

The AME2012 atomic mass evaluation *

(II). Tables, graphs and references

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Abstract This paper is the second part of the new evaluation of atomic masses, AME2012. From the results of a least-squares calculation, described in Part I, for all accepted experimental data, we derive here tables and graphs to replace those of AME2003. The first table lists atomic masses. It is followed by a table of the influences of data on primary nuclides, a table of separation energies and reaction energies, and finally, a series of graphs of separation and decay energies. The last section in this paper lists all references to the input data used in Part I of this AME2012 and also to the data included in the NUBASE2012 evaluation (first paper in this issue).

AMDC: <http://amdc.in2p3.fr/> and <http://amdc.impcas.ac.cn/>

1 Introduction

The description of the general procedures and policies are given in Part I of this series of two papers (p. 1287 of the present issue), where the input data used in the evaluation are presented. In this paper we give tables and graphs derived from the evaluation of the input data in Part I.

Firstly, we present the table of atomic masses (Table I) expressed as mass excess in energy unit, together with the binding energy per nucleon, the beta-decay energy and the full atomic mass in mass unit.

The second table is the table of *influences* on primary nuclides (Table II). For each of the *primary* nuclides entering this evaluation, we give the three main data and their influences on the mass of this nuclide (see the definitions in Part I, Section 5.1, p. 1306).

Thirdly, we give a table for values and their uncertainties for the separation energies and reaction energies for twelve carefully selected combinations of nuclides. This selection, together with the β -decay energies in Table I,

yields all differences in masses between any pair of nuclei differing at most by 2 units in Z and N . A method is indicated in which many more reaction energy values can be derived from the present table.

The following series of graphs are then presented: two-neutron separation energies and α -decay energies as a function of neutron number, two-proton separation energies as a function of proton number and double β -decay energies as a function of mass number which are considered as the most illustrative ones for representing the regular trends in the mass surface and useful to derive estimates for unknown masses.

Finally, references to the input data used in Part I of AME2012 and in NUBASE2012, the first paper of this issue, are given in the last section of this paper.

2 The atomic mass table

As in our previous works AME2003 [1, 2], AME'95 [3], AME'93 [4, 5, 6, 7], ... the tables presented in this

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work give atomic masses and derived quantities. With very few exceptions, experimental data on masses of nuclei refer to “atomic” masses or to masses of singly ionized atoms. In this last case the ionization energy is generally (much) smaller than the error on the mass, and, for the small number of very precise mass measurements, corrections for the first -and second- ionization potentials could be applied without much loss of accuracy. The same is true for the electron mass M_e involved, see Table A in Part I, p. 1290. This is the reason for the decision to present, in our evaluations, atomic rather than nuclear masses.

Nuclear masses can be calculated from atomic ones by using the formula:

$$M_N(A, Z) = M_A(A, Z) - Z \times M_e + B_e(Z) \quad (1)$$

Nowadays, several mass measurements are made on fully or almost fully ionized atoms. Then, a correction must be made for the total binding energy of all removed electrons $B_e(Z)$. They can be found in the table for calculated total atomic binding energy of all electrons of Huang et al. [8]. Unfortunately, the precision of the calculated

values $B_e(Z)$ is not clear; this quantity (up to 760 keV for ${}_{92}\text{U}$) cannot be measured easily. Very probably, its precision for ${}_{92}\text{U}$ is rather better than the 2 keV accuracy with which the mass of, e.g., ${}^{238}\text{U}$ is known. A simple formula, approximating the results of [8], is given in the review of Lunney, Pearson and Thibault [9]:

$$B_{el}(Z) = 14.4381 Z^{2.39} + 1.55468 \times 10^{-6} Z^{5.35} \text{ eV} \quad (2)$$

The atomic masses are given in mass units and the derived quantities in energy units. For the atomic mass unit we use the “unified atomic mass unit,” symbol “u”, defined as 1/12 of the atomic mass of one ${}^{12}\text{C}$ atom in its electronic and nuclear ground states and in its rest coordinate system. In our work energy values are expressed as electron-volt, using the *maintained* volt V_{90} . For a discussion see Part I, Section 2, p. 1291.

Due to the drastic increase in the precision of the mass values of the very light nuclei, the printing format of the mass table is not adequate. Table A gives, for the most precise among them, values of mass excesses and atomic masses.

Table A. The most precisely known masses.

	Mass excess (keV ₉₀)		Atomic mass (μu)	
${}^1_0\text{n}$	8 071.317 144	0.000 458	1 008 664.915 850	0.000 491
${}^1_1\text{H}$	7 288.970 591	0.000 087	1 007 825.032 231	0.000 093
${}^2_1\text{H}$	13 135.721 741	0.000 114	2 014 101.778 120	0.000 122
${}^4_2\text{He}$	2 424.915 609	0.000 059	4 002 603.254 130	0.000 063
${}^{13}_6\text{C}$	3 125.008 747	0.000 211	13 003 354.835 071	0.000 227
${}^{14}_7\text{N}$	2 863.416 686	0.000 188	14 003 074.004 426	0.000 202
${}^{15}_7\text{N}$	101.438 657	0.000 599	15 000 108.898 884	0.000 643
${}^{16}_8\text{O}$	-4 737.001 374	0.000 160	15 994 914.619 566	0.000 172
${}^{17}_8\text{O}$	-808.763 613	0.000 644	16 999 131.756 500	0.000 692
${}^{18}_8\text{O}$	-782.815 582	0.000 707	17 999 159.612 858	0.000 758
${}^{19}_9\text{F}$	-1 487.444 343	0.000 860	18 998 403.162 727	0.000 923
${}^{28}_{14}\text{Si}$	-21 492.794 586	0.000 410	27 976 926.534 649	0.000 440
${}^{29}_{14}\text{Si}$	-21 895.078 667	0.000 487	28 976 494.664 901	0.000 523
${}^{31}_{15}\text{P}$	-24 440.541 107	0.000 655	30 973 761.998 417	0.000 702
${}^{32}_{16}\text{S}$	-26 015.533 531	0.001 316	31 972 071.174 408	0.001 412

Mass excesses expressed in keV, of practical use, are also given. Conversion of the errors from μu to keV were obtained by:

$$\sigma_{M_{\text{keV}}}^2 = (\sigma_{M_u} \times u)^2 + (M_u \times \sigma_u)^2 \quad (3)$$

where M_u is the mass excess in μu , and σ_u the error of u expressed in eV₉₀. The part dependent on M_u is only important for very few nuclides.

As mentioned in Part I, since AME2003 we don't give any more values for the binding energies, $ZM_H + NM_n -$

Table B. Correlation matrices for the most precisely known very light nuclei (in squared nano atomic mass units).

	n	H	D	⁴ He	¹³ C	¹⁴ N	¹⁵ N	¹⁶ O	²⁸ Si
n	0.241418								
H	-0.006094	0.008708							
D	0.012274	0.002612	0.014891						
⁴ He	0.000000	0.000000	0.000000	0.004011					
¹³ C	0.004869	-0.006656	-0.001785	0.000000	0.051325				
¹⁴ N	-0.001079	0.001890	0.000811	0.000000	0.037139	0.040928			
¹⁵ N	-0.000790	0.013496	0.012707	0.000000	-0.005664	0.006929	0.413749		
¹⁶ O	-0.000749	0.002027	0.001279	0.000000	0.010791	0.013155	0.005573	0.029467	
²⁸ Si	-0.003321	0.006777	0.003455	0.000000	0.028736	0.030353	0.036443	0.016784	0.193341

	n	H	D	³ H	³ He	¹⁶ O	²⁰ Ne	²³ Na	²⁸ Si
n	0.241418								
H	-0.006094	0.008708							
D	0.012274	0.002612	0.014891						
³ H	0.000000	0.000000	0.000000	5.632850					
³ He	0.000000	0.000000	0.000000	5.553019	6.271468				
¹⁶ O	-0.000749	0.002027	0.001279	0.000000	0.000000	0.029467			
²⁰ Ne	0.027477	0.012383	0.039872	0.000001	0.000001	0.005511	2.830803		
²³ Na	-0.000001	0.000003	0.000001	0.000000	0.000000	0.000001	0.000024	3.782120	
²⁸ Si	-0.003321	0.006777	0.003455	0.000000	0.000000	0.016784	0.014612	0.000011	0.193341

M , as we used to until and including in AME1993. Otherwise than before, its error equals that in the value of the mass excess, which makes its use unnecessary. Since AME2003 we give instead the binding energy per nucleon, which is of educational interest, connected to the Aston curve and the maximum stability around the ‘iron-peak’ of importance in astrophysics. (*Note*: the highest binding energy per nucleon is actually observed for ⁶²Ni followed by ⁵⁸Fe and only then by ⁵⁶Fe).

3 Influences on primary nuclides

Table II presents a list of all primary nuclides, and for each of them the main data contributing to its mass determination (up to the three most important ones) and the *influences* of these data on this nuclide.

This Table II complements the information given in the main table (Part I, Table I) where we display the *significance* (total flux) and the main *flux* of each datum. In other words, the flow-of-information matrix \mathbf{F} , defined in Part I, Section 5.1, is (partly) displayed once along lines and once along columns.

4 Nuclear-reaction and separation energies

The result of the least-squares adjustment of experimental data (reaction and decay energies and mass-spectrometric data) determining atomic masses of nuclides, as described in Part I, is not represented completely by the adjusted values of the input data given there and the resulting values of the atomic masses given in the Table I. A complete representation would require reproduction of a matrix of correlation coefficients. Since this matrix contains $\frac{1}{2}N(N+1)$ elements in which $N =$

1176, this is not very attractive. For the first time in this AME2012, and following the suggestion of B.N. Taylor we made available at the AMDC Web-site in directory `masstables/Ame2012` a full list of correlation coefficients [10].

The main use of the correlation matrix is in obtaining errors in linear combinations of atomic masses. In practice, the correlations are important only for combinations involving two neighbouring nuclides with small differences in mass number and particles such as n, p, d, t, ³He and α . Such combinations, consisting of various kinds of decay and binding energies of particles or groups of particles, are important for studies of the trends in the nuclear energy surface and for Q-values of frequently studied reactions. As before [5], we present in Table III values for 12 such combinations and their standard errors. The β -decay energies are given in Table I.

With the help of the instructions given in the ‘Explanation of Table’, values for 28 additional reactions and their standard errors can be derived. The derived values will be correct, but in a few cases (of reactions on very light nuclei measured with extreme precision) the errors will be slightly larger than would follow from a calculation including correlations.

The precision (standard error) in the value of any combination of the most precise mass values, for very light nuclei, can be obtained with the help of the correlation coefficients given in Table B. When doing this, one should use mass values and their uncertainties as given in the mass table (Table I) in μu , and not the mass-excesses (in keV).

We have also prepared a table of neutron, proton and deuteron pairing energies, available from the AMDC [11], defined as:

$$P_n(A, Z) = \frac{1}{4}(-1)^{A-Z+1}[S_n(A+1, Z) - 2S_n(A, Z) + S_n(A-1, Z)]$$

$$P_p(A, Z) = \frac{1}{4}(-1)^{Z+1}[S_p(A+1, Z+1) - 2S_p(A, Z) + S_p(A-1, Z-1)]$$

$$P_d(A, Z) = \frac{1}{4}(-1)^{Z+1}[S_d(A+2, Z+1) - 2S_d(A, Z) + S_d(A-2, Z-1)]$$

S_n , S_p , and S_d are the neutron, proton and deuteron separation energies, the latter being defined as

$$S_d(A, Z) = -M(A, Z) + M(A-2, Z-1) + M(d) = -Q(\gamma, d),$$

the quantities S_n , and S_p are defined below in the Explanation of Table III (p. 1696), and $Q(\gamma, d)$ can be calculated as indicated also there.

Remark: P_n is also sometimes written as:

$$P_n(A, Z) = \frac{1}{4}(-1)^{A-Z+1}[-M(A+1, Z) + 3M(A, Z) - 3M(A-1, Z) + M(A-2, Z)]$$

displaying thus more clearly the combination of the involved masses. And similarly for P_p and P_d .

5 Graphs of trends in the mass surface

All the information contained in the mass table (Table I) and in the nuclear reaction and separation energy table (Table III) can in principle be displayed in a plot of the binding energy or the mass versus Z , N , or A . Such a plot, in which the binding energies vary rapidly, is complicated by the fact that there are four sheets, corresponding to the four possible combinations of parity for Z and N . These sheets are nearly parallel almost everywhere in this three dimensional space and have remarkably regular trends, as one may convince oneself by making various cuts (e.g. Z or N or A constant). Any derivative of the binding energies also defines four sheets. In the present context, *derivative* means a specified difference between the masses of two nearby nuclei. They are also smooth and have the advantage of displaying much smaller variations (see also Part I, Section 4). For a derivative specified in such a way that differences are between nuclides in the same mass sheet, the nearly parallelism of these leads to an (almost) unique surface for the derivative, allowing thus a single display. Therefore, in order to illustrate the regular trends in the mass surface, four derivatives of this last type were chosen:

1. the two-neutron separation energies versus N , with lines connecting the isotopes of a given element (Figs. 1–9);
2. the two-proton separation energies versus Z , with lines connecting the isotones (the same number of neutrons) (Figs. 10–17);
3. the α -decay energies versus N , with lines connecting the isotopes of a given element (Figs. 18–26);

4. the double β -decay energies versus A , with lines connecting the isotopes and the isotones (Figs. 27–36).

These graphs of regular trends supersede earlier graphs [2].

Other various representations are possible (e.g. separately for odd and even nuclei: one-neutron separation energies versus N , one-proton separation energy versus Z , β -decay energy versus A , ...); they can all be built starting from the values in Table III. They cannot all be given in the present printed version, but they are retrievable from the *Web* distribution [11].

Clearly showing the trends in the mass surface, these graphs can be quite useful for checking the quality of any interpolation or extrapolation (if not too far) and provide an excellent testground for theoretical mass models. When some masses in a defined region deviate from the regular trends in the mass-surface TMS, almost always there is a serious physical cause, like a shell or subshell closure or an onset of deformation. But, if only one mass exhibits an irregular pattern, violating the general trends, then one may seriously question the correctness of the related data. See the discussion in Part I, Section 4, p. 1303).

6 List of references for the NUBASE2012 and AME2012 evaluations

Full references related to all the input data used in the present AME2012 evaluation, as well as in the NUBASE2012 evaluation (first article in this issue), are listed in a special table, at the end of this paper.

A list of identifiers for journals, books, conferences ... is given first, as much as possible in the CODEN-style

(see [12]). With one exception though, for the *Eur. Phys. Journal* for which we preferred the ‘EPJAA’ identifier, that we think more practical to use, than the ‘ZAANE’ identifier as adopted by the NSR.

In both evaluations, the references for the regular journals were quoted in the NSR [12] key number style, where available. They are listed in this Section by year of publication and first author name.

References

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- [11] The AME2012 files in the electronic distribution and complementary documents can be retrieved from the Atomic Mass Data Center (AMDC) through the *Web*: <http://amdc.in2p3.fr/> and <http://amdc.impcas.ac.cn/>
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Table I. The 2012 Atomic mass table**EXPLANATION OF TABLE**

N	Number of neutrons.
Z	Number of protons.
A	Mass number $A = N + Z$.
Elt.	Element symbol (for $Z > 109$ see Section 2).
Orig.	Origin of values for secondary nuclides. zpn mass of AZ derived from mass of ${}^{A+z+n}(Z+z)$. Special notations: IT when $z = 0, n = 0$; + when $z = +1, n = -1$; - when $z = -1, n = +1$; ++ when $z = +2, n = -2$; -- when $z = -2, n = +2$; ϵp when $z = -2, n = +1$; $+\alpha$ when $z = +2, n = +2$; $-\alpha$ when $z = -2, n = -2$; x for distant connection.
Mass excess	Mass excess $[M(\text{in u}) - A]$, in keV, and its one standard deviation error. In cases where the furthest-left significant digit in the error was larger than 3, values and errors were rounded off, but not to more than tens of keV. (Examples: $2345.67 \pm 2.78 \rightarrow 2345.7 \pm 2.8$, $2345.67 \pm 4.68 \rightarrow 2346 \pm 5$, but $2346.7 \pm 468.2 \rightarrow 2350 \pm 470$). # in place of decimal point: value and error derived not from purely experimental data, but at least partly from TMS (see Part I, Section 4, p. 1297).
Binding energy per nucleon	Tabulated binding energy per nucleon (in keV): $B/A = 1/A[ZM({}^1\text{H}) + NM({}^1\text{n}) - M(A, Z)]$, and its one standard deviation error. # in place of decimal point: see above.
Beta-decay energy	Direction of decay, value and standard error in keV: for β^- : $Q^- = M(A, Z) - M(A, Z + 1)$; for β^+ : $Q^+ = M(A, Z) - M(A, Z - 1)$. For a few odd-odd nuclides near maximum β -stability decaying both β^- and β^+ , the Q^+ values are given as negative Q^- values for the preceding even-even isobar. * in place of value: not calculable. # in place of decimal point: see above.
Atomic mass	Atomic mass M and its one standard deviation error in μu . # in place of decimal point: see above.

Table I. The 2012 Atomic mass table (Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	El.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ u		
1	0	1	n		8071.3171	0.0005	0.0	0.0	β^-	782.347	0.001	1 008664.9158	0.0005
0	1		H		7288.97059	0.00009	0.0	0.0	*	*		1 007825.03223	0.00009
1	1	2	H		13135.72174	0.00011	1112.283	0.000	*	*		2 014101.77812	0.00012
2	1	3	H		14949.8061	0.0022	2827.266	0.001	β^-	18.591	0.001	3 016049.2779	0.0024
1	2		He		14931.2155	0.0023	2572.681	0.001	*	*		3 016029.3201	0.0025
0	3		Li	-pp	28670#	2000#	-2270#	670#	β^+	13740#	2000#	3 030780#	2150#
3	1	4	H	-n	24620	100	1720	25	β^-	22200	100	4 026430	110
2	2		He		2424.91561	0.00006	7073.915	0.000	*	*		4 002603.25413	0.00006
1	3		Li	-p	25320	210	1150	50	β^+	22900	210	4 027190	230
4	1	5	H	-nn	32890	90	1336	18	β^-	21660	90	5 035310	100
3	2		He	-n	11231	20	5512	4	*	*		5 012057	21
2	3		Li	-p	11680	50	5266	10	β^+	450	50	5 012540	50
1	4		Be	x	37140#	2000#	20#	400#	β^+	25460#	2000#	5 039870#	2150#
5	1	6	H	-3n	41880	250	960	40	β^-	24280	250	6 044960	270
4	2		He		17592.09	0.05	4878.519	0.009	β^-	3505.22	0.05	6 018885.89	0.06
3	3		Li		14086.8789	0.0014	5332.331	0.000	*	*		6 015122.8874	0.0015
2	4		Be	-	18375	5	4487.2	0.9	β^+	4288	5	6 019726	6
1	5		B	x	47320#	2000#	-470#	330#	β^+	28950#	2000#	6 050800#	2150#
6	1	7	H	-nn	49140#	1000#	940#	140#	β^-	23060#	1000#	7 052750#	1080#
5	2		He	-n	26073	8	4123.1	1.1	β^-	11166	8	7 027991	8
4	3		Li		14907.105	0.004	5606.439	0.001	*	*		7 016003.437	0.005
3	4		Be		15769.00	0.07	5371.548	0.010	β^+	861.89	0.07	7 016928.72	0.08
2	5		B	p4n	27677	25	3559	4	β^+	11908	25	7 029712	27
6	2	8	He		31609.68	0.09	3924.520	0.011	β^-	10663.88	0.10	8 033934.39	0.10
5	3		Li		20945.80	0.05	5159.712	0.006	β^-	16004.13	0.06	8 022486.25	0.05
4	4		Be	$-\alpha$	4941.67	0.04	7062.435	0.004	*	*		8 005305.10	0.04
3	5		B		22921.6	1.0	4717.15	0.13	β^+	17979.9	1.0	8 024607.3	1.1
2	6		C		35064	18	3101.5	2.3	β^+	12143	18	8 037643	20
7	2	9	He		40940	50	3349	5	β^-	15980	50	9 043950	50
6	3		Li	-3n	24954.90	0.19	5037.768	0.021	β^-	13606.45	0.20	9 026790.19	0.20
5	4		Be		11348.45	0.08	6462.668	0.009	*	*		9 012183.07	0.08
4	5		B	-	12416.5	0.9	6257.07	0.10	β^+	1068.0	0.9	9 013329.6	1.0
3	6		C	-pp	28911.0	2.1	4337.42	0.24	β^+	16494.5	2.3	9 031037.2	2.3
8	2	10	He	-nn	49170	100	2998	10	β^-	16120	100	10 052790	110
7	3		Li	-n	33053	13	4531.4	1.3	β^-	20445	13	10 035483	14
6	4		Be		12607.49	0.08	6497.630	0.008	β^-	556.8	0.4	10 013534.70	0.09
5	5		B		12050.7	0.4	6475.07	0.04	*	*		10 012936.9	0.4
4	6		C		15698.8	0.4	6032.03	0.04	β^+	3648.06	0.07	10 016853.3	0.4
3	7		N	--	38800	400	3640	40	β^+	23100	400	10 041650	430
8	3	11	Li	x	40728.3	0.6	4155.38	0.06	β^-	20551.1	0.7	11 043723.6	0.7
7	4		Be		20177.17	0.24	5952.540	0.022	β^-	11509.3	0.5	11 021661.08	0.26
6	5		B		8667.9	0.4	6927.72	0.04	*	*		11 009305.4	0.4
5	6		C		10650.3	0.9	6676.37	0.09	β^+	1982.4	0.9	11 011433.6	1.0
4	7		N	-p	24300	50	5364	4	β^+	13650	50	11 026090	50
9	3	12	Li	-n	48920	15	3799.1	1.3	β^-	23842	15	12 052517	16
8	4		Be		25077.8	1.9	5720.72	0.16	β^-	11708.3	2.3	12 026922.1	2.0
7	5		B		13369.4	1.3	6631.22	0.11	β^-	13369.4	1.3	12 014352.7	1.4
6	6		C		0.0	0.0	7680.144	0.000	*	*		12 000000.0	0.0
5	7		N		17338.1	1.0	6170.11	0.08	β^+	17338.1	1.0	12 018613.2	1.1
4	8		O	-pp	31915	24	4890.2	2.0	β^+	14577	24	12 034262	26

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
10	3	13	Li	-nn	58340	350	3403	27	β^-	24680	350	13 062630	380
9	4		Be	-n	33659	10	5241.4	0.8	β^-	17097	10	13 036135	11
8	5		B	-nn	16562.1	1.1	6496.41	0.08	β^-	13437.1	1.1	13 017780.2	1.2
7	6		C		3125.00875	0.00021	7469.849	0.000	*			13 003354.83507	0.00023
6	7		N		5345.48	0.27	7238.863	0.021	β^+	2220.47	0.27	13 005738.61	0.29
5	8		O	+3n	23115	10	5811.8	0.7	β^+	17770	10	13 024815	10
10	4	14	Be	x	39950	130	4994	9	β^-	16290	130	14 042890	140
9	5		B		23664	21	6101.6	1.5	β^-	20644	21	14 025404	23
8	6		C		3019.893	0.004	7520.319	0.000	β^-	156.476	0.004	14 003241.988	0.004
7	7		N		2863.41669	0.00019	7475.614	0.000	*			14 003074.00443	0.00020
6	8		O		8007.46	0.11	7052.301	0.008	β^+	5144.04	0.11	14 008596.36	0.12
5	9		F	-p	31960	40	5285.2	2.9	β^+	23960	40	14 034320	40
11	4	15	Be	-n2p	49760#	400#	4545#	27#	β^-	20800#	400#	15 053420#	430#
10	5		B		28958	21	5880.0	1.4	β^-	19085	21	15 031088	23
9	6		C	-n	9873.1	0.8	7100.17	0.05	β^-	9771.7	0.8	15 010599.3	0.9
8	7		N		101.4387	0.0006	7699.460	0.000	*			15 000108.8989	0.0006
7	8		O		2855.6	0.5	7463.69	0.03	β^+	2754.2	0.5	15 003065.6	0.5
6	9		F		16810	60	6481	4	β^+	13950	60	15 018040	70
12	4	16	Be	-nn	57450	170	4285	10	β^-	20330	170	16 061670	180
11	5		B		37112	25	5507.3	1.5	β^-	23418	25	16 039842	26
10	6		C	-nn	13694	4	6922.05	0.22	β^-	8010	4	16 014701	4
9	7		N	-n	5683.9	2.3	7373.80	0.14	β^-	10420.9	2.3	16 006101.9	2.5
8	8		O		-4737.00137	0.00016	7976.206	0.000	*			15 994914.61957	0.00017
7	9		F	—	10680	8	6963.7	0.5	β^+	15417	8	16 011466	9
6	10		Ne	—	23986	20	6083.2	1.3	β^+	13306	22	16 025750	22
12	5	17	B	x	43770	170	5266	10	β^-	22740	170	17 046990	180
11	6		C	2p-n	21031	17	6558.1	1.0	β^-	13161	23	17 022577	19
10	7		N	+p	7870	15	7286.2	0.9	β^-	8679	15	17 008449	16
9	8		O		-808.7636	0.0006	7750.728	0.000	*			16 999131.7565	0.0007
8	9		F		1951.70	0.25	7542.328	0.015	β^+	2760.47	0.25	17 002095.24	0.27
7	10		Ne	x	16500.5	0.4	6640.499	0.021	β^+	14548.7	0.4	17 017714.0	0.4
13	5	18	B	-n	51850	170	4974	9	β^-	26930	170	18 055660	180
12	6		C	++	24920	30	6426.2	1.7	β^-	11800	40	18 026750	30
11	7		N	+	13113	19	7038.6	1.0	β^-	13896	19	18 014078	20
10	8		O		-782.8156	0.0007	7767.097	0.000	*			17 999159.6129	0.0008
9	9		F		873.1	0.5	7631.638	0.026	β^+	1655.9	0.5	18 000937.3	0.5
8	10		Ne		5317.6	0.4	7341.257	0.020	β^+	4444.5	0.6	18 005708.7	0.4
7	11		Na	-p	25040	110	6202	6	β^+	19720	110	18 026880	120
14	5	19	B	x	58780#	400#	4772#	21#	β^-	26370#	410#	19 063100#	430#
13	6		C	-n	32410	100	6118	5	β^-	16560	100	19 034800	110
12	7		N	p-2n	15856	16	6948.6	0.9	β^-	12523	17	19 017022	18
11	8		O	-n	3332.9	2.6	7566.49	0.14	β^-	4820.3	2.6	19 003578.0	2.8
10	9		F		-1487.4443	0.0009	7779.018	0.000	*			18 998403.1627	0.0009
9	10		Ne	+3n	1752.05	0.16	7567.342	0.008	β^+	3239.50	0.16	19 001880.91	0.17
8	11		Na		12929	11	6937.9	0.6	β^+	11177	11	19 013880	11
7	12		Mg	-pp	31830	50	5902.0	2.6	β^+	18900	50	19 034170	50
15	5	20	B	x	67130#	700#	4520#	40#	β^-	29580#	740#	20 072070#	750#
14	6		C	x	37560	240	5959	12	β^-	15790	250	20 040320	260
13	7		N	x	21770	60	6709.2	2.8	β^-	17970	60	20 023370	60
12	8		O	-nn	3796.2	0.9	7568.57	0.04	β^-	3813.6	0.9	20 004075.4	0.9
11	9		F	-n	-17.463	0.030	7720.134	0.002	β^-	7024.467	0.030	19 999981.25	0.03
10	10		Ne		-7041.9306	0.0016	8032.240	0.000	*			19 992440.1762	0.0017
9	11		Na		6850.6	1.1	7298.50	0.06	β^+	13892.5	1.1	20 007354.4	1.2
8	12		Mg	4n	17559	27	6724.0	1.4	β^+	10708	27	20 018850	29

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	El.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ u		
16	5	21	B	x	75720#	900#	4280#	40#	β^-	30080#	990#	21 081290#	970#
15	6		C	x	45640#	400#	5674#	19#	β^-	20390#	410#	21 049000#	430#
14	7		N	x	25250	100	6608	5	β^-	17190	100	21 027110	100
13	8		O	-3n	8062	12	7389.4	0.6	β^-	8110	12	21 008655	13
12	9		F	-nn	-47.6	1.8	7738.29	0.09	β^-	5684.2	1.8	20 999948.9	1.9
11	10		Ne	-n	-5731.78	0.04	7971.713	0.002	*			20 993846.69	0.04
10	11		Na		-2184.64	0.28	7765.547	0.013	β^+	3547.14	0.28	20 997654.70	0.30
9	12		Mg	+3n	10914	16	7104.6	0.8	β^+	13098	16	21 011716	18
8	13		Al	x	26990#	400#	6302#	19#	β^+	16080#	400#	21 028980#	430#
16	6	22	C	-nn	53590	250	5422	11	β^-	21550	310	22 057530	260
15	7		N	x	32040	190	6366	9	β^-	22760	200	22 034390	210
14	8		O	-4n	9280	60	7364.9	2.6	β^-	6490	60	22 009970	60
13	9		F	+	2793	12	7624.3	0.6	β^-	10818	12	22 002999	13
12	10		Ne		-8024.714	0.018	8080.465	0.001	*			21 991385.115	0.019
11	11		Na		-5181.52	0.17	7915.667	0.008	β^+	2843.20	0.17	21 994437.41	0.18
10	12		Mg		-399.9	0.3	7662.762	0.014	β^+	4781.6	0.3	21 999570.6	0.3
9	13		Al	x	18200#	400#	6782#	18#	β^+	18600#	400#	22 019540#	430#
8	14		Si	x	33340#	500#	6058#	23#	β^+	15140#	640#	22 035790#	540#
17	6	23	C	x	64170#	1000#	5080#	40#	β^-	25850#	1040#	23 068890#	1070#
16	7		N	x	38320#	300#	6167#	13#	β^-	23700#	310#	23 041140#	320#
15	8		O	x	14620	90	7164	4	β^-	11310	100	23 015700	100
14	9		F		3310	50	7621.1	2.2	β^-	8470	50	23 003560	50
13	10		Ne	-n	-5154.04	0.10	7955.255	0.005	β^-	4375.81	0.10	22 994466.91	0.11
12	11		Na		-9529.8525	0.0018	8111.493	0.000	*			22 989769.2820	0.0019
11	12		Mg		-5473.3	0.7	7901.104	0.030	β^+	4056.6	0.7	22 994124.2	0.7
10	13		Al	---	6748.1	0.3	7335.727	0.015	β^+	12221.3	0.8	23 007244.4	0.4
9	14		Si	x	23700#	500#	6565#	22#	β^+	16950#	500#	23 025440#	540#
17	7	24	N	x	46940#	400#	5887#	17#	β^-	28440#	420#	24 050390#	430#
16	8		O	x	18500	110	7040	5	β^-	10940	130	24 019860	120
15	9		F	x	7560	70	7463	3	β^-	13510	70	24 008120	80
14	10		Ne	-nn	-5951.6	0.5	7993.324	0.021	β^-	2466.3	0.5	23 993610.7	0.6
13	11		Na	-n	-8417.96	0.04	8063.490	0.002	β^-	5515.61	0.04	23 990962.95	0.04
12	12		Mg		-13933.569	0.013	8260.709	0.001	*			23 985041.698	0.014
11	13		Al		-47.6	1.1	7649.53	0.05	β^+	13886.0	1.1	23 999948.9	1.2
10	14		Si	---	10744	19	7167.3	0.8	β^+	10792	20	24 011535	21
9	15		P	x	33320#	500#	6194#	21#	β^+	22580#	500#	24 035770#	540#
18	7	25	N	x	55980#	500#	5613#	20#	β^-	28640#	520#	25 060100#	540#
17	8		O	-n	27350	110	6727	4	β^-	15980	130	25 029360	120
16	9		F	x	11360	80	7335	3	β^-	13420	90	25 012200	80
15	10		Ne	2p-n	-2060	40	7840.8	1.8	β^-	7300	40	24 997790	50
14	11		Na	-nn	-9357.8	1.2	8101.40	0.05	β^-	3835.0	1.2	24 989954.0	1.3
13	12		Mg		-13192.77	0.05	8223.502	0.002	*			24 985836.98	0.05
12	13		Al		-8916.2	0.5	8021.144	0.019	β^+	4276.6	0.5	24 990428.1	0.5
11	14		Si	+3n	3827	10	7480.1	0.4	β^+	12743	10	25 004109	11
10	15		P	x	19740#	400#	6812#	16#	β^+	15910#	400#	25 021190#	430#
18	8	26	O	-nn	34730	160	6495	6	β^-	16070	170	26 037290	170
17	9		F	x	18670	80	7082.6	3.0	β^-	18190	80	26 020040	80
16	10		Ne	x	479	18	7752.0	0.7	β^-	7340	19	26 000515	20
15	11		Na	x	-6861	4	8004.20	0.13	β^-	9354	4	25 992635	4
14	12		Mg		-16214.546	0.030	8333.871	0.001	*			25 982592.97	0.03
13	13		Al		-12210.11	0.06	8149.764	0.003	β^+	4004.43	0.06	25 986891.90	0.07
12	14		Si	-	-7140.98	0.11	7924.707	0.004	β^+	5069.14	0.08	25 992333.85	0.11
11	15		P	x	10970#	200#	7198#	8#	β^+	18110#	200#	26 011780#	210#
10	16		S	x	27080#	600#	6548#	23#	β^+	16110#	630#	26 029070#	640#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	El.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
19	8	27	O	x	44450#	500#	6193#	19#	β^-	19820#	540#	27 047720#	540#
18	9		F	x	24630	190	6898	7	β^-	17590	200	27 026440	200
17	10		Ne	x	7040	70	7521.0	2.4	β^-	12550	70	27 007550	70
16	11		Na	++	-5518	4	7956.94	0.14	β^-	9069	4	26 994077	4
15	12		Mg	-n	-14586.61	0.05	8263.853	0.002	β^-	2610.13	0.11	26 984340.62	0.05
14	13		Al		-17196.75	0.10	8331.548	0.004	*			26 981538.53	0.11
13	14		Si	-	-12384.39	0.14	8124.337	0.005	β^+	4812.36	0.10	26 986704.81	0.15
12	15		P	p4n	-722	26	7663.4	1.0	β^+	11662	26	26 999224	28
11	16		S	-	17030#	400#	6977#	15#	β^+	17750#	400#	27 018280#	430#
20	8	28	O	x	52080#	700#	5988#	25#	β^-	19160#	730#	28 055910#	750#
19	9		F	-n	32920	200	6644	7	β^-	21630	220	28 035340	210
18	10		Ne	x	11290	100	7389	3	β^-	12280	100	28 012120	100
17	11		Na	x	-988	10	7799.3	0.4	β^-	14030	10	27 998939	11
16	12		Mg	+	-15018.7	2.0	8272.41	0.07	β^-	1831.8	2.0	27 983876.7	2.2
15	13		Al	-n	-16850.53	0.12	8309.889	0.004	β^-	4642.26	0.12	27 981910.21	0.13
14	14		Si		-21492.7946	0.0004	8447.744	0.000	*			27 976926.5346	0.0004
13	15		P		-7147.7	1.2	7907.48	0.04	β^+	14345.1	1.2	27 992326.6	1.2
12	16		S	--	4070	160	7479	6	β^+	11220	160	28 004370	170
11	17		Cl	x	27520#	600#	6614#	21#	β^+	23440#	620#	28 029540#	640#
20	9	29	F	x	39630#	500#	6462#	17#	β^-	21230#	510#	29 042540#	540#
19	10		Ne	x	18400	100	7167	3	β^-	15720	100	29 019750	110
18	11		Na		2680	7	7682.15	0.25	β^-	13283	14	29 002877	8
17	12		Mg	x	-10603	11	8113.2	0.4	β^-	7602	11	28 988617	12
16	13		Al	x	-18204.7	0.9	8348.36	0.03	β^-	3690.4	0.9	28 980456.5	1.0
15	14		Si		-21895.0787	0.0005	8448.635	0.000	*			28 976494.6649	0.0005
14	15		P		-16952.5	0.6	8251.222	0.019	β^+	4942.6	0.6	28 981800.8	0.6
13	16		S	+3n	-3160	50	7748.5	1.7	β^+	13800	50	28 996610	50
12	17		Cl	x	13770#	400#	7138#	14#	β^+	16920#	400#	29 014780#	430#
21	9	30	F	x	48110#	600#	6233#	20#	β^-	25070#	660#	30 051650#	640#
20	10		Ne	x	23040	280	7043	9	β^-	14560	280	30 024730	300
19	11		Na		8475	5	7501.97	0.16	β^-	17358	6	30 009098	5
18	12		Mg	x	-8884	3	8054.50	0.11	β^-	6989	14	29 990463	4
17	13		Al	+	-15872	14	8261.4	0.5	β^-	8561	14	29 982960	15
16	14		Si	-n	-24432.961	0.022	8520.654	0.001	*			29 973770.136	0.023
15	15		P	-p	-20200.6	0.3	8353.497	0.010	β^+	4232.4	0.3	29 978313.8	0.3
14	16		S	-	-14059.0	0.4	8122.699	0.012	β^+	6141.60	0.20	29 984907.0	0.4
13	17		Cl	x	4440#	200#	7480#	7#	β^+	18500#	200#	30 004770#	210#
12	18		Ar	x	21490#	500#	6886#	17#	β^+	17050#	540#	30 023070#	540#
22	9	31	F	-nn	55620#	530#	6050#	17#	β^-	24800#	1700#	31 059710#	560#
21	10		Ne	x	30820	1620	6820	50	β^-	18560	1620	31 033090	1740
20	11		Na	x	12261	23	7398.2	0.8	β^-	15383	23	31 013163	25
19	12		Mg	x	-3122	3	7869.19	0.10	β^-	11833	21	30 996648	3
18	13		Al	p-2n	-14955	20	8225.7	0.7	β^-	7994	20	30 983945	22
17	14		Si	-n	-22949.04	0.04	8458.291	0.001	β^-	1491.50	0.04	30 975363.19	0.05
16	15		P		-24440.5411	0.0007	8481.167	0.000	*			30 973761.9984	0.0007
15	16		S		-19042.52	0.23	8281.800	0.007	β^+	5398.02	0.23	30 979557.01	0.25
14	17		Cl	p4n	-7070	50	7870.2	1.6	β^+	11980	50	30 992410	50
13	18		Ar	-	11290#	210#	7253#	7#	β^+	18360#	200#	31 012120#	220#
22	10	32	Ne	x	37000#	500#	6671#	16#	β^-	18190#	520#	32 039720#	540#
21	11		Na	x	18810	120	7215	4	β^-	19640	120	32 020190	130
20	12		Mg	x	-829	3	7803.84	0.10	β^-	10270	13	31 999110	3
19	13		Al	x	-11099	12	8100.3	0.4	β^-	12979	12	31 988085	13
18	14		Si	x	-24077.69	0.30	8481.468	0.009	β^-	227.2	0.3	31 974151.5	0.3
17	15		P	-n	-24304.87	0.04	8464.120	0.001	β^-	1710.66	0.04	31 973907.64	0.04
16	16		S		-26015.5335	0.0013	8493.129	0.000	*			31 972071.1744	0.0014
15	17		Cl		-13334.7	0.6	8072.404	0.018	β^+	12680.9	0.6	31 985684.6	0.6
14	18		Ar	x	-2200.4	1.8	7700.01	0.06	β^+	11134.3	1.9	31 997637.8	1.9
13	19		K	x	21100#	500#	6947#	16#	β^+	23300#	500#	32 022650#	540#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μu		
23	10	33	Ne	x	46000#	600#	6440#	18#	β^-	22030#	840#	33 049380#	640#
22	11		Na	x	23970#	600#	7084#	18#	β^-	19010#	600#	33 025730#	640#
21	12		Mg	x	4962.2	2.9	7636.46	0.09	β^-	13430	80	33 005327	3
20	13		Al	x	-8470	80	8019.7	2.3	β^-	12050	80	32 990910	80
19	14		Si	x	-20514.3	0.7	8361.059	0.021	β^-	5823.0	1.3	32 977977.0	0.8
18	15		P	+	-26337.3	1.1	8513.81	0.03	β^-	248.5	1.1	32 971725.7	1.2
17	16		S		-26585.8543	0.0014	8497.630	0.000	*			32 971458.9098	0.0015
16	17		Cl		-21003.3	0.4	8304.755	0.012	β^+	5582.5	0.4	32 977452.0	0.4
15	18		Ar	x	-9384.3	0.4	7928.955	0.012	β^+	11619.0	0.6	32 989925.5	0.4
14	19		K	x	7040#	200#	7407#	6#	β^+	16430#	200#	33 007560#	210#
24	10	34	Ne	-nn	52840#	510#	6287#	15#	β^-	21550#	720#	34 056730#	550#
23	11		Na	x	31290#	500#	6898#	15#	β^-	22970#	500#	34 033590#	540#
22	12		Mg	x	8323	29	7550.4	0.8	β^-	11390	70	34 008940	30
21	13		Al	x	-3070	70	7862.4	2.0	β^-	16890	70	33 996710	70
20	14		Si	+pp	-19957	14	8336.1	0.4	β^-	4592	14	33 978576	15
19	15		P	x	-24548.7	0.8	8448.185	0.024	β^-	5383.0	0.8	33 973645.9	0.9
18	16		S		-29931.69	0.04	8583.498	0.001	*			33 967867.00	0.05
17	17		Cl		-24440.09	0.05	8398.970	0.002	β^+	5491.61	0.04	33 973762.49	0.05
16	18		Ar		-18378.29	0.08	8197.672	0.002	β^+	6061.79	0.06	33 980270.09	0.08
15	19		K	x	-1220#	300#	7670#	9#	β^+	17160#	300#	33 998690#	320#
14	20		Ca	x	13850#	300#	7204#	9#	β^+	15070#	420#	34 014870#	320#
24	11	35	Na	-n	37840#	590#	6744#	17#	β^-	22200#	610#	35 040620#	630#
23	12		Mg	x	15640	180	7356	5	β^-	15860	190	35 016790	190
22	13		Al	x	-220	70	7787.0	2.0	β^-	14140	80	34 999760	80
21	14		Si	2p-n	-14360	40	8168.7	1.1	β^-	10500	40	34 984580	40
20	15		P	+p	-24857.8	1.9	8446.25	0.05	β^-	3988.4	1.9	34 973314.1	2.0
19	16		S		-28846.22	0.04	8537.851	0.001	β^-	167.323	0.026	34 969032.31	0.04
18	17		Cl		-29013.54	0.04	8520.278	0.001	*			34 968852.68	0.04
17	18		Ar	-	-23047.4	0.7	8327.465	0.021	β^+	5966.1	0.7	34 975257.6	0.8
16	19		K	4n	-11172.9	0.5	7965.840	0.015	β^+	11874.5	0.9	34 988005.4	0.6
15	20		Ca	x	4790#	200#	7487#	6#	β^+	15960#	200#	35 005140#	210#
25	11	36	Na	-n	45910#	590#	6557#	17#	β^-	25530#	750#	36 049290#	640#
24	12		Mg	x	20380	460	7244	13	β^-	14430	470	36 021880	490
23	13		Al	x	5950	100	7623.5	2.8	β^-	18340	120	36 006390	110
22	14		Si	x	-12390	70	8111.3	2.0	β^-	7860	70	35 986700	80
21	15		P	+	-20251	13	8307.9	0.4	β^-	10413	13	35 978260	14
20	16		S		-30664.12	0.19	8575.389	0.005	β^-	-1142.11	0.19	35 967080.71	0.20
19	17		Cl		-29522.02	0.04	8521.932	0.001	β^-	709.52	0.04	35 968306.81	0.04
18	18		Ar		-30231.540	0.027	8519.909	0.001	*			35 967545.105	0.029
17	19		K		-17417.1	0.3	8142.219	0.009	β^+	12814.5	0.3	35 981302.0	0.4
16	20		Ca	4n	-6450	40	7815.9	1.1	β^+	10970	40	35 993070	40
15	21		Sc	x	15350#	300#	7189#	8#	β^+	21800#	300#	36 016480#	320#
26	11	37	Na	-nn	53140#	610#	6402#	16#	β^-	24850#	790#	37 057050#	650#
25	12		Mg	x	28290#	500#	7053#	14#	β^-	18480#	520#	37 030370#	540#
24	13		Al	x	9810	120	7531	3	β^-	16400	150	37 010530	130
23	14		Si	x	-6590	80	7953.5	2.2	β^-	12400	90	36 992920	90
22	15		P	p-2n	-19000	40	8267.6	1.0	β^-	7900	40	36 979610	40
21	16		S	-n	-26896.41	0.20	8459.935	0.005	β^-	4865.11	0.20	36 971125.51	0.21
20	17		Cl		-31761.52	0.05	8570.280	0.001	*			36 965902.60	0.06
19	18		Ar	-	-30947.65	0.21	8527.139	0.006	β^+	813.87	0.20	36 966776.33	0.22
18	19		K	-p	-24800.20	0.09	8339.847	0.003	β^+	6147.45	0.23	36 973375.89	0.10
17	20		Ca	x	-13136.1	0.6	8003.456	0.017	β^+	11664.1	0.6	36 985897.9	0.7
16	21		Sc	x	3480#	300#	7533#	8#	β^+	16620#	300#	37 003740#	320#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μu		
26	12	38	Mg	x	34070#	500#	6928#	13#	β^-	17860#	560#	38 036580#	540#
25	13		Al	x	16210	250	7377	7	β^-	20380	260	38 017400	270
24	14		Si	x	-4170	70	7892.8	1.8	β^-	10500	110	37 995520	80
23	15		P	x	-14670	90	8148.5	2.3	β^-	12190	90	37 984250	90
22	16		S	+	-26861	7	8448.78	0.19	β^-	2937	7	37 971163	8
21	17		Cl	-n	-29798.09	0.10	8505.480	0.003	β^-	4916.73	0.22	37 968010.44	0.11
20	18		Ar		-34714.82	0.19	8614.280	0.005	*			37 962732.11	0.21
19	19		K		-28800.75	0.20	8438.058	0.005	β^+	5914.07	0.04	37 969081.12	0.21
18	20		Ca		-22058.50	0.19	8240.043	0.005	β^+	6742.25	0.06	37 976319.22	0.21
17	21		Sc	x	-4550#	200#	7759#	5#	β^+	17510#	200#	37 995120#	210#
16	22		Ti	x	10670#	300#	7338#	8#	β^+	15210#	360#	38 011450#	320#
27	12	39	Mg	-n	42280#	510#	6747#	13#	β^-	21280#	720#	39 045380#	550#
26	13		Al	x	21000#	500#	7272#	13#	β^-	18680#	510#	39 022540#	540#
25	14		Si	x	2320	90	7731.0	2.3	β^-	15150	130	39 002490	100
24	15		P	x	-12830	90	8099.4	2.3	β^-	10330	100	38 986230	100
23	16		S	2p-n	-23160	50	8344.3	1.3	β^-	6640	50	38 975130	50
22	17		Cl	-nn	-29800.2	1.7	8494.40	0.04	β^-	3442	5	38 968008.2	1.9
21	18		Ar	+	-33242	5	8562.60	0.13	β^-	565	5	38 964313	5
20	19		K		-33807.190	0.005	8557.025	0.000	*			38 963706.486	0.005
19	20		Ca		-27282.7	0.6	8369.670	0.015	β^+	6524.5	0.6	38 970710.8	0.6
18	21		Sc	2n-p	-14173	24	8013.5	0.6	β^+	13110	24	38 984785	26
17	22		Ti	x	2200#	210#	7574#	5#	β^+	16370#	210#	39 002360#	220#
28	12	40	Mg	x	48610#	600#	6621#	15#	β^-	20630#	780#	40 052180#	640#
27	13		Al	x	27970#	500#	7118#	13#	β^-	22540#	550#	40 030030#	540#
26	14		Si	x	5430	230	7662	6	β^-	13500	260	40 005830	250
25	15		P	x	-8070	110	7979.8	2.8	β^-	14760	110	39 991330	120
24	16		S		-22838	4	8329.32	0.10	β^-	4720	30	39 975483	4
23	17		Cl	+	-27560	30	8427.8	0.8	β^-	7480	30	39 970420	30
22	18		Ar		-35039.8946	0.0022	8595.259	0.000	β^-	-1504.40	0.06	39 962383.1237	0.0024
21	19		K		-33535.49	0.06	8538.090	0.001	β^-	1310.89	0.06	39 963998.17	0.06
20	20		Ca		-34846.386	0.021	8551.303	0.001	*			39 962590.864	0.022
19	21		Sc	-	-20523.3	2.8	8173.67	0.07	β^+	14323.0	2.8	39 977967	3
18	22		Ti	--	-8850	160	7862	4	β^+	11670	160	39 990500	170
17	23		V	x	11890#	400#	7324#	10#	β^+	20740#	430#	40 012760#	430#
28	13	41	Al	x	33890#	600#	6997#	15#	β^-	21770#	700#	41 036380#	640#
27	14		Si	x	12120	370	7509	9	β^-	17100	380	41 013010	400
26	15		P	x	-4980	80	7906.6	2.0	β^-	14030	80	40 994650	90
25	16		S	x	-19009	4	8229.64	0.10	β^-	8300	70	40 979593	4
24	17		Cl	x	-27310	70	8413.0	1.7	β^-	5760	70	40 970680	70
23	18		Ar	-n	-33067.5	0.3	8534.372	0.008	β^-	2492.0	0.3	40 964500.6	0.4
22	19		K		-35559.543	0.004	8576.072	0.000	*			40 961825.258	0.004
21	20		Ca		-35137.89	0.14	8546.706	0.003	β^+	421.66	0.14	40 962277.92	0.15
20	21		Sc		-28642.41	0.08	8369.198	0.002	β^+	6495.48	0.16	40 969251.11	0.09
19	22		Ti	x	-15698	28	8034.4	0.7	β^+	12945	28	40 983150	30
18	23		V	x	200#	300#	7628#	7#	β^+	15890#	300#	41 000210#	320#
29	13	42	Al	x	40840#	600#	6857#	14#	β^-	24280#	780#	42 043840#	640#
28	14		Si	x	16560#	500#	7416#	12#	β^-	15550#	550#	42 017780#	540#
27	15		P	x	1010	210	7768	5	β^-	18650	210	42 001080	230
26	16		S	x	-17637.7	2.8	8193.23	0.07	β^-	7280	140	41 981065	3
25	17		Cl	x	-24910	140	8348	3	β^-	9510	140	41 973250	150
24	18		Ar	x	-34423	6	8555.61	0.14	β^-	599	6	41 963046	6
23	19		K	-n	-35022.03	0.11	8551.256	0.003	β^-	3525.22	0.18	41 962402.31	0.11
22	20		Ca		-38547.24	0.15	8616.563	0.004	*			41 958617.83	0.16
21	21		Sc		-32121.14	0.17	8444.933	0.004	β^+	6426.10	0.10	41 965516.53	0.18
20	22		Ti		-25104.66	0.28	8259.247	0.007	β^+	7016.48	0.22	41 973049.03	0.30
19	23		V	x	-7620#	300#	7824#	7#	β^+	17490#	300#	41 991820#	320#
18	24		Cr	x	6240#	400#	7476#	10#	β^+	13860#	500#	42 006700#	430#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
30	13	43	Al	x	47940#	700#	6720#	16#	β^-	24840#	920#	43 051470#	750#
29	14		Si	x	23100#	600#	7279#	14#	β^-	18420#	700#	43 024800#	640#
28	15		P	x	4680	370	7690	9	β^-	16880	370	43 005020	400
27	16		S	x	-12195	5	8063.83	0.12	β^-	12130	100	42 986908	5
26	17		Cl	x	-24320	100	8327.7	2.2	β^-	7690	100	42 973890	100
25	18		Ar	x	-32010	5	8488.24	0.12	β^-	4566	5	42 965636	6
24	19		K	-4n	-36575.4	0.4	8576.220	0.010	β^-	1833.4	0.5	42 960734.7	0.4
23	20		Ca		-38408.82	0.23	8600.663	0.005	*			42 958766.44	0.24
22	21		Sc	-p	-36188.1	1.9	8530.82	0.04	β^+	2220.7	1.9	42 961150.5	2.0
21	22		Ti	-n2p	-29321	7	8352.93	0.17	β^+	6867	7	42 968523	8
20	23		V	x	-17920	40	8069.5	1.0	β^+	11400	40	42 980770	50
19	24		Cr	x	-2300#	400#	7688#	9#	β^+	15620#	400#	42 997530#	430#
30	14	44	Si	x	28510#	600#	7174#	14#	β^-	18070#	780#	44 030610#	640#
29	15		P	x	10440#	500#	7567#	11#	β^-	19650#	500#	44 011210#	540#
28	16		S	x	-9204	5	7996.01	0.12	β^-	11410	190	43 990119	6
27	17		Cl	x	-20610	190	8237	4	β^-	12060	190	43 977870	200
26	18		Ar	x	-32673.3	1.6	8493.84	0.04	β^-	3108.2	1.6	43 964923.8	1.7
25	19		K	x	-35781.5	0.4	8546.701	0.010	β^-	5687.2	0.5	43 961587.0	0.5
24	20		Ca		-41468.7	0.3	8658.175	0.007	*			43 955481.6	0.3
23	21		Sc	-p	-37816.0	1.8	8557.38	0.04	β^+	3652.7	1.8	43 959402.9	1.9
22	22		Ti	$-\alpha$	-37548.6	0.7	8533.520	0.016	β^+	267.4	1.9	43 959689.9	0.8
21	23		V	x	-24120	180	8210	4	β^+	13430	180	43 974110	200
20	24		Cr	x	-13640#	300#	7955#	7#	β^+	10480#	350#	43 985360#	320#
19	25		Mn	x	6660#	500#	7475#	11#	β^+	20300#	590#	44 007150#	540#
31	14	45	Si	x	37210#	700#	7001#	16#	β^-	21890#	920#	45 039950#	750#
30	15		P	x	15320#	600#	7470#	13#	β^-	19310#	910#	45 016450#	640#
29	16		S	x	-3990	690	7882	15	β^-	14370	700	44 995720	740
28	17		Cl	x	-18360	100	8183.8	2.2	β^-	11410	100	44 980290	110
27	18		Ar	x	-29770.8	0.5	8419.952	0.011	β^-	6844.8	0.7	44 968039.7	0.6
26	19		K	x	-36615.6	0.5	8554.674	0.012	β^-	4196.5	0.6	44 960691.5	0.6
25	20		Ca		-40812.2	0.4	8630.544	0.008	β^-	259.0	0.8	44 956186.4	0.4
24	21		Sc		-41071.2	0.7	8618.915	0.016	*			44 955908.3	0.8
23	22		Ti	-	-39009.1	0.9	8555.706	0.020	β^+	2062.1	0.5	44 958122.0	0.9
22	23		V		-31881	8	8379.91	0.18	β^+	7129	8	44 965775	9
21	24		Cr	x	-19510	40	8087.7	0.8	β^+	12370	40	44 979050	40
20	25		Mn	x	-5130#	400#	7751#	9#	β^+	14380#	400#	44 994490#	430#
19	26		Fe	-pp	13430#	400#	7321#	9#	β^+	18560#	570#	45 014420#	430#
31	15	46	P	x	22780#	700#	7321#	15#	β^-	22750#	860#	46 024460#	750#
30	16		S	x	40#	500#	7798#	11#	β^-	13850#	530#	46 000040#	540#
29	17		Cl	x	-13810	160	8082	3	β^-	15920	170	45 985170	170
28	18		Ar	+pp	-29730	40	8411.5	0.9	β^-	5680	40	45 968080	40
27	19		K	x	-35413.9	0.7	8518.042	0.016	β^-	7724.5	2.4	45 961981.6	0.8
26	20		Ca		-43138.4	2.3	8668.96	0.05	β^-	-1377.9	2.3	45 953689.0	2.4
25	21		Sc	-n	-41760.5	0.7	8621.996	0.016	β^-	2366.5	0.7	45 955168.3	0.8
24	22		Ti		-44127.0	0.3	8656.434	0.007	*			45 952627.7	0.4
23	23		V		-37074.6	0.3	8486.113	0.007	β^+	7052.39	0.09	45 960198.8	0.4
22	24		Cr	x	-29474	20	8303.9	0.4	β^+	7601	20	45 968359	21
21	25		Mn	x	-12960#	400#	7928#	9#	β^+	16520#	400#	45 986090#	430#
20	26		Fe	x	590#	500#	7616#	11#	β^+	13540#	640#	46 000630#	540#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
32	15	47	P	x	29240#	800#	7200#	17#	β^-	21830#	950#	47 031390#	860#
31	16		S	x	7410#	500#	7647#	11#	β^-	17500#	640#	47 007950#	540#
30	17		Cl	x	-10100#	400#	8003#	9#	β^-	15110#	410#	46 989160#	430#
29	18		Ar	-n	-25210	90	8308.1	1.9	β^-	10500	90	46 972930	100
28	19		K	x	-35712.0	1.4	8514.879	0.030	β^-	6631.5	2.6	46 961661.6	1.5
27	20		Ca		-42343.5	2.2	8639.33	0.05	β^-	1992.2	1.2	46 954542.4	2.4
26	21		Sc		-44335.6	2.0	8665.07	0.04	β^-	600.8	1.9	46 952403.7	2.1
25	22		Ti		-44936.4	0.4	8661.206	0.008	*			46 951758.8	0.4
24	23		V		-42005.8	0.3	8582.207	0.007	β^+	2930.60	0.15	46 954904.9	0.4
23	24		Cr		-34561	7	8407.16	0.15	β^+	7445	7	46 962897	7
22	25		Mn	x	-22570	30	8135.3	0.7	β^+	12000	30	46 975780	30
21	26		Fe	x	-7590#	500#	7800#	11#	β^+	14970#	500#	46 991850#	540#
20	27		Co	x	9850#	800#	7412#	17#	β^+	17440#	950#	47 010570#	860#
32	16	48	S	x	12760#	600#	7545#	12#	β^-	16820#	780#	48 013700#	640#
31	17		Cl	x	-4060#	500#	7879#	10#	β^-	18380#	590#	47 995640#	540#
30	18		Ar	x	-22440#	300#	8245#	6#	β^-	9850#	300#	47 975910#	320#
29	19		K	x	-32284.5	0.8	8434.232	0.016	β^-	11940.3	0.8	47 965341.2	0.8
28	20		Ca		-44224.76	0.12	8666.689	0.003	β^-	279	5	47 952522.77	0.13
27	21		Sc		-44503	5	8656.20	0.10	β^-	3988	5	47 952224	5
26	22		Ti		-48491.7	0.4	8722.986	0.007	*			47 947942.0	0.4
25	23		V		-44476.8	1.0	8623.042	0.021	β^+	4015.0	1.0	47 952252.2	1.1
24	24		Cr	+nn	-42822	7	8572.26	0.15	β^+	1655	7	47 954029	8
23	25		Mn	x	-29320	170	8275	3	β^+	13500	170	47 968520	180
22	26		Fe	x	-18420#	400#	8031#	8#	β^+	10910#	430#	47 980230#	430#
21	27		Co	x	870#	800#	7613#	17#	β^+	19280#	900#	48 000930#	860#
20	28		Ni	-pp	16480#	510#	7272#	11#	β^+	15610#	950#	48 017690#	540#
33	16	49	S	-n	21200#	670#	7383#	14#	β^-	20060#	900#	49 022760#	720#
32	17		Cl	x	1150#	600#	7777#	12#	β^-	18010#	720#	49 001230#	640#
31	18		Ar	x	-16860#	400#	8128#	8#	β^-	12750#	400#	48 981900#	430#
30	19		K	x	-29611.5	0.8	8372.274	0.016	β^-	11688.4	0.8	48 968210.8	0.9
29	20		Ca	-n	-41299.89	0.21	8594.847	0.004	β^-	5261.2	2.7	48 955662.74	0.23
28	21		Sc		-46561.1	2.7	8686.25	0.06	β^-	2001.7	2.7	48 950014.6	2.9
27	22		Ti		-48562.8	0.4	8711.137	0.007	*			48 947865.7	0.4
26	23		V	-	-47961.0	0.9	8682.888	0.018	β^+	601.9	0.8	48 948511.8	1.0
25	24		Cr	+n	-45332.7	2.4	8613.28	0.05	β^+	2628.3	2.5	48 951333.3	2.5
24	25		Mn		-37637	10	8440.26	0.21	β^+	7696	10	48 959595	11
23	26		Fe	x	-24751	24	8161.3	0.5	β^+	12886	26	48 973429	26
22	27		Co	x	-10330#	700#	7851#	14#	β^+	14420#	700#	48 988910#	750#
21	28		Ni	x	7170#	800#	7478#	16#	β^+	17500#	1060#	49 007700#	860#
33	17	50	Cl	x	8430#	600#	7637#	12#	β^-	21350#	780#	50 009050#	640#
32	18		Ar	x	-12920#	500#	8048#	10#	β^-	12810#	500#	49 986130#	540#
31	19		K	x	-25728	8	8288.58	0.15	β^-	13861	8	49 972380	8
30	20		Ca	x	-39589.2	1.6	8550.16	0.03	β^-	4958	15	49 957499.2	1.7
29	21		Sc	-pn	-44548	15	8633.7	0.3	β^-	6883	15	49 952176	16
28	22		Ti		-51430.7	0.4	8755.698	0.007	β^-	-2206.8	0.9	49 944786.9	0.4
27	23		V	+n	-49223.9	0.9	8695.915	0.018	β^-	1037.9	0.3	49 947156.0	0.9
26	24		Cr		-50261.7	0.9	8701.025	0.018	*			49 946041.8	0.9
25	25		Mn		-42627.2	0.9	8532.689	0.018	β^+	7634.48	0.07	49 954237.8	0.9
24	26		Fe	4n	-34490	60	8354.3	1.2	β^+	8140	60	49 962970	60
23	27		Co	x	-17780#	600#	8004#	12#	β^+	16710#	600#	49 980910#	640#
22	28		Ni	x	-4900#	800#	7731#	16#	β^+	12880#	1000#	49 994740#	860#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
34	17	51	Cl	x	14480#	700#	7527#	14#	β^-	20340#	920#	51 015540#	750#
33	18		Ar	x	-5870#	600#	7910#	12#	β^-	16650#	600#	50 993700#	640#
32	19		K	x	-22516	13	8221.35	0.26	β^-	13822	26	50 975828	14
31	20		Ca	x	-36339	22	8477.0	0.4	β^-	6890	30	50 960989	24
30	21		Sc	-p2n	-43229	20	8596.8	0.4	β^-	6503	20	50 953592	21
29	22		Ti	-n	-49731.9	0.6	8708.969	0.012	β^-	2471.8	1.0	50 946610.7	0.7
28	23		V		-52203.7	0.9	8742.096	0.017	*			50 943957.0	0.9
27	24		Cr		-51451.1	0.9	8711.998	0.017	β^+	752.63	0.24	50 944765.0	0.9
26	25		Mn		-48243.5	0.9	8633.765	0.017	β^+	3207.6	0.4	50 948208.5	0.9
25	26		Fe		-40202	9	8460.75	0.18	β^+	8041	9	50 956841	10
24	27		Co	x	-27340	50	8193.3	0.9	β^+	12860	50	50 970650	50
23	28		Ni	x	-12940#	800#	7895#	16#	β^+	14400#	800#	50 986110#	860#
34	18	52	Ar	x	-970#	600#	7819#	11#	β^-	15580#	720#	51 998960#	640#
33	19		K	x	-16540#	400#	8104#	8#	β^-	17720#	410#	51 982240#	430#
32	20		Ca		-34260	60	8429.3	1.2	β^-	5900	140	51 963220	60
31	21		Sc		-40170	140	8527.8	2.7	β^-	9300	140	51 956880	150
30	22		Ti	-nn	-49469	7	8691.65	0.14	β^-	1975	7	51 946893	8
29	23		V	-n	-51443.6	0.9	8714.579	0.017	β^-	3974.5	0.9	51 944773.0	1.0
28	24		Cr		-55418.1	0.6	8775.967	0.011	*			51 940506.2	0.6
27	25		Mn	+pn	-50706.9	1.9	8670.32	0.04	β^+	4711.2	1.9	51 945563.9	2.0
26	26		Fe	-	-48332	7	8609.61	0.13	β^+	2375	6	51 948113	7
25	27		Co	x	-33990#	200#	8319#	4#	β^+	14340#	200#	51 963510#	210#
24	28		Ni	x	-23470#	700#	8101#	13#	β^+	10520#	730#	51 974800#	750#
23	29		Cu	x	-3070#	800#	7694#	15#	β^+	20410#	1060#	51 996710#	860#
35	18	53	Ar	x	6790#	700#	7677#	13#	β^-	18470#	860#	53 007290#	750#
34	19		K	x	-11680#	500#	8011#	9#	β^-	16780#	640#	52 987460#	540#
33	20		Ca	x	-28460#	400#	8313#	8#	β^-	9650#	480#	52 969450#	430#
32	21		Sc	x	-38110	270	8480	5	β^-	8720	290	52 959090	290
31	22		Ti	+	-46830	100	8630.2	1.9	β^-	5020	100	52 949730	110
30	23		V	+p	-51850	3	8710.11	0.06	β^-	3436	3	52 944337	3
29	24		Cr		-55285.9	0.6	8760.177	0.011	*			52 940648.1	0.6
28	25		Mn		-54689.0	0.6	8734.155	0.012	β^+	596.8	0.4	52 941288.9	0.7
27	26		Fe		-50946.7	1.7	8648.78	0.03	β^+	3742.3	1.7	52 945306.4	1.8
26	27		Co		-42658.6	1.8	8477.64	0.03	β^+	8288.1	0.4	52 954204.1	1.9
25	28		Ni	x	-29631	25	8217.1	0.5	β^+	13028	25	52 968190	27
24	29		Cu	x	-14350#	800#	7914#	15#	β^+	15280#	800#	52 984590#	860#
35	19	54	K	x	-5000#	600#	7889#	11#	β^-	19780#	780#	53 994630#	640#
34	20		Ca	x	-24780#	500#	8240#	9#	β^-	8820#	620#	53 973400#	540#
33	21		Sc	x	-33600	360	8389	7	β^-	12000	380	53 963930	390
32	22		Ti	x	-45600	120	8597.0	2.3	β^-	4300	130	53 951050	130
31	23		V	+	-49892	15	8662.02	0.28	β^-	7042	15	53 946439	16
30	24		Cr		-56933.7	0.6	8777.935	0.011	β^-	-1377.2	1.0	53 938879.2	0.6
29	25		Mn	-p	-55556.5	1.2	8737.944	0.021	β^-	697.3	1.1	53 940357.6	1.2
28	26		Fe		-56253.9	0.5	8736.370	0.009	*			53 939609.0	0.5
27	27		Co		-48009.3	0.5	8569.205	0.009	β^+	8244.55	0.09	53 948459.9	0.5
26	28		Ni	4n	-39220	50	8392.0	0.9	β^+	8790	50	53 957890	50
25	29		Cu	x	-21740#	500#	8054#	9#	β^+	17480#	510#	53 976660#	540#
24	30		Zn	-pp	-7420#	700#	7774#	13#	β^+	14330#	860#	53 992040#	750#
36	19	55	K	x	710#	700#	7788#	13#	β^-	19060#	860#	55 000760#	750#
35	20		Ca	x	-18350#	500#	8120#	9#	β^-	11630#	680#	54 980300#	540#
34	21		Sc	x	-29980	460	8318	8	β^-	11690	490	54 967820	500
33	22		Ti		-41670	160	8516.0	2.9	β^-	7480	160	54 955270	170
32	23		V		-49140	100	8637.7	1.7	β^-	5970	100	54 947240	100
31	24		Cr		-55108.6	0.6	8731.905	0.011	β^-	2603.1	0.4	54 940838.4	0.6
30	25		Mn		-57711.7	0.4	8765.009	0.008	*			54 938043.9	0.5
29	26		Fe		-57480.6	0.5	8746.583	0.009	β^+	231.09	0.18	54 938292.0	0.5
28	27		Co		-54029.3	0.5	8669.606	0.010	β^+	3451.4	0.3	54 941997.2	0.6
27	28		Ni	-	-45335.2	0.8	8497.308	0.014	β^+	8694.0	0.6	54 951330.6	0.8
26	29		Cu	x	-31640	160	8234.0	2.8	β^+	13700	160	54 966040	170
25	30		Zn	x	-14920#	700#	7916#	13#	β^+	16710#	720#	54 983980#	750#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
37	19	56	K	x	7930#	800#	7664#	14#	β^-	21830#	1000#	56 008510#	860#
36	20		Ca	x	-13900#	600#	8040#	11#	β^-	10830#	720#	55 985080#	640#
35	21		Sc	x	-24730#	400#	8220#	7#	β^-	14470#	420#	55 973450#	430#
34	22		Ti		-39210	140	8464.1	2.4	β^-	6920	200	55 957910	150
33	23		V		-46120	180	8574	3	β^-	9160	180	55 950480	190
32	24		Cr	x	-55281.2	1.9	8723.19	0.03	β^-	1629.6	1.9	55 940653.1	2.0
31	25		Mn		-56910.8	0.5	8738.320	0.008	β^-	3695.58	0.21	55 938903.7	0.5
30	26		Fe		-60606.4	0.5	8790.342	0.008	*			55 934936.3	0.5
29	27		Co		-56039.8	0.6	8694.825	0.010	β^+	4566.6	0.4	55 939838.8	0.6
28	28		Ni		-53906.9	0.5	8642.767	0.010	β^+	2132.9	0.4	55 942128.5	0.6
27	29		Cu	x	-38240#	200#	8349#	3#	β^+	15670#	200#	55 958950#	210#
26	30		Zn	x	-25580#	500#	8109#	9#	β^+	12660#	540#	55 972540#	540#
25	31		Ga	x	-4320#	600#	7715#	11#	β^+	21260#	780#	55 995360#	640#
37	20	57	Ca	x	-6870#	600#	7917#	10#	β^-	13830#	780#	56 992620#	640#
36	21		Sc	x	-20710#	500#	8146#	9#	β^-	13160#	560#	56 977770#	540#
35	22		Ti		-33870	250	8364	4	β^-	10360	330	56 963640	270
34	23		V		-44230	230	8532	4	β^-	8300	230	56 952520	240
33	24		Cr	x	-52524.1	1.9	8663.38	0.03	β^-	4962.0	2.4	56 943613.0	2.0
32	25		Mn		-57486.1	1.5	8736.711	0.026	β^-	2695.0	1.6	56 938286.1	1.6
31	26		Fe		-60181.2	0.5	8770.267	0.008	*			56 935392.8	0.5
30	27		Co		-59344.9	0.6	8741.871	0.011	β^+	836.2	0.5	56 936290.6	0.7
29	28		Ni		-56083.2	0.7	8670.923	0.012	β^+	3261.7	0.6	56 939792.2	0.7
28	29		Cu		-47308.3	0.6	8503.251	0.011	β^+	8775.0	0.4	56 949212.5	0.7
27	30		Zn	x	-32550#	210#	8231#	4#	β^+	14760#	210#	56 965060#	220#
26	31		Ga	x	-15650#	300#	7920#	5#	β^+	16900#	360#	56 983200#	320#
38	20	58	Ca	x	-1920#	700#	7835#	12#	β^-	12960#	920#	57 997940#	750#
37	21		Sc	x	-14880#	600#	8045#	10#	β^-	16240#	720#	57 984030#	640#
36	22		Ti	x	-31110#	400#	8311#	7#	β^-	9210#	420#	57 966600#	430#
35	23		V	x	-40320	130	8456.2	2.2	β^-	11520	240	57 956720	140
34	24		Cr	x	-51830	200	8641	3	β^-	3990	200	57 944350	220
33	25		Mn	x	-55827.6	2.7	8696.64	0.05	β^-	6326.9	2.7	57 940066.6	2.9
32	26		Fe		-62154.5	0.5	8792.239	0.008	β^-	-2307.9	1.1	57 933274.4	0.5
31	27		Co		-59846.6	1.2	8738.959	0.021	β^-	381.6	1.1	57 935752.1	1.3
30	28		Ni		-60228.2	0.5	8732.049	0.008	*			57 935342.4	0.5
29	29		Cu		-51667.1	0.7	8570.957	0.011	β^+	8561.0	0.4	57 944533.0	0.7
28	30		Zn	--	-42300	50	8395.9	0.9	β^+	9370	50	57 954590	50
27	31		Ga	x	-23490#	200#	8058#	3#	β^+	18810#	200#	57 974780#	210#
26	32		Ge	x	-7710#	400#	7773#	7#	β^+	15780#	450#	57 991720#	430#
38	21	59	Sc	x	-10300#	600#	7967#	10#	β^-	15340#	720#	58 988940#	640#
37	22		Ti	x	-25640#	400#	8214#	7#	β^-	12190#	430#	58 972470#	430#
36	23		V	x	-37830	160	8407.6	2.7	β^-	10060	290	58 959390	170
35	24		Cr	x	-47890	240	8565	4	β^-	7630	240	58 948590	260
34	25		Mn	x	-55525.3	2.3	8680.92	0.04	β^-	5138.8	2.4	58 940391.1	2.5
33	26		Fe	-n	-60664.2	0.5	8754.760	0.009	β^-	1565.0	0.4	58 934874.3	0.5
32	27		Co		-62229.1	0.5	8768.025	0.009	*			58 933194.3	0.6
31	28		Ni		-61156.1	0.5	8736.578	0.008	β^+	1073.00	0.19	58 934346.2	0.5
30	29		Cu		-56357.7	0.6	8641.990	0.011	β^+	4798.4	0.4	58 939497.5	0.7
29	30		Zn		-47215.0	0.8	8473.767	0.014	β^+	9142.8	0.6	58 949312.7	0.9
28	31		Ga	x	-33970#	170#	8236#	3#	β^+	13240#	170#	58 963530#	180#
27	32		Ge	x	-16310#	300#	7923#	5#	β^+	17660#	340#	58 982490#	320#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ u		
39	21	60	Sc	x	-4050#	700#	7865#	12#	β^-	18280#	860#	59 995650#	750#
38	22		Ti	x	-22330#	500#	8157#	8#	β^-	10910#	550#	59 976030#	540#
37	23		V	x	-33240	220	8325	4	β^-	13260	310	59 964310	240
36	24		Cr	x	-46500	210	8533	4	β^-	6460	210	59 950080	230
35	25		Mn	x	-52967.9	2.3	8628.14	0.04	β^-	8444	4	59 943136.6	2.5
34	26		Fe	-nn	-61412	3	8755.84	0.06	β^-	237	3	59 934071	4
33	27		Co	-n	-61649.7	0.5	8746.757	0.009	β^-	2822.81	0.21	59 933816.3	0.6
32	28		Ni		-64472.5	0.5	8780.764	0.008	*			59 930785.9	0.5
31	29		Cu	-	-58344.6	1.6	8665.592	0.027	β^+	6128.0	1.6	59 937364.5	1.8
30	30		Zn		-54173.7	0.6	8583.039	0.011	β^+	4170.8	1.6	59 941842.1	0.7
29	31		Ga	x	-39780#	200#	8330#	3#	β^+	14390#	200#	59 957290#	210#
28	32		Ge	x	-27610#	200#	8114#	3#	β^+	12180#	280#	59 970360#	210#
27	33		As	x	-5700#	400#	7736#	7#	β^+	21910#	450#	59 993880#	430#
40	21	61	Sc	x	930#	800#	7787#	13#	β^-	17280#	1000#	61 001000#	860#
39	22		Ti	x	-16350#	600#	8057#	10#	β^-	14160#	1080#	60 982450#	640#
38	23		V	x	-30510	890	8276	15	β^-	11950	900	60 967250	960
37	24		Cr	x	-42460	130	8459.5	2.1	β^-	9290	130	60 954420	140
36	25		Mn	x	-51742.1	2.3	8598.91	0.04	β^-	7178	3	60 944452.5	2.5
35	26		Fe	x	-58920.5	2.6	8703.77	0.04	β^-	3977.1	2.8	60 936746.2	2.8
34	27		Co	p2n	-62897.6	0.9	8756.141	0.015	β^-	1323.7	0.8	60 932476.6	1.0
33	28		Ni		-64221.3	0.5	8765.016	0.008	*			60 931055.6	0.5
32	29		Cu	p2n	-61983.8	1.0	8715.510	0.016	β^+	2237.5	1.0	60 933457.6	1.0
31	30		Zn		-56349	16	8610.31	0.26	β^+	5635	16	60 939507	17
30	31		Ga		-47130	40	8446.4	0.6	β^+	9210	40	60 949400	40
29	32		Ge	x	-33730#	300#	8214#	5#	β^+	13410#	300#	60 963790#	320#
28	33		As	x	-17590#	300#	7936#	5#	β^+	16140#	420#	60 981120#	320#
40	22	62	Ti	x	-12570#	700#	7996#	11#	β^-	12910#	760#	61 986510#	750#
39	23		V	x	-25480#	300#	8192#	5#	β^-	15420#	330#	61 972650#	320#
38	24		Cr	x	-40890	150	8428.1	2.4	β^-	7590#	210#	61 956100	160
37	25		Mn	IT	-48480#	150#	8538#	2#	β^-	10400#	150#	61 947950#	160#
36	26		Fe	x	-58878.0	2.8	8692.88	0.05	β^-	2546	19	61 936792	3
35	27		Co	+	-61424	19	8721.32	0.30	β^-	5322	19	61 934059	20
34	28		Ni		-66745.9	0.5	8794.546	0.008	*			61 928345.4	0.6
33	29		Cu	-	-62787.0	0.7	8718.074	0.011	β^+	3958.9	0.5	61 932595.4	0.8
32	30		Zn		-61167.5	0.7	8679.335	0.011	β^+	1619.5	0.7	61 934334.0	0.7
31	31		Ga		-51986.4	0.7	8518.635	0.011	β^+	9181.1	0.4	61 944190.3	0.8
30	32		Ge	x	-41900#	140#	8343#	2#	β^+	10090#	140#	61 955020#	150#
29	33		As	x	-24580#	300#	8051#	5#	β^+	17320#	330#	61 973610#	320#
41	22	63	Ti	x	-5820#	700#	7891#	11#	β^-	16170#	810#	62 993750#	750#
40	23		V	x	-21990#	400#	8135#	6#	β^-	13730#	610#	62 976390#	430#
39	24		Cr	x	-35720	460	8340	7	β^-	11160	460	62 961650	490
38	25		Mn	x	-46887	4	8505.10	0.06	β^-	8749	6	62 949665	4
37	26		Fe		-55636	4	8631.55	0.07	β^-	6215	19	62 940273	5
36	27		Co		-61851	19	8717.79	0.29	β^-	3661	19	62 933600	20
35	28		Ni		-65512.3	0.5	8763.486	0.008	β^-	66.977	0.015	62 929669.6	0.6
34	29		Cu		-65579.3	0.5	8752.131	0.008	*			62 929597.7	0.6
33	30		Zn		-62213.1	1.6	8686.281	0.025	β^+	3366.2	1.5	62 933211.5	1.7
32	31		Ga	x	-56547.1	1.3	8583.926	0.021	β^+	5666.0	2.0	62 939294.2	1.4
31	32		Ge	x	-46920	40	8418.7	0.6	β^+	9630	40	62 949630	40
30	33		As	x	-33630#	200#	8195#	3#	β^+	13290#	200#	62 963900#	210#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
41	23	64	V	x	-16170#	400#	8043#	6#	β^-	17290#	500#	63 982640#	430#
40	24		Cr	x	-33460#	300#	8301#	5#	β^-	9530#	300#	63 964080#	320#
39	25		Mn	x	-42989	4	8437.42	0.06	β^-	11981	6	63 953849	4
38	26		Fe	x	-54970	5	8612.39	0.08	β^-	4822	21	63 940988	5
37	27		Co	+	-59792	20	8675.5	0.3	β^-	7307	20	63 935811	21
36	28		Ni		-67098.5	0.5	8777.454	0.009	β^-	-1674.38	0.23	63 927966.8	0.6
35	29		Cu		-65424.1	0.5	8739.068	0.008	β^-	579.7	0.7	63 929764.3	0.6
34	30		Zn		-66003.8	0.7	8735.901	0.010	*			63 929142.0	0.7
33	31		Ga		-58832.8	1.4	8611.630	0.022	β^+	7171.0	1.5	63 936840.4	1.5
32	32		Ge	x	-54315	4	8528.82	0.06	β^+	4517	4	63 941690	4
31	33		As	-p	-39650#	300#	8287#	5#	β^+	14660#	300#	63 957430#	330#
30	34		Se	x	-26930#	500#	8076#	8#	β^+	12720#	590#	63 971090#	540#
42	23	65	V	x	-11640#	500#	7974#	8#	β^-	16340#	590#	64 987500#	540#
41	24		Cr	x	-27980#	300#	8213#	5#	β^-	12990#	300#	64 969960#	320#
40	25		Mn	x	-40967	4	8400.68	0.06	β^-	10254	8	64 956020	4
39	26		Fe	x	-51221	7	8546.40	0.10	β^-	7964	7	64 945011	7
38	27		Co	x	-59185.2	2.1	8656.88	0.03	β^-	5940.0	2.2	64 936462.1	2.2
37	28		Ni	-n	-65125.2	0.6	8736.233	0.009	β^-	2138.2	0.7	64 930085.2	0.6
36	29		Cu		-67263.5	0.7	8757.093	0.010	*			64 927789.7	0.7
35	30		Zn		-65911.8	0.7	8724.262	0.010	β^+	1351.7	0.4	64 929240.8	0.7
34	31		Ga		-62657.3	0.8	8662.157	0.013	β^+	3254.5	0.7	64 932734.6	0.9
33	32		Ge		-56478.2	2.2	8555.06	0.03	β^+	6179.1	2.3	64 939368.1	2.3
32	33		As	x	-46940	80	8396.2	1.3	β^+	9540	80	64 949610	90
31	34		Se	x	-33160#	600#	8172#	9#	β^+	13780#	600#	64 964400#	640#
43	23	66	V	x	-5610#	600#	7884#	9#	β^-	18930#	780#	65 993980#	640#
42	24		Cr	x	-24540#	500#	8159#	8#	β^-	12220#	500#	65 973660#	540#
41	25		Mn	x	-36750	11	8331.80	0.17	β^-	13317	12	65 960547	12
40	26		Fe	x	-50068	4	8521.72	0.06	β^-	6341	15	65 946250	4
39	27		Co	x	-56409	14	8605.94	0.21	β^-	9598	14	65 939443	15
38	28		Ni	x	-66006.3	1.4	8739.508	0.021	β^-	251.8	1.5	65 929139.3	1.5
37	29		Cu		-66258.1	0.7	8731.469	0.010	β^-	2641.0	1.0	65 928869.0	0.7
36	30		Zn		-68899.1	0.9	8759.630	0.013	*			65 926033.8	0.9
35	31		Ga	-	-63724	3	8669.37	0.05	β^+	5175	3	65 931589	3
34	32		Ge	x	-61607.0	2.4	8625.44	0.04	β^+	2117	4	65 933862.1	2.6
33	33		As	x	-52025	6	8468.40	0.09	β^+	9582	6	65 944149	6
32	34		Se	x	-41370#	300#	8295#	5#	β^+	10660#	300#	65 955590#	320#
43	24	67	Cr	x	-18480#	500#	8067#	8#	β^-	14830#	640#	66 980160#	540#
42	25		Mn	x	-33310#	400#	8277#	6#	β^-	12760#	460#	66 964240#	430#
41	26		Fe	x	-46070	220	8455	3	β^-	9250	220	66 950540	230
40	27		Co	x	-55322	6	8581.74	0.10	β^-	8421	7	66 940610	7
39	28		Ni	x	-63742.7	2.9	8695.75	0.04	β^-	3576	3	66 931569	3
38	29		Cu	x	-67318.8	1.2	8737.447	0.018	β^-	561.3	1.5	66 927730.3	1.3
37	30		Zn		-67880.1	0.9	8734.148	0.013	*			66 927127.7	1.0
36	31		Ga		-66878.9	1.2	8707.528	0.018	β^+	1001.2	1.1	66 928202.5	1.3
35	32		Ge	-n2p	-62658	5	8632.85	0.07	β^+	4221	5	66 932734	5
34	33		As		-56587.2	0.4	8530.568	0.007	β^+	6071	5	66 939251.1	0.5
33	34		Se	x	-46580	70	8369.5	1.0	β^+	10010	70	66 949990	70
32	35		Br	x	-32930#	500#	8154#	8#	β^+	13650#	510#	66 964650#	540#
44	24	68	Cr	x	-14880#	700#	8014#	10#	β^-	13420#	860#	67 984030#	750#
43	25		Mn	x	-28300#	500#	8200#	7#	β^-	15530#	620#	67 969620#	540#
42	26		Fe	x	-43830	370	8417	5	β^-	8100	390	67 952950	390
41	27		Co	x	-51920	150	8524.3	2.2	β^-	11540	150	67 944260	160
40	28		Ni	x	-63463.8	3.0	8682.47	0.04	β^-	2103	3	67 931869	3
39	29		Cu	x	-65567.0	1.6	8701.890	0.023	β^-	4439.8	1.8	67 929610.9	1.7
38	30		Zn		-70006.8	0.9	8755.677	0.013	*			67 924844.6	1.0
37	31		Ga	-	-67085.7	1.5	8701.214	0.022	β^+	2921.1	1.2	67 927980.5	1.6
36	32		Ge	x	-66978.8	1.9	8688.136	0.028	β^+	107.0	2.4	67 928095.3	2.0
35	33		As		-58894.5	1.8	8557.745	0.027	β^+	8084.3	2.6	67 936774.1	2.0
34	34		Se	x	-54189.4	0.5	8477.047	0.007	β^+	4705.1	1.9	67 941825.2	0.5
33	35		Br	-p	-38440#	310#	8234#	5#	β^+	15750#	310#	67 958730#	330#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
44	25	69	Mn	x	-24540#	600#	8143#	9#	β^-	14520#	720#	68 973660#	640#
43	26		Fe	x	-39060#	400#	8343#	6#	β^-	11110#	440#	68 958070#	430#
42	27		Co	x	-50170	190	8492.3	2.8	β^-	9810	190	68 946140	200
41	28		Ni	x	-59979	4	8623.10	0.05	β^-	5758	4	68 935610	4
40	29		Cu	x	-65736.2	1.4	8695.204	0.020	β^-	2681.4	1.7	68 929429.3	1.5
39	30		Zn	-n	-68417.6	0.9	8722.726	0.013	β^-	910.2	1.5	68 926550.7	1.0
38	31		Ga		-69327.8	1.2	8724.579	0.017	*			68 925573.5	1.3
37	32		Ge		-67100.7	1.3	8680.963	0.019	β^+	2227.1	0.5	68 927964.5	1.4
36	33		As		-63110	30	8611.8	0.5	β^+	3990	30	68 932250	30
35	34		Se		-56434.7	1.5	8503.707	0.022	β^+	6680	30	68 939414.8	1.6
34	35		Br	-p	-46110	40	8342.8	0.5	β^+	10320	40	68 950500	40
33	36		Kr	x	-32440#	400#	8133#	6#	β^+	13680#	400#	68 965180#	430#
45	25	70	Mn	x	-19220#	700#	8066#	10#	β^-	17090#	860#	69 979370#	750#
44	26		Fe	x	-36310#	500#	8299#	7#	β^-	10610#	590#	69 961020#	540#
43	27		Co	x	-46920	300	8440	4	β^-	12290	300	69 949630	320
42	28		Ni	x	-59213.9	2.1	8604.29	0.03	β^-	3762.5	2.4	69 936431.3	2.3
41	29		Cu	x	-62976.4	1.1	8646.865	0.015	β^-	6588.3	2.2	69 932392.1	1.2
40	30		Zn		-69564.7	1.9	8729.807	0.027	β^-	-654.6	1.6	69 925319.2	2.1
39	31		Ga		-68910.1	1.2	8709.280	0.017	β^-	1651.7	1.5	69 926021.9	1.3
38	32		Ge		-70561.8	0.8	8721.699	0.012	*			69 924248.8	0.9
37	33		As	-	-64340	50	8621.7	0.7	β^+	6220	50	69 930930	50
36	34		Se	x	-61929.9	1.6	8576.033	0.023	β^+	2410	50	69 933515.5	1.7
35	35		Br	x	-51426	15	8414.80	0.21	β^+	10504	15	69 944792	16
34	36		Kr	x	-40950#	200#	8254#	3#	β^+	10480#	200#	69 956040#	210#
46	25	71	Mn	x	-15200#	700#	8010#	10#	β^-	15800#	920#	70 983680#	750#
45	26		Fe	x	-31000#	600#	8221#	8#	β^-	13370#	760#	70 966720#	640#
44	27		Co	x	-44370	470	8399	7	β^-	11040	470	70 952370	500
43	28		Ni	x	-55406.2	2.2	8543.16	0.03	β^-	7304.9	2.7	70 940519.0	2.4
42	29		Cu	x	-62711.1	1.5	8635.022	0.021	β^-	4618	3	70 932676.8	1.6
41	30		Zn		-67328.8	2.7	8689.04	0.04	β^-	2810.3	2.8	70 927719.6	2.8
40	31		Ga		-70139.1	0.8	8717.604	0.011	*			70 924702.6	0.9
39	32		Ge		-69906.5	0.8	8703.308	0.012	β^+	232.64	0.22	70 924952.3	0.9
38	33		As	-	-67893	4	8663.93	0.06	β^+	2013	4	70 927114	4
37	34		Se	x	-63146.5	2.8	8586.06	0.04	β^+	4747	5	70 932209	3
36	35		Br		-56502	5	8481.46	0.08	β^+	6644	6	70 939342	6
35	36		Kr		-46330	130	8327.1	1.8	β^+	10180	130	70 950270	140
34	37		Rb	x	-32300#	500#	8119#	7#	β^+	14020#	520#	70 965320#	540#
46	26	72	Fe	x	-28100#	700#	8179#	10#	β^-	11680#	810#	71 969830#	750#
45	27		Co	x	-39780#	400#	8330#	6#	β^-	14440#	400#	71 957290#	430#
44	28		Ni	x	-54226.1	2.2	8520.21	0.03	β^-	5556.9	2.6	71 941785.9	2.4
43	29		Cu	x	-59783.0	1.4	8586.525	0.019	β^-	8362.5	2.6	71 935820.3	1.5
42	30		Zn	x	-68145.5	2.1	8691.804	0.030	β^-	442.8	2.3	71 926842.8	2.3
41	31		Ga		-68588.3	0.8	8687.088	0.011	β^-	3997.6	0.8	71 926367.5	0.9
40	32		Ge		-72585.90	0.08	8731.745	0.001	*			71 922075.83	0.08
39	33		As	-	-68230	4	8660.38	0.06	β^+	4356	4	71 926752	4
38	34		Se	x	-67868.2	2.0	8644.489	0.027	β^+	362	5	71 927140.5	2.1
37	35		Br	x	-59067	7	8511.39	0.09	β^+	8801	7	71 936589	7
36	36		Kr	x	-53941	8	8429.32	0.11	β^+	5127	10	71 942092	9
35	37		Rb	x	-38120#	500#	8199#	7#	β^+	15820#	500#	71 959080#	540#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
47	26	73	Fe	x	-22620#	700#	8102#	10#	β^-	14280#	860#	72 975720#	750#
46	27		Co	x	-36900#	500#	8287#	7#	β^-	13210#	500#	72 960390#	540#
45	28		Ni	x	-50108.2	2.4	8457.65	0.03	β^-	8879	3	72 946206.7	2.6
44	29		Cu		-58987.4	1.9	8568.569	0.027	β^-	6606.0	2.7	72 936674.4	2.1
43	30		Zn	x	-65593.4	1.9	8648.345	0.026	β^-	4105.9	2.5	72 929582.6	2.0
42	31		Ga	x	-69699.3	1.7	8693.873	0.023	β^-	1598.2	1.7	72 925174.7	1.8
41	32		Ge		-71297.52	0.06	8705.049	0.001	*			72 923458.96	0.06
40	33		As		-70953	4	8689.61	0.05	β^+	345	4	72 923829	4
39	34		Se		-68227	7	8641.56	0.10	β^+	2725	7	72 926755	8
38	35		Br	x	-63648	7	8568.10	0.10	β^+	4580	10	72 9231672	8
37	36		Kr	x	-56552	7	8460.18	0.09	β^+	7096	10	72 939289	7
36	37		Rb	-p	-46080#	100#	8306#	1#	β^+	10470#	100#	72 950530#	110#
35	38		Sr	x	-31950#	400#	8102#	5#	β^+	14130#	410#	72 965700#	430#
48	26	74	Fe	x	-19240#	800#	8056#	11#	β^-	13230#	1000#	73 979350#	860#
47	27		Co	x	-32460#	600#	8225#	8#	β^-	15990#	720#	73 965150#	640#
46	28		Ni	x	-48460#	400#	8430#	5#	β^-	7550#	400#	73 947980#	430#
45	29		Cu	x	-56006	6	8521.56	0.08	β^-	9751	7	73 939875	7
44	30		Zn	x	-65756.7	2.5	8642.75	0.03	β^-	2293	4	73 929407.3	2.7
43	31		Ga	x	-68049.6	3.0	8663.17	0.04	β^-	5372.8	3.0	73 926946	3
42	32		Ge		-73422.442	0.013	8725.200	0.000	β^-	-2562.4	1.7	73 921177.762	0.014
41	33		As		-70860.1	1.7	8680.001	0.023	β^-	1353.1	1.7	73 923928.6	1.8
40	34		Se		-72213.202	0.015	8687.715	0.000	*			73 922475.935	0.016
39	35		Br		-65288	6	8583.56	0.08	β^+	6925	6	73 929910	6
38	36		Kr		-62331.8	2.0	8533.038	0.027	β^+	2956	6	73 933084.0	2.2
37	37		Rb		-51916	3	8381.71	0.04	β^+	10416	3	73 944266	3
36	38		Sr	x	-40830#	100#	8221#	1#	β^+	11090#	100#	73 956170#	110#
48	27	75	Co	x	-29100#	700#	8178#	9#	β^-	15150#	760#	74 968760#	750#
47	28		Ni	x	-44250#	300#	8369#	4#	β^-	10230#	300#	74 952500#	320#
46	29		Cu	x	-54471.3	2.3	8495.09	0.03	β^-	8088	3	74 941522.6	2.5
45	30		Zn	x	-62558.9	2.0	8592.497	0.026	β^-	5906	3	74 932840.2	2.1
44	31		Ga	x	-68464.6	2.4	8660.81	0.03	β^-	3392.4	2.4	74 926500.2	2.6
43	32		Ge	-n	-71856.96	0.05	8695.609	0.001	β^-	1177.2	0.9	74 922858.37	0.06
42	33		As		-73034.2	0.9	8700.874	0.012	*			74 921594.6	0.9
41	34		Se		-72169.48	0.07	8678.913	0.001	β^+	864.7	0.9	74 922522.87	0.08
40	35		Br	x	-69107	4	8627.65	0.06	β^+	3062	4	74 925810	5
39	36		Kr	x	-64324	8	8553.44	0.11	β^+	4783	9	74 930946	9
38	37		Rb	x	-57218.7	1.2	8448.275	0.016	β^+	7105	8	74 938573.2	1.3
37	38		Sr	-	-46620	220	8296.5	2.9	β^+	10600	220	74 949950	240
49	27	76	Co	x	-24100#	800#	8110#	11#	β^-	17510#	950#	75 974130#	860#
48	28		Ni	x	-41610#	500#	8331#	7#	β^-	9370#	500#	75 955330#	540#
47	29		Cu	x	-50976	7	8443.53	0.09	β^-	11327	7	75 945275	7
46	30		Zn		-62303.0	1.5	8582.273	0.019	β^-	3993.6	2.4	75 933115.0	1.6
45	31		Ga	x	-66296.6	2.0	8624.526	0.026	β^-	6916.2	2.0	75 928827.6	2.1
44	32		Ge		-73212.889	0.018	8705.236	0.000	β^-	-921.5	0.9	75 921402.726	0.019
43	33		As	-n	-72291.4	0.9	8682.816	0.012	β^-	2960.6	0.9	75 922392.0	1.0
42	34		Se		-75251.950	0.016	8711.477	0.000	*			75 919213.704	0.017
41	35		Br	-	-70289	9	8635.88	0.12	β^+	4963	9	75 924542	10
40	36		Kr		-69014	4	8608.81	0.05	β^+	1275	10	75 925910	4
39	37		Rb	x	-60479.1	0.9	8486.215	0.012	β^+	8535	4	75 935073.0	1.0
38	38		Sr	x	-54250	30	8393.9	0.5	β^+	6230	30	75 941760	40
37	39		Y	x	-38600#	500#	8178#	7#	β^+	15650#	500#	75 958560#	540#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μu		
49	28	77	Ni	x	-36750#	500#	8264#	7#	β^-	11770#	530#	76 960550#	540#
48	29		Cu	x	-48510#	150#	8407#	2#	β^-	10280#	150#	76 947920#	160#
47	30		Zn		-58789.2	2.0	8530.003	0.026	β^-	7203	3	76 936887.2	2.1
46	31		Ga	x	-65992.3	2.4	8613.39	0.03	β^-	5220.5	2.4	76 929154.3	2.6
45	32		Ge	-n	-71212.86	0.05	8671.029	0.001	β^-	2703.5	1.7	76 923549.84	0.06
44	33		As		-73916.3	1.7	8695.978	0.022	β^-	683.2	1.7	76 920647.6	1.8
43	34		Se		-74599.48	0.06	8694.690	0.001	*			76 919914.15	0.07
42	35		Br	—	-73234.8	2.8	8666.81	0.04	β^+	1364.7	2.8	76 921379	3
41	36		Kr	x	-70169.4	2.0	8616.836	0.025	β^+	3065	3	76 924670.0	2.1
40	37		Rb	x	-64830.5	1.3	8537.339	0.017	β^+	5339.0	2.4	76 930401.6	1.4
39	38		Sr	x	-57803	8	8435.92	0.10	β^+	7027	8	76 937945	9
38	39		Y	-p	-46780#	60#	8283#	1#	β^+	11030#	60#	76 949780#	70#
50	28	78	Ni	x	-34130#	800#	8228#	10#	β^-	10370#	950#	77 963360#	860#
49	29		Cu	x	-44500	500	8351	6	β^-	12990	500	77 952230	540
48	30		Zn		-57483.2	1.9	8507.379	0.025	β^-	6222.7	2.7	77 938289.2	2.1
47	31		Ga		-63705.9	1.9	8577.127	0.024	β^-	8156	4	77 931608.8	2.0
46	32		Ge	-nn	-71862	4	8671.66	0.05	β^-	955	10	77 922853	4
45	33		As	+pn	-72817	10	8673.88	0.13	β^-	4209	10	77 921828	11
44	34		Se		-77025.91	0.18	8717.806	0.002	β^-	-3574	4	77 917309.28	0.20
43	35		Br	—	-73452	4	8661.96	0.05	β^-	727	4	77 921146	4
42	36		Kr		-74179.6	0.7	8661.254	0.009	*			77 920364.9	0.8
41	37		Rb	x	-66935	3	8558.35	0.04	β^+	7244	3	77 928142	3
40	38		Sr	x	-63174	7	8500.10	0.10	β^+	3761	8	77 932180	8
39	39		Y	x	-52530#	400#	8354#	5#	β^+	10650#	400#	77 943610#	430#
38	40		Zr	x	-41300#	500#	8200#	6#	β^+	11230#	640#	77 955660#	540#
51	28	79	Ni	x	-27710#	800#	8145#	10#	β^-	14190#	900#	78 970250#	860#
50	29		Cu	x	-41900#	400#	8314#	5#	β^-	11530#	400#	78 955020#	430#
49	30		Zn		-53432.3	2.2	8450.582	0.028	β^-	9115.4	2.9	78 942638.1	2.4
48	31		Ga		-62547.7	1.9	8556.063	0.024	β^-	6980	40	78 932852.3	2.0
47	32		Ge		-69530	40	8634.5	0.5	β^-	4110	40	78 925360	40
46	33		As		-73636	5	8676.62	0.07	β^-	2281	5	78 920948	6
45	34		Se	-n	-75917.42	0.23	8695.591	0.003	β^-	150.6	1.3	78 918499.29	0.24
44	35		Br	+n	-76068.1	1.3	8687.595	0.016	*			78 918337.6	1.4
43	36		Kr	—	-74442	4	8657.11	0.05	β^+	1626	3	78 920083	4
42	37		Rb	x	-70803.0	2.1	8601.142	0.027	β^+	3639	4	78 923989.9	2.3
41	38		Sr	x	-65477	8	8523.82	0.11	β^+	5326	9	78 929708	9
40	39		Y	—	-58360	450	8424	6	β^+	7120	450	78 937350	480
39	40		Zr	x	-47060#	400#	8271#	5#	β^+	11300#	600#	78 949480#	430#
51	29	80	Cu	x	-36430#	600#	8243#	7#	β^-	15220#	600#	79 960890#	640#
50	30		Zn		-51648.6	2.6	8423.54	0.03	β^-	7575	4	79 944552.9	2.8
49	31		Ga	x	-59223.7	2.9	8508.45	0.04	β^-	10312	4	79 936421	3
48	32		Ge	x	-69535.3	2.1	8627.570	0.026	β^-	2679	4	79 925350.8	2.2
47	33		As	x	-72214	3	8651.28	0.04	β^-	5545	4	79 922475	4
46	34		Se		-77759.5	1.2	8710.813	0.016	β^-	-1870.5	0.3	79 916521.8	1.3
45	35		Br	—	-75889.0	1.3	8677.653	0.016	β^-	2004.3	1.4	79 918529.8	1.4
44	36		Kr		-77893.3	0.7	8692.928	0.009	*			79 916378.1	0.7
43	37		Rb	x	-72175.5	1.9	8611.675	0.023	β^+	5717.8	2.0	79 922516.4	2.0
42	38		Sr		-70311	3	8578.60	0.04	β^+	1864	4	79 924518	4
41	39		Y	x	-61147	6	8454.26	0.08	β^+	9165	7	79 934356	7
40	40		Zr	x	-55520	1490	8374	19	β^+	5630	1490	79 940400	1600

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ u		
52	29	81	Cu	x	-31790#	800#	8184#	10#	β^-	14410#	800#	80 965870#	860#
51	30		Zn	x	-46200	5	8351.93	0.06	β^-	11428	6	80 950403	5
50	31		Ga	x	-57628	3	8483.36	0.04	β^-	8664	4	80 938134	4
49	32		Ge	x	-66291.7	2.1	8580.658	0.025	β^-	6242	3	80 928832.9	2.2
48	33		As		-72533.3	2.7	8648.06	0.03	β^-	3855.7	2.8	80 922132.3	2.9
47	34		Se		-76389.0	1.3	8685.999	0.016	β^-	1586.6	1.7	80 917993.0	1.4
46	35		Br		-77975.7	1.3	8695.929	0.016	*			80 916289.7	1.4
45	36		Kr		-77694.8	1.4	8682.803	0.017	β^+	280.8	0.5	80 916591.2	1.5
44	37		Rb		-75457	5	8645.51	0.06	β^+	2238	5	80 918994	5
43	38		Sr	x	-71528	3	8587.35	0.04	β^+	3929	6	80 923211	3
42	39		Y		-65712	5	8505.89	0.07	β^+	5816	6	80 929456	6
41	40		Zr		-58400	160	8405.9	2.0	β^+	7320	160	80 937310	180
40	41		Nb	x	-46950#	400#	8255#	5#	β^+	11450#	430#	80 949600#	430#
53	29	82	Cu	x	-25670#	800#	8108#	10#	β^-	16940#	850#	81 972440#	860#
52	30		Zn	x	-42610#	300#	8305#	4#	β^-	10320#	300#	81 954260#	320#
51	31		Ga	x	-52930.7	2.4	8421.049	0.030	β^-	12484	3	81 943176.5	2.6
50	32		Ge	x	-65415.1	2.2	8563.756	0.027	β^-	4688	5	81 929774.0	2.4
49	33		As	x	-70103	4	8611.39	0.05	β^-	7491	5	81 924741	5
48	34		Se		-77593.9	1.4	8693.197	0.017	β^-	-96.6	1.7	81 916699.5	1.5
47	35		Br		-77497.3	1.3	8682.477	0.016	β^-	3093.0	1.0	81 916803.2	1.4
46	36		Kr		-80590.3	0.9	8710.657	0.011	*			81 913482.7	0.9
45	37		Rb	IT	-76188	3	8647.43	0.04	β^+	4403	3	81 918209	3
44	38		Sr		-76010	6	8635.72	0.07	β^+	178	7	81 918400	6
43	39		Y	x	-68063	6	8529.26	0.07	β^+	7947	8	81 926931	6
42	40		Zr	—	-63940#	200#	8469#	2#	β^+	4120#	200#	81 931350#	220#
41	41		Nb	x	-52200#	300#	8317#	4#	β^+	11740#	360#	81 943960#	320#
53	30	83	Zn	x	-36740#	500#	8231#	6#	β^-	12520#	500#	82 960560#	540#
52	31		Ga	x	-49257.1	2.6	8372.57	0.03	β^-	11719	4	82 947120.3	2.8
51	32		Ge	x	-60976.4	2.4	8504.345	0.029	β^-	8693	4	82 934539.1	2.6
50	33		As	x	-69669.3	2.8	8599.65	0.03	β^-	5671	4	82 925207	3
49	34		Se	-n	-75341	3	8658.56	0.04	β^-	3673	5	82 919119	4
48	35		Br		-79013	4	8693.38	0.05	β^-	977	4	82 915176	4
47	36		Kr		-79990.03	0.30	8695.721	0.004	*			82 914127.2	0.3
46	37		Rb		-79070.6	2.3	8675.218	0.028	β^+	919.4	2.3	82 915114.2	2.5
45	38		Sr		-76798	7	8638.41	0.08	β^+	2273	6	82 917554	7
44	39		Y	x	-72205	19	8573.64	0.22	β^+	4593	20	82 922485	20
43	40		Zr	x	-65911	6	8488.39	0.08	β^+	6294	20	82 929242	7
42	41		Nb	—	-58410	300	8389	4	β^+	7500	300	82 937290	320
41	42		Mo	x	-46690#	400#	8238#	5#	β^+	11720#	500#	82 949880#	430#
54	30	84	Zn	x	-32410#	600#	8178#	7#	β^-	11870#	720#	83 965210#	640#
53	31		Ga	x	-44280#	400#	8310#	5#	β^-	13870#	400#	83 952460#	430#
52	32		Ge	x	-58148	3	8465.52	0.04	β^-	7705	4	83 937575	3
51	33		As	x	-65854	3	8547.94	0.04	β^-	10094	4	83 929303	3
50	34		Se		-75947.7	2.0	8658.793	0.023	β^-	1835	26	83 918466.8	2.1
49	35		Br		-77783	26	8671.3	0.3	β^-	4656	26	83 916496	28
48	36		Kr		-82439.335	0.004	8717.446	0.000	β^-	-2680.4	2.2	83 911497.728	0.004
47	37		Rb		-79759.0	2.2	8676.224	0.026	β^-	890.6	2.3	83 914375.2	2.4
46	38		Sr		-80649.6	1.2	8677.512	0.015	*			83 913419.1	1.3
45	39		Y		-73893	4	8587.77	0.05	β^+	6756	4	83 920672	5
44	40		Zr	x	-71421	6	8549.02	0.07	β^+	2473	7	83 923327	6
43	41		Nb	—	-61020#	300#	8416#	4#	β^+	10400#	300#	83 934490#	320#
42	42		Mo	x	-54500#	400#	8329#	5#	β^+	6520#	500#	83 941490#	430#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
55	30	85	Zn	x	-25840#	700#	8099#	8#	β^-	14220#	760#	84 972260#	750#
54	31		Ga	x	-40060#	300#	8257#	4#	β^-	13060#	300#	84 956990#	320#
53	32		Ge	x	-53123	4	8401.77	0.04	β^-	10066	5	84 942970	4
52	33		As	x	-63189	3	8510.98	0.04	β^-	9224	4	84 932164	3
51	34		Se	+3p	-72413.6	2.6	8610.30	0.03	β^-	6162	4	84 922260.8	2.8
50	35		Br	+n2p	-78575	3	8673.59	0.04	β^-	2905	4	84 915646	3
49	36		Kr	+	-81480.3	2.0	8698.562	0.024	β^-	687.0	2.0	84 912527.3	2.1
48	37		Rb		-82167.330	0.005	8697.441	0.000	*			84 911789.738	0.005
47	38		Sr		-81103.3	2.8	8675.72	0.03	β^+	1064.1	2.8	84 912932	3
46	39		Y	x	-77842	19	8628.15	0.22	β^+	3261	19	84 916433	20
45	40		Zr	x	-73174	6	8564.02	0.08	β^+	4668	20	84 921444	7
44	41		Nb	x	-66280	4	8473.71	0.05	β^+	6894	8	84 928846	4
43	42		Mo	x	-57510	16	8361.33	0.19	β^+	8770	16	84 938261	17
42	43		Tc	x	-46030#	400#	8217#	5#	β^+	11480#	400#	84 950580#	430#
55	31	86	Ga	x	-34460#	700#	8190#	8#	β^-	15300#	760#	85 963010#	750#
54	32		Ge	x	-49760#	300#	8359#	3#	β^-	9200#	300#	85 946580#	320#
53	33		As	x	-58962	3	8456.72	0.04	β^-	11541	4	85 936702	4
52	34		Se	x	-70503.2	2.5	8581.822	0.029	β^-	5129	4	85 924311.7	2.7
51	35		Br	+pp	-75632	3	8632.37	0.04	β^-	7633	3	85 918805	3
50	36		Kr		-83265.665	0.004	8712.029	0.000	β^-	-518.65	0.20	85 910610.627	0.004
49	37		Rb		-82747.01	0.20	8696.901	0.002	β^-	1776.2	1.1	85 911167.43	0.21
48	38		Sr		-84523.2	1.1	8708.457	0.013	*			85 909260.6	1.2
47	39		Y	—	-79283	14	8638.43	0.16	β^+	5240	14	85 914886	15
46	40		Zr		-77969	4	8614.05	0.04	β^+	1315	15	85 916297	4
45	41		Nb	x	-69133	6	8502.21	0.06	β^+	8836	7	85 925783	6
44	42		Mo	x	-64110	4	8434.71	0.04	β^+	5023	7	85 931175	4
43	43		Tc	x	-51300#	300#	8277#	3#	β^+	12810#	300#	85 944930#	320#
56	31	87	Ga	x	-29580#	800#	8133#	9#	β^-	14500#	900#	86 968250#	860#
55	32		Ge	x	-44080#	400#	8290#	5#	β^-	11540#	400#	86 952680#	430#
54	33		As	x	-55617.9	3.0	8413.85	0.03	β^-	10808	4	86 940292	3
53	34		Se	x	-66426.1	2.2	8529.091	0.026	β^-	7466	4	86 928688.6	2.4
52	35		Br	2p-n	-73892	3	8605.91	0.04	β^-	6818	3	86 920674	3
51	36		Kr	-n	-80709.52	0.25	8675.283	0.003	β^-	3888.27	0.25	86 913354.76	0.26
50	37		Rb		-84597.790	0.006	8710.983	0.000	β^-	282.2	1.1	86 909180.532	0.007
49	38		Sr		-84880.0	1.1	8705.235	0.012	*			86 908877.5	1.2
48	39		Y	—	-83018.3	1.6	8674.844	0.018	β^+	1861.7	1.1	86 910876.1	1.7
47	40		Zr		-79347	4	8623.65	0.05	β^+	3672	4	86 914818	5
46	41		Nb	x	-73873	7	8551.74	0.08	β^+	5473	8	86 920694	7
45	42		Mo		-66884.8	2.9	8462.42	0.03	β^+	6988	7	86 928196	3
44	43		Tc	x	-57690	4	8347.74	0.05	β^+	9195	5	86 938067	5
43	44		Ru	x	-45930#	400#	8204#	5#	β^+	11760#	400#	86 950690#	430#
56	32	88	Ge	x	-40140#	500#	8243#	6#	β^-	10580#	540#	87 956910#	540#
55	33		As	x	-50720#	200#	8354#	2#	β^-	13160#	200#	87 945550#	210#
54	34		Se	x	-63884	3	8495.00	0.04	β^-	6832	5	87 931417	4
53	35		Br	++	-70716	3	8563.75	0.04	β^-	8975	4	87 924083	3
52	36		Kr	x	-79691.3	2.6	8656.849	0.030	β^-	2917.7	2.6	87 914447.9	2.8
51	37		Rb		-82608.99	0.16	8681.114	0.002	β^-	5312.4	1.1	87 911315.59	0.17
50	38		Sr		-87921.4	1.1	8732.592	0.012	*			87 905612.5	1.2
49	39		Y	—	-84298.8	1.9	8682.536	0.021	β^+	3622.6	1.5	87 909501.6	2.0
48	40		Zr		-83628	5	8666.03	0.06	β^+	670	6	87 910221	6
47	41		Nb		-76180	60	8572.5	0.6	β^+	7450	60	87 918220	60
46	42		Mo	x	-72687	4	8523.91	0.04	β^+	3490	60	87 921968	4
45	43		Tc	x	-61680	150	8390.0	1.7	β^+	11010	150	87 933780	160
44	44		Ru	x	-54400#	300#	8298#	3#	β^+	7280#	330#	87 941600#	320#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ u		
57	32	89	Ge	x	-33730#	600#	8169#	7#	β^-	13070#	670#	88 963790#	640#
56	33		As	x	-46800#	300#	8307#	3#	β^-	12190#	300#	88 949760#	320#
55	34		Se	x	-58992	4	8435.28	0.04	β^-	9282	5	88 936669	4
54	35		Br	x	-68274	3	8530.78	0.04	β^-	8262	4	88 926705	4
53	36		Kr	x	-76535.8	2.1	8614.815	0.024	β^-	5176	6	88 917835.5	2.3
52	37		Rb		-81712	5	8664.19	0.06	β^-	4497	5	88 912278	6
51	38		Sr		-86208.7	1.1	8705.919	0.012	β^-	1500.4	2.3	88 907451.1	1.2
50	39		Y		-87709.2	2.2	8713.987	0.025	*			88 905840.3	2.4
49	40		Zr		-84876	3	8673.37	0.04	β^+	2832.8	2.8	88 908881	4
48	41		Nb		-80625	24	8616.81	0.27	β^+	4251	24	88 913445	25
47	42		Mo	x	-75015	4	8544.98	0.04	β^+	5610	24	88 919468	4
46	43		Tc	x	-67395	4	8450.57	0.04	β^+	7620	5	88 927649	4
45	44		Ru	x	-58110#	300#	8337#	3#	β^+	9290#	300#	88 937620#	320#
44	45		Rh	-p	-46030#	360#	8193#	4#	β^+	12080#	470#	88 950580#	390#
58	32	90	Ge	x	-29220#	700#	8118#	8#	β^-	12110#	920#	89 968630#	750#
57	33		As	x	-41330#	600#	8244#	7#	β^-	14470#	680#	89 955630#	640#
56	34		Se	x	-55800	330	8396	4	β^-	8200	330	89 940100	350
55	35		Br	x	-64000	3	8478.19	0.04	β^-	10959	4	89 931293	4
54	36		Kr	x	-74959.2	1.9	8591.259	0.021	β^-	4405	7	89 919527.9	2.0
53	37		Rb		-79365	7	8631.52	0.07	β^-	6584	7	89 914798	7
52	38		Sr		-85948.9	2.6	8695.981	0.029	β^-	545.9	1.4	89 907730.0	2.8
51	39		Y		-86494.9	2.2	8693.354	0.025	β^-	2278.7	1.6	89 907143.9	2.4
50	40		Zr		-88773.6	1.8	8709.980	0.021	*			89 904697.7	2.0
49	41		Nb		-82662	4	8633.38	0.04	β^+	6111	3	89 911258	4
48	42		Mo		-80173	4	8597.03	0.04	β^+	2489	3	89 913931	4
47	43		Tc	x	-70724.7	1.0	8483.359	0.011	β^+	9448	4	89 924073.9	1.1
46	44		Ru		-64884	4	8409.77	0.04	β^+	5841	4	89 930344	4
45	45		Rh	x	-51960#	400#	8257#	4#	β^+	12930#	400#	89 944220#	430#
58	33	91	As	x	-36900#	600#	8193#	7#	β^-	13440#	780#	90 960390#	640#
57	34		Se	x	-50340#	500#	8332#	6#	β^-	10770#	500#	90 945960#	540#
56	35		Br	-n2p	-61107	4	8441.92	0.04	β^-	9867	4	90 934399	4
55	36		Kr	x	-70974.0	2.2	8541.751	0.025	β^-	6771	8	90 923806.3	2.4
54	37		Rb		-77745	8	8607.56	0.09	β^-	5907	9	90 916537	8
53	38		Sr		-83652	6	8663.88	0.06	β^-	2699	5	90 910195	6
52	39		Y		-86351.9	2.6	8684.947	0.028	β^-	1544.3	1.8	90 907297.4	2.8
51	40		Zr		-87896.2	1.8	8693.320	0.020	*			90 905639.6	2.0
50	41		Nb		-86639	3	8670.90	0.04	β^+	1257.6	2.9	90 906990	4
49	42		Mo		-82209	6	8613.63	0.07	β^+	4430	7	90 911745	7
48	43		Tc		-75986.3	2.4	8536.651	0.026	β^+	6222	7	90 918425.4	2.5
47	44		Ru		-68239.5	2.2	8442.925	0.024	β^+	7747	3	90 926741.9	2.4
46	45		Rh	x	-58800#	400#	8331#	4#	β^+	9440#	400#	90 936880#	430#
45	46		Pd	x	-46280#	500#	8184#	6#	β^+	12520#	640#	90 950320#	540#
59	33	92	As	x	-30980#	700#	8127#	8#	β^-	15740#	920#	91 966740#	750#
58	34		Se	x	-46720#	600#	8290#	6#	β^-	9510#	600#	91 949840#	640#
57	35		Br	x	-56233	7	8384.91	0.07	β^-	12537	7	91 939632	7
56	36		Kr	x	-68769.3	2.7	8512.674	0.029	β^-	6003	7	91 926173.1	2.9
55	37		Rb		-74773	6	8569.42	0.07	β^-	8095	6	91 919728	7
54	38		Sr		-82867	3	8648.91	0.04	β^-	1950	9	91 911038	4
53	39		Y		-84817	9	8661.59	0.10	β^-	3643	9	91 908945	10
52	40		Zr		-88459.6	1.8	8692.684	0.020	β^-	-2005.9	1.8	91 905034.7	2.0
51	41		Nb		-86453.7	2.4	8662.377	0.026	β^-	354.1	2.5	91 907188.1	2.6
50	42		Mo		-86807.8	0.8	8657.722	0.008	*			91 906808.0	0.8
49	43		Tc		-78926	3	8563.54	0.03	β^+	7882	3	91 915270	3
48	44		Ru		-74301.2	2.7	8504.773	0.030	β^+	4624	4	91 920234.4	2.9
47	45		Rh	x	-62999	4	8373.42	0.05	β^+	11302	5	91 932368	5
46	46		Pd	x	-55070#	500#	8279#	5#	β^+	7930#	500#	91 940880#	540#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
59	34	93	Se	x	-40720#	800#	8223#	9#	β^-	12260#	920#	92 956290#	860#
58	35		Br	x	-52970	450	8346	5	β^-	11170	450	92 943130	480
57	36		Kr	x	-64136.0	2.5	8458.108	0.027	β^-	8484	8	92 931147.2	2.7
56	37		Rb		-72620	8	8540.92	0.08	β^-	7466	9	92 922039	8
55	38		Sr		-80086	8	8612.79	0.08	β^-	4142	12	92 914024	8
54	39		Y		-84228	11	8648.91	0.11	β^-	2895	10	92 909578	11
53	40		Zr		-87122.7	1.8	8671.627	0.020	β^-	90.3	1.5	92 906469.9	2.0
52	41		Nb		-87213.0	1.8	8664.186	0.020	*			92 906373.0	2.0
51	42		Mo		-86806.3	0.8	8651.401	0.008	β^+	406.7	1.9	92 906809.6	0.8
50	43		Tc	-p	-83605.4	1.3	8608.569	0.014	β^+	3201.0	1.0	92 910246.0	1.4
49	44		Ru		-77216.7	2.1	8531.462	0.022	β^+	6388.6	2.4	92 917104.4	2.2
48	45		Rh		-69011.8	2.6	8434.825	0.028	β^+	8205	3	92 925912.8	2.8
47	46		Pd	+p	-59140#	400#	8320#	4#	β^+	9870#	400#	92 936510#	430#
46	47		Ag	x	-46270#	500#	8173#	5#	β^+	12870#	640#	92 950330#	540#
60	34	94	Se	x	-36800#	800#	8180#	9#	β^-	10800#	900#	93 960490#	860#
59	35		Br	x	-47600#	400#	8286#	4#	β^-	13750#	400#	93 948900#	430#
58	36		Kr	x	-61348	12	8424.33	0.13	β^-	7215	12	93 934140	13
57	37		Rb		-68562.8	2.0	8492.764	0.022	β^-	10283.0	2.6	93 926394.8	2.2
56	38		Sr		-78845.7	1.7	8593.834	0.018	β^-	3507	7	93 915355.6	1.8
55	39		Y		-82353	6	8622.82	0.07	β^-	4918	6	93 911591	7
54	40		Zr		-87270.9	1.9	8666.818	0.020	β^-	-901.7	2.2	93 906310.8	2.0
53	41		Nb		-86369.2	1.8	8648.902	0.019	β^-	2043.6	1.8	93 907278.8	2.0
52	42		Mo		-88412.8	0.4	8662.320	0.005	*			93 905084.9	0.5
51	43		Tc	-	-84157	4	8608.72	0.04	β^+	4256	4	93 909654	4
50	44		Ru		-82584	3	8583.66	0.03	β^+	1574	5	93 911343	3
49	45		Rh		-72908	3	8472.40	0.04	β^+	9676	5	93 921730	4
48	46		Pd	x	-66101	4	8391.67	0.05	β^+	6807	5	93 929038	5
47	47		Ag	IT	-52410#	640#	8238#	7#	β^+	13690#	640#	93 943730#	690#
61	34	95	Se	x	-30460#	800#	8112#	8#	β^-	13310#	820#	94 967300#	860#
60	35		Br	x	-43770#	200#	8244#	2#	β^-	12390#	200#	94 953010#	210#
59	36		Kr	x	-56159	19	8366.00	0.20	β^-	9735	27	94 939711	20
58	37		Rb		-65894	20	8460.23	0.21	β^-	9228	20	94 929260	22
57	38		Sr		-75122	6	8549.14	0.06	β^-	6089	7	94 919353	6
56	39		Y		-81211	7	8605.00	0.07	β^-	4450	7	94 912816	7
55	40		Zr		-85661.6	1.8	8643.609	0.019	β^-	1123.5	1.8	94 908038.5	1.9
54	41		Nb		-86785.1	0.7	8647.200	0.007	β^-	925.6	0.5	94 906832.4	0.7
53	42		Mo		-87710.6	0.4	8648.707	0.005	*			94 905838.8	0.5
52	43		Tc		-86020	5	8622.68	0.05	β^+	1691	5	94 907654	5
51	44		Ru		-83456	10	8587.46	0.10	β^+	2564	11	94 910406	10
50	45		Rh		-78341	4	8525.37	0.04	β^+	5116	10	94 915898	4
49	46		Pd	x	-69965	3	8428.97	0.03	β^+	8376	5	94 924890	3
48	47		Ag	x	-59600#	400#	8312#	4#	β^+	10370#	400#	94 936020#	430#
47	48		Cd	x	-46630#	500#	8167#	5#	β^+	12970#	640#	94 949940#	540#
61	35	96	Br	x	-38160#	300#	8184#	3#	β^-	14920#	300#	95 959030#	320#
60	36		Kr	x	-53080	20	8330.85	0.21	β^-	8275	21	95 943017	22
59	37		Rb		-61354	3	8408.90	0.03	β^-	11575	9	95 934133	4
58	38		Sr		-72930	9	8521.32	0.09	β^-	5412	10	95 921707	9
57	39		Y		-78342	6	8569.55	0.07	β^-	7103	6	95 915897	7
56	40		Zr		-85444.6	2.0	8635.387	0.021	β^-	162	4	95 908271.4	2.1
55	41		Nb	+	-85607	3	8628.93	0.03	β^-	3187	3	95 908097	3
54	42		Mo		-88793.6	0.4	8653.974	0.005	β^-	-2973	5	95 904676.1	0.5
53	43		Tc	-	-85820	5	8614.85	0.05	β^-	259	5	95 907868	6
52	44		Ru		-86079.1	0.5	8609.399	0.005	*			95 907590.3	0.5
51	45		Rh	-	-79686	10	8534.66	0.10	β^+	6393	10	95 914453	11
50	46		Pd	x	-76182	4	8490.01	0.04	β^+	3504	11	95 918215	5
49	47		Ag	ϵ p	-64510	90	8360.3	0.9	β^+	11670	90	95 930740	100
48	48		Cd	x	-55570#	400#	8259#	4#	β^+	8940#	410#	95 940340#	430#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
62	35	97	Br	x	-34060#	400#	8140#	4#	β^-	13370#	420#	96 963440#	430#
61	36		Kr	x	-47420	130	8269.9	1.3	β^-	11100	130	96 949090	140
60	37		Rb		-58519.1	1.9	8376.186	0.020	β^-	10063	4	96 937177.1	2.1
59	38		Sr		-68582	3	8471.86	0.03	β^-	7545	8	96 926374	4
58	39		Y	+	-76127	7	8541.58	0.07	β^-	6821	7	96 918274	8
57	40		Zr		-82948.4	2.0	8603.838	0.020	β^-	2659.7	1.7	96 910951.2	2.1
56	41		Nb		-85608.1	1.8	8623.192	0.018	β^-	1935.5	1.7	96 908095.9	1.9
55	42		Mo		-87543.6	0.5	8635.080	0.005	*			96 906018.1	0.5
54	43		Tc		-87219	4	8623.67	0.04	β^+	325	4	96 906367	4
53	44		Ru	-n	-86119.3	2.8	8604.266	0.029	β^+	1100	5	96 907547	3
52	45		Rh	-	-82600	40	8559.9	0.4	β^+	3520	40	96 911330	40
51	46		Pd	x	-77806	5	8502.43	0.05	β^+	4790	40	96 916472	5
50	47		Ag	-	-70830	110	8422.4	1.1	β^+	6980	110	96 923970	120
49	48		Cd	x	-60450#	300#	8307#	3#	β^+	10370#	320#	96 935100#	320#
48	49		In	x	-47190#	500#	8163#	5#	β^+	13260#	590#	96 949340#	540#
63	35	98	Br	x	-28450#	400#	8082#	4#	β^-	15860#	500#	97 969460#	430#
62	36		Kr	x	-44310#	300#	8236#	3#	β^-	10010#	300#	97 952430#	320#
61	37		Rb	x	-54318	3	8330.21	0.04	β^-	12108	5	97 941687	4
60	38		Sr		-66426	4	8445.77	0.04	β^-	5875	9	97 928689	4
59	39		Y	p-2n	-72301	8	8497.74	0.08	β^-	8992	12	97 922382	9
58	40		Zr		-81293	9	8581.51	0.09	β^-	2238	10	97 912729	9
57	41		Nb	-pn	-83530	5	8596.36	0.05	β^-	4584	5	97 910326	6
56	42		Mo		-88114.8	0.5	8635.157	0.005	β^-	-1684	3	97 905404.8	0.5
55	43		Tc		-86431	3	8609.99	0.03	β^-	1794	7	97 907212	4
54	44		Ru		-88225	6	8620.31	0.07	*			97 905287	7
53	45		Rh	-	-83175	12	8560.80	0.12	β^+	5050	10	97 910708	13
52	46		Pd		-81321	5	8533.90	0.05	β^+	1854	13	97 912698	5
51	47		Ag		-73070	30	8441.7	0.3	β^+	8250	30	97 921560	40
50	48		Cd	-	-67640	50	8378.3	0.5	β^+	5430	40	97 927390	60
49	49		In	x	-53900#	200#	8230#	2#	β^+	13740#	200#	97 942140#	210#
63	36	99	Kr	x	-38760#	500#	8178#	5#	β^-	12450#	520#	98 958390#	540#
62	37		Rb		-51210	110	8296.2	1.1	β^-	11310	110	98 945030	120
61	38		Sr		-62512	4	8402.46	0.04	β^-	8144	8	98 932891	4
60	39		Y	x	-70656	7	8476.81	0.07	β^-	6969	12	98 924148	7
59	40		Zr		-77624	11	8539.30	0.11	β^-	4707	16	98 916667	11
58	41		Nb	+p	-82332	12	8578.95	0.12	β^-	3637	12	98 911613	13
57	42		Mo		-85969.0	0.5	8607.786	0.005	β^-	1357.8	0.9	98 907708.5	0.5
56	43		Tc		-87326.8	1.0	8613.599	0.010	β^-	295.1	1.1	98 906250.8	1.0
55	44		Ru		-87621.8	1.1	8608.677	0.011	*			98 905934.1	1.1
54	45		Rh		-85578	7	8580.13	0.07	β^+	2044	7	98 908128	7
53	46		Pd		-82181	5	8537.92	0.05	β^+	3397	8	98 911775	5
52	47		Ag	x	-76712	6	8474.77	0.06	β^+	5469	8	98 917646	7
51	48		Cd	x	-69931.1	1.6	8398.373	0.016	β^+	6781	6	98 924925.8	1.7
50	49		In	x	-61380#	200#	8304#	2#	β^+	8560#	200#	98 934110#	210#
49	50		Sn	x	-47940#	500#	8160#	5#	β^+	13430#	540#	98 948530#	540#
64	36	100	Kr	x	-35050#	400#	8140#	4#	β^-	11500#	450#	99 962370#	430#
63	37		Rb	x	-46550#	200#	8247#	2#	β^-	13280#	200#	99 950030#	210#
62	38		Sr	-n2p	-59830	10	8372.33	0.10	β^-	7503	15	99 935770	10
61	39		Y	x	-67333	11	8439.54	0.11	β^-	9049	14	99 927715	12
60	40		Zr		-76382	8	8522.20	0.08	β^-	3421	11	99 918001	9
59	41		Nb	IT	-79803	8	8548.59	0.08	β^-	6386	8	99 914328	9
58	42		Mo		-86189.5	1.0	8604.626	0.010	β^-	-169.6	1.5	99 907471.8	1.1
57	43		Tc	-n	-86019.9	1.4	8595.107	0.014	β^-	3204.0	1.5	99 907653.9	1.5
56	44		Ru		-89223.8	1.1	8619.323	0.011	*			99 904214.3	1.1
55	45		Rh		-85588	18	8575.14	0.18	β^+	3636	18	99 908117	19
54	46		Pd		-85227	18	8563.71	0.18	β^+	361	25	99 908505	19
53	47		Ag	x	-78138	5	8484.99	0.05	β^+	7089	18	99 916115	5
52	48		Cd		-74194.6	1.7	8437.737	0.017	β^+	3943	5	99 920348.8	1.8
51	49		In		-64310	180	8331.1	1.8	β^+	9880	180	99 930960	200
50	50		Sn	-	-57280	300	8253	3	β^+	7030	240	99 938500	320

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
65	36	101	Kr	x	-29130#	500#	8081#	5#	β^-	13680#	550#	100 968730#	540#
64	37		Rb	+	-42810#	220#	8209#	2#	β^-	12750#	200#	100 954040#	230#
63	38		Sr	+	-55560	80	8327.1	0.8	β^-	9500	80	100 940350	90
62	39		Y	x	-65067	7	8413.45	0.07	β^-	8104	11	100 930148	8
61	40		Zr		-73171	8	8485.94	0.08	β^-	5717	9	100 921448	9
60	41		Nb	x	-78888	4	8534.80	0.04	β^-	4628	4	100 915310	4
59	42		Mo	-n	-83516.4	1.1	8572.880	0.010	β^-	2825	24	100 910341.4	1.1
58	43		Tc	+	-86341	24	8593.10	0.24	β^-	1614	24	100 907309	26
57	44		Ru		-87954.6	1.1	8601.330	0.011		*		100 905576.9	1.2
56	45		Rh		-87411	6	8588.20	0.06	β^+	544	6	100 906161	6
55	46		Pd		-85431	5	8560.85	0.05	β^+	1980	4	100 908286	5
54	47		Ag	x	-81334	5	8512.55	0.05	β^+	4096	7	100 912684	5
53	48		Cd	x	-75836.5	1.5	8450.365	0.015	β^+	5498	5	100 918586.2	1.6
52	49		In	x	-68610#	300#	8371#	3#	β^+	7220#	300#	100 926340#	320#
51	50		Sn	ϵ p	-60310	300	8281.1	3.0	β^+	8310#	420#	100 935260	320
65	37	102	Rb	x	-37710#	300#	8157#	3#	β^-	14650#	310#	101 959520#	320#
64	38		Sr	+	-52360	70	8293.2	0.7	β^-	8820	70	101 943790	80
63	39		Y	x	-61173	4	8371.92	0.04	β^-	10420	10	101 934328	4
62	40		Zr		-71594	9	8466.41	0.09	β^-	4717	9	101 923141	10
61	41		Nb		-76311	3	8504.99	0.03	β^-	7260	9	101 918077	4
60	42		Mo		-83570	8	8568.49	0.08	β^-	1000	12	101 910283	9
59	43		Tc		-84571	9	8570.63	0.09	β^-	4532	9	101 909210	10
58	44		Ru		-89102.9	1.1	8607.392	0.011	β^-	-2322	5	101 904344.1	1.2
57	45		Rh		-86780	5	8576.95	0.05	β^-	1151	5	101 906837	5
56	46		Pd		-87931.0	2.6	8580.563	0.026		*		101 905602.2	2.8
55	47		Ag	+	-82247	8	8517.16	0.08	β^+	5684	9	101 911705	9
54	48		Cd		-79659.5	1.7	8484.130	0.016	β^+	2587	8	101 914482.0	1.8
53	49		In		-70694	5	8388.56	0.04	β^+	8966	5	101 924107	5
52	50		Sn	-	-64930	100	8324.4	1.0	β^+	5760	100	101 930290	110
66	37	103	Rb	x	-33610#	400#	8117#	4#	β^-	13810#	450#	102 963920#	430#
65	38		Sr	x	-47420#	200#	8243#	2#	β^-	11040#	200#	102 949090#	210#
64	39		Y	x	-58458	11	8342.64	0.11	β^-	9364	15	102 937243	12
63	40		Zr	x	-67821	9	8425.95	0.09	β^-	7204	10	102 927191	10
62	41		Nb	x	-75025	4	8488.30	0.04	β^-	5942	10	102 919457	4
61	42		Mo	x	-80967	9	8538.39	0.09	β^-	3635	14	102 913079	10
60	43		Tc	+p	-84602	10	8566.08	0.10	β^-	2662	10	102 909176	11
59	44		Ru		-87263.6	1.1	8584.331	0.011	β^-	764.4	2.2	102 906318.6	1.2
58	45		Rh		-88028.1	2.4	8584.157	0.024		*		102 905498.0	2.6
57	46		Pd		-87485.0	2.5	8571.289	0.025	β^+	543.0	0.8	102 906080.9	2.7
56	47		Ag		-84800	4	8537.63	0.04	β^+	2685	5	102 908963	4
55	48		Cd		-80652.0	1.8	8489.758	0.017	β^+	4148	4	102 913416.5	1.9
54	49		In		-74630	9	8423.69	0.09	β^+	6022	9	102 919882	10
53	50		Sn	-	-66970	70	8341.7	0.7	β^+	7660	70	102 928110	80
52	51		Sb	x	-56180#	300#	8229#	3#	β^+	10790#	310#	102 939690#	320#
66	38	104	Sr	x	-44110#	300#	8210#	3#	β^-	9960#	500#	103 952650#	320#
65	39		Y	x	-54060#	400#	8298#	4#	β^-	11670#	400#	103 941960#	430#
64	40		Zr	x	-65730	10	8402.44	0.09	β^-	6095	10	103 929436	10
63	41		Nb	x	-71825	3	8453.52	0.03	β^-	8531	9	103 922892	4
62	42		Mo		-80356	9	8528.02	0.09	β^-	2151	24	103 913734	10
61	43		Tc		-82507	25	8541.19	0.24	β^-	5587	25	103 911425	27
60	44		Ru		-88093.7	2.6	8587.380	0.025	β^-	-1138	3	103 905427.5	2.8
59	45		Rh	-n	-86955.7	2.4	8568.914	0.023	β^-	2439.3	2.8	103 906649.2	2.6
58	46		Pd	+n	-89395.0	1.3	8584.846	0.013		*		103 904030.5	1.4
57	47		Ag	-	-85116	4	8536.18	0.04	β^+	4279	4	103 908624	5
56	48		Cd		-83968.2	1.7	8517.621	0.016	β^+	1148	5	103 909856.4	1.8
55	49		In	x	-76183	6	8435.24	0.06	β^+	7786	6	103 918215	6
54	50		Sn		-71627	6	8383.91	0.06	β^+	4556	8	103 923105	6
53	51		Sb	-p	-59170	120	8256.6	1.2	β^+	12460	120	103 936480	130

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
67	38	105	Sr	x	-38610#	500#	8156#	5#	β^-	12210#	710#	104 958550#	540#
66	39		Y	x	-50820#	500#	8265#	5#	β^-	10650#	500#	104 945440#	540#
65	40		Zr	x	-61471	12	8358.72	0.12	β^-	8441	13	104 934008	13
64	41		Nb	x	-69912	4	8431.66	0.04	β^-	7431	10	104 924946	4
63	42		Mo		-77343	9	8494.98	0.09	β^-	4950	40	104 916969	10
62	43		Tc		-82290	40	8534.7	0.3	β^-	3640	40	104 911650	40
61	44		Ru		-85932.5	2.6	8561.882	0.024	β^-	1918.0	2.9	104 907747.6	2.8
60	45		Rh		-87850.6	2.5	8572.698	0.024	β^-	567.2	2.4	104 905688.5	2.7
59	46		Pd		-88417.8	1.1	8570.649	0.011		*		104 905079.6	1.2
58	47		Ag		-87071	5	8550.37	0.04	β^+	1347	5	104 906526	5
57	48		Cd		-84333.8	1.4	8516.852	0.013	β^+	2737	4	104 909463.9	1.5
56	49		In	x	-79641	10	8464.70	0.10	β^+	4693	10	104 914502	11
55	50		Sn		-73338	4	8397.23	0.04	β^+	6303	11	104 921268	4
54	51		Sb	$+\alpha$	-64016	22	8301.00	0.21	β^+	9322	22	104 931276	23
53	52		Te	$-\alpha$	-52810	300	8186.8	2.9	β^+	11200	300	104 943300	320
68	38	106	Sr	x	-34790#	600#	8119#	6#	β^-	11260#	780#	105 962650#	640#
67	39		Y	x	-46050#	500#	8218#	5#	β^-	12860#	540#	105 950560#	540#
66	40		Zr	x	-58910#	200#	8332#	2#	β^-	7290#	200#	105 936760#	210#
65	41		Nb	x	-66200	4	8393.24	0.04	β^-	9941	10	105 928932	5
64	42		Mo	x	-76141	9	8479.64	0.09	β^-	3635	15	105 918259	10
63	43		Tc	+	-79775	12	8506.55	0.12	β^-	6547	11	105 914358	13
62	44		Ru		-86322	5	8560.93	0.05	β^-	39.40	0.21	105 907329	6
61	45		Rh		-86362	5	8553.92	0.05	β^-	3546	5	105 907287	6
60	46		Pd		-89907.4	1.1	8579.991	0.010	β^-	-2965.1	2.8	105 903480.4	1.2
59	47		Ag		-86942	3	8544.638	0.028	β^-	189.8	2.8	105 906664	3
58	48		Cd		-87132.0	1.1	8539.047	0.010		*		105 906459.9	1.2
57	49		In	-	-80608	12	8470.12	0.12	β^+	6524	12	105 913464	13
56	50		Sn		-77354	5	8432.04	0.05	β^+	3254	13	105 916957	5
55	51		Sb	x	-66473	7	8322.01	0.07	β^+	10880	9	105 928638	8
54	52		Te	$-\alpha$	-58220	100	8236.8	0.9	β^+	8250	100	105 937500	110
69	38	107	Sr	x	-28900#	700#	8064#	7#	β^-	13470#	860#	106 968980#	750#
68	39		Y	x	-42360#	500#	8182#	5#	β^-	11900#	590#	106 954520#	540#
67	40		Zr	x	-54270#	300#	8286#	3#	β^-	9450#	300#	106 941740#	320#
66	41		Nb	x	-63720	8	8367.05	0.08	β^-	8838	12	106 931594	9
65	42		Mo	x	-72558	9	8442.34	0.09	β^-	6190	13	106 922106	10
64	43		Tc	x	-78748	9	8492.88	0.08	β^-	5113	12	106 915461	9
63	44		Ru	-nn	-83860	9	8533.35	0.08	β^-	3003	15	106 909972	9
62	45		Rh	+p	-86864	12	8554.10	0.11	β^-	1509	12	106 906748	13
61	46		Pd		-88372.5	1.2	8560.893	0.011	β^-	34.1	2.3	106 905128.2	1.3
60	47		Ag		-88406.6	2.4	8553.899	0.022		*		106 905091.6	2.6
59	48		Cd		-86990.2	1.7	8533.351	0.016	β^+	1416.3	2.6	106 906612.1	1.8
58	49		In	-	-83564	11	8494.02	0.10	β^+	3426	11	106 910290	12
57	50		Sn	x	-78512	5	8439.49	0.05	β^+	5052	12	106 915714	6
56	51		Sb		-70653	4	8358.73	0.04	β^+	7859	7	106 924151	4
55	52		Te	$-\alpha$	-60540	70	8256.9	0.7	β^+	10120	70	106 935010	80
54	53		I	x	-49570#	300#	8147#	3#	β^+	10960#	310#	106 946780#	320#
69	39	108	Y	x	-37300#	600#	8134#	6#	β^-	14060#	720#	107 959960#	640#
68	40		Zr	x	-51350#	400#	8257#	4#	β^-	8190#	400#	107 944870#	430#
67	41		Nb	x	-59546	8	8325.67	0.08	β^-	11216	13	107 936075	9
66	42		Mo	x	-70762	9	8422.28	0.09	β^-	5158	13	107 924033	10
65	43		Tc	x	-75921	9	8462.80	0.08	β^-	7739	12	107 918496	9
64	44		Ru	-3n	-83659	9	8527.21	0.08	β^-	1373	16	107 910188	9
63	45		Rh	x	-85032	14	8532.67	0.13	β^-	4492	14	107 908714	15
62	46		Pd		-89524.4	1.1	8567.025	0.010	β^-	-1917.7	2.6	107 903891.6	1.2
61	47		Ag	-n	-87606.7	2.4	8542.025	0.022	β^-	1645.9	2.6	107 905950.3	2.6
60	48		Cd		-89252.6	1.1	8550.020	0.010		*		107 904183.4	1.2
59	49		In		-84120	9	8495.25	0.08	β^+	5133	9	107 909694	9
58	50		Sn		-82070	5	8469.03	0.05	β^+	2050	10	107 911894	6
57	51		Sb	x	-72445	5	8372.67	0.05	β^+	9625	8	107 922227	6
56	52		Te		-65782	5	8303.72	0.05	β^+	6664	8	107 929380	6
55	53		I	$-\alpha$	-52650	130	8174.9	1.2	β^+	13140	130	107 943480	140

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
70	39	109	Y	x	-33200#	700#	8096#	6#	β^-	12990#	860#	108 964360#	750#
69	40		Zr	x	-46190#	500#	8208#	5#	β^-	10430#	730#	108 950410#	540#
68	41		Nb	x	-56620	530	8296	5	β^-	10050	530	108 939220	560
67	42		Mo	x	-66672	11	8381.54	0.10	β^-	7608	15	108 928424	12
66	43		Tc	x	-74281	10	8444.16	0.09	β^-	6456	13	108 920256	10
65	44		Ru	-4n	-80736	9	8496.21	0.08	β^-	4264	10	108 913326	10
64	45		Rh		-85000	4	8528.15	0.04	β^-	2607	4	108 908749	4
63	46		Pd		-87606.6	1.1	8544.883	0.010	β^-	1113.3	1.4	108 905950.4	1.2
62	47		Ag		-88719.9	1.3	8547.919	0.012		*		108 904755.3	1.4
61	48		Cd		-88504.4	1.5	8538.764	0.014	β^+	215.5	1.8	108 904986.7	1.7
60	49		In		-86488	4	8513.09	0.04	β^+	2016	4	108 907151	4
59	50		Sn		-82631	8	8470.52	0.07	β^+	3857	9	108 911292	9
58	51		Sb		-76251	5	8404.82	0.05	β^+	6380	9	108 918141	6
57	52		Te		-67715	4	8319.33	0.04	β^+	8536	7	108 927305	5
56	53		I	-p	-57673	6	8220.02	0.05	β^+	10042	7	108 938085	6
55	54		Xe	$-\alpha$	-46170	300	8107.3	2.8	β^+	11500	300	108 950430	320
70	40	110	Zr	x	-42890#	600#	8177#	5#	β^-	9250#	630#	109 953960#	640#
69	41		Nb	x	-52140#	200#	8254#	2#	β^-	12410#	200#	109 944030#	210#
68	42		Mo	x	-64549	24	8359.41	0.22	β^-	6483	26	109 930704	26
67	43		Tc	x	-71032	10	8411.24	0.09	β^-	9038	13	109 923744	10
66	44		Ru		-80071	9	8486.29	0.08	β^-	2758	19	109 914041	10
65	45		Rh		-82829	18	8504.26	0.16	β^-	5503	18	109 911079	19
64	46		Pd		-88331.5	0.7	8547.168	0.006	β^-	-873.8	1.4	109 905172.2	0.7
63	47		Ag		-87457.8	1.3	8532.112	0.012	β^-	2891.0	1.3	109 906110.2	1.4
62	48		Cd		-90348.8	0.6	8551.282	0.005		*		109 903006.6	0.6
61	49		In	-	-86471	12	8508.92	0.11	β^+	3878	12	109 907170	12
60	50		Sn	x	-85842	14	8496.09	0.13	β^+	629	18	109 907845	15
59	51		Sb	x	-77450	6	8412.68	0.05	β^+	8392	15	109 916854	6
58	52		Te		-72230	7	8358.12	0.06	β^+	5220	9	109 922458	7
57	53		I	$-\alpha$	-60460	50	8244.0	0.5	β^+	11770	50	109 935090	50
56	54		Xe	$-\alpha$	-51920	100	8159.2	0.9	β^+	8550	110	109 944260	110
71	40	111	Zr	x	-37560#	700#	8128#	6#	β^-	11320#	760#	110 959680#	750#
70	41		Nb	x	-48880#	300#	8223#	3#	β^-	11060#	300#	110 947530#	320#
69	42		Mo	+	-59938	13	8315.27	0.11	β^-	9085	7	110 935654	14
68	43		Tc	x	-69023	11	8390.07	0.10	β^-	7761	14	110 925901	11
67	44		Ru	x	-76783	10	8452.94	0.09	β^-	5521	12	110 917570	10
66	45		Rh		-82305	7	8495.63	0.06	β^-	3682	7	110 911642	7
65	46		Pd	-n	-85986.5	0.8	8521.755	0.007	β^-	2229.8	1.6	110 907689.7	0.9
64	47		Ag	+	-88216.3	1.5	8534.795	0.014	β^-	1036.8	1.4	110 905295.9	1.6
63	48		Cd		-89253.1	0.6	8537.087	0.005		*		110 904182.9	0.6
62	49		In		-88391	4	8522.27	0.03	β^+	862	4	110 905108	4
61	50		Sn	+n	-85940	5	8493.14	0.05	β^+	2451	6	110 907740	6
60	51		Sb	x	-80837	9	8440.12	0.08	β^+	5103	10	110 913218	10
59	52		Te	x	-73587	6	8367.76	0.06	β^+	7249	11	110 921001	7
58	53		I		-64954	5	8282.93	0.04	β^+	8634	8	110 930269	5
57	54		Xe	$-\alpha$	-54390	90	8180.7	0.8	β^+	10560	90	110 941610	90

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
72	40	112	Zr	x	-33810#	700#	8094#	6#	β^-	10460#	760#	111 963700#	750#
71	41		Nb	x	-44270#	300#	8180#	3#	β^-	13190#	360#	111 952470#	320#
70	42		Mo	x	-57460#	200#	8291#	2#	β^-	7790#	200#	111 938310#	210#
69	43		Tc	x	-65255	6	8353.59	0.05	β^-	10374	11	111 929946	6
68	44		Ru	x	-75629	10	8439.22	0.09	β^-	4100	50	111 918809	10
67	45		Rh		-79730	40	8468.9	0.4	β^-	6590	40	111 914400	50
66	46		Pd		-86322	7	8520.73	0.06	β^-	262	7	111 907330	7
65	47		Ag	x	-86583.7	2.4	8516.080	0.022	β^-	3992.1	2.5	111 907048.6	2.6
64	48		Cd		-90575.8	0.6	8544.738	0.005	β^-	-2585	4	111 902762.9	0.6
63	49		In		-87991	4	8514.68	0.04	β^-	665	4	111 905538	5
62	50		Sn		-88656.0	0.6	8513.627	0.005	*			111 904823.9	0.6
61	51		Sb	x	-81599	18	8443.63	0.16	β^+	7057	18	111 912400	19
60	52		Te	x	-77568	8	8400.65	0.07	β^+	4031	20	111 916728	9
59	53		I	x	-67063	10	8299.88	0.09	β^+	10504	13	111 928005	11
58	54		Xe	$-\alpha$	-60026	8	8230.06	0.07	β^+	7037	13	111 935559	9
57	55		Cs	-p	-46290	90	8100.4	0.8	β^+	13740	90	111 950310	90
72	41	113	Nb	x	-40510#	400#	8146#	4#	β^-	12260#	500#	112 956510#	430#
71	42		Mo	x	-52770#	300#	8248#	3#	β^-	10040#	300#	112 943350#	320#
70	43		Tc	x	-62812	3	8329.464	0.030	β^-	9060	40	112 932569	4
69	44		Ru		-71870	40	8402.7	0.3	β^-	6900	40	112 922840	40
68	45		Rh	x	-78768	7	8456.82	0.06	β^-	4824	10	112 915439	8
67	46		Pd	x	-83591	7	8492.59	0.06	β^-	3435	18	112 910261	7
66	47		Ag	+	-87027	17	8516.06	0.15	β^-	2016	17	112 906573	18
65	48		Cd		-89043.3	0.4	8526.986	0.004	β^-	322.6	0.8	112 904408.1	0.4
64	49		In		-89365.8	0.9	8522.917	0.008	*			112 904061.8	0.9
63	50		Sn		-88328.2	1.6	8506.812	0.015	β^+	1037.6	1.7	112 905175.7	1.8
62	51		Sb	-	-84417	17	8465.28	0.15	β^+	3911	17	112 909375	18
61	52		Te	x	-78347	28	8404.64	0.25	β^+	6070	30	112 915890	30
60	53		I	x	-71120	8	8333.75	0.07	β^+	7228	29	112 923650	9
59	54		Xe		-62204	7	8247.93	0.06	β^+	8916	11	112 933222	7
58	55		Cs	-p	-51764	9	8148.62	0.08	β^+	10440	11	112 944429	9
73	41	114	Nb	x	-35390#	500#	8100#	4#	β^-	14420#	590#	113 962010#	540#
72	42		Mo	x	-49810#	300#	8220#	3#	β^-	8960#	320#	113 946530#	320#
71	43		Tc	IT	-58770#	100#	8292#	1#	β^-	11450#	100#	113 936910#	110#
70	44		Ru	x	-70222	4	8385.34	0.03	β^-	5490	70	113 924614	4
69	45		Rh		-75710	70	8426.6	0.6	β^-	7780	70	113 918720	80
68	46		Pd	x	-83491	7	8488.01	0.06	β^-	1440	8	113 910369	7
67	47		Ag	x	-84931	5	8493.78	0.04	β^-	5084	5	113 908823	5
66	48		Cd		-90014.8	0.4	8531.512	0.004	β^-	-1446.4	0.8	113 903365.1	0.4
65	49		In		-88568.4	0.9	8511.961	0.008	β^-	1988.9	0.6	113 904917.9	0.9
64	50		Sn		-90557.3	1.0	8522.545	0.009	*			113 902782.7	1.0
63	51		Sb		-84496	22	8462.51	0.19	β^+	6062	22	113 909290	23
62	52		Te	x	-81889	28	8432.78	0.25	β^+	2610	40	113 912090	30
61	53		I	x	-72800#	300#	8346#	3#	β^+	9090#	300#	113 921850#	320#
60	54		Xe	x	-67086	11	8289.20	0.10	β^+	5710#	300#	113 927980	12
59	55		Cs	$-\alpha$	-54680	70	8173.5	0.6	β^+	12400	70	113 941300	80
58	56		Ba	$-\alpha$	-45960	110	8090.2	1.0	β^+	8720	130	113 950660	120

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
74	41	115	Nb	x	-31350#	500#	8065#	4#	β^-	13400#	640#	114 966340#	540#
73	42		Mo	x	-44750#	400#	8175#	3#	β^-	11160#	450#	114 951960#	430#
72	43		Tc	x	-55910#	200#	8265#	2#	β^-	10400#	210#	114 939980#	210#
71	44		Ru		-66300	70	8348.5	0.6	β^-	7930	70	114 928820	70
70	45		Rh		-74229	7	8410.65	0.06	β^-	6197	15	114 920312	8
69	46		Pd		-80427	14	8457.74	0.12	β^-	4556	22	114 913659	15
68	47		Ag		-84983	18	8490.56	0.16	β^-	3102	18	114 908767	20
67	48		Cd		-88084.4	0.7	8510.724	0.006	β^-	1452.0	0.7	114 905437.5	0.8
66	49		In		-89536.343	0.012	8516.546	0.000	β^-	497.490	0.010	114 903878.776	0.013
65	50		Sn		-90033.833	0.015	8514.069	0.000	*			114 903344.699	0.016
64	51		Sb	x	-87003	16	8480.91	0.14	β^+	3030	16	114 906598	17
63	52		Te	x	-82063	28	8431.15	0.24	β^+	4940	30	114 911900	30
62	53		I	x	-76338	29	8374.56	0.25	β^+	5720	40	114 918050	30
61	54		Xe	x	-68657	12	8300.97	0.11	β^+	7680	30	114 926294	13
60	55		Cs	x	-59700#	300#	8216#	3#	β^+	8960#	300#	114 935910#	320#
59	56		Ba	x	-49030#	500#	8117#	4#	β^+	10680#	590#	114 947370#	540#
74	42	116	Mo	x	-41500#	500#	8146#	4#	β^-	9960#	580#	115 955450#	540#
73	43		Tc	x	-51460#	300#	8225#	3#	β^-	12610#	300#	115 944760#	320#
72	44		Ru	x	-64069	4	8326.88	0.03	β^-	6670	70	115 931219	4
71	45		Rh		-70740	70	8377.6	0.6	β^-	9090	70	115 924060	80
70	46		Pd	x	-79832	7	8449.28	0.06	β^-	2711	8	115 914297	8
69	47		Ag	x	-82543	3	8465.906	0.028	β^-	6170	3	115 911387	4
68	48		Cd		-88712.56	0.16	8512.351	0.001	β^-	-462.81	0.27	115 904763.15	0.17
67	49		In	-n	-88249.75	0.22	8501.617	0.002	β^-	3276.25	0.24	115 905260.00	0.24
66	50		Sn		-91525.99	0.10	8523.116	0.001	*			115 901742.80	0.10
65	51		Sb		-86822	5	8475.82	0.04	β^+	4704	5	115 906793	6
64	52		Te	x	-85269	28	8455.69	0.24	β^+	1553	28	115 908460	30
63	53		I	+	-77490	100	8381.9	0.8	β^+	7780	100	115 916810	100
62	54		Xe	x	-73047	13	8336.83	0.11	β^+	4450	100	115 921581	14
61	55		Cs	ea	-62060#	100#	8235#	1#	β^+	10980#	100#	115 933370#	110#
60	56		Ba	x	-54700#	300#	8165#	3#	β^+	7370#	320#	115 941280#	320#
59	57		La	$-\alpha$	-40700#	220#	8038#	2#	β^+	14000#	370#	115 956300#	230#
75	42	117	Mo	x	-36170#	500#	8100#	4#	β^-	12210#	640#	116 961170#	540#
74	43		Tc	x	-48380#	400#	8197#	3#	β^-	11140#	710#	116 948060#	430#
73	44		Ru	x	-59520	590	8286	5	β^-	9380	590	116 936100	630
72	45		Rh	x	-68898	9	8359.28	0.08	β^-	7527	11	116 926035	10
71	46		Pd		-76425	7	8416.93	0.06	β^-	5757	15	116 917955	8
70	47		Ag		-82182	14	8459.45	0.12	β^-	4236	14	116 911774	15
69	48		Cd	-n	-86418.5	1.0	8488.974	0.009	β^-	2525	5	116 907226.0	1.1
68	49		In		-88943	5	8503.86	0.04	β^-	1455	5	116 904516	5
67	50		Sn		-90397.8	0.5	8509.612	0.004	*			116 902954.0	0.5
66	51		Sb		-88640	8	8487.90	0.07	β^+	1758	8	116 904842	9
65	52		Te		-85095	13	8450.92	0.12	β^+	3544	13	116 908646	14
64	53		I		-80436	26	8404.41	0.22	β^+	4659	29	116 913648	28
63	54		Xe	x	-74185	10	8344.30	0.09	β^+	6251	28	116 920359	11
62	55		Cs	x	-66490	60	8271.9	0.5	β^+	7690	60	116 928620	70
61	56		Ba	ϵp	-57620	190	8189.4	1.6	β^+	8870	200	116 938140	210
60	57		La	-p	-46590#	300#	8088#	3#	β^+	11030#	360#	116 949990#	320#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
75	43	118	Tc	x	-43790#	400#	8157#	3#	β^-	13470#	500#	117 952990#	430#
74	44		Ru	x	-57260#	300#	8265#	3#	β^-	7630#	300#	117 938530#	320#
73	45		Rh	x	-64888	24	8322.86	0.21	β^-	10501	24	117 930340	26
72	46		Pd		-75388.9	2.5	8405.223	0.021	β^-	4165	4	117 919066.7	2.7
71	47		Ag	x	-79553.8	2.5	8433.889	0.021	β^-	7148	20	117 914595.5	2.7
70	48		Cd	-nn	-86702	20	8487.83	0.17	β^-	527	21	117 906922	21
69	49		In		-87228	8	8485.67	0.07	β^-	4425	8	117 906357	8
68	50		Sn		-91652.9	0.5	8516.534	0.004	*			117 901606.6	0.5
67	51		Sb	-	-87996	3	8478.915	0.026	β^+	3656.6	3.0	117 905532	3
66	52		Te	+nn	-87697	18	8469.75	0.16	β^+	299	19	117 905854	20
65	53		I	x	-80971	20	8406.12	0.17	β^+	6726	27	117 913074	21
64	54		Xe	x	-78079	10	8374.98	0.09	β^+	2892	22	117 916179	11
63	55		Cs	IT	-68409	13	8286.40	0.11	β^+	9670	16	117 926560	14
62	56		Ba	x	-62350#	200#	8228#	2#	β^+	6060#	200#	117 933060#	210#
61	57		La	x	-49620#	300#	8114#	3#	β^+	12730#	360#	117 946730#	320#
76	43	119	Tc	x	-40370#	500#	8128#	4#	β^-	12190#	590#	118 956660#	540#
75	44		Ru	x	-52560#	300#	8224#	3#	β^-	10260#	300#	118 943570#	320#
74	45		Rh	x	-62823	9	8303.39	0.08	β^-	8585	12	118 932557	10
73	46		Pd	x	-71408	8	8368.97	0.07	β^-	7238	17	118 923340	9
72	47		Ag		-78646	15	8423.21	0.12	β^-	5330	40	118 915570	16
71	48		Cd		-83980	40	8461.4	0.3	β^-	3720	40	118 909850	40
70	49		In		-87700	7	8486.15	0.06	β^-	2366	7	118 905851	8
69	50		Sn		-90065.1	0.7	8499.449	0.006	*			118 903311.2	0.8
68	51		Sb		-89474	8	8487.91	0.06	β^+	591	8	118 903945	8
67	52		Te	-	-87181	8	8462.07	0.07	β^+	2293.0	2.0	118 906407	9
66	53		I	x	-83766	28	8426.79	0.23	β^+	3416	29	118 910070	30
65	54		Xe	x	-78794	10	8378.44	0.09	β^+	4971	30	118 915411	11
64	55		Cs	IT	-72305	14	8317.33	0.12	β^+	6489	17	118 922377	15
63	56		Ba	ϵ p	-64590	200	8245.9	1.7	β^+	7710	200	118 930660	210
62	57		La	x	-54970#	300#	8158#	3#	β^+	9620#	360#	118 940990#	320#
61	58		Ce	x	-44050#	500#	8060#	4#	β^+	10920#	590#	118 952710#	540#
77	43	120	Tc	x	-35520#	500#	8087#	4#	β^-	14490#	640#	119 961870#	540#
76	44		Ru	x	-50010#	400#	8201#	3#	β^-	8800#	450#	119 946310#	430#
75	45		Rh	x	-58820#	200#	8268#	2#	β^-	11470#	200#	119 936860#	210#
74	46		Pd		-70280.2	2.3	8357.086	0.019	β^-	5371	5	119 924551.1	2.5
73	47		Ag	x	-75652	4	8395.33	0.04	β^-	8306	6	119 918785	5
72	48		Cd	x	-83957	4	8458.02	0.03	β^-	1770	40	119 909868	4
71	49		In	+	-85730	40	8466.3	0.3	β^-	5370	40	119 907970	40
70	50		Sn		-91098.6	0.9	8504.494	0.008	β^-	-2681	7	119 902201.6	1.0
69	51		Sb	-	-88418	7	8475.64	0.06	β^-	950	8	119 905079	8
68	52		Te		-89368	3	8477.035	0.026	*			119 904059	3
67	53		I	-	-83753	15	8423.72	0.13	β^+	5615	15	119 910087	16
66	54		Xe	x	-82172	12	8404.03	0.10	β^+	1581	19	119 911784	13
65	55		Cs	IT	-73889	10	8328.48	0.08	β^+	8284	15	119 920677	11
64	56		Ba	-	-68890	300	8280.3	2.5	β^+	5000	300	119 926050	320
63	57		La	x	-57690#	300#	8180#	2#	β^+	11200#	420#	119 938070#	320#
62	58		Ce	x	-49800#	500#	8108#	4#	β^+	7890#	590#	119 946540#	540#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ u		
77	44	121	Ru	x	-45050#	400#	8159#	3#	β^-	11380#	500#	120 951640#	430#
76	45		Rh	x	-56430#	300#	8247#	2#	β^-	9750#	300#	120 939420#	320#
75	46		Pd	x	-66182	3	8320.858	0.028	β^-	8220	13	120 928950	4
74	47		Ag	x	-74403	12	8382.33	0.10	β^-	6671	12	120 920125	13
73	48		Cd	x	-81073.8	1.9	8430.996	0.016	β^-	4762	27	120 912963.7	2.1
72	49		In	+p	-85836	27	8463.89	0.23	β^-	3361	27	120 907851	29
71	50		Sn		-89197.5	1.0	8485.203	0.008	β^-	401.1	2.9	120 904242.6	1.0
70	51		Sb		-89598.6	2.8	8482.052	0.023	*			120 903812	3
69	52		Te		-88544	26	8466.87	0.21	β^+	1054	26	120 904944	28
68	53		I		-86252	5	8441.46	0.04	β^+	2293	26	120 907405	6
67	54		Xe		-82481	10	8403.83	0.08	β^+	3771	12	120 911453	11
66	55		Cs		-77102	14	8352.91	0.12	β^+	5379	14	120 917227	15
65	56		Ba	—	-70740	140	8293.9	1.2	β^+	6360	140	120 924050	150
64	57		La	x	-62270#	300#	8217#	2#	β^+	8470#	330#	120 933150#	320#
63	58		Ce	x	-52770#	400#	8132#	3#	β^+	9500#	500#	120 943350#	430#
62	59		Pr	-p	-41620#	500#	8034#	4#	β^+	11150#	640#	120 955320#	540#
78	44	122	Ru	x	-42410#	500#	8137#	4#	β^-	9760#	590#	121 954470#	540#
77	45		Rh	x	-52170#	300#	8210#	2#	β^-	12440#	300#	121 943990#	320#
76	46		Pd	x	-64616	20	8305.97	0.16	β^-	6490	40	121 930632	21
75	47		Ag	x	-71110	40	8352.8	0.3	β^-	9510	40	121 923660	40
74	48		Cd		-80612.4	2.3	8424.266	0.019	β^-	2960	50	121 913459.1	2.5
73	49		In	+	-83570	50	8442.1	0.4	β^-	6370	50	121 910280	50
72	50		Sn		-89941.5	2.4	8487.909	0.020	β^-	-1608	4	121 903443.8	2.6
71	51		Sb		-88333.6	2.8	8468.317	0.023	β^-	1980.8	2.4	121 905170	3
70	52		Te		-90314.4	1.5	8478.140	0.012	*			121 903043.5	1.6
69	53		I	—	-86080	5	8437.02	0.04	β^+	4234	5	121 907589	6
68	54		Xe	x	-85355	11	8424.66	0.09	β^+	725	12	121 908368	12
67	55		Cs		-78140	30	8359.15	0.28	β^+	7210	40	121 916110	40
66	56		Ba	x	-74609	28	8323.76	0.23	β^+	3540	40	121 919900	30
65	57		La	x	-64540#	300#	8235#	2#	β^+	10070#	300#	121 930710#	320#
64	58		Ce	x	-57870#	400#	8174#	3#	β^+	6670#	500#	121 937870#	430#
63	59		Pr	x	-44950#	500#	8061#	4#	β^+	12930#	640#	121 951750#	540#
79	44	123	Ru	x	-37360#	500#	8095#	4#	β^-	12150#	640#	122 959890#	540#
78	45		Rh	x	-49510#	400#	8188#	3#	β^-	10910#	450#	122 946850#	430#
77	46		Pd	x	-60420#	200#	8270#	2#	β^-	9130#	200#	122 935140#	210#
76	47		Ag	x	-69550	30	8337.80	0.25	β^-	7870	30	122 925340	30
75	48		Cd		-77414.2	2.7	8395.395	0.022	β^-	6016	20	122 916892.5	2.9
74	49		In		-83430	20	8437.95	0.16	β^-	4386	20	122 910434	21
73	50		Sn		-87816.4	2.4	8467.244	0.020	β^-	1408.4	3.0	122 905725.2	2.6
72	51		Sb		-89224.8	2.1	8472.335	0.017	*			122 904213.2	2.3
71	52		Te		-89172.1	1.5	8465.546	0.012	β^+	52.7	1.6	122 904269.8	1.6
70	53		I		-87944	4	8449.20	0.03	β^+	1228	3	122 905589	4
69	54		Xe		-85249	10	8420.93	0.08	β^+	2695	10	122 908482	10
68	55		Cs	x	-81044	12	8380.38	0.10	β^+	4205	15	122 912996	13
67	56		Ba	x	-75655	12	8330.21	0.10	β^+	5389	17	122 918781	13
66	57		La	x	-68650#	200#	8267#	2#	β^+	7000#	200#	122 926300#	210#
65	58		Ce	x	-60290#	300#	8193#	2#	β^+	8370#	360#	122 935280#	320#
64	59		Pr	x	-50340#	400#	8105#	3#	β^+	9950#	500#	122 945960#	430#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	El.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
80	44	124	Ru	x	-34420#	600#	8071#	5#	β^-	10750#	720#	123 963050#	640#
79	45		Rh	x	-45170#	400#	8152#	3#	β^-	13390#	500#	123 951510#	430#
78	46		Pd	x	-58550#	300#	8253#	2#	β^-	7650#	390#	123 937140#	320#
77	47		Ag	x	-66200	250	8308.7	2.0	β^-	10500	250	123 928930	270
76	48		Cd		-76701.7	3.0	8387.035	0.024	β^-	4170	30	123 917657	3
75	49		In		-80870	30	8414.34	0.25	β^-	7360	30	123 913180	30
74	50		Sn		-88234.2	1.0	8467.421	0.008	β^-	-613.2	2.1	123 905276.6	1.1
73	51		Sb		-87621.0	2.1	8456.167	0.017	β^-	2904.3	1.6	123 905935.0	2.3
72	52		Te		-90525.3	1.5	8473.279	0.012	β^-	-3159.6	1.9	123 902817.1	1.6
71	53		I	—	-87365.7	2.4	8441.489	0.019	β^-	295.3	2.9	123 906209.0	2.6
70	54		Xe		-87661.1	1.8	8437.562	0.015	*			123 905892.0	1.9
69	55		Cs	x	-81731	8	8383.43	0.07	β^+	5930	8	123 912258	9
68	56		Ba	x	-79090	12	8355.82	0.10	β^+	2642	15	123 915094	13
67	57		La	x	-70260	60	8278.3	0.5	β^+	8830	60	123 924570	60
66	58		Ce	x	-64920#	300#	8229#	2#	β^+	5340#	300#	123 930310#	320#
65	59		Pr	x	-53150#	400#	8128#	3#	β^+	11770#	500#	123 942940#	430#
64	60		Nd	x	-44530#	500#	8052#	4#	β^+	8630#	640#	123 952200#	540#
80	45	125	Rh	x	-42210#	500#	8127#	4#	β^-	12020#	640#	124 954690#	540#
79	46		Pd	x	-54220#	400#	8217#	3#	β^-	10010#	720#	124 941790#	430#
78	47		Ag	x	-64230	600	8291	5	β^-	9120	600	124 931050	640
77	48		Cd		-73348.1	2.9	8357.681	0.023	β^-	7129	27	124 921258	3
76	49		In		-80477	27	8408.45	0.22	β^-	5420	27	124 913605	29
75	50		Sn		-85896.4	1.0	8445.550	0.008	β^-	2359.8	2.6	124 907786.4	1.1
74	51		Sb	+	-88256.3	2.6	8458.170	0.021	β^-	766.7	2.1	124 905253.0	2.8
73	52		Te		-89023.0	1.5	8458.045	0.012	*			124 904429.9	1.6
72	53		I	—	-88837.2	1.5	8450.300	0.012	β^+	185.77	0.06	124 904629.4	1.6
71	54		Xe		-87193.0	1.8	8430.888	0.015	β^+	1644.2	2.2	124 906394.4	2.0
70	55		Cs		-84088	8	8399.79	0.06	β^+	3105	8	124 909728	8
69	56		Ba		-79669	11	8358.18	0.09	β^+	4419	13	124 914472	12
68	57		La		-73759	26	8304.64	0.21	β^+	5909	28	124 920816	28
67	58		Ce	x	-66660#	200#	8242#	2#	β^+	7100#	200#	124 928440#	210#
66	59		Pr	x	-58030#	300#	8166#	2#	β^+	8630#	360#	124 937700#	320#
65	60		Nd	x	-47600#	400#	8077#	3#	β^+	10430#	500#	124 948900#	430#
81	45	126	Rh	x	-37760#	500#	8092#	4#	β^-	14250#	710#	125 959460#	540#
80	46		Pd	x	-52020#	500#	8199#	4#	β^-	8770#	540#	125 944160#	540#
79	47		Ag	x	-60780#	200#	8262#	2#	β^-	11480#	200#	125 934750#	210#
78	48		Cd		-72256.8	2.5	8346.747	0.020	β^-	5516	27	125 922429.1	2.7
77	49		In		-77773	27	8384.32	0.21	β^-	8242	27	125 916507	29
76	50		Sn		-86015	10	8443.52	0.08	β^-	380	30	125 907659	11
75	51		Sb	—	-86390	30	8440.31	0.25	β^-	3670	30	125 907250	30
74	52		Te		-90065.3	1.5	8463.248	0.012	β^-	-2154	4	125 903310.9	1.6
73	53		I		-87911	4	8439.94	0.03	β^-	1234	5	125 905623	4
72	54		Xe		-89146	4	8443.530	0.028	*			125 904298	4
71	55		Cs		-84350	10	8399.26	0.08	β^+	4795	11	125 909446	11
70	56		Ba	x	-82670	12	8379.72	0.10	β^+	1681	16	125 911250	13
69	57		La	x	-74970	90	8312.4	0.7	β^+	7700	90	125 919510	100
68	58		Ce	x	-70821	28	8273.26	0.22	β^+	4150	90	125 923970	30
67	59		Pr	x	-60320#	200#	8184#	2#	β^+	10500#	200#	125 935240#	210#
66	60		Nd	x	-52990#	300#	8119#	2#	β^+	7330#	360#	125 943110#	320#
65	61		Pm	x	-39200#	500#	8004#	4#	β^+	13800#	590#	125 957920#	540#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
81	46	127	Pd	x	-47440#	500#	8161#	4#	β^-	11140#	540#	126 949070#	540#
80	47		Ag	x	-58580#	200#	8243#	2#	β^-	9910#	200#	126 937110#	210#
79	48		Cd		-68491	13	8314.92	0.10	β^-	8408	24	126 926472	14
78	49		In		-76898	21	8374.97	0.17	β^-	6573	19	126 917446	23
77	50		Sn		-83471	10	8420.56	0.08	β^-	3228	11	126 910390	11
76	51		Sb		-86699	5	8439.82	0.04	β^-	1582	5	126 906924	6
75	52		Te		-88281.7	1.5	8446.117	0.012	β^-	702	4	126 905225.7	1.6
74	53		I		-88984	4	8445.487	0.029	*			126 904472	4
73	54		Xe		-88322	4	8434.11	0.03	β^+	662.3	2.0	126 905183	4
72	55		Cs		-86240	6	8411.56	0.04	β^+	2081	6	126 907417	6
71	56		Ba		-82818	11	8378.46	0.09	β^+	3422	13	126 911091	12
70	57		La		-77896	26	8333.54	0.20	β^+	4922	28	126 916375	28
69	58		Ce	x	-71979	29	8280.79	0.23	β^+	5920	40	126 922730	30
68	59		Pr	x	-64540#	200#	8216#	2#	β^+	7440#	200#	126 930710#	210#
67	60		Nd	x	-55540#	300#	8139#	2#	β^+	9010#	360#	126 940380#	320#
66	61		Pm	x	-44790#	400#	8048#	3#	β^+	10750#	500#	126 951920#	430#
82	46	128	Pd	x	-44870#	600#	8141#	5#	β^-	10030#	670#	127 951830#	640#
81	47		Ag	x	-54900#	300#	8213#	2#	β^-	12340#	300#	127 941060#	320#
80	48		Cd		-67242	7	8303.26	0.06	β^-	6900	150	127 927813	8
79	49		In		-74150	150	8351.1	1.2	β^-	9220	150	127 920400	160
78	50		Sn		-83362	18	8416.98	0.14	β^-	1268	14	127 910507	19
77	51		Sb	IT	-84630	19	8420.78	0.15	β^-	4363	19	127 909146	21
76	52		Te		-88993.7	0.9	8448.752	0.007	β^-	-1255	4	127 904461.3	0.9
75	53		I		-87739	4	8432.835	0.028	β^-	2122	4	127 905809	4
74	54		Xe		-89860.3	1.1	8443.298	0.008	*			127 903531.0	1.1
73	55		Cs		-85932	5	8406.49	0.04	β^+	3929	5	127 907749	6
72	56		Ba		-85379	5	8396.06	0.04	β^+	553	8	127 908342	6
71	57		La	x	-78630	50	8337.2	0.4	β^+	6750	50	127 915590	60
70	58		Ce	x	-75534	28	8306.93	0.22	β^+	3090	60	127 918910	30
69	59		Pr	x	-66331	30	8228.91	0.23	β^+	9200	40	127 928790	30
68	60		Nd	x	-60310#	200#	8176#	2#	β^+	6020#	200#	127 935250#	210#
67	61		Pm	x	-47790#	300#	8072#	2#	β^+	12530#	360#	127 948700#	320#
66	62		Sm	x	-38730#	500#	7995#	4#	β^+	9050#	590#	127 958420#	540#
82	47	129	Ag	x	-52210#	300#	8191#	2#	β^-	11300#	360#	128 943950#	320#
81	48		Cd	x	-63510#	200#	8273#	2#	β^-	9330#	200#	128 931820#	210#
80	49		In		-72837.9	2.7	8338.782	0.021	β^-	7769	19	128 921805.3	2.9
79	50		Sn		-80607	19	8392.94	0.15	β^-	4022	29	128 913465	21
78	51		Sb	+	-84629	21	8418.06	0.16	β^-	2376	21	128 909147	23
77	52		Te		-87004.8	0.9	8430.409	0.007	β^-	1502	3	128 906596.5	0.9
76	53		I		-88507	3	8435.990	0.025	β^-	189	3	128 904984	3
75	54		Xe		-88696.057	0.006	8431.390	0.000	*			128 904780.861	0.006
74	55		Cs		-87499	5	8416.05	0.04	β^+	1197	5	128 906066	5
73	56		Ba		-85063	11	8391.10	0.08	β^+	2436	11	128 908681	11
72	57		La		-81325	21	8356.05	0.17	β^+	3739	22	128 912694	23
71	58		Ce	x	-76287	28	8310.94	0.22	β^+	5040	40	128 918100	30
70	59		Pr	x	-69774	30	8254.38	0.23	β^+	6510	40	128 925100	30
69	60		Nd	ϵp	-62320#	200#	8190#	2#	β^+	7460#	200#	128 933100#	220#
68	61		Pm	x	-52880#	300#	8111#	2#	β^+	9430#	360#	128 943230#	320#
67	62		Sm	x	-42140#	500#	8022#	4#	β^+	10740#	590#	128 954760#	540#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
83	47	130	Ag	-nn	-45920#	330#	8142#	3#	β^-	15610#	370#	129 950700#	360#
82	48		Cd	+	-61530	160	8255.8	1.3	β^-	8350	160	129 933940	180
81	49		In	+	-69880	40	8314.00	0.29	β^-	10250	40	129 924980	40
80	50		Sn		-80132.9	2.1	8386.821	0.016	β^-	2153	14	129 913973.8	2.3
79	51		Sb		-82286	14	8397.37	0.11	β^-	5067	14	129 911662	15
78	52		Te		-87352.947	0.011	8430.324	0.000	β^-	-417	3	129 906222.749	0.012
77	53		I	-n	-86936	3	8421.100	0.024	β^-	2944	3	129 906670	3
76	54		Xe		-89880.462	0.009	8437.731	0.000	β^-	-2981	8	129 903509.350	0.010
75	55		Cs		-86900	8	8408.78	0.06	β^-	362	9	129 906709	9
74	56		Ba		-87261.7	2.6	8405.550	0.020		*		129 906320.7	2.8
73	57		La	x	-81627	26	8356.19	0.20	β^+	5634	26	129 912369	28
72	58		Ce	x	-79423	28	8333.22	0.21	β^+	2200	40	129 914740	30
71	59		Pr	x	-71180	60	8263.8	0.5	β^+	8250	70	129 923590	70
70	60		Nd	x	-66596	28	8222.51	0.21	β^+	4580	70	129 928510	30
69	61		Pm	x	-55400#	200#	8130#	2#	β^+	11200#	200#	129 940530#	210#
68	62		Sm	x	-47510#	400#	8064#	3#	β^+	7890#	450#	129 949000#	430#
67	63		Eu	-p	-33820#	500#	7952#	4#	β^+	13680#	640#	129 963690#	540#
83	48	131	Cd	x	-55330#	200#	8207#	1#	β^-	12700#	200#	130 940600#	210#
82	49		In		-68025.6	2.7	8297.963	0.020	β^-	9247	7	130 926971.5	2.9
81	50		Sn		-77272	6	8362.58	0.05	β^-	4710	6	130 917045	7
80	51		Sb		-81981.9	2.1	8392.556	0.016	β^-	3229.1	2.1	130 911988.8	2.3
79	52		Te	-n	-85211.01	0.06	8411.233	0.001	β^-	2231.8	0.6	130 908522.21	0.07
78	53		I	+	-87442.8	0.6	8422.297	0.005	β^-	970.8	0.6	130 906126.3	0.7
77	54		Xe		-88413.63	0.22	8423.736	0.002		*		130 905084.06	0.24
76	55		Cs		-88059	5	8415.06	0.04	β^+	355	5	130 905465	5
75	56		Ba		-86683.9	2.6	8398.588	0.020	β^+	1375	5	130 906941.0	2.8
74	57		La	x	-83769	28	8370.37	0.21	β^+	2915	28	130 910070	30
73	58		Ce		-79710	30	8333.40	0.25	β^+	4060	40	130 914430	40
72	59		Pr		-74300	50	8286.1	0.4	β^+	5410	60	130 920230	50
71	60		Nd		-67768	28	8230.30	0.21	β^+	6530	50	130 927248	30
70	61		Pm	x	-59920#	200#	8164#	1#	β^+	7850#	200#	130 935670#	210#
69	62		Sm	x	-50130#	400#	8084#	3#	β^+	9790#	450#	130 946180#	430#
68	63		Eu	-p	-39270#	400#	7995#	3#	β^+	10860#	570#	130 957840#	430#
84	48	132	Cd	x	-50260#	200#	8168#	1#	β^-	12150#	210#	131 946040#	210#
83	49		In	+	-62410	60	8253.7	0.5	β^-	14140	60	131 933000	60
82	50		Sn		-76543.9	2.9	8354.852	0.022	β^-	3092	4	131 917827	3
81	51		Sb	x	-79635.6	2.7	8372.347	0.020	β^-	5553	4	131 914507.7	2.9
80	52		Te		-85188	3	8408.485	0.026	β^-	515	3	131 908547	4
79	53		I		-85703	4	8406.46	0.03	β^-	3575	4	131 907994	4
78	54		Xe		-89278.963	0.005	8427.622	0.000	β^-	-2122.7	2.0	131 904155.086	0.006
77	55		Cs	+n	-87156.2	2.0	8405.614	0.015	β^-	1278.7	2.3	131 906433.9	2.1
76	56		Ba		-88435.0	1.1	8409.375	0.008		*		131 905061.1	1.1
75	57		La		-83720	40	8367.76	0.28	β^+	4710	40	131 910120	40
74	58		Ce		-82471	20	8352.34	0.15	β^+	1250	40	131 911464	22
73	59		Pr	x	-75210	60	8291.4	0.4	β^+	7260	60	131 919260	60
72	60		Nd	x	-71426	24	8256.81	0.18	β^+	3790	60	131 923321	26
71	61		Pm	x	-61630#	150#	8177#	1#	β^+	9800#	150#	131 933840#	160#
70	62		Sm	x	-55080#	300#	8121#	2#	β^+	6550#	330#	131 940870#	320#
69	63		Eu	x	-42230#	400#	8018#	3#	β^+	12860#	500#	131 954670#	430#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
85	48	133	Cd	x	-43920#	300#	8119#	2#	β^-	13540#	360#	132 952850#	320#
84	49		In	x	-57460#	200#	8215#	1#	β^-	13410#	200#	132 938310#	210#
83	50		Sn	x	-70874.2	2.4	8310.091	0.018	β^-	8048	4	132 923913.4	2.6
82	51		Sb		-78923	3	8364.722	0.024	β^-	4010	4	132 915273	3
81	52		Te		-82932	4	8388.987	0.027	β^-	2955	6	132 910969	4
80	53		I	+	-85887	5	8405.32	0.04	β^-	1757	4	132 907797	5
79	54		Xe	+	-87643.6	2.4	8412.647	0.018	β^-	427.4	2.4	132 905910.8	2.6
78	55		Cs		-88070.931	0.008	8409.978	0.000	*			132 905451.961	0.009
77	56		Ba		-87553.6	1.0	8400.206	0.007	β^+	517.3	1.0	132 906007.4	1.1
76	57		La	x	-85494	28	8378.84	0.21	β^+	2059	28	132 908220	30
75	58		Ce	x	-82418	16	8349.83	0.12	β^+	3080	30	132 911520	18
74	59		Pr	x	-77938	12	8310.26	0.09	β^+	4481	21	132 916331	13
73	60		Nd	x	-72330	50	8262.2	0.4	β^+	5610	50	132 922350	50
72	61		Pm	x	-65410	50	8204.3	0.4	β^+	6920	70	132 929780	50
71	62		Sm	x	-57230#	300#	8137#	2#	β^+	8180#	300#	132 938560#	320#
70	63		Eu	x	-47240#	300#	8056#	2#	β^+	10000#	420#	132 949290#	320#
69	64		Gd	x	-36020#	500#	7966#	4#	β^+	11220#	590#	132 961330#	540#
85	49	134	In	x	-51660#	300#	8171#	2#	β^-	14770#	300#	133 944540#	320#
84	50		Sn	x	-66432	3	8275.160	0.024	β^-	7588	4	133 928682	4
83	51		Sb	x	-74020.5	1.7	8325.950	0.013	β^-	8515	3	133 920535.7	1.8
82	52		Te		-82536.0	2.8	8383.660	0.021	β^-	1523	5	133 911394.0	3.0
81	53		I		-84059	6	8389.19	0.04	β^-	4065	6	133 909759	6
80	54		Xe		-88124.3	0.8	8413.687	0.006	β^-	-1233.1	0.8	133 905394.7	0.9
79	55		Cs		-86891.154	0.016	8398.646	0.000	β^-	2058.90	0.28	133 906718.504	0.018
78	56		Ba		-88950.05	0.28	8408.173	0.002	*			133 904508.18	0.30
77	57		La	x	-85219	20	8374.49	0.15	β^+	3731	20	133 908514	21
76	58		Ce	x	-84833	20	8365.77	0.15	β^+	386	29	133 908928	22
75	59		Pr	x	-78528	20	8312.88	0.15	β^+	6305	29	133 915697	22
74	60		Nd	x	-75646	12	8285.54	0.09	β^+	2882	24	133 918790	13
73	61		Pm	x	-66740	60	8213.2	0.4	β^+	8910	60	133 928350	60
72	62		Sm	x	-61380#	200#	8167#	1#	β^+	5360#	200#	133 934110#	210#
71	63		Eu	x	-49930#	300#	8076#	2#	β^+	11450#	360#	133 946400#	320#
70	64		Gd	x	-41300#	400#	8006#	3#	β^+	8630#	500#	133 955660#	430#
86	49	135	In	x	-46530#	400#	8132#	3#	β^-	14100#	400#	134 950050#	430#
85	50		Sn	x	-60632	3	8230.687	0.023	β^-	9057	4	134 934909	3
84	51		Sb	x	-69689.6	2.9	8291.983	0.021	β^-	8038	4	134 925185	3
83	52		Te	x	-77727.9	2.7	8345.731	0.020	β^-	6061	6	134 916555.7	2.9
82	53		I		-83789	5	8384.83	0.04	β^-	2628	5	134 910049	6
81	54		Xe		-86417	4	8398.50	0.03	β^-	1165	4	134 907228	4
80	55		Cs		-87581.8	1.0	8401.338	0.007	β^-	268.9	1.0	134 905977.0	1.1
79	56		Ba		-87850.71	0.27	8397.534	0.002	*			134 905688.38	0.29
78	57		La		-86644	9	8382.80	0.07	β^+	1207	9	134 906984	10
77	58		Ce		-84616	10	8361.99	0.08	β^+	2027	5	134 909161	11
76	59		Pr	x	-80936	12	8328.93	0.09	β^+	3680	16	134 913112	13
75	60		Nd	x	-76214	19	8288.15	0.14	β^+	4722	22	134 918181	21
74	61		Pm	x	-70030	70	8236.5	0.5	β^+	6190	70	134 924820	70
73	62		Sm	x	-62860	150	8177.6	1.1	β^+	7170	170	134 932520	170
72	63		Eu	x	-54150#	200#	8107#	1#	β^+	8710#	250#	134 941870#	210#
71	64		Gd	x	-44290#	400#	8029#	3#	β^+	9860#	450#	134 952450#	430#
70	65		Tb	-p	-32830#	400#	7938#	3#	β^+	11470#	570#	134 964760#	430#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
86	50	136	Sn	x	-55900#	400#	8195#	3#	β^-	8610#	400#	135 939990#	430#
85	51		Sb	x	-64510	6	8252.27	0.05	β^-	9916	7	135 930746	7
84	52		Te		-74425.8	2.4	8319.433	0.018	β^-	5120	14	135 920100.6	2.6
83	53		I		-79545	14	8351.33	0.10	β^-	6884	14	135 914604	15
82	54		Xe		-86429.152	0.010	8396.188	0.000	β^-	-90.2	1.9	135 907214.484	0.011
81	55		Cs	+	-86338.9	1.9	8389.772	0.014	β^-	2548.2	1.9	135 907311.4	2.0
80	56		Ba		-88887.14	0.27	8402.756	0.002	β^-	-2850	50	135 904575.73	0.29
79	57		La	x	-86040	50	8376.1	0.4	β^-	470	50	135 907630	60
78	58		Ce		-86508.6	0.4	8373.762	0.003		*		135 907129.2	0.4
77	59		Pr		-81340	11	8330.01	0.08	β^+	5168	11	135 912677	12
76	60		Nd	x	-79199	12	8308.51	0.09	β^+	2141	16	135 914976	13
75	61		Pm	x	-71180	70	8243.8	0.5	β^+	8020	70	135 923580	80
74	62		Sm	x	-66811	12	8205.92	0.09	β^+	4370	70	135 928276	13
73	63		Eu	x	-56240#	200#	8122#	1#	β^+	10570#	200#	135 939620#	210#
72	64		Gd	x	-49090#	300#	8064#	2#	β^+	7150#	360#	135 947300#	320#
71	65		Tb	x	-36060#	500#	7963#	4#	β^+	13030#	590#	135 961290#	540#
87	50	137	Sn	x	-49790#	500#	8149#	4#	β^-	10240#	590#	136 946550#	540#
86	51		Sb	x	-60030	300	8218.3	2.2	β^-	9270	300	136 935560	320
85	52		Te	x	-69304.2	2.5	8280.238	0.018	β^-	7052	9	136 925598.9	2.7
84	53		I	p-2n	-76356	8	8326.00	0.06	β^-	6027	8	136 918028	9
83	54		Xe	-n	-82383.40	0.10	8364.286	0.001	β^-	4162.4	0.3	136 911557.78	0.11
82	55		Cs	+	-86545.8	0.3	8388.958	0.002	β^-	1175.63	0.17	136 907089.2	0.4
81	56		Ba		-87721.45	0.28	8391.828	0.002		*		136 905827.1	0.3
80	57		La	+	-87140.9	1.7	8381.880	0.012	β^+	580.5	1.6	136 906450.4	1.8
79	58		Ce		-85918.8	0.4	8367.249	0.003	β^+	1222.1	1.6	136 907762.4	0.4
78	59		Pr		-83202	8	8341.71	0.06	β^+	2717	8	136 910679	9
77	60		Nd		-79585	12	8309.59	0.09	β^+	3617	14	136 914562	13
76	61		Pm	x	-74073	13	8263.65	0.10	β^+	5512	18	136 920480	14
75	62		Sm		-68030	40	8213.8	0.3	β^+	6050	40	136 926970	50
74	63		Eu	x	-60120#	200#	8150#	1#	β^+	7910#	200#	136 935460#	210#
73	64		Gd	x	-51210#	300#	8080#	2#	β^+	8910#	360#	136 945020#	320#
72	65		Tb	x	-40970#	500#	7999#	4#	β^+	10250#	590#	136 956020#	540#
88	50	138	Sn	x	-44860#	600#	8113#	4#	β^-	9680#	670#	137 951840#	640#
87	51		Sb	x	-54540#	300#	8177#	2#	β^-	11160#	300#	137 941450#	320#
86	52		Te	x	-65696	4	8252.58	0.03	β^-	6284	7	137 929472	5
85	53		I	x	-71980	6	8292.44	0.04	β^-	7992	7	137 922726	6
84	54		Xe		-79972.2	2.8	8344.690	0.020	β^-	2915	10	137 914146	3
83	55		Cs		-82887	9	8360.14	0.07	β^-	5375	9	137 911017	10
82	56		Ba		-88261.86	0.29	8393.422	0.002	β^-	-1740	3	137 905247.0	0.3
81	57		La	+n	-86522	3	8375.144	0.025	β^-	1047	10	137 907115	4
80	58		Ce		-87569	10	8377.06	0.07		*		137 905991	11
79	59		Pr	-	-83132	14	8339.24	0.10	β^+	4437	10	137 910754	15
78	60		Nd		-82018	12	8325.50	0.08	β^+	1113	18	137 911950	12
77	61		Pm		-74940	28	8268.54	0.20	β^+	7078	29	137 919548	30
76	62		Sm	x	-71498	12	8237.93	0.09	β^+	3440	30	137 923244	13
75	63		Eu	x	-61750	28	8161.62	0.20	β^+	9750	30	137 933710	30
74	64		Gd	x	-55660#	200#	8112#	1#	β^+	6090#	200#	137 940250#	210#
73	65		Tb	x	-43670#	300#	8019#	2#	β^+	11990#	360#	137 953120#	320#
72	66		Dy	x	-34930#	400#	7950#	3#	β^+	8740#	500#	137 962500#	430#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
88	51	139	Sb	x	-49790#	400#	8142#	3#	β^-	10420#	400#	138 946550#	430#
87	52		Te	x	-60205	4	8211.771	0.025	β^-	8254	29	138 935367	4
86	53		I	x	-68459	29	8265.52	0.21	β^-	7186	29	138 926510	30
85	54		Xe	x	-75644.6	2.1	8311.590	0.015	β^-	5057	4	138 918792.2	2.3
84	55		Cs	+	-80701	3	8342.339	0.023	β^-	4213	3	138 913364	3
83	56		Ba		-84913.97	0.29	8367.019	0.002	β^-	2314.6	2.3	138 908841.1	0.3
82	57		La		-87228.6	2.3	8378.043	0.016	*			138 906356.3	2.4
81	58		Ce		-86950	7	8370.41	0.05	β^+	278	7	138 906655	8
80	59		Pr		-84821	8	8349.47	0.06	β^+	2129.1	3.0	138 908941	8
79	60		Nd		-82015	28	8323.65	0.20	β^+	2806	28	138 911954	30
78	61		Pm		-77501	14	8285.54	0.10	β^+	4514	26	138 916800	15
77	62		Sm	x	-72380	11	8243.08	0.08	β^+	5120	17	138 922297	12
76	63		Eu	x	-65398	13	8187.22	0.09	β^+	6982	17	138 929792	14
75	64		Gd	x	-57630#	200#	8126#	1#	β^+	7770#	200#	138 938130#	210#
74	65		Tb	x	-48130#	300#	8052#	2#	β^+	9500#	360#	138 948330#	320#
73	66		Dy	x	-37640#	500#	7971#	4#	β^+	10490#	590#	138 959590#	540#
89	51	140	Sb	x	-43940#	600#	8100#	4#	β^-	12420#	600#	139 952830#	640#
88	52		Te	x	-56357	28	8183.28	0.20	β^-	7240	180	139 939500	30
87	53		I	x	-63600	180	8229.4	1.3	β^-	9390	180	139 931730	200
86	54		Xe	x	-72986.5	2.3	8290.887	0.017	β^-	4064	9	139 921645.8	2.5
85	55		Cs		-77050	8	8314.33	0.06	β^-	6220	10	139 917283	9
84	56		Ba		-83270	8	8353.17	0.06	β^-	1048	8	139 910606	9
83	57		La		-84318.2	2.3	8355.064	0.016	β^-	3760.9	1.8	139 909480.6	2.4
82	58		Ce		-88079.2	2.2	8376.339	0.016	*			139 905443.1	2.3
81	59		Pr	-	-84691	6	8346.55	0.05	β^+	3388	6	139 909080	7
80	60		Nd		-84254	26	8337.84	0.19	β^+	437	27	139 909550	28
79	61		Pm	-	-78210	40	8289.07	0.25	β^+	6045	24	139 916040	40
78	62		Sm	x	-75456	12	8263.82	0.09	β^+	2750	40	139 918995	13
77	63		Eu	-	-66990	50	8197.7	0.4	β^+	8470	50	139 928090	60
76	64		Gd	x	-61782	28	8154.97	0.20	β^+	5200	60	139 933670	30
75	65		Tb	-	-50480	800	8069	6	β^+	11300	800	139 945810	860
74	66		Dy	x	-42830#	500#	8008#	4#	β^+	7650#	950#	139 954020#	540#
73	67		Ho	-p	-29260#	500#	7906#	4#	β^+	13570#	710#	139 968590#	540#
89	52	141	Te	x	-50490#	400#	8141#	3#	β^-	9420#	450#	140 945800#	430#
88	53		I	x	-59900#	200#	8202#	1#	β^-	8290#	200#	140 935690#	210#
87	54		Xe	x	-68197.3	2.9	8255.364	0.020	β^-	6280	10	140 926787	3
86	55		Cs		-74477	9	8294.35	0.06	β^-	5256	10	140 920045	10
85	56		Ba		-79733	5	8326.08	0.04	β^-	3202	7	140 914403	6
84	57		La		-82935	4	8343.24	0.03	β^-	2501	4	140 910966	5
83	58		Ce		-85436.0	2.2	8355.430	0.015	β^-	580.4	1.1	140 908280.7	2.3
82	59		Pr		-86016.4	2.1	8353.998	0.015	*			140 907657.6	2.3
81	60		Nd	-	-84193	4	8335.520	0.025	β^+	1823.0	2.8	140 909615	4
80	61		Pm	x	-80523	14	8303.94	0.10	β^+	3670	14	140 913555	15
79	62		Sm		-75934	9	8265.84	0.06	β^+	4589	16	140 918482	9
78	63		Eu		-69926	13	8217.68	0.09	β^+	6008	14	140 924932	14
77	64		Gd	x	-63224	20	8164.61	0.14	β^+	6701	23	140 932126	21
76	65		Tb	x	-54540	110	8097.5	0.7	β^+	8680	110	140 941450	110
75	66		Dy	x	-45380#	300#	8027#	2#	β^+	9160#	320#	140 951280#	320#
74	67		Ho	-p	-34360#	500#	7943#	4#	β^+	11020#	590#	140 963110#	540#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
90	52	142	Te	x	-46370#	500#	8111#	4#	β^-	8400#	630#	141 950220#	540#
89	53		I	x	-54770	370	8165.0	2.6	β^-	10460	370	141 941200	400
88	54		Xe	x	-65229.6	2.7	8233.169	0.019	β^-	5288	8	141 929973.1	2.9
87	55		Cs		-70518	7	8264.90	0.05	β^-	7325	9	141 924296	8
86	56		Ba		-77843	6	8310.97	0.04	β^-	2181	8	141 916432	6
85	57		La		-80024	6	8320.82	0.04	β^-	4509	6	141 914091	7
84	58		Ce		-84532.7	2.7	8347.068	0.019	β^-	-744.5	2.4	141 909250.4	2.9
83	59		Pr		-83788.3	2.1	8336.316	0.015	β^-	2161.6	1.5	141 910049.6	2.3
82	60		Nd		-85949.9	1.8	8346.029	0.013		*		141 907729.0	2.0
81	61		Pm		-81142	24	8306.66	0.17	β^+	4808	24	141 912890	25
80	62		Sm		-78987	3	8285.973	0.023	β^+	2155	24	141 915204	4
79	63		Eu	-	-71310	30	8226.43	0.21	β^+	7670	30	141 923440	30
78	64		Gd	x	-66960	28	8190.26	0.20	β^+	4350	40	141 928120	30
77	65		Tb	-	-56560	700	8112	5	β^+	10400	700	141 939280	750
76	66		Dy	-	-50120#	730#	8061#	5#	β^+	6440#	200#	141 946190#	780#
75	67		Ho	x	-37250#	500#	7965#	4#	β^+	12870#	890#	141 960010#	540#
74	68		Er	x	-27850#	500#	7893#	4#	β^+	9400#	710#	141 970100#	540#
91	52	143	Te	x	-40280#	500#	8068#	4#	β^-	10350#	590#	142 956760#	540#
90	53		I	x	-50630#	300#	8135#	2#	β^-	9580#	300#	142 945650#	320#
89	54		Xe	x	-60203	5	8196.88	0.03	β^-	7471	23	142 935370	5
88	55		Cs		-67674	22	8243.66	0.15	β^-	6263	22	142 927349	24
87	56		Ba		-73937	7	8281.99	0.05	β^-	4234	10	142 920625	7
86	57		La		-78171	7	8306.13	0.05	β^-	3435	8	142 916080	8
85	58		Ce		-81606.2	2.7	8324.675	0.019	β^-	1461.8	1.8	142 912392.1	2.9
84	59		Pr		-83068.0	2.2	8329.426	0.016	β^-	934.1	1.4	142 910822.8	2.4
83	60		Nd		-84002.1	1.8	8330.487	0.013		*		142 909820.0	2.0
82	61		Pm		-82960	3	8317.732	0.022	β^+	1041.7	2.7	142 910938	3
81	62		Sm		-79517	3	8288.179	0.021	β^+	3444	4	142 914635	3
80	63		Eu	x	-74241	11	8245.82	0.08	β^+	5275	11	142 920299	12
79	64		Gd	-	-68230	200	8198.3	1.4	β^+	6010	200	142 926750	220
78	65		Tb	x	-60420	50	8138.2	0.4	β^+	7810	210	142 935140	60
77	66		Dy	x	-52169	13	8075.05	0.09	β^+	8250	50	142 943994	14
76	67		Ho	x	-42050#	400#	7999#	3#	β^+	10120#	400#	142 954860#	430#
75	68		Er	x	-31090#	400#	7917#	3#	β^+	10950#	570#	142 966620#	430#
91	53	144	I	x	-45280#	400#	8098#	3#	β^-	11590#	400#	143 951390#	430#
90	54		Xe	x	-56872	5	8172.88	0.04	β^-	6398	26	143 938945	6
89	55		Cs		-63271	25	8211.88	0.18	β^-	8497	25	143 932076	27
88	56		Ba		-71767	7	8265.45	0.05	β^-	3083	15	143 922955	8
87	57		La	x	-74850	13	8281.43	0.09	β^-	5582	13	143 919646	14
86	58		Ce	+	-80432	3	8314.759	0.022	β^-	318.6	0.8	143 913653	3
85	59		Pr	+	-80750	3	8311.539	0.021	β^-	2997.4	2.4	143 913311	3
84	60		Nd		-83747.9	1.8	8326.922	0.013	β^-	-2331.9	2.6	143 910093.0	2.0
83	61		Pm		-81416	3	8305.295	0.022	β^-	549.5	2.7	143 912596	3
82	62		Sm		-81965.4	1.9	8303.678	0.014		*		143 912006.5	2.1
81	63		Eu		-75619	11	8254.17	0.07	β^+	6346	11	143 918820	12
80	64		Gd	x	-71760	28	8221.94	0.19	β^+	3860	30	143 922960	30
79	65		Tb	x	-62368	28	8151.29	0.19	β^+	9390	40	143 933050	30
78	66		Dy	x	-56570	7	8105.59	0.05	β^+	5798	29	143 939270	8
77	67		Ho	x	-44610	8	8017.10	0.06	β^+	11961	11	143 952110	9
76	68		Er	x	-36610#	200#	7956#	1#	β^+	8000#	200#	143 960700#	210#
75	69		Tm	-p	-22090#	400#	7850#	3#	β^+	14520#	450#	143 976280#	430#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ u		
92	53	145	I	x	-40940#	500#	8068#	3#	β^-	10550#	500#	144 956050#	540#
91	54		Xe	x	-51493	11	8135.09	0.08	β^-	8562	16	144 944720	12
90	55		Cs		-60056	11	8188.74	0.07	β^-	7460	14	144 935527	12
89	56		Ba	x	-67516	8	8234.80	0.06	β^-	5319	15	144 927518	9
88	57		La		-72835	12	8266.09	0.08	β^-	4230	40	144 921808	13
87	58		Ce		-77070	30	8289.87	0.23	β^-	2560	30	144 917270	40
86	59		Pr		-79626	7	8302.13	0.05	β^-	1806	7	144 914518	8
85	60		Nd		-81431.8	1.8	8309.186	0.013	*			144 912579.3	2.0
84	61		Pm		-81267	3	8302.656	0.021	β^+	164.5	2.5	144 912756	3
83	62		Sm		-80651.2	2.0	8293.012	0.014	β^+	616.1	2.5	144 913417.3	2.1
82	63		Eu		-77992	3	8269.274	0.023	β^+	2659.7	2.7	144 916273	4
81	64		Gd		-72924	20	8228.93	0.14	β^+	5068	20	144 921713	21
80	65		Tb		-66300	100	8177.9	0.7	β^+	6620	100	144 928820	100
79	66		Dy	x	-58243	7	8116.89	0.04	β^+	8060	100	144 937474	7
78	67		Ho	x	-49120	7	8048.58	0.05	β^+	9122	10	144 947267	8
77	68		Er	x	-39080#	200#	7974#	1#	β^+	10040#	200#	144 958050#	210#
76	69		Tm	-p	-27580#	200#	7889#	1#	β^+	11490#	280#	144 970390#	210#
92	54	146	Xe	x	-47955	24	8110.41	0.17	β^-	7610	50	145 948518	26
91	55		Cs		-55570	40	8157.21	0.27	β^-	9370	40	145 940340	40
90	56		Ba		-64940	20	8216.04	0.14	β^-	4110	30	145 930284	22
89	57		La		-69050	30	8238.80	0.23	β^-	6590	30	145 925880	40
88	58		Ce		-75635	16	8278.57	0.11	β^-	1050	30	145 918802	18
87	59		Pr		-76680	30	8280.37	0.24	β^-	4250	30	145 917680	40
86	60		Nd		-80925.8	1.8	8304.091	0.012	β^-	-1472	4	145 913122.6	2.0
85	61		Pm	+	-79454	4	8288.65	0.03	β^-	1542	3	145 914702	5
84	62		Sm		-80996	3	8293.856	0.022	*			145 913047	4
83	63		Eu		-77117	6	8261.93	0.04	β^+	3879	6	145 917211	7
82	64		Gd		-76086	4	8249.504	0.029	β^+	1032	7	145 918319	5
81	65		Tb		-67760	40	8187.1	0.3	β^+	8320	40	145 927250	50
80	66		Dy		-62555	7	8146.11	0.05	β^+	5210	50	145 932845	7
79	67		Ho		-51238	7	8063.24	0.05	β^+	11317	9	145 944994	7
78	68		Er		-44322	7	8010.51	0.05	β^+	6916	9	145 952418	7
77	69		Tm	-p	-30890#	200#	7913#	1#	β^+	13430#	200#	145 966840#	210#
93	54	147	Xe	x	-42610#	200#	8074#	1#	β^-	9410#	200#	146 954260#	210#
92	55		Cs		-52020	50	8132.5	0.4	β^-	8250	60	146 944160	60
91	56		Ba	x	-60264	20	8183.24	0.13	β^-	6414	22	146 935304	21
90	57		La	x	-66678	11	8221.55	0.07	β^-	5335	14	146 928418	12
89	58		Ce		-72014	9	8252.53	0.06	β^-	3430	16	146 922690	9
88	59		Pr		-75444	16	8270.54	0.11	β^-	2703	16	146 919008	17
87	60		Nd		-78146.6	1.8	8283.602	0.012	β^-	895.3	0.9	146 916106.1	2.0
86	61		Pm		-79041.9	1.8	8284.370	0.012	β^-	224.1	0.3	146 915145.0	1.9
85	62		Sm		-79266.0	1.8	8280.572	0.012	*			146 914904.4	1.9
84	63		Eu		-77544.4	2.8	8263.539	0.019	β^+	1721.6	2.3	146 916753	3
83	64		Gd		-75356.6	2.3	8243.333	0.016	β^+	2187.8	2.6	146 919101.4	2.5
82	65		Tb		-70743	8	8206.62	0.06	β^+	4614	8	146 924055	9
81	66		Dy	x	-64196	9	8156.77	0.06	β^+	6546	12	146 931083	10
80	67		Ho		-55757	5	8094.04	0.03	β^+	8439	10	146 940142	5
79	68		Er	x	-46610	40	8026.48	0.26	β^+	9150	40	146 949960	40
78	69		Tm		-35974	7	7948.82	0.05	β^+	10630	40	146 961380	7

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
94	54	148	Xe	x	-39000#	200#	8049#	1#	β^-	8300#	610#	147 958130#	210#
93	55		Cs		-47300	580	8100	4	β^-	10300	580	147 949230	620
92	56		Ba	+	-57590	60	8164.4	0.4	β^-	5110	60	147 938170	70
91	57		La	x	-62709	19	8193.72	0.13	β^-	7690	22	147 932679	21
90	58		Ce		-70398	11	8240.39	0.08	β^-	2137	13	147 924424	12
89	59		Pr		-72535	15	8249.54	0.10	β^-	4872	15	147 922130	16
88	60		Nd		-77407.8	2.4	8277.175	0.016	β^-	-543	6	147 916899.3	2.6
87	61		Pm	+p	-76865	6	8268.22	0.04	β^-	2471	6	147 917482	6
86	62		Sm		-79336.1	1.8	8279.632	0.012	*			147 914829.2	1.9
85	63		Eu		-76299	10	8253.83	0.07	β^+	3037	10	147 918089	11
84	64		Gd		-76269.3	1.9	8248.338	0.013	β^+	30	10	147 918121.5	2.1
83	65		Tb		-70531	13	8204.28	0.09	β^+	5738	13	147 924282	14
82	66		Dy		-67853	9	8180.90	0.06	β^+	2678	10	147 927157	10
81	67		Ho	x	-57990	80	8109.0	0.6	β^+	9860	80	147 937740	90
80	68		Er	x	-51479	10	8059.69	0.07	β^+	6510	80	147 944735	11
79	69		Tm	x	-38765	10	7968.50	0.07	β^+	12714	14	147 958384	11
78	70		Yb	x	-30200#	600#	7905#	4#	β^+	8570#	600#	147 967580#	640#
94	55	149	Cs	x	-43760#	200#	8076#	1#	β^-	9260#	280#	148 953020#	210#
93	56		Ba	x	-53020#	200#	8133#	1#	β^-	7200#	280#	148 943080#	210#
92	57		La	+	-60220	200	8176.2	1.3	β^-	6450	200	148 935350	210
91	58		Ce	x	-66670	10	8214.23	0.07	β^-	4369	14	148 928427	11
90	59		Pr	x	-71039	10	8238.30	0.07	β^-	3336	10	148 923736	11
89	60		Nd	-n	-74375.3	2.4	8255.441	0.016	β^-	1688.4	2.5	148 920154.8	2.6
88	61		Pm		-76063.7	2.5	8261.522	0.017	β^-	1071.4	1.9	148 918342.3	2.7
87	62		Sm		-77135.1	1.7	8263.462	0.012	*			148 917192.1	1.8
86	63		Eu		-76440	4	8253.550	0.027	β^+	695	4	148 917938	4
85	64		Gd		-75127	4	8239.482	0.024	β^+	1314	4	148 919348	4
84	65		Tb		-71489	4	8209.816	0.026	β^+	3638	4	148 923254	4
83	66		Dy		-67699	9	8179.13	0.06	β^+	3789	9	148 927322	10
82	67		Ho		-61662	14	8133.37	0.10	β^+	6037	14	148 933803	16
81	68		Er	x	-53742	28	8074.96	0.19	β^+	7920	30	148 942310	30
80	69		Tm	x	-43880#	300#	8004#	2#	β^+	9860#	300#	148 952890#	320#
79	70		Yb	x	-33200#	500#	7927#	3#	β^+	10680#	590#	148 964360#	540#
95	55	150	Cs	x	-38820#	300#	8043#	2#	β^-	11440#	420#	149 958330#	320#
94	56		Ba	x	-50250#	300#	8114#	2#	β^-	6130#	360#	149 946050#	320#
93	57		La	x	-56380#	200#	8150#	1#	β^-	8460#	200#	149 939470#	210#
92	58		Ce		-64847	12	8201.12	0.08	β^-	3454	14	149 930384	13
91	59		Pr		-68300	9	8218.93	0.06	β^-	5379	9	149 926677	10
90	60		Nd		-73679.1	1.7	8249.572	0.011	β^-	-83	20	149 920902.2	1.8
89	61		Pm	+	-73596	20	8243.81	0.13	β^-	3454	20	149 920991	22
88	62		Sm		-77050.5	1.7	8261.617	0.011	β^-	-2259	6	149 917282.9	1.8
87	63		Eu		-74792	6	8241.34	0.04	β^-	972	4	149 919708	7
86	64		Gd		-75764	6	8242.61	0.04	*			149 918664	7
85	65		Tb		-71106	7	8206.34	0.05	β^+	4658	8	149 923665	8
84	66		Dy		-69309	4	8189.148	0.030	β^+	1796	8	149 925593	5
83	67		Ho		-61946	14	8134.84	0.09	β^+	7364	14	149 933498	15
82	68		Er		-57831	17	8102.20	0.11	β^+	4115	14	149 937916	18
81	69		Tm	x	-46490#	200#	8021#	1#	β^+	11340#	200#	149 950090#	210#
80	70		Yb	x	-38640#	400#	7964#	3#	β^+	7850#	450#	149 958520#	430#
79	71		Lu	-p	-24640#	500#	7865#	3#	β^+	14000#	640#	149 973550#	540#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ u		
96	55	151	Cs	x	-34860#	400#	8017#	3#	β^-	10540#	500#	150 962580#	430#
95	56		Ba	x	-45390#	300#	8082#	2#	β^-	8340#	360#	150 951270#	320#
94	57		La	x	-53730#	200#	8132#	1#	β^-	7500#	200#	150 942320#	210#
93	58		Ce	x	-61225	18	8176.28	0.12	β^-	5554	21	150 934272	19
92	59		Pr		-66779	12	8207.88	0.08	β^-	4163	12	150 928309	13
91	60		Nd		-70942.3	1.7	8230.268	0.011	β^-	2443	4	150 923840.3	1.8
90	61		Pm		-73385	5	8241.27	0.03	β^-	1190	4	150 921218	5
89	62		Sm		-74575.6	1.7	8243.967	0.011	β^-	76.4	0.5	150 919939.8	1.8
88	63		Eu		-74652.0	1.7	8239.292	0.011	*			150 919857.8	1.8
87	64		Gd		-74188	3	8231.038	0.021	β^+	464.0	2.8	150 920356	3
86	65		Tb		-71623	4	8208.870	0.028	β^+	2565	4	150 923110	5
85	66		Dy	$-\alpha$	-68752	3	8184.676	0.023	β^+	2871	5	150 926192	4
84	67		Ho	$-\alpha$	-63623	8	8145.52	0.06	β^+	5130	9	150 931698	9
83	68		Er	x	-58266	16	8104.87	0.11	β^+	5356	18	150 937449	18
82	69		Tm	$+\alpha$	-50778	20	8050.10	0.13	β^+	7489	26	150 945488	21
81	70		Yb	ϵ p	-41540	300	7983.8	2.0	β^+	9240	300	150 955400	320
80	71		Lu	-p	-30110#	400#	7903#	3#	β^+	11430#	500#	150 967680#	430#
96	56	152	Ba	x	-42090#	400#	8060#	3#	β^-	7440#	500#	151 954810#	430#
95	57		La	x	-49540#	300#	8104#	2#	β^-	9520#	360#	151 946820#	320#
94	58		Ce	x	-59060#	200#	8161#	1#	β^-	4700#	200#	151 936600#	210#
93	59		Pr	x	-63758	19	8187.10	0.12	β^-	6390	30	151 931553	20
92	60		Nd		-70149	25	8224.00	0.16	β^-	1105	19	151 924692	26
91	61		Pm		-71254	26	8226.12	0.17	β^-	3508	26	151 923506	28
90	62		Sm		-74762.0	1.6	8244.057	0.011	β^-	-1874.6	0.7	151 919739.7	1.8
89	63		Eu		-72887.4	1.7	8226.577	0.011	β^-	1818.9	0.7	151 921752.2	1.8
88	64		Gd		-74706.3	1.6	8233.397	0.011	*			151 919799.5	1.8
87	65		Tb	-	-70720	40	8202.00	0.26	β^+	3990	40	151 924080	40
86	66		Dy	$-\alpha$	-70118	5	8192.92	0.03	β^+	600	40	151 924725	5
85	67		Ho		-63599	13	8144.88	0.08	β^+	6519	14	151 931724	14
84	68		Er		-60494	9	8119.31	0.06	β^+	3105	10	151 935057	10
83	69		Tm		-51770	70	8056.8	0.5	β^+	8720	70	151 944420	80
82	70		Yb		-46320	160	8015.8	1.0	β^+	5450	140	151 950270	170
81	71		Lu	x	-33420#	200#	7926#	1#	β^+	12900#	250#	151 964120#	210#
97	56	153	Ba	x	-36920#	400#	8026#	3#	β^-	9320#	500#	152 960360#	430#
96	57		La	x	-46240#	300#	8082#	2#	β^-	8780#	360#	152 950360#	320#
95	58		Ce	x	-55020#	200#	8134#	1#	β^-	6550#	200#	152 940930#	210#
94	59		Pr		-61568	12	8172.04	0.08	β^-	5762	12	152 933904	13
93	60		Nd		-67330.3	2.7	8204.582	0.018	β^-	3317	9	152 927718.0	2.9
92	61		Pm		-70648	9	8221.15	0.06	β^-	1911	9	152 924157	10
91	62		Sm	-n	-72559.1	1.6	8228.530	0.011	β^-	807.3	0.7	152 922104.7	1.8
90	63		Eu		-73366.3	1.7	8228.693	0.011	*			152 921238.0	1.8
89	64		Gd		-72881.9	1.6	8220.414	0.011	β^+	484.4	0.7	152 921758.0	1.8
88	65		Tb		-71313	4	8205.045	0.027	β^+	1569	4	152 923442	4
87	66		Dy		-69143	4	8185.747	0.027	β^+	2170.4	1.9	152 925772	4
86	67		Ho	$-\alpha$	-65012	5	8153.64	0.03	β^+	4130	6	152 930206	6
85	68		Er		-60472	10	8118.85	0.06	β^+	4540	10	152 935080	10
84	69		Tm		-53989	15	8071.37	0.09	β^+	6483	14	152 942040	16
83	70		Yb	x	-47210#	200#	8022#	1#	β^+	6780#	200#	152 949320#	210#
82	71		Lu	$+\alpha$	-38420	160	7959.4	1.0	β^+	8790#	250#	152 958750	170
81	72		Hf	x	-27300#	500#	7882#	3#	β^+	11120#	530#	152 970690#	540#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μu		
97	57	154	La	x	-41760#	400#	8053#	3#	β^-	10590#	500#	153 955170#	430#
96	58		Ce	x	-52350#	300#	8117#	2#	β^-	5840#	330#	153 943800#	320#
95	59		Pr	+	-58190	150	8149.5	1.0	β^-	7490	100	153 937530	160
94	60		Nd	+	-65680	110	8193.0	0.7	β^-	2810	120	153 929480	120
93	61		Pm	+	-68490	40	8206.18	0.29	β^-	3960	40	153 926470	50
92	62		Sm		-72454.5	1.8	8226.830	0.012	β^-	-717.3	1.1	153 922216.9	2.0
91	63		Eu		-71737.2	1.7	8217.092	0.011	β^-	1968.2	0.7	153 922987.0	1.9
90	64		Gd		-73705.3	1.6	8224.792	0.011	β^-	-3550	50	153 920874.1	1.7
89	65		Tb	-	-70160	50	8196.66	0.29	β^-	240	50	153 924680	50
88	66		Dy		-70394	7	8193.13	0.05		*		153 924429	8
87	67		Ho	$-\alpha$	-64639	8	8150.68	0.05	β^+	5754	10	153 930607	9
86	68		Er		-62605	5	8132.39	0.03	β^+	2034	9	153 932791	5
85	69		Tm	$-\alpha$	-54427	14	8074.21	0.09	β^+	8178	15	153 941570	15
84	70		Yb		-49932	17	8039.94	0.11	β^+	4495	14	153 946396	19
83	71		Lu	$+\alpha$	-39720#	200#	7969#	1#	β^+	10220#	200#	153 957360#	220#
82	72		Hf	x	-32730#	500#	7918#	3#	β^+	6980#	540#	153 964860#	540#
98	57	155	La	x	-38180#	400#	8030#	3#	β^-	9740#	570#	154 959010#	430#
97	58		Ce	x	-47930#	400#	8088#	3#	β^-	7490#	400#	154 948550#	430#
96	59		Pr		-55415	17	8131.04	0.11	β^-	6868	19	154 940509	18
95	60		Nd		-62284	9	8170.30	0.06	β^-	4656	10	154 933136	10
94	61		Pm		-66940	5	8195.30	0.03	β^-	3250	5	154 928137	5
93	62		Sm	-n	-70190.2	1.8	8211.218	0.012	β^-	1627.0	1.2	154 924647.7	2.0
92	63		Eu		-71817.2	1.8	8216.668	0.011	β^-	252.1	0.9	154 922901.1	1.9
91	64		Gd		-72069.2	1.6	8213.247	0.010		*		154 922630.5	1.7
90	65		Tb	+	-71249	10	8202.91	0.06	β^+	820	10	154 923511	11
89	66		Dy		-69155	10	8184.35	0.06	β^+	2094.5	1.9	154 925759	10
88	67		Ho		-66039	17	8159.20	0.11	β^+	3116	17	154 929104	19
87	68		Er	$-\alpha$	-62209	6	8129.44	0.04	β^+	3830	18	154 933216	7
86	69		Tm	$-\alpha$	-56626	10	8088.37	0.06	β^+	5583	12	154 939210	11
85	70		Yb	$-\alpha$	-50503	17	8043.82	0.11	β^+	6123	19	154 945783	18
84	71		Lu	$+\alpha$	-42550	19	7987.47	0.13	β^+	7953	26	154 954321	21
83	72		Hf	x	-34360#	300#	7930#	2#	β^+	8190#	300#	154 963110#	320#
82	73		Ta	-p	-23990#	500#	7858#	3#	β^+	10370#	590#	154 974250#	540#
98	58	156	Ce	x	-44870#	400#	8068#	3#	β^-	6700#	500#	155 951830#	430#
97	59		Pr	x	-51570#	300#	8106#	2#	β^-	8910#	360#	155 944640#	320#
96	60		Nd	+	-60470	200	8158.1	1.3	β^-	3690	200	155 935080	210
95	61		Pm		-64164	4	8176.705	0.023	β^-	5199	10	155 931118	4
94	62		Sm		-69363	9	8205.02	0.06	β^-	722	8	155 925536	10
93	63		Eu		-70085	6	8204.63	0.04	β^-	2449	5	155 924760	6
92	64		Gd		-72534.3	1.6	8215.318	0.010	β^-	-2444	4	155 922131.2	1.7
91	65		Tb		-70090	4	8194.635	0.026	β^-	438	4	155 924755	4
90	66		Dy		-70528.3	1.6	8192.429	0.010		*		155 924284.7	1.7
89	67		Ho	-	-65480	60	8155.0	0.4	β^+	5050	60	155 929710	60
88	68		Er		-64210	25	8141.90	0.16	β^+	1270	60	155 931067	26
87	69		Tm		-56829	15	8089.57	0.09	β^+	7381	27	155 938992	16
86	70		Yb		-53258	10	8061.66	0.06	β^+	3571	13	155 942825	11
85	71		Lu	$-\alpha$	-43750	70	7995.7	0.5	β^+	9510	70	155 953030	80
84	72		Hf		-37870	160	7953.0	1.0	β^+	5880	140	155 959350	170
83	73		Ta	-p	-26050#	300#	7872#	2#	β^+	11810#	340#	155 972030#	320#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
99	58	157	Ce	x	-40010#	500#	8037#	3#	β^-	8530#	640#	156 957050#	540#
98	59		Pr	x	-48540#	400#	8086#	3#	β^-	7920#	400#	156 947890#	430#
97	60		Nd		-56462	25	8131.96	0.16	β^-	5836	26	156 939386	27
96	61		Pm		-62297	7	8164.14	0.04	β^-	4381	8	156 933121	8
95	62		Sm		-66678	4	8187.063	0.028	β^-	2781	6	156 928419	5
94	63		Eu		-69458	4	8199.791	0.028	β^-	1365	4	156 925433	5
93	64		Gd		-70822.8	1.6	8203.500	0.010	*			156 923968.6	1.7
92	65		Tb		-70762.8	1.6	8198.134	0.011	β^+	60.04	0.30	156 924033.0	1.8
91	66		Dy		-69424	5	8184.62	0.03	β^+	1339	5	156 925471	6
90	67		Ho		-66831	23	8163.12	0.15	β^+	2593	24	156 928254	25
89	68		Er		-63389	25	8136.22	0.16	β^+	3440	30	156 931949	27
88	69		Tm		-58736	26	8101.60	0.17	β^+	4650	30	156 936944	28
87	70		Yb		-53426	11	8062.79	0.07	β^+	5311	28	156 942645	12
86	71		Lu		-46457	15	8013.42	0.09	β^+	6969	16	156 950127	16
85	72		Hf	$-\alpha$	-38900#	200#	7960#	1#	β^+	7550#	200#	156 958240#	210#
84	73		Ta	IT	-29640	160	7896.4	1.0	β^+	9260#	250#	156 968180	170
83	74		W	x	-19710#	400#	7828#	3#	β^+	9930#	430#	156 978840#	430#
99	59	158	Pr	x	-44330#	400#	8060#	3#	β^-	9730#	500#	157 952410#	430#
98	60		Nd	x	-54060#	300#	8116#	2#	β^-	5040#	300#	157 941970#	320#
97	61		Pm		-59089	13	8143.25	0.09	β^-	6161	14	157 936565	14
96	62		Sm		-65250	5	8177.30	0.03	β^-	2005	10	157 929951	5
95	63		Eu		-67255	10	8185.03	0.06	β^-	3434	10	157 927799	11
94	64		Gd		-70688.9	1.6	8201.815	0.010	β^-	-1219.0	1.0	157 924112.3	1.7
93	65		Tb		-69469.9	1.9	8189.149	0.012	β^-	936.2	2.5	157 925420.9	2.0
92	66		Dy		-70406.2	2.9	8190.123	0.018	*			157 924416	3
91	67		Ho	-	-66186	27	8158.46	0.17	β^+	4220	27	157 928946	29
90	68		Er		-65304	25	8147.93	0.16	β^+	880	40	157 929893	27
89	69		Tm		-58703	25	8101.20	0.16	β^+	6600	30	157 936980	27
88	70		Yb		-56010	8	8079.20	0.05	β^+	2693	26	157 939871	9
87	71		Lu	$-\alpha$	-47212	15	8018.57	0.10	β^+	8798	17	157 949316	16
86	72		Hf		-42103	17	7981.28	0.11	β^+	5110	15	157 954801	19
85	73		Ta	$+\alpha$	-31170#	200#	7907#	1#	β^+	10940#	200#	157 966540#	220#
84	74		W	$-\alpha$	-23700#	500#	7855#	3#	β^+	7470#	540#	157 974560#	540#
100	59	159	Pr	x	-41090#	500#	8039#	3#	β^-	8720#	640#	158 955890#	540#
99	60		Nd	x	-49810#	400#	8089#	3#	β^-	6750#	400#	158 946530#	430#
98	61		Pm		-56554	10	8126.86	0.06	β^-	5653	12	158 939287	11
97	62		Sm		-62208	6	8157.49	0.04	β^-	3835	7	158 933217	6
96	63		Eu		-66043	4	8176.695	0.027	β^-	2518	4	158 929100	5
95	64		Gd		-68560.8	1.6	8187.610	0.010	β^-	970.9	0.8	158 926397.0	1.7
94	65		Tb		-69531.6	1.8	8188.796	0.011	*			158 925354.7	1.9
93	66		Dy		-69166.3	2.0	8181.577	0.013	β^+	365.4	1.2	158 925747.0	2.2
92	67		Ho	-	-67329	3	8165.100	0.021	β^+	1837.6	2.7	158 927720	4
91	68		Er	-	-64560	4	8142.767	0.025	β^+	2768.5	2.0	158 930692	4
90	69		Tm	x	-60570	28	8112.75	0.18	β^+	3990	28	158 934980	30
89	70		Yb	x	-55839	18	8078.08	0.11	β^+	4730	30	158 940055	19
88	71		Lu	x	-49710	40	8034.60	0.24	β^+	6130	40	158 946640	40
87	72		Hf	$-\alpha$	-42853	17	7986.56	0.11	β^+	6860	40	158 953996	18
86	73		Ta	IT	-34444	20	7928.76	0.13	β^+	8408	26	158 963023	21
85	74		W	$-\alpha$	-25490#	300#	7868#	2#	β^+	8960#	300#	158 972640#	320#
84	75		Re	IT	-14740#	510#	7795#	3#	β^+	10750#	590#	158 984180#	540#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
100	60	160	Nd	x	-47130#	400#	8073#	3#	β^-	5870#	500#	159 949400#	430#
99	61		Pm	x	-53000#	300#	8104#	2#	β^-	7230#	300#	159 943100#	320#
98	62		Sm		-60235	6	8144.63	0.04	β^-	3246	11	159 935335	6
97	63		Eu		-63480	10	8160.02	0.06	β^-	4460	10	159 931851	10
96	64		Gd		-67940.9	1.7	8183.009	0.011	β^-	-105.4	1.0	159 927062.4	1.8
95	65		Tb		-67835.5	1.8	8177.461	0.011	β^-	1835.9	1.3	159 927175.6	1.9
94	66		Dy		-69671.4	1.9	8184.046	0.012	*			159 925204.6	2.0
93	67		Ho	-	-66381	15	8158.59	0.09	β^+	3290	15	159 928737	16
92	68		Er		-66064	24	8151.72	0.15	β^+	317	29	159 929077	26
91	69		Tm		-60300	30	8110.82	0.21	β^+	5760	40	159 935260	40
90	70		Yb	x	-58165	16	8092.57	0.10	β^+	2140	40	159 937557	17
89	71		Lu	x	-50270	60	8038.3	0.4	β^+	7890	60	159 946030	60
88	72		Hf		-45931	10	8006.33	0.06	β^+	4340	60	159 950691	11
87	73		Ta	$-\alpha$	-35870	70	7938.6	0.5	β^+	10060	70	159 961490	80
86	74		W		-29380	160	7893.1	1.0	β^+	6500	140	159 968460	170
85	75		Re	$-\alpha$	-16930#	300#	7810#	2#	β^+	12450#	340#	159 981820#	320#
101	60	161	Nd	x	-42590#	500#	8044#	3#	β^-	7650#	590#	160 954280#	540#
100	61		Pm	x	-50240#	300#	8087#	2#	β^-	6440#	300#	160 946070#	320#
99	62		Sm		-56672	7	8122.04	0.04	β^-	5120	12	160 939160	7
98	63		Eu		-61792	10	8148.98	0.06	β^-	3714	11	160 933664	11
97	64		Gd	-n	-65505.0	2.0	8167.186	0.012	β^-	1955.8	1.4	160 929677.5	2.1
96	65		Tb		-67460.8	1.8	8174.474	0.011	β^-	593.7	1.3	160 927577.8	2.0
95	66		Dy		-68054.5	1.9	8173.302	0.012	*			160 926940.5	2.0
94	67		Ho		-67196.5	2.8	8163.114	0.017	β^+	858.0	2.2	160 927862	3
93	68		Er	+n	-65200	9	8145.86	0.06	β^+	1996	9	160 930005	10
92	69		Tm	x	-61899	28	8120.49	0.17	β^+	3302	29	160 933550	30
91	70		Yb	x	-57839	15	8090.42	0.10	β^+	4060	30	160 937907	17
90	71		Lu	x	-52562	28	8052.78	0.17	β^+	5280	30	160 943570	30
89	72		Hf		-46315	23	8009.12	0.14	β^+	6250	40	160 950278	24
88	73		Ta	$+\alpha$	-38701	25	7956.97	0.16	β^+	7610	30	160 958452	27
87	74		W	$-\alpha$	-30560#	200#	7902#	1#	β^+	8150#	200#	160 967200#	210#
86	75		Re		-20890	160	7836.6	1.0	β^+	9670#	250#	160 977570	170
85	76		Os	$-\alpha$	-10220#	400#	7765#	2#	β^+	10670#	430#	160 989030#	430#
101	61	162	Pm	x	-46370#	400#	8063#	2#	β^-	8160#	450#	161 950220#	430#
100	62		Sm	x	-54530#	200#	8109#	1#	β^-	4170#	210#	161 941460#	210#
99	63		Eu	+	-58690	60	8129.4	0.4	β^-	5580	60	161 936990	60
98	64		Gd	-nn	-64280	4	8159.030	0.026	β^-	1400	40	161 930993	4
97	65		Tb	+	-65670	40	8162.81	0.22	β^-	2510	40	161 929500	40
96	66		Dy		-68180.2	1.9	8173.449	0.012	β^-	-2139	3	161 926805.6	2.0
95	67		Ho		-66041	4	8155.413	0.022	β^-	292	3	161 929102	4
94	68		Er		-66333.2	1.9	8152.389	0.012	*			161 928788.4	2.0
93	69		Tm	-	-61476	26	8117.58	0.16	β^+	4857	26	161 934002	28
92	70		Yb	x	-59827	15	8102.57	0.10	β^+	1650	30	161 935774	17
91	71		Lu	x	-52830	80	8054.6	0.5	β^+	6990	80	161 943280	80
90	72		Hf		-49169	9	8027.12	0.06	β^+	3660	80	161 947215	10
89	73		Ta	$-\alpha$	-39780	50	7964.3	0.3	β^+	9390	50	161 957290	60
88	74		W		-34000	18	7923.83	0.11	β^+	5780	50	161 963499	19
87	75		Re	$+\alpha$	-22500#	200#	7848#	1#	β^+	11500#	200#	161 975840#	220#
86	76		Os	$-\alpha$	-14500#	500#	7794#	3#	β^+	8000#	540#	161 984430#	540#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
102	61	163	Pm	x	-43250#	500#	8044#	3#	β^-	7470#	590#	162 953570#	540#
101	62		Sm	x	-50720#	300#	8085#	2#	β^-	5920#	310#	162 945550#	320#
100	63		Eu	+	-56640	70	8116.4	0.4	β^-	4670	70	162 939200	80
99	64		Gd		-61314	8	8140.30	0.05	β^-	3281	10	162 934177	9
98	65		Tb	+p	-64595	4	8155.625	0.027	β^-	1785	4	162 930655	5
97	66		Dy		-66379.9	1.9	8161.777	0.012	*			162 928738.3	2.0
96	67		Ho		-66377.3	1.9	8156.962	0.012	β^+	2.555	0.016	162 928741.0	2.0
95	68		Er		-65167	5	8144.73	0.03	β^+	1211	5	162 930041	5
94	69		Tm	-	-62728	6	8124.97	0.04	β^+	2439	3	162 932659	6
93	70		Yb	x	-59299	15	8099.14	0.09	β^+	3428	16	162 936340	17
92	71		Lu	x	-54791	28	8066.68	0.17	β^+	4510	30	162 941180	30
91	72		Hf		-49264	25	8027.97	0.15	β^+	5530	40	162 947113	27
90	73		Ta	$-\alpha$	-42530	40	7981.89	0.23	β^+	6730	50	162 954340	40
89	74		W	$-\alpha$	-34910	50	7930.3	0.3	β^+	7630	70	162 962520	60
88	75		Re	$+\alpha$	-26007	19	7870.90	0.12	β^+	8900	60	162 972080	20
87	76		Os	$-\alpha$	-16390#	300#	7807#	2#	β^+	9620#	300#	162 982410#	320#
102	62	164	Sm	x	-48100#	300#	8069#	2#	β^-	5230#	360#	163 948360#	320#
101	63		Eu	+	-53330#	210#	8096#	1#	β^-	6440	70	163 942740#	220#
100	64		Gd	x	-59770#	200#	8130#	1#	β^-	2300#	220#	163 935830#	210#
99	65		Tb	+	-62080	100	8139.8	0.6	β^-	3890	100	163 933360	110
98	66		Dy		-65966.7	1.9	8158.706	0.011	β^-	-985.9	1.4	163 929181.9	2.0
97	67		Ho		-64980.8	2.3	8147.924	0.014	β^-	960.8	1.4	163 930240.3	2.5
96	68		Er		-65941.6	1.9	8149.012	0.012	*			163 929208.8	2.0
95	69		Tm		-61904	24	8119.62	0.15	β^+	4038	24	163 933544	26
94	70		Yb	x	-61018	15	8109.45	0.09	β^+	886	29	163 934495	17
93	71		Lu	x	-54642	28	8065.80	0.17	β^+	6380	30	163 941340	30
92	72		Hf		-51818	16	8043.81	0.10	β^+	2820	30	163 944371	17
91	73		Ta	x	-43283	28	7987.00	0.17	β^+	8540	30	163 953530	30
90	74		W		-38228	11	7951.40	0.06	β^+	5055	30	163 958961	11
89	75		Re	$-\alpha$	-27520	70	7881.4	0.5	β^+	10700	70	163 970450	80
88	76		Os		-20470	160	7833.6	1.0	β^+	7050	140	163 978020	170
87	77		Ir	$-\alpha$	-7540#	310#	7750#	2#	β^+	12940#	350#	163 991910#	340#
103	62	165	Sm	x	-43810#	400#	8043#	2#	β^-	6880#	510#	164 952970#	430#
102	63		Eu	+	-50690#	320#	8080#	2#	β^-	5800	120	164 945590#	350#
101	64		Gd	x	-56490#	300#	8110#	2#	β^-	4080#	360#	164 939360#	320#
100	65		Tb	x	-60570#	200#	8130#	1#	β^-	3050#	200#	164 934980#	210#
99	66		Dy	-n	-63611.3	1.9	8143.902	0.011	β^-	1287.0	0.8	164 931710.5	2.0
98	67		Ho		-64898.3	2.0	8146.960	0.012	*			164 930328.8	2.1
97	68		Er		-64520.4	2.0	8139.928	0.012	β^+	377.9	1.0	164 930734.5	2.1
96	69		Tm		-62928.8	2.4	8125.541	0.014	β^+	1591.6	1.5	164 932443.1	2.6
95	70		Yb		-60295	27	8104.84	0.16	β^+	2633	27	164 935270	28
94	71		Lu		-56442	27	8076.75	0.16	β^+	3850	40	164 939407	28
93	72		Hf	x	-51636	28	8042.87	0.17	β^+	4810	40	164 944570	30
92	73		Ta		-45848	14	8003.05	0.08	β^+	5790	30	164 950781	15
91	74		W		-38861	25	7955.97	0.15	β^+	6986	29	164 958281	27
90	75		Re	$+\alpha$	-30644	25	7901.42	0.15	β^+	8220	40	164 967103	27
89	76		Os	$-\alpha$	-21800#	200#	7843#	1#	β^+	8850#	200#	164 976600#	220#
88	77		Ir	IT	-11640#	170#	7777#	1#	β^+	10150#	260#	164 987500#	180#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
103	63	166	Eu	x	-46930#	300#	8057#	2#	β^-	7600#	670#	165 949620#	320#
102	64		Gd	x	-54530#	600#	8098#	4#	β^-	3350#	600#	165 941460#	640#
101	65		Tb	+	-57880	70	8113.7	0.4	β^-	4700	70	165 937860	80
100	66		Dy	-n	-62583.5	1.9	8137.273	0.012	β^-	487.1	0.9	165 932813.9	2.1
99	67		Ho		-63070.6	2.0	8135.494	0.012	β^-	1855.0	0.9	165 932290.9	2.1
98	68		Er		-64925.6	2.0	8141.956	0.012	*			165 930299.5	2.2
97	69		Tm	-	-61888	12	8118.94	0.07	β^+	3038	12	165 933561	13
96	70		Yb	+nn	-61595	7	8112.47	0.04	β^+	293	14	165 933875	8
95	71		Lu	x	-56021	30	8074.17	0.18	β^+	5570	30	165 939860	30
94	72		Hf	x	-53859	28	8056.44	0.17	β^+	2160	40	165 942180	30
93	73		Ta	x	-46098	28	8004.97	0.17	β^+	7760	40	165 950510	30
92	74		W		-41888	10	7974.90	0.06	β^+	4210	30	165 955031	10
91	75		Re	$-\alpha$	-31890	70	7910.0	0.4	β^+	9990	70	165 965760	80
90	76		Os		-25437	18	7866.37	0.11	β^+	6460	70	165 972692	20
89	77		Ir	-p	-13350#	200#	7789#	1#	β^+	12080#	200#	165 985660#	220#
88	78		Pt	$-\alpha$	-4790#	500#	7733#	3#	β^+	8560#	540#	165 994860#	540#
104	63	167	Eu	x	-43880#	400#	8039#	2#	β^-	6930#	570#	166 952890#	430#
103	64		Gd	x	-50810#	400#	8076#	2#	β^-	5110#	450#	166 945450#	430#
102	65		Tb	x	-55930#	200#	8102#	1#	β^-	4000#	210#	166 939960#	210#
101	66		Dy	+	-59930	60	8121.0	0.4	β^-	2350	60	166 935660	60
100	67		Ho	p2n	-62281	6	8130.38	0.03	β^-	1010	5	166 933139	6
99	68		Er		-63290.7	2.0	8131.743	0.012	*			166 932054.6	2.2
98	69		Tm		-62544.1	2.3	8122.587	0.014	β^+	746.7	1.5	166 932856.2	2.5
97	70		Yb		-60591	4	8106.207	0.026	β^+	1953	4	166 934953	5
96	71		Lu	x	-57500	30	8083.02	0.19	β^+	3090	30	166 938270	30
95	72		Hf	x	-53468	28	8054.18	0.17	β^+	4030	40	166 942600	30
94	73		Ta	x	-48351	28	8018.86	0.17	β^+	5120	40	166 948090	30
93	74		W		-42099	18	7976.74	0.11	β^+	6250	30	166 954805	20
92	75		Re	$+\alpha$	-34840#	40#	7929#	0#	β^+	7260#	50#	166 962600#	40#
91	76		Os	$-\alpha$	-26500	70	7874.0	0.4	β^+	8340#	80#	166 971550	80
90	77		Ir		-17078	19	7812.86	0.11	β^+	9420	80	166 981666	20
89	78		Pt	$-\alpha$	-6810#	310#	7747#	2#	β^+	10270#	310#	166 992700#	330#
104	64	168	Gd	x	-48360#	400#	8061#	2#	β^-	4360#	500#	167 948080#	430#
103	65		Tb	x	-52720#	300#	8082#	2#	β^-	5840#	330#	167 943400#	320#
102	66		Dy	+pp	-58560	140	8112.5	0.8	β^-	1500	140	167 937130	150
101	67		Ho	+	-60060	30	8116.81	0.18	β^-	2930	30	167 935520	30
100	68		Er		-62990.7	2.0	8129.598	0.012	β^-	-1677.4	1.9	167 932376.7	2.2
99	69		Tm		-61313.3	2.6	8114.957	0.015	β^-	268.1	1.9	167 934177.4	2.7
98	70		Yb		-61581.4	2.0	8111.896	0.012	*			167 933889.6	2.2
97	71		Lu	-	-57070	40	8080.37	0.23	β^+	4510	40	167 938740	40
96	72		Hf	x	-55361	28	8065.55	0.17	β^+	1710	50	167 940570	30
95	73		Ta	x	-48394	28	8019.43	0.17	β^+	6970	40	167 948050	30
94	74		W		-44893	13	7993.93	0.08	β^+	3500	30	167 951806	14
93	75		Re	$-\alpha$	-35790	30	7935.12	0.18	β^+	9100	30	167 961570	30
92	76		Os		-29987	11	7895.89	0.06	β^+	5810	30	167 967808	12
91	77		Ir	$-\alpha$	-18720	70	7824.2	0.4	β^+	11270	80	167 979910	80
90	78		Pt	$-\alpha$	-11060	160	7773.9	0.9	β^+	7660	140	167 988130	170

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ u		
105	64	169	Gd	x	-44150#	500#	8036#	3#	β^-	6180#	590#	168 952600#	540#
104	65		Tb	x	-50330#	300#	8068#	2#	β^-	5270#	420#	168 945970#	320#
103	66		Dy	+	-55600	300	8094.8	1.8	β^-	3200	300	168 940310	320
102	67		Ho	+p	-58798	20	8109.07	0.12	β^-	2125	20	168 936878	22
101	68		Er	-n	-60922.6	2.0	8117.016	0.012	β^-	353.0	1.1	168 934596.9	2.2
100	69		Tm		-61275.6	2.1	8114.475	0.012		*		168 934217.9	2.2
99	70		Yb	-n	-60377.1	2.1	8104.529	0.012	β^+	898.5	1.2	168 935182.5	2.2
98	71		Lu	-	-58084	4	8086.332	0.022	β^+	2293	3	168 937644	4
97	72		Hf	x	-54717	28	8061.78	0.17	β^+	3367	28	168 941260	30
96	73		Ta	x	-50290	28	8030.96	0.17	β^+	4430	40	168 946010	30
95	74		W		-44918	15	7994.54	0.09	β^+	5370	30	168 951779	17
94	75		Re	$+\alpha$	-38409	11	7951.40	0.07	β^+	6509	19	168 958766	12
93	76		Os	$-\alpha$	-30723	25	7901.29	0.15	β^+	7686	28	168 967018	27
92	77		Ir	$+\alpha$	-22078	25	7845.50	0.15	β^+	8650	40	168 976298	27
91	78		Pt	$-\alpha$	-12510#	200#	7784#	1#	β^+	9570#	200#	168 986570#	220#
90	79		Au	x	-1790#	300#	7716#	2#	β^+	10720#	360#	168 998080#	320#
105	65	170	Tb	x	-46720#	400#	8047#	2#	β^-	6940#	450#	169 949840#	430#
104	66		Dy	x	-53660#	200#	8083#	1#	β^-	2580#	200#	169 942390#	210#
103	67		Ho	+	-56240	50	8093.80	0.29	β^-	3870	50	169 939620	50
102	68		Er		-60109.1	2.4	8111.961	0.014	β^-	-312.8	1.9	169 935470.2	2.6
101	69		Tm		-59796.3	2.1	8105.519	0.012	β^-	968.4	0.8	169 935806.0	2.2
100	70		Yb		-60764.7	2.1	8106.614	0.012		*		169 934766.4	2.2
99	71		Lu	-	-57307	17	8081.67	0.10	β^+	3458	17	169 938478	18
98	72		Hf	x	-56254	28	8070.88	0.16	β^+	1050	30	169 939610	30
97	73		Ta	x	-50138	28	8030.30	0.16	β^+	6120	40	169 946180	30
96	74		W		-47290	13	8008.95	0.08	β^+	2850	30	169 949232	14
95	75		Re	x	-38918	26	7955.09	0.15	β^+	8373	29	169 958220	28
94	76		Os		-33926	10	7921.13	0.06	β^+	4991	28	169 963578	11
93	77		Ir	$-\alpha$	-23360#	90#	7854#	1#	β^+	10570#	90#	169 974920#	100#
92	78		Pt		-16305	19	7808.27	0.11	β^+	7060#	90#	169 982496	20
91	79		Au	-p	-3750#	200#	7730#	1#	β^+	12550#	200#	169 995970#	220#
106	65	171	Tb	x	-44030#	500#	8031#	3#	β^-	6160#	590#	170 952730#	540#
105	66		Dy	x	-50190#	300#	8063#	2#	β^-	4330#	670#	170 946120#	320#
104	67		Ho	+	-54520	600	8084	4	β^-	3200	600	170 941470	640
103	68		Er		-57719.4	2.4	8097.749	0.014	β^-	1492.1	1.3	170 938035.7	2.6
102	69		Tm		-59211.5	2.2	8101.899	0.013	β^-	96.6	1.0	170 936433.9	2.4
101	70		Yb		-59308.0	2.0	8097.889	0.012		*		170 936330.2	2.2
100	71		Lu		-57830.0	2.5	8084.670	0.015	β^+	1478.0	1.9	170 937917.0	2.7
99	72		Hf	x	-55431	29	8066.07	0.17	β^+	2399	29	170 940490	30
98	73		Ta	x	-51720	28	8039.79	0.16	β^+	3710	40	170 944480	30
97	74		W	x	-47086	28	8008.12	0.16	β^+	4630	40	170 949450	30
96	75		Re	x	-41250	28	7969.41	0.16	β^+	5840	40	170 955720	30
95	76		Os		-34303	18	7924.21	0.10	β^+	6950	30	170 963174	19
94	77		Ir	$-\alpha$	-26420	40	7873.52	0.23	β^+	7890	40	170 971640	40
93	78		Pt	$-\alpha$	-17470	70	7816.6	0.4	β^+	8950	80	170 981250	80
92	79		Au	-p	-7568	21	7754.14	0.12	β^+	9900	80	170 991876	22
91	80		Hg	$-\alpha$	3290#	310#	7686#	2#	β^+	10860#	310#	171 003530#	330#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
106	66	172	Dy	x	-48010#	300#	8050#	2#	β^-	3470#	360#	171 948460#	320#
105	67		Ho	x	-51480#	200#	8066#	1#	β^-	5000#	200#	171 944730#	210#
104	68		Er		-56484	4	8090.413	0.026	β^-	891	5	171 939362	5
103	69		Tm		-57375	6	8091.04	0.03	β^-	1881	6	171 938406	6
102	70		Yb		-59256.2	2.0	8097.433	0.012	*			171 936385.9	2.2
101	71		Lu		-56738.1	2.8	8078.245	0.016	β^+	2518.0	2.4	171 939089.1	3.0
100	72		Hf	x	-56402	24	8071.74	0.14	β^+	336	25	171 939450	26
99	73		Ta	x	-51330	28	8037.70	0.16	β^+	5070	40	171 944900	30
98	74		W	x	-49097	28	8020.17	0.16	β^+	2230	40	171 947290	30
97	75		Re		-41530	40	7971.61	0.23	β^+	7570	50	171 955420	40
96	76		Os		-37244	13	7942.16	0.07	β^+	4280	40	171 960017	14
95	77		Ir	$-\alpha$	-27380	30	7880.26	0.19	β^+	9860	30	171 970610	30
94	78		Pt		-21097	12	7839.19	0.07	β^+	6280	30	171 977351	12
93	79		Au	$-\alpha$	-9370	80	7766.5	0.4	β^+	11730	80	171 989940	80
92	80		Hg	$-\alpha$	-1110	160	7713.9	0.9	β^+	8260	140	171 998810	170
107	66	173	Dy	x	-43940#	400#	8027#	2#	β^-	5410#	500#	172 952830#	430#
106	67		Ho	x	-49350#	300#	8054#	2#	β^-	4300#	360#	172 947020#	320#
105	68		Er	x	-53650#	200#	8074#	1#	β^-	2600#	200#	172 942400#	210#
104	69		Tm	p2n	-56254	5	8084.453	0.029	β^-	1298	5	172 939608	5
103	70		Yb		-57552.2	2.0	8087.433	0.012	*			172 938215.1	2.2
102	71		Lu		-56882.6	2.2	8079.040	0.012	β^+	669.6	1.6	172 938934.0	2.3
101	72		Hf	x	-55412	28	8066.02	0.16	β^+	1471	28	172 940510	30
100	73		Ta	x	-52397	28	8044.06	0.16	β^+	3020	40	172 943750	30
99	74		W	x	-48727	28	8018.33	0.16	β^+	3670	40	172 947690	30
98	75		Re	x	-43554	28	7983.91	0.16	β^+	5170	40	172 953240	30
97	76		Os		-37438	15	7944.03	0.09	β^+	6120	30	172 959808	16
96	77		Ir		-30268	11	7898.07	0.06	β^+	7170	19	172 967506	12
95	78		Pt	$-\alpha$	-21940	60	7845.4	0.3	β^+	8330	60	172 976440	60
94	79		Au	$+\alpha$	-12816	24	7788.14	0.14	β^+	9130	60	172 986241	26
93	80		Hg	$-\alpha$	-2710#	200#	7725#	1#	β^+	10110#	200#	172 997090#	220#
107	67	174	Ho	x	-45690#	300#	8033#	2#	β^-	6260#	420#	173 950950#	320#
106	68		Er	x	-51950#	300#	8064#	2#	β^-	1920#	300#	173 944230#	320#
105	69		Tm	+	-53870	40	8070.65	0.26	β^-	3080	40	173 942170	50
104	70		Yb		-56945.5	2.0	8083.853	0.012	β^-	-1373.4	1.6	173 938866.4	2.2
103	71		Lu		-55572.1	2.1	8071.464	0.012	β^-	274.5	2.2	173 940340.9	2.3
102	72		Hf		-55846.7	2.7	8068.545	0.015	*			173 940046.1	2.8
101	73		Ta	x	-51741	28	8040.45	0.16	β^+	4106	28	173 944450	30
100	74		W	x	-50227	28	8027.26	0.16	β^+	1510	40	173 946080	30
99	75		Re	x	-43673	28	7985.09	0.16	β^+	6550	40	173 953120	30
98	76		Os		-39995	10	7959.46	0.06	β^+	3678	30	173 957064	11
97	77		Ir	$-\alpha$	-30869	28	7902.51	0.16	β^+	9126	30	173 966861	30
96	78		Pt	$-\alpha$	-25318	10	7866.12	0.06	β^+	5550	30	173 972820	11
95	79		Au	$-\alpha$	-14240#	90#	7798#	1#	β^+	11080#	90#	173 984720#	100#
94	80		Hg	$-\alpha$	-6646	19	7749.82	0.11	β^+	7590#	90#	173 992865	21
108	67	175	Ho	x	-43200#	400#	8019#	2#	β^-	5450#	570#	174 953620#	430#
107	68		Er	x	-48650#	400#	8045#	2#	β^-	3660#	400#	174 947770#	430#
106	69		Tm	+	-52310	50	8061.77	0.29	β^-	2390	50	174 943840	50
105	70		Yb		-54696.6	2.0	8070.930	0.012	β^-	471.0	1.3	174 941280.8	2.2
104	71		Lu		-55167.6	1.9	8069.151	0.011	*			174 940775.2	2.0
103	72		Hf		-54483.8	2.7	8060.774	0.015	β^+	683.7	2.0	174 941509.2	2.9
102	73		Ta	x	-52409	28	8044.44	0.16	β^+	2075	28	174 943740	30
101	74		W	x	-49633	28	8024.11	0.16	β^+	2780	40	174 946720	30
100	75		Re	x	-45288	28	7994.82	0.16	β^+	4340	40	174 951380	30
99	76		Os		-40105	12	7960.73	0.07	β^+	5180	30	174 956945	13
98	77		Ir		-33394	12	7917.91	0.07	β^+	6711	17	174 964150	13
97	78		Pt		-25700	18	7869.47	0.10	β^+	7694	22	174 972410	19
96	79		Au	$-\alpha$	-17420	40	7817.66	0.22	β^+	8280	40	174 981300	40
95	80		Hg	$-\alpha$	-7970	70	7759.2	0.4	β^+	9440	80	174 991440	80

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
108	68	176	Er	x	-46630#	400#	8034#	2#	β^-	2740#	410#	175 949940#	430#
107	69		Tm	+	-49370	100	8045.1	0.6	β^-	4120	100	175 947000	110
106	70		Yb		-53489.7	2.2	8064.075	0.013	β^-	-105.5	1.6	175 942576.4	2.4
105	71		Lu		-53384.2	1.9	8059.031	0.011	β^-	1194.2	0.9	175 942689.7	2.0
104	72		Hf		-54578.4	2.0	8061.371	0.012	*			175 941407.6	2.2
103	73		Ta	x	-51370	30	8038.67	0.17	β^+	3210	30	175 944860	30
102	74		W	x	-50642	28	8030.11	0.16	β^+	720	40	175 945630	30
101	75		Re	x	-45063	28	7993.97	0.16	β^+	5580	40	175 951620	30
100	76		Os	x	-42098	28	7972.68	0.16	β^+	2960	40	175 954810	30
99	77		Ir		-33859	20	7921.42	0.12	β^+	8240	30	175 963650	22
98	78		Pt		-28934	13	7888.99	0.07	β^+	4926	24	175 968938	14
97	79		Au	$-\alpha$	-18400	30	7824.68	0.19	β^+	10540	40	175 980250	40
96	80		Hg		-11773	13	7782.60	0.07	β^+	6620	40	175 987361	14
95	81		Tl	-p	580	80	7708.0	0.4	β^+	12350	80	176 000620	80
109	68	177	Er	x	-42860#	500#	8013#	3#	β^-	4610#	590#	176 953990#	540#
108	69		Tm	x	-47470#	300#	8035#	2#	β^-	3520#	300#	176 949040#	320#
107	70		Yb	-n	-50984.8	2.3	8049.964	0.013	β^-	1401.0	1.6	176 945265.6	2.4
106	71		Lu		-52385.8	1.9	8053.459	0.011	β^-	497.2	0.8	176 943761.5	2.0
105	72		Hf		-52883.0	1.9	8051.849	0.011	*			176 943227.7	2.0
104	73		Ta	-	-51717	4	8040.841	0.020	β^+	1166	3	176 944479	4
103	74		W	x	-49702	28	8025.04	0.16	β^+	2015	28	176 946640	30
102	75		Re	x	-46269	28	8001.22	0.16	β^+	3430	40	176 950330	30
101	76		Os	$+\alpha$	-41949	16	7972.40	0.09	β^+	4320	30	176 954966	17
100	77		Ir	x	-36047	20	7934.63	0.11	β^+	5902	25	176 961302	21
99	78		Pt		-29370	15	7892.49	0.08	β^+	6677	25	176 968470	16
98	79		Au		-21545	10	7843.86	0.06	β^+	7825	18	176 976870	11
97	80		Hg	$-\alpha$	-12780	80	7789.9	0.4	β^+	8760	80	176 986280	80
96	81		Tl	IT	-3325	23	7732.08	0.13	β^+	9460	80	176 996431	25
109	69	178	Tm	x	-44120#	400#	8016#	2#	β^-	5580#	400#	177 952640#	430#
108	70		Yb	-nn	-49694	10	8042.83	0.06	β^-	646	10	177 946651	11
107	71		Lu		-50339.8	2.7	8042.065	0.015	β^-	2097.9	2.1	177 945958.0	2.9
106	72		Hf		-52437.7	1.9	8049.456	0.011	*			177 943705.8	2.0
105	73		Ta	IT	-50600#	50#	8035#	0#	β^+	1840#	50#	177 945680#	60#
104	74		W	-	-50409	15	8029.27	0.09	β^+	190#	50#	177 945883	16
103	75		Re	x	-45653	28	7998.16	0.16	β^+	4760	30	177 950990	30
102	76		Os		-43544	14	7981.91	0.08	β^+	2110	30	177 953254	15
101	77		Ir	x	-36252	20	7936.55	0.11	β^+	7292	24	177 961082	21
100	78		Pt		-31997	10	7908.25	0.06	β^+	4255	22	177 965650	11
99	79		Au	$-\alpha$	-22330	60	7849.5	0.3	β^+	9670	60	177 976030	60
98	80		Hg	$-\alpha$	-16316	11	7811.37	0.06	β^+	6010	60	177 982484	12
97	81		Tl	$-\alpha$	-4790#	100#	7742#	1#	β^+	11520#	100#	177 994850#	110#
96	82		Pb	$-\alpha$	3569	24	7690.86	0.14	β^+	8360#	100#	178 003831	26
110	69	179	Tm	x	-41600#	500#	8002#	3#	β^-	4940#	540#	178 955340#	540#
109	70		Yb	x	-46540#	200#	8025#	1#	β^-	2520#	200#	178 950040#	210#
108	71		Lu		-49061	5	8035.084	0.030	β^-	1404	5	178 947331	6
107	72		Hf		-50465.4	1.9	8038.560	0.011	*			178 945823.2	2.0
106	73		Ta		-50359.8	1.9	8033.599	0.011	β^+	105.6	0.4	178 945936.6	2.1
105	74		W		-49297	15	8023.29	0.08	β^+	1062	15	178 947077	16
104	75		Re		-46585	25	8003.77	0.14	β^+	2713	27	178 949989	26
103	76		Os		-43019	17	7979.48	0.09	β^+	3566	30	178 953817	18
102	77		Ir		-38079	10	7947.51	0.05	β^+	4940	19	178 959120	10
101	78		Pt		-32268	8	7910.67	0.04	β^+	5811	13	178 965359	9
100	79		Au		-24989	12	7865.64	0.07	β^+	7279	14	178 973174	13
99	80		Hg		-16924	27	7816.21	0.15	β^+	8065	30	178 981831	29
98	81		Tl	$-\alpha$	-8280	40	7763.55	0.22	β^+	8640	50	178 991110	40
97	82		Pb	$-\alpha$	2050	80	7701.5	0.4	β^+	10330	90	179 002200	80

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)			Atomic mass μ	
110	70	180	Yb	x	-44600#	300#	8015#	2#	β^-	2080#	310#	179 952120#	320#
109	71		Lu	+	-46680	70	8022.1	0.4	β^-	3100	70	179 949890	80
108	72		Hf		-49781.8	1.9	8034.944	0.011	β^-	-845.6	2.6	179 946557.0	2.0
107	73		Ta	+n	-48936.2	2.3	8025.900	0.013	β^-	702.4	2.6	179 947464.8	2.4
106	74		W		-49638.6	1.9	8025.456	0.011		*		179 946710.8	2.0
105	75		Re	x	-45837	21	7999.99	0.12	β^+	3801	21	179 950792	23
104	76		Os		-44362	16	7987.45	0.09	β^+	1475	27	179 952375	17
103	77		Ir	x	-37978	22	7947.63	0.12	β^+	6384	27	179 959229	23
102	78		Pt	$+\alpha$	-34436	11	7923.61	0.06	β^+	3542	24	179 963032	12
101	79		Au		-25594	20	7870.14	0.11	β^+	8841	23	179 972523	21
100	80		Hg		-20250	13	7836.11	0.07	β^+	5344	24	179 978260	14
99	81		Tl	$-\alpha$	-9260	60	7770.7	0.3	β^+	10990	60	179 990060	60
98	82		Pb	$-\alpha$	-1930	14	7725.64	0.08	β^+	7330	60	179 997928	15
111	70	181	Yb	x	-41090#	300#	7996#	2#	β^-	3710#	340#	180 955890#	320#
110	71		Lu	x	-44800	160	8011.9	0.9	β^-	2610	160	180 951910	170
109	72		Hf	-n	-47405.3	1.9	8022.015	0.010	β^-	1036.4	2.2	180 949108.3	2.0
108	73		Ta		-48441.6	1.8	8023.418	0.010		*		180 947995.8	2.0
107	74		W		-48253	5	8018.056	0.026	β^+	188	5	180 948198	5
106	75		Re	4n	-46521	13	8004.16	0.07	β^+	1732	13	180 950058	14
105	76		Os		-43550	25	7983.43	0.14	β^+	2971	28	180 953247	27
104	77		Ir	x	-39472	26	7956.57	0.14	β^+	4080	40	180 957625	28
103	78		Pt	x	-34374	15	7924.09	0.08	β^+	5097	30	180 963098	16
102	79		Au	$-\alpha$	-27871	20	7883.84	0.11	β^+	6503	25	180 970079	21
101	80		Hg		-20661	15	7839.68	0.08	β^+	7210	25	180 977819	17
100	81		Tl		-12799	9	7791.92	0.05	β^+	7862	18	180 986260	10
99	82		Pb	$-\alpha$	-3120	80	7734.1	0.4	β^+	9680	80	180 996650	80
111	71	182	Lu	x	-41880#	200#	7996#	1#	β^-	4170#	200#	181 955040#	210#
110	72		Hf	-nn	-46052	6	8014.85	0.03	β^-	381	6	181 950561	7
109	73		Ta		-46433.2	1.8	8012.647	0.010	β^-	1814.5	1.7	181 950151.9	2.0
108	74		W		-48247.7	0.8	8018.318	0.005		*		181 948203.9	0.9
107	75		Re	IT	-45450	100	7998.6	0.6	β^+	2800	100	181 951210	110
106	76		Os		-44609	22	7989.73	0.12	β^+	840	100	181 952110	23
105	77		Ir		-39052	21	7954.89	0.12	β^+	5560	30	181 958076	23
104	78		Pt		-36168	13	7934.75	0.07	β^+	2883	25	181 961172	14
103	79		Au	$-\alpha$	-28301	20	7887.23	0.11	β^+	7867	24	181 969618	22
102	80		Hg		-23577	10	7856.97	0.05	β^+	4724	23	181 974689	11
101	81		Tl	$-\alpha$	-13310	60	7796.3	0.3	β^+	10270	60	181 985710	60
100	82		Pb	$-\alpha$	-6826	12	7756.33	0.07	β^+	6480	60	181 992672	13
112	71	183	Lu	x	-39720	90	7984.8	0.5	β^-	3570	100	182 957360	100
111	72		Hf	+	-43290	30	8000.04	0.16	β^-	2010	30	182 953530	30
110	73		Ta	-n	-45296.1	1.9	8006.753	0.010	β^-	1071.1	1.7	182 951372.6	2.0
109	74		W		-46367.2	0.8	8008.331	0.005		*		182 950222.7	0.9
108	75		Re	-	-45811	8	8001.02	0.04	β^+	556	8	182 950820	9
107	76		Os		-43660	50	7985.01	0.27	β^+	2150	50	182 953120	50
106	77		Ir		-40203	24	7961.82	0.13	β^+	3460	50	182 956840	26
105	78		Pt		-35772	16	7933.34	0.08	β^+	4431	29	182 961597	17
104	79		Au		-30189	9	7898.55	0.05	β^+	5583	18	182 967591	10
103	80		Hg		-23805	7	7859.39	0.04	β^+	6385	12	182 974445	8
102	81		Tl		-16587	9	7815.67	0.05	β^+	7217	12	182 982193	10
101	82		Pb	$-\alpha$	-7571	28	7762.13	0.15	β^+	9016	30	182 991870	30

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ u		
113	71	184	Lu	x	-36410#	300#	7967#	2#	β^-	5090#	300#	183 960910#	320#
112	72		Hf	+	-41500	40	7990.73	0.22	β^-	1340	30	183 955450	40
111	73		Ta	+	-42842	26	7993.76	0.14	β^-	2866	26	183 954008	28
110	74		W		-45707.6	0.9	8005.088	0.005	β^-	-1483	4	183 950930.9	0.9
109	75		Re		-44225	4	7992.778	0.024	β^-	32	4	183 952523	5
108	76		Os		-44256.6	1.3	7988.699	0.007	*			183 952488.5	1.4
107	77		Ir	x	-39611	28	7959.20	0.15	β^+	4646	28	183 957480	30
106	78		Pt		-37339	15	7942.60	0.08	β^+	2270	30	183 959915	17
105	79		Au	$-\alpha$	-30319	22	7900.19	0.12	β^+	7020	27	183 967452	24
104	80		Hg		-26349	10	7874.37	0.05	β^+	3970	24	183 971714	11
103	81		Tl		-16873	20	7818.62	0.11	β^+	9475	22	183 981886	22
102	82		Pb		-11052	13	7782.73	0.07	β^+	5822	24	183 988136	14
101	83		Bi	$-\alpha$	1190	80	7712.0	0.4	β^+	12240	80	184 001270	80
114	71	185	Lu	x	-33890#	300#	7954#	2#	β^-	4430#	310#	184 963620#	320#
113	72		Hf	x	-38320	90	7974.0	0.5	β^-	3080	90	184 958860	100
112	73		Ta	+	-41396	14	7986.37	0.08	β^-	1994	14	184 955559	15
111	74		W		-43389.9	0.9	7992.919	0.005	β^-	432.7	0.9	184 953419.0	1.0
110	75		Re		-43822.6	1.2	7991.029	0.007	*			184 952954.5	1.3
109	76		Os		-42809.8	1.3	7981.325	0.007	β^+	1012.8	0.4	184 954041.7	1.4
108	77		Ir	x	-40336	28	7963.72	0.15	β^+	2474	28	184 956700	30
107	78		Pt		-36688	26	7939.78	0.14	β^+	3650	40	184 960614	28
106	79		Au	$-\alpha$	-31867	26	7909.49	0.14	β^+	4820	40	184 965790	28
105	80		Hg	$-\alpha$	-26176	16	7874.49	0.08	β^+	5690	30	184 971899	17
104	81		Tl	IT	-19758	21	7835.58	0.11	β^+	6418	26	184 978789	22
103	82		Pb	$-\alpha$	-11541	16	7786.93	0.09	β^+	8217	26	184 987610	17
102	83		Bi	IT	-2240#	80#	7732#	0#	β^+	9310#	80#	184 997600#	90#
114	72	186	Hf	x	-36420	50	7964.30	0.30	β^-	2190	80	185 960900	60
113	73		Ta	+	-38610	60	7971.8	0.3	β^-	3900	60	185 958550	60
112	74		W		-42510.8	1.5	7988.614	0.008	β^-	-580.2	1.3	185 954362.8	1.7
111	75		Re		-41930.6	1.2	7981.288	0.007	β^-	1071.7	1.0	185 954985.6	1.3
110	76		Os		-43002.4	1.5	7982.844	0.008	*			185 953835.0	1.6
109	77		Ir	x	-39175	17	7958.06	0.09	β^+	3828	17	185 957944	18
108	78		Pt		-37864	22	7946.81	0.12	β^+	1310	27	185 959351	23
107	79		Au		-31715	21	7909.54	0.11	β^+	6150	30	185 965953	23
106	80		Hg		-28539	12	7888.26	0.06	β^+	3176	24	185 969362	13
105	81		Tl	x	-19887	22	7837.54	0.12	β^+	8652	25	185 978651	24
104	82		Pb	$-\alpha$	-14682	11	7805.35	0.06	β^+	5205	25	185 984238	12
103	83		Bi	$-\alpha$	-3130	60	7739.0	0.3	β^+	11560	60	185 996640	60
102	84		Po	$-\alpha$	4090	30	7696.00	0.18	β^+	7220	70	186 004390	40
115	72	187	Hf	x	-32820#	300#	7946#	2#	β^-	4080#	310#	186 964770#	320#
114	73		Ta	x	-36900	70	7963.2	0.4	β^-	3010	70	186 960390	70
113	74		W		-39906.3	1.5	7975.128	0.008	β^-	1312.3	1.2	186 957158.8	1.7
112	75		Re		-41218.5	1.5	7977.962	0.008	β^-	2.467	0.002	186 955750.1	1.6
111	76		Os		-41221.0	1.5	7973.791	0.008	*			186 955747.4	1.6
110	77		Ir	x	-39549	28	7960.67	0.15	β^+	1672	28	186 957540	30
109	78		Pt		-36685	24	7941.17	0.13	β^+	2860	40	186 960617	26
108	79		Au		-33028	22	7917.43	0.12	β^+	3657	27	186 964543	24
107	80		Hg		-28118	14	7886.99	0.07	β^+	4910	26	186 969814	15
106	81		Tl		-22443	8	7852.46	0.04	β^+	5675	16	186 975906	9
105	82		Pb		-14987	5	7808.400	0.027	β^+	7456	10	186 983911	5
104	83		Bi	$-\alpha$	-6383	10	7758.21	0.05	β^+	8604	11	186 993147	11
103	84		Po	$-\alpha$	2830	30	7704.74	0.17	β^+	9220	30	187 003040	30

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
116	72	188	Hf	x	-30880#	300#	7936#	2#	β^-	2730#	310#	187 966850#	320#
115	73		Ta	x	-33610	70	7946.3	0.4	β^-	5060	70	187 963920	70
114	74		W	+	-38670	3	7969.063	0.018	β^-	349	3	187 958486	4
113	75		Re	-n	-39018.9	1.5	7966.758	0.008	β^-	2120.39	0.15	187 958111.5	1.6
112	76		Os		-41139.3	1.5	7973.875	0.008	*			187 955835.2	1.6
111	77		Ir		-38351	10	7954.88	0.05	β^+	2788	9	187 958828	10
110	78		Pt		-37829	6	7947.94	0.03	β^+	522	9	187 959389	6
109	79		Au		-32277	15	7914.25	0.08	β^+	5552	16	187 965349	17
108	80		Hg		-30211	11	7899.10	0.06	β^+	2066	15	187 967567	12
107	81		Tl	x	-22336	30	7853.05	0.16	β^+	7870	30	187 976020	30
106	82		Pb	$-\alpha$	-17815	11	7824.84	0.06	β^+	4520	30	187 980875	11
105	83		Bi	$-\alpha$	-7185	21	7764.14	0.11	β^+	10630	23	187 992287	22
104	84		Po	$-\alpha$	-544	20	7724.65	0.11	β^+	6640	29	187 999416	21
117	72	189	Hf	x	-27160#	300#	7917#	2#	β^-	4670#	420#	188 970840#	320#
116	73		Ta	x	-31830#	300#	7938#	2#	β^-	3790#	300#	188 965830#	320#
115	74		W	x	-35620	40	7953.45	0.22	β^-	2360	40	188 961760	40
114	75		Re	+p	-37981	8	7961.82	0.04	β^-	1008	8	188 959226	9
113	76		Os		-38988.5	1.6	7963.011	0.008	*			188 958144.2	1.7
112	77		Ir		-38457	13	7956.06	0.07	β^+	532	13	188 958715	14
111	78		Pt		-36485	11	7941.49	0.06	β^+	1971	14	188 960831	12
110	79		Au	x	-33582	20	7921.99	0.11	β^+	2903	23	188 963948	22
109	80		Hg		-29630	30	7896.92	0.17	β^+	3960	40	188 968190	30
108	81		Tl	$+\alpha$	-24602	11	7866.20	0.06	β^+	5020	30	188 973588	12
107	82		Pb	x	-17880	30	7826.48	0.18	β^+	6720	40	188 980810	40
106	83		Bi	$-\alpha$	-10065	21	7781.00	0.11	β^+	7810	40	188 989195	22
105	84		Po	$-\alpha$	-1422	22	7731.13	0.12	β^+	8640	30	188 998473	24
117	73	190	Ta	x	-28510#	200#	7921#	1#	β^-	5870#	200#	189 969390#	210#
116	74		W		-34380	40	7947.57	0.20	β^-	1250	60	189 963090	40
115	75		Re		-35630	70	7950.0	0.4	β^-	3070	70	189 961740	80
114	76		Os		-38709.4	1.6	7962.112	0.008	β^-	-1953.8	1.2	189 958443.7	1.7
113	77		Ir	+n	-36755.6	2.0	7947.712	0.010	β^-	570	6	189 960541.2	2.1
112	78		Pt		-37325	6	7946.59	0.03	*			189 959930	6
111	79		Au	-	-32883	16	7919.10	0.08	β^+	4442	15	189 964698	17
110	80		Hg		-31370	16	7907.01	0.08	β^+	1513	23	189 966323	17
109	81		Tl	IT	-24380#	50#	7866#	0#	β^+	6990#	50#	189 973830#	50#
108	82		Pb	$-\alpha$	-20416	13	7841.13	0.07	β^+	3960#	50#	189 978082	13
107	83		Bi	$-\alpha$	-10599	23	7785.34	0.12	β^+	9818	26	189 988622	24
106	84		Po	$-\alpha$	-4564	13	7749.46	0.07	β^+	6035	26	189 995101	14
118	73	191	Ta	x	-26490#	300#	7911#	2#	β^-	4680#	300#	190 971560#	320#
117	74		W	x	-31180	40	7931.44	0.23	β^-	3180	50	190 966530	50
116	75		Re	+p	-34352	10	7943.97	0.05	β^-	2045	10	190 963122	11
115	76		Os		-36396.9	1.6	7950.576	0.008	β^-	314.0	1.2	190 960926.4	1.7
114	77		Ir		-36710.8	1.9	7948.124	0.010	*			190 960589.3	2.1
113	78		Pt		-35701	5	7938.743	0.026	β^+	1009	4	190 961673	5
112	79		Au		-33810	40	7924.75	0.19	β^+	1890	40	190 963700	40
111	80		Hg		-30593	23	7903.81	0.12	β^+	3220	40	190 967157	24
110	81		Tl	$+\alpha$	-26283	7	7877.14	0.04	β^+	4310	24	190 971784	8
109	82		Pb	x	-20240	40	7841.39	0.20	β^+	6050	40	190 978280	40
108	83		Bi		-13240	7	7800.66	0.04	β^+	7000	40	190 985787	8
107	84		Po		-5069	7	7753.79	0.04	β^+	8171	10	190 994558	8
106	85		At	$-\alpha$	3864	16	7702.92	0.08	β^+	8933	18	191 004148	17

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
119	73	192	Ta	x	-23160#	400#	7894#	2#	β^-	6490#	450#	191 975140#	430#
118	74		W	x	-29650#	200#	7924#	1#	β^-	1940#	210#	191 968170#	210#
117	75		Re	x	-31590	80	7930.2	0.4	β^-	4300	80	191 966090	80
116	76		Os		-35883.9	2.7	7948.534	0.014	β^-	-1046.3	2.4	191 961477.0	2.9
115	77		Ir		-34837.6	1.9	7939.010	0.010	β^-	1454.5	2.3	191 962600.2	2.1
114	78		Pt		-36292	3	7942.511	0.016		*		191 961039	3
113	79		Au	-	-32776	16	7920.12	0.08	β^+	3516	16	191 964814	17
112	80		Hg	x	-32011	16	7912.06	0.08	β^+	765	22	191 965635	17
111	81		Tl	x	-25870	30	7876.02	0.16	β^+	6140	40	191 972230	30
110	82		Pb	$-\alpha$	-22565	12	7854.72	0.06	β^+	3310	30	191 975775	13
109	83		Bi	$-\alpha$	-13540	30	7803.61	0.16	β^+	9030	30	191 985470	30
108	84		Po	$-\alpha$	-8071	11	7771.07	0.06	β^+	5460	30	191 991336	12
107	85		At	$-\alpha$	2940	30	7709.68	0.17	β^+	11010	30	192 003150	40
119	74	193	W	x	-26290#	200#	7908#	1#	β^-	3950#	200#	192 971780#	210#
118	75		Re	x	-30240	40	7923.96	0.20	β^-	3160	40	192 967540	40
117	76		Os		-33396.0	2.7	7936.279	0.014	β^-	1142.3	2.4	192 964147.9	2.9
116	77		Ir		-34538.3	1.9	7938.144	0.010		*		192 962921.6	2.1
115	78		Pt		-34481.7	2.0	7933.797	0.010	β^+	56.63	0.30	192 962982.4	2.1
114	79		Au		-33406	9	7924.17	0.04	β^+	1076	9	192 964137	9
113	80		Hg		-31063	16	7907.98	0.08	β^+	2343	14	192 966653	17
112	81		Tl	x	-27477	7	7885.34	0.03	β^+	3586	17	192 970502	7
111	82		Pb	x	-22190	50	7853.92	0.26	β^+	5280	50	192 976170	50
110	83		Bi	x	-15873	10	7817.11	0.05	β^+	6320	50	192 982960	10
109	84		Po	$-\alpha$	-8360	30	7774.13	0.18	β^+	7510	40	192 991030	40
108	85		At	$-\alpha$	-68	22	7727.11	0.11	β^+	8290	40	192 999927	23
107	86		Rn	$-\alpha$	9043	25	7675.85	0.13	β^+	9110	30	193 009708	27
120	74	194	W	x	-24530#	300#	7899#	2#	β^-	2710#	360#	193 973670#	320#
119	75		Re	x	-27240#	200#	7909#	1#	β^-	5200#	200#	193 970760#	210#
118	76		Os	+	-32437.2	2.8	7932.033	0.014	β^-	96.6	2.0	193 965177.2	3.0
117	77		Ir	-n	-32533.8	1.9	7928.498	0.010	β^-	2228.8	2.1	193 965073.5	2.1
116	78		Pt		-34762.6	0.9	7935.954	0.005		*		193 962680.9	1.0
115	79		Au	+3n	-32213.2	2.1	7918.780	0.011	β^+	2549.4	2.2	193 965417.8	2.3
114	80		Hg	x	-32183.9	2.9	7914.597	0.015	β^+	29	4	193 965449	3
113	81		Tl	x	-26937	14	7883.52	0.07	β^+	5246	14	193 971081	15
112	82		Pb		-24207	17	7865.42	0.09	β^+	2730	22	193 974012	19
111	83		Bi	$-\alpha$	-16040#	50#	7819#	0#	β^+	8170#	50#	193 982790#	50#
110	84		Po	$-\alpha$	-11005	13	7789.29	0.07	β^+	5030#	50#	193 988186	14
109	85		At	$-\alpha$	-712	27	7732.20	0.14	β^+	10290	30	193 999236	29
108	86		Rn	$-\alpha$	5723	17	7695.00	0.09	β^+	6430	30	194 006144	18
120	75	195	Re	x	-25580#	300#	7902#	2#	β^-	3930#	300#	194 972540#	320#
119	76		Os	x	-29510	60	7917.7	0.3	β^-	2180	60	194 968320	70
118	77		Ir	-n	-31694.3	1.9	7924.926	0.010	β^-	1102.0	2.1	194 965974.7	2.1
117	78		Pt		-32796.3	0.9	7926.565	0.005		*		194 964791.7	1.0
116	79		Au		-32569.5	1.4	7921.389	0.007	β^+	226.8	1.0	194 965035.2	1.5
115	80		Hg		-31000	23	7909.33	0.12	β^+	1570	23	194 966721	25
114	81		Tl		-28155	11	7890.73	0.06	β^+	2845	26	194 969774	12
113	82		Pb	x	-23713	23	7863.94	0.12	β^+	4442	26	194 974543	25
112	83		Bi		-18026	5	7830.757	0.027	β^+	5688	24	194 980649	6
111	84		Po	$-\alpha$	-11060	40	7791.03	0.20	β^+	6960	40	194 988130	40
110	85		At	$-\alpha$	-3476	9	7748.12	0.05	β^+	7590	40	194 996269	10
109	86		Rn	$-\alpha$	5050	50	7700.38	0.26	β^+	8530	50	195 005420	50

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
121	75	196	Re	x	-22540#	300#	7887#	2#	β^-	5740#	300#	195 975800#	320#
120	76		Os	+pp	-28280	40	7912.24	0.20	β^-	1160	60	195 969640	40
119	77		Ir	+	-29440	40	7914.16	0.20	β^-	3210	40	195 968400	40
118	78		Pt		-32646.9	0.9	7926.541	0.005	β^-	-1507.0	3.0	195 964952.1	1.0
117	79		Au		-31139.9	3.0	7914.861	0.015	β^-	687	3	195 966570	3
116	80		Hg		-31826.8	3.0	7914.373	0.015	*			195 965833	3
115	81		Tl	x	-27497	12	7888.29	0.06	β^+	4330	12	195 970481	13
114	82		Pb	x	-25361	14	7873.40	0.07	β^+	2136	19	195 972774	15
113	83		Bi	x	-18009	24	7831.90	0.12	β^+	7352	28	195 980667	26
112	84		Po	$-\alpha$	-13483	13	7804.81	0.06	β^+	4526	27	195 985526	14
111	85		At	$-\alpha$	-3910	30	7752.00	0.16	β^+	9570	30	195 995800	30
110	86		Rn	$-\alpha$	1971	14	7717.99	0.07	β^+	5880	30	196 002116	15
122	75	197	Re	x	-20500#	300#	7878#	2#	β^-	4810#	360#	196 977990#	320#
121	76		Os	x	-25310#	200#	7898#	1#	β^-	2960#	200#	196 972830#	210#
120	77		Ir	+p	-28266	20	7909.01	0.10	β^-	2156	20	196 969655	22
119	78		Pt		-30422.0	0.9	7915.982	0.004	β^-	719.0	0.6	196 967340.7	0.9
118	79		Au		-31141.0	0.7	7915.660	0.003	*			196 966568.8	0.7
117	80		Hg		-30541	3	7908.644	0.016	β^+	600	3	196 967213	3
116	81		Tl	$+\alpha$	-28340	16	7893.50	0.08	β^+	2201	17	196 969576	18
115	82		Pb	IT	-24749	6	7871.298	0.028	β^+	3591	17	196 973431	6
114	83		Bi	$+\alpha$	-19687	8	7841.63	0.04	β^+	5062	10	196 978865	9
113	84		Po	$-\alpha$	-13360	50	7805.54	0.25	β^+	6330	50	196 985660	50
112	85		At	$-\alpha$	-6340	50	7765.96	0.26	β^+	7010	70	196 993190	50
111	86		Rn	$-\alpha$	1480	40	7722.29	0.18	β^+	7820	60	197 001580	40
123	75	198	Re	x	-17140#	400#	7862#	2#	β^-	6700#	450#	197 981600#	430#
122	76		Os	x	-23840#	200#	7891#	1#	β^-	1980#	280#	197 974410#	210#
121	77		Ir	x	-25820#	200#	7897#	1#	β^-	4090#	200#	197 972280#	210#
120	78		Pt		-29905.7	2.2	7914.159	0.011	β^-	-323.7	2.1	197 967894.9	2.3
119	79		Au		-29582.0	0.7	7908.573	0.003	β^-	1372.9	0.5	197 968242.4	0.7
118	80		Hg		-30954.8	0.5	7911.555	0.002	*			197 966768.6	0.5
117	81		Tl	-	-27490	80	7890.1	0.4	β^+	3460	80	197 970480	90
116	82		Pb	x	-26050	15	7878.88	0.07	β^+	1440	80	197 972034	16
115	83		Bi	x	-19369	28	7841.19	0.14	β^+	6680	30	197 979210	30
114	84		Po		-15473	17	7817.56	0.09	β^+	3900	30	197 983389	19
113	85		At	$-\alpha$	-6720#	50#	7769#	0#	β^+	8750#	50#	197 992780#	50#
112	86		Rn	$-\alpha$	-1230	13	7737.72	0.07	β^+	5490#	50#	197 998679	14
123	76	199	Os	x	-20480#	200#	7875#	1#	β^-	3920#	200#	198 978010#	210#
122	77		Ir	p-2n	-24400	40	7891.21	0.21	β^-	2990	40	198 973810	40
121	78		Pt	-n	-27390.4	2.2	7902.309	0.011	β^-	1704.6	2.1	198 970595.2	2.4
120	79		Au		-29095.0	0.7	7906.943	0.003	β^-	451.4	0.6	198 968765.3	0.7
119	80		Hg		-29546.4	0.4	7905.280	0.002	*			198 968280.6	0.5
118	81		Tl	x	-28059	28	7893.88	0.14	β^+	1487	28	198 969880	30
117	82		Pb	$+\alpha$	-25232	10	7875.74	0.05	β^+	2828	30	198 972913	11
116	83		Bi		-20797	11	7849.52	0.05	β^+	4434	15	198 977673	11
115	84		Po	$-\alpha$	-15214	23	7817.53	0.12	β^+	5583	26	198 983667	25
114	85		At		-8823	5	7781.488	0.027	β^+	6391	24	198 990528	6
113	86		Rn	$-\alpha$	-1500	60	7740.8	0.3	β^+	7320	60	198 998390	70
112	87		Fr	$-\alpha$	6760	40	7695.31	0.21	β^+	8260	80	199 007260	40
124	76	200	Os	x	-18780#	300#	7868#	1#	β^-	2830#	360#	199 979840#	320#
123	77		Ir	x	-21610#	200#	7878#	1#	β^-	4990#	200#	199 976800#	210#
122	78		Pt	-nn	-26601	20	7899.21	0.10	β^-	640	30	199 971443	22
121	79		Au		-27240	27	7898.49	0.13	β^-	2263	27	199 970756	29
120	80		Hg		-29503.6	0.4	7905.896	0.002	*			199 968326.6	0.5
119	81		Tl	-	-27048	6	7889.705	0.029	β^+	2456	6	199 970963	6
118	82		Pb	4n	-26251	11	7881.81	0.05	β^+	797	12	199 971819	12
117	83		Bi	$+\alpha$	-20371	22	7848.50	0.11	β^+	5880	25	199 978131	24
116	84		Po	$-\alpha$	-16954	14	7827.50	0.07	β^+	3416	27	199 981799	15
115	85		At	$-\alpha$	-8988	24	7783.76	0.12	β^+	7966	28	199 990351	26
114	86		Rn	$-\alpha$	-4014	13	7754.98	0.06	β^+	4974	28	199 995690	14
113	87		Fr	$-\alpha$	6130	60	7700.32	0.29	β^+	10150	60	200 006590	60

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ u		
125	76	201	Os	x	-15240#	300#	7851#	1#	β^-	4660#	360#	200 983640#	320#
124	77		Ir	x	-19900#	200#	7871#	1#	β^-	3840#	200#	200 978640#	210#
123	78		Pt	+	-23740	50	7885.83	0.25	β^-	2660	50	200 974510	50
122	79		Au		-26401	3	7895.175	0.016	β^-	1262	3	200 971657	3
121	80		Hg		-27662.7	0.6	7897.561	0.003	*			200 970302.8	0.7
120	81		Tl		-27179	14	7891.26	0.07	β^+	484	14	200 970822	15
119	82		Pb		-25259	22	7877.82	0.11	β^+	1920	24	200 972883	23
118	83		Bi	$+\alpha$	-21415	15	7854.80	0.08	β^+	3845	26	200 977010	16
117	84		Po	$-\alpha$	-16525	6	7826.580	0.029	β^+	4890	16	200 982260	6
116	85		At	$+\alpha$	-10789	8	7794.15	0.04	β^+	5736	10	200 988417	9
115	86		Rn	$-\alpha$	-4070	50	7756.84	0.25	β^+	6720	50	200 995630	50
114	87		Fr	$-\alpha$	3600	70	7714.8	0.4	β^+	7670	90	201 003870	80
113	88		Ra	$-\alpha$	11840#	110#	7670#	1#	β^+	8240#	130#	201 012710#	110#
126	76	202	Os	x	-13090#	400#	7842#	2#	β^-	3690#	500#	201 985950#	430#
125	77		Ir	x	-16780#	300#	7856#	1#	β^-	5920#	300#	201 981990#	320#
124	78		Pt	x	-22692	25	7881.56	0.12	β^-	1660	30	201 975639	27
123	79		Au	x	-24353	23	7885.91	0.12	β^-	2993	23	201 973856	25
122	80		Hg		-27345.5	0.6	7896.851	0.003	*			201 970643.4	0.7
121	81		Tl		-25986	14	7886.25	0.07	β^+	1359	14	201 972102	15
120	82		Pb		-25940	4	7882.148	0.019	β^+	46	14	201 972152	4
119	83		Bi		-20741	15	7852.54	0.08	β^+	5199	16	201 977734	17
118	84		Po	$-\alpha$	-17924	15	7834.72	0.07	β^+	2817	21	201 980758	16
117	85		At	$-\alpha$	-10591	28	7794.54	0.14	β^+	7330	30	201 988630	30
116	86		Rn	$-\alpha$	-6274	18	7769.30	0.09	β^+	4320	30	201 993264	19
115	87		Fr	$-\alpha$	3090#	50#	7719#	0#	β^+	9370#	50#	202 003320#	60#
114	88		Ra	$-\alpha$	9091	24	7685.49	0.12	β^+	6000#	60#	202 009760	26
126	77	203	Ir	x	-14690#	400#	7847#	2#	β^-	4940#	450#	202 984230#	430#
125	78		Pt	x	-19630#	200#	7867#	1#	β^-	3520#	200#	202 978930#	210#
124	79		Au		-23143	3	7880.864	0.015	β^-	2125	3	202 975154	3
123	80		Hg		-25268.8	1.7	7887.480	0.008	β^-	492.1	1.2	202 972872.8	1.8
122	81		Tl		-25760.8	1.3	7886.050	0.006	*			202 972344.6	1.4
121	82		Pb		-24786	7	7877.39	0.03	β^+	975	6	202 973391	7
120	83		Bi	$+\alpha$	-21524	13	7857.47	0.06	β^+	3262	14	202 976893	14
119	84		Po	$+\alpha$	-17311	9	7832.86	0.04	β^+	4213	15	202 981416	9
118	85		At		-12163	11	7803.65	0.05	β^+	5148	14	202 986943	11
117	86		Rn	$-\alpha$	-6159	24	7770.22	0.12	β^+	6003	26	202 993388	25
116	87		Fr		876	6	7731.71	0.03	β^+	7036	24	203 000941	7
115	88		Ra	$-\alpha$	8670	80	7689.5	0.4	β^+	7790	80	203 009300	90
127	77	204	Ir	x	-9690#	400#	7824#	2#	β^-	8230#	450#	203 989600#	430#
126	78		Pt	x	-17920#	200#	7860#	1#	β^-	2730#	280#	203 980760#	210#
125	79		Au	+	-20650#	200#	7870#	1#	β^-	4040#	200#	203 977830#	220#
124	80		Hg		-24690.2	0.5	7885.545	0.002	β^-	-344.6	1.3	203 973494.0	0.5
123	81		Tl		-24345.6	1.2	7880.021	0.006	β^-	763.75	0.18	203 973863.9	1.3
122	82		Pb		-25109.4	1.2	7879.930	0.006	*			203 973044.0	1.3
121	83		Bi	$+\alpha$	-20646	9	7854.21	0.05	β^+	4464	9	203 977836	10
120	84		Po	$-\alpha$	-18341	11	7839.08	0.05	β^+	2305	14	203 980310	12
119	85		At		-11875	22	7803.55	0.11	β^+	6465	25	203 987251	24
118	86		Rn	$-\alpha$	-7983	15	7780.64	0.07	β^+	3892	27	203 991430	16
117	87		Fr	$-\alpha$	607	25	7734.69	0.12	β^+	8590	29	204 000652	26
116	88		Ra	$-\alpha$	6047	14	7704.19	0.07	β^+	5440	29	204 006492	16

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
127	78	205	Pt	x	-12970#	300#	7837#	1#	β^-	5800#	360#	204 986080#	320#
126	79		Au	x	-18770#	200#	7861#	1#	β^-	3520#	200#	204 979850#	210#
125	80		Hg		-22287	4	7874.731	0.018	β^-	1533	4	204 976073	4
124	81		Tl		-23820.3	1.3	7878.392	0.006		*		204 974427.8	1.4
123	82		Pb		-23769.7	1.2	7874.328	0.006	β^+	50.6	0.5	204 974482.2	1.3
122	83		Bi		-21064	5	7857.314	0.025	β^+	2706	5	204 977387	5
121	84		Po		-17509	20	7836.16	0.10	β^+	3555	21	204 981203	22
120	85		At	$+\alpha$	-12970	15	7810.20	0.07	β^+	4539	25	204 986076	16
119	86		Rn	$-\alpha$	-7710	50	7780.74	0.25	β^+	5260	50	204 991720	50
118	87		Fr	x	-1310	8	7745.69	0.04	β^+	6400	50	204 998594	8
117	88		Ra	$-\alpha$	5840	70	7707.0	0.3	β^+	7150	70	205 006270	80
128	78	206	Pt	x	-9630#	300#	7822#	1#	β^-	4580#	420#	205 989660#	320#
127	79		Au	x	-14220#	300#	7840#	1#	β^-	6730#	300#	205 984740#	320#
126	80		Hg	$+\alpha$	-20945	20	7869.17	0.10	β^-	1308	20	205 977514	22
125	81		Tl		-22252.8	1.4	7871.719	0.007	β^-	1532.2	0.6	205 976110.6	1.5
124	82		Pb		-23785.1	1.2	7875.359	0.006		*		205 974465.7	1.3
123	83		Bi	-	-20028	8	7853.32	0.04	β^+	3757	8	205 978499	8
122	84		Po	$-\alpha$	-18188	4	7840.595	0.019	β^+	1839	9	205 980474	4
121	85		At		-12429	15	7808.84	0.07	β^+	5759	16	205 986657	16
120	86		Rn	$-\alpha$	-9115	15	7788.96	0.07	β^+	3314	21	205 990214	16
119	87		Fr	$-\alpha$	-1242	28	7746.94	0.14	β^+	7870	30	205 998670	30
118	88		Ra	$-\alpha$	3566	18	7719.80	0.09	β^+	4810	30	206 003828	19
117	89		Ac	$-\alpha$	13460#	70#	7668#	0#	β^+	9900#	70#	206 014450#	80#
128	79	207	Au	x	-10810#	300#	7825#	1#	β^-	5680#	300#	206 988400#	320#
127	80		Hg	x	-16487	30	7848.61	0.14	β^-	4550	30	206 982300	30
126	81		Tl		-21033	5	7866.792	0.027	β^-	1418	5	206 977420	6
125	82		Pb		-22451.5	1.2	7869.864	0.006		*		206 975897.3	1.3
124	83		Bi		-20054.1	2.4	7854.502	0.012	β^+	2397.4	2.1	206 978471.0	2.6
123	84		Po		-17145	7	7836.67	0.03	β^+	2909	7	206 981594	7
122	85		At	$+\alpha$	-13227	12	7813.96	0.06	β^+	3918	14	206 985800	13
121	86		Rn	$+\alpha$	-8635	8	7788.00	0.04	β^+	4592	15	206 990730	9
120	87		Fr		-2844	18	7756.25	0.08	β^+	5790	19	206 996946	19
119	88		Ra	$-\alpha$	3540	60	7721.63	0.27	β^+	6380	60	207 003800	60
118	89		Ac	$-\alpha$	11150	50	7681.10	0.24	β^+	7610	70	207 011970	50
129	79	208	Au	x	-6100#	300#	7804#	1#	β^-	7160#	300#	207 993450#	320#
128	80		Hg	x	-13270	30	7834.19	0.15	β^-	3480	30	207 985760	30
127	81		Tl	$+\alpha$	-16749.2	2.0	7847.178	0.010	β^-	4998.9	1.7	207 982019.0	2.1
126	82		Pb		-21748.1	1.2	7867.450	0.006		*		207 976652.5	1.3
125	83		Bi	$+\alpha$	-18869.7	2.4	7849.851	0.011	β^+	2878.4	2.0	207 979742.5	2.5
124	84		Po	$-\alpha$	-17469.2	1.8	7839.356	0.009	β^+	1400.6	2.4	207 981246.1	1.9
123	85		At	$+\alpha$	-12470	9	7811.56	0.04	β^+	5000	9	207 986613	10
122	86		Rn	$-\alpha$	-9655	11	7794.27	0.05	β^+	2814	14	207 989635	12
121	87		Fr		-2666	11	7756.90	0.05	β^+	6989	16	207 997138	12
120	88		Ra	$-\alpha$	1715	15	7732.08	0.07	β^+	4381	19	208 001841	17
119	89		Ac	$-\alpha$	10760	60	7684.84	0.27	β^+	9040	60	208 011550	60
118	90		Th	$-\alpha$	16670	30	7652.64	0.16	β^+	5910	70	208 017900	40
130	79	209	Au	x	-2470#	400#	7787#	2#	β^-	6180#	430#	208 997350#	430#
129	80		Hg	x	-8640#	150#	7813#	1#	β^-	4990#	150#	208 990720#	160#
128	81		Tl	$+\alpha$	-13638	8	7833.36	0.04	β^-	3976	8	208 985359	9
127	82		Pb		-17614.1	1.8	7848.646	0.009	β^-	644.0	1.1	208 981090.5	1.9
126	83		Bi		-18258.2	1.4	7847.984	0.007		*		208 980399.1	1.6
125	84		Po	$-\alpha$	-16365.6	1.8	7835.185	0.009	β^+	1892.6	1.6	208 982430.8	2.0
124	85		At		-12882	5	7814.776	0.024	β^+	3483	5	208 986170	5
123	86		Rn	$-\alpha$	-8929	20	7792.12	0.10	β^+	3954	21	208 990415	22
122	87		Fr	x	-3768	15	7763.68	0.07	β^+	5161	25	208 995955	16
121	88		Ra	$-\alpha$	1850	50	7733.04	0.24	β^+	5620	50	209 001990	50
120	89		Ac	$-\alpha$	8840	50	7695.85	0.24	β^+	6990	70	209 009490	50
119	90		Th	$-\alpha$	16540	90	7655.3	0.4	β^+	7690	100	209 017750	90

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
131	79	210	Au	x	2330#	400#	7766#	2#	β^-	7690#	450#	210 002500#	430#
130	80		Hg	x	-5370#	200#	7799#	1#	β^-	3880#	200#	209 994240#	210#
129	81		Tl	$+\alpha$	-9246	12	7813.58	0.06	β^-	5482	12	209 990074	12
128	82		Pb		-14728.0	1.5	7835.963	0.007	β^-	63.5	0.5	209 984188.9	1.6
127	83		Bi		-14791.5	1.4	7832.540	0.007	β^-	1161.2	0.8	209 984120.7	1.6
126	84		Po		-15952.7	1.2	7834.344	0.006	*			209 982874.1	1.3
125	85		At	$-\alpha$	-11972	8	7811.66	0.04	β^+	3981	8	209 987148	8
124	86		Rn	$-\alpha$	-9605	5	7796.663	0.022	β^+	2367	9	209 989689	5
123	87		Fr		-3333	15	7763.07	0.07	β^+	6272	16	209 996422	16
122	88		Ra	$-\alpha$	460	15	7741.28	0.07	β^+	3793	21	210 000494	16
121	89		Ac	$-\alpha$	8790	60	7697.90	0.27	β^+	8330	60	210 009440	60
120	90		Th	$-\alpha$	14060	19	7669.08	0.09	β^+	5270	60	210 015094	20
131	80	211	Hg	x	-620#	200#	7778#	1#	β^-	5450#	200#	210 999330#	210#
130	81		Tl	x	-6080	40	7799.79	0.20	β^-	4410	40	210 993480	50
129	82		Pb		-10491.3	2.6	7816.999	0.013	β^-	1367	6	210 988737.1	2.8
128	83		Bi		-11858	5	7819.769	0.026	β^-	574	5	210 987270	6
127	84		Po	$-\alpha$	-12432.1	1.3	7818.782	0.006	*			210 986653.6	1.4
126	85		At	$-\alpha$	-11646.8	2.8	7811.352	0.013	β^+	785.3	2.5	210 987496.6	3.0
125	86		Rn	$-\alpha$	-8755	7	7793.94	0.03	β^+	2892	7	210 990601	7
124	87		Fr		-4140	12	7768.36	0.06	β^+	4615	14	210 995556	13
123	88		Ra	x	832	8	7741.09	0.04	β^+	4972	14	211 000893	9
122	89		Ac	$-\alpha$	7200	50	7707.19	0.25	β^+	6370	50	211 007730	60
121	90		Th	$-\alpha$	13910	70	7671.7	0.4	β^+	6700	90	211 014930	80
132	80	212	Hg	x	2760#	300#	7763#	1#	β^-	4310#	360#	212 002960#	320#
131	81		Tl	$+\alpha$	-1550#	200#	7780#	1#	β^-	6000#	200#	211 998340#	220#
130	82		Pb		-7547.2	2.2	7804.312	0.010	β^-	569.8	1.9	211 991897.7	2.3
129	83		Bi		-8117.0	2.0	7803.309	0.009	β^-	2252.0	1.7	211 991286.0	2.1
128	84		Po		-10369.0	1.2	7810.241	0.006	β^-	-1741.3	2.1	211 988868.4	1.3
127	85		At	$-\alpha$	-8627.8	2.4	7798.338	0.011	β^-	31	4	211 990737.7	2.6
126	86		Rn	$-\alpha$	-8659	3	7794.796	0.015	*			211 990704	3
125	87		Fr		-3516	9	7766.84	0.04	β^+	5143	9	211 996226	9
124	88		Ra	$-\alpha$	-199	11	7747.51	0.05	β^+	3317	14	211 999787	12
123	89		Ac	$-\alpha$	7280	50	7708.55	0.24	β^+	7480	50	212 007810	60
122	90		Th	$-\alpha$	12098	16	7682.12	0.08	β^+	4820	50	212 012988	17
121	91		Pa	$-\alpha$	21610	70	7633.5	0.4	β^+	9520	80	212 023200	80
133	80	213	Hg	x	7670#	300#	7741#	1#	β^-	5880#	300#	213 008230#	320#
132	81		Tl	x	1784	27	7765.43	0.13	β^-	4985	28	213 001915	29
131	82		Pb	$+\alpha$	-3202	7	7785.16	0.03	β^-	2029	8	212 996563	7
130	83		Bi		-5230	5	7791.014	0.024	β^-	1423	6	212 994385	6
129	84		Po		-6653	3	7794.021	0.015	*			212 992858	3
128	85		At	$-\alpha$	-6579	5	7790.001	0.023	β^+	74	5	212 992937	5
127	86		Rn	$-\alpha$	-5698	6	7782.191	0.027	β^+	881	7	212 993883	6
126	87		Fr		-3553	5	7768.446	0.024	β^+	2145	8	212 996186	5
125	88		Ra	$-\alpha$	358	21	7746.41	0.10	β^+	3911	21	213 000384	22
124	89		Ac	$-\alpha$	6160	50	7715.52	0.24	β^+	5800	60	213 006610	60
123	90		Th	$-\alpha$	12120	70	7683.9	0.3	β^+	5960	90	213 013010	80
122	91		Pa	$-\alpha$	19660	70	7644.8	0.3	β^+	7550	100	213 021110	80
134	80	214	Hg	x	11180#	400#	7727#	2#	β^-	4710#	450#	214 012000#	430#
133	81		Tl	x	6470#	200#	7745#	1#	β^-	6650#	200#	214 006940#	210#
132	82		Pb		-180.8	2.3	7772.384	0.011	β^-	1019	11	213 999805.9	2.5
131	83		Bi		-1200	11	7773.49	0.05	β^-	3270	11	213 998712	12
130	84		Po		-4469.6	1.5	7785.114	0.007	β^-	-1090	4	213 995201.7	1.6
129	85		At	$-\alpha$	-3379	4	7776.364	0.020	β^-	940	10	213 996372	5
128	86		Rn	$-\alpha$	-4319	9	7777.10	0.04	*			213 995363	10
127	87		Fr	$-\alpha$	-958	9	7757.74	0.04	β^+	3361	13	213 998971	9
126	88		Ra	$-\alpha$	93	5	7749.170	0.024	β^+	1051	10	214 000100	6
125	89		Ac	$-\alpha$	6445	15	7715.83	0.07	β^+	6352	16	214 006918	16
124	90		Th	$-\alpha$	10712	16	7692.24	0.08	β^+	4268	22	214 011500	17
123	91		Pa	$-\alpha$	19490	80	7647.6	0.4	β^+	8770	80	214 020920	80

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
135	80	215	Hg	x	16210#	400#	7705#	2#	β^-	6300#	500#	215 017400#	430#
134	81		Tl	x	9910#	300#	7730#	1#	β^-	5500#	320#	215 010640#	320#
133	82		Pb	$+\alpha$	4420#	100#	7752#	0#	β^-	2770#	100#	215 004740#	110#
132	83		Bi	x	1649	15	7761.63	0.07	β^-	2189	15	215 001770	16
131	84		Po		-540.1	2.5	7768.168	0.012	β^-	715	7	214 999420.1	2.7
130	85		At	$-\alpha$	-1255	7	7767.85	0.03	*	*	*	214 998653	7
129	86		Rn	$-\alpha$	-1168	8	7763.81	0.04	β^+	87	10	214 998746	8
128	87		Fr	$-\alpha$	318	7	7753.26	0.03	β^+	1487	10	215 000342	8
127	88		Ra	$-\alpha$	2534	8	7739.31	0.04	β^+	2216	10	215 002720	8
126	89		Ac	$-\alpha$	6031	12	7719.41	0.06	β^+	3497	15	215 006475	13
125	90		Th	$-\alpha$	10922	9	7693.03	0.04	β^+	4891	15	215 011725	9
124	91		Pa	$-\alpha$	17870	70	7657.1	0.3	β^+	6950	70	215 019180	80
136	80	216	Hg	x	19860#	400#	7690#	2#	β^-	5140#	500#	216 021320#	430#
135	81		Tl	x	14720#	300#	7710#	1#	β^-	7240#	360#	216 015800#	320#
134	82		Pb	x	7480#	200#	7740#	1#	β^-	1610#	200#	216 008030#	210#
133	83		Bi	x	5874	11	7743.50	0.05	β^-	4090	11	216 006306	12
132	84		Po		1784.0	2.2	7758.812	0.010	β^-	-474	4	216 001915.2	2.3
131	85		At	$-\alpha$	2258	4	7752.998	0.017	β^-	2004	7	216 002424	4
130	86		Rn	$-\alpha$	253	6	7758.655	0.028	*	*	*	216 000272	6
129	87		Fr	$-\alpha$	2971	4	7742.449	0.019	β^+	2718	7	216 003190	5
128	88		Ra	$-\alpha$	3291	9	7737.35	0.04	β^+	320	10	216 003533	9
127	89		Ac	$-\alpha$	8145	11	7711.26	0.05	β^+	4853	14	216 008743	12
126	90		Th	$-\alpha$	10299	12	7697.66	0.06	β^+	2154	16	216 011056	13
125	91		Pa	$-\alpha$	17800	50	7659.31	0.25	β^+	7500	50	216 019110	60
136	81	217	Tl	x	18310#	400#	7695#	2#	β^-	6070#	500#	217 019660#	430#
135	82		Pb	x	12240#	300#	7719#	1#	β^-	3510#	300#	217 013140#	320#
134	83		Bi	x	8730	18	7731.85	0.08	β^-	2845	19	217 009372	19
133	84		Po	$+\alpha$	5885	6	7741.352	0.029	β^-	1489	8	217 006318	7
132	85		At		4396	5	7744.610	0.024	β^-	737	6	217 004719	6
131	86		Rn	$-\alpha$	3659	4	7744.401	0.019	*	*	*	217 003928	5
130	87		Fr	$-\alpha$	4315	7	7737.77	0.03	β^+	656	8	217 004632	7
129	88		Ra	$-\alpha$	5888	9	7726.92	0.04	β^+	1573	11	217 006321	9
128	89		Ac	$-\alpha$	8704	11	7710.34	0.05	β^+	2816	14	217 009344	12
127	90		Th	$-\alpha$	12218	21	7690.54	0.10	β^+	3514	24	217 013117	22
126	91		Pa	$-\alpha$	17070	50	7664.57	0.24	β^+	4850	60	217 018330	60
125	92		U	$-\alpha$	22970#	100#	7634#	0#	β^+	5900#	110#	217 024660#	110#
137	81	218	Tl	x	23090#	400#	7675#	2#	β^-	7640#	500#	218 024790#	430#
136	82		Pb	x	15450#	300#	7706#	1#	β^-	2240#	300#	218 016590#	320#
135	83		Bi	x	13216	27	7712.83	0.12	β^-	4857	27	218 014188	29
134	84		Po		8358.8	2.3	7731.519	0.011	β^-	260	12	218 008973.5	2.5
133	85		At	$-\alpha$	8099	12	7729.12	0.05	β^-	2881	12	218 008695	12
132	86		Rn		5217.8	2.4	7738.750	0.011	β^-	-1842	5	218 005601.6	2.5
131	87		Fr	$-\alpha$	7059	5	7726.713	0.022	β^-	408	12	218 007579	5
130	88		Ra	$-\alpha$	6651	11	7725.00	0.05	*	*	*	218 007141	12
129	89		Ac	$-\alpha$	10840	50	7702.18	0.23	β^+	4190	50	218 011640	50
128	90		Th	$-\alpha$	12367	11	7691.60	0.05	β^+	1520	50	218 013276	11
127	91		Pa	$-\alpha$	18684	18	7659.03	0.08	β^+	6318	21	218 020059	20
126	92		U	$-\alpha$	21912	18	7640.64	0.08	β^+	3228	26	218 023523	20
137	82	219	Pb	x	20280#	400#	7686#	2#	β^-	4000#	450#	219 021770#	430#
136	83		Bi	x	16280#	200#	7700#	1#	β^-	3600#	200#	219 017480#	210#
135	84		Po	x	12681	16	7713.33	0.07	β^-	2284	16	219 013614	17
134	85		At	$+\alpha$	10397	4	7720.191	0.018	β^-	1566	3	219 011162	4
133	86		Rn		8830.9	2.5	7723.771	0.011	β^-	212	7	219 009480.4	2.7
132	87		Fr	$-\alpha$	8619	7	7721.17	0.03	*	*	*	219 009252	8
131	88		Ra	$-\alpha$	9395	8	7714.05	0.04	β^+	776	11	219 010085	9
130	89		Ac	$-\alpha$	11570	50	7700.55	0.23	β^+	2180	50	219 012420	50
129	90		Th	$-\alpha$	14470	50	7683.72	0.23	β^+	2900	70	219 015540	50
128	91		Pa	$-\alpha$	18540	50	7661.57	0.24	β^+	4070	70	219 019900	60
127	92		U	$-\alpha$	23290	50	7636.33	0.23	β^+	4750	70	219 025000	50
126	93		Np	x	29280#	200#	7605#	1#	β^+	5990#	200#	219 031430#	210#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
138	82	220	Pb	x	23670#	400#	7672#	2#	β^-	2850#	500#	220 025410#	430#
137	83		Bi	x	20820#	300#	7682#	1#	β^-	5560#	300#	220 022350#	320#
136	84		Po	x	15263	18	7703.22	0.08	β^-	888	23	220 016386	19
135	85		At	x	14376	14	7703.70	0.06	β^-	3762	14	220 015433	15
134	86		Rn		10613.6	2.2	7717.247	0.010	β^-	-870	4	220 011394.1	2.3
133	87		Fr	$-\alpha$	11483	4	7709.738	0.019	β^-	1213	9	220 012328	4
132	88		Ra	$-\alpha$	10271	8	7711.69	0.04	*			220 011026	9
131	89		Ac	$-\alpha$	13744	6	7692.349	0.028	β^+	3474	10	220 014755	7
130	90		Th	$-\alpha$	14669	22	7684.59	0.10	β^+	925	23	220 015748	24
129	91		Pa	$-\alpha$	20220#	50#	7656#	0#	β^+	5550#	60#	220 021710#	60#
128	92		U	$-\alpha$	22930#	100#	7640#	0#	β^+	2720#	110#	220 024620#	110#
127	93		Np	x	30310#	200#	7603#	1#	β^+	7380#	220#	220 032540#	210#
138	83	221	Bi	x	24100#	300#	7668#	1#	β^-	4320#	300#	221 025870#	320#
137	84		Po	x	19774	20	7684.48	0.09	β^-	2991	24	221 021228	21
136	85		At	x	16783	14	7694.47	0.06	β^-	2310	15	221 018017	15
135	86		Rn	$+\alpha$	14473	6	7701.387	0.027	β^-	1194	7	221 015537	6
134	87		Fr		13279	5	7703.250	0.023	β^-	314	6	221 014255	5
133	88		Ra	$-\alpha$	12964	5	7701.133	0.021	*			221 013918	5
132	89		Ac	$-\alpha$	14520	50	7690.54	0.23	β^+	1560	50	221 015590	50
131	90		Th	$-\alpha$	16938	9	7676.07	0.04	β^+	2410	50	221 018184	10
130	91		Pa	$-\alpha$	20380	50	7656.97	0.23	β^+	3440	50	221 021870	60
129	92		U	$-\alpha$	24480#	100#	7635#	0#	β^+	4110#	110#	221 026280#	110#
128	93		Np	x	29850#	200#	7607#	1#	β^+	5360#	220#	221 032040#	210#
139	83	222	Bi	x	28670#	300#	7650#	1#	β^-	6190#	300#	222 030780#	320#
138	84		Po	x	22490	40	7674.00	0.18	β^-	1530	40	222 024140	40
137	85		At	x	20953	16	7677.39	0.07	β^-	4579	16	222 022494	17
136	86		Rn		16374.0	2.3	7694.489	0.010	β^-	24	21	222 017578.2	2.5
135	87		Fr		16350	21	7691.07	0.10	β^-	2028	22	222 017552	23
134	88		Ra		14322	5	7696.686	0.021	*			222 015375	5
133	89		Ac	$-\alpha$	16622	5	7682.801	0.023	β^+	2300	7	222 017844	6
132	90		Th	$-\alpha$	17203	12	7676.66	0.06	β^+	582	13	222 018469	13
131	91		Pa	$-\alpha$	22160#	70#	7651#	0#	β^+	4950#	70#	222 023780#	80#
130	92		U	$-\alpha$	24220#	100#	7638#	0#	β^+	2070#	120#	222 026000#	110#
129	93		Np	x	31020#	200#	7604#	1#	β^+	6800#	220#	222 033300#	210#
140	83	223	Bi	x	32140#	400#	7636#	2#	β^-	5060#	450#	223 034500#	430#
139	84		Po	x	27080#	200#	7655#	1#	β^-	3650#	200#	223 029070#	210#
138	85		At	x	23428	14	7668.05	0.06	β^-	3038	16	223 025151	15
137	86		Rn		20390	8	7678.17	0.04	β^-	2006	8	223 021889	8
136	87		Fr	$+\alpha$	18384.0	2.4	7683.657	0.011	β^-	1149.2	0.8	223 019736.0	2.5
135	88		Ra		17234.8	2.5	7685.302	0.011	*			223 018502.3	2.7
134	89		Ac	$-\alpha$	17827	7	7679.14	0.03	β^+	592	7	223 019138	8
133	90		Th	$-\alpha$	19386	9	7668.64	0.04	β^+	1559	12	223 020812	10
132	91		Pa	$-\alpha$	22320	70	7652.0	0.3	β^+	2930	70	223 023960	80
131	92		U	$-\alpha$	25840	70	7632.7	0.3	β^+	3520	100	223 027740	80
130	93		Np	x	30600#	200#	7608#	1#	β^+	4760#	210#	223 032850#	210#
141	83	224	Bi	x	36770#	400#	7617#	2#	β^-	6860#	450#	224 039470#	430#
140	84		Po	x	29910#	200#	7644#	1#	β^-	2200#	200#	224 032110#	210#
139	85		At	x	27711	22	7650.73	0.10	β^-	5266	24	224 029749	24
138	86		Rn		22445	10	7670.75	0.04	β^-	650	16	224 024096	11
137	87		Fr	x	21795	13	7670.16	0.06	β^-	2968	13	224 023398	14
136	88		Ra		18827.3	2.2	7679.916	0.010	β^-	-1408	4	224 020212.0	2.3
135	89		Ac	$-\alpha$	20235	4	7670.139	0.019	β^-	241	11	224 021723	4
134	90		Th	$-\alpha$	19994	10	7667.72	0.05	*			224 021464	11
133	91		Pa	$-\alpha$	23863	8	7646.96	0.03	β^+	3869	13	224 025618	8
132	92		U	$-\alpha$	25714	25	7635.20	0.11	β^+	1851	26	224 027605	27
131	93		Np	x	31880#	200#	7604#	1#	β^+	6160#	200#	224 034220#	210#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
141	84	225	Po	x	34530#	300#	7626#	1#	β^-	4140#	420#	225 037070#	320#
140	85		At	x	30400#	300#	7641#	1#	β^-	3860#	300#	225 032630#	320#
139	86		Rn		26534	11	7654.36	0.05	β^-	2713	16	225 028486	12
138	87		Fr		23821	12	7662.94	0.05	β^-	1826	12	225 025573	13
137	88		Ra		21994.3	2.9	7667.580	0.013	β^-	356	5	225 023612	3
136	89		Ac		21639	5	7665.684	0.022	*			225 023230	5
135	90		Th	$-\alpha$	22311	5	7659.221	0.023	β^+	672	7	225 023951	5
134	91		Pa	$-\alpha$	24340	70	7646.7	0.3	β^+	2030	70	225 026130	80
133	92		U	$-\alpha$	27378	12	7629.74	0.05	β^+	3040	70	225 029391	13
132	93		Np	$-\alpha$	31590	70	7607.6	0.3	β^+	4210	70	225 033910	80
142	84	226	Po	x	37550#	400#	7614#	2#	β^-	2930#	500#	226 040310#	430#
141	85		At	x	34610#	300#	7624#	1#	β^-	5870#	300#	226 037160#	320#
140	86		Rn		28747	10	7646.41	0.05	β^-	1207	16	226 030861	11
139	87		Fr	x	27541	12	7648.29	0.05	β^-	3871	12	226 029566	13
138	88		Ra		23669.6	2.3	7661.954	0.010	β^-	-641	3	226 025410.3	2.5
137	89		Ac		24310	3	7655.656	0.015	β^-	1113	5	226 026098	4
136	90		Th		23197	5	7657.120	0.021	*			226 024903	5
135	91		Pa	$-\alpha$	26033	11	7641.11	0.05	β^+	2836	12	226 027948	12
134	92		U	$-\alpha$	27329	13	7631.91	0.06	β^+	1296	17	226 029339	14
133	93		Np	$-\alpha$	32780#	90#	7604#	0#	β^+	5450#	90#	226 035190#	100#
143	84	227	Po	x	42280#	400#	7596#	2#	β^-	4800#	500#	227 045390#	430#
142	85		At	x	37480#	300#	7613#	1#	β^-	4600#	300#	227 040240#	320#
141	86		Rn		32886	14	7630.05	0.06	β^-	3200	19	227 035304	15
140	87		Fr	x	29686	13	7640.70	0.06	β^-	2506	13	227 031869	14
139	88		Ra	-n	27179.5	2.3	7648.295	0.010	β^-	1328.4	2.3	227 029178.3	2.5
138	89		Ac		25851.1	2.4	7650.701	0.010	β^-	44.8	0.8	227 027752.3	2.5
137	90		Th		25806.3	2.5	7647.451	0.011	*			227 027704.2	2.7
136	91		Pa	$-\alpha$	26832	7	7639.49	0.03	β^+	1026	7	227 028805	8
135	92		U	$-\alpha$	29022	17	7626.39	0.07	β^+	2190	18	227 031157	18
134	93		Np	$-\alpha$	32560	70	7607.3	0.3	β^+	3540	70	227 034960	80
143	85	228	At	x	41680#	400#	7597#	2#	β^-	6440#	400#	228 044750#	430#
142	86		Rn		35243	18	7621.64	0.08	β^-	1874	22	228 037835	19
141	87		Fr	x	33369	13	7626.43	0.06	β^-	4427	14	228 035823	14
140	88		Ra	$+\alpha$	28942.2	2.4	7642.419	0.011	β^-	45.8	0.7	228 031070.7	2.6
139	89		Ac	-	28896.4	2.5	7639.189	0.011	β^-	2124.1	2.6	228 031021.5	2.7
138	90		Th		26772.3	2.2	7645.074	0.009	*			228 028741.3	2.3
137	91		Pa	$-\alpha$	28924	4	7632.203	0.019	β^+	2152	4	228 031052	5
136	92		U	$-\alpha$	29222	14	7627.47	0.06	β^+	298	15	228 031371	15
135	93		Np	$-\alpha$	33600	50	7604.85	0.22	β^+	4370	50	228 036070	50
134	94		Pu	$-\alpha$	36080	30	7590.53	0.14	β^+	2480	60	228 038730	30
144	85	229	At	x	44820#	400#	7585#	2#	β^-	5460#	400#	229 048120#	430#
143	86		Rn	x	39362	13	7605.62	0.06	β^-	3688	19	229 042257	14
142	87		Fr	x	35674	14	7618.31	0.06	β^-	3126	20	229 038298	15
141	88		Ra		32549	14	7628.54	0.06	β^-	1850	18	229 034942	16
140	89		Ac		30698	12	7633.21	0.05	β^-	1111	12	229 032956	13
139	90		Th		29586.8	2.8	7634.645	0.012	*			229 031762.7	3.0
138	91		Pa		29898	4	7629.868	0.015	β^+	312	4	229 032097	4
137	92		U	$-\alpha$	31211	6	7620.720	0.026	β^+	1313	7	229 033506	6
136	93		Np	$-\alpha$	33780	90	7606.1	0.4	β^+	2570	90	229 036260	90
135	94		Pu	$-\alpha$	37390	50	7586.89	0.22	β^+	3610	100	229 040140	60

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ u		
144	86	230	Rn	x	42050#	200#	7596#	1#	β^-	2540#	200#	230 045140#	210#
143	87		Fr		39511	16	7603.60	0.07	β^-	4994	19	230 042416	17
142	88		Ra	x	34516	10	7621.91	0.04	β^-	678	19	230 037055	11
141	89		Ac	x	33838	16	7621.46	0.07	β^-	2974	16	230 036327	17
140	90		Th		30864.2	1.8	7630.989	0.008	β^-	-1310.5	2.8	230 033134.1	1.9
139	91		Pa		32175	3	7621.890	0.014	β^-	560	5	230 034541	4
138	92		U	$-\alpha$	31615	5	7620.922	0.021	*			230 033940	5
137	93		Np	$-\alpha$	35240	50	7601.77	0.22	β^+	3620	50	230 037830	60
136	94		Pu	$-\alpha$	36934	15	7590.99	0.07	β^+	1700	50	230 039650	16
135	95		Am	$-\alpha$	42930#	130#	7562#	1#	β^+	6000#	130#	230 046090#	140#
145	86	231	Rn	x	46450#	300#	7579#	1#	β^-	4390#	300#	231 049870#	320#
144	87		Fr	x	42064	25	7594.57	0.11	β^-	3848	28	231 045158	27
143	88		Ra		38216	11	7607.84	0.05	β^-	2454	17	231 041027	12
142	89		Ac	x	35763	13	7615.08	0.06	β^-	1945	13	231 038393	14
141	90		Th		33817.5	1.8	7620.111	0.008	β^-	391.6	1.5	231 036304.6	1.9
140	91		Pa		33426.0	2.2	7618.419	0.010	*			231 035884.2	2.4
139	92		U	$-\alpha$	33808	3	7613.380	0.013	β^+	381.6	2.0	231 036294	3
138	93		Np	$-\alpha$	35630	50	7602.12	0.22	β^+	1820	50	231 038250	50
137	94		Pu	$-\alpha$	38286	26	7587.22	0.11	β^+	2660	60	231 041102	28
136	95		Am	x	42440#	300#	7566#	1#	β^+	4150#	300#	231 045560#	320#
145	87	232	Fr	$+\alpha$	45990#	160#	7580#	1#	β^-	5490#	160#	232 049370#	170#
144	88		Ra		40497	9	7600.01	0.04	β^-	1343	16	232 043475	10
143	89		Ac	x	39154	13	7602.42	0.06	β^-	3706	13	232 042034	14
142	90		Th		35448.7	1.9	7615.024	0.008	β^-	-499	8	232 038055.8	2.1
141	91		Pa	+	35948	8	7609.50	0.03	β^-	1337	7	232 038592	8
140	92		U		34610.9	2.2	7611.891	0.009	*			232 037156.3	2.3
139	93		Np	-	37360#	100#	7597#	0#	β^+	2750#	100#	232 040110#	110#
138	94		Pu	$-\alpha$	38363	18	7588.97	0.08	β^+	1000#	100#	232 041185	19
137	95		Am	x	43270#	300#	7564#	1#	β^+	4910#	300#	232 046450#	320#
136	96		Cm	$-\alpha$	46400#	200#	7548#	1#	β^+	3140#	360#	232 049820#	220#
146	87	233	Fr	x	49030#	300#	7569#	1#	β^-	4710#	300#	233 052640#	320#
145	88		Ra	x	44322	16	7585.61	0.07	β^-	3014	21	233 047582	17
144	89		Ac	x	41308	13	7595.19	0.06	β^-	2574	13	233 044346	14
143	90		Th		38733.6	2.0	7602.884	0.008	β^-	1243.6	1.3	233 041582.3	2.1
142	91		Pa		37490.0	2.1	7604.864	0.009	β^-	569.8	2.0	233 040247.2	2.2
141	92		U		36920.3	2.7	7603.952	0.011	*			233 039635.5	2.9
140	93		Np	$-\alpha$	37950	50	7596.17	0.22	β^+	1030	50	233 040740	50
139	94		Pu	$-\alpha$	40050	50	7583.79	0.22	β^+	2100	70	233 043000	50
138	95		Am	$-\alpha$	43260#	100#	7567#	0#	β^+	3210#	110#	233 046450#	110#
137	96		Cm	$-\alpha$	47290	70	7546.0	0.3	β^+	4030#	120#	233 050770	80
146	88	234	Ra	x	46890	30	7576.70	0.13	β^-	2050	30	234 050340	30
145	89		Ac	x	44841	14	7582.13	0.06	β^-	4227	14	234 048139	15
144	90		Th	$+\alpha$	40614	3	7596.849	0.015	β^-	274	3	234 043601	4
143	91		Pa	IT	40340	5	7594.677	0.020	β^-	2194	4	234 043307	5
142	92		U		38146.8	1.8	7600.707	0.008	*			234 040952.3	1.9
141	93		Np	-	39957	9	7589.63	0.04	β^+	1810	8	234 042895	9
140	94		Pu	$-\alpha$	40350	7	7584.606	0.030	β^+	393	11	234 043317	7
139	95		Am	$-\alpha$	44460#	160#	7564#	1#	β^+	4110#	160#	234 047730#	170#
138	96		Cm	$-\alpha$	46724	18	7550.68	0.08	β^+	2260#	160#	234 050160	20
137	97		Bk	$-\alpha$	53340#	140#	7519#	1#	β^+	6620#	140#	234 057270#	150#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
147	88	235	Ra	x	51200#	300#	7560#	1#	β^-	3850#	300#	235 054970#	320#
146	89		Ac	x	47357	14	7573.50	0.06	β^-	3339	19	235 050840	15
145	90		Th	x	44018	13	7584.39	0.06	β^-	1729	19	235 047255	14
144	91		Pa	x	42289	14	7588.41	0.06	β^-	1368	14	235 045399	15
143	92		U		40920.7	1.8	7590.906	0.008	*			235 043930.1	1.9
142	93		Np		41044.9	2.0	7587.049	0.008	β^+	124.2	0.9	235 044063.5	2.1
141	94		Pu	$-\alpha$	42184	21	7578.87	0.09	β^+	1139	21	235 045286	22
140	95		Am	$-\alpha$	44630	50	7565.15	0.22	β^+	2440	60	235 047910	60
139	96		Cm	$-\alpha$	48010#	200#	7547#	1#	β^+	3380#	210#	235 051540#	220#
138	97		Bk	x	52700#	400#	7524#	2#	β^+	4690#	450#	235 056580#	430#
147	89	236	Ac	x	51220	40	7559.24	0.16	β^-	4970	40	236 054990	40
146	90		Th	x	46255	14	7576.97	0.06	β^-	921	20	236 049657	15
145	91		Pa	x	45334	14	7577.56	0.06	β^-	2887	14	236 048668	15
144	92		U		42446.5	1.8	7586.476	0.008	β^-	-930	50	236 045568.2	1.9
143	93		Np	IT	43380	50	7579.21	0.21	β^-	480	50	236 046570	50
142	94		Pu		42902.9	2.2	7577.913	0.009	*			236 046058.1	2.3
141	95		Am	$-\alpha$	46040#	110#	7561#	0#	β^+	3140#	110#	236 049430#	120#
140	96		Cm	$-\alpha$	47855	18	7550.30	0.08	β^+	1810#	110#	236 051374	20
139	97		Bk	x	53540#	400#	7523#	2#	β^+	5690#	400#	236 057480#	430#
148	89	237	Ac	x	54280#	400#	7549#	2#	β^-	4320#	400#	237 058270#	430#
147	90		Th	x	49955	16	7563.44	0.07	β^-	2427	21	237 053629	17
146	91		Pa	x	47528	13	7570.38	0.06	β^-	2136	13	237 051023	14
145	92		U		45392.1	1.8	7576.094	0.008	β^-	518.6	0.5	237 048730.4	2.0
144	93		Np		44873.5	1.8	7574.981	0.008	*			237 048173.6	1.9
143	94		Pu		45093.5	2.2	7570.752	0.009	β^+	220.0	1.3	237 048409.8	2.4
142	95		Am	$-\alpha$	46570#	60#	7561#	0#	β^+	1480#	60#	237 050000#	60#
141	96		Cm	$-\alpha$	49250	70	7546.62	0.30	β^+	2680#	90#	237 052870	80
140	97		Bk	$-\alpha$	53190#	220#	7527#	1#	β^+	3940#	240#	237 057100#	240#
139	98		Cf	$-\alpha$	57940	90	7503.4	0.4	β^+	4750#	240#	237 062200	90
148	90	238	Th	$+\alpha$	52630#	280#	7554#	1#	β^-	1730#	280#	238 056500#	300#
147	91		Pa	x	50894	16	7558.34	0.07	β^-	3585	16	238 054637	17
146	92		U		47309.1	1.9	7570.120	0.008	β^-	-147.4	1.2	238 050788.4	2.0
145	93		Np	-n	47456.5	1.8	7566.213	0.008	β^-	1291.5	0.4	238 050946.6	1.9
144	94		Pu		46164.9	1.8	7568.353	0.008	*			238 049560.1	1.9
143	95		Am	$-\alpha$	48420	50	7555.58	0.21	β^+	2260	50	238 051980	50
142	96		Cm	$-\alpha$	49445	12	7548.00	0.05	β^+	1020	50	238 053081	13
141	97		Bk	$-\alpha$	54220#	260#	7525#	1#	β^+	4770#	260#	238 058200#	270#
140	98		Cf	x	57280#	300#	7509#	1#	β^+	3060#	390#	238 061490#	320#
149	90	239	Th	x	56610#	400#	7540#	2#	β^-	3270#	450#	239 060770#	430#
148	91		Pa	x	53340#	200#	7550#	1#	β^-	2760#	200#	239 057260#	210#
147	92		U	-n	50574.0	1.9	7558.556	0.008	β^-	1261.5	1.6	239 054293.5	2.0
146	93		Np		49312.6	2.0	7560.561	0.009	β^-	722.5	1.0	239 052939.2	2.2
145	94		Pu		48590.1	1.8	7560.310	0.008	*			239 052163.6	1.9
144	95		Am	$-\alpha$	49392.2	2.4	7553.681	0.010	β^+	802.1	1.7	239 053024.7	2.6
143	96		Cm	$-\alpha$	51150	50	7543.06	0.23	β^+	1760	50	239 054910	60
142	97		Bk	$-\alpha$	54250#	210#	7527#	1#	β^+	3100#	210#	239 058240#	220#
141	98		Cf	$-\alpha$	58250#	210#	7507#	1#	β^+	4000#	290#	239 062530#	230#
140	99		Es	x	63560#	300#	7481#	1#	β^+	5310#	360#	239 068230#	320#
149	91	240	Pa	x	56800#	300#	7538#	1#	β^-	4090#	300#	240 060980#	320#
148	92		U		52716	5	7551.766	0.022	β^-	399	17	240 056593	6
147	93		Np		52318	17	7550.17	0.07	β^-	2191	17	240 056165	18
146	94		Pu		50127.2	1.8	7556.035	0.007	*			240 053813.8	1.9
145	95		Am	$+\alpha$	51512	14	7547.01	0.06	β^+	1385	14	240 055300	15
144	96		Cm		51725.6	2.2	7542.855	0.009	β^+	214	14	240 055529.7	2.4
143	97		Bk	-	55670#	150#	7523#	1#	β^+	3940#	150#	240 059760#	160#
142	98		Cf	$-\alpha$	57991	19	7510.23	0.08	β^+	2330#	150#	240 062256	20
141	99		Es	x	64200#	400#	7481#	2#	β^+	6210#	400#	240 068920#	430#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
150	91	241	Pa	x	59690#	400#	7528#	2#	β^-	3490#	500#	241 064080#	430#
149	92		U	x	56200#	300#	7539#	1#	β^-	1940#	310#	241 060330#	320#
148	93		Np	+	54260	70	7544.26	0.29	β^-	1300	70	241 058250	80
147	94		Pu		52957.0	1.8	7546.431	0.007	β^-	20.78	0.13	241 056851.7	1.9
146	95		Am		52936.2	1.8	7543.271	0.007	*			241 056829.3	1.9
145	96		Cm		53703.6	2.1	7536.841	0.009	β^+	767.4	1.2	241 057653.2	2.3
144	97		Bk	-	56030#	200#	7524#	1#	β^+	2330#	200#	241 060160#	220#
143	98		Cf	$-\alpha$	59330#	170#	7507#	1#	β^+	3290#	260#	241 063690#	180#
142	99		Es	$-\alpha$	63860#	230#	7485#	1#	β^+	4540#	280#	241 068560#	240#
141	100		Fm	x	69130#	300#	7460#	1#	β^+	5260#	370#	241 074210#	320#
150	92	242	U	$+\alpha$	58620#	200#	7532#	1#	β^-	1200#	280#	242 062930#	220#
149	93		Np	+	57420	200	7533.4	0.8	β^-	2700	200	242 061640	210
148	94		Pu		54718.6	1.8	7541.321	0.008	β^-	-751.3	0.7	242 058742.8	2.0
147	95		Am	-n	55469.9	1.8	7534.983	0.007	β^-	664.5	0.4	242 059549.4	1.9
146	96		Cm		54805.4	1.8	7534.496	0.007	*			242 058836.0	1.9
145	97		Bk	-	57740#	200#	7519#	1#	β^+	2930#	200#	242 061980#	220#
144	98		Cf	$-\alpha$	59387	13	7509.10	0.05	β^+	1650#	200#	242 063754	14
143	99		Es	$-\alpha$	64800#	260#	7483#	1#	β^+	5420#	260#	242 069570#	280#
142	100		Fm	x	68400#	400#	7465#	2#	β^+	3600#	480#	242 073430#	430#
151	92	243	U	x	62400#	400#	7518#	2#	β^-	2520#	400#	243 066990#	430#
150	93		Np	IT	59880#	30#	7525#	0#	β^-	2120#	30#	243 064280#	30#
149	94		Pu		57756	3	7531.002	0.013	β^-	579.7	2.9	243 062004	3
148	95		Am		57176.3	2.3	7530.168	0.009	*			243 061381.3	2.4
147	96		Cm	$-\alpha$	57183.8	2.1	7526.918	0.008	β^+	7.5	1.7	243 061389.3	2.2
146	97		Bk	$-\alpha$	58691	5	7517.494	0.019	β^+	1508	5	243 063008	5
145	98		Cf	$-\alpha$	60990#	110#	7505#	0#	β^+	2300#	110#	243 065480#	120#
144	99		Es	$-\alpha$	64750#	210#	7486#	1#	β^+	3760#	240#	243 069510#	220#
143	100		Fm	$-\alpha$	69360#	220#	7464#	1#	β^+	4620#	300#	243 074470#	230#
151	93	244	Np	x	63200#	300#	7514#	1#	β^-	3400#	300#	244 067850#	320#
150	94		Pu		59807	5	7524.811	0.021	β^-	-74	5	244 064205	6
149	95		Am	+	59881.1	2.1	7521.300	0.008	β^-	1427.3	1.0	244 064285.1	2.2
148	96		Cm	$-\alpha$	58453.8	1.8	7523.944	0.007	*			244 062752.8	1.9
147	97		Bk	$-\alpha$	60716	14	7511.47	0.06	β^+	2262	14	244 065181	16
146	98		Cf		61479.4	2.9	7505.131	0.012	β^+	764	15	244 066001	3
145	99		Es	$-\alpha$	66030#	180#	7483#	1#	β^+	4550#	180#	244 070880#	200#
144	100		Fm	$-\alpha$	68970#	200#	7468#	1#	β^+	2940#	270#	244 074040#	220#
152	93	245	Np	x	65950#	400#	7505#	2#	β^-	2770#	400#	245 070800#	430#
151	94		Pu	-n	63180	14	7513.28	0.06	β^-	1277	15	245 067826	15
150	95		Am		61902	3	7515.296	0.013	β^-	897.4	2.4	245 066455	3
149	96		Cm		61004.9	2.1	7515.765	0.008	*			245 065491.5	2.2
148	97		Bk	$-\alpha$	61815.6	2.3	7509.263	0.009	β^+	810.7	1.7	245 066361.8	2.4
147	98		Cf		63386.9	2.8	7499.656	0.011	β^+	1571.3	2.6	245 068048.7	3.0
146	99		Es	$-\alpha$	66370#	200#	7484#	1#	β^+	2980#	200#	245 071250#	220#
145	100		Fm	$-\alpha$	70190#	200#	7466#	1#	β^+	3820#	280#	245 075350#	210#
144	101		Md	$-\alpha$	75270#	310#	7442#	1#	β^+	5090#	360#	245 080810#	330#
152	94	246	Pu		65396	15	7506.53	0.06	β^-	401#	14#	246 070205	16
151	95		Am	IT	64995#	18#	7505#	0#	β^-	2377#	18#	246 069775#	20#
150	96		Cm		62618.6	2.0	7511.464	0.008	*			246 067223.8	2.2
149	97		Bk	-	63970	60	7502.80	0.24	β^+	1350	60	246 068670	60
148	98		Cf		64091.9	2.1	7499.114	0.008	β^+	120	60	246 068805.5	2.2
147	99		Es	$-\alpha$	67900#	220#	7480#	1#	β^+	3810#	220#	246 072900#	240#
146	100		Fm	$-\alpha$	70189	15	7467.97	0.06	β^+	2290#	220#	246 075350	17
145	101		Md	$-\alpha$	76120#	260#	7441#	1#	β^+	5930#	260#	246 081710#	280#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
153	94	247	Pu	x	69110#	200#	7494#	1#	β^-	1950#	220#	247 074190#	210#
152	95		Am	+	67150#	100#	7499#	0#	β^-	1620#	100#	247 072090#	110#
151	96		Cm		65534	4	7501.926	0.018	β^-	44	7	247 070354	5
150	97		Bk	$-\alpha$	65491	5	7498.935	0.022	*			247 070307	6
149	98		Cf	$+\alpha$	66104	15	7493.29	0.06	β^+	613	16	247 070965	16
148	99		Es	$+\alpha$	68578	19	7480.10	0.08	β^+	2475	25	247 073622	21
147	100		Fm	$+\alpha$	71670#	120#	7464#	0#	β^+	3100#	120#	247 076950#	120#
146	101		Md	$-\alpha$	75940#	210#	7444#	1#	β^+	4260#	240#	247 081520#	220#
153	95	248	Am	+	70560#	200#	7487#	1#	β^-	3170#	200#	248 075750#	220#
152	96		Cm		67393	5	7496.725	0.021	β^-	-690#	70#	248 072350	6
151	97		Bk	IT	68080#	70#	7491#	0#	β^-	840#	70#	248 073090#	80#
150	98		Cf	$-\alpha$	67240	5	7491.035	0.021	*			248 072185	6
149	99		Es	$-\alpha$	70300#	50#	7476#	0#	β^+	3060#	50#	248 075470#	60#
148	100		Fm		71899	9	7465.94	0.03	β^+	1600#	50#	248 077186	9
147	101		Md	$-\alpha$	77150#	240#	7442#	1#	β^+	5250#	240#	248 082820#	260#
146	102		No	$-\alpha$	80620#	220#	7424#	1#	β^+	3470#	330#	248 086550#	240#
154	95	249	Am	x	73100#	300#	7479#	1#	β^-	2350#	300#	249 078480#	320#
153	96		Cm	-n	70751	5	7485.547	0.021	β^-	901	5	249 075955	6
152	97		Bk		69850.6	2.6	7486.023	0.010	β^-	124.6	1.4	249 074987.7	2.7
151	98		Cf		69726.0	2.2	7483.382	0.009	*			249 074853.9	2.3
150	99		Es	$-\alpha$	71180#	30#	7474#	0#	β^+	1450#	30#	249 076410#	30#
149	100		Fm		73521	6	7461.859	0.025	β^+	2340#	30#	249 078928	7
148	101		Md	$-\alpha$	77230#	200#	7444#	1#	β^+	3710#	200#	249 082910#	220#
147	102		No	$-\alpha$	81780#	280#	7422#	1#	β^+	4550#	340#	249 087800#	300#
154	96	250	Cm	-nn	72990	11	7478.93	0.05	β^-	39	12	250 078358	12
153	97		Bk	$+\alpha$	72952	4	7475.961	0.016	β^-	1780	3	250 078317	4
152	98		Cf	$-\alpha$	71172.0	2.0	7479.949	0.008	*			250 076406.2	2.2
151	99		Es	-	73230#	100#	7469#	0#	β^+	2060#	100#	250 078610#	110#
150	100		Fm		74073	8	7462.09	0.03	β^+	850#	100#	250 079521	9
149	101		Md	$-\alpha$	78630#	300#	7441#	1#	β^+	4560#	300#	250 084420#	320#
148	102		No	$-\alpha$	81560#	200#	7426#	1#	β^+	2930#	360#	250 087560#	220#
155	96	251	Cm	+	76649	23	7466.72	0.09	β^-	1420	20	251 082286	24
154	97		Bk	+	75229	11	7469.26	0.04	β^-	1093	10	251 080762	12
153	98		Cf	$-\alpha$	74136	4	7470.495	0.018	*			251 079589	5
152	99		Es	$-\alpha$	74514	6	7465.875	0.025	β^+	377	7	251 079994	7
151	100		Fm	$+\alpha$	75954	15	7457.02	0.06	β^+	1440	16	251 081540	16
150	101		Md	$+\alpha$	78967	19	7441.90	0.08	β^+	3013	24	251 084774	20
149	102		No	IT	82850#	110#	7423#	0#	β^+	3880#	120#	251 088940#	120#
148	103		Lr	x	87730#	300#	7401#	1#	β^+	4880#	320#	251 094180#	320#
156	96	252	Cm	x	79060#	300#	7460#	1#	β^-	520#	360#	252 084870#	320#
155	97		Bk	+	78540#	200#	7459#	1#	β^-	2500#	200#	252 084310#	220#
154	98		Cf	$-\alpha$	76035	5	7465.344	0.021	β^-	-1260	50	252 081627	6
153	99		Es	-	77300	50	7457.24	0.20	β^-	480	50	252 082980	50
152	100		Fm	$-\alpha$	76818	6	7456.031	0.023	*			252 082467	6
151	101		Md	IT	80510#	130#	7438#	1#	β^+	3690#	130#	252 086430#	140#
150	102		No		82872	9	7425.80	0.04	β^+	2360#	130#	252 088967	10
149	103		Lr	$-\alpha$	88740#	240#	7399#	1#	β^+	5870#	240#	252 095260#	260#
156	97	253	Bk	$-\alpha$	80930#	360#	7451#	1#	β^-	1630#	360#	253 086880#	390#
155	98		Cf	$-\alpha$	79302	6	7454.826	0.025	β^-	288	6	253 085134	7
154	99		Es	$-\alpha$	79014.6	2.6	7452.871	0.010	*			253 084825.7	2.7
153	100		Fm	$-\alpha$	79349	3	7448.457	0.014	β^+	334	3	253 085185	4
152	101		Md	$-\alpha$	81180#	30#	7438#	0#	β^+	1830#	30#	253 087140#	30#
151	102		No		84360	7	7422.466	0.028	β^+	3190#	30#	253 090564	7
150	103		Lr	$-\alpha$	88580#	200#	7403#	1#	β^+	4220#	200#	253 095090#	220#
149	104		Rf	$-\alpha$	93560#	410#	7380#	2#	β^+	4980#	460#	253 100440#	440#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
157	97	254	Bk	x	84390#	300#	7440#	1#	β^-	3050#	300#	254 090600#	320#
156	98		Cf	$-\alpha$	81342	12	7449.22	0.05	β^-	-650	13	254 087324	13
155	99		Es	$-\alpha$	81992	4	7443.583	0.017	β^-	1088	3	254 088022	5
154	100		Fm	$-\alpha$	80904.4	2.8	7444.786	0.011	*			254 086854.4	3.0
153	101		Md	—	83450#	100#	7432#	0#	β^+	2550#	100#	254 089590#	110#
152	102		No		84725	10	7423.58	0.04	β^+	1270#	100#	254 090956	11
151	103		Lr	$-\alpha$	89870#	300#	7400#	1#	β^+	5150#	300#	254 096480#	320#
150	104		Rf	$-\alpha$	93200#	280#	7384#	1#	β^+	3330#	410#	254 100050#	300#
157	98	255	Cf	+	84810#	200#	7438#	1#	β^-	720#	200#	255 091050#	220#
156	99		Es	$-\alpha$	84091	11	7437.82	0.04	β^-	290	10	255 090275	12
155	100		Fm	$-\alpha$	83801	5	7435.883	0.019	*			255 089964	5
154	101		Md	$-\alpha$	84844	7	7428.724	0.027	β^+	1043	8	255 091084	7
153	102		No	x	86807	15	7417.96	0.06	β^+	1963	16	255 093191	16
152	103		Lr	x	89947	18	7402.58	0.07	β^+	3140	23	255 096562	19
151	104		Rf	$-\alpha$	94330#	120#	7382#	0#	β^+	4380#	120#	255 101270#	120#
150	105		Db	$-\alpha$	99730#	420#	7358#	2#	β^+	5400#	440#	255 107070#	450#
158	98	256	Cf	$-\alpha$	87040#	310#	7432#	1#	β^-	-150#	330#	256 093440#	340#
157	99		Es	+	87190#	100#	7428#	0#	β^-	1700#	100#	256 093600#	110#
156	100		Fm	$-\alpha$	85487	7	7431.778	0.028	*			256 091774	8
155	101		Md	IT	87460#	120#	7421#	0#	β^+	1970#	120#	256 093890#	130#
154	102		No	$-\alpha$	87824	8	7416.54	0.03	β^+	370#	120#	256 094283	8
153	103		Lr	x	91750	80	7398.2	0.3	β^+	3920	80	256 098490	90
152	104		Rf	$-\alpha$	94223	18	7385.43	0.07	β^+	2480	80	256 101152	19
151	105		Db	$-\alpha$	100500#	240#	7358#	1#	β^+	6280#	240#	256 107890#	260#
158	99	257	Es	$-\alpha$	89400#	410#	7422#	2#	β^-	810#	410#	257 095980#	440#
157	100		Fm	$-\alpha$	88591	6	7422.191	0.025	*			257 095106	7
156	101		Md	$-\alpha$	88997.2	2.7	7417.566	0.011	β^+	406	7	257 095542.4	2.9
155	102		No	$-\alpha$	90250	7	7409.645	0.027	β^+	1253	7	257 096888	7
154	103		Lr	$-\alpha$	92610#	40#	7397#	0#	β^+	2360#	50#	257 099420#	50#
153	104		Rf	$-\alpha$	95868	11	7381.70	0.04	β^+	3260#	50#	257 102918	12
152	105		Db	$-\alpha$	100210#	200#	7362#	1#	β^+	4340#	200#	257 107580#	220#
159	99	258	Es	x	92700#	300#	7412#	1#	β^-	2280#	360#	258 099520#	320#
158	100		Fm	$-\alpha$	90430#	200#	7418#	1#	β^-	-1260#	200#	258 097080#	220#
157	101		Md	$-\alpha$	91688	5	7409.668	0.018	β^-	210#	100#	258 098431	5
156	102		No	$-\alpha$	91480#	100#	7407#	0#	*			258 098210#	110#
155	103		Lr	$-\alpha$	94780#	100#	7392#	0#	β^+	3300#	140#	258 101760#	110#
154	104		Rf	$-\alpha$	96340	30	7382.53	0.12	β^+	1560#	110#	258 103430	30
153	105		Db	$-\alpha$	101800#	310#	7358#	1#	β^+	5460#	310#	258 109290#	330#
152	106		Sg	$-\alpha$	105240#	410#	7342#	2#	β^+	3450#	510#	258 112980#	440#
159	100	259	Fm	$-\alpha$	93710#	280#	7407#	1#	β^-	80#	350#	259 100600#	300#
158	101		Md	$-\alpha$	93630#	200#	7405#	1#	*			259 100510#	220#
157	102		No	$-\alpha$	94110#	100#	7400#	0#	β^+	490#	220#	259 101030#	110#
156	103		Lr	$-\alpha$	95850#	70#	7390#	0#	β^+	1740#	120#	259 102900#	80#
155	104		Rf	$-\alpha$	98360#	70#	7377#	0#	β^+	2510#	100#	259 105600#	80#
154	105		Db	$-\alpha$	101990	50	7360.36	0.20	β^+	3630#	90#	259 109490	60
153	106		Sg	$-\alpha$	106560#	120#	7340#	0#	β^+	4570#	130#	259 114400#	130#
160	100	260	Fm	$-\alpha$	95770#	510#	7402#	2#	β^-	-790#	600#	260 102810#	550#
159	101		Md	$-\alpha$	96550#	320#	7396#	1#	β^-	940#	370#	260 103650#	340#
158	102		No	$-\alpha$	95610#	200#	7397#	1#	*			260 102640#	220#
157	103		Lr	$-\alpha$	98280#	120#	7383#	0#	β^+	2670#	240#	260 105510#	130#
156	104		Rf	$-\alpha$	99150#	200#	7377#	1#	β^+	870#	240#	260 106440#	220#
155	105		Db	$-\alpha$	103670#	90#	7357#	0#	β^+	4520#	220#	260 111300#	100#
154	106		Sg	$-\alpha$	106548	21	7342.56	0.08	β^+	2880#	100#	260 114384	22
153	107		Bh	$-\alpha$	113320#	250#	7313#	1#	β^+	6780#	250#	260 121660#	260#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ		
160	101	261	Md	$-\alpha$	98580#	570#	7391#	2#	β^-	120#	610#	261 105830#	620#
159	102		No	$-\alpha$	98460#	200#	7388#	1#	*			261 105700#	220#
158	103		Lr	$-\alpha$	99560#	200#	7381#	1#	β^+	1110#	280#	261 106880#	220#
157	104		Rf	$-\alpha$	101320	50	7371.37	0.19	β^+	1760#	210#	261 108770	50
156	105		Db	$-\alpha$	104250#	110#	7357#	0#	β^+	2930#	120#	261 111920#	120#
155	106		Sg	$-\alpha$	108006	19	7339.77	0.07	β^+	3760#	110#	261 115949	20
154	107		Bh	$-\alpha$	113140#	210#	7317#	1#	β^+	5130#	210#	261 121460#	220#
161	101	262	Md	$-\alpha$	101630#	420#	7382#	2#	β^-	1530#	560#	262 109100#	450#
160	102		No	$-\alpha$	100100#	360#	7385#	1#	*			262 107460#	390#
159	103		Lr	$-\alpha$	102100#	200#	7374#	1#	β^+	2000#	410#	262 109610#	220#
158	104		Rf	$-\alpha$	102390#	220#	7370#	1#	β^+	290#	300#	262 109930#	240#
157	105		Db	$-\alpha$	106260#	140#	7352#	1#	β^+	3860#	270#	262 114070#	150#
156	106		Sg	$-\alpha$	108370	40	7341.18	0.14	β^+	2110#	150#	262 116340	40
155	107		Bh	$-\alpha$	114540#	310#	7315#	1#	β^+	6180#	310#	262 122970#	330#
161	102	263	No	$-\alpha$	103130#	490#	7376#	2#	*			263 110720#	530#
160	103		Lr	$-\alpha$	103730#	280#	7371#	1#	β^+	600#	570#	263 111360#	300#
159	104		Rf	$-\alpha$	104790#	180#	7364#	1#	β^+	1060#	340#	263 112500#	200#
158	105		Db	$-\alpha$	107110#	170#	7352#	1#	β^+	2320#	250#	263 114990#	180#
157	106		Sg	$-\alpha$	110190#	100#	7337#	0#	β^+	3080#	190#	263 118290#	100#
156	107		Bh	$-\alpha$	114500#	310#	7318#	1#	β^+	4310#	320#	263 122920#	330#
155	108		Hs	$-\alpha$	119720#	130#	7295#	0#	β^+	5220#	330#	263 128520#	140#
162	102	264	No	$-\alpha$	105010#	650#	7371#	2#	β^-	-1370#	780#	264 112730#	700#
161	103		Lr	$-\alpha$	106380#	440#	7363#	2#	β^-	300#	570#	264 114200#	470#
160	104		Rf	$-\alpha$	106080#	360#	7361#	1#	*			264 113880#	390#
159	105		Db	$-\alpha$	109360#	240#	7346#	1#	β^+	3290#	430#	264 117410#	250#
158	106		Sg	$-\alpha$	110780#	280#	7338#	1#	β^+	1420#	370#	264 118930#	300#
157	107		Bh	$-\alpha$	116060#	180#	7315#	1#	β^+	5270#	330#	264 124590#	190#
156	108		Hs	$-\alpha$	119564	29	7298.37	0.11	β^+	3510#	180#	264 128360	30
162	103	265	Lr	$-\alpha$	108230#	610#	7359#	2#	*			265 116190#	650#
161	104		Rf	$-\alpha$	108690#	360#	7354#	1#	β^+	460#	710#	265 116680#	390#
160	105		Db	$-\alpha$	110490#	220#	7344#	1#	β^+	1800#	420#	265 118610#	240#
159	106		Sg	$-\alpha$	112800#	120#	7333#	0#	β^+	2310#	260#	265 121090#	130#
158	107		Bh	$-\alpha$	116360#	230#	7316#	1#	β^+	3560#	260#	265 124910#	250#
157	108		Hs	$-\alpha$	120901	24	7296.24	0.09	β^+	4550#	240#	265 129793	26
156	109		Mt	$-\alpha$	126680#	450#	7271#	2#	β^+	5780#	450#	265 136000#	480#
163	103	266	Lr	$-\alpha$	111620#	520#	7349#	2#	β^-	1550#	700#	266 119830#	560#
162	104		Rf	$-\alpha$	110080#	470#	7352#	2#	*			266 118170#	500#
161	105		Db	$-\alpha$	112740#	280#	7339#	1#	β^+	2660#	550#	266 121030#	300#
160	106		Sg	$-\alpha$	113620#	250#	7332#	1#	β^+	880#	370#	266 121980#	260#
159	107		Bh	$-\alpha$	118110#	160#	7313#	1#	β^+	4490#	290#	266 126790#	180#
158	108		Hs	$-\alpha$	121140	40	7298.27	0.15	β^+	3030#	170#	266 130050	40
157	109		Mt	$-\alpha$	127960#	310#	7270#	1#	β^+	6830#	310#	266 137370#	330#
163	104	267	Rf	$-\alpha$	113450#	580#	7342#	2#	*			267 121790#	620#
162	105		Db	$-\alpha$	114080#	410#	7336#	2#	β^+	630#	710#	267 122470#	440#
161	106		Sg	$-\alpha$	115840#	280#	7327#	1#	β^+	1760#	500#	267 124360#	300#
160	107		Bh	$-\alpha$	118770#	260#	7313#	1#	β^+	2930#	380#	267 127500#	280#
159	108		Hs	$-\alpha$	122650#	100#	7295#	0#	β^+	3890#	280#	267 131670#	100#
158	109		Mt	$-\alpha$	127790#	500#	7273#	2#	β^+	5140#	510#	267 137190#	540#
157	110		Ds	$-\alpha$	133920#	140#	7247#	1#	β^+	6130#	520#	267 143770#	150#
164	104	268	Rf	$-\alpha$	115480#	710#	7337#	3#	β^-	-1590#	890#	268 123970#	770#
163	105		Db	$-\alpha$	117060#	530#	7328#	2#	β^-	260#	710#	268 125670#	570#
162	106		Sg	$-\alpha$	116800#	470#	7326#	2#	*			268 125390#	500#
161	107		Bh	$-\alpha$	120810#	380#	7308#	1#	β^+	4010#	610#	268 129690#	410#
160	108		Hs	$-\alpha$	122830#	280#	7298#	1#	β^+	2020#	480#	268 131870#	300#
159	109		Mt	$-\alpha$	129150#	230#	7271#	1#	β^+	6320#	370#	268 138650#	250#
158	110		Ds	$-\alpha$	133650#	300#	7252#	1#	β^+	4500#	380#	268 143480#	320#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

<i>N</i>	<i>Z</i>	<i>A</i>	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μ u			
164	105	269	Db	$-\alpha$	119150#	680#	7323#	3#	*		269	127910#	730#	
163	106		Sg	$-\alpha$	119820#	360#	7318#	1#	β^+	670#	770#	269	128630#	390#
162	107		Bh	$-\alpha$	121480#	370#	7309#	1#	β^+	1670#	520#	269	130420#	400#
161	108		Hs	$-\alpha$	124590#	130#	7294#	0#	β^+	3110#	390#	269	133750#	130#
160	109		Mt	$-\alpha$	129310#	460#	7274#	2#	β^+	4720#	480#	269	138820#	500#
159	110		Ds	$-\alpha$	134840	30	7250.15	0.12	β^+	5520#	460#	269	144750	30
165	105	270	Db	$-\alpha$	122360#	600#	7314#	2#	β^-	870#	820#	270	131360#	640#
164	106		Sg	$-\alpha$	121490#	560#	7314#	2#	*			270	130430#	600#
163	107		Bh	$-\alpha$	124230#	290#	7301#	1#	β^+	2740#	630#	270	133360#	310#
162	108		Hs	$-\alpha$	125090#	250#	7295#	1#	β^+	860#	380#	270	134290#	270#
161	109		Mt	$-\alpha$	130710#	170#	7271#	1#	β^+	5620#	300#	270	140330#	180#
160	110		Ds	$-\alpha$	134680	50	7253.77	0.18	β^+	3970#	180#	270	144580	50
165	106	271	Sg	$-\alpha$	124760#	590#	7305#	2#	*			271	133930#	630#
164	107		Bh	$-\alpha$	125990#	440#	7298#	2#	β^+	1230#	730#	271	135260#	480#
163	108		Hs	$-\alpha$	127770#	300#	7288#	1#	β^+	1780#	530#	271	137170#	320#
162	109		Mt	$-\alpha$	131100#	330#	7273#	1#	β^+	3330#	440#	271	140740#	350#
161	110		Ds	$-\alpha$	135950#	100#	7252#	0#	β^+	4850#	340#	271	145950#	100#
166	106	272	Sg	$-\alpha$	126580#	770#	7301#	3#	*			272	135890#	830#
165	107		Bh	$-\alpha$	128790#	540#	7290#	2#	β^+	2210#	940#	272	138260#	580#
164	108		Hs	$-\alpha$	129010#	510#	7286#	2#	β^+	220#	740#	272	138500#	550#
163	109		Mt	$-\alpha$	133580#	490#	7267#	2#	β^+	4580#	700#	272	143410#	520#
162	110		Ds	$-\alpha$	136020#	410#	7255#	2#	β^+	2430#	640#	272	146020#	440#
161	111		Rg	$-\alpha$	142770#	230#	7227#	1#	β^+	6760#	470#	272	153270#	250#
167	106	273	Sg	x	130020#	500#	7291#	2#	*			273	139580#	540#
166	107		Bh	$-\alpha$	130630#	740#	7286#	3#	β^+	620#	900#	273	140240#	800#
165	108		Hs	$-\alpha$	131970#	370#	7278#	1#	β^+	1340#	830#	273	141680#	400#
164	109		Mt	$-\alpha$	134510#	480#	7266#	2#	β^+	2530#	600#	273	144400#	520#
163	110		Ds	$-\alpha$	138380#	130#	7249#	0#	β^+	3880#	500#	273	148560#	140#
162	111		Rg	$-\alpha$	142640#	530#	7231#	2#	β^+	4250#	540#	273	153130#	570#
167	107	274	Bh	$-\alpha$	133710#	600#	7278#	2#	β^-	230#	840#	274	143550#	650#
166	108		Hs	$-\alpha$	133490#	590#	7276#	2#	*			274	143300#	640#
165	109		Mt	$-\alpha$	137160#	350#	7260#	1#	β^+	3670#	690#	274	147250#	380#
164	110		Ds	$-\alpha$	139180#	390#	7249#	1#	β^+	2020#	530#	274	149410#	420#
163	111		Rg	$-\alpha$	144620#	180#	7227#	1#	β^+	5440#	430#	274	155250#	190#
168	107	275	Bh	x	135690#	600#	7273#	2#	*			275	145670#	640#
167	108		Hs	$-\alpha$	136620#	590#	7267#	2#	β^+	930#	840#	275	146670#	630#
166	109		Mt	$-\alpha$	138630#	470#	7257#	2#	β^+	2010#	750#	275	148820#	500#
165	110		Ds	$-\alpha$	141620#	420#	7243#	2#	β^+	2990#	630#	275	152030#	450#
164	111		Rg	$-\alpha$	145260#	520#	7227#	2#	β^+	3640#	670#	275	155940#	560#
168	108	276	Hs	$-\alpha$	138290#	800#	7264#	3#	*			276	148460#	860#
167	109		Mt	$-\alpha$	141210#	550#	7251#	2#	β^+	2920#	970#	276	151590#	590#
166	110		Ds	$-\alpha$	142540#	550#	7243#	2#	β^+	1330#	780#	276	153030#	590#
165	111		Rg	$-\alpha$	147490#	630#	7222#	2#	β^+	4950#	830#	276	158330#	680#
164	112		Cn	x	150350#	600#	7209#	2#	β^+	2870#	870#	276	161410#	640#
169	108	277	Hs	$-\alpha$	141490#	540#	7255#	2#	*			277	151900#	580#
168	109		Mt	$-\alpha$	142770#	770#	7248#	3#	β^+	1280#	940#	277	153270#	820#
167	110		Ds	$-\alpha$	145230#	380#	7236#	1#	β^+	2470#	860#	277	155910#	410#
166	111		Rg	$-\alpha$	148170#	570#	7223#	2#	β^+	2940#	680#	277	159070#	610#
165	112		Cn	$-\alpha$	152430#	140#	7205#	1#	β^+	4260#	580#	277	163640#	150#
169	109	278	Mt	$-\alpha$	145600#	630#	7241#	2#	*			278	156310#	680#
168	110		Ds	$-\alpha$	146280#	630#	7236#	2#	β^+	680#	890#	278	157040#	670#
167	111		Rg	$-\alpha$	150430#	360#	7218#	1#	β^+	4150#	720#	278	161490#	380#
166	112		Cn	$-\alpha$	152910#	440#	7206#	2#	β^+	2480#	570#	278	164160#	470#
165	113		Ed	$-\alpha$	158890#	180#	7182#	1#	β^+	5980#	480#	278	170580#	200#

Table I. The 2012 Atomic mass table (continued, Explanation of Table on page 1608)

N	Z	A	Elt.	Orig.	Mass excess (keV)		Binding energy per nucleon (keV)		Beta-decay energy (keV)		Atomic mass μu	
170	109	279	Mt	$-\alpha$	147250#	670#	7238#	2#	*		279 158080#	720#
169	110		Ds	$-\alpha$	149130#	600#	7228#	2#	β^+	1880# 900#	279 160100#	640#
168	111		Rg	$-\alpha$	151570#	470#	7217#	2#	β^+	2450# 760#	279 162720#	510#
167	112		Cn	$-\alpha$	155130#	470#	7201#	2#	β^+	3560# 660#	279 166540#	500#
166	113		Ed	x	159240#	700#	7184#	3#	β^+	4110# 840#	279 170950#	750#
170	110	280	Ds	$-\alpha$	150260#	820#	7227#	3#	*		280 161310#	890#
169	111		Rg	$-\alpha$	153830#	560#	7212#	2#	β^+	3570# 1000#	280 165140#	610#
168	112		Cn	$-\alpha$	155700#	580#	7202#	2#	β^+	1870# 810#	280 167150#	630#
167	113		Ed	x	161080#	700#	7180#	2#	β^+	5390# 910#	280 172930#	750#
171	110	281	Ds	$-\alpha$	153240#	550#	7220#	2#	*		281 164510#	590#
170	111		Rg	$-\alpha$	154960#	820#	7211#	3#	β^+	1720# 990#	281 166360#	890#
169	112		Cn	$-\alpha$	158120#	390#	7197#	1#	β^+	3150# 910#	281 169750#	420#
168	113		Ed	x	161600#	700#	7182#	2#	β^+	3480# 800#	281 173480#	750#
171	111	282	Rg	$-\alpha$	157530#	670#	7205#	2#	*		282 169120#	720#
170	112		Cn	$-\alpha$	158820#	660#	7197#	2#	β^+	1280# 940#	282 170500#	700#
169	113		Ed	$-\alpha$	163640#	360#	7178#	1#	β^+	4820# 750#	282 175670#	390#
172	111	283	Rg	$-\alpha$	158860#	730#	7203#	3#	*		283 170540#	790#
171	112		Cn	$-\alpha$	161400#	610#	7191#	2#	β^+	2540# 950#	283 173270#	650#
170	113		Ed	$-\alpha$	164480#	480#	7178#	2#	β^+	3080# 780#	283 176570#	520#
172	112	284	Cn	$-\alpha$	162230#	850#	7192#	3#	*		284 174160#	910#
171	113		Ed	$-\alpha$	166480#	580#	7174#	2#	β^+	4260# 1020#	284 178730#	620#
173	112	285	Cn	$-\alpha$	164980#	560#	7185#	2#	*		285 177120#	600#
172	113		Ed	$-\alpha$	167420#	830#	7174#	3#	β^+	2430# 1000#	285 179730#	890#
171	114		Fl	$-\alpha$	171060#	440#	7158#	2#	β^+	3650# 930#	285 183640#	470#
173	113	286	Ed	$-\alpha$	169730#	670#	7169#	2#	*		286 182210#	720#
172	114		Fl	$-\alpha$	171610#	660#	7159#	2#	β^+	1890# 940#	286 184240#	710#
174	113	287	Ed	$-\alpha$	170830#	760#	7168#	3#	*		287 183390#	810#
173	114		Fl	$-\alpha$	173990#	610#	7154#	2#	β^+	3160# 970#	287 186780#	660#
172	115		Ef	$-\alpha$	177640#	490#	7139#	2#	β^+	3650# 780#	287 190700#	520#
174	114	288	Fl	$-\alpha$	174720#	850#	7155#	3#	*		288 187570#	910#
173	115		Ef	$-\alpha$	179540#	580#	7136#	2#	β^+	4810# 1030#	288 192740#	620#
175	114	289	Fl	$-\alpha$	177370#	560#	7149#	2#	*		289 190420#	600#
174	115		Ef	$-\alpha$	180360#	830#	7136#	3#	β^+	2990# 1000#	289 193630#	890#
173	116		Lv	$-\alpha$	184590#	530#	7119#	2#	β^+	4220# 980#	289 198160#	570#
175	115	290	Ef	$-\alpha$	182550#	680#	7132#	2#	*		290 195980#	730#
174	116		Lv	$-\alpha$	185030#	660#	7120#	2#	β^+	2480# 950#	290 198640#	710#
176	115	291	Ef	$-\alpha$	183570#	820#	7131#	3#	*		291 197070#	880#
175	116		Lv	$-\alpha$	187300#	610#	7116#	2#	β^+	3730# 1020#	291 201080#	660#
174	117		Eh	$-\alpha$	191450#	630#	7099#	2#	β^+	4150# 880#	291 205540#	680#
176	116	292	Lv	$-\alpha$	187920#	850#	7117#	3#	*		292 201740#	910#
175	117		Eh	$-\alpha$	193250#	700#	7096#	2#	β^+	5330# 1100#	292 207460#	750#
177	116	293	Lv	$-\alpha$	190480#	560#	7111#	2#	*		293 204490#	600#
176	117		Eh	$-\alpha$	193970#	830#	7097#	3#	β^+	3490# 1000#	293 208240#	890#
175	118		Ei	$-\alpha$	198930#	730#	7077#	2#	β^+	4960# 1100#	293 213560#	780#
177	117	294	Eh	$-\alpha$	196040#	690#	7093#	2#	*		294 210460#	740#
176	118		Ei	$-\alpha$	199270#	660#	7080#	2#	β^+	3220# 960#	294 213920#	710#
177	118	295	Ei	$-\alpha$	201430#	640#	7076#	2#	*		295 216240#	690#

Table II. Influences on primary nuclei**EXPLANATION OF TABLE**

This table gives for each of the 1176 primary nuclei the up to three most important contributing data and their *influences* ($\times 100$) on its mass, as given by the flow-of-information matrix.

Nucleus	Nuclidic name (primaries only)		
Influence	<i>Influence</i> ($\times 100$) brought to the determination of the mass of the nucleus, by the piece of data represented by the equation in following column		
Equation	K^m , Cs^m , Cs^n , In^p , Tl^q : higher isomers, see NUBASE.	In nuclear reactions: ϵ = electron capture,	In mass-doublet equation: $H = {}^1H$, $N = {}^{14}N$, $D = {}^2H$, $O = {}^{16}O$, $C = {}^{12}C$, u = absolute mass-doublet.
			In mass-triplet equation: Rb^x , Rb^y : different mixtures of isomers or contaminants.

Table II. Influences on primary nuclei (Explanation of Table on page 1673)

Nucleus	Infl.	Equation	Infl.	Equation	Infl.	Equation
$0\pi^+$	100.0	π^+				
$0\pi^-$	100.0	$\pi^+(2\beta^+)\pi^-$				
1 n	100.0	${}^1\text{H}(n,\gamma){}^2\text{H}$				
${}^1\text{H}$	43.4	$\text{H}_{12}-\text{C}$	24.2	H_2-D	18.0	$\text{C}_2\text{H}_4-{}^{28}\text{Si}$
${}^2\text{H}$	78.5	D_6-C	7.9	H_2-D	3.2	$\text{C D}_3-{}^{18}\text{O}$
${}^3\text{H}$	90.1	${}^3\text{H}_4-\text{C}$	5.1	${}^3\text{H}(\beta^-){}^3\text{He}$	4.7	${}^3\text{H}-{}^3\text{He}$
${}^3\text{He}$	46.3	${}^3\text{H}(\beta^-){}^3\text{He}$	42.5	${}^3\text{H}-{}^3\text{He}$	11.1	${}^3\text{He}_4-\text{C}$
${}^4\text{He}$	100.0	${}^4\text{He}_3-\text{C}$				
${}^6\text{He}$	100.0	${}^6\text{He}-{}^7\text{Li}_{.857}$				
${}^6\text{Li}$	100.0	${}^6\text{Li}_2-\text{C}$				
${}^7\text{Li}$	99.8	${}^7\text{Li}-\text{H}_7$	0.1	${}^7\text{Li}(n,\gamma){}^8\text{Li}$	0.1	${}^8\text{He}-{}^7\text{Li}_{.143}$
${}^7\text{Li}^i$	61.0	${}^9\text{Be}(p,{}^3\text{He}){}^7\text{Li}^i$	39.0	${}^6\text{Li}(n,\gamma){}^7\text{Li}^i$		
${}^7\text{Be}$	100.0	${}^7\text{Li}(p,n){}^7\text{Be}$				
${}^8\text{He}$	74.9	${}^8\text{He}-{}^7\text{Li}_{.143}$	25.1	${}^8\text{He}-{}^6\text{Li}_{.333}$		
${}^8\text{Li}$	78.7	${}^7\text{Li}(n,\gamma){}^8\text{Li}$	21.3	${}^8\text{Li}-{}^6\text{Li}_{.333}$		
${}^8\text{Be}^j$	57.1	${}^{10}\text{Be}(p,t){}^8\text{Be}^j$	42.9	${}^6\text{Li}(d,\gamma){}^8\text{Be}^j$		
${}^8\text{B}$	100.0	${}^6\text{Li}({}^3\text{He},n){}^8\text{B}$				
${}^8\text{C}$	62.5	${}^{12}\text{C}(\alpha,{}^8\text{He}){}^8\text{C}$	37.5	${}^8\text{C}-\text{u}$		
${}^9\text{He}$	56.2	${}^9\text{He}(\gamma,n){}^8\text{He}$	43.8	${}^9\text{Be}(\pi^-, \pi^+){}^9\text{He}$		
${}^9\text{Be}$	67.1	${}^9\text{Be}-{}^7\text{Li}_{.286}$	32.9	${}^9\text{Be}(n,\gamma){}^{10}\text{Be}$		
${}^{10}\text{Be}$	55.6	${}^9\text{Be}(n,\gamma){}^{10}\text{Be}$	44.4	${}^{10}\text{Be}-{}^7\text{Li}_{.429}$		
${}^{10}\text{B}$	99.2	${}^{10}\text{B}(\alpha,d){}^{12}\text{C}$	0.8	${}^{10}\text{B}(n,\gamma){}^{11}\text{B}$		
${}^{10}\text{C}$	67.2	${}^{10}\text{C}-{}^{10}\text{B}$	32.8	${}^{10}\text{B}(p,n){}^{10}\text{C}$		
${}^{11}\text{Be}$	83.1	${}^{11}\text{Be}-{}^6\text{Li}_{.833}$	16.9	${}^{11}\text{Be}-{}^7\text{Li}_{.571}$		
${}^{11}\text{B}$	99.0	${}^{10}\text{B}(n,\gamma){}^{11}\text{B}$	1.0	${}^{11}\text{B}(d,p){}^{12}\text{B}$		
${}^{11}\text{B}^i$	79.1	${}^9\text{Be}({}^3\text{He},p){}^{11}\text{B}^i$	20.9	${}^7\text{Li}(\alpha,\gamma){}^{11}\text{B}^i$		
${}^{11}\text{C}$	100.0	${}^{11}\text{C}(\beta^+){}^{11}\text{B}$				
${}^{11}\text{C}^i$	50.0	${}^9\text{Be}({}^3\text{He},n){}^{11}\text{C}^i$	50.0	${}^{11}\text{B}({}^3\text{He},t){}^{11}\text{C}^i$		
${}^{12}\text{Be}$	79.4	${}^{12}\text{Be}-\text{C}$	20.6	${}^{10}\text{Be}(t,p){}^{12}\text{Be}$		
${}^{12}\text{B}$	89.2	${}^{14}\text{C}(d,\alpha){}^{12}\text{B}$	10.8	${}^{11}\text{B}(d,p){}^{12}\text{B}$		
${}^{12}\text{B}^i$	86.3	${}^{14}\text{C}(p,{}^3\text{He}){}^{12}\text{B}^i$	13.7	${}^9\text{Be}({}^7\text{Li},\alpha){}^{12}\text{B}^i$		
${}^{12}\text{C}^i$	69.2	${}^{11}\text{B}(d,n){}^{12}\text{C}^i$	30.8	${}^{10}\text{B}({}^3\text{He},p){}^{12}\text{C}^i$		
${}^{12}\text{N}$	100.0	${}^{14}\text{N}(p,t){}^{12}\text{N}$				
${}^{13}\text{C}$	75.3	${}^{13}\text{C H}-{}^{14}\text{N}$	24.0	${}^{13}\text{C}_2\text{H}_2-{}^{28}\text{Si}$	0.7	${}^{13}\text{C D}_3-{}^{19}\text{F}$
${}^{13}\text{N}$	100.0	${}^{12}\text{C}(p,\gamma){}^{13}\text{N}$				
${}^{14}\text{B}$	100.0	${}^{14}\text{C}({}^7\text{Li},{}^7\text{Be}){}^{14}\text{B}$				
${}^{14}\text{C}$	80.0	${}^{14}\text{C H}_2-\text{N D}$	20.0	$\text{C D}_2-{}^{14}\text{C H}_2$		
${}^{14}\text{N}$	77.9	$\text{N}_2-\text{C O}$	19.0	${}^{13}\text{C H}-{}^{14}\text{N}$	1.2	${}^{86}\text{Kr}-\text{N}_6$
${}^{14}\text{O}$	57.4	${}^{26}\text{Mg}({}^3\text{He},t){}^{26}\text{Al}-{}^{14}\text{N}({}^{14}\text{O})$	42.6	${}^{14}\text{N}(p,n){}^{14}\text{O}$		
${}^{15}\text{B}$	88.4	${}^{18}\text{O}({}^{48}\text{Ca},{}^{51}\text{V}){}^{15}\text{B}$	11.6	${}^{16}\text{B}(\gamma,n){}^{15}\text{B}$		
${}^{15}\text{N}$	60.6	$\text{C D H}-{}^{15}\text{N}$	26.5	${}^{15}\text{N}_2-{}^{28}\text{Si H}_2$	12.9	$\text{C H}_3-{}^{15}\text{N}$
${}^{15}\text{O}$	70.3	${}^{15}\text{N}(p,n){}^{15}\text{O}$	29.7	${}^{14}\text{N}(p,\gamma){}^{15}\text{O}$		
${}^{15}\text{F}$	78.3	${}^{15}\text{F}(p){}^{14}\text{O}$	21.7	${}^{20}\text{Ne}({}^3\text{He},{}^8\text{Li}){}^{15}\text{F}$		
${}^{16}\text{B}$	83.2	${}^{16}\text{B}(\gamma,n){}^{15}\text{B}$	16.8	${}^{14}\text{C}({}^{14}\text{C},{}^{12}\text{N}){}^{16}\text{B}$		
${}^{16}\text{O}$	90.9	C_4-O_3	4.4	$\text{O}_2-{}^{31}\text{P H}$	1.8	$\text{N}_2-\text{C O}$
${}^{16}\text{O}^i$	54.4	${}^{14}\text{N}({}^3\text{He},p){}^{16}\text{O}^i$	45.6	${}^{15}\text{N}(p,\gamma){}^{16}\text{O}^i$		
${}^{16}\text{O}^j$	77.0	${}^{14}\text{N}(d,\gamma){}^{16}\text{O}^j$	23.0	${}^{14}\text{C}({}^3\text{He},n){}^{16}\text{O}^j$		
${}^{17}\text{O}$	82.2	${}^{17}\text{O}_2-{}^{28}\text{Si D}_3$	17.8	${}^{17}\text{O}-{}^{16}\text{O H}$		
${}^{17}\text{F}$	100.0	${}^{16}\text{O}(p,\gamma){}^{17}\text{F}$				
${}^{18}\text{O}$	84.1	$\text{C D}_3-{}^{18}\text{O}$	15.9	$\text{C}_3-{}^{18}\text{O}_2$		
${}^{18}\text{F}$	59.6	${}^{17}\text{O}(p,\gamma){}^{18}\text{F}$	40.4	${}^{18}\text{O}(p,n){}^{18}\text{F}$		
${}^{18}\text{Ne}$	100.0	${}^{18}\text{Ne}-{}^{22}\text{Ne}_{.818}$				
${}^{19}\text{F}$	84.1	${}^{13}\text{C D}_3-{}^{19}\text{F}$	15.9	${}^{28}\text{Si H}_3-\text{C }{}^{19}\text{F}$		
${}^{19}\text{Na}$	77.1	${}^{24}\text{Mg}({}^3\text{He},{}^8\text{Li}){}^{19}\text{Na}$	22.9	${}^{19}\text{Na}(p){}^{18}\text{Ne}$		
${}^{20}\text{Ne}$	60.5	${}^{20}\text{Ne}_2-{}^{40}\text{Ar}$	39.5	$\text{C D}_4-{}^{20}\text{Ne}$		

Table II. Influences on primary nuclei (continued, Explanation of Table on page 1673)

Nucleus	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{20}Na	100.0	$^{20}\text{Ne}(^3\text{He,t})^{20}\text{Na}-^{36}\text{Ar}()$		^{36}K		
^{21}Na	46.4	$^{21}\text{Na}-^{39}\text{K}_{.538}$	38.1	$^{21}\text{Na}-^{23}\text{Na}_{.913}$	15.5	$^{20}\text{Ne}(p,\gamma)^{21}\text{Na}$
^{22}Ne	99.6	$^{22}\text{Ne-u}$	0.2	$^{22}\text{Na}-^{22}\text{Ne}$	0.1	$^{46}\text{Ti}-^{22}\text{Ne}_{2.091}$
^{22}Na	30.8	$^{22}\text{Na}-^{22}\text{Ne}$	17.8	$^{22}\text{Na}-^{23}\text{Na}_{.957}$	16.6	$^{22}\text{Na}-^{39}\text{K}_{.564}$
^{22}Mg	40.9	$^{22}\text{Mg}-^{39}\text{K}_{.564}$	38.0	$^{22}\text{Mg}-^{22}\text{Na}$	21.1	$^{22}\text{Mg}-^{22}\text{Ne}$
$^{22}\text{Mg}^i$	87.7	$^{22}\text{Mg}^i(p)^{21}\text{Na}$	12.3	$^{22}\text{Mg}^i(\alpha)^{18}\text{Ne}$		
^{23}F	69.2	$^{23}\text{F-u}$	30.8	$^{22}\text{Ne}(^{18}\text{O},^{17}\text{F})^{23}\text{F}$		
^{23}Na	100.0	$^{23}\text{Na-u}$				
^{23}Mg	79.0	$^{23}\text{Mg}-^{23}\text{Na}$	21.0	$^{24}\text{Mg}(p,d)^{23}\text{Mg}$		
^{24}Mg	98.0	$^{24}\text{Mg}-\text{H}_{24}$	1.9	$^{24}\text{Mg}(n,\gamma)^{25}\text{Mg}$	0.1	$^{22}\text{Na}-^{24}\text{Mg}_{.917}$
^{24}Al	100.0	$^{24}\text{Mg}(^3\text{He,t})^{24}\text{Al}-^{36}\text{Ar}()$				
^{25}Mg	44.9	$^{25}\text{Mg}(n,\gamma)^{26}\text{Mg}$	42.4	$^{24}\text{Mg}(n,\gamma)^{25}\text{Mg}$	12.7	$^{25}\text{Mg}(p,\gamma)^{26}\text{Al}$
^{25}Al	99.1	$^{24}\text{Mg}(p,\gamma)^{25}\text{Al}$	0.9	$^{25}\text{Al}^i(\text{IT})^{25}\text{Al}$		
$^{25}\text{Al}^i$	83.9	$^{25}\text{Al}^i(\text{IT})^{25}\text{Al}$	16.1	$^{27}\text{Al}(p,t)^{25}\text{Al}^i$		
^{26}Mg	88.0	$^{26}\text{Mg}-\text{H}_{26}$	8.6	$^{25}\text{Mg}(n,\gamma)^{26}\text{Mg}$	0.9	$^{26}\text{Mg}(p,\gamma)^{27}\text{Al}$
^{26}Al	59.4	$^{25}\text{Mg}(p,\gamma)^{26}\text{Al}$	13.8	$^{26}\text{Al}-^{26}\text{Mg}$	13.7	$^{26}\text{Al}^m(\text{IT})^{26}\text{Al}$
$^{26}\text{Al}^m$	85.7	$^{26}\text{Al}^m(\text{IT})^{26}\text{Al}$	14.3	$^{26}\text{Al}^m-^{26}\text{Mg}$		
^{27}Al	67.2	$^{27}\text{Al}(p,\gamma)^{28}\text{Si}$	19.9	$^{27}\text{Al}-^{23}\text{Na}_{1.174}$	12.8	$^{26}\text{Mg}(p,\gamma)^{27}\text{Al}$
$^{27}\text{Si}^i$	78.7	$^{28}\text{Si}(^3\text{He},\alpha)^{27}\text{Si}^i$	21.3	$^{29}\text{Si}(p,t)^{27}\text{Si}^i$		
^{28}Si	30.2	$^{28}\text{Si-u}$	26.6	$\text{C}_2\text{H}_4-^{28}\text{Si}$	24.3	$^{13}\text{C}_2\text{H}_2-^{28}\text{Si}$
^{28}P	100.0	$^{28}\text{Si}(^3\text{He,t})^{28}\text{P}-^{36}\text{Ar}()$				
^{29}Na	62.8	$^{29}\text{Na}-^{39}\text{K}_{.744}$	37.2	$^{29}\text{Na-u}$		
^{29}Si	100.0	$^{29}\text{Si}-^{28}\text{Si H}$				
^{29}P	99.0	$^{28}\text{Si}(p,\gamma)^{29}\text{P}$	1.0	$^{29}\text{P}^i(\text{IT})^{29}\text{P}$		
$^{29}\text{P}^i$	75.4	$^{29}\text{P}^i(\text{IT})^{29}\text{P}$	24.6	$^{28}\text{Si}(p,\gamma)^{29}\text{P}^i$		
^{30}Na	82.1	$^{30}\text{Na}-\text{O}_{1.876}$	17.9	$^{30}\text{Na}-^{39}\text{K}_{.769}$		
^{31}P	57.6	$\text{O}_2-^{31}\text{P H}$	42.4	$^{31}\text{P}-^{28}\text{Si H}_3$		
^{31}S	96.9	$^{31}\text{S}-^{31}\text{P}$	3.1	$^{32}\text{Cl}(p)^{31}\text{S}$		
^{32}S	51.6	$^{32}\text{S}-\text{C}_2\text{D}_4$	48.3	$^{32}\text{S}-\text{O}_2$		
^{32}Cl	76.3	$^{32}\text{Cl}(p)^{31}\text{S}$	23.7	$^{32}\text{S}(^3\text{He,t})^{32}\text{Cl}-^{36}\text{Ar}()$		
^{33}S	100.0	$^{33}\text{S}-^{32}\text{S H}$				
^{33}Cl	79.9	$^{32}\text{S}(p,\gamma)^{33}\text{Cl}$	20.1	$^{33}\text{Cl}^i(\text{IT})^{33}\text{Cl}$		
$^{33}\text{Cl}^i$	63.1	$^{33}\text{Cl}^i(\text{IT})^{33}\text{Cl}$	36.9	$^{32}\text{S}(p,\gamma)^{33}\text{Cl}^i$		
^{34}S	46.5	$^{34}\text{S}(n,\gamma)^{35}\text{S}$	23.6	$^{33}\text{S}(n,\gamma)^{34}\text{S}$	18.0	$^{34}\text{Cl}-^{34}\text{S}$
^{34}Cl	48.4	$^{33}\text{S}(p,\gamma)^{34}\text{Cl}$	31.0	$^{34}\text{Cl}-^{34}\text{S}$	18.4	$^{34}\text{Cl}^m(\text{IT})^{34}\text{Cl}$
$^{34}\text{Cl}^m$	65.1	$^{34}\text{Cl}^m(\text{IT})^{34}\text{Cl}$	30.7	$^{34}\text{Cl}^m-^{34}\text{S}$	4.2	$^{34}\text{Cl}^m-^{34}\text{Ar}$
^{34}Ar	52.0	$^{34}\text{Ar}-^{34}\text{Cl}$	35.1	$^{34}\text{Cl}^m-^{34}\text{Ar}$	12.9	$^{34}\text{S}-^{34}\text{Ar}$
^{35}S	71.5	$^{35}\text{S}(\beta^-)^{35}\text{Cl}$	28.5	$^{34}\text{S}(n,\gamma)^{35}\text{S}$		
^{35}Cl	55.5	$\text{C}_3-^{35}\text{Cl H}$	19.4	$^{35}\text{S}(\beta^-)^{35}\text{Cl}$	15.2	$\text{C}_5\text{H}_{10}-^{35}\text{Cl}_2$
^{36}S	63.6	$^{36}\text{S}(p,\gamma)^{37}\text{Cl}$	36.4	$^{36}\text{S}(p,n)^{36}\text{Cl}$		
^{36}Cl	99.1	$^{35}\text{Cl}(n,\gamma)^{36}\text{Cl}$	0.9	$^{36}\text{S}(p,n)^{36}\text{Cl}$		
^{36}Ar	100.0	$^{36}\text{Ar-u}$				
^{36}K	92.8	$^{36}\text{K}-^{39}\text{K}_{.923}$	7.2	$^{32}\text{S}(^3\text{He,t})^{32}\text{Cl}-^{36}\text{Ar}()$		
^{37}Cl	85.0	$\text{C}_3\text{H}_6\text{O}_2-^{37}\text{Cl}_2$	9.2	$\text{C}_5\text{H}_{12}-^{35}\text{Cl}^{37}\text{Cl}$	1.8	$^{36}\text{S}(p,\gamma)^{37}\text{Cl}$
^{38}Ar	32.0	$^{38}\text{Ar}-^{39}\text{K}_{.974}$	27.4	$^{38}\text{K}^m-^{38}\text{Ar}$	23.5	$^{38}\text{K}-^{38}\text{Ar}$
^{38}K	26.5	$^{38}\text{K}-^{38}\text{Ar}$	26.1	$^{38}\text{K}^m-^{38}\text{K}$	24.6	$^{38}\text{Ca}-^{38}\text{K}$
$^{38}\text{K}^m$	44.5	$^{38}\text{K}^m-^{38}\text{Ar}$	34.0	$^{38}\text{K}^m-^{38}\text{K}$	21.5	$^{38}\text{K}^m-^{38}\text{Ca}$
^{38}Ca	48.4	$^{38}\text{Ca}-\text{H}_6\text{O}_2$	20.5	$^{38}\text{Ca}-^{38}\text{K}$	15.8	$^{38}\text{K}^m-^{38}\text{Ca}$
^{39}K	99.8	$^{39}\text{K}-^{40}\text{Ar}$	0.1	$^{39}\text{K}(n,\gamma)^{40}\text{K}$		
^{39}Ca	100.0	$^{39}\text{Ca}^{19}\text{F}-^{39}\text{K}_{1.487}$				
^{40}S	79.3	$^{40}\text{S}-^{40}\text{Ar}$	20.7	$^{40}\text{S}-^{41}\text{K}_{.976}$		
^{40}Ar	46.2	$\text{C}_3\text{H}_4-^{40}\text{Ar}$	32.9	$\text{C}_2\text{D}_8-^{40}\text{Ar}$	13.5	$^{20}\text{Ne}_2-^{40}\text{Ar}$
^{40}K	60.9	$^{39}\text{K}(n,\gamma)^{40}\text{K}$	39.1	$^{40}\text{K}(n,\gamma)^{41}\text{K}$		
^{40}Ca	99.1	$^{40}\text{Ca}-\text{H}_{40}$	0.9	$^{48}\text{Ca}-^{40}\text{Ca}_{1.200}$		
^{41}K	99.9	$^{41}\text{K}-^{40}\text{Ar H}$	0.1	$^{40}\text{K}(n,\gamma)^{41}\text{K}$		

Table II. Influences on primary nuclei (continued, Explanation of Table on page 1673)

Nucleus	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{41}Ca	99.6	$^{40}\text{Ca}(n,\gamma)^{41}\text{Ca}$	0.4	$^{41}\text{Ca}(n,\gamma)^{42}\text{Ca}$		
^{41}Sc	79.2	$^{40}\text{Ca}(p,\gamma)^{41}\text{Sc}$	20.8	$^{41}\text{Sc}^r(\text{IT})^{41}\text{Sc}$		
$^{41}\text{Sc}^r$	72.4	$^{41}\text{Sc}^r(\text{IT})^{41}\text{Sc}$	27.6	$^{41}\text{Ca}(p,\gamma)^{42}\text{Sc}^r - ^{40}\text{Ca}()^{41}\text{Sc}^r$		
^{42}Ca	90.3	$^{41}\text{Ca}(n,\gamma)^{42}\text{Ca}$	3.4	$^{42}\text{Sc} - ^{42}\text{Ca}$	2.9	$^{42}\text{Sc}^m - ^{42}\text{Ca}$
^{42}Sc	49.6	$^{42}\text{Sc}^r(\text{IT})^{42}\text{Sc}$	18.9	$^{42}\text{Sc} - ^{42}\text{Ca}$	16.4	$^{42}\text{Sc}^m(\text{IT})^{42}\text{Sc}$
$^{42}\text{Sc}^m$	76.3	$^{42}\text{Sc}^m(\text{IT})^{42}\text{Sc}$	21.8	$^{42}\text{Sc}^m - ^{42}\text{Ca}$	2.0	$^{42}\text{Ti} - ^{42}\text{Sc}^m$
$^{42}\text{Sc}^r$	66.0	$^{41}\text{Ca}(p,\gamma)^{42}\text{Sc}^r - ^{40}\text{Ca}()^{41}\text{Sc}^r$	34.0	$^{42}\text{Sc}^r(\text{IT})^{42}\text{Sc}$		
^{42}Ti	48.8	$^{42}\text{Ti} - ^{42}\text{Sc}$	38.5	$^{42}\text{Ti} - ^{42}\text{Sc}^m$	12.7	$^{42}\text{Ti} - ^{42}\text{Ca}$
^{43}Ca	98.8	$^{42}\text{Ca}(n,\gamma)^{43}\text{Ca}$	1.1	$^{43}\text{Ca}(n,\gamma)^{44}\text{Ca}$		
$^{43}\text{Ca}^i$	76.8	$^{44}\text{Ca}(p,d)^{43}\text{Ca}^i$	23.2	$^{41}\text{K}(^3\text{He},p)^{43}\text{Ca}^i$		
$^{43}\text{Sc}^i$	83.3	$^{43}\text{Ca}(^3\text{He},t)^{43}\text{Sc}^i$	16.7	$^{42}\text{Ca}(^3\text{He},d)^{43}\text{Sc}^i$		
$^{43}\text{V}^i$	88.8	$^{43}\text{V}^i(2p)^{41}\text{Sc}$	11.2	$^{43}\text{V}^i(p)^{42}\text{Ti}$		
^{44}Ca	97.5	$^{43}\text{Ca}(n,\gamma)^{44}\text{Ca}$	2.3	$^{44}\text{Ca}(n,\gamma)^{45}\text{Ca}$	0.2	$^{44}\text{Ca}(^3\text{He},t)^{44}\text{Sc}^i$
$^{44}\text{Sc}^i$	75.6	$^{44}\text{Ca}(^3\text{He},t)^{44}\text{Sc}^i$	24.4	$^{43}\text{Ca}(^3\text{He},d)^{44}\text{Sc}^i$		
^{45}Ca	97.1	$^{44}\text{Ca}(n,\gamma)^{45}\text{Ca}$	2.9	$^{45}\text{Ca}(\beta^-)^{45}\text{Sc}$		
^{45}Sc	86.4	$^{45}\text{Sc}(p,\gamma)^{46}\text{Ti}$	12.5	$^{45}\text{Ca}(\beta^-)^{45}\text{Sc}$	1.0	$^{45}\text{Sc}(^3\text{He},t)^{45}\text{Ti}^i$
$^{45}\text{Ti}^i$	60.4	$^{45}\text{Sc}(^3\text{He},t)^{45}\text{Ti}^i$	39.6	$^{46}\text{Ti}(p,d)^{45}\text{Ti}^i$		
^{45}V	78.0	$^{45}\text{V} - u$	22.0	$^{50}\text{Cr}(p,^6\text{He})^{45}\text{V}$		
^{46}Ca	90.4	$^{46}\text{Ca}(n,\gamma)^{47}\text{Ca}$	9.6	$^{46}\text{Ca}(^3\text{He},t)^{46}\text{Sc}^i$		
$^{46}\text{Sc}^i$	62.6	$^{46}\text{Ca}(^3\text{He},t)^{46}\text{Sc}^i$	37.4	$^{48}\text{Ti}(p,^3\text{He})^{46}\text{Sc}^i$		
^{46}Ti	52.9	$^{46}\text{Ti} - ^{22}\text{Ne}_{2,091}$	27.1	$^{46}\text{V} - ^{46}\text{Ti}$	8.2	$^{46}\text{Ti}(^3\text{He},t)^{46}\text{V} - ^{47}\text{Ti}()^{47}\text{V}$
^{46}V	58.9	$^{46}\text{V} - ^{46}\text{Ti}$	37.4	$^{46}\text{V} - ^{22}\text{Ne}_{2,091}$	3.7	$^{46}\text{Ti}(^3\text{He},t)^{46}\text{V} - ^{47}\text{Ti}()^{47}\text{V}$
^{47}Ca	90.5	$^{47}\text{Ca}(\beta^-)^{47}\text{Sc}$	9.5	$^{46}\text{Ca}(n,\gamma)^{47}\text{Ca}$		
^{47}Sc	93.0	$^{47}\text{Sc}(\beta^-)^{47}\text{Ti}$	7.0	$^{47}\text{Ca}(\beta^-)^{47}\text{Sc}$		
^{47}Ti	33.2	$^{46}\text{Ti}(^3\text{He},t)^{46}\text{V} - ^{47}\text{Ti}()^{47}\text{V}$	32.6	$^{46}\text{Ti}(d,p)^{47}\text{Ti} - ^{48}\text{Ti}()^{49}\text{Ti}$	22.9	$^{46}\text{Ti}(n,\gamma)^{47}\text{Ti}$
^{47}V	86.2	$^{46}\text{Ti}(p,\gamma)^{47}\text{V}$	13.8	$^{46}\text{Ti}(^3\text{He},t)^{46}\text{V} - ^{47}\text{Ti}()^{47}\text{V}$		
^{47}Cr	75.4	$^{47}\text{Cr} - u$	24.6	$^{50}\text{Cr}(^3\text{He},^6\text{He})^{47}\text{Cr}$		
^{48}Ca	34.4	$^{48}\text{Ca} - ^{41}\text{K}_{1,171}$	34.4	$^{48}\text{Ca} - ^{39}\text{K}_{1,231}$	31.1	$^{48}\text{Ca} - ^{40}\text{Ca}_{1,200}$
^{48}Sc	50.1	$^{48}\text{Ca}(p,n)^{48}\text{Sc}$	49.9	$^{48}\text{Sc}(\beta^-)^{48}\text{Ti}$		
^{48}Ti	88.6	$^{47}\text{Ti}(n,\gamma)^{48}\text{Ti}$	32.5	$^{46}\text{Ti}(d,p)^{47}\text{Ti} - ^{48}\text{Ti}()^{49}\text{Ti}$	7.4	$^{48}\text{Ti} \text{O} - ^{55}\text{Mn}_{1,164}$
^{48}V	89.6	$^{48}\text{V}^i(\text{IT})^{48}\text{V}$	10.4	$^{48}\text{V}(\beta^+)^{48}\text{Ti}$		
$^{48}\text{V}^i$	99.6	$^{46}\text{Ti}(^3\text{He},t)^{46}\text{V} - ^{48}\text{Ti}()^{48}\text{V}^i$	0.4	$^{48}\text{V}^i(\text{IT})^{48}\text{V}$		
^{49}Sc	71.0	$^{48}\text{Ca}(p,\gamma)^{49}\text{Sc}$	29.0	$^{49}\text{Sc}(\beta^-)^{49}\text{Ti}$		
^{49}Ti	100.0	$^{48}\text{Ti}(n,\gamma)^{49}\text{Ti}$	2.8	$^{49}\text{Ti}(n,\gamma)^{50}\text{Ti}$	0.8	$^{49}\text{Ti} \text{ } ^{37}\text{Cl} - ^{51}\text{V} \text{ } ^{35}\text{Cl}$
^{49}Mn	82.2	$^{49}\text{Mn} - u$	17.8	$^{54}\text{Fe}(p,^6\text{He})^{49}\text{Mn}$		
^{50}Ti	97.1	$^{49}\text{Ti}(n,\gamma)^{50}\text{Ti}$	2.9	$^{50}\text{Ti}(p,\gamma)^{51}\text{V}$		
$^{50}\text{V}^i$	100.0	$^{46}\text{Ti}(^3\text{He},t)^{46}\text{V} - ^{50}\text{Ti}()^{50}\text{V}^i$				
^{50}Cr	49.7	$^{50}\text{Cr}(n,\gamma)^{51}\text{Cr}$	47.5	$^{50}\text{Cr}(p,\gamma)^{51}\text{Mn}$	2.3	$^{50}\text{Cr}(p,\gamma)^{51}\text{Mn}^i$
^{50}Mn	52.0	$^{50}\text{Mn} - ^{50}\text{Cr}$	36.5	$^{50}\text{Mn}^m - ^{50}\text{Mn}$	11.5	$^{50}\text{Cr}(^3\text{He},t)^{50}\text{Mn} - ^{54}\text{Fe}()^{54}\text{Co}$
$^{50}\text{Mn}^m$	81.2	$^{50}\text{Mn}^m - ^{50}\text{Cr}$	18.8	$^{50}\text{Mn}^m - ^{50}\text{Mn}$		
^{51}V	46.9	$^{51}\text{V}(p,n)^{51}\text{Cr}$	34.8	$^{50}\text{Ti}(p,\gamma)^{51}\text{V}$	10.2	$^{49}\text{Ti} \text{ } ^{37}\text{Cl} - ^{51}\text{V} \text{ } ^{35}\text{Cl}$
^{51}Cr	51.1	$^{51}\text{V}(p,n)^{51}\text{Cr}$	48.9	$^{50}\text{Cr}(n,\gamma)^{51}\text{Cr}$		
^{51}Mn	50.6	$^{54}\text{Fe}(p,\alpha)^{51}\text{Mn}$	49.4	$^{50}\text{Cr}(p,\gamma)^{51}\text{Mn}$		
$^{51}\text{Mn}^i$	89.6	$^{50}\text{Cr}(p,\gamma)^{51}\text{Mn}^i$	10.4	$^{54}\text{Fe}(p,\alpha)^{51}\text{Mn}^i$		
^{51}Fe	64.3	$^{51}\text{Fe} - u$	35.7	$^{54}\text{Fe}(^3\text{He},^6\text{He})^{51}\text{Fe}$		
^{52}Ca	61.3	$^{52}\text{Ca} - ^{52}\text{Cr}$	34.1	$^{52}\text{Ca} - ^{58}\text{Ni}_{,897}$	4.6	$^{52}\text{Ca}(\beta^-)^{52}\text{Sc}$
^{52}Sc	53.9	$^{52}\text{Sc} - u$	46.1	$^{52}\text{Ca}(\beta^-)^{52}\text{Sc}$		
^{52}Cr	77.2	$^{52}\text{Cr}(n,\gamma)^{53}\text{Cr}$	20.0	$^{52}\text{Cr}(p,\gamma)^{53}\text{Mn}$	2.7	$^{51}\text{V}(p,\gamma)^{52}\text{Cr}$
^{53}Cr	79.5	$^{53}\text{Cr}(n,\gamma)^{54}\text{Cr}$	20.5	$^{52}\text{Cr}(n,\gamma)^{53}\text{Cr}$		
^{53}Mn	66.9	$^{52}\text{Cr}(p,\gamma)^{53}\text{Mn}$	33.1	$^{56}\text{Fe}(p,\alpha)^{53}\text{Mn}$		
^{53}Fe	100.0	$^{54}\text{Fe}(d,t)^{53}\text{Fe}$				
^{53}Co	94.3	$^{53}\text{Co} - ^{53}\text{Fe}$	5.7	$^{53}\text{Co}^m - ^{53}\text{Co}$		
$^{53}\text{Co}^m$	59.6	$^{53}\text{Co}^m - ^{53}\text{Fe}$	40.4	$^{53}\text{Co}^m - ^{53}\text{Co}$		
^{54}Cr	81.2	$^{54}\text{Cr}(p,\gamma)^{55}\text{Mn}$	18.8	$^{53}\text{Cr}(n,\gamma)^{54}\text{Cr}$		
$^{54}\text{Mn}^i$	51.2	$^{52}\text{Cr}(^3\text{He},p)^{54}\text{Mn}^i$	48.8	$^{54}\text{Cr}(^3\text{He},t)^{54}\text{Mn}^i$		

Table II. Influences on primary nuclei (continued, Explanation of Table on page 1673)

Nucleus	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{54}Fe	71.6	$^{54}\text{Fe}(n,\gamma)^{55}\text{Fe}$	19.4	$^{54}\text{Fe}(p,\gamma)^{55}\text{Co}$	6.8	$^{54}\text{Fe}(p,\alpha)^{51}\text{Mn}$
^{54}Co	46.9	$^{54}\text{Co}-^{54}\text{Fe}$	29.7	$^{54}\text{Co}^m-^{54}\text{Co}$	23.5	$^{50}\text{Cr}(^3\text{He},t)^{50}\text{Mn}-^{54}\text{Fe}()^{54}\text{Co}$
$^{54}\text{Co}^m$	80.8	$^{54}\text{Co}^m-^{54}\text{Fe}$	19.2	$^{54}\text{Co}^m-^{54}\text{Co}$		
^{55}Ti	52.2	$^{55}\text{Ti}(\beta^-)^{55}\text{V}$	47.8	$^{55}\text{Ti}-u$		
^{55}V	90.4	$^{55}\text{V}(\beta^-)^{55}\text{Cr}$	9.6	$^{55}\text{Ti}(\beta^-)^{55}\text{V}$		
^{55}Cr	100.0	$^{54}\text{Cr}(n,\gamma)^{55}\text{Cr}$				
^{55}Mn	32.2	$^{55}\text{Mn}-^{85}\text{Rb}_{.647}$	26.3	$^{55}\text{Mn}(p,\gamma)^{56}\text{Fe}$	18.5	$^{48}\text{Ti O}-^{55}\text{Mn}_{1.164}$
^{55}Fe	81.3	$^{55}\text{Fe}(\epsilon)^{55}\text{Mn}$	18.7	$^{54}\text{Fe}(n,\gamma)^{55}\text{Fe}$		
^{55}Co	54.5	$^{54}\text{Fe}(p,\gamma)^{55}\text{Co}$	33.3	$^{56}\text{Ni}-^{55}\text{Co}_{1.018}$	12.2	$^{58}\text{Ni}(p,\alpha)^{55}\text{Co}$
^{56}Ti	87.8	$^{56}\text{Ti}-u$	12.2	$^{56}\text{Ti}(\beta^-)^{56}\text{V}$		
^{56}V	75.7	$^{56}\text{V}-u$	24.3	$^{56}\text{Ti}(\beta^-)^{56}\text{V}$		
^{56}Mn	89.2	$^{55}\text{Mn}(n,\gamma)^{56}\text{Mn}$	10.8	$^{56}\text{Mn}-^{85}\text{Rb}_{.659}$		
^{56}Fe	63.0	$^{55}\text{Mn}(p,\gamma)^{56}\text{Fe}$	15.5	$^{56}\text{Fe}(n,\gamma)^{57}\text{Fe}$	13.4	$^{56}\text{Fe}-^{58}\text{Ni}_{.966}$
^{56}Co	52.8	$^{56}\text{Co}-^{58}\text{Ni}_{.966}$	47.2	$^{56}\text{Ni}-^{56}\text{Co}$		
^{56}Ni	37.4	$^{56}\text{Ni}-^{56}\text{Fe}$	26.9	$^{56}\text{Ni}-^{55}\text{Co}_{1.018}$	19.8	$^{56}\text{Ni}-^{56}\text{Co}$
^{57}Ti	93.6	$^{57}\text{Ti}-u$	6.4	$^{57}\text{Ti}(\beta^-)^{57}\text{V}$		
^{57}V	94.7	$^{57}\text{V}-u$	5.3	$^{57}\text{Ti}(\beta^-)^{57}\text{V}$		
^{57}Mn	49.4	$^{57}\text{Mn}-^{85}\text{Rb}_{.671}$	33.3	$^{57}\text{Mn}-^{39}\text{K}_{1.462}$	17.2	$^{55}\text{Mn}(t,p)^{57}\text{Mn}$
^{57}Fe	83.6	$^{56}\text{Fe}(n,\gamma)^{57}\text{Fe}$	12.6	$^{57}\text{Fe}-^{58}\text{Ni}_{.983}$	1.6	$^{57}\text{Cu}-^{57}\text{Fe}$
^{57}Co	33.8	$^{60}\text{Ni}(p,\alpha)^{57}\text{Co}$	29.3	$^{58}\text{Fe}(p,\gamma)^{59}\text{Co}-^{56}\text{Fe}()^{57}\text{Co}$	27.2	$^{56}\text{Fe}(p,\gamma)^{57}\text{Co}$
^{57}Ni	51.2	$^{57}\text{Ni}-^{58}\text{Ni}_{.983}$	48.8	$^{57}\text{Cu}-^{57}\text{Ni}$		
^{57}Cu	47.5	$^{57}\text{Cu}-^{56}\text{Ni}_{1.018}$	27.7	$^{57}\text{Cu}-^{57}\text{Fe}$	24.8	$^{57}\text{Cu}-^{57}\text{Ni}$
^{58}Fe	94.5	$^{57}\text{Fe}(n,\gamma)^{58}\text{Fe}$	5.5	$^{58}\text{Fe}(p,\gamma)^{59}\text{Co}-^{56}\text{Fe}()^{57}\text{Co}$		
^{58}Co	60.9	$^{59}\text{Co}(d,t)^{58}\text{Co}$	25.1	$^{60}\text{Ni}(d,\alpha)^{58}\text{Co}$	13.9	$^{57}\text{Fe}(p,\gamma)^{58}\text{Co}$
^{58}Ni	45.6	$^{58}\text{Ni}(n,\gamma)^{59}\text{Ni}$	21.3	$^{57}\text{Fe}-^{58}\text{Ni}_{.983}$	18.3	$^{56}\text{Fe}-^{58}\text{Ni}_{.966}$
^{58}Cu	90.2	$^{58}\text{Cu}-^{58}\text{Ni}$	9.8	$^{59}\text{Zn}-^{58}\text{Cu}_{1.017}$		
^{59}Co	91.5	$^{59}\text{Co}(p,n)^{59}\text{Ni}$	7.5	$^{58}\text{Fe}(p,\gamma)^{59}\text{Co}-^{56}\text{Fe}()^{57}\text{Co}$	1.0	$^{59}\text{Co}(d,t)^{58}\text{Co}$
^{59}Ni	53.9	$^{58}\text{Ni}(n,\gamma)^{59}\text{Ni}$	43.1	$^{59}\text{Ni}(n,\gamma)^{60}\text{Ni}$	3.0	$^{59}\text{Co}(p,n)^{59}\text{Ni}$
^{59}Cu	62.7	$^{58}\text{Ni}(p,\gamma)^{59}\text{Cu}$	30.1	$^{60}\text{Zn}-^{59}\text{Cu}_{1.017}$	7.1	$^{59}\text{Zn}-^{59}\text{Cu}$
^{59}Zn	73.4	$^{59}\text{Zn}-^{59}\text{Cu}$	26.6	$^{59}\text{Zn}-^{58}\text{Cu}_{1.017}$		
^{60}Ni	56.3	$^{59}\text{Ni}(n,\gamma)^{60}\text{Ni}$	29.7	$^{60}\text{Ni}(n,\gamma)^{61}\text{Ni}$	10.5	$^{60}\text{Ni}-^{85}\text{Rb}_{.706}$
$^{60}\text{Cu}^i$	73.5	$^{60}\text{Ni}(^3\text{He},t)^{60}\text{Cu}^i$	26.5	$^{58}\text{Ni}(^3\text{He},p)^{60}\text{Cu}^i$		
^{60}Zn	64.8	$^{60}\text{Zn}-^{58}\text{Ni}_{1.034}$	35.2	$^{60}\text{Zn}-^{59}\text{Cu}_{1.017}$		
^{61}Ni	70.1	$^{60}\text{Ni}(n,\gamma)^{61}\text{Ni}$	29.9	$^{61}\text{Ni}(n,\gamma)^{62}\text{Ni}$		
^{61}Zn	95.4	$^{64}\text{Zn}(^3\text{He},^6\text{He})^{61}\text{Zn}$	4.6	$^{61}\text{Ga}(\beta^+)^{61}\text{Zn}$		
^{61}Ga	52.2	$^{61}\text{Ga}(\beta^+)^{61}\text{Zn}$	47.8	$^{61}\text{Ga}-u$		
^{62}Ni	60.5	$^{61}\text{Ni}(n,\gamma)^{62}\text{Ni}$	20.7	$^{62}\text{Ni}(p,\gamma)^{63}\text{Cu}$	14.2	$^{62}\text{Ni}(n,\gamma)^{63}\text{Ni}$
^{62}Zn	67.7	$^{62}\text{Zn}-^{62}\text{Ni}$	32.3	$^{62}\text{Ga}-^{62}\text{Zn}$		
^{62}Ga	51.7	$^{62}\text{Ga}-^{62}\text{Ni}$	48.3	$^{62}\text{Ga}-^{62}\text{Zn}$		
^{63}Fe	57.3	$^{63}\text{Fe}-^{39}\text{K}_{1.615}$	21.3	$^{63}\text{Fe}-\text{H C}_2\text{ F}_2$	21.3	$^{63}\text{Fe}-\text{C }^{32}\text{S F}$
^{63}Co	86.2	$^{64}\text{Ni}(t,\alpha)^{63}\text{Co}$	13.8	$^{63}\text{Co}(\beta^-)^{63}\text{Ni}$		
^{63}Ni	57.5	$^{63}\text{Ni}(\beta^-)^{63}\text{Cu}$	27.1	$^{62}\text{Ni}(n,\gamma)^{63}\text{Ni}$	15.4	$^{63}\text{Ni}(n,\gamma)^{64}\text{Ni}$
^{63}Cu	41.1	$^{63}\text{Ni}(\beta^-)^{63}\text{Cu}$	39.0	$^{62}\text{Ni}(p,\gamma)^{63}\text{Cu}$	13.4	$^{63}\text{Cu}(n,\gamma)^{64}\text{Cu}$
^{63}Zn	72.9	$^{64}\text{Zn}(d,t)^{63}\text{Zn}$	27.1	$^{63}\text{Cu}(p,n)^{63}\text{Zn}$		
$^{64}\text{Co}^m$	86.8	$\text{H C}_2\text{ F}_2-^{64}\text{Co}^m_{.984}$	13.2	$^{64}\text{Co}^m-^{32}\text{S O}_2$		
^{64}Ni	82.5	$^{63}\text{Ni}(n,\gamma)^{64}\text{Ni}$	17.5	$^{64}\text{Ni}-^{85}\text{Rb}_{.753}$		
^{64}Cu	86.1	$^{63}\text{Cu}(n,\gamma)^{64}\text{Cu}$	13.9	$^{64}\text{Cu}(\beta^-)^{64}\text{Zn}$		
^{64}Zn	44.6	$^{64}\text{Zn}(n,\gamma)^{65}\text{Zn}$	30.2	$^{64}\text{Cu}(\beta^-)^{64}\text{Zn}$	17.8	$^{64}\text{Zn}(p,\gamma)^{65}\text{Ga}$
^{64}Ga	37.7	$^{64}\text{Ga}-^{85}\text{Rb}_{.753}$	32.7	$\text{C}_5\text{ H}_2-^{64}\text{Ga}_{.969}$	13.1	$^{64}\text{Ga}-^{64}\text{Zn}$
$^{64}\text{Ga}^i$	83.3	$^{64}\text{Ga}^i(\text{IT})^{64}\text{Ga}$	16.7	$^{64}\text{Zn}(^3\text{He},t)^{64}\text{Ga}^i$		
^{65}Cu	44.6	$^{65}\text{Cu}(p,n)^{65}\text{Zn}$	35.0	$^{65}\text{Cu}-^{85}\text{Rb}_{.765}$	10.4	$^{65}\text{Cu}(n,\gamma)^{66}\text{Cu}$
^{65}Zn	53.5	$^{64}\text{Zn}(n,\gamma)^{65}\text{Zn}$	46.5	$^{65}\text{Cu}(p,n)^{65}\text{Zn}$		
^{65}Ga	65.4	$^{64}\text{Zn}(p,\gamma)^{65}\text{Ga}$	34.6	$^{65}\text{Ga}-^{85}\text{Rb}_{.765}$		
^{65}Ge	56.7	$\text{C}_5\text{ H}_2-^{65}\text{Ge}_{.939}$	29.2	$^{65}\text{Ge O H}-^{85}\text{Rb}_{.965}$	14.0	$^{65}\text{Ge H}-^{85}\text{Rb}_{.776}$
^{66}Cu	89.4	$^{65}\text{Cu}(n,\gamma)^{66}\text{Cu}$	10.6	$^{66}\text{Cu}-^{85}\text{Rb}_{.776}$		

Table II. Influences on primary nuclei (continued, Explanation of Table on page 1673)

Nucleus	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{66}Zn	83.0	$^{66}\text{Zn}(p,\alpha)^{63}\text{Cu}$	14.6	$^{66}\text{Zn}(n,\gamma)^{67}\text{Zn}$	2.4	$^{67}\text{Zn N}-^{66}\text{Zn }^{15}\text{N}$
^{67}Zn	70.5	$^{66}\text{Zn}(n,\gamma)^{67}\text{Zn}$	16.0	$^{67}\text{Zn}(p,n)^{67}\text{Ga}$	11.6	$^{67}\text{Zn N}-^{66}\text{Zn }^{15}\text{N}$
^{67}Ga	51.9	$^{67}\text{Zn}(p,n)^{67}\text{Ga}$	48.1	$^{70}\text{Ge}(p,\alpha)^{67}\text{Ga}$		
^{67}As	77.4	$^{67}\text{As}-^{85}\text{Rb}_{.788}$	22.6	$^{67}\text{As O}-^{85}\text{Rb}_{.976}$		
^{68}Zn	98.1	$^{67}\text{Zn}(n,\gamma)^{68}\text{Zn}$	1.9	$^{70}\text{Zn }^{35}\text{Cl}-^{68}\text{Zn }^{37}\text{Cl}$		
^{68}As	87.5	$^{68}\text{As}-\text{C}_5\text{H}_8$	12.5	$\text{C F}_3-^{68}\text{As}_{1.015}$		
^{69}Ga	64.6	$^{69}\text{Ga}-^{85}\text{Rb}_{.812}$	35.4	$^{69}\text{Ga}(n,\gamma)^{70}\text{Ga}$		
^{69}Ge	100.0	$^{69}\text{Ga}(p,n)^{69}\text{Ge}$				
^{69}As	81.8	$^{69}\text{As}(\beta^+)^{69}\text{Ge}$	18.2	$^{69}\text{Se}(\beta^+)^{69}\text{As}$		
^{69}Se	100.0	$\text{C F}_3-^{69}\text{Se}$				
^{70}Zn	87.6	$^{70}\text{Zn}(p,n)^{70}\text{Ga}$	9.0	$^{70}\text{Zn }^{35}\text{Cl}-^{68}\text{Zn }^{37}\text{Cl}$	3.4	$^{70}\text{Zn}(d,p)^{71}\text{Zn}$
^{70}Ga	64.1	$^{69}\text{Ga}(n,\gamma)^{70}\text{Ga}$	31.4	$^{70}\text{Ga}-^{85}\text{Rb}_{.824}$	4.5	$^{70}\text{Zn}(p,n)^{70}\text{Ga}$
^{70}Ge	86.1	$^{70}\text{Ge}(n,\gamma)^{71}\text{Ge}$	13.9	$^{70}\text{Ge}(p,\alpha)^{67}\text{Ga}$		
^{71}Zn	93.2	$^{71}\text{Zn}^m(\text{IT})^{71}\text{Zn}$	6.8	$^{70}\text{Zn}(d,p)^{71}\text{Zn}$		
$^{71}\text{Zn}^m$	94.7	$^{71}\text{Zn}^m-^{85}\text{Rb}_{.835}$	5.3	$^{71}\text{Zn}^m(\text{IT})^{71}\text{Zn}$		
^{71}Ga	53.8	$^{71}\text{Ga}-^{85}\text{Rb}_{.835}$	33.4	$^{71}\text{Ga}(n,\gamma)^{72}\text{Ga}$	12.9	$^{71}\text{Ge}(\epsilon)^{71}\text{Ga}$
^{71}Ge	86.3	$^{71}\text{Ge}(\epsilon)^{71}\text{Ga}$	13.7	$^{70}\text{Ge}(n,\gamma)^{71}\text{Ge}$		
^{71}Br	100.0	$^{71}\text{Br H}_2-\text{C}_4\text{H}_9\text{O}$				
^{71}Kr	83.8	$^{71}\text{Kr-u}$	16.2	$^{71}\text{Kr}(\epsilon)^{71}\text{Br}$		
^{72}Ga	65.4	$^{71}\text{Ga}(n,\gamma)^{72}\text{Ga}$	34.6	$^{72}\text{Ga}-^{85}\text{Rb}_{.847}$		
^{72}Ge	100.0	$^{72}\text{Ge}(n,\gamma)^{73}\text{Ge}$				
^{73}Cu	75.4	$^{73}\text{Cu}-^{72}\text{Ge}_{1.014}$	24.6	$^{73}\text{Cu}-^{85}\text{Rb}_{.859}$		
^{73}Ge	100.0	$^{73}\text{Ge}(n,\gamma)^{74}\text{Ge}$				
^{73}As	92.8	$^{72}\text{Ge}(\text{}^3\text{He,d})^{73}\text{As}$	7.2	$^{73}\text{Se}(\beta^+)^{73}\text{As}$		
^{73}Se	52.5	$^{73}\text{Se}-^{85}\text{Rb}_{.859}$	47.5	$^{73}\text{Se}(\beta^+)^{73}\text{As}$		
^{74}Ge	100.0	$^{74}\text{Ge}-^{84}\text{Kr}$				
^{74}As	82.1	$^{74}\text{As}(\beta^+)^{74}\text{Ge}$	17.9	$^{74}\text{As}(\beta^-)^{74}\text{Se}$		
^{74}Se	100.0	$^{74}\text{Se}-^{74}\text{Ge}$				
^{74}Br	84.9	$^{74}\text{Br }^{27}\text{Al}-^{85}\text{Rb}_{1.188}$	15.1	$^{74}\text{Se}(p,n)^{74}\text{Br}$		
^{74}Kr	93.3	$^{74}\text{Kr}-^{85}\text{Rb}_{.871}$	6.7	$^{74}\text{Rb}(\beta^+)^{74}\text{Kr}$		
^{74}Rb	82.8	$^{74}\text{Rb}-^{85}\text{Rb}_{.871}$	17.2	$^{74}\text{Rb}(\beta^+)^{74}\text{Kr}$		
^{75}As	85.3	$^{75}\text{As}(p,n)^{75}\text{Se}$	14.7	$^{78}\text{Se}(p,\alpha)^{75}\text{As}$		
^{75}Se	99.9	$^{74}\text{Se}(n,\gamma)^{75}\text{Se}$	0.1	$^{75}\text{As}(p,n)^{75}\text{Se}$		
^{76}Zn	61.1	$^{76}\text{Zn}-^{85}\text{Rb}_{.894}$	38.9	$^{76}\text{Zn}-^{88}\text{Rb}_{.864}$		
^{76}Ge	100.0	$^{76}\text{Ge}-^{76}\text{Se}$				
^{76}Se	100.0	$^{76}\text{Se}-^{84}\text{Kr}$				
^{76}Kr	84.2	$^{76}\text{Kr}-^{85}\text{Rb}_{.894}$	15.8	$^{80}\text{Kr}(\alpha,{}^6\text{He})^{78}\text{Kr}-^{78}\text{Kr}()^{76}\text{Kr}$		
^{77}Zn	77.9	$^{77}\text{Zn}-^{85}\text{Rb}_{.906}$	22.1	$^{77}\text{Zn}-^{88}\text{Rb}_{.875}$		
^{77}As	32.7	$^{76}\text{Ge}(\text{}^3\text{He,d})^{77}\text{As}$	30.6	$^{80}\text{Se}(p,\alpha)^{77}\text{As}$	18.4	$^{77}\text{As}(\beta^-)^{77}\text{Se}$
^{77}Se	99.9	$^{76}\text{Se}(n,\gamma)^{77}\text{Se}$	0.1	$^{77}\text{Se}(n,\gamma)^{78}\text{Se}$		
^{78}Zn	51.6	$^{78}\text{Zn}-^{88}\text{Rb}_{.886}$	48.4	$^{78}\text{Zn}-^{85}\text{Rb}_{.918}$		
^{78}Ga	61.7	$^{78}\text{Ga}-^{85}\text{Rb}_{.918}$	38.3	$^{78}\text{Ga}-^{88}\text{Rb}_{.886}$		
^{78}Se	98.9	$^{77}\text{Se}(n,\gamma)^{78}\text{Se}$	0.5	$^{78}\text{Se}(p,\alpha)^{75}\text{As}$	0.5	$^{80}\text{Se}(p,t)^{78}\text{Se}$
^{78}Kr	57.3	$^{78}\text{Kr}-^{86}\text{Kr}_{.907}$	41.1	$^{78}\text{Kr}-^{85}\text{Rb}_{.918}$	1.7	$^{80}\text{Kr}(\alpha,{}^6\text{He})^{78}\text{Kr}-^{78}\text{Kr}()^{76}\text{Kr}$
^{79}Zn	67.7	$^{79}\text{Zn}-^{88}\text{Rb}_{.898}$	32.3	$^{79}\text{Zn}-^{85}\text{Rb}_{.929}$		
^{79}Ga	100.0	$^{79}\text{Ga}-^{88}\text{Rb}_{.898}$				
^{79}Ge	86.2	$^{79}\text{Ga}(\beta^-)^{79}\text{Ge}$	13.8	$^{79}\text{Ge}(\beta^-)^{79}\text{As}$		
^{79}As	99.7	$^{80}\text{Se}(d,{}^3\text{He})^{79}\text{As}$	0.3	$^{79}\text{Ge}(\beta^-)^{79}\text{As}$		
^{80}Zn	85.6	$^{80}\text{Zn}-^{85}\text{Rb}_{.941}$	14.4	$^{80}\text{Zn}-^{88}\text{Rb}_{.909}$		
^{80}Se	34.3	$^{80}\text{Se}(p,t)^{78}\text{Se}$	31.5	$^{80}\text{Se}(n,\gamma)^{81}\text{Se}$	17.2	$^{82}\text{Se }^{35}\text{Cl}-^{80}\text{Se }^{37}\text{Cl}$
^{80}Kr	46.2	$^{80}\text{Kr}-^{86}\text{Kr}_{.930}$	19.4	$^{80}\text{Kr}-^{85}\text{Rb}_{.941}$	6.8	$^{81}\text{Se}-^{80}\text{Kr}_{1.013}$
^{80}Sr	100.0	$^{80}\text{Sr}-^{85}\text{Rb}_{.941}$				
^{81}As	75.1	$^{81}\text{As}-^{88}\text{Rb}_{.920}$	24.9	$^{82}\text{Se}(d,{}^3\text{He})^{81}\text{As}$		
^{81}Se	65.8	$^{80}\text{Se}(n,\gamma)^{81}\text{Se}$	28.8	$^{81}\text{Se}-^{80}\text{Kr}_{1.013}$	5.4	$^{82}\text{Se}(p,d)^{81}\text{Se}$
^{81}Br	90.3	$^{81}\text{Br}(n,\gamma)^{82}\text{Br}$	9.2	$^{81}\text{Kr}(\epsilon)^{81}\text{Br}$	0.5	$^{87}\text{Rb}(\text{}^3\text{He,t})^{87}\text{Sr}-^{81}\text{Br}()^{81}\text{Kr}$

Table II. Influences on primary nuclei (continued, Explanation of Table on page 1673)

Nucleus	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{81}Kr	84.2	$^{81}\text{Kr}(\epsilon)^{81}\text{Br}$	11.0	$^{80}\text{Kr}(\text{d,p})^{81}\text{Kr}$	4.8	$^{87}\text{Rb}(^3\text{He,t})^{87}\text{Sr}-^{81}\text{Br}()^{81}\text{Kr}$
^{81}Rb	76.1	$^{81}\text{Rb}-^{85}\text{Rb}_{.953}$	23.9	$^{80}\text{Kr}(^3\text{He,d})^{81}\text{Rb}$		
^{81}Y	100.0	$^{81}\text{Y O}-^{97}\text{Mo}$				
^{81}Zr	67.8	$^{81}\text{Zr}(\epsilon\text{p})^{80}\text{Sr}$	32.2	$^{81}\text{Zr}(\beta^+)^{81}\text{Y}$		
^{82}Se	37.5	$^{82}\text{Se }^{35}\text{Cl}-^{80}\text{Se }^{37}\text{Cl}$	34.0	$^{82}\text{Se}-^{82}\text{Kr}$	10.5	$^{82}\text{Se}(\text{p,d})^{81}\text{Se}$
^{82}Br	90.4	$^{82}\text{Br}(\beta^-)^{82}\text{Kr}$	9.6	$^{81}\text{Br}(\text{n},\gamma)^{82}\text{Br}$		
^{82}Kr	73.2	$^{82}\text{Kr}-^{86}\text{Kr}_{.953}$	13.1	$^{82}\text{Kr}-^{85}\text{Rb}_{.965}$	9.5	$^{82}\text{Se}-^{82}\text{Kr}$
^{82}Sr	64.7	$^{82}\text{Sr}-^{85}\text{Rb}_{.965}$	35.3	$^{84}\text{Sr}(\text{p,t})^{82}\text{Sr}$		
^{83}Br	55.7	$^{83}\text{Br}(\beta^-)^{83}\text{Kr}$	44.3	$^{82}\text{Se}(^3\text{He,d})^{83}\text{Br}$		
^{83}Kr	99.8	$^{83}\text{Kr}(\text{n},\gamma)^{84}\text{Kr}$	0.2	$^{83}\text{Br}(\beta^-)^{83}\text{Kr}$		
^{83}Rb	100.0	$^{83}\text{Rb}-^{85}\text{Rb}_{.976}$				
^{83}Sr	58.7	$^{83}\text{Sr}-^{83}\text{Rb}$	41.3	$^{83}\text{Sr}(\beta^+)^{83}\text{Rb}$		
^{84}Se	99.9	$^{84}\text{Se}-^{88}\text{Rb}_{.955}$	0.1	$^{84}\text{Se}(\beta^-)^{84}\text{Br}$		
^{84}Br	73.6	$^{84}\text{Br}(\beta^-)^{84}\text{Kr}$	26.4	$^{84}\text{Se}(\beta^-)^{84}\text{Br}$		
^{84}Kr	36.9	$^{86}\text{Kr}-^{84}\text{Kr}$	25.3	$^{84}\text{Kr}-\text{N}_6$	12.3	$^{85}\text{Rb}-^{84}\text{Kr}$
^{84}Rb	72.7	$^{84}\text{Rb}(\beta^+)^{84}\text{Kr}$	27.3	$^{84}\text{Rb}(\beta^-)^{84}\text{Sr}$		
^{84}Sr	88.8	$^{84}\text{Sr}-^{85}\text{Rb}_{.988}$	6.8	$^{84}\text{Rb}(\beta^-)^{84}\text{Sr}$	2.1	$^{84}\text{Sr}(\text{d,p})^{85}\text{Sr}$
^{84}Y	81.7	$^{84}\text{Y O}-^{97}\text{Mo}_{1.031}$	18.3	$^{84}\text{Y}(\beta^+)^{84}\text{Sr}$		
^{85}Rb	65.8	$^{86}\text{Kr}-^{85}\text{Rb}$	34.2	$^{85}\text{Rb}-^{84}\text{Kr}$		
^{85}Sr	87.9	$^{85}\text{Rb}(^3\text{He,t})^{85}\text{Sr}$	12.1	$^{84}\text{Sr}(\text{d,p})^{85}\text{Sr}$		
^{86}Kr	28.7	$^{86}\text{Kr}-\text{N}_6$	22.1	$^{86}\text{Kr}-^{84}\text{Kr}$	16.3	$^{129}\text{Xe}_2-^{86}\text{Kr}_3$
^{86}Rb	99.1	$^{85}\text{Rb}(\text{n},\gamma)^{86}\text{Rb}$	0.9	$^{86}\text{Rb}(\beta^-)^{86}\text{Sr}$		
^{86}Sr	52.0	$^{86}\text{Sr}(\text{n},\gamma)^{87}\text{Sr}$	48.0	$^{86}\text{Rb}(\beta^-)^{86}\text{Sr}$		
^{86}Zr	69.3	$^{86}\text{Zr}-^{85}\text{Rb}_{1.012}$	30.7	$^{86}\text{Zr O}-^{98}\text{Mo}_{1.041}$		
^{87}Rb	81.3	$^{87}\text{Rb}-^{86}\text{Kr}$	18.7	$^{87}\text{Rb}-\text{C}_6 \text{H}_{14}$		
^{87}Sr	47.7	$^{86}\text{Sr}(\text{n},\gamma)^{87}\text{Sr}$	46.3	$^{87}\text{Rb}(^3\text{He,t})^{87}\text{Sr}-^{81}\text{Br}()^{81}\text{Kr}$	6.0	$^{87}\text{Sr}(\text{n},\gamma)^{88}\text{Sr}$
^{87}Zr	74.1	$^{87}\text{Zr O}-^{97}\text{Mo}_{1.062}$	25.9	$^{90}\text{Zr}(^3\text{He},^6\text{He})^{87}\text{Zr}$		
^{87}Mo	53.3	$^{87}\text{Mo}-^{85}\text{Rb}_{1.024}$	46.7	$^{87}\text{Mo}_{1.069}-\text{C}_7 \text{H}_9$		
^{88}Rb	99.0	$^{87}\text{Rb}(\text{n},\gamma)^{88}\text{Rb}$	0.2	$^{76}\text{Zn}-^{88}\text{Rb}_{.864}$	0.1	$^{94}\text{Rb}-^{88}\text{Rb}_{1.068}$
^{88}Sr	93.9	$^{87}\text{Sr}(\text{n},\gamma)^{88}\text{Sr}$	5.1	$^{88}\text{Sr}(\text{p},\gamma)^{89}\text{Y}$	1.0	$^{88}\text{Sr}(\text{n},\gamma)^{89}\text{Sr}$
^{88}Zr	71.2	$^{88}\text{Zr O}-^{98}\text{Mo}_{1.061}$	28.6	$^{90}\text{Zr}(\text{p,t})^{88}\text{Zr}$	0.2	$^{88}\text{Nb}(\beta^+)^{88}\text{Zr}$
^{88}Nb	67.9	$^{88}\text{Nb O}-^{98}\text{Mo}_{1.061}$	32.1	$^{88}\text{Nb}(\beta^+)^{88}\text{Zr}$		
^{89}Rb	56.2	$^{89}\text{Rb}(\beta^-)^{89}\text{Sr}$	42.4	$^{89}\text{Rb}-^{85}\text{Rb}_{1.047}$	1.3	$^{91}\text{Rb}-^{93}\text{Rb}_{.489} \ ^{89}\text{Rb}_{.511}$
^{89}Sr	99.0	$^{88}\text{Sr}(\text{n},\gamma)^{89}\text{Sr}$	1.0	$^{89}\text{Rb}(\beta^-)^{89}\text{Sr}$		
^{89}Y	54.0	$^{89}\text{Y}(\text{n},\gamma)^{90}\text{Y}$	28.9	$^{88}\text{Sr}(\text{p},\gamma)^{89}\text{Y}$	13.4	$^{89}\text{Y}(\text{p},\gamma)^{90}\text{Zr}$
^{89}Zr	81.6	$^{89}\text{Zr}(\beta^+)^{89}\text{Y}$	18.0	$^{90}\text{Zr}(\text{d,t})^{89}\text{Zr}$	0.4	$^{89}\text{Nb}(\beta^+)^{89}\text{Zr}$
^{89}Nb	77.8	$^{89}\text{Nb-u}$	22.2	$^{89}\text{Nb}(\beta^+)^{89}\text{Zr}$		
^{90}Rb	60.4	$^{90}\text{Rb}-^{85}\text{Rb}_{1.059}$	39.6	$^{90}\text{Rb}(\beta^-)^{90}\text{Sr}$		
^{90}Sr	96.0	$^{90}\text{Sr}(\beta^-)^{90}\text{Y}$	4.0	$^{90}\text{Rb}(\beta^-)^{90}\text{Sr}$		
^{90}Y	51.1	$^{90}\text{Y}(\beta^-)^{90}\text{Zr}$	46.0	$^{89}\text{Y}(\text{n},\gamma)^{90}\text{Y}$	2.9	$^{90}\text{Sr}(\beta^-)^{90}\text{Y}$
^{90}Zr	69.0	$^{90}\text{Zr}(\text{n},\gamma)^{91}\text{Zr}$	13.7	$^{90}\text{Y}(\beta^-)^{90}\text{Zr}$	6.7	$^{90}\text{Nb}(\beta^+)^{90}\text{Zr}$
^{90}Nb	64.1	$^{90}\text{Nb}(\beta^+)^{90}\text{Zr}$	35.9	$^{90}\text{Mo}(\beta^+)^{90}\text{Nb}$		
^{90}Mo	65.0	$^{90}\text{Mo}-\text{C}_7 \text{H}_6$	35.0	$^{90}\text{Mo}(\beta^+)^{90}\text{Nb}$		
^{90}Ru	85.9	$^{90}\text{Ru}-^{85}\text{Rb}_{1.059}$	14.1	$^{90}\text{Ru}_{1.033}-\text{C}_7 \text{H}_9$		
^{91}Rb	70.2	$^{91}\text{Rb}-^{85}\text{Rb}_{1.071}$	18.2	$^{91}\text{Rb}(\beta^-)^{91}\text{Sr}$	11.5	$^{91}\text{Rb}-^{93}\text{Rb}_{.489} \ ^{89}\text{Rb}_{.511}$
^{91}Sr	79.6	$^{91}\text{Sr}(\beta^-)^{91}\text{Y}$	11.9	$^{92}\text{Rb}(\beta^-)^{91}\text{Sr}$	8.5	$^{91}\text{Rb}(\beta^-)^{91}\text{Sr}$
^{91}Y	96.5	$^{91}\text{Y}(\beta^-)^{91}\text{Zr}$	3.5	$^{91}\text{Sr}(\beta^-)^{91}\text{Y}$		
^{91}Zr	67.5	$^{91}\text{Zr}(\text{n},\gamma)^{92}\text{Zr}$	29.9	$^{90}\text{Zr}(\text{n},\gamma)^{91}\text{Zr}$	1.7	$^{91}\text{Y}(\beta^-)^{91}\text{Zr}$
^{91}Nb	96.9	$^{91}\text{Zr}(\text{p,n})^{91}\text{Nb}$	3.1	$^{91}\text{Mo}(\beta^+)^{91}\text{Nb}$		
^{91}Mo	65.2	$^{91}\text{Mo}-\text{C}_7 \text{H}_7$	23.5	$^{92}\text{Mo}(\text{p,d})^{91}\text{Mo}$	11.3	$^{91}\text{Mo}(\beta^+)^{91}\text{Nb}$
^{91}Tc	44.9	$^{91}\text{Tc}-\text{C}_7 \text{H}_7$	33.0	$^{91}\text{Tc}-^{94}\text{Mo}_{.968}$	22.1	$^{91}\text{Tc}-^{85}\text{Rb}_{1.071}$
^{91}Ru	37.5	$^{91}\text{Ru}-\text{C}_7 \text{H}_7$	37.0	$^{91}\text{Ru}-^{85}\text{Rb}_{1.071}$	25.5	$^{91}\text{Ru}-^{94}\text{Mo}_{.968}$
^{92}Rb	53.4	$^{92}\text{Rb}-^{85}\text{Rb}_{1.082}$	31.7	$^{92}\text{Rb}(\beta^-)^{92}\text{Sr}$	14.4	$^{92}\text{Rb}(\beta^-)^{91}\text{Sr}$
^{92}Sr	89.8	$^{92}\text{Sr}-^{85}\text{Rb}_{1.082}$	7.3	$^{92}\text{Rb}(\beta^-)^{92}\text{Sr}$	2.9	$^{92}\text{Sr}(\beta^-)^{92}\text{Y}$
^{92}Y	57.4	$^{92}\text{Y}(\beta^-)^{92}\text{Zr}$	29.3	$^{92}\text{Sr}(\beta^-)^{92}\text{Y}$	13.3	$^{94}\text{Zr}(\text{d},\alpha)^{92}\text{Y}$

Table II. Influences on primary nuclei (continued, Explanation of Table on page 1673)

Nucleus	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{92}Zr	57.4	$^{92}\text{Zr}(n,\gamma)^{93}\text{Zr}$	32.4	$^{91}\text{Zr}(n,\gamma)^{92}\text{Zr}$	9.3	$^{92}\text{Zr}(p,n)^{92}\text{Nb}$
^{92}Nb	64.1	$^{92}\text{Zr}(p,n)^{92}\text{Nb}$	35.9	$^{93}\text{Nb}(\gamma,n)^{92}\text{Nb}$		
^{92}Mo	97.2	$^{92}\text{Mo}-^{85}\text{Rb}_{1.082}$	2.5	$^{92}\text{Mo}(n,\gamma)^{93}\text{Mo}$	0.3	$^{92}\text{Mo}(p,d)^{91}\text{Mo}$
^{92}Tc	60.0	$^{92}\text{Tc}-^{85}\text{Rb}_{1.082}$	40.0	$^{92}\text{Tc}_{.989}-\text{C}_7 \text{H}_7$		
^{92}Ru	72.3	$^{92}\text{Ru}-^{85}\text{Rb}_{1.082}$	27.7	$^{92}\text{Ru}_{1.011}-\text{C}_7 \text{H}_9$		
^{93}Rb	70.7	$^{93}\text{Rb}-^{85}\text{Rb}_{1.094}$	26.4	$^{93}\text{Rb}(\beta^-)^{93}\text{Sr}$	2.5	$^{91}\text{Rb}-^{93}\text{Rb}_{.489} \text{ } ^{89}\text{Rb}_{.511}$
^{93}Sr	65.8	$^{93}\text{Sr}-^{85}\text{Rb}_{1.094}$	23.8	$^{93}\text{Rb}(\beta^-)^{93}\text{Sr}$	10.4	$^{93}\text{Sr}(\beta^-)^{93}\text{Y}$
^{93}Y	75.9	$^{93}\text{Y}(\beta^-)^{93}\text{Zr}$	24.1	$^{93}\text{Sr}(\beta^-)^{93}\text{Y}$		
^{93}Zr	40.3	$^{92}\text{Zr}(n,\gamma)^{93}\text{Zr}$	29.8	$^{93}\text{Zr}(\beta^-)^{93}\text{Nb}$	29.4	$^{94}\text{Zr}(d,t)^{93}\text{Zr}$
^{93}Nb	44.4	$^{93}\text{Nb}(n,\gamma)^{94}\text{Nb}$	30.2	$^{93}\text{Zr}(\beta^-)^{93}\text{Nb}$	16.1	$^{93}\text{Nb}(p,n)^{93}\text{Mo}$
^{93}Mo	97.4	$^{92}\text{Mo}(n,\gamma)^{93}\text{Mo}$	2.6	$^{93}\text{Nb}(p,n)^{93}\text{Mo}$		
^{93}Ru	73.4	$^{93}\text{Ru}-\text{C}_7 \text{H}_9$	26.6	$^{93}\text{Ru}-^{85}\text{Rb}_{1.094}$		
^{93}Rh	55.1	$^{93}\text{Rh}-\text{C}_7 \text{H}_9$	44.9	$^{93}\text{Rh}-^{85}\text{Rb}_{1.094}$		
^{94}Rb	70.2	$^{94}\text{Rb}-^{85}\text{Rb}_{1.106}$	29.6	$^{94}\text{Rb}-^{88}\text{Rb}_{1.068}$	0.3	$^{94}\text{Rb}-^{95}\text{Rb}_{.660} \text{ } ^{92}\text{Rb}_{.341}$
^{94}Sr	98.4	$^{94}\text{Sr}-^{85}\text{Rb}_{1.106}$	1.6	$^{94}\text{Sr}(\beta^-)^{94}\text{Y}$		
^{94}Y	49.2	$^{94}\text{Y}(\beta^-)^{94}\text{Zr}$	40.6	$^{94}\text{Sr}(\beta^-)^{94}\text{Y}$	10.2	$^{96}\text{Zr}(d,\alpha)^{94}\text{Y}$
^{94}Zr	64.3	$^{94}\text{Zr}(n,\gamma)^{95}\text{Zr}$	33.4	$^{94}\text{Zr}(d,t)^{93}\text{Zr}$	2.0	$^{94}\text{Y}(\beta^-)^{94}\text{Zr}$
^{94}Nb	55.5	$^{93}\text{Nb}(n,\gamma)^{94}\text{Nb}$	44.5	$^{94}\text{Nb}(\beta^-)^{94}\text{Mo}$		
^{94}Mo	74.5	$^{94}\text{Mo}(n,\gamma)^{95}\text{Mo}$	23.0	$^{94}\text{Mo}-^{85}\text{Rb}_{1.106}$	1.0	$^{94}\text{Nb}(\beta^-)^{94}\text{Mo}$
^{94}Ru	56.2	$^{94}\text{Ru}-^{85}\text{Rb}_{1.106}$	43.8	$^{94}\text{Ru}-\text{C}_7 \text{H}_{10}$		
^{94}Rh	62.2	$^{94}\text{Rh}-^{85}\text{Rb}_{1.106}$	37.8	$^{94}\text{Rh}-\text{C}_7 \text{H}_{10}$		
^{95}Rb	51.1	$^{95}\text{Rb}(\beta^-)^{95}\text{Sr}$	25.4	$^{95}\text{Rb}-^{96}\text{Rb}_{.742} \text{ } ^{92}\text{Rb}_{.258}$	12.6	$^{94}\text{Rb}-^{95}\text{Rb}_{.660} \text{ } ^{92}\text{Rb}_{.341}$
^{95}Sr	40.0	$^{95}\text{Sr}-^{85}\text{Rb}_{1.118}$	37.9	$^{95}\text{Sr}-^{97}\text{Zr}_{.979}$	20.0	$^{95}\text{Sr}(\beta^-)^{95}\text{Y}$
^{95}Y	55.8	$^{95}\text{Y}(\beta^-)^{95}\text{Zr}$	32.8	$^{95}\text{Sr}(\beta^-)^{95}\text{Y}$	11.4	$^{96}\text{Zr}(t,\alpha)^{95}\text{Y}$
^{95}Zr	45.5	$^{95}\text{Zr}(\beta^-)^{95}\text{Nb}$	30.4	$^{94}\text{Zr}(n,\gamma)^{95}\text{Zr}$	22.9	$^{96}\text{Zr}(d,t)^{95}\text{Zr}$
^{95}Nb	97.3	$^{95}\text{Nb}(\beta^-)^{95}\text{Mo}$	2.7	$^{95}\text{Zr}(\beta^-)^{95}\text{Nb}$		
^{95}Mo	52.3	$^{95}\text{Mo}(n,\gamma)^{96}\text{Mo}$	24.5	$^{94}\text{Mo}(n,\gamma)^{95}\text{Mo}$	22.4	$^{95}\text{Mo}-^{85}\text{Rb}_{1.118}$
^{95}Tc	97.4	$^{95}\text{Tc}(\beta^+)^{95}\text{Mo}$	2.6	$^{95}\text{Ru}(\beta^+)^{95}\text{Tc}$		
^{95}Ru	90.3	$^{96}\text{Ru}(p,d)^{95}\text{Ru}$	9.7	$^{95}\text{Ru}(\beta^+)^{95}\text{Tc}$		
^{95}Rh	85.9	$^{95}\text{Rh}-^{85}\text{Rb}_{1.118}$	14.1	$^{95}\text{Rh}_{.989}-\text{C}_7 \text{H}_{10}$		
^{96}Rb	99.7	$^{96}\text{Rb}-^{88}\text{Rb}_{1.091}$	0.3	$^{95}\text{Rb}-^{96}\text{Rb}_{.742} \text{ } ^{92}\text{Rb}_{.258}$		
^{96}Sr	82.6	$^{96}\text{Sr}-^{97}\text{Zr}_{.990}$	17.4	$^{96}\text{Sr}(\beta^-)^{96}\text{Y}$		
^{96}Y	92.0	$^{96}\text{Y}-^{97}\text{Zr}_{.990}$	8.0	$^{96}\text{Sr}(\beta^-)^{96}\text{Y}$		
^{96}Zr	66.8	$^{96}\text{Zr}(n,\gamma)^{97}\text{Zr}$	32.0	$^{96}\text{Zr}(d,t)^{95}\text{Zr}$	0.7	$^{96}\text{Zr}(d,\alpha)^{94}\text{Y}$
^{96}Mo	47.3	$^{95}\text{Mo}(n,\gamma)^{96}\text{Mo}$	31.5	$^{96}\text{Mo}(n,\gamma)^{97}\text{Mo}$	18.5	$^{96}\text{Mo}-^{85}\text{Rb}_{1.129}$
^{96}Ru	100.0	$^{96}\text{Ru}-^{96}\text{Mo}$				
^{97}Rb	87.0	$^{97}\text{Rb}-^{85}\text{Rb}_{1.141}$	12.9	$^{97}\text{Rb}-^{88}\text{Rb}_{1.102}$		
^{97}Sr	87.3	$^{97}\text{Sr}-^{85}\text{Rb}_{1.141}$	12.7	$^{97}\text{Sr}-^{97}\text{Zr}$		
^{97}Zr	47.2	$^{97}\text{Zr}(\beta^-)^{97}\text{Nb}$	32.3	$^{96}\text{Zr}(n,\gamma)^{97}\text{Zr}$	6.4	$^{99}\text{Sr}-^{97}\text{Zr}_{1.021}$
^{97}Nb	73.2	$^{97}\text{Nb}(\beta^-)^{97}\text{Mo}$	26.8	$^{97}\text{Zr}(\beta^-)^{97}\text{Nb}$		
^{97}Mo	63.3	$^{96}\text{Mo}(n,\gamma)^{97}\text{Mo}$	18.8	$^{97}\text{Mo}(n,\gamma)^{98}\text{Mo}$	16.7	$^{97}\text{Mo}-^{85}\text{Rb}_{1.141}$
^{97}Tc	56.2	$^{97}\text{Mo}(p,n)^{97}\text{Tc}$	43.8	$^{96}\text{Mo}(\beta^+\text{He},d)^{97}\text{Tc}$		
^{98}Sr	85.0	$^{98}\text{Sr}-^{85}\text{Rb}_{1.153}$	15.0	$^{98}\text{Sr}-^{97}\text{Zr}_{1.010}$		
^{98}Zr	82.2	$^{98}\text{Zr}-^{97}\text{Zr}_{1.010}$	17.8	$^{96}\text{Zr}(t,p)^{98}\text{Zr}$		
^{98}Mo	80.9	$^{97}\text{Mo}(n,\gamma)^{98}\text{Mo}$	14.4	$^{98}\text{Mo}-^{85}\text{Rb}_{1.153}$	4.1	$^{98}\text{Mo}(n,\gamma)^{99}\text{Mo}$
^{98}Tc	57.3	$^{99}\text{Tc}(p,d)^{98}\text{Tc}$	29.2	$^{97}\text{Mo}(\beta^+\text{He},d)^{98}\text{Tc}$	11.4	$^{98}\text{Mo}(p,n)^{98}\text{Tc}$
^{98}Ru	91.6	$\text{C}_7 \text{H}_{14}-^{98}\text{Ru}$	8.4	$^{98}\text{Tc}(\beta^-)^{98}\text{Ru}$		
^{98}Pd	99.6	$^{98}\text{Pd}-^{85}\text{Rb}_{1.153}$	0.4	$^{98}\text{Ag}(\beta^+)^{98}\text{Pd}$		
^{98}Ag	78.0	$^{98}\text{Ag}-^{85}\text{Rb}_{1.153}$	22.0	$^{98}\text{Ag}(\beta^+)^{98}\text{Pd}$		
^{99}Rb	86.7	$^{99}\text{Rb}(\beta^-)^{99}\text{Sr}$	13.3	$^{97}\text{Rb}-^{99}\text{Rb}_{.490} \text{ } ^{95}\text{Rb}_{.511}$		
^{99}Sr	75.5	$^{99}\text{Sr}-^{85}\text{Rb}_{1.165}$	24.5	$^{99}\text{Sr}-^{97}\text{Zr}_{1.021}$		
^{99}Zr	64.3	$^{99}\text{Zr}-^{97}\text{Zr}_{1.021}$	35.7	$^{99}\text{Zr}-u$		
^{99}Mo	95.4	$^{98}\text{Mo}(n,\gamma)^{99}\text{Mo}$	4.6	$^{99}\text{Mo}(\beta^-)^{99}\text{Tc}$		
^{99}Tc	74.8	$^{99}\text{Mo}(\beta^-)^{99}\text{Tc}$	23.5	$^{99}\text{Tc}(\beta^-)^{99}\text{Ru}$	1.7	$^{99}\text{Tc}(p,d)^{98}\text{Tc}$
^{99}Ru	68.9	$^{99}\text{Ru}(n,\gamma)^{100}\text{Ru}$	30.9	$^{99}\text{Tc}(\beta^-)^{99}\text{Ru}$	0.2	$^{99}\text{Rh}(\beta^+)^{99}\text{Ru}$

Table II. Influences on primary nuclei (continued, Explanation of Table on page 1673)

Nucleus	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{99}Rh	89.3	$^{99}\text{Rh}(\beta^+)^{99}\text{Ru}$	10.7	$^{99}\text{Pd}(\beta^+)^{99}\text{Rh}$		
^{99}Pd	94.5	$^{99}\text{Pd}-^{96}\text{Mo}_{1.031}$	5.5	$^{99}\text{Pd}(\beta^+)^{99}\text{Rh}$		
^{100}Zr	75.5	$^{100}\text{Zr}-^{97}\text{Zr}_{1.031}$	24.5	$^{100}\text{Zr-u}$		
^{100}Mo	64.6	$^{100}\text{Mo}-^{85}\text{Rb}_{1.176}$	35.1	$^{100}\text{Mo}-^{100}\text{Ru}$	0.2	$^{100}\text{Mo}(t,p)^{102}\text{Mo}$
^{100}Ru	64.3	$^{100}\text{Mo}-^{100}\text{Ru}$	31.1	$^{99}\text{Ru}(n,\gamma)^{100}\text{Ru}$	4.6	$^{100}\text{Ru}(n,\gamma)^{101}\text{Ru}$
^{100}Rh	82.1	$^{100}\text{Rh}(\beta^+)^{100}\text{Ru}$	17.9	$^{100}\text{Rh-u}$		
^{100}Pd	53.7	$^{102}\text{Pd}(p,t)^{100}\text{Pd}$	46.3	$^{96}\text{Ru}(^{16}\text{O},^{12}\text{C})^{100}\text{Pd}$		
^{100}Cd	100.0	$^{100}\text{Cd}-^{85}\text{Rb}_{1.176}$				
^{100}In	63.0	$^{100}\text{In}(\beta^+)^{100}\text{Cd}$	37.0	$^{100}\text{In-u}$		
^{101}Zr	79.2	$^{101}\text{Zr}-^{97}\text{Zr}_{1.041}$	20.8	$^{101}\text{Zr-u}$		
^{101}Ru	95.2	$^{100}\text{Ru}(n,\gamma)^{101}\text{Ru}$	4.8	$^{101}\text{Ru}(n,\gamma)^{102}\text{Ru}$		
^{101}Rh	88.4	$^{101}\text{Pd}(\beta^+)^{101}\text{Rh}$	11.6	$^{103}\text{Rh}(p,t)^{101}\text{Rh}$		
^{101}Pd	93.2	$^{101}\text{Pd}-^{96}\text{Mo}_{1.052}$	6.8	$^{101}\text{Pd}(\beta^+)^{101}\text{Rh}$		
^{102}Zr	92.0	$^{102}\text{Zr}-^{97}\text{Zr}_{1.052}$	8.0	$^{102}\text{Zr}(\beta^-)^{102}\text{Nb}^m$		
^{102}Nb	99.4	$^{102}\text{Nb}-^{97}\text{Zr}_{1.052}$	0.6	$^{102}\text{Nb}^m-^{102}\text{Nb}$		
$^{102}\text{Nb}^m$	94.2	$^{102}\text{Nb}^m-^{102}\text{Nb}$	5.8	$^{102}\text{Zr}(\beta^-)^{102}\text{Nb}^m$		
^{102}Mo	82.1	$^{102}\text{Mo}-^{97}\text{Zr}_{1.052}$	17.9	$^{100}\text{Mo}(t,p)^{102}\text{Mo}$		
^{102}Tc	79.1	$^{104}\text{Ru}(d,\alpha)^{102}\text{Tc}$	20.9	$^{100}\text{Mo}(^3\text{He,p})^{102}\text{Tc}$		
^{102}Ru	95.1	$^{101}\text{Ru}(n,\gamma)^{102}\text{Ru}$	4.8	$^{102}\text{Ru}(n,\gamma)^{103}\text{Ru}$		
^{102}Rh	50.8	$^{102}\text{Rh}(\beta^+)^{102}\text{Ru}$	49.2	$^{102}\text{Rh}(\beta^-)^{102}\text{Pd}$		
^{102}Pd	91.9	$^{102}\text{Pd}(n,\gamma)^{103}\text{Pd}$	7.6	$^{102}\text{Rh}(\beta^-)^{102}\text{Pd}$	0.6	$^{102}\text{Pd}(p,t)^{100}\text{Pd}$
^{102}Cd	88.3	$^{102}\text{Cd}-^{85}\text{Rb}_{1.200}$	11.7	$^{102}\text{Cd}-^{96}\text{Mo}_{1.063}$		
^{102}In	85.6	$^{102}\text{In}-^{96}\text{Mo}_{1.063}$	14.4	$^{102}\text{In}-^{85}\text{Rb}_{1.200}$		
^{103}Ru	95.1	$^{102}\text{Ru}(n,\gamma)^{103}\text{Ru}$	4.5	$^{104}\text{Ru}(d,t)^{103}\text{Ru}-^{148}\text{Gd}(^{147}\text{Gd})$	0.4	$^{103}\text{Ru}(\beta^-)^{103}\text{Rh}$
^{103}Rh	91.7	$^{103}\text{Ru}(\beta^-)^{103}\text{Rh}$	6.6	$^{103}\text{Pd}(\epsilon)^{103}\text{Rh}$	1.8	$^{103}\text{Rh}(p,t)^{101}\text{Rh}$
^{103}Pd	92.6	$^{103}\text{Pd}(\epsilon)^{103}\text{Rh}$	7.4	$^{102}\text{Pd}(n,\gamma)^{103}\text{Pd}$		
^{103}Ag	88.1	$^{103}\text{Ag}-^{85}\text{Rb}_{1.212}$	11.9	$^{103}\text{Cd}(\beta^+)^{103}\text{Ag}$		
^{103}Cd	83.6	$^{103}\text{Cd}-^{85}\text{Rb}_{1.212}$	13.5	$^{103}\text{Cd}-^{96}\text{Mo}_{1.073}$	2.3	$^{103}\text{Cd}(\beta^+)^{103}\text{Ag}$
^{103}In	79.3	$^{103}\text{In}-^{85}\text{Rb}_{1.212}$	20.7	$^{103}\text{In}(\beta^+)^{103}\text{Cd}$		
^{104}Mo	97.1	$^{104}\text{Mo}-^{97}\text{Zr}_{1.072}$	2.9	$^{104}\text{Mo}(\beta^-)^{104}\text{Tc}$		
^{104}Tc	70.1	$^{104}\text{Mo}(\beta^-)^{104}\text{Tc}$	29.9	$^{104}\text{Tc}(\beta^-)^{104}\text{Ru}$		
^{104}Ru	55.5	$^{104}\text{Ru}(d,t)^{103}\text{Ru}-^{148}\text{Gd}(^{147}\text{Gd})$	32.6	$^{104}\text{Ru}(n,\gamma)^{105}\text{Ru}$	10.5	$\text{C}_8\text{H}_8-^{104}\text{Ru}$
^{104}Cd	89.4	$^{104}\text{Cd}-^{85}\text{Rb}_{1.224}$	10.6	$^{104}\text{Cd}-^{96}\text{Mo}_{1.083}$		
^{104}Sn	92.9	$^{104}\text{Sn}-^{87}\text{Rb}_{1.195}$	7.1	$^{108}\text{Te}(\alpha)^{104}\text{Sn}$		
^{105}Mo	98.3	$^{105}\text{Mo}-^{97}\text{Zr}_{1.082}$	1.7	$^{105}\text{Mo}(\beta^-)^{105}\text{Tc}$		
^{105}Tc	58.9	$^{105}\text{Mo}(\beta^-)^{105}\text{Tc}$	41.1	$^{105}\text{Tc}(\beta^-)^{105}\text{Ru}$		
^{105}Ru	67.3	$^{104}\text{Ru}(n,\gamma)^{105}\text{Ru}$	26.8	$^{105}\text{Ru}(\beta^-)^{105}\text{Rh}$	5.4	$^{106}\text{Ru}-^{105}\text{Ru}_{1.010}$
^{105}Rh	75.1	$^{105}\text{Rh}(\beta^-)^{105}\text{Pd}$	24.9	$^{105}\text{Ru}(\beta^-)^{105}\text{Rh}$		
^{105}Pd	96.1	$^{105}\text{Pd}(n,\gamma)^{106}\text{Pd}$	3.8	$^{105}\text{Rh}(\beta^-)^{105}\text{Pd}$	0.2	$^{105}\text{Pd}(^3\text{He,d})^{106}\text{Ag}$
^{105}Ag	91.1	$^{105}\text{Cd}(\beta^+)^{105}\text{Ag}$	8.9	$^{107}\text{Ag}(p,t)^{105}\text{Ag}$		
^{105}Cd	99.2	$^{105}\text{Cd}-^{85}\text{Rb}_{1.235}$	0.8	$^{105}\text{Cd}(\beta^+)^{105}\text{Ag}$		
^{105}Sn	58.0	$^{105}\text{Sn}-^{87}\text{Rb}_{1.207}$	36.1	$^{105}\text{Sn}-^{85}\text{Rb}_{1.235}$	6.0	$^{109}\text{Te}(\alpha)^{105}\text{Sn}$
^{106}Ru	63.4	$^{106}\text{Ru}(\beta^-)^{106}\text{Rh}$	36.6	$^{106}\text{Ru}-^{105}\text{Ru}_{1.010}$		
^{106}Rh	63.4	$^{106}\text{Rh}(\beta^-)^{106}\text{Pd}$	36.6	$^{106}\text{Ru}(\beta^-)^{106}\text{Rh}$		
^{106}Pd	70.0	$^{106}\text{Cd}-^{106}\text{Pd}$	20.2	$^{106}\text{Pd-u}$	5.2	$^{106}\text{Pd}(n,\gamma)^{107}\text{Pd}$
^{106}Ag	81.0	$^{106}\text{Ag}(\epsilon)^{106}\text{Pd}$	12.3	$^{105}\text{Pd}(^3\text{He,d})^{106}\text{Ag}$	6.6	$^{107}\text{Ag}(p,d)^{106}\text{Ag}$
^{106}Cd	43.4	$^{106}\text{Cd}-^{85}\text{Rb}_{1.247}$	29.8	$^{106}\text{Cd}-^{106}\text{Pd}$	26.8	$^{106}\text{Cd-u}$
^{106}Sn	51.7	$^{106}\text{Sn}-^{87}\text{Rb}_{1.218}$	39.5	$^{106}\text{Sn}-^{85}\text{Rb}_{1.247}$	8.8	$^{110}\text{Te}(\alpha)^{106}\text{Sn}$
^{107}Pd	93.7	$^{106}\text{Pd}(n,\gamma)^{107}\text{Pd}$	6.3	$^{107}\text{Pd}(\beta^-)^{107}\text{Ag}$		
^{107}Ag	53.3	$^{107}\text{Pd}(\beta^-)^{107}\text{Ag}$	29.7	$^{107}\text{Cd}(\beta^+)^{107}\text{Ag}$	10.9	$\text{C}_8\text{H}_{11}-^{107}\text{Ag}$
^{107}Cd	88.5	$^{107}\text{Cd}-^{85}\text{Rb}_{1.259}$	11.5	$^{107}\text{Cd}(\beta^+)^{107}\text{Ag}$		
^{107}Sb	58.9	$^{107}\text{Sb}-^{87}\text{Rb}_{1.230}$	21.1	$^{107}\text{Sb}-^{133}\text{Cs}_{.805}$	20.0	$^{111}\text{I}(\alpha)^{107}\text{Sb}$
^{108}Pd	41.0	$^{108}\text{Pd}-^{108}\text{Cd}$	40.2	$^{108}\text{Pd-u}$	18.8	$^{108}\text{Pd}(n,\gamma)^{109}\text{Pd}$
^{108}Cd	45.6	$^{108}\text{Pd}-^{108}\text{Cd}$	27.5	$^{108}\text{Cd}-^{85}\text{Rb}_{1.271}$	25.1	$^{108}\text{Cd-u}$
^{108}In	88.6	$^{108}\text{In}(\beta^+)^{108}\text{Cd}$	11.4	$^{108}\text{Sn}(\beta^+)^{108}\text{In}$		

Table II. Influences on primary nuclei (continued, Explanation of Table on page 1673)

Nucleus	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{108}Sn	95.9	$^{108}\text{Sn}-^{87}\text{Rb}_{1.241}$	4.1	$^{108}\text{Sn}(\beta^+)^{108}\text{In}$		
^{108}Te	93.7	$^{108}\text{Te}-^{87}\text{Rb}_{1.241}$	6.3	$^{108}\text{Te}(\alpha)^{104}\text{Sn}$		
^{109}Rh	64.2	$^{110}\text{Pd}(d,^3\text{He})^{109}\text{Rh}$	35.8	$^{109}\text{Rh}-^{120}\text{Sn}_{.908}$		
^{109}Pd	80.9	$^{108}\text{Pd}(n,\gamma)^{109}\text{Pd}$	19.1	$^{109}\text{Pd}(\beta^-)^{109}\text{Ag}$	14.2	$^{109}\text{Cd}(\epsilon)^{109}\text{Ag}$
^{109}Ag	55.0	$^{109}\text{Ag}(n,\gamma)^{110}\text{Ag}$	30.8	$^{109}\text{Pd}(\beta^-)^{109}\text{Ag}$	3.1	$^{109}\text{In}(\beta^+)^{109}\text{Cd}$
^{109}Cd	75.5	$^{109}\text{Cd}-^{85}\text{Rb}_{1.282}$	21.4	$^{109}\text{Cd}(\epsilon)^{109}\text{Ag}$		
^{109}In	69.1	$^{108}\text{Cd}(^3\text{He},d)^{109}\text{In}-^{110}\text{CdO}^{111}\text{In}$	30.9	$^{109}\text{In}(\beta^+)^{109}\text{Cd}$		
^{109}Sn	77.9	$^{112}\text{Sn}(^3\text{He},^6\text{He})^{109}\text{Sn}$	22.1	$^{109}\text{Sb}(\beta^+)^{109}\text{Sn}$		
^{109}Sb	91.8	$^{109}\text{Sb}-^{87}\text{Rb}_{1.253}$	8.2	$^{109}\text{Sb}(\beta^+)^{109}\text{Sn}$		
^{109}Te	54.0	$^{109}\text{Te}-^{87}\text{Rb}_{1.253}$	32.1	$^{109}\text{Te}-^{133}\text{Cs}_{.820}$	7.4	$^{109}\text{Te}(\alpha)^{105}\text{Sn}$
^{110}Ru	97.2	$^{110}\text{Ru}-^{105}\text{Ru}_{1.048}$	2.8	$^{110}\text{Ru}(\beta^-)^{110}\text{Rh}$		
^{110}Rh	87.7	$^{110}\text{Rh}(\beta^-)^{110}\text{Pd}$	12.3	$^{110}\text{Ru}(\beta^-)^{110}\text{Rh}$		
^{110}Pd	63.3	$^{110}\text{Pd}-^{110}\text{Cd}$	35.9	$^{110}\text{Pd-u}$	0.6	$^{110}\text{Pd}(d,^3\text{He})^{109}\text{Rh}$
^{110}Ag	55.2	$^{110}\text{Ag}(\beta^-)^{110}\text{Cd}$	44.8	$^{109}\text{Ag}(n,\gamma)^{110}\text{Ag}$		
^{110}Cd	49.8	$^{110}\text{Cd}(n,\gamma)^{111}\text{Cd}$	26.4	$^{110}\text{Cd-u}$	18.9	$^{110}\text{Pd}-^{110}\text{Cd}$
^{110}Te	84.0	$^{110}\text{Te}-^{133}\text{Cs}_{.827}$	16.0	$^{110}\text{Te}(\alpha)^{106}\text{Sn}$		
^{111}Cd	52.1	$^{111}\text{Cd}(n,\gamma)^{112}\text{Cd}$	47.9	$^{110}\text{Cd}(n,\gamma)^{111}\text{Cd}$		
^{111}In	68.8	$^{113}\text{In}(p,t)^{111}\text{In}-^{112}\text{CdO}^{110}\text{Cd}$	20.2	$^{108}\text{Cd}(^3\text{He},d)^{109}\text{In}-^{110}\text{CdO}^{111}\text{In}$	11.0	$^{113}\text{In}(p,t)^{111}\text{In}-^{115}\text{InO}^{113}\text{In}$
^{111}I	70.0	$^{111}\text{I}-^{87}\text{Rb}_{1.276}$	30.0	$^{111}\text{I}(\alpha)^{107}\text{Sb}$		
^{112}Rh	65.7	$^{112}\text{Rh}(\beta^-)^{112}\text{Pd}$	18.5	$^{112}\text{Rh}-^{120}\text{Sn}_{.933}$	15.8	$^{112}\text{Rh-u}$
^{112}Pd	88.8	$^{112}\text{Pd}-^{120}\text{Sn}_{.933}$	10.7	$^{110}\text{Pd}(t,p)^{112}\text{Pd}$	0.5	$^{112}\text{Rh}(\beta^-)^{112}\text{Pd}$
^{112}Cd	49.4	$^{112}\text{Cd}(d,p)^{113}\text{Cd}$	40.8	$^{111}\text{Cd}(n,\gamma)^{112}\text{Cd}$	9.4	$^{112}\text{Sn}-^{112}\text{Cd}$
^{112}In	50.0	$^{112}\text{Cd}(p,n)^{112}\text{In}$	50.0	$^{112}\text{In}(\beta^-)^{112}\text{Sn}$		
^{112}Sn	89.8	$^{112}\text{Sn}-^{112}\text{Cd}$	8.1	$^{112}\text{Sn}-^{120}\text{Sn}_{.933}$	2.0	$^{112}\text{Sn}(n,\gamma)^{113}\text{Sn}$
^{113}Ru	78.8	$^{113}\text{Ru}-^{105}\text{Ru}_{1.076}$	21.2	$^{113}\text{Ru-u}$		
^{113}Cd	79.3	$^{113}\text{Cd}(n,\gamma)^{114}\text{Cd}$	16.3	$^{112}\text{Cd}(d,p)^{113}\text{Cd}$	4.3	$^{113}\text{Cd}(\beta^-)^{113}\text{In}$
^{113}In	72.7	$^{113}\text{Cd}(\beta^-)^{113}\text{In}$	22.5	$^{113}\text{In}(n,\gamma)^{114}\text{In}$	3.1	$^{113}\text{Sn}(\beta^+)^{113}\text{In}$
^{113}Sn	69.9	$^{112}\text{Sn}(n,\gamma)^{113}\text{Sn}$	16.4	$^{113}\text{Sn}(\beta^+)^{113}\text{In}$	13.6	$^{114}\text{Sn}(d,t)^{113}\text{Sn}$
^{113}Xe	82.2	$^{113}\text{Xe}-^{133}\text{Cs}_{.850}$	17.8	$^{113}\text{Xe}(\alpha)^{109}\text{Te}$		
^{114}Rh	59.0	$^{114}\text{Rh}-^{120}\text{Sn}_{.950}$	41.0	$^{114}\text{Rh-u}$		
^{114}Cd	81.1	$^{116}\text{Cd } ^{35}\text{Cl}-^{114}\text{Cd } ^{37}\text{Cl}$	18.9	$^{113}\text{Cd}(n,\gamma)^{114}\text{Cd}$		
^{114}In	75.7	$^{113}\text{In}(n,\gamma)^{114}\text{In}$	24.3	$^{114}\text{In}(\beta^-)^{114}\text{Sn}$		
^{114}Sn	64.5	$^{114}\text{In}(\beta^-)^{114}\text{Sn}$	31.7	$^{114}\text{Sn}(n,\gamma)^{115}\text{Sn}$	3.7	$^{114}\text{Sn}(d,t)^{113}\text{Sn}$
^{114}Sb	61.1	$^{114}\text{Sb-u}$	38.9	$^{114}\text{Sn}(p,n)^{114}\text{Sb}$		
^{115}Ru	56.2	$^{115}\text{Ru}-^{120}\text{Sn}_{.958}$	43.8	$^{115}\text{Ru}(\beta^-)^{115}\text{Rh}$		
^{115}Rh	99.7	$^{115}\text{Rh}-^{120}\text{Sn}_{.958}$	0.3	$^{115}\text{Ru}(\beta^-)^{115}\text{Rh}$		
^{115}Pd	93.6	$^{115}\text{Pd}-^{120}\text{Sn}_{.958}$	6.4	$^{115}\text{Pd}(\beta^-)^{115}\text{Ag}$		
^{115}Ag	66.8	$^{115}\text{Ag}-^{133}\text{Cs}_{.865}$	20.9	$^{115}\text{Ag}(\beta^-)^{115}\text{Cd}$	12.4	$^{115}\text{Pd}(\beta^-)^{115}\text{Ag}$
^{115}Cd	100.0	$^{114}\text{Cd}(d,p)^{115}\text{Cd}$				
^{115}In	100.0	$^{115}\text{In}-^{129}\text{Xe}$				
^{115}Sn	100.0	$^{115}\text{In}-^{115}\text{Sn}$				
^{116}Rh	57.6	$^{116}\text{Rh}-^{120}\text{Sn}_{.967}$	42.4	$^{116}\text{Rh-u}$		
^{116}Cd	97.5	$^{116}\text{Cd}-^{116}\text{Sn}$	2.5	$^{116}\text{Cd } ^{35}\text{Cl}-^{114}\text{Cd } ^{37}\text{Cl}$		
^{116}Sn	99.0	$^{115}\text{Sn}(n,\gamma)^{116}\text{Sn}$	0.9	$^{116}\text{Cd}-^{116}\text{Sn}$	0.1	$^{116}\text{Sn}(n,\gamma)^{117}\text{Sn}$
^{116}Sb	75.5	$^{116}\text{Sn}(p,n)^{116}\text{Sb}$	24.5	$^{115}\text{Sn}(^3\text{He},d)^{116}\text{Sb}-^{120}\text{SnO}^{121}\text{Sb}$		
^{117}Pd	95.8	$^{117}\text{Pd}-^{120}\text{Sn}_{.975}$	4.2	$^{117}\text{Pd}(\beta^-)^{117}\text{Ag}$		
^{117}Ag	82.9	$^{117}\text{Ag}-^{133}\text{Cs}_{.880}$	17.1	$^{117}\text{Pd}(\beta^-)^{117}\text{Ag}$		
^{117}In	94.3	$^{117}\text{In}(\beta^-)^{117}\text{Sn}$	5.7	$^{120}\text{Sn}(t,\alpha)^{119}\text{In}-^{118}\text{SnO}^{117}\text{In}$		
^{117}Sn	96.9	$^{116}\text{Sn}(n,\gamma)^{117}\text{Sn}$	3.1	$^{117}\text{Sn}(n,\gamma)^{118}\text{Sn}$		
^{117}Sb	71.2	$^{116}\text{Sn}(^3\text{He},d)^{117}\text{Sb}$	17.8	$^{117}\text{Sn}(p,n)^{117}\text{Sb}$	11.0	$^{117}\text{Te}(\beta^+)^{117}\text{Sb}$
^{117}Te	50.7	$^{117}\text{Te}(\beta^+)^{117}\text{Sb}$	46.4	$^{117}\text{Te-u}$	2.9	$^{117}\text{I}(\beta^+)^{117}\text{Te}$
^{117}I	87.9	$^{117}\text{I-u}$	12.1	$^{117}\text{I}(\beta^+)^{117}\text{Te}$		
^{118}Pd	61.3	$^{118}\text{Pd}-^{120}\text{Sn}_{.983}$	38.7	$^{118}\text{Pd}-^{129}\text{Xe}_{.915}$		
^{118}In	100.0	$^{119}\text{Sn}(t,\alpha)^{118}\text{In}-^{118}\text{SnO}^{117}\text{In}$				
^{118}Sn	96.7	$^{117}\text{Sn}(n,\gamma)^{118}\text{Sn}$	3.3	$^{118}\text{Sn}(n,\gamma)^{119}\text{Sn}$		

Table II. Influences on primary nuclei (continued, Explanation of Table on page 1673)

Nucleus	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{119}Ag	97.3	$^{119}\text{Ag} - ^{133}\text{Cs}_{,895}$	2.7	$^{119}\text{Ag}(\beta^-)^{119}\text{Cd}$		
^{119}Cd	78.0	$^{119}\text{Ag}(\beta^-)^{119}\text{Cd}$	22.0	$^{119}\text{Cd}(\beta^-)^{119}\text{In}$		
^{119}In	86.2	$^{120}\text{Sn}(t,\alpha)^{119}\text{In} - ^{118}\text{Sn}()^{117}\text{In}$	13.1	$^{120}\text{Sn}(d,^3\text{He})^{119}\text{In}$	0.6	$^{119}\text{Cd}(\beta^-)^{119}\text{In}$
^{119}Sn	92.6	$^{118}\text{Sn}(n,\gamma)^{119}\text{Sn}$	7.3	$^{120}\text{Sn}(d,t)^{119}\text{Sn}$	0.1	$^{119}\text{Sb}(\epsilon)^{119}\text{Sn}$
^{119}Sb	59.1	$^{118}\text{Sn}(^3\text{He},d)^{119}\text{Sb}$	40.9	$^{119}\text{Sb}(\epsilon)^{119}\text{Sn}$		
^{120}Pd	68.7	$^{120}\text{Pd} - ^{120}\text{Sn}$	31.3	$^{120}\text{Pd} - ^{129}\text{Xe}_{,930}$		
^{120}Sn	21.6	$^{115}\text{Sn} - ^{120}\text{Sn}_{,958}$	20.3	$^{122}\text{Sn} - ^{120}\text{Sn}_{,933}$	18.9	$^{129}\text{Xe} - ^{120}\text{Sn}_{1,075}$
^{120}Te	82.1	$^{122}\text{Te}(p,t)^{120}\text{Te} - ^{132}\text{Ba}()^{130}\text{Ba}$	17.7	$^{122}\text{Te}(p,t)^{120}\text{Te} - ^{144}\text{Sm}()^{142}\text{Sm}$	0.2	$^{120}\text{Te}(^3\text{He},d)^{121}\text{I}$
^{121}Sn	96.7	$^{120}\text{Sn}(n,\gamma)^{121}\text{Sn}$	3.3	$^{122}\text{Sn}(d,t)^{121}\text{Sn}$		
^{121}Sb	94.2	$^{121}\text{Sb}(n,\gamma)^{122}\text{Sb}$	5.7	$^{115}\text{Sn}(^3\text{He},d)^{116}\text{Sb} - ^{120}\text{Sn}()^{121}\text{Sb}$	0.2	$^{121}\text{Te}(\beta^+)^{121}\text{Sb}$
^{121}Te	73.6	$^{121}\text{Te}(\beta^+)^{121}\text{Sb}$	26.4	$^{121}\text{I}(\beta^+)^{121}\text{Te}$		
^{121}I	99.2	$^{120}\text{Te}(^3\text{He},d)^{121}\text{I}$	0.8	$^{121}\text{I}(\beta^+)^{121}\text{Te}$		
^{121}Xe	85.0	$^{121}\text{Xe} - ^{133}\text{Cs}_{,910}$	15.0	$^{121}\text{Cs}(\beta^+)^{121}\text{Xe}$		
^{121}Cs	46.0	$^{121}\text{Cs}(\beta^+)^{121}\text{Xe}$	37.7	$^{121}\text{Cs} - ^{133}\text{Cs}_{,910}$	16.3	$^{121}\text{Cs-u}$
^{122}Cd	72.4	$^{122}\text{Cd} - ^{130}\text{Xe}_{,938}$	27.6	$^{122}\text{Cd} - ^{133}\text{Cs}_{,917}$		
^{122}Sn	57.0	$^{122}\text{Sn}(d,t)^{121}\text{Sn}$	43.0	$^{122}\text{Sn}(n,\gamma)^{123}\text{Sn}$		
^{122}Sb	63.2	$^{122}\text{Sb}(\beta^-)^{122}\text{Te}$	30.9	$^{123}\text{Sb}(\gamma,n)^{122}\text{Sb}$	5.8	$^{121}\text{Sb}(n,\gamma)^{122}\text{Sb}$
^{122}Te	98.0	$^{122}\text{Te}(n,\gamma)^{123}\text{Te}$	1.4	$^{122}\text{Sb}(\beta^-)^{122}\text{Te}$	0.6	$^{122}\text{Te}(^3\text{He},d)^{123}\text{I}$
^{122}Cs	56.8	$^{122}\text{Cs} - ^{133}\text{Cs}_{,917}$	43.2	$^{122}\text{Cs-u}$		
^{123}Cd	99.6	$^{123}\text{Cd} - ^{130}\text{Xe}_{,946}$	0.4	$^{123}\text{Cd}(\beta^-)^{123}\text{In}$		
^{123}In	43.4	$^{123}\text{In}(\beta^-)^{123}\text{Sn}$	31.9	$^{123}\text{Cd}(\beta^-)^{123}\text{In}$	24.7	$^{124}\text{Sn}(d,^3\text{He})^{123}\text{In}$
^{123}Sn	50.7	$^{122}\text{Sn}(n,\gamma)^{123}\text{Sn}$	38.7	$^{124}\text{Sn}(d,t)^{123}\text{Sn}$	10.2	$^{123}\text{Sn}(\beta^-)^{123}\text{Sb}$
^{123}Sb	82.4	$^{123}\text{Sb}(n,\gamma)^{124}\text{Sb}$	10.1	$^{123}\text{Sb}(\gamma,n)^{122}\text{Sb}$	7.5	$^{123}\text{Sn}(\beta^-)^{123}\text{Sb}$
^{123}Te	98.0	$^{123}\text{Te}(n,\gamma)^{124}\text{Te}$	2.0	$^{122}\text{Te}(n,\gamma)^{123}\text{Te}$		
^{123}I	96.2	$^{122}\text{Te}(^3\text{He},d)^{123}\text{I}$	3.8	$^{123}\text{Xe}(\beta^+)^{123}\text{I}$		
^{123}Xe	62.0	$^{123}\text{Xe} - ^{133}\text{Cs}_{,925}$	38.0	$^{123}\text{Xe}(\beta^+)^{123}\text{I}$		
^{124}Cd	89.4	$^{124}\text{Cd} - ^{130}\text{Xe}_{,954}$	10.3	$^{124}\text{Cd} - ^{133}\text{Cs}_{,932}$	0.2	$^{124}\text{Cd}(\beta^-)^{124}\text{In}$
^{124}In	61.1	$^{124}\text{Cd}(\beta^-)^{124}\text{In}$	38.9	$^{124}\text{In}(\beta^-)^{124}\text{Sn}$		
^{124}Sn	37.3	$^{124}\text{Sn} - ^{13}\text{C}^{37}\text{Cl}_3$	26.9	$^{124}\text{Sn} - ^{129}\text{Xe}_{,961}$	20.3	$^{124}\text{Sn} - ^{120}\text{Sn}_{1,033}$
^{124}Sb	82.4	$^{124}\text{Sb}(\beta^-)^{124}\text{Te}$	17.6	$^{123}\text{Sb}(n,\gamma)^{124}\text{Sb}$		
^{124}Te	40.9	$^{124}\text{Sn} - ^{124}\text{Te}$	26.2	$^{124}\text{Te} - ^{13}\text{C}^{37}\text{Cl}_3$	16.9	$^{124}\text{Te}(n,\gamma)^{125}\text{Te}$
^{124}Xe	58.4	$^{124}\text{Xe} - ^{54}\text{Fe}^{35}\text{Cl}_2$	24.0	$^{124}\text{Xe} - ^{13}\text{C}^{37}\text{Cl}_3$	16.5	$^{124}\text{Xe} - ^{124}\text{Te}$
^{125}Cd	99.8	$^{125}\text{Cd} - ^{130}\text{Xe}_{,962}$	0.2	$^{125}\text{Cd}(\beta^-)^{125}\text{In}$		
^{125}In	81.0	$^{125}\text{In}(\beta^-)^{125}\text{Sn}$	19.0	$^{125}\text{Cd}(\beta^-)^{125}\text{In}$		
^{125}Sn	100.0	$^{124}\text{Sn}(n,\gamma)^{125}\text{Sn}$				
^{125}Te	83.1	$^{124}\text{Te}(n,\gamma)^{125}\text{Te}$	16.9	$^{125}\text{Te}(n,\gamma)^{126}\text{Te}$		
^{125}Xe	98.8	$^{124}\text{Xe}(n,\gamma)^{125}\text{Xe}$	1.2	$^{125}\text{Cs}(\beta^+)^{125}\text{Xe}$		
^{125}Cs	70.5	$^{125}\text{Cs} - ^{133}\text{Cs}_{,940}$	29.5	$^{125}\text{Cs}(\beta^+)^{125}\text{Xe}$		
^{125}Ba	97.9	$^{125}\text{Ba} - ^{133}\text{Cs}_{,940}$	2.1	$^{125}\text{La}(\beta^+)^{125}\text{Ba}$		
^{125}La	86.5	$^{125}\text{La-u}$	13.5	$^{125}\text{La}(\beta^+)^{125}\text{Ba}$		
^{126}Cd	64.9	$^{126}\text{Cd} - ^{130}\text{Xe}_{,969}$	34.9	$^{126}\text{Cd} - ^{133}\text{Cs}_{,947}$	0.2	$^{126}\text{Cd}(\beta^-)^{126}\text{In}$
^{126}In	55.7	$^{126}\text{Cd}(\beta^-)^{126}\text{In}$	44.3	$^{126}\text{In}(\beta^-)^{126}\text{Sn}$		
^{126}Sn	96.1	$^{124}\text{Sn}(t,p)^{126}\text{Sn}$	3.9	$^{126}\text{In}(\beta^-)^{126}\text{Sn}$		
^{126}Te	83.1	$^{125}\text{Te}(n,\gamma)^{126}\text{Te}$	12.3	$^{128}\text{Te}^{35}\text{Cl} - ^{126}\text{Te}^{37}\text{Cl}$	2.5	$^{126}\text{I}(\beta^+)^{126}\text{Te}$
^{126}I	51.5	$^{126}\text{I}(\beta^+)^{126}\text{Te}$	48.5	$^{127}\text{I}(\gamma,n)^{126}\text{I}$		
^{126}Xe	97.6	$^{126}\text{Xe} - ^{134}\text{Xe}_{,940}$	2.4	$^{126}\text{Cs}(\beta^+)^{126}\text{Xe}$		
^{126}Cs	73.8	$^{126}\text{Cs} - ^{133}\text{Cs}_{,947}$	26.2	$^{126}\text{Cs}(\beta^+)^{126}\text{Xe}$		
^{127}Cd	96.3	$^{127}\text{Cd} - ^{130}\text{Xe}_{,977}$	3.7	$^{127}\text{Cd}(\beta^-)^{127}\text{In}$		
^{127}In	89.2	$^{127}\text{In}(\beta^-)^{127}\text{Sn}$	10.8	$^{127}\text{Cd}(\beta^-)^{127}\text{In}$		
^{127}Sn	81.0	$^{127}\text{Sn} - ^{34}\text{S} - ^{133}\text{Cs}_{1,211}$	16.8	$^{127}\text{Sn}(\beta^-)^{127}\text{Sb}$	2.2	$^{127}\text{In}(\beta^-)^{127}\text{Sn}$
^{127}Sb	96.2	$^{127}\text{Sb}(\beta^-)^{127}\text{Te}$	3.8	$^{127}\text{Sn}(\beta^-)^{127}\text{Sb}$		
^{127}Te	97.9	$^{126}\text{Te}(n,\gamma)^{127}\text{Te}$	1.8	$^{127}\text{Te}(\beta^-)^{127}\text{I}$	0.3	$^{127}\text{Sb}(\beta^-)^{127}\text{Te}$
^{127}I	35.0	$^{127}\text{I}(\gamma,n)^{126}\text{I}$	23.8	$^{127}\text{Te}(\beta^-)^{127}\text{I}$	21.2	$\text{C}_{10}\text{H}_7 - ^{127}\text{I}$
^{127}Xe	91.1	$^{127}\text{Xe}(\epsilon)^{127}\text{I}$	8.9	$^{127}\text{Cs}(\beta^+)^{127}\text{Xe}$		
^{127}Cs	81.7	$^{127}\text{Cs} - ^{133}\text{Cs}_{,955}$	18.3	$^{127}\text{Cs}(\beta^+)^{127}\text{Xe}$		

Table II. Influences on primary nuclei (continued, Explanation of Table on page 1673)

Nucleus	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{127}Ba	97.7	$^{127}\text{Ba}-^{133}\text{Cs}_{.955}$	2.3	$^{127}\text{La}(\beta^+)^{127}\text{Ba}$		
^{127}La	86.6	$^{127}\text{La-u}$	13.4	$^{127}\text{La}(\beta^+)^{127}\text{Ba}$		
^{128}Cd	50.0	$^{128}\text{Cd}-^{133}\text{Cs}_{.962}$	50.0	$^{128}\text{Cd}-^{130}\text{Xe}_{.985}$		
^{128}In	72.0	$^{128}\text{In}(\beta^-)^{128}\text{Sn}$	28.0	$^{128}\text{Cd}(\beta^-)^{128}\text{In}$		
^{128}Sn	57.5	$^{128}\text{Sn-u}$	42.2	$^{128}\text{Sn}(\beta^-)^{128}\text{Sb}^m$	0.3	$^{128}\text{In}(\beta^-)^{128}\text{Sn}$
$^{128}\text{Sb}^m$	54.9	$^{128}\text{Sb}^m(\beta^-)^{128}\text{Te}$	45.1	$^{128}\text{Sn}(\beta^-)^{128}\text{Sb}^m$		
^{128}Te	73.8	$^{130}\text{Te } ^{35}\text{Cl}-^{128}\text{Te } ^{37}\text{Cl}$	20.7	$^{128}\text{Te}-^{128}\text{Xe}$	3.7	$^{128}\text{Te } ^{35}\text{Cl}-^{126}\text{Te } ^{37}\text{Cl}$
^{128}I	86.9	$^{127}\text{I}(n,\gamma)^{128}\text{I}$	13.1	$^{128}\text{I}(\beta^-)^{128}\text{Xe}$		
^{128}Xe	56.1	$^{128}\text{Te}-^{128}\text{Xe}$	42.3	$\text{C}_{10}\text{H}_8-^{128}\text{Xe}$	0.9	$^{128}\text{I}(\beta^-)^{128}\text{Xe}$
^{128}Cs	79.8	$^{128}\text{Cs}(\beta^+)^{128}\text{Xe}$	20.2	$^{128}\text{Cs}-^{133}\text{Cs}_{.962}$		
^{128}Ba	77.7	$^{130}\text{Ba}(p,t)^{128}\text{Ba}-^{144}\text{Sm}()^{142}\text{Sm}$	22.3	$^{128}\text{Ba}-^{133}\text{Cs}_{.962}$		
^{129}In	99.5	$^{129}\text{In}-^{130}\text{Xe}_{.992}$	0.5	$^{129}\text{In}(\beta^-)^{129}\text{Sn}$		
^{129}Sn	55.0	$^{129}\text{In}(\beta^-)^{129}\text{Sn}$	45.0	$^{129}\text{Sn-u}$		
^{129}Te	98.2	$^{128}\text{Te}(n,\gamma)^{129}\text{Te}$	1.8	$^{129}\text{Te}(\beta^-)^{129}\text{I}$		
^{129}I	59.9	$^{129}\text{Te}(\beta^-)^{129}\text{I}$	40.1	$^{129}\text{I}(\beta^-)^{129}\text{Xe}$		
^{129}Xe	40.5	$^{132}\text{Xe}-^{129}\text{Xe}$	16.2	$\text{C}_{10}\text{H}_{10}-^{129}\text{Xe}$	15.2	$^{129}\text{Xe}_2-^{86}\text{Kr}_3$
^{129}Cs	83.0	$^{129}\text{Cs}(\beta^+)^{129}\text{Xe}$	12.2	$^{129}\text{Cs}-^{133}\text{Cs}_{.970}$	4.8	$^{129}\text{Ba}(\beta^+)^{129}\text{Cs}$
^{129}Ba	48.3	$^{130}\text{Ba}(d,t)^{129}\text{Ba}$	45.3	$^{129}\text{Ba}(\beta^+)^{129}\text{Cs}$	6.4	$^{129}\text{La}(\beta^+)^{129}\text{Ba}$
^{129}La	58.4	$^{129}\text{La-u}$	41.6	$^{129}\text{La}(\beta^+)^{129}\text{Ba}$		
^{130}Sn	94.4	$^{130}\text{Sn}-^{130}\text{Xe}$	5.4	$^{130}\text{Sn}-^{133}\text{Cs}_{.977}$	0.2	$^{130}\text{Sn}(\beta^-)^{130}\text{Sb}$
^{130}Sb	90.0	$^{130}\text{Sn}(\beta^-)^{130}\text{Sb}$	10.0	$^{130}\text{Sb}(\beta^-)^{130}\text{Te}$		
^{130}Te	77.3	$^{130}\text{Te}-^{129}\text{Xe}$	22.7	$^{130}\text{Te}-^{130}\text{Xe}$		
^{130}Xe	49.1	$^{130}\text{Xe}-^{129}\text{Xe}$	38.5	$^{132}\text{Xe}-^{130}\text{Xe}$	12.4	$^{130}\text{Te}-^{130}\text{Xe}$
^{130}Cs	47.6	$^{130}\text{Cs}-^{133}\text{Cs}_{.977}$	34.9	$^{130}\text{Cs}(\beta^+)^{130}\text{Xe}$	17.5	$^{129}\text{Xe}({}^3\text{He},d)^{130}\text{Cs}$
^{130}Ba	66.2	$^{130}\text{Ba}-^{85}\text{Rb}_{1.529}$	16.4	$^{122}\text{Te}(p,t)^{120}\text{Te}-^{132}\text{Ba}()^{130}\text{Ba}$	10.5	$^{130}\text{Ba}(p,t)^{128}\text{Ba}-^{144}\text{Sm}()^{142}\text{Sm}$
^{131}In	98.0	$^{131}\text{In}-^{130}\text{Xe}_{1.008}$	2.0	$^{131}\text{In}(\beta^-)^{131}\text{Sn}$		
^{131}Sn	53.8	$^{131}\text{Sn}(\beta^-)^{131}\text{Sb}$	35.1	$^{131}\text{Sn } ^{34}\text{S}-^{133}\text{Cs}_{1.241}$	11.1	$^{131}\text{In}(\beta^-)^{131}\text{Sn}$
^{131}Sb	96.9	$^{131}\text{Sb}-^{130}\text{Xe}_{1.008}$	3.1	$^{131}\text{Sn}(\beta^-)^{131}\text{Sb}$		
^{131}Xe	100.0	$^{131}\text{Xe}(n,\gamma)^{132}\text{Xe}$				
^{131}Cs	60.5	$^{131}\text{Cs}(\epsilon)^{131}\text{Xe}$	25.0	$^{131}\text{Ba}(\beta^+)^{131}\text{Cs}$	14.6	$^{131}\text{Cs}-^{133}\text{Cs}_{.985}$
^{131}Ba	94.6	$^{130}\text{Ba}(n,\gamma)^{131}\text{Ba}$	5.4	$^{131}\text{Ba}(\beta^+)^{131}\text{Cs}$		
^{131}Ce	95.7	$^{131}\text{Ce-u}$	4.3	$^{131}\text{Pr}(\beta^+)^{131}\text{Ce}$		
^{131}Pr	81.2	$^{131}\text{Pr-u}$	9.5	$^{131}\text{Nd}(\beta^+)^{131}\text{Pr}$	9.3	$^{131}\text{Pr}(\beta^+)^{131}\text{Ce}$
^{131}Nd	97.0	$^{131}\text{Nd-u}$	3.0	$^{131}\text{Nd}(\beta^+)^{131}\text{Pr}$		
^{132}Sn	83.7	$^{132}\text{Sn}-^{132}\text{Xe}$	16.3	$^{132}\text{Sn } ^{34}\text{S}-^{133}\text{Cs}_{1.248}$		
^{132}Te	75.8	$^{132}\text{Te}-^{130}\text{Xe}_{1.015}$	24.2	$^{132}\text{Te}(\beta^-)^{132}\text{I}$		
^{132}I	51.6	$^{132}\text{Te}(\beta^-)^{132}\text{I}$	48.4	$^{132}\text{I}(\beta^-)^{132}\text{Xe}$		
^{132}Xe	34.1	$^{132}\text{Xe}-\text{C}_{10}\text{H}_{10}$	26.3	$^{132}\text{Xe}-^{129}\text{Xe}$	15.7	$^{132}\text{Xe}-\text{C}_3\text{O}_6$
^{132}Ba	98.5	$^{132}\text{Ba}(n,\gamma)^{133}\text{Ba}$	1.4	$^{122}\text{Te}(p,t)^{120}\text{Te}-^{132}\text{Ba}()^{130}\text{Ba}$		
^{132}La	66.1	$^{132}\text{La}(\beta^+)^{132}\text{Ba}$	33.9	$^{132}\text{La-u}$		
^{132}Ce	53.6	$^{132}\text{Ce-u}$	46.4	$^{132}\text{Ce O}-^{142}\text{Sm}_{1.042}$		
^{133}Sb	72.9	$^{133}\text{Sb}-^{130}\text{Xe}_{1.023}$	15.4	$^{133}\text{Sb}(\beta^-)^{133}\text{Te}$	11.7	$^{133}\text{Sb}-^{136}\text{Xe}_{.978}$
^{133}Te	78.7	$^{133}\text{Te}-^{130}\text{Xe}_{1.023}$	21.3	$^{133}\text{Sb}(\beta^-)^{133}\text{Te}$		
^{133}Cs	45.5	$^{133}\text{Cs}-^{132}\text{Xe}$	43.7	$^{133}\text{Cs}-^{129}\text{Xe}$	10.8	$^{133}\text{Cs}-\text{C}_3\text{O}_6$
^{133}Ba	98.7	$^{133}\text{Ba}(\epsilon)^{133}\text{Cs}$	1.3	$^{132}\text{Ba}(n,\gamma)^{133}\text{Ba}$		
^{134}Te	72.3	$^{134}\text{Te}-^{130}\text{Xe}_{1.031}$	21.0	$^{134}\text{Te}-^{136}\text{Xe}_{.985}$	6.8	$^{134}\text{Te}(\beta^-)^{134}\text{I}$
^{134}I	53.1	$^{134}\text{Te}(\beta^-)^{134}\text{I}$	46.9	$^{134}\text{I}(\beta^-)^{134}\text{Xe}$		
^{134}Xe	99.3	$^{134}\text{Xe}-\text{C } ^{13}\text{C } ^{35}\text{Cl } ^{37}\text{Cl}_2$	0.6	$^{134}\text{I}(\beta^-)^{134}\text{Xe}$	0.1	$^{126}\text{Xe}-^{134}\text{Xe}_{.940}$
^{134}Cs	99.9	$^{133}\text{Cs}(n,\gamma)^{134}\text{Cs}$	0.1	$^{134}\text{Cs}(\beta^-)^{134}\text{Ba}$		
^{134}Ba	52.5	$^{134}\text{Ba}(n,\gamma)^{135}\text{Ba}$	47.5	$^{134}\text{Cs}(\beta^-)^{134}\text{Ba}$		
^{135}I	51.2	$^{135}\text{I}(\beta^-)^{135}\text{Xe}$	48.8	$^{135}\text{I}-^{136}\text{Xe}_{.993}$		
^{135}Xe	82.0	$^{135}\text{Xe}(\beta^-)^{135}\text{Cs}$	18.0	$^{135}\text{I}(\beta^-)^{135}\text{Xe}$		
^{135}Cs	99.1	$^{134}\text{Cs}(n,\gamma)^{135}\text{Cs}$	0.9	$^{135}\text{Xe}(\beta^-)^{135}\text{Cs}$		
^{135}Ba	55.9	$^{135}\text{Ba}(n,\gamma)^{136}\text{Ba}$	44.1	$^{134}\text{Ba}(n,\gamma)^{135}\text{Ba}$		
^{135}La	88.9	$^{135}\text{La}(\beta^+)^{135}\text{Ba}$	11.1	$^{135}\text{Ce}(\beta^+)^{135}\text{La}$		

Table II. Influences on primary nuclei (continued, Explanation of Table on page 1673)

Nucleus	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{135}Ce	86.5	$^{135}\text{Ce}(\beta^+)^{135}\text{La}$	13.5	$^{135}\text{Ce-u}$		
^{136}Te	71.7	$^{136}\text{Te}-^{130}\text{Xe}_{1.046}$	27.6	$^{136}\text{Te}-^{136}\text{Xe}$	0.7	$^{136}\text{Te}(\beta^-)^{136}\text{I}$
^{136}I	50.4	$^{136}\text{I}(\beta^-)^{136}\text{Xe}$	49.6	$^{136}\text{Te}(\beta^-)^{136}\text{I}$		
^{136}Xe	100.0	$^{136}\text{Xe-u}$				
^{136}Ba	56.0	$^{136}\text{Xe}-^{136}\text{Ba}$	43.6	$^{135}\text{Ba}(n,\gamma)^{136}\text{Ba}$	0.4	$^{136}\text{Ba}(n,\gamma)^{137}\text{Ba}$
^{136}Ce	99.9	$^{136}\text{Ce}-^{136}\text{Ba}$	0.1	$^{136}\text{Ce}(n,\gamma)^{137}\text{Ce}$		
^{136}Pr	67.2	$^{136}\text{Pr}-^{133}\text{Cs}_{1.023}$	32.8	$^{136}\text{Pr}(\beta^+)^{136}\text{Ce}$		
^{137}Ba	99.6	$^{136}\text{Ba}(n,\gamma)^{137}\text{Ba}$	0.4	$^{137}\text{Ba}(n,\gamma)^{138}\text{Ba}$		
^{137}Ce	99.9	$^{136}\text{Ce}(n,\gamma)^{137}\text{Ce}$	0.1	$^{137}\text{Pr}(\beta^+)^{137}\text{Ce}$		
^{137}Pr	66.1	$^{137}\text{Pr}(\beta^+)^{137}\text{Ce}$	33.9	$^{137}\text{Pr}-^{133}\text{Cs}_{1.030}$		
^{137}Nd	81.0	$^{137}\text{Nd}-^{133}\text{Cs}_{1.030}$	17.6	$^{137}\text{Nd-u}$	1.4	$^{137}\text{Pm}^m(\beta^+)^{137}\text{Nd}$
$^{137}\text{Pm}^m$	69.9	$^{137}\text{Pm}^m(\beta^+)^{137}\text{Nd}$	30.1	$^{137}\text{Sm}(\beta^+)^{137}\text{Pm}^m$		
^{137}Sm	43.5	$^{137}\text{Sm-u}$	34.0	$^{137}\text{Sm}-^{133}\text{Cs}_{1.030}$	22.4	$^{137}\text{Sm}(\beta^+)^{137}\text{Pm}^m$
^{138}Xe	74.0	$^{138}\text{Xe}-^{133}\text{Cs}_{1.038}$	26.0	$^{138}\text{Xe}-^{136}\text{Xe}_{1.015}$		
^{138}Cs	50.7	$^{138}\text{Cs}(\beta^-)^{138}\text{Ba}$	49.3	$^{138}\text{Cs}-^{133}\text{Cs}_{1.038}$		
^{138}Ba	99.6	$^{137}\text{Ba}(n,\gamma)^{138}\text{Ba}$	0.4	$^{138}\text{Ba}(n,\gamma)^{139}\text{Ba}$		
^{138}Ce	64.8	$^{138}\text{Ce}(t,p)^{140}\text{Ce}$	26.9	$^{140}\text{Ce}-^{138}\text{Ce}$	8.3	$^{138}\text{Pr}^m(\beta^+)^{138}\text{Ce}$
$^{138}\text{Pr}^m$	60.7	$^{138}\text{Pr}^m(\beta^+)^{138}\text{Ce}$	39.3	$^{138}\text{Pr}^m\text{-u}$		
^{138}Nd	96.4	$^{138}\text{Nd}-^{133}\text{Cs}_{1.038}$	3.6	$^{138}\text{Pm}(\beta^+)^{138}\text{Nd}$		
^{138}Pm	72.4	$^{138}\text{Pm-u}$	27.6	$^{138}\text{Pm}(\beta^+)^{138}\text{Nd}$		
^{139}Ba	99.6	$^{138}\text{Ba}(n,\gamma)^{139}\text{Ba}$	0.4	$^{139}\text{Ba}(\beta^-)^{139}\text{La}$		
^{139}La	52.4	$^{139}\text{Ba}(\beta^-)^{139}\text{La}$	47.4	$^{139}\text{La}(n,\gamma)^{140}\text{La}$	0.1	$^{139}\text{Ce}(\epsilon)^{139}\text{La}$
^{139}Ce	98.5	$^{139}\text{Ce}(\epsilon)^{139}\text{La}$	1.5	$^{139}\text{Pr}(\beta^+)^{139}\text{Ce}$		
^{139}Pr	98.3	$^{139}\text{Pr}(\beta^+)^{139}\text{Ce}$	1.7	$^{139}\text{Nd}(\beta^+)^{139}\text{Pr}$		
^{139}Nd	70.3	$^{139}\text{Pm}(\beta^+)^{139}\text{Nd}$	29.7	$^{139}\text{Nd}(\beta^+)^{139}\text{Pr}$		
^{139}Pm	94.6	$^{139}\text{Pm}-^{133}\text{Cs}_{1.045}$	5.4	$^{139}\text{Pm}(\beta^+)^{139}\text{Nd}$		
^{140}Cs	79.1	$^{140}\text{Cs}-^{133}\text{Cs}_{1.053}$	20.9	$^{140}\text{Cs}(\beta^-)^{140}\text{Ba}$		
^{140}Ba	37.4	$^{140}\text{Ba}(\beta^-)^{140}\text{La}$	37.1	$^{140}\text{Ba}-^{133}\text{Cs}_{1.053}$	19.2	$^{140}\text{Cs}(\beta^-)^{140}\text{Ba}$
^{140}La	52.6	$^{139}\text{La}(n,\gamma)^{140}\text{La}$	45.5	$^{140}\text{La}(\beta^-)^{140}\text{Ce}$	1.9	$^{140}\text{Ba}(\beta^-)^{140}\text{La}$
^{140}Ce	54.5	$^{140}\text{Ce}(n,\gamma)^{141}\text{Ce}$	35.3	$^{140}\text{La}(\beta^-)^{140}\text{Ce}$	6.5	$^{140}\text{Ce}(t,p)^{142}\text{Ce}$
^{140}Nd	86.7	$^{140}\text{Nd-u}$	13.3	$^{140}\text{Pm}^m(\beta^+)^{140}\text{Nd}$		
$^{140}\text{Pm}^m$	75.6	$^{140}\text{Pm}^m-^{133}\text{Cs}_{1.053}$	21.5	$^{140}\text{Pm}^m\text{-u}$	3.0	$^{140}\text{Pm}^m(\beta^+)^{140}\text{Nd}$
^{141}Cs	37.4	$^{141}\text{Cs}-^{133}\text{Cs}_{1.060}$	32.5	$^{141}\text{Cs}(\beta^-)^{141}\text{Ba}$	19.8	$^{141}\text{Cs}-^{136}\text{Xe}_{1.037}$
^{141}Ba	57.9	$^{141}\text{Ba-u}$	27.2	$^{141}\text{Ba}-^{133}\text{Cs}_{1.060}$	8.1	$^{141}\text{Cs}(\beta^-)^{141}\text{Ba}$
^{141}La	95.4	$^{141}\text{La}(\beta^-)^{141}\text{Ce}$	4.6	$^{141}\text{Ba}(\beta^-)^{141}\text{La}$		
^{141}Ce	53.5	$^{141}\text{Ce}(\beta^-)^{141}\text{Pr}$	45.4	$^{140}\text{Ce}(n,\gamma)^{141}\text{Ce}$	1.1	$^{141}\text{La}(\beta^-)^{141}\text{Ce}$
^{141}Pr	62.4	$^{141}\text{Pr}(n,\gamma)^{142}\text{Pr}$	37.6	$^{141}\text{Ce}(\beta^-)^{141}\text{Pr}$		
^{141}Sm	49.6	$^{144}\text{Sm}(^3\text{He},^6\text{He})^{141}\text{Sm}$	43.1	$^{141}\text{Sm}-^{133}\text{Cs}_{1.060}$	7.4	$^{141}\text{Eu}(\beta^+)^{141}\text{Sm}$
^{141}Eu	81.8	$^{141}\text{Eu}-^{133}\text{Cs}_{1.060}$	18.2	$^{141}\text{Eu}(\beta^+)^{141}\text{Sm}$		
^{142}Cs	51.6	$^{142}\text{Cs}-^{136}\text{Xe}_{1.044}$	24.4	$^{142}\text{Cs}-^{133}\text{Cs}_{1.068}$	20.4	$^{142}\text{Cs}(\beta^-)^{142}\text{Ba}$
^{142}Ba	48.9	$^{142}\text{Ba-u}$	33.8	$^{142}\text{Ba}-^{133}\text{Cs}_{1.068}$	12.0	$^{142}\text{Cs}(\beta^-)^{142}\text{Ba}$
^{142}La	93.8	$^{142}\text{La}(\beta^-)^{142}\text{Ce}$	6.2	$^{142}\text{Ba}(\beta^-)^{142}\text{La}$		
^{142}Ce	73.4	$^{142}\text{Ce}(n,\gamma)^{143}\text{Ce}$	16.9	$^{140}\text{Ce}(t,p)^{142}\text{Ce}$	8.7	$^{142}\text{Ce}-^{140}\text{Ce}$
^{142}Pr	62.4	$^{142}\text{Pr}(\beta^-)^{142}\text{Nd}$	37.6	$^{141}\text{Pr}(n,\gamma)^{142}\text{Pr}$		
^{142}Nd	80.0	$^{142}\text{Nd}(n,\gamma)^{143}\text{Nd}$	17.5	$^{142}\text{Pr}(\beta^-)^{142}\text{Nd}$	1.5	$^{146}\text{Sm}(\alpha)^{142}\text{Nd}$
^{142}Pm	88.7	$^{142}\text{Pm-u}$	11.3	$^{142}\text{Sm}(\beta^+)^{142}\text{Pm}$		
^{142}Sm	80.6	$^{122}\text{Te}(p,t)^{120}\text{Te}-^{144}\text{Sm}()^{142}\text{Sm}$	11.0	$^{130}\text{Ba}(p,t)^{128}\text{Ba}-^{144}\text{Sm}()^{142}\text{Sm}$	2.8	$^{148}\text{Eu}-^{142}\text{Sm}_{1.042}$
^{143}Cs	72.2	$^{143}\text{Cs}(\beta^-)^{143}\text{Ba}$	15.8	$^{143}\text{Cs}-^{144}\text{Cs}_{.662}$ $^{141}\text{Cs}_{.338}$	8.2	$^{142}\text{Cs}-^{143}\text{Cs}_{.497}$ $^{141}\text{Cs}_{.504}$
^{143}Ba	76.4	$^{143}\text{Ba-u}$	21.6	$^{143}\text{Ba}-^{133}\text{Cs}_{1.075}$	2.0	$^{143}\text{Cs}(\beta^-)^{143}\text{Ba}$
^{143}La	81.9	$^{143}\text{La-u}$	18.1	$^{143}\text{La}(\beta^-)^{143}\text{Ce}$		
^{143}Ce	71.3	$^{143}\text{Ce}(\beta^-)^{143}\text{Pr}$	26.6	$^{142}\text{Ce}(n,\gamma)^{143}\text{Ce}$	2.1	$^{143}\text{La}(\beta^-)^{143}\text{Ce}$
^{143}Pr	87.7	$^{143}\text{Pr}(\beta^-)^{143}\text{Nd}$	12.3	$^{143}\text{Ce}(\beta^-)^{143}\text{Pr}$		
^{143}Nd	59.6	$^{143}\text{Nd}(n,\gamma)^{144}\text{Nd}$	19.9	$^{142}\text{Nd}(n,\gamma)^{143}\text{Nd}$	16.2	$^{176}\text{Lu} \text{ } ^{37}\text{Cl}-^{143}\text{Nd} \text{ } ^{35}\text{Cl}_2$
^{143}Pm	48.9	$^{143}\text{Nd}(^3\text{He},d)^{144}\text{Pm}-^{142}\text{Nd}()^{143}\text{Pm}$	28.3	$^{142}\text{Nd}(^3\text{He},d)^{143}\text{Pm}$	22.7	$^{147}\text{Eu}(\alpha)^{143}\text{Pm}$
^{143}Sm	100.0	$^{144}\text{Sm}(p,d)^{143}\text{Sm}-^{148}\text{Gd}()^{147}\text{Gd}$				

Table II. Influences on primary nuclei (continued, Explanation of Table on page 1673)

Nucleus	Infl. Equation	Infl. Equation	Infl. Equation
^{144}Cs	59.0 $^{144}\text{Cs}(\beta^-)^{144}\text{Ba}$	30.4 $^{144}\text{Cs}-^{145}\text{Cs}_{.662}$ $^{142}\text{Cs}_{.338}$	8.2 $^{143}\text{Cs}-^{144}\text{Cs}_{.662}$ $^{141}\text{Cs}_{.338}$
^{144}Ba	71.6 $^{144}\text{Ba-u}$	26.4 $^{144}\text{Ba}-^{133}\text{Cs}_{1.083}$	2.0 $^{144}\text{Cs}(\beta^-)^{144}\text{Ba}$
^{144}Nd	48.5 $^{144}\text{Nd}(n,\gamma)^{145}\text{Nd}$	40.3 $^{143}\text{Nd}(n,\gamma)^{144}\text{Nd}$	10.9 $^{144}\text{Sm}-^{144}\text{Nd}$
^{144}Pm	57.1 $^{144}\text{Nd}(^3\text{He,d})^{145}\text{Pm}-^{143}\text{Nd}(^0)^{144}\text{Pm}$	42.1 $^{143}\text{Nd}(^3\text{He,d})^{144}\text{Pm}-^{142}\text{Nd}(^0)^{143}\text{Pm}$	0.8 $^{148}\text{Eu}(\alpha)^{144}\text{Pm}$
^{144}Sm	81.0 $^{144}\text{Sm}-^{144}\text{Nd}$	8.2 $^{144}\text{Sm}(n,\gamma)^{145}\text{Sm}$	5.5 $^{148}\text{Gd}(\alpha)^{144}\text{Sm}$
^{144}Eu	46.5 $^{144}\text{Eu}-^{133}\text{Cs}_{1.083}$	38.6 $^{144}\text{Eu}(\beta^+)^{144}\text{Sm}$	14.9 $^{144}\text{Eu-u}$
^{145}Cs	92.6 $^{145}\text{Cs}-^{133}\text{Cs}_{1.090}$	2.8 $^{145}\text{Cs}-^{147}\text{Cs}_{.493}$ $^{143}\text{Cs}_{.507}$	1.6 $^{145}\text{Cs}-^{146}\text{Cs}_{.662}$ $^{143}\text{Cs}_{.338}$
^{145}La	98.1 $^{145}\text{La-u}$	1.9 $^{145}\text{La}(\beta^-)^{145}\text{Ce}$	
^{145}Ce	66.9 $^{145}\text{Ce}(\beta^-)^{145}\text{Pr}$	17.5 $^{145}\text{La}(\beta^-)^{145}\text{Ce}$	15.6 $^{145}\text{Ce-u}$
^{145}Pr	49.5 $^{145}\text{Pr}(\beta^-)^{145}\text{Nd}$	49.5 $^{146}\text{Nd}(d,^3\text{He})^{145}\text{Pr}$	1.0 $^{145}\text{Ce}(\beta^-)^{145}\text{Pr}$
^{145}Nd	50.5 $^{144}\text{Nd}(n,\gamma)^{145}\text{Nd}$	49.5 $^{145}\text{Nd}(n,\gamma)^{146}\text{Nd}$	
^{145}Pm	40.9 $^{145}\text{Sm}(\epsilon)^{145}\text{Pm}$	34.0 $^{144}\text{Nd}(^3\text{He,d})^{145}\text{Pm}-^{143}\text{Nd}(^0)^{144}\text{Pm}$	25.1 $^{144}\text{Nd}(^3\text{He,d})^{145}\text{Pm}$
^{145}Sm	91.0 $^{144}\text{Sm}(n,\gamma)^{145}\text{Sm}$	3.6 $^{149}\text{Gd}(\alpha)^{145}\text{Sm}$	2.8 $^{145}\text{Sm}(\epsilon)^{145}\text{Pm}$
^{145}Eu	90.9 $^{144}\text{Sm}(^3\text{He,d})^{145}\text{Eu}$	9.1 $^{149}\text{Tb}(\alpha)^{145}\text{Eu}$	
^{145}Gd	99.1 $^{145}\text{Gd-u}$	0.9 $^{145}\text{Tb}(\beta^+)^{145}\text{Gd}$	
^{145}Tb	64.2 $^{145}\text{Tb}(\beta^+)^{145}\text{Gd}$	35.8 $^{145}\text{Tb-u}$	
^{146}Cs	81.9 $^{146}\text{Cs}(\beta^-)^{146}\text{Ba}$	11.7 $^{145}\text{Cs}-^{146}\text{Cs}_{.662}$ $^{143}\text{Cs}_{.338}$	6.4 $^{145}\text{Cs}-^{146}\text{Cs}_{.497}$ $^{144}\text{Cs}_{.503}$
^{146}Ba	85.6 $^{146}\text{Ba-u}$	10.3 $^{146}\text{Ba}(\beta^-)^{146}\text{La}$	4.1 $^{146}\text{Cs}(\beta^-)^{146}\text{Ba}$
^{146}La	45.7 $^{146}\text{Ba}(\beta^-)^{146}\text{La}$	36.8 $^{146}\text{La}(\beta^-)^{146}\text{Ce}$	17.5 $^{146}\text{La-u}$
^{146}Ce	90.0 $^{146}\text{Ce-u}$	5.8 $^{146}\text{La}(\beta^-)^{146}\text{Ce}$	4.2 $^{146}\text{Ce}(\beta^-)^{146}\text{Pr}$
^{146}Pr	75.8 $^{146}\text{Ce}(\beta^-)^{146}\text{Pr}$	24.2 $^{146}\text{Pr}(\beta^-)^{146}\text{Nd}$	
^{146}Nd	50.4 $^{145}\text{Nd}(n,\gamma)^{146}\text{Nd}$	47.2 $^{146}\text{Nd}(n,\gamma)^{147}\text{Nd}$	2.3 $^{148}\text{Nd }^{35}\text{Cl}-^{146}\text{Nd }^{37}\text{Cl}$
^{146}Sm	45.5 $^{146}\text{Sm}(\alpha)^{142}\text{Nd}$	30.1 $^{146}\text{Sm}(^3\text{He},\alpha)^{145}\text{Sm}$	12.6 $^{148}\text{Sm}(p,t)^{146}\text{Sm}$
^{146}Eu	45.6 $^{146}\text{Eu}(\beta^+)^{146}\text{Sm}$	23.9 $^{144}\text{Sm}(^3\text{He,p})^{146}\text{Eu}$	19.0 $^{146}\text{Eu}-^{133}\text{Cs}_{1.098}$
^{146}Gd	88.4 $^{148}\text{Gd}(p,t)^{146}\text{Gd}-^{65}\text{Cu}(^0)^{63}\text{Cu}$	7.3 $^{150}\text{Dy}(\alpha)^{146}\text{Gd}$	4.2 $^{147}\text{Tb}(p)^{146}\text{Gd}$
^{146}Tb	80.0 $^{146}\text{Tb}(\beta^+)^{146}\text{Gd}$	20.0 $^{146}\text{Dy}(\beta^+)^{146}\text{Tb}$	
^{146}Dy	99.6 $^{146}\text{Dy}-^{85}\text{Rb}_{1.718}$	0.4 $^{146}\text{Dy}(\beta^+)^{146}\text{Tb}$	
^{146}Ho	50.0 $^{146}\text{Ho}-^{133}\text{Cs}_{1.098}$	50.0 $^{146}\text{Ho}-^{85}\text{Rb}_{1.718}$	
^{146}Er	61.2 $^{146}\text{Er}-^{85}\text{Rb}_{1.718}$	38.8 $^{147}\text{Tm}(p)^{146}\text{Er}$	
^{147}Cs	79.1 $^{147}\text{Cs}-^{133}\text{Cs}_{1.105}$	20.9 $^{145}\text{Cs}-^{147}\text{Cs}_{.493}$ $^{143}\text{Cs}_{.507}$	
^{147}Ce	92.1 $^{147}\text{Ce-u}$	7.9 $^{147}\text{Ce}(\beta^-)^{147}\text{Pr}$	
^{147}Pr	52.5 $^{147}\text{Ce}(\beta^-)^{147}\text{Pr}$	47.5 $^{147}\text{Pr}(\beta^-)^{147}\text{Nd}$	
^{147}Nd	52.6 $^{146}\text{Nd}(n,\gamma)^{147}\text{Nd}$	46.4 $^{147}\text{Nd}(\beta^-)^{147}\text{Pm}$	0.7 $^{148}\text{Nd}(d,t)^{147}\text{Nd}$
^{147}Pm	62.6 $^{147}\text{Pm}(\beta^-)^{147}\text{Sm}$	37.4 $^{147}\text{Nd}(\beta^-)^{147}\text{Pm}$	
^{147}Sm	45.8 $^{147}\text{Sm}(n,\gamma)^{148}\text{Sm}$	35.9 $^{147}\text{Pm}(\beta^-)^{147}\text{Sm}$	16.0 $^{149}\text{Sm }^{35}\text{Cl}-^{147}\text{Sm }^{37}\text{Cl}$
^{147}Eu	56.6 $^{147}\text{Eu}(\beta^+)^{147}\text{Sm}$	19.0 $^{147}\text{Gd}(\beta^+)^{147}\text{Eu}$	14.5 $^{147}\text{Eu}(\alpha)^{143}\text{Pm}$
^{147}Gd	85.0 $^{148}\text{Gd}(p,d)^{147}\text{Gd}-^{148}\text{Sm}(^0)^{147}\text{Sm}$	7.7 $^{147}\text{Gd}(\beta^+)^{147}\text{Eu}$	6.0 $^{104}\text{Ru}(d,t)^{103}\text{Ru}-^{148}\text{Gd}(^0)^{147}\text{Gd}$
^{147}Tb	52.8 $^{147}\text{Tb}-^{133}\text{Cs}_{1.105}$	28.3 $^{147}\text{Tb}(\beta^+)^{147}\text{Gd}$	18.9 $^{147}\text{Tb}(p)^{146}\text{Gd}$
^{147}Ho	52.6 $^{147}\text{Ho}-^{85}\text{Rb}_{1.729}$	47.4 $^{147}\text{Ho}-^{133}\text{Cs}_{1.105}$	
^{147}Tm	55.5 $^{147}\text{Tm}(p)^{146}\text{Er}$	44.5 $^{147}\text{Tm}-^{85}\text{Rb}_{1.729}$	
^{148}Cs	100.0 $^{145}\text{Cs}-^{148}\text{Cs}_{.392}$ $^{143}\text{Cs}_{.608}$		
^{148}Ce	85.5 $^{148}\text{Ce-u}$	14.5 $^{148}\text{Ce}(\beta^-)^{148}\text{Pr}$	
^{148}Pr	66.1 $^{148}\text{Ce}(\beta^-)^{148}\text{Pr}$	33.9 $^{148}\text{Pr}(\beta^-)^{148}\text{Nd}$	
^{148}Nd	60.0 $^{148}\text{Nd }^{35}\text{Cl}-^{146}\text{Nd }^{37}\text{Cl}$	16.5 $^{148}\text{Nd}(d,t)^{147}\text{Nd}$	11.8 $^{148}\text{Nd}(^3\text{He,d})^{149}\text{Pm}$
^{148}Sm	51.4 $^{147}\text{Sm}(n,\gamma)^{148}\text{Sm}$	30.4 $^{150}\text{Sm }^{35}\text{Cl}-^{148}\text{Sm }^{37}\text{Cl}$	17.0 $^{148}\text{Sm}(n,\gamma)^{149}\text{Sm}$
^{148}Eu	51.5 $^{148}\text{Eu}-^{133}\text{Cs}_{1.113}$	38.1 $^{148}\text{Eu}-^{142}\text{Sm}_{1.042}$	10.3 $^{148}\text{Eu}(\alpha)^{144}\text{Pm}$
^{148}Gd	94.5 $^{148}\text{Gd}(\alpha)^{144}\text{Sm}$	3.7 $^{148}\text{Gd}(p,d)^{147}\text{Gd}-^{148}\text{Sm}(^0)^{147}\text{Sm}$	1.4 $^{148}\text{Gd}(p,t)^{146}\text{Gd}-^{65}\text{Cu}(^0)^{63}\text{Cu}$
^{148}Tb	84.9 $^{148}\text{Dy}(\beta^+)^{148}\text{Tb}$	10.2 $^{148}\text{Tb}(\beta^+)^{148}\text{Gd}$	4.9 $^{152}\text{Ho}(\alpha)^{148}\text{Tb}$
^{148}Dy	89.8 $^{148}\text{Dy}-^{133}\text{Cs}_{1.113}$	7.3 $^{148}\text{Dy}(\beta^+)^{148}\text{Tb}$	2.9 $^{152}\text{Er}(\alpha)^{148}\text{Dy}$
^{149}Pm	86.3 $^{149}\text{Pm}(\beta^-)^{149}\text{Sm}$	13.7 $^{148}\text{Nd}(^3\text{He,d})^{149}\text{Pm}$	
^{149}Sm	80.4 $^{149}\text{Sm}(n,\gamma)^{150}\text{Sm}$	8.8 $^{148}\text{Sm}(n,\gamma)^{149}\text{Sm}$	8.7 $^{149}\text{Sm }^{35}\text{Cl}-^{147}\text{Sm }^{37}\text{Cl}$
^{149}Eu	56.1 $^{151}\text{Eu}(p,t)^{149}\text{Eu}$	29.8 $^{149}\text{Gd}(\epsilon)^{149}\text{Eu}$	14.1 $^{149}\text{Eu}(\epsilon)^{149}\text{Sm}$
^{149}Gd	52.5 $^{149}\text{Gd}(\alpha)^{145}\text{Sm}$	21.2 $^{153}\text{Dy}(\alpha)^{149}\text{Gd}$	17.9 $^{149}\text{Gd}(\epsilon)^{149}\text{Eu}$
^{149}Tb	85.8 $^{149}\text{Tb}(\alpha)^{145}\text{Eu}$	10.6 $^{149}\text{Tb}(\beta^+)^{149}\text{Gd}$	3.6 $^{149}\text{Dy}(\beta^+)^{149}\text{Tb}$
^{149}Dy	47.8 $^{149}\text{Dy}(\beta^+)^{149}\text{Tb}$	37.3 $^{149}\text{Dy}-^{142}\text{Sm}_{1.049}$	12.1 $^{149}\text{Ho}(\beta^+)^{149}\text{Dy}$

Table II. Influences on primary nuclei (continued, Explanation of Table on page 1673)

Nucleus	Infl.	Equation	Infl.	Equation	Infl.	Equation
¹⁴⁹ Ho	47.0	¹⁴⁹ Ho(β^+) ¹⁴⁹ Dy	32.1	¹⁵³ Tm(α) ¹⁴⁹ Ho	20.9	¹⁴⁹ Ho-u
¹⁵⁰ Ce	91.9	¹⁵⁰ Ce-u	8.1	¹⁵⁰ Ce(β^-) ¹⁵⁰ Pr		
¹⁵⁰ Pr	83.4	¹⁵⁰ Pr-u	12.0	¹⁵⁰ Pr(β^-) ¹⁵⁰ Nd	4.6	¹⁵⁰ Ce(β^-) ¹⁵⁰ Pr
¹⁵⁰ Nd	99.2	¹⁵⁰ Nd- ¹⁵⁰ Sm	0.4	¹⁵⁰ Nd(n, γ) ¹⁵¹ Nd	0.4	¹⁵⁰ Pr(β^-) ¹⁵⁰ Nd
¹⁵⁰ Sm	64.5	¹⁵⁰ Sm(n, γ) ¹⁵¹ Sm	15.0	¹⁴⁹ Sm(n, γ) ¹⁵⁰ Sm	12.2	¹⁵⁰ Sm- ³⁵ Cl- ¹⁴⁸ Sm- ³⁷ Cl
¹⁵⁰ Eu	53.5	¹⁵⁰ Eu(β^-) ¹⁵⁰ Gd	46.5	¹⁵¹ Eu(p,d) ¹⁵⁰ Eu		
¹⁵⁰ Gd	39.2	¹⁵⁰ Gd(α) ¹⁴⁶ Sm	37.5	¹⁵⁰ Eu(β^-) ¹⁵⁰ Gd	11.7	¹⁵⁰ Tb(β^+) ¹⁵⁰ Gd
¹⁵⁰ Tb	80.5	¹⁵⁰ Tb(α) ¹⁴⁶ Eu	19.5	¹⁵⁰ Tb(β^+) ¹⁵⁰ Gd		
¹⁵⁰ Tb ^m	89.2	¹⁵⁰ Tb ^m -u	10.8	¹⁵⁴ Ho ^m (α) ¹⁵⁰ Tb ^m		
¹⁵⁰ Dy	91.7	¹⁵⁰ Dy(α) ¹⁴⁶ Gd	6.3	¹⁵⁴ Er(α) ¹⁵⁰ Dy	2.0	¹⁵⁰ Ho(ϵ) ¹⁵⁰ Dy
¹⁵⁰ Ho	53.2	¹⁵⁰ Ho- ¹³³ Cs _{1.128}	26.8	¹⁵⁰ Ho(ϵ) ¹⁵⁰ Dy	20.0	¹⁵⁰ Er(β^+) ¹⁵⁰ Ho
¹⁵⁰ Er	62.1	¹⁵⁰ Er(β^+) ¹⁵⁰ Ho	37.9	¹⁵⁰ Er-u		
¹⁵¹ Pr	76.5	¹⁵¹ Pr-u	23.5	¹⁵¹ Pr(β^-) ¹⁵¹ Nd		
¹⁵¹ Nd	99.6	¹⁵⁰ Nd(n, γ) ¹⁵¹ Nd	0.4	¹⁵¹ Pr(β^-) ¹⁵¹ Nd		
¹⁵¹ Pm	80.0	¹⁵⁰ Nd(³ He,d) ¹⁵¹ Pm	20.0	¹⁵¹ Pm(β^-) ¹⁵¹ Sm		
¹⁵¹ Sm	40.6	¹⁵¹ Sm(n, γ) ¹⁵² Sm	35.1	¹⁵⁰ Sm(n, γ) ¹⁵¹ Sm	24.3	¹⁵¹ Sm(β^-) ¹⁵¹ Eu
¹⁵¹ Eu	55.2	¹⁵¹ Sm(β^-) ¹⁵¹ Eu	42.2	¹⁵¹ Eu(n, γ) ¹⁵² Eu	0.9	¹⁵¹ Eu(p,t) ¹⁴⁹ Eu
¹⁵¹ Gd	85.0	¹⁵¹ Gd(ϵ) ¹⁵¹ Eu	15.0	¹⁵¹ Tb(β^+) ¹⁵¹ Gd		
¹⁵¹ Tb	51.4	¹⁵¹ Tb(β^+) ¹⁵¹ Gd	48.6	¹⁵¹ Tb(α) ¹⁴⁷ Eu		
¹⁵² Nd	66.4	¹⁵⁰ Nd(t,p) ¹⁵² Nd	33.6	¹⁵² Nd(β^-) ¹⁵² Pm		
¹⁵² Pm	51.4	¹⁵² Nd(β^-) ¹⁵² Pm	48.6	¹⁵² Pm(β^-) ¹⁵² Sm		
¹⁵² Sm	71.3	¹⁵² Gd- ¹⁵² Sm	17.0	¹⁵¹ Sm(n, γ) ¹⁵² Sm	6.6	¹⁵² Eu(β^+) ¹⁵² Sm
¹⁵² Eu	57.2	¹⁵¹ Eu(n, γ) ¹⁵² Eu	25.0	¹⁵² Eu(β^+) ¹⁵² Sm	17.8	¹⁵² Eu(n, γ) ¹⁵³ Eu
¹⁵² Gd	73.1	¹⁵² Gd(n, γ) ¹⁵³ Gd	26.9	¹⁵² Gd- ¹⁵² Sm		
¹⁵² Ho	95.0	¹⁵² Ho(α) ¹⁴⁸ Tb	5.0	¹⁵⁶ Tm(α) ¹⁵² Ho		
¹⁵² Er	97.0	¹⁵² Er(α) ¹⁴⁸ Dy	3.0	¹⁵⁶ Yb(α) ¹⁵² Er		
¹⁵² Tm	100.0	¹⁵² Tm-u				
¹⁵² Yb	100.0	¹⁵² Yb(β^+) ¹⁵² Tm				
¹⁵³ Pr	79.7	¹⁵³ Pr-u	10.2	¹⁵³ Pr- ⁸⁶ Kr _{1.779}	10.2	¹⁵³ Pr- ⁸⁰ Kr _{1.913}
¹⁵³ Nd	35.8	¹⁵³ Nd- ⁸⁰ Kr _{1.913}	32.2	¹⁵³ Nd-u	31.0	¹⁵³ Nd- ⁸⁶ Kr _{1.779}
¹⁵³ Pm	33.3	¹⁵⁴ Sm(d, ³ He) ¹⁵³ Pm	17.9	¹⁵³ Pm-u	17.9	¹⁵³ Pm- ⁸⁶ Kr _{1.779}
¹⁵³ Eu	81.8	¹⁵² Eu(n, γ) ¹⁵³ Eu	18.2	¹⁵³ Eu(n, γ) ¹⁵⁴ Eu		
¹⁵³ Gd	73.3	¹⁵³ Gd(n, γ) ¹⁵⁴ Gd	25.9	¹⁵² Gd(n, γ) ¹⁵³ Gd	0.8	¹⁵³ Tb(β^+) ¹⁵³ Gd
¹⁵³ Tb	58.6	¹⁵³ Tb(β^+) ¹⁵³ Gd	41.4	¹⁵³ Dy(β^+) ¹⁵³ Tb		
¹⁵³ Dy	52.1	¹⁵³ Dy(β^+) ¹⁵³ Tb	47.9	¹⁵³ Dy(α) ¹⁴⁹ Gd		
¹⁵³ Er	97.1	¹⁵³ Er(α) ¹⁴⁹ Dy	2.9	¹⁵⁷ Yb(α) ¹⁵³ Er		
¹⁵³ Tm	67.7	¹⁵³ Tm(α) ¹⁴⁹ Ho	32.3	¹⁵⁷ Lu ^m (α) ¹⁵³ Tm		
¹⁵⁴ Sm	78.3	¹⁵⁴ Sm- ³⁵ Cl- ¹⁵² Sm- ³⁷ Cl	20.7	¹⁵⁴ Sm- ¹⁵⁴ Gd	0.9	¹⁵⁴ Sm(d, ³ He) ¹⁵³ Pm
¹⁵⁴ Eu	80.0	¹⁵³ Eu(n, γ) ¹⁵⁴ Eu	16.0	¹⁵⁴ Eu(β^-) ¹⁵⁴ Gd	3.6	¹⁵⁴ Eu(n, γ) ¹⁵⁵ Eu
¹⁵⁴ Gd	70.7	¹⁵⁴ Gd(n, γ) ¹⁵⁵ Gd	25.0	¹⁵³ Gd(n, γ) ¹⁵⁴ Gd	3.6	¹⁵⁴ Eu(β^-) ¹⁵⁴ Gd
¹⁵⁴ Dy	81.3	¹⁵⁴ Dy(α) ¹⁵⁰ Gd	17.9	¹⁵⁴ Dy- ¹³³ Cs _{1.158}	0.8	¹⁵⁴ Ho ^m (β^+) ¹⁵⁴ Dy
¹⁵⁴ Ho ^m	89.0	¹⁵⁴ Ho ^m (α) ¹⁵⁰ Tb ^m	11.0	¹⁵⁴ Ho ^m (β^+) ¹⁵⁴ Dy		
¹⁵⁴ Er	91.4	¹⁵⁴ Er(α) ¹⁵⁰ Dy	8.6	¹⁵⁸ Yb(α) ¹⁵⁴ Er		
¹⁵⁴ Yb	100.0	¹⁵⁴ Yb(α) ¹⁵⁰ Er				
¹⁵⁵ Pr	35.5	¹⁵⁵ Pr-u	33.3	¹⁵⁵ Pr- ⁸⁶ Kr _{1.802}	31.2	¹⁵⁵ Pr- ⁸⁰ Kr _{1.938}
¹⁵⁵ Nd	33.4	¹⁵⁵ Nd-u	33.4	¹⁵⁵ Nd- ⁸⁶ Kr _{1.802}	33.2	¹⁵⁵ Nd- ⁸⁰ Kr _{1.938}
¹⁵⁵ Pm	33.7	¹⁵⁵ Pm- ⁸⁰ Kr _{1.938}	33.1	¹⁵⁵ Pm-u	33.1	¹⁵⁵ Pm- ⁸⁶ Kr _{1.802}
¹⁵⁵ Eu	96.2	¹⁵⁴ Eu(n, γ) ¹⁵⁵ Eu	3.8	¹⁵⁸ Gd(t, α) ¹⁵⁷ Eu- ¹⁵⁶ Gd() ¹⁵⁵ Eu		
¹⁵⁵ Gd	49.7	¹⁵⁵ Gd(n, γ) ¹⁵⁶ Gd	28.9	¹⁵⁴ Gd(n, γ) ¹⁵⁵ Gd	20.0	¹⁵⁵ Gd O-C ₁₅
¹⁵⁵ Dy	92.0	¹⁵⁶ Dy(d,t) ¹⁵⁵ Dy	8.0	¹⁵⁵ Ho(β^+) ¹⁵⁵ Dy		
¹⁵⁵ Ho	60.8	¹⁵⁵ Ho(β^+) ¹⁵⁵ Dy	39.2	¹⁵⁵ Ho-u		
¹⁵⁶ Pm	35.2	¹⁵⁶ Pm- ⁸⁰ Kr _{1.950}	32.9	¹⁵⁶ Pm- ⁸⁶ Kr _{1.814}	31.9	¹⁵⁶ Pm-u
¹⁵⁶ Sm	86.4	¹⁵⁶ Sm(β^-) ¹⁵⁶ Eu	13.6	¹⁵⁴ Sm(t,p) ¹⁵⁶ Sm		
¹⁵⁶ Eu	68.2	¹⁵⁶ Eu(β^-) ¹⁵⁶ Gd	27.8	¹⁵⁴ Eu(t,p) ¹⁵⁶ Eu	4.0	¹⁵⁶ Sm(β^-) ¹⁵⁶ Eu
¹⁵⁶ Gd	53.7	¹⁵⁶ Gd(n, γ) ¹⁵⁷ Gd	50.2	¹⁵⁵ Gd(n, γ) ¹⁵⁶ Gd	0.5	¹⁵⁶ Dy- ¹⁵⁶ Gd

Table II. Influences on primary nuclei (continued, Explanation of Table on page 1673)

Nucleus	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{156}Tb	100.0	$^{155}\text{Gd}(\alpha, t)^{156}\text{Tb} - ^{158}\text{Gd}()^{159}\text{Tb}$				
^{156}Dy	99.5	$^{156}\text{Dy} - ^{156}\text{Gd}$	0.3	$^{156}\text{Dy}(d, p)^{157}\text{Dy}$	0.2	$^{156}\text{Dy}(d, t)^{155}\text{Dy}$
^{156}Er	77.7	$^{156}\text{Er} - u$	22.3	$^{156}\text{Tm}(\beta^+)^{156}\text{Er}$		
^{156}Tm	93.5	$^{156}\text{Tm}(\alpha)^{152}\text{Ho}$	6.5	$^{156}\text{Tm}(\beta^+)^{156}\text{Er}$		
^{156}Yb	96.6	$^{156}\text{Yb}(\alpha)^{152}\text{Er}$	3.4	$^{160}\text{Hf}(\alpha)^{156}\text{Yb}$		
^{156}Hf	100.0	$^{156}\text{Hf}(\alpha)^{152}\text{Yb}$				
^{157}Nd	33.8	$^{157}\text{Nd} - ^{86}\text{Kr}_{1.826}$	33.8	$^{157}\text{Nd} - ^{80}\text{Kr}_{1.963}$	32.4	$^{157}\text{Nd} - u$
^{157}Pm	33.5	$^{157}\text{Pm} - u$	33.5	$^{157}\text{Pm} - ^{86}\text{Kr}_{1.826}$	33.0	$^{157}\text{Pm} - ^{80}\text{Kr}_{1.963}$
^{157}Sm	34.2	$^{157}\text{Sm} - ^{80}\text{Kr}_{1.963}$	32.9	$^{157}\text{Sm} - u$	32.9	$^{157}\text{Sm} - ^{86}\text{Kr}_{1.826}$
^{157}Eu	66.0	$^{158}\text{Gd}(t, \alpha)^{157}\text{Eu} - ^{156}\text{Gd}()^{155}\text{Eu}$	34.0	$^{160}\text{Gd}(t, \alpha)^{159}\text{Eu} - ^{158}\text{Gd}()^{157}\text{Eu}$		
^{157}Gd	45.1	$^{156}\text{Gd}(n, \gamma)^{157}\text{Gd}$	36.4	$^{157}\text{Gd}(n, \gamma)^{158}\text{Gd}$	12.4	$^{157}\text{Gd} \text{ O} - \text{C}_{15}$
^{157}Tb	96.1	$^{157}\text{Tb}(\epsilon)^{157}\text{Gd}$	3.9	$^{156}\text{Gd}(\alpha, t)^{157}\text{Tb} - ^{158}\text{Gd}()^{159}\text{Tb}$		
^{157}Dy	52.3	$^{156}\text{Dy}(d, p)^{157}\text{Dy}$	46.8	$^{158}\text{Dy}(d, t)^{157}\text{Dy}$	0.9	$^{157}\text{Ho}(\beta^+)^{157}\text{Dy}$
^{157}Ho	70.5	$^{157}\text{Ho} - u$	21.8	$^{157}\text{Ho}(\beta^+)^{157}\text{Dy}$	7.8	$^{157}\text{Er}(\beta^+)^{157}\text{Ho}$
^{157}Er	80.2	$^{157}\text{Er} - u$	10.8	$^{157}\text{Tm}(\beta^+)^{157}\text{Er}$	9.0	$^{157}\text{Er}(\beta^+)^{157}\text{Ho}$
^{157}Tm	88.0	$^{157}\text{Tm} - u$	12.0	$^{157}\text{Tm}(\beta^+)^{157}\text{Er}$		
^{157}Yb	96.1	$^{157}\text{Yb}(\alpha)^{153}\text{Er}$	3.9	$^{161}\text{Hf}(\alpha)^{157}\text{Yb}$		
^{157}Lu	74.3	$^{157}\text{Lu}^m(\text{IT})^{157}\text{Lu}$	25.7	$^{157}\text{Lu} - u$		
$^{157}\text{Lu}^m$	67.2	$^{157}\text{Lu}^m(\alpha)^{153}\text{Tm}$	25.3	$^{157}\text{Lu}^m(\text{IT})^{157}\text{Lu}$	7.5	$^{161}\text{Ta}^m(\alpha)^{157}\text{Lu}^m$
^{158}Pm	33.4	$^{158}\text{Pm} - u$	33.4	$^{158}\text{Pm} - ^{86}\text{Kr}_{1.837}$	33.3	$^{158}\text{Pm} - ^{80}\text{Kr}_{1.975}$
^{158}Sm	32.4	$^{158}\text{Sm} - ^{80}\text{Kr}_{1.975}$	31.2	$^{158}\text{Sm} - ^{86}\text{Kr}_{1.837}$	30.6	$^{158}\text{Sm} - u$
^{158}Eu	41.9	$^{158}\text{Sm}(\beta^-)^{158}\text{Eu}$	19.4	$^{158}\text{Eu} - u$	19.4	$^{158}\text{Eu} - ^{86}\text{Kr}_{1.837}$
^{158}Gd	63.1	$^{157}\text{Gd}(n, \gamma)^{158}\text{Gd}$	13.2	$^{158}\text{Gd} \text{ O} - \text{C}_{15}$	10.8	$^{160}\text{Gd}^{35}\text{Cl} - ^{158}\text{Gd}^{37}\text{Cl}$
^{158}Tb	40.0	$^{157}\text{Gd}(\alpha, t)^{158}\text{Tb} - ^{158}\text{Gd}()^{159}\text{Tb}$	39.9	$^{159}\text{Tb}(d, t)^{158}\text{Tb} - ^{164}\text{Dy}()^{163}\text{Dy}$	17.8	$^{158}\text{Gd}(d, t)^{157}\text{Gd} - ^{159}\text{Tb}()^{158}\text{Tb}$
^{158}Dy	61.6	$^{160}\text{Dy}(p, t)^{158}\text{Dy}$	17.0	$^{160}\text{Dy}^{35}\text{Cl} - ^{158}\text{Dy}^{37}\text{Cl}$	15.4	$^{158}\text{Tb}(\beta^-)^{158}\text{Dy}$
^{158}Er	81.4	$^{158}\text{Er} - u$	18.6	$^{158}\text{Tm}(\beta^+)^{158}\text{Er}$		
^{158}Tm	81.4	$^{158}\text{Tm} - u$	18.6	$^{158}\text{Tm}(\beta^+)^{158}\text{Er}$		
^{158}Yb	71.1	$^{158}\text{Yb}(\alpha)^{154}\text{Er}$	14.6	$^{162}\text{Hf}(\alpha)^{158}\text{Yb}$	14.3	$^{158}\text{Yb} - ^{142}\text{Sm}_{1.113}$
^{158}Hf	100.0	$^{158}\text{Hf}(\alpha)^{154}\text{Yb}$				
^{159}Pm	35.8	$^{159}\text{Pm} - u$	32.2	$^{159}\text{Pm} - ^{86}\text{Kr}_{1.849}$	32.0	$^{159}\text{Pm} - ^{80}\text{Kr}_{1.988}$
^{159}Sm	33.5	$^{159}\text{Sm} - u$	33.5	$^{159}\text{Sm} - ^{86}\text{Kr}_{1.849}$	32.9	$^{159}\text{Sm} - ^{80}\text{Kr}_{1.988}$
^{159}Eu	35.2	$^{160}\text{Gd}(t, \alpha)^{159}\text{Eu} - ^{158}\text{Gd}()^{157}\text{Eu}$	21.8	$^{159}\text{Eu} - u$	21.8	$^{159}\text{Eu} - ^{86}\text{Kr}_{1.849}$
^{159}Gd	96.4	$^{158}\text{Gd}(n, \gamma)^{159}\text{Gd}$	3.6	$^{159}\text{Gd}(\beta^-)^{159}\text{Tb}$		
^{159}Tb	25.2	$^{159}\text{Tb}^{35}\text{Cl} - ^{157}\text{Gd}^{37}\text{Cl}$	22.4	$^{159}\text{Gd}(\beta^-)^{159}\text{Tb}$	12.1	$^{156}\text{Gd}(\alpha, t)^{157}\text{Tb} - ^{158}\text{Gd}()^{159}\text{Tb}$
^{159}Dy	72.5	$^{159}\text{Dy}(\epsilon)^{159}\text{Tb}$	27.5	$^{161}\text{Dy}(p, t)^{159}\text{Dy}$		
^{160}Sm	33.5	$^{160}\text{Sm} - u$	33.5	$^{160}\text{Sm} - ^{86}\text{Kr}_{1.860}$	32.9	$^{160}\text{Sm} - ^{80}\text{Kr}_{2.000}$
^{160}Eu	36.0	$^{160}\text{Eu} - u$	32.1	$^{160}\text{Eu} - ^{86}\text{Kr}_{1.860}$	31.9	$^{160}\text{Eu} - ^{80}\text{Kr}_{2.000}$
^{160}Gd	39.4	$^{160}\text{Gd}^{35}\text{Cl} - ^{158}\text{Gd}^{37}\text{Cl}$	30.5	$^{160}\text{Gd}(\alpha, t)^{161}\text{Tb} - ^{158}\text{Gd}()^{159}\text{Tb}$	14.9	$^{160}\text{Gd} - ^{160}\text{Dy}$
^{160}Tb	93.9	$^{159}\text{Tb}(n, \gamma)^{160}\text{Tb}$	6.1	$^{160}\text{Tb}(n, \gamma)^{161}\text{Tb}$		
^{160}Dy	64.3	$^{160}\text{Dy}(n, \gamma)^{161}\text{Dy}$	32.4	$^{160}\text{Gd} - ^{160}\text{Dy}$	2.6	$^{160}\text{Dy}(p, t)^{158}\text{Dy}$
^{160}Er	94.8	$^{160}\text{Er} - u$	5.2	$^{160}\text{Tm}(\beta^+)^{160}\text{Er}$		
^{160}Tm	88.9	$^{160}\text{Tm} - u$	11.1	$^{160}\text{Tm}(\beta^+)^{160}\text{Er}$		
^{160}Hf	96.4	$^{160}\text{Hf}(\alpha)^{156}\text{Yb}$	3.6	$^{164}\text{W}(\alpha)^{160}\text{Hf}$		
^{160}W	100.0	$^{160}\text{W}(\alpha)^{156}\text{Hf}$				
^{161}Sm	36.6	$^{161}\text{Sm} - ^{80}\text{Kr}_{2.013}$	31.7	$^{161}\text{Sm} - u$	31.7	$^{161}\text{Sm} - ^{86}\text{Kr}_{1.872}$
^{161}Eu	34.5	$^{161}\text{Eu} - u$	34.3	$^{161}\text{Eu} - ^{80}\text{Kr}_{2.013}$	31.2	$^{161}\text{Eu} - ^{86}\text{Kr}_{1.872}$
^{161}Tb	78.0	$^{160}\text{Tb}(n, \gamma)^{161}\text{Tb}$	22.0	$^{160}\text{Gd}(\alpha, t)^{161}\text{Tb} - ^{158}\text{Gd}()^{159}\text{Tb}$		
^{161}Dy	35.6	$^{160}\text{Dy}(n, \gamma)^{161}\text{Dy}$	29.9	$^{161}\text{Dy}(n, \gamma)^{162}\text{Dy}$	19.0	$^{161}\text{Dy}^{35}\text{Cl} - ^{159}\text{Tb}^{37}\text{Cl}$
^{161}Ho	100.0	$^{160}\text{Dy}({}^3\text{He}, d)^{161}\text{Ho} - ^{164}\text{Dy}()^{165}\text{Ho}$				
^{161}Hf	65.1	$^{161}\text{Hf} - u$	19.4	$^{161}\text{Hf}(\alpha)^{157}\text{Yb}$	15.5	$^{165}\text{W}(\alpha)^{161}\text{Hf}$
$^{161}\text{Ta}^m$	88.8	$^{165}\text{Re}^m(\alpha)^{161}\text{Ta}^m$	11.2	$^{161}\text{Ta}^m(\alpha)^{157}\text{Lu}^m$		
^{161}Re	79.2	$^{161}\text{Re}(p)^{160}\text{W}$	20.9	$^{161}\text{Re}^m(\text{IT})^{161}\text{Re}$		
$^{161}\text{Re}^m$	78.2	$^{161}\text{Re}^m(\text{IT})^{161}\text{Re}$	21.8	$^{165}\text{Ir}^m(\alpha)^{161}\text{Re}^m$		
^{162}Dy	70.0	$^{161}\text{Dy}(n, \gamma)^{162}\text{Dy}$	46.5	$^{162}\text{Dy}(n, \gamma)^{163}\text{Dy}$		
^{162}Ho	100.0	$^{161}\text{Dy}({}^3\text{He}, d)^{162}\text{Ho} - ^{164}\text{Dy}()^{165}\text{Ho}$				

Table II. Influences on primary nuclei (continued, Explanation of Table on page 1673)

Nucleus	Infl. Equation	Infl. Equation	Infl. Equation
^{162}Er	99.9 $^{162}\text{Er}-^{162}\text{Dy}$	0.1 $^{162}\text{Er}(\text{d,p})^{163}\text{Er}$	
^{162}Hf	80.7 $^{162}\text{Hf}(\alpha)^{158}\text{Yb}$	19.3 $^{166}\text{W}(\alpha)^{162}\text{Hf}$	
^{162}W	100.0 $^{162}\text{W}(\alpha)^{158}\text{Hf}$		
^{163}Gd	36.4 $^{163}\text{Gd}-^{86}\text{Kr}_{1.895}$	32.0 $^{163}\text{Gd-u}$	31.7 $^{163}\text{Gd}-^{80}\text{Kr}_{2.038}$
^{163}Dy	53.4 $^{162}\text{Dy}(\text{n},\gamma)^{163}\text{Dy}$	30.7 $^{163}\text{Dy}(\text{n},\gamma)^{164}\text{Dy}$	16.6 $^{163}\text{Ho}(\varepsilon)^{163}\text{Dy}$
^{163}Ho	83.3 $^{163}\text{Ho}(\varepsilon)^{163}\text{Dy}$	16.6 $^{162}\text{Dy}(\text{}^3\text{He,d})^{163}\text{Ho}-^{164}\text{Dy}()^{165}\text{Ho}$	
^{163}Er	58.2 $^{163}\text{Er}(\beta^+)^{163}\text{Ho}$	20.9 $^{164}\text{Er}(\text{d,t})^{163}\text{Er}$	20.9 $^{162}\text{Er}(\text{d,p})^{163}\text{Er}$
^{163}Hf	78.6 $^{163}\text{Hf-u}$	21.4 $^{167}\text{W}(\alpha)^{163}\text{Hf}$	
^{164}Dy	68.9 $^{163}\text{Dy}(\text{n},\gamma)^{164}\text{Dy}$	16.6 $^{162}\text{Dy}(\text{}^3\text{He,d})^{163}\text{Ho}-^{164}\text{Dy}()^{165}\text{Ho}$	7.8 $^{158}\text{Gd}(\alpha,\text{t})^{159}\text{Tb}-^{164}\text{Dy}()^{165}\text{Ho}$
^{164}Ho	67.1 $^{163}\text{Dy}(\text{}^3\text{He,d})^{164}\text{Ho}-^{164}\text{Dy}()^{165}\text{Ho}$	32.9 $^{165}\text{Ho}(\gamma,\text{n})^{164}\text{Ho}$	
^{164}Er	94.2 $^{164}\text{Er}-^{164}\text{Dy}$	6.0 $^{164}\text{Er}(\text{n},\gamma)^{165}\text{Er}$	3.3 $^{166}\text{Er }^{35}\text{Cl}-^{164}\text{Er }^{37}\text{Cl}$
^{164}Tm	76.2 $^{164}\text{Tm-u}$	23.8 $^{164}\text{Tm}(\beta^+)^{164}\text{Er}$	
^{164}Hf	68.0 $^{168}\text{W}(\alpha)^{164}\text{Hf}$	32.0 $^{164}\text{Hf-u}$	
^{164}W	96.3 $^{164}\text{W}(\alpha)^{160}\text{Hf}$	3.7 $^{168}\text{Os}(\alpha)^{164}\text{W}$	
^{164}Os	80.0 $^{164}\text{Os}(\alpha)^{160}\text{W}$	20.0 $^{165}\text{Ir}^m(\text{p})^{164}\text{Os}$	
^{165}Ho	55.0 $^{162}\text{Dy}(\text{}^3\text{He,d})^{163}\text{Ho}-^{164}\text{Dy}()^{165}\text{Ho}$	29.1 $^{165}\text{Ho}(\text{n},\gamma)^{166}\text{Ho}$	10.3 $^{169}\text{Tm }^{35}\text{Cl}_2-^{165}\text{Ho }^{37}\text{Cl}_2$
^{165}Er	88.2 $^{164}\text{Er}(\text{n},\gamma)^{165}\text{Er}$	7.3 $^{165}\text{Tm}(\beta^+)^{165}\text{Er}$	4.5 $^{167}\text{Er}(\text{p,t})^{165}\text{Er}$
^{165}Tm	52.3 $^{165}\text{Tm}(\beta^+)^{165}\text{Er}$	47.7 $^{164}\text{Er}(\alpha,\text{t})^{165}\text{Tm}-^{168}\text{Er}()^{169}\text{Tm}$	
^{165}Yb	90.2 $^{165}\text{Yb-u}$	9.8 $^{165}\text{Lu}(\beta^+)^{165}\text{Yb}$	
^{165}Lu	90.2 $^{165}\text{Lu-u}$	9.8 $^{165}\text{Lu}(\beta^+)^{165}\text{Yb}$	
^{165}Ta	75.4 $^{169}\text{Re}^m(\alpha)^{165}\text{Ta}$	24.6 $^{165}\text{Ta-u}$	
^{165}W	79.9 $^{165}\text{W-u}$	20.1 $^{165}\text{W}(\alpha)^{161}\text{Hf}$	
$^{165}\text{Re}^m$	89.0 $^{169}\text{Ir}^m(\alpha)^{165}\text{Re}^m$	11.0 $^{165}\text{Re}^m(\alpha)^{161}\text{Ta}^m$	
$^{165}\text{Ir}^m$	51.6 $^{165}\text{Ir}^m(\text{p})^{164}\text{Os}$	48.4 $^{165}\text{Ir}^m(\alpha)^{161}\text{Re}^m$	
^{166}Ho	71.0 $^{165}\text{Ho}(\text{n},\gamma)^{166}\text{Ho}$	29.1 $^{166}\text{Ho}(\beta^-)^{166}\text{Er}$	
^{166}Er	46.3 $^{166}\text{Ho}(\beta^-)^{166}\text{Er}$	45.3 $^{166}\text{Er}(\text{n},\gamma)^{167}\text{Er}$	8.7 $^{166}\text{Er }^{35}\text{Cl}-^{164}\text{Er }^{37}\text{Cl}$
^{166}W	77.6 $^{166}\text{W}(\alpha)^{162}\text{Hf}$	11.6 $^{166}\text{W-u}$	10.8 $^{170}\text{Os}(\alpha)^{166}\text{W}$
^{166}Os	100.0 $^{166}\text{Os}(\alpha)^{162}\text{W}$		
^{167}Er	54.0 $^{166}\text{Er}(\text{n},\gamma)^{167}\text{Er}$	25.3 $^{167}\text{Er}(\text{n},\gamma)^{168}\text{Er}$	8.8 $^{169}\text{Tm }^{35}\text{Cl}-^{167}\text{Er }^{37}\text{Cl}$
^{167}Tm	98.9 $^{166}\text{Er}(\alpha,\text{t})^{167}\text{Tm}-^{168}\text{Er}()^{169}\text{Tm}$	1.1 $^{167}\text{Yb}(\beta^+)^{167}\text{Tm}$	
^{167}Yb	89.1 $^{167}\text{Yb}(\beta^+)^{167}\text{Tm}$	10.9 $^{168}\text{Yb}(\text{d,t})^{167}\text{Yb}$	
^{167}W	89.8 $^{171}\text{Os}(\alpha)^{167}\text{W}$	10.2 $^{167}\text{W}(\alpha)^{163}\text{Hf}$	
^{167}Ir	76.6 $^{167}\text{Ir}(\text{p})^{166}\text{Os}$	23.4 $^{167}\text{Ir}^m(\text{IT})^{167}\text{Ir}$	
$^{167}\text{Ir}^m$	70.3 $^{167}\text{Ir}^m(\text{IT})^{167}\text{Ir}$	29.7 $^{171}\text{Au}^m(\alpha)^{167}\text{Ir}^m$	
^{168}Er	74.4 $^{167}\text{Er}(\text{n},\gamma)^{168}\text{Er}$	10.0 $^{170}\text{Er}(\alpha,\text{t})^{171}\text{Tm}-^{168}\text{Er}()^{169}\text{Tm}$	7.2 $^{164}\text{Er}(\alpha,\text{t})^{165}\text{Tm}-^{168}\text{Er}()^{169}\text{Tm}$
^{168}Tm	100.0 $^{167}\text{Er}(\alpha,\text{t})^{168}\text{Tm}-^{168}\text{Er}()^{169}\text{Tm}$		
^{168}Yb	99.6 $^{168}\text{Yb}-^{168}\text{Er}$	0.4 $^{168}\text{Yb}(\text{d,t})^{167}\text{Yb}$	
^{168}W	58.5 $^{172}\text{Os}(\alpha)^{168}\text{W}$	22.6 $^{168}\text{W-u}$	18.9 $^{168}\text{W}(\alpha)^{164}\text{Hf}$
^{168}Os	96.0 $^{168}\text{Os}(\alpha)^{164}\text{W}$	4.0 $^{172}\text{Pt}(\alpha)^{168}\text{Os}$	
^{169}Tm	41.7 $^{169}\text{Tm}(\text{n},\gamma)^{170}\text{Tm}$	15.8 $^{170}\text{Er}(\alpha,\text{t})^{171}\text{Tm}-^{168}\text{Er}()^{169}\text{Tm}$	15.4 $^{169}\text{Tm }^{35}\text{Cl}_2-^{165}\text{Ho }^{37}\text{Cl}_2$
^{169}W	69.5 $^{173}\text{Os}(\alpha)^{169}\text{W}$	30.5 $^{169}\text{W-u}$	
$^{169}\text{Re}^m$	76.3 $^{173}\text{Ir}(\alpha)^{169}\text{Re}^m$	23.7 $^{169}\text{Re}^m(\alpha)^{165}\text{Ta}$	
$^{169}\text{Ir}^m$	89.3 $^{173}\text{Au}^m(\alpha)^{169}\text{Ir}^m$	10.7 $^{169}\text{Ir}^m(\alpha)^{165}\text{Re}^m$	
^{170}Er	59.9 $^{170}\text{Er}(\alpha,\text{t})^{171}\text{Tm}-^{168}\text{Er}()^{169}\text{Tm}$	27.8 $^{170}\text{Er}(\text{n},\gamma)^{171}\text{Er}$	10.9 $^{170}\text{Er }^{35}\text{Cl}-^{168}\text{Er }^{37}\text{Cl}$
^{170}Tm	57.6 $^{169}\text{Tm}(\text{n},\gamma)^{170}\text{Tm}$	42.4 $^{170}\text{Tm}(\beta^-)^{170}\text{Yb}$	
^{170}Yb	67.2 $^{170}\text{Yb}(\text{n},\gamma)^{171}\text{Yb}$	38.6 $^{170}\text{Tm}(\beta^-)^{170}\text{Yb}$	
^{170}W	77.7 $^{174}\text{Os}(\alpha)^{170}\text{W}$	22.3 $^{170}\text{W-u}$	
^{170}Os	88.4 $^{170}\text{Os}(\alpha)^{166}\text{W}$	11.6 $^{170}\text{Os-u}$	
^{170}Pt	84.4 $^{170}\text{Pt}(\alpha)^{166}\text{Os}$	15.6 $^{171}\text{Au}^m(\text{p})^{170}\text{Pt}$	
^{171}Er	70.4 $^{170}\text{Er}(\text{n},\gamma)^{171}\text{Er}$	29.6 $^{171}\text{Er}(\beta^-)^{171}\text{Tm}$	
^{171}Tm	92.6 $^{171}\text{Tm}(\beta^-)^{171}\text{Yb}$	11.1 $^{171}\text{Er}(\beta^-)^{171}\text{Tm}$	
^{171}Yb	62.9 $^{171}\text{Yb}(\text{n},\gamma)^{172}\text{Yb}$	21.8 $^{170}\text{Yb}(\text{n},\gamma)^{171}\text{Yb}$	8.2 $^{171}\text{Lu}(\beta^+)^{171}\text{Yb}$
^{171}Lu	67.4 $^{170}\text{Yb}(\alpha,\text{t})^{171}\text{Lu}-^{174}\text{Yb}()^{175}\text{Lu}$	32.6 $^{171}\text{Lu}(\beta^+)^{171}\text{Yb}$	
^{171}Os	81.3 $^{171}\text{Os-u}$	9.6 $^{171}\text{Os}(\alpha)^{167}\text{W}$	9.0 $^{175}\text{Pt}(\alpha)^{171}\text{Os}$
$^{171}\text{Au}^m$	61.0 $^{171}\text{Au}^m(\text{p})^{170}\text{Pt}$	39.0 $^{171}\text{Au}^m(\alpha)^{167}\text{Ir}^m$	

Table II. Influences on primary nuclei (continued, Explanation of Table on page 1673)

Nucleus	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{172}Er	87.4	$^{170}\text{Er}(t,p)^{172}\text{Er}$	12.6	$^{172}\text{Er}(\beta^-)^{172}\text{Tm}$		
^{172}Tm	70.0	$^{172}\text{Er}(\beta^-)^{172}\text{Tm}$	30.0	$^{172}\text{Tm}(\beta^-)^{172}\text{Yb}$		
^{172}Yb	57.8	$^{172}\text{Yb}(n,\gamma)^{173}\text{Yb}$	36.7	$^{171}\text{Yb}(n,\gamma)^{172}\text{Yb}$	5.2	$^{172}\text{Yb } ^{35}\text{Cl}_2 - ^{168}\text{Er } ^{37}\text{Cl}_2$
^{172}Lu	100.0	$^{171}\text{Yb}(\alpha,t)^{172}\text{Lu} - ^{174}\text{Yb}()^{175}\text{Lu}$				
^{172}Re	53.1	$^{176}\text{Ir}(\alpha)^{172}\text{Re}$	46.9	$^{172}\text{Re-u}$		
^{172}Os	65.8	$^{176}\text{Pt}(\alpha)^{172}\text{Os}$	34.2	$^{172}\text{Os}(\alpha)^{168}\text{W}$		
^{172}Pt	95.5	$^{172}\text{Pt}(\alpha)^{168}\text{Os}$	4.5	$^{176}\text{Hg}(\alpha)^{172}\text{Pt}$		
^{173}Yb	45.7	$^{173}\text{Yb}(n,\gamma)^{174}\text{Yb}$	40.3	$^{172}\text{Yb}(n,\gamma)^{173}\text{Yb}$	9.5	$^{175}\text{Lu } ^{35}\text{Cl} - ^{173}\text{Yb } ^{37}\text{Cl}$
^{173}Lu	100.0	$^{172}\text{Yb}(\alpha,t)^{173}\text{Lu} - ^{174}\text{Yb}()^{175}\text{Lu}$				
^{173}Os	43.9	$^{177}\text{Pt}(\alpha)^{173}\text{Os}$	28.7	$^{173}\text{Os-u}$	27.4	$^{173}\text{Os}(\alpha)^{169}\text{W}$
^{173}Ir	86.4	$^{177}\text{Au}(\alpha)^{173}\text{Ir}$	13.6	$^{173}\text{Ir}(\alpha)^{169}\text{Re}^m$		
$^{173}\text{Au}^m$	89.6	$^{177}\text{Tl}^m(\alpha)^{173}\text{Au}^m$	10.4	$^{173}\text{Au}^m(\alpha)^{169}\text{Ir}^m$		
^{174}Yb	54.3	$^{173}\text{Yb}(n,\gamma)^{174}\text{Yb}$	37.5	$^{174}\text{Yb}(n,\gamma)^{175}\text{Yb}$	8.3	$^{170}\text{Yb}(\alpha,t)^{171}\text{Lu} - ^{174}\text{Yb}()^{175}\text{Lu}$
^{174}Lu	100.0	$^{173}\text{Yb}(\alpha,t)^{174}\text{Lu} - ^{174}\text{Yb}()^{175}\text{Lu}$				
^{174}Hf	73.7	$^{176}\text{Hf } ^{35}\text{Cl} - ^{174}\text{Hf } ^{37}\text{Cl}$	14.5	$^{174}\text{Hf}(n,\gamma)^{175}\text{Hf}$	11.8	$^{176}\text{Hf}(p,t)^{174}\text{Hf}$
^{174}Os	74.7	$^{178}\text{Pt}(\alpha)^{174}\text{Os}$	13.5	$^{174}\text{Os-u}$	11.9	$^{174}\text{Os}(\alpha)^{170}\text{W}$
^{175}Yb	62.5	$^{174}\text{Yb}(n,\gamma)^{175}\text{Yb}$	37.5	$^{175}\text{Yb}(\beta^-)^{175}\text{Lu}$		
^{175}Lu	69.5	$^{175}\text{Lu}(n,\gamma)^{176}\text{Lu}$	21.3	$^{175}\text{Yb}(\beta^-)^{175}\text{Lu}$	5.4	$^{175}\text{Lu } ^{35}\text{Cl} - ^{173}\text{Yb } ^{37}\text{Cl}$
^{175}Hf	85.0	$^{174}\text{Hf}(n,\gamma)^{175}\text{Hf}$	15.0	$^{177}\text{Hf}(p,t)^{175}\text{Hf}$		
^{175}Os	82.2	$^{179}\text{Pt}(\alpha)^{175}\text{Os}$	17.8	$^{175}\text{Os-u}$		
^{175}Ir	80.4	$^{179}\text{Au}(\alpha)^{175}\text{Ir}$	19.6	$^{175}\text{Ir-u}$		
^{175}Pt	90.8	$^{175}\text{Pt}(\alpha)^{171}\text{Os}$	9.2	$^{179}\text{Hg}(\alpha)^{175}\text{Pt}$		
^{176}Yb	100.0	$^{176}\text{Yb}(\alpha,t)^{177}\text{Lu} - ^{174}\text{Yb}()^{175}\text{Lu}$				
^{176}Lu	40.3	$^{176}\text{Lu}(n,\gamma)^{177}\text{Lu}$	30.3	$^{175}\text{Lu}(n,\gamma)^{176}\text{Lu}$	19.0	$^{176}\text{Lu } ^{37}\text{Cl} - ^{143}\text{Nd } ^{35}\text{Cl}_2$
^{176}Hf	66.0	$^{176}\text{Lu}(\beta^-)^{176}\text{Hf}$	31.2	$^{180}\text{W}(\alpha)^{176}\text{Hf}$	2.4	$^{176}\text{Hf } ^{35}\text{Cl} - ^{174}\text{Hf } ^{37}\text{Cl}$
^{176}Ir	53.6	$^{176}\text{Ir-u}$	39.2	$^{180}\text{Au}(\alpha)^{176}\text{Ir}$	7.2	$^{176}\text{Ir}(\alpha)^{172}\text{Re}$
^{176}Pt	66.4	$^{180}\text{Hg}(\alpha)^{176}\text{Pt}$	33.6	$^{176}\text{Pt}(\alpha)^{172}\text{Os}$		
^{176}Hg	94.4	$^{176}\text{Hg}(\alpha)^{172}\text{Pt}$	5.6	$^{177}\text{Tl}^m(p)^{176}\text{Hg}$		
^{177}Lu	59.0	$^{176}\text{Lu}(n,\gamma)^{177}\text{Lu}$	41.0	$^{177}\text{Lu}(\beta^-)^{177}\text{Hf}$		
^{177}Hf	62.3	$^{177}\text{Hf}(n,\gamma)^{178}\text{Hf}$	36.9	$^{177}\text{Lu}(\beta^-)^{177}\text{Hf}$	0.8	$^{177}\text{Hf}(p,t)^{175}\text{Hf}$
^{177}Pt	55.3	$^{177}\text{Pt}(\alpha)^{173}\text{Os}$	28.8	$^{177}\text{Pt-u}$	16.0	$^{181}\text{Hg}(\alpha)^{177}\text{Pt}$
^{177}Au	87.9	$^{181}\text{Tl}(\alpha)^{177}\text{Au}$	12.1	$^{177}\text{Au}(\alpha)^{173}\text{Ir}$		
$^{177}\text{Tl}^m$	92.5	$^{177}\text{Tl}^m(p)^{176}\text{Hg}$	7.5	$^{177}\text{Tl}^m(\alpha)^{173}\text{Au}^m$		
^{178}Lu	89.4	$^{179}\text{Hf}(t,\alpha)^{178}\text{Lu} - ^{178}\text{Hf}()^{177}\text{Lu}$	10.6	$^{178}\text{Lu}^m(\text{IT})^{178}\text{Lu}$		
$^{178}\text{Lu}^m$	65.8	$^{178}\text{Lu}^m(\text{IT})^{178}\text{Lu}$	34.2	$^{176}\text{Lu}(t,p)^{178}\text{Lu}^m$		
^{178}Hf	63.2	$^{178}\text{Hf}(n,\gamma)^{179}\text{Hf}$	36.8	$^{177}\text{Hf}(n,\gamma)^{178}\text{Hf}$		
^{178}Os	76.2	$^{182}\text{Pt}(\alpha)^{178}\text{Os}$	23.8	$^{178}\text{Os-u}$		
^{178}Pt	62.4	$^{182}\text{Hg}(\alpha)^{178}\text{Pt}$	24.5	$^{178}\text{Pt}(\alpha)^{174}\text{Os}$	13.2	$^{178}\text{Pt-u}$
^{179}Lu	100.0	$^{180}\text{Hf}(t,\alpha)^{179}\text{Lu} - ^{178}\text{Hf}()^{177}\text{Lu}$				
^{179}Hf	36.6	$^{178}\text{Hf}(n,\gamma)^{179}\text{Hf}$	22.2	$^{179}\text{Hf}(n,\gamma)^{180}\text{Hf}$	20.3	$\text{C}_{14} \text{H}_{11} - ^{179}\text{Hf}$
^{179}Ta	89.3	$^{179}\text{Ta}(\epsilon)^{179}\text{Hf}$	10.7	$^{181}\text{Ta}(p,t)^{179}\text{Ta}$		
^{179}W	93.5	$^{180}\text{W}(d,t)^{179}\text{W}$	6.5	$^{179}\text{Re}(\beta^+)^{179}\text{W}$		
^{179}Re	77.7	$^{179}\text{Re-u}$	22.3	$^{179}\text{Re}(\beta^+)^{179}\text{W}$		
^{179}Os	65.1	$^{183}\text{Pt}(\alpha)^{179}\text{Os}$	34.9	$^{179}\text{Os-u}$		
^{179}Ir	87.9	$^{183}\text{Au}(\alpha)^{179}\text{Ir}$	12.1	$^{179}\text{Ir-u}$		
^{179}Pt	92.8	$^{183}\text{Hg}(\alpha)^{179}\text{Pt}$	7.2	$^{179}\text{Pt}(\alpha)^{175}\text{Os}$		
^{179}Au	66.6	$^{183}\text{Tl}^m(\alpha)^{179}\text{Au}$	16.9	$^{179}\text{Au}(\alpha)^{175}\text{Ir}$	16.4	$^{179}\text{Au-u}$
^{179}Hg	74.0	$^{179}\text{Hg} - ^{208}\text{Pb}_{.861}$	26.0	$^{179}\text{Hg}(\alpha)^{175}\text{Pt}$		
^{180}Hf	77.2	$^{179}\text{Hf}(n,\gamma)^{180}\text{Hf}$	22.8	$^{180}\text{W} - ^{180}\text{Hf}$		
^{180}W	75.2	$^{180}\text{W} - ^{180}\text{Hf}$	13.4	$^{180}\text{W}(t,p)^{182}\text{W}$	10.1	$^{180}\text{W}(\alpha)^{176}\text{Hf}$
^{180}Os	66.2	$^{184}\text{Pt}(\alpha)^{180}\text{Os}$	33.8	$^{180}\text{Os-u}$		
^{180}Au	51.3	$^{180}\text{Au-u}$	35.2	$^{180}\text{Au}(\alpha)^{176}\text{Ir}$	13.5	$^{184}\text{Tl}(\alpha)^{180}\text{Au}$
^{180}Hg	38.0	$^{180}\text{Hg} - ^{208}\text{Pb}_{.865}$	32.8	$^{180}\text{Hg}(\alpha)^{176}\text{Pt}$	29.2	$^{184}\text{Pb}(\alpha)^{180}\text{Hg}$
^{181}Ta	42.1	$^{181}\text{Ta}(n,\gamma)^{182}\text{Ta}$	35.7	$^{183}\text{W } ^{35}\text{Cl} - ^{181}\text{Ta } ^{37}\text{Cl}$	10.0	$^{181}\text{Ta } ^{35}\text{Cl} - ^{179}\text{Hf } ^{37}\text{Cl}$
^{181}W	68.7	$^{181}\text{W}(\epsilon)^{181}\text{Ta}$	21.8	$^{182}\text{W}(d,t)^{181}\text{W}$	9.5	$^{180}\text{W}(d,p)^{181}\text{W}$

Table II. Influences on primary nuclei (continued, Explanation of Table on page 1673)

Nucleus	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{181}Os	64.0	$^{181}\text{Os-u}$	36.0	$^{185}\text{Pt}(\alpha)^{181}\text{Os}$		
^{181}Hg	83.0	$^{181}\text{Hg}(\alpha)^{177}\text{Pt}$	17.0	$^{181}\text{Hg}-^{208}\text{Pb}_{.870}$		
^{181}Tl	79.0	$^{181}\text{Tl}-^{133}\text{Cs}_{1.361}$	12.2	$^{185}\text{Bi}^m(\alpha)^{181}\text{Tl}$	8.8	$^{181}\text{Tl}(\alpha)^{177}\text{Au}$
^{182}Ta	57.8	$^{181}\text{Ta}(n,\gamma)^{182}\text{Ta}$	42.2	$^{182}\text{Ta}(\beta^-)^{182}\text{W}$		
^{182}W	96.9	$^{182}\text{W}(n,\gamma)^{183}\text{W}$	1.8	$^{180}\text{W}(t,p)^{182}\text{W}$	1.5	$^{182}\text{Ta}(\beta^-)^{182}\text{W}$
^{182}Os	60.6	$^{182}\text{Os-u}$	39.4	$^{186}\text{Pt}(\alpha)^{182}\text{Os}$		
^{182}Ir	56.3	$^{182}\text{Ir-u}$	43.7	$^{186}\text{Au}(\alpha)^{182}\text{Ir}$		
^{182}Pt	56.8	$^{186}\text{Hg}(\alpha)^{182}\text{Pt}$	22.0	$^{182}\text{Pt-u}$	21.3	$^{182}\text{Pt}(\alpha)^{178}\text{Os}$
^{182}Hg	55.3	$^{182}\text{Hg}-^{208}\text{Pb}_{.875}$	32.4	$^{182}\text{Hg}(\alpha)^{178}\text{Pt}$	12.3	$^{182}\text{Hg-u}$
^{183}W	54.6	$^{183}\text{W O}-\text{C}_2\text{ }^{35}\text{Cl}_5$	39.2	$^{199}\text{Hg}-^{183}\text{W O}$	3.0	$^{182}\text{W}(n,\gamma)^{183}\text{W}$
^{183}Os	76.7	$^{183}\text{Os-u}$	23.3	$^{183}\text{Ir}(\beta^+)^{183}\text{Os}$		
^{183}Ir	76.2	$^{183}\text{Ir-u}$	19.3	$^{187}\text{Au}(\alpha)^{183}\text{Ir}$	4.5	$^{183}\text{Ir}(\beta^+)^{183}\text{Os}$
^{183}Pt	30.4	$^{187}\text{Hg}(\alpha)^{183}\text{Pt}$	27.9	$^{183}\text{Pt}(\alpha)^{179}\text{Os}$	27.2	$^{183}\text{Pt-u}$
^{183}Au	77.6	$^{187}\text{Tl}^m(\alpha)^{183}\text{Au}$	11.3	$^{183}\text{Au-u}$	11.1	$^{183}\text{Au}(\alpha)^{179}\text{Ir}$
^{183}Hg	62.6	$^{187}\text{Pb}(\alpha)^{183}\text{Hg}$	31.8	$^{183}\text{Hg}-^{208}\text{Pb}_{.880}$	5.6	$^{183}\text{Hg}(\alpha)^{179}\text{Pt}$
^{183}Tl	82.9	$^{183}\text{Tl}-^{133}\text{Cs}_{1.376}$	17.1	$^{183}\text{Tl}^m(\text{IT})^{183}\text{Tl}$		
$^{183}\text{Tl}^m$	82.9	$^{183}\text{Tl}^m(\text{IT})^{183}\text{Tl}$	17.1	$^{183}\text{Tl}^m(\alpha)^{179}\text{Au}$		
^{184}W	95.9	$^{183}\text{W}(n,\gamma)^{184}\text{W}$	3.1	$^{186}\text{W}(p,t)^{184}\text{W}-^{184}\text{W}(\text{O})^{182}\text{W}$	1.2	$^{184}\text{W}(n,\gamma)^{185}\text{W}$
^{184}Re	100.0	$^{185}\text{Re}(d,t)^{184}\text{Re}-^{187}\text{Re}(\text{O})^{186}\text{Re}$				
^{184}Os	99.7	$^{184}\text{Os}(n,\gamma)^{185}\text{Os}$	0.3	$^{188}\text{Pt}(\alpha)^{184}\text{Os}$		
^{184}Pt	41.7	$^{188}\text{Hg}(\alpha)^{184}\text{Pt}$	30.4	$^{184}\text{Pt-u}$	27.9	$^{184}\text{Pt}(\alpha)^{180}\text{Os}$
^{184}Hg	38.9	$^{184}\text{Hg-u}$	32.1	$^{184}\text{Hg}-^{208}\text{Pb}_{.885}$	29.0	$^{184}\text{Hg}-^{204}\text{Pb}_{.902}$
^{184}Tl	86.4	$^{184}\text{Tl}-^{133}\text{Cs}_{1.383}$	13.6	$^{184}\text{Tl}(\alpha)^{180}\text{Au}$		
^{184}Pb	69.5	$^{184}\text{Pb}(\alpha)^{180}\text{Hg}$	30.5	$^{185}\text{Bi}^m(p)^{184}\text{Pb}$		
^{185}W	96.5	$^{184}\text{W}(n,\gamma)^{185}\text{W}$	3.5	$^{185}\text{W}(\beta^-)^{185}\text{Re}$		
^{185}Re	70.5	$^{185}\text{W}(\beta^-)^{185}\text{Re}$	15.4	$^{185}\text{Re }^{35}\text{Cl}-^{183}\text{W }^{37}\text{Cl}$	11.4	$^{185}\text{Re}(n,\gamma)^{186}\text{Re}$
^{185}Os	99.7	$^{185}\text{Os}(\epsilon)^{185}\text{Re}$	0.3	$^{184}\text{Os}(n,\gamma)^{185}\text{Os}$		
^{185}Pt	60.3	$^{185}\text{Pt}(\alpha)^{181}\text{Os}$	39.7	$^{185}\text{Pt-u}$		
$^{185}\text{Bi}^m$	63.5	$^{185}\text{Bi}^m(\alpha)^{181}\text{Tl}$	36.5	$^{185}\text{Bi}^m(p)^{184}\text{Pb}$		
^{186}W	46.4	$^{186}\text{W}(p,t)^{184}\text{W}-^{184}\text{W}(\text{O})^{182}\text{W}$	38.5	$^{186}\text{W}(n,\gamma)^{187}\text{W}$	15.0	$^{186}\text{W }^{35}\text{Cl}-^{184}\text{W }^{37}\text{Cl}$
^{186}Re	88.0	$^{185}\text{Re}(n,\gamma)^{186}\text{Re}$	12.0	$^{186}\text{Re}(\beta^-)^{186}\text{Os}$		
^{186}Os	58.6	$^{186}\text{Re}(\beta^-)^{186}\text{Os}$	41.2	$^{186}\text{Os}(n,\gamma)^{187}\text{Os}$	0.2	$^{190}\text{Pt}(\alpha)^{186}\text{Os}$
^{186}Pt	60.6	$^{186}\text{Pt-u}$	39.4	$^{186}\text{Pt}(\alpha)^{182}\text{Os}$		
^{186}Au	56.3	$^{186}\text{Au-u}$	43.7	$^{186}\text{Au}(\alpha)^{182}\text{Ir}$		
^{186}Hg	56.2	$^{186}\text{Hg}-^{204}\text{Pb}_{.912}$	26.4	$^{186}\text{Hg}(\alpha)^{182}\text{Pt}$	17.4	$^{186}\text{Hg-u}$
^{187}W	61.4	$^{186}\text{W}(n,\gamma)^{187}\text{W}$	38.6	$^{187}\text{W}(\beta^-)^{187}\text{Re}$		
^{187}Re	50.7	$^{187}\text{Re}(\beta^-)^{187}\text{Os}$	32.1	$^{187}\text{W}(\beta^-)^{187}\text{Re}$	12.0	$^{187}\text{Re }^{35}\text{Cl}-^{185}\text{Re }^{37}\text{Cl}$
^{187}Os	50.6	$^{186}\text{Os}(n,\gamma)^{187}\text{Os}$	42.3	$^{187}\text{Re}(\beta^-)^{187}\text{Os}$	5.3	$^{187}\text{Os}(n,\gamma)^{188}\text{Os}$
^{187}Pt	74.1	$^{187}\text{Pt-u}$	25.9	$^{187}\text{Au}(\beta^+)^{187}\text{Pt}$		
^{187}Au	63.7	$^{187}\text{Au-u}$	20.9	$^{187}\text{Au}(\beta^+)^{187}\text{Pt}$	15.4	$^{187}\text{Au}(\alpha)^{183}\text{Ir}$
^{187}Hg	55.5	$^{187}\text{Hg}-^{208}\text{Pb}_{.899}$	18.5	$^{187}\text{Hg}(\alpha)^{183}\text{Pt}$	17.2	$^{187}\text{Hg-u}$
$^{187}\text{Hg}^m$	51.0	$^{187}\text{Hg}^m(\text{IT})^{187}\text{Hg}$	49.0	$^{187}\text{Hg}^m(\alpha)^{183}\text{Pt}$		
^{187}Tl	62.2	$^{191}\text{Bi}(\alpha)^{187}\text{Tl}$	37.8	$^{187}\text{Tl}^m(\text{IT})^{187}\text{Tl}$		
$^{187}\text{Tl}^m$	76.5	$^{191}\text{Bi}(\alpha)^{187}\text{Tl}^m$	13.6	$^{187}\text{Tl}^m(\alpha)^{183}\text{Au}$	9.9	$^{187}\text{Tl}^m(\text{IT})^{187}\text{Tl}$
^{187}Pb	85.9	$^{187}\text{Pb}-^{133}\text{Cs}_{1.406}$	14.1	$^{187}\text{Pb}(\alpha)^{183}\text{Hg}$		
$^{187}\text{Pb}^m$	60.7	$^{187}\text{Pb}^m(\text{IT})^{187}\text{Pb}$	39.3	$^{191}\text{Po}(\alpha)^{187}\text{Pb}^m$		
^{188}Os	94.7	$^{187}\text{Os}(n,\gamma)^{188}\text{Os}$	5.2	$^{188}\text{Os}(n,\gamma)^{189}\text{Os}$	0.2	$^{188}\text{Ir}(\beta^+)^{188}\text{Os}$
^{188}Ir	67.6	$^{188}\text{Pt}(\epsilon)^{188}\text{Ir}$	32.4	$^{188}\text{Ir}(\beta^+)^{188}\text{Os}$		
^{188}Pt	70.6	$^{188}\text{Pt}(\alpha)^{184}\text{Os}$	21.3	$^{190}\text{Pt}(p,t)^{188}\text{Pt}$	8.0	$^{188}\text{Pt}(\epsilon)^{188}\text{Ir}$
^{188}Au	57.0	$^{188}\text{Au-u}$	43.0	$^{188}\text{Hg}(\beta^+)^{188}\text{Au}$		
^{188}Hg	52.7	$^{188}\text{Hg}-^{208}\text{Pb}_{.904}$	16.3	$^{188}\text{Hg-u}$	15.6	$^{188}\text{Hg}(\beta^+)^{188}\text{Au}$
^{189}Os	94.2	$^{188}\text{Os}(n,\gamma)^{189}\text{Os}$	5.8	$^{189}\text{Os}(n,\gamma)^{190}\text{Os}$		
^{189}Ir	71.0	$^{191}\text{Ir}(p,t)^{189}\text{Ir}$	29.0	$^{189}\text{Pt}(\beta^+)^{189}\text{Ir}$		
^{189}Pt	80.3	$^{190}\text{Pt}(p,d)^{189}\text{Pt}$	19.7	$^{189}\text{Pt}(\beta^+)^{189}\text{Ir}$		
^{189}Hg	65.0	$^{189}\text{Hg-u}$	35.0	$^{189}\text{Hg}^m(\text{IT})^{189}\text{Hg}$		

Table II. Influences on primary nuclei (continued, Explanation of Table on page 1673)

Nucleus	Infl.	Equation	Infl.	Equation	Infl.	Equation
$^{189}\text{Hg}^m$	92.0	$^{189}\text{Hg}^m - ^{208}\text{Pb}_{.909}$	8.0	$^{189}\text{Hg}^m(\text{IT})^{189}\text{Hg}$		
^{190}W	94.2	$^{190}\text{W}-u$	5.8	$^{190}\text{W}(\beta^-)^{190}\text{Re}$		
^{190}Re	76.5	$^{190}\text{W}(\beta^-)^{190}\text{Re}$	23.5	$^{190}\text{Re}(\beta^-)^{190}\text{Os}$		
^{190}Os	94.1	$^{189}\text{Os}(\text{n},\gamma)^{190}\text{Os}$	5.7	$^{190}\text{Os}(\text{n},\gamma)^{191}\text{Os}$	0.2	$^{192}\text{Os}(\text{p},\text{t})^{190}\text{Os}$
^{190}Pt	56.9	$^{192}\text{Pt}(\text{p},\text{t})^{190}\text{Pt}$	23.5	$^{190}\text{Pt}(\text{p},\text{t})^{188}\text{Pt}$	15.4	$^{190}\text{Pt}(\alpha)^{186}\text{Os}$
^{190}Hg	72.6	$^{190}\text{Hg} - ^{208}\text{Pb}_{.913}$	27.4	$^{194}\text{Pb}(\alpha)^{190}\text{Hg}$		
^{191}Os	94.3	$^{190}\text{Os}(\text{n},\gamma)^{191}\text{Os}$	5.7	$^{191}\text{Os}(\beta^-)^{191}\text{Ir}$		
^{191}Ir	86.3	$^{191}\text{Os}(\beta^-)^{191}\text{Ir}$	12.1	$^{191}\text{Ir}(\text{n},\gamma)^{192}\text{Ir}$	1.5	$^{193}\text{Ir}(\text{t},\alpha)^{192}\text{Os} - ^{191}\text{Ir}(\text{O})^{190}\text{Os}$
^{191}Pt	64.0	$^{192}\text{Pt}(\text{p},\text{d})^{191}\text{Pt} - ^{194}\text{Pt}(\text{O})^{193}\text{Pt}$	35.6	$^{192}\text{Pt}(\text{p},\text{d})^{191}\text{Pt}$	0.4	$^{191}\text{Au}(\beta^+)^{191}\text{Pt}$
^{191}Au	54.4	$^{191}\text{Au}(\beta^+)^{191}\text{Pt}$	25.2	$^{191}\text{Hg}(\beta^+)^{191}\text{Au}$	20.4	$^{191}\text{Au}-u$
^{191}Hg	69.8	$^{191}\text{Hg} - ^{208}\text{Pb}_{.918}$	22.6	$^{191}\text{Hg}-u$	7.6	$^{191}\text{Hg}(\beta^+)^{191}\text{Au}$
^{191}Bi	87.3	$^{191}\text{Bi} - ^{133}\text{Cs}_{1.436}$	11.2	$^{191}\text{Bi}(\alpha)^{187}\text{Tl}^m$	1.4	$^{191}\text{Bi}(\alpha)^{187}\text{Tl}$
^{191}Po	93.9	$^{191}\text{Po}(\alpha)^{187}\text{Pb}$	6.1	$^{191}\text{Po}(\alpha)^{187}\text{Pb}^m$		
^{192}Os	50.5	$^{192}\text{Os}(\text{p},\text{t})^{190}\text{Os}$	30.6	$^{193}\text{Ir}(\text{t},\alpha)^{192}\text{Os} - ^{191}\text{Ir}(\text{O})^{190}\text{Os}$	18.9	$^{192}\text{Os}(\text{n},\gamma)^{193}\text{Os}$
^{192}Ir	87.9	$^{191}\text{Ir}(\text{n},\gamma)^{192}\text{Ir}$	10.6	$^{192}\text{Ir}(\text{n},\gamma)^{193}\text{Ir}$	1.6	$^{192}\text{Ir}(\beta^-)^{192}\text{Pt}$
^{192}Pt	94.0	$^{192}\text{Ir}(\beta^-)^{192}\text{Pt}$	7.9	$^{192}\text{Pt}(\text{p},\text{d})^{191}\text{Pt} - ^{194}\text{Pt}(\text{O})^{193}\text{Pt}$	5.8	$^{192}\text{Pt}(\text{p},\text{t})^{190}\text{Pt}$
^{193}Os	81.0	$^{192}\text{Os}(\text{n},\gamma)^{193}\text{Os}$	19.0	$^{193}\text{Os}(\beta^-)^{193}\text{Ir}$		
^{193}Ir	89.1	$^{192}\text{Ir}(\text{n},\gamma)^{193}\text{Ir}$	8.1	$^{193}\text{Pt}(\epsilon)^{193}\text{Ir}$	4.1	$^{193}\text{Os}(\beta^-)^{193}\text{Ir}$
^{193}Pt	91.7	$^{193}\text{Pt}(\epsilon)^{193}\text{Ir}$	8.3	$^{192}\text{Pt}(\text{p},\text{d})^{191}\text{Pt} - ^{194}\text{Pt}(\text{O})^{193}\text{Pt}$		
^{193}Au	92.5	$^{197}\text{Au}(\alpha, ^8\text{He})^{193}\text{Au}$	7.5	$^{193}\text{Hg}(\beta^+)^{193}\text{Au}$		
^{193}Hg	67.1	$^{193}\text{Hg}(\beta^+)^{193}\text{Au}$	32.9	$^{193}\text{Hg} - ^{208}\text{Pb}_{.928}$		
^{194}Pt	98.3	$^{194}\text{Pt}(\text{n},\gamma)^{195}\text{Pt}$	1.7	$^{192}\text{Pt}(\text{p},\text{d})^{191}\text{Pt} - ^{194}\text{Pt}(\text{O})^{193}\text{Pt}$		
^{194}Pb	60.4	$^{198}\text{Po}(\alpha)^{194}\text{Pb}$	39.6	$^{194}\text{Pb}(\alpha)^{190}\text{Hg}$		
^{195}Pt	98.3	$^{195}\text{Pt}(\text{n},\gamma)^{196}\text{Pt}$	1.7	$^{194}\text{Pt}(\text{n},\gamma)^{195}\text{Pt}$		
^{195}Au	99.9	$^{195}\text{Au}(\epsilon)^{195}\text{Pt}$	0.1	$^{195}\text{Hg}(\beta^+)^{195}\text{Au}$		
^{195}Hg	78.6	$^{195}\text{Hg} - ^{208}\text{Pb}_{.938}$	21.4	$^{195}\text{Hg}(\beta^+)^{195}\text{Au}$		
^{195}Tl	56.4	$^{199}\text{Bi}^m(\alpha)^{195}\text{Tl}$	21.9	$^{195}\text{Tl}-u$	21.7	$^{195}\text{Tl} - ^{133}\text{Cs}_{1.466}$
^{195}Bi	89.5	$^{195}\text{Bi} - ^{133}\text{Cs}_{1.466}$	10.5	$^{199}\text{At}(\alpha)^{195}\text{Bi}$		
^{196}Pt	97.5	$^{196}\text{Pt}(\text{n},\gamma)^{197}\text{Pt}$	1.7	$^{195}\text{Pt}(\text{n},\gamma)^{196}\text{Pt}$	0.9	$^{196}\text{Au}(\beta^+)^{196}\text{Pt}$
^{196}Au	51.7	$^{197}\text{Au}(\gamma,\text{n})^{196}\text{Au}$	31.0	$^{196}\text{Au}(\beta^-)^{196}\text{Hg}$	17.3	$^{196}\text{Au}(\beta^+)^{196}\text{Pt}$
^{196}Hg	57.1	$^{198}\text{Hg} - ^{35}\text{Cl} - ^{196}\text{Hg} - ^{37}\text{Cl}$	29.9	$^{196}\text{Au}(\beta^-)^{196}\text{Hg}$	13.0	$^{196}\text{Hg}(\text{n},\gamma)^{197}\text{Hg}$
^{197}Pt	95.7	$^{197}\text{Pt}(\beta^-)^{197}\text{Au}$	2.2	$^{196}\text{Pt}(\text{n},\gamma)^{197}\text{Pt}$	2.0	$^{198}\text{Pt}(\text{p},\text{d})^{197}\text{Pt}$
^{197}Au	98.5	$^{197}\text{Au}(\text{n},\gamma)^{198}\text{Au}$	0.9	$^{197}\text{Pt}(\beta^-)^{197}\text{Au}$	0.5	$^{197}\text{Au}(\gamma,\text{n})^{196}\text{Au}$
^{197}Hg	84.0	$^{196}\text{Hg}(\text{n},\gamma)^{197}\text{Hg}$	16.0	$^{199}\text{Hg}(\text{p},\text{t})^{197}\text{Hg}$		
^{198}Pt	54.5	$^{198}\text{Pt} - ^{197}\text{Au}_{1.005}$	45.5	$^{198}\text{Pt}(\text{p},\text{d})^{197}\text{Pt}$		
^{198}Au	65.5	$^{198}\text{Au}(\beta^-)^{198}\text{Hg}$	33.0	$^{198}\text{Au}(\text{n},\gamma)^{199}\text{Au}$	1.4	$^{197}\text{Au}(\text{n},\gamma)^{198}\text{Au}$
^{198}Hg	73.7	$^{198}\text{Hg}-u$	13.4	$^{200}\text{Hg} - ^{35}\text{Cl} - ^{198}\text{Hg} - ^{37}\text{Cl}$	12.7	$^{198}\text{Au}(\beta^-)^{198}\text{Hg}$
^{198}Po	60.5	$^{198}\text{Po} - ^{208}\text{Pb}_{.952}$	39.5	$^{198}\text{Po}(\alpha)^{194}\text{Pb}$		
^{199}Au	66.8	$^{198}\text{Au}(\text{n},\gamma)^{199}\text{Au}$	33.2	$^{199}\text{Au}(\beta^-)^{199}\text{Hg}$		
^{199}Hg	59.6	$^{199}\text{Hg} - \text{C}_2 - ^{35}\text{Cl}_5$	20.3	$^{199}\text{Hg}(\text{n},\gamma)^{200}\text{Hg}$	8.9	$^{199}\text{Au}(\beta^-)^{199}\text{Hg}$
^{199}Bi	38.7	$^{203}\text{At}(\alpha)^{199}\text{Bi}$	33.6	$^{199}\text{Bi}^m(\text{IT})^{199}\text{Bi}$	27.7	$^{199}\text{Bi}-u$
$^{199}\text{Bi}^m$	63.9	$^{199}\text{Bi}^m(\text{IT})^{199}\text{Bi}$	36.1	$^{199}\text{Bi}^m(\alpha)^{195}\text{Tl}$		
^{199}At	89.0	$^{199}\text{At}(\alpha)^{195}\text{Bi}$	11.0	$^{203}\text{Fr}(\alpha)^{199}\text{At}$		
^{200}Au	71.2	$^{200}\text{Au}-u$	28.8	$^{200}\text{Au}(\beta^-)^{200}\text{Hg}$		
$^{200}\text{Au}^m$	72.6	$^{200}\text{Au}^m-u$	27.4	$^{200}\text{Au}^m(\beta^-)^{200}\text{Hg}$		
^{200}Hg	77.7	$^{199}\text{Hg}(\text{n},\gamma)^{200}\text{Hg}$	10.7	$^{200}\text{Hg} - ^{35}\text{Cl} - ^{198}\text{Hg} - ^{37}\text{Cl}$	8.1	$^{204}\text{Hg} - ^{35}\text{Cl}_2 - ^{200}\text{Hg} - ^{37}\text{Cl}_2$
^{201}Au	100.0	$^{202}\text{Hg}(\text{d}, ^3\text{He})^{201}\text{Au} - ^{206}\text{Pb}(\text{O})^{205}\text{Tl}$				
^{201}Hg	49.1	$^{201}\text{Hg}(\text{n},\gamma)^{202}\text{Hg}$	36.3	$^{201}\text{Hg} - ^{35}\text{Cl} - ^{199}\text{Hg} - ^{37}\text{Cl}$	13.8	$^{201}\text{Hg} - ^{35}\text{Cl} - ^{199}\text{Hg} - ^{37}\text{Cl}$
^{201}Tl	90.8	$^{203}\text{Tl}(\text{p},\text{t})^{201}\text{Tl}$	9.2	$^{201}\text{Pb}(\beta^+)^{201}\text{Tl}$		
^{201}Pb	74.4	$^{205}\text{Po}(\alpha)^{201}\text{Pb}$	25.6	$^{201}\text{Pb}(\beta^+)^{201}\text{Tl}$		
^{202}Hg	47.3	$^{201}\text{Hg}(\text{n},\gamma)^{202}\text{Hg}$	26.8	$^{202}\text{Hg} - ^{35}\text{Cl} - ^{200}\text{Hg} - ^{37}\text{Cl}$	21.8	$^{204}\text{Hg} - ^{35}\text{Cl} - ^{202}\text{Hg} - ^{37}\text{Cl}$
^{202}Tl	50.8	$^{203}\text{Tl}(\text{p},\text{d})^{202}\text{Tl}$	49.2	$^{202}\text{Pb}(\epsilon)^{202}\text{Tl}$		
^{202}Pb	84.3	$^{202}\text{Pb} - ^{133}\text{Cs}_{1.519}$	13.9	$^{204}\text{Pb}(\text{p},\text{t})^{202}\text{Pb}$	1.7	$^{202}\text{Pb}(\epsilon)^{202}\text{Tl}$
^{202}Bi	69.6	$^{206}\text{At}(\alpha)^{202}\text{Bi}$	30.4	$^{202}\text{Bi}-u$		
^{203}Au	100.0	$^{204}\text{Hg}(\text{d}, ^3\text{He})^{203}\text{Au} - ^{206}\text{Pb}(\text{O})^{205}\text{Tl}$				

Table II. Influences on primary nuclei (continued, Explanation of Table on page 1673)

Nucleus	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{203}Hg	83.9	$^{203}\text{Hg}(\beta^-)^{203}\text{Tl}$	11.1	$^{204}\text{Hg}(\text{d,t})^{203}\text{Hg}$	5.1	$^{202}\text{Hg}(\text{d,p})^{203}\text{Hg}-^{204}\text{Hg}(\alpha)^{205}\text{Hg}$
^{203}Tl	76.4	$^{203}\text{Tl}(\text{n},\gamma)^{204}\text{Tl}$	10.6	$^{203}\text{Tl}^{35}\text{Cl}-^{201}\text{Hg}^{37}\text{Cl}$	7.9	$^{203}\text{Hg}(\beta^-)^{203}\text{Tl}$
^{203}Pb	52.1	$^{204}\text{Pb}(\text{p,d})^{203}\text{Pb}$	37.5	$^{207}\text{Po}(\alpha)^{203}\text{Pb}$	10.4	$^{203}\text{Pb}(\epsilon)^{203}\text{Tl}$
^{203}At	61.2	$^{203}\text{At}(\alpha)^{199}\text{Bi}$	20.6	$^{203}\text{At}-^{208}\text{Pb}_{.976}$	14.3	$^{203}\text{At-u}$
^{203}Fr	84.5	$^{203}\text{Fr}(\alpha)^{199}\text{At}$	15.5	$^{203}\text{Fr}-^{133}\text{Cs}_{1.526}$		
^{204}Hg	77.2	$^{204}\text{Hg-u}$	11.8	$^{204}\text{Hg}^{35}\text{Cl}_2-^{200}\text{Hg}^{37}\text{Cl}_2$	10.4	$^{204}\text{Hg}^{35}\text{Cl}-^{202}\text{Hg}^{37}\text{Cl}$
^{204}Tl	78.6	$^{204}\text{Tl}(\beta^-)^{204}\text{Pb}$	17.9	$^{203}\text{Tl}(\text{n},\gamma)^{204}\text{Tl}$	3.5	$^{205}\text{Tl}(\text{d,t})^{204}\text{Tl}$
^{204}Pb	79.7	$^{204}\text{Pb}(\text{n},\gamma)^{205}\text{Pb}$	18.6	$^{204}\text{Tl}(\beta^-)^{204}\text{Pb}$	1.3	$^{204}\text{Pb}(\text{p,t})^{202}\text{Pb}$
^{204}At	81.2	$^{204}\text{At-u}$	18.8	$^{208}\text{Fr}(\alpha)^{204}\text{At}$		
^{205}Hg	52.6	$^{204}\text{Hg}(\text{d,p})^{205}\text{Hg}$	47.4	$^{202}\text{Hg}(\text{d,p})^{203}\text{Hg}-^{204}\text{Hg}(\alpha)^{205}\text{Hg}$		
^{205}Tl	60.4	$^{205}\text{Tl}(\text{d,t})^{204}\text{Tl}$	14.3	$^{205}\text{Tl}^{35}\text{Cl}-^{203}\text{Tl}^{37}\text{Cl}$	12.5	$^{205}\text{Tl}(\beta^+)^{206}\text{Pb}$
^{205}Pb	79.2	$^{205}\text{Pb}(\text{n},\gamma)^{206}\text{Pb}$	19.3	$^{204}\text{Pb}(\text{n},\gamma)^{205}\text{Pb}$	1.5	$^{205}\text{Bi}(\beta^+)^{205}\text{Pb}$
^{205}Bi	50.8	$^{205}\text{Bi}(\beta^+)^{205}\text{Pb}$	49.2	$^{209}\text{At}(\alpha)^{205}\text{Bi}$		
^{205}Po	78.6	$^{205}\text{Po-u}$	21.4	$^{205}\text{Po}(\alpha)^{201}\text{Pb}$		
^{206}Tl	83.6	$^{205}\text{Tl}(\text{n},\gamma)^{206}\text{Tl}$	16.4	$^{210}\text{Bi}(\alpha)^{206}\text{Tl}$		
^{206}Pb	67.0	$^{206}\text{Pb}^{35}\text{Cl}_2-^{202}\text{Hg}^{37}\text{Cl}_2$	20.5	$^{205}\text{Pb}(\text{n},\gamma)^{206}\text{Pb}$	10.6	$^{206}\text{Pb}(\text{n},\gamma)^{207}\text{Pb}$
^{206}At	42.8	$^{210}\text{Fr}(\alpha)^{206}\text{At}$	29.1	$^{206}\text{At-u}$	28.2	$^{206}\text{At}(\alpha)^{202}\text{Bi}$
^{207}Tl	45.4	$^{207}\text{Tl}(\beta^-)^{207}\text{Pb}$	41.7	$^{211}\text{Bi}(\alpha)^{207}\text{Tl}$	12.9	$^{205}\text{Tl}(\text{t,p})^{207}\text{Tl}$
^{207}Pb	89.3	$^{206}\text{Pb}(\text{n},\gamma)^{207}\text{Pb}$	10.1	$^{207}\text{Pb}(\text{n},\gamma)^{208}\text{Pb}$	0.6	$^{207}\text{Tl}(\beta^-)^{207}\text{Pb}$
^{207}Bi	97.4	$^{209}\text{Bi}(\text{p,t})^{207}\text{Bi}$	2.6	$^{207}\text{Po}(\beta^+)^{207}\text{Bi}$		
^{207}Po	58.8	$^{207}\text{Po}(\alpha)^{203}\text{Pb}$	41.2	$^{207}\text{Po}(\beta^+)^{207}\text{Bi}$		
^{207}Fr	88.3	$^{207}\text{Fr}-^{133}\text{Cs}_{1.556}$	11.7	$^{207}\text{Fr}(\alpha)^{203}\text{At}$		
^{208}Pb	89.9	$^{207}\text{Pb}(\text{n},\gamma)^{208}\text{Pb}$	7.8	$^{212}\text{Po}(\alpha)^{208}\text{Pb}$	0.5	$^{183}\text{Hg}-^{208}\text{Pb}_{.880}$
^{208}Fr	95.8	$^{208}\text{Fr}-^{133}\text{Cs}_{1.564}$	4.2	$^{208}\text{Fr}(\alpha)^{204}\text{At}$		
^{209}Pb	87.0	$^{209}\text{Pb}(\beta^-)^{209}\text{Bi}$	11.1	$^{208}\text{Pb}(\text{d,p})^{209}\text{Pb}$	1.9	$^{213}\text{Po}(\alpha)^{209}\text{Pb}$
^{209}Bi	85.9	$^{209}\text{Bi}(\text{n},\gamma)^{210}\text{Bi}$	9.5	$^{209}\text{Bi}(\alpha)^{205}\text{Tl}$	4.3	$^{209}\text{Pb}(\beta^-)^{209}\text{Bi}$
^{209}At	53.2	$^{213}\text{Fr}(\alpha)^{209}\text{At}$	46.8	$^{209}\text{At}(\alpha)^{205}\text{Bi}$		
^{210}Pb	97.7	$^{210}\text{Pb}(\beta^-)^{210}\text{Bi}$	2.3	$^{214}\text{Po}(\alpha)^{210}\text{Pb}$		
^{210}Bi	50.7	$^{210}\text{Bi}(\beta^-)^{210}\text{Po}$	33.4	$^{210}\text{Bi}(\alpha)^{206}\text{Tl}$	14.0	$^{209}\text{Bi}(\text{n},\gamma)^{210}\text{Bi}$
^{210}Po	98.4	$^{210}\text{Po}(\alpha)^{206}\text{Pb}$	1.6	$^{210}\text{Bi}(\beta^-)^{210}\text{Po}$		
^{210}Fr	54.4	$^{210}\text{Fr}(\alpha)^{206}\text{At}$	45.6	$^{210}\text{Fr}-^{226}\text{Ra}_{.929}$		
^{211}Pb	94.4	$^{215}\text{Po}(\alpha)^{211}\text{Pb}$	5.6	$^{211}\text{Pb}(\beta^-)^{211}\text{Bi}$		
^{211}Bi	58.1	$^{211}\text{Bi}(\alpha)^{207}\text{Tl}$	41.9	$^{211}\text{Pb}(\beta^-)^{211}\text{Bi}$		
^{211}Fr	73.7	$^{211}\text{Fr}-^{133}\text{Cs}_{1.586}$	26.3	$^{211}\text{Fr}-^{226}\text{Ra}_{.934}$		
^{212}Pb	55.9	$^{216}\text{Po}(\alpha)^{212}\text{Pb}$	44.1	$^{212}\text{Pb}(\beta^-)^{212}\text{Bi}$		
^{212}Bi	71.7	$^{212}\text{Bi}(\beta^-)^{212}\text{Po}$	28.3	$^{212}\text{Pb}(\beta^-)^{212}\text{Bi}$		
^{212}Po	92.1	$^{212}\text{Po}(\alpha)^{208}\text{Pb}$	7.9	$^{212}\text{Bi}(\beta^-)^{212}\text{Po}$		
^{212}Fr	88.8	$^{212}\text{Fr}-^{133}\text{Cs}_{1.594}$	11.2	$^{212}\text{Fr}-^{226}\text{Ra}_{.938}$		
^{213}Bi	75.8	$^{217}\text{At}(\alpha)^{213}\text{Bi}$	24.2	$^{213}\text{Bi}(\beta^-)^{213}\text{Po}$		
^{213}Po	93.3	$^{213}\text{Po}(\alpha)^{209}\text{Pb}$	6.7	$^{213}\text{Bi}(\beta^-)^{213}\text{Po}$		
^{213}Fr	54.6	$^{213}\text{Fr}-^{133}\text{Cs}_{1.602}$	45.4	$^{213}\text{Fr}(\alpha)^{209}\text{At}$		
^{214}Pb	99.2	$^{218}\text{Po}(\alpha)^{214}\text{Pb}$	0.8	$^{214}\text{Pb}(\beta^-)^{214}\text{Bi}$		
^{214}Bi	69.0	$^{214}\text{Bi}(\beta^-)^{214}\text{Po}$	31.0	$^{214}\text{Pb}(\beta^-)^{214}\text{Bi}$		
^{214}Po	97.7	$^{214}\text{Po}(\alpha)^{210}\text{Pb}$	2.0	$^{218}\text{Rn}(\alpha)^{214}\text{Po}$	0.3	$^{214}\text{Bi}(\beta^-)^{214}\text{Po}$
^{215}Po	95.0	$^{219}\text{Rn}(\alpha)^{215}\text{Po}$	5.0	$^{215}\text{Po}(\alpha)^{211}\text{Pb}$		
^{216}Po	57.4	$^{220}\text{Rn}(\alpha)^{216}\text{Po}$	42.6	$^{216}\text{Po}(\alpha)^{212}\text{Pb}$		
^{217}At	76.9	$^{221}\text{Fr}(\alpha)^{217}\text{At}$	23.1	$^{217}\text{At}(\alpha)^{213}\text{Bi}$		
^{218}Po	99.2	$^{222}\text{Rn}(\alpha)^{218}\text{Po}$	0.8	$^{218}\text{Po}(\alpha)^{214}\text{Pb}$		
^{218}Rn	94.0	$^{218}\text{Rn}(\alpha)^{214}\text{Po}$	6.0	$^{222}\text{Ra}(\alpha)^{218}\text{Rn}$		
^{219}Rn	95.0	$^{223}\text{Ra}(\alpha)^{219}\text{Rn}$	5.0	$^{219}\text{Rn}(\alpha)^{215}\text{Po}$		
^{220}Rn	57.4	$^{224}\text{Ra}(\alpha)^{220}\text{Rn}$	42.6	$^{220}\text{Rn}(\alpha)^{216}\text{Po}$		
^{221}Fr	78.3	$^{225}\text{Ac}(\alpha)^{221}\text{Fr}$	21.7	$^{221}\text{Fr}(\alpha)^{217}\text{At}$		
^{222}Rn	99.2	$^{226}\text{Ra}(\alpha)^{222}\text{Rn}$	0.8	$^{222}\text{Rn}(\alpha)^{218}\text{Po}$		
^{222}Fr	82.2	$^{222}\text{Fr}-^{226}\text{Ra}_{.982}$	17.8	$^{226}\text{Ac}(\alpha)^{222}\text{Fr}$		
^{222}Ra	64.8	$^{222}\text{Ra}(\alpha)^{218}\text{Rn}$	35.2	$^{226}\text{Th}(\alpha)^{222}\text{Ra}$		

Table II. Influences on primary nuclei (continued, Explanation of Table on page 1673)

Nucleus	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{223}Rn	58.3	$^{223}\text{Rn} - ^{133}\text{Cs}_{1.677}$	41.7	$^{223}\text{Rn-u}$		
^{223}Ra	95.1	$^{227}\text{Th}(\alpha)^{223}\text{Ra}$	4.9	$^{223}\text{Ra}(\alpha)^{219}\text{Rn}$		
^{224}Rn	56.6	$^{224}\text{Rn-u}$	43.4	$^{224}\text{Rn} - ^{133}\text{Cs}_{1.684}$		
^{224}Ra	57.5	$^{228}\text{Th}(\alpha)^{224}\text{Ra}$	42.5	$^{224}\text{Ra}(\alpha)^{220}\text{Rn}$		
^{225}Rn	73.0	$^{225}\text{Rn-u}$	27.0	$^{225}\text{Rn} - ^{133}\text{Cs}_{1.692}$		
^{225}Fr	84.2	$^{225}\text{Fr-u}$	15.8	$^{225}\text{Fr}(\beta^-)^{225}\text{Ra}$		
^{225}Ra	94.2	$^{229}\text{Th}(\alpha)^{225}\text{Ra}$	5.0	$^{225}\text{Ra}(\beta^-)^{225}\text{Ac}$	0.8	$^{225}\text{Fr}(\beta^-)^{225}\text{Ra}$
^{225}Ac	59.4	$^{229}\text{Pa}(\alpha)^{225}\text{Ac}$	20.3	$^{225}\text{Ac}(\alpha)^{221}\text{Fr}$	20.3	$^{225}\text{Ra}(\beta^-)^{225}\text{Ac}$
^{226}Rn	56.2	$^{226}\text{Rn-u}$	43.8	$^{226}\text{Rn} - ^{133}\text{Cs}_{1.699}$		
^{226}Ra	97.4	$^{230}\text{Th}(\alpha)^{226}\text{Ra}$	0.8	$^{226}\text{Ra}(\alpha)^{222}\text{Rn}$	0.6	$^{211}\text{Fr} - ^{226}\text{Ra}_{.934}$
^{226}Ac	86.2	$^{230}\text{Pa}(\alpha)^{226}\text{Ac}$	13.6	$^{226}\text{Ac}(\beta^-)^{226}\text{Th}$	0.3	$^{226}\text{Ac}(\alpha)^{222}\text{Fr}$
^{226}Th	58.8	$^{226}\text{Th}(\alpha)^{222}\text{Ra}$	41.2	$^{226}\text{Ac}(\beta^-)^{226}\text{Th}$		
^{227}Rn	63.4	$^{227}\text{Rn} - ^{133}\text{Cs}_{1.707}$	36.6	$^{227}\text{Rn-u}$		
^{227}Ac	95.7	$^{231}\text{Pa}(\alpha)^{227}\text{Ac}$	4.3	$^{227}\text{Ac}(\beta^-)^{227}\text{Th}$		
^{227}Th	95.1	$^{227}\text{Ac}(\beta^-)^{227}\text{Th}$	4.9	$^{227}\text{Th}(\alpha)^{223}\text{Ra}$		
^{228}Rn	62.5	$^{228}\text{Rn} - ^{133}\text{Cs}_{1.714}$	37.5	$^{228}\text{Rn-u}$		
^{228}Th	56.7	$^{230}\text{Th}(\text{p,t})^{228}\text{Th} - ^{232}\text{Th}(\text{)}^{230}\text{Th}$	42.2	$^{228}\text{Th}(\alpha)^{224}\text{Ra}$	1.2	$^{232}\text{U}(\alpha)^{228}\text{Th}$
^{229}Ra	88.0	$^{229}\text{Ra} - ^{133}\text{Cs}_{1.722}$	12.0	$^{229}\text{Ra}(\beta^-)^{229}\text{Ac}$		
^{229}Ac	92.6	$^{229}\text{Ac-u}$	7.4	$^{229}\text{Ra}(\beta^-)^{229}\text{Ac}$		
^{229}Th	68.2	$^{233}\text{U}(\alpha)^{229}\text{Th}$	26.9	$^{230}\text{Th}(\text{d,t})^{229}\text{Th}$	4.9	$^{229}\text{Th}(\alpha)^{225}\text{Ra}$
^{229}Pa	86.6	$^{231}\text{Pa}(\text{p,t})^{229}\text{Pa}$	13.4	$^{229}\text{Pa}(\alpha)^{225}\text{Ac}$		
^{230}Fr	71.9	$^{230}\text{Fr-u}$	28.1	$^{230}\text{Fr} - ^{133}\text{Cs}_{1.729}$		
^{230}Th	59.2	$^{230}\text{Th}(\text{p,t})^{228}\text{Th} - ^{232}\text{Th}(\text{)}^{230}\text{Th}$	21.2	$^{234}\text{U}(\alpha)^{230}\text{Th}$	14.3	$^{230}\text{Th}(\text{n},\gamma)^{231}\text{Th}$
^{230}Pa	86.8	$^{230}\text{Pa}(\epsilon)^{230}\text{Th}$	13.2	$^{230}\text{Pa}(\alpha)^{226}\text{Ac}$		
^{231}Ra	66.2	$^{231}\text{Ra-u}$	33.8	$^{231}\text{Ra} - ^{133}\text{Cs}_{1.737}$		
^{231}Th	83.9	$^{230}\text{Th}(\text{n},\gamma)^{231}\text{Th}$	12.0	$^{235}\text{U}(\alpha)^{231}\text{Th}$	4.1	$^{231}\text{Th}(\beta^-)^{231}\text{Pa}$
^{231}Pa	50.7	$^{231}\text{Th}(\beta^-)^{231}\text{Pa}$	41.9	$^{235}\text{Np}(\alpha)^{231}\text{Pa}$	3.8	$^{231}\text{Pa}(\alpha)^{227}\text{Ac}$
^{232}Ra	57.1	$^{232}\text{Ra} - ^{133}\text{Cs}_{1.744}$	42.9	$^{232}\text{Ra-u}$		
^{232}Th	71.4	$^{236}\text{U}(\alpha)^{232}\text{Th}$	21.6	$\text{C}_{24}\text{H}_{16} - ^{232}\text{Th} \text{ } ^{37}\text{Cl} \text{ } ^{35}\text{Cl}$	17.5	$\text{C}_{18}\text{H}_{16} - ^{232}\text{Th}$
^{232}U	98.8	$^{232}\text{U}(\alpha)^{228}\text{Th}$	1.2	$^{236}\text{Pu}(\alpha)^{232}\text{U}$		
^{233}Th	93.3	$^{232}\text{Th}(\text{n},\gamma)^{233}\text{Th}$	6.7	$^{233}\text{Th}(\beta^-)^{233}\text{Pa}$		
^{233}Pa	77.8	$^{237}\text{Np}(\alpha)^{233}\text{Pa}$	13.0	$^{233}\text{Th}(\beta^-)^{233}\text{Pa}$	9.2	$^{233}\text{Pa}(\beta^-)^{233}\text{U}$
^{233}U	48.3	$^{233}\text{Pa}(\beta^-)^{233}\text{U}$	25.3	$^{233}\text{U}(\alpha)^{229}\text{Th}$	15.1	$^{237}\text{Pu}(\alpha)^{233}\text{U}$
^{234}U	49.3	$^{234}\text{U}(\text{n},\gamma)^{235}\text{U}$	36.0	$^{234}\text{U}(\alpha)^{230}\text{Th}$	14.3	$^{238}\text{Pu}(\alpha)^{234}\text{U}$
^{235}U	32.1	$^{234}\text{U}(\text{n},\gamma)^{235}\text{U}$	24.1	$^{239}\text{Pu}(\alpha)^{235}\text{U}$	22.2	$^{235}\text{U}(\text{n},\gamma)^{236}\text{U}$
^{235}Np	86.3	$^{235}\text{Np}(\epsilon)^{235}\text{U}$	13.7	$^{235}\text{Np}(\alpha)^{231}\text{Pa}$		
^{236}U	59.1	$^{240}\text{Pu}(\alpha)^{236}\text{U}$	31.7	$^{235}\text{U}(\text{n},\gamma)^{236}\text{U}$	8.4	$^{236}\text{U}(\alpha)^{232}\text{Th}$
^{236}Pu	98.8	$^{236}\text{Pu}(\alpha)^{232}\text{U}$	1.2	$^{240}\text{Cm}(\alpha)^{236}\text{Pu}$		
^{237}U	84.6	$^{236}\text{U}(\text{n},\gamma)^{237}\text{U}$	15.4	$^{241}\text{Pu}(\alpha)^{237}\text{U}$		
^{237}Np	97.8	$^{241}\text{Am}(\alpha)^{237}\text{Np}$	2.2	$^{237}\text{Np}(\alpha)^{233}\text{Pa}$		
^{237}Pu	94.1	$^{241}\text{Cm}(\alpha)^{237}\text{Pu}$	5.9	$^{237}\text{Pu}(\alpha)^{233}\text{U}$		
^{238}U	55.4	$^{242}\text{Pu}(\alpha)^{238}\text{U}$	33.3	$\text{C}_{24}\text{H}_{20} - ^{238}\text{U} \text{ } ^{35}\text{Cl}_2$	11.3	$\text{C}_{18}\text{H}_{22} - ^{238}\text{U}$
^{238}Pu	75.4	$^{238}\text{Pu}(\alpha)^{234}\text{U}$	23.8	$^{238}\text{Pu}(\text{n},\gamma)^{239}\text{Pu}$	0.8	$^{242}\text{Cm}(\alpha)^{238}\text{Pu}$
^{239}Np	98.0	$^{239}\text{Np}(\beta^-)^{239}\text{Pu}$	2.0	$^{243}\text{Am}(\alpha)^{239}\text{Np}$		
^{239}Pu	44.3	$^{239}\text{Pu}(\alpha)^{235}\text{U}$	41.2	$^{239}\text{Pu}(\text{n},\gamma)^{240}\text{Pu}$	14.2	$^{238}\text{Pu}(\text{n},\gamma)^{239}\text{Pu}$
^{240}U	96.4	$^{244}\text{Pu}(\alpha)^{240}\text{U}$	3.6	$^{240}\text{U}(\beta^-)^{240}\text{Np}^m$		
^{240}Np	67.6	$^{240}\text{Np}^m(\text{IT})^{240}\text{Np}$	32.4	$^{240}\text{Np}(\beta^-)^{240}\text{Pu}$		
$^{240}\text{Np}^m$	43.6	$^{240}\text{Np}^m(\beta^-)^{240}\text{Pu}$	40.9	$^{240}\text{U}(\beta^-)^{240}\text{Np}^m$	15.5	$^{240}\text{Np}^m(\text{IT})^{240}\text{Np}$
^{240}Pu	37.7	$^{240}\text{Pu}(\text{n},\gamma)^{241}\text{Pu}$	31.3	$^{239}\text{Pu}(\text{n},\gamma)^{240}\text{Pu}$	31.0	$^{240}\text{Pu}(\alpha)^{236}\text{U}$
^{240}Cm	98.8	$^{240}\text{Cm}(\alpha)^{236}\text{Pu}$	1.2	$^{244}\text{Cf}(\alpha)^{240}\text{Cm}$		
^{241}Pu	62.3	$^{240}\text{Pu}(\text{n},\gamma)^{241}\text{Pu}$	33.6	$^{241}\text{Pu}(\text{n},\gamma)^{242}\text{Pu}$	3.7	$^{241}\text{Pu}(\beta^-)^{241}\text{Am}$
^{241}Am	96.1	$^{241}\text{Pu}(\beta^-)^{241}\text{Am}$	2.1	$^{241}\text{Am}(\alpha)^{237}\text{Np}$	1.9	$^{241}\text{Cm}(\epsilon)^{241}\text{Am}$
^{241}Cm	93.0	$^{241}\text{Cm}(\epsilon)^{241}\text{Am}$	4.9	$^{241}\text{Cm}(\alpha)^{237}\text{Pu}$	2.1	$^{245}\text{Cf}(\alpha)^{241}\text{Cm}$
^{242}Pu	62.2	$^{241}\text{Pu}(\text{n},\gamma)^{242}\text{Pu}$	37.2	$^{242}\text{Pu}(\alpha)^{238}\text{U}$	0.5	$^{242}\text{Pu}(\text{n},\gamma)^{243}\text{Pu}$
^{242}Cm	99.2	$^{242}\text{Cm}(\alpha)^{238}\text{Pu}$	0.8	$^{246}\text{Cf}(\alpha)^{242}\text{Cm}$		

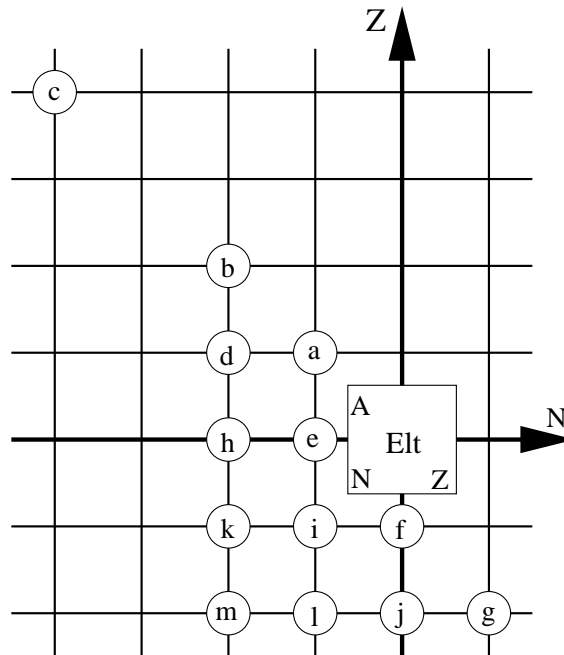
Table II. Influences on primary nuclei (continued, Explanation of Table on page 1673)

Nucleus	Infl.	Equation	Infl.	Equation	Infl.	Equation
^{243}Pu	76.1	$^{242}\text{Pu}(n,\gamma)^{243}\text{Pu}$	13.7	$^{243}\text{Pu}(\beta^-)^{243}\text{Am}$	7.7	$^{247}\text{Cm}(\alpha)^{243}\text{Pu}$
^{243}Am	96.4	$^{243}\text{Am}(\alpha)^{239}\text{Np}$	3.6	$^{243}\text{Pu}(\beta^-)^{243}\text{Am}$		
^{244}Pu	69.7	$^{244}\text{Pu}(d,t)^{243}\text{Pu}$	24.3	$^{248}\text{Cm}(\alpha)^{244}\text{Pu}$	3.4	$^{244}\text{Pu}(\alpha)^{240}\text{U}$
^{244}Cf	97.9	$^{244}\text{Cf}(\alpha)^{240}\text{Cm}$	2.1	$^{248}\text{Fm}(\alpha)^{244}\text{Cf}$		
^{245}Am	76.5	$^{249}\text{Bk}(\alpha)^{245}\text{Am}$	23.5	$^{245}\text{Am}(\beta^-)^{245}\text{Cm}$		
^{245}Cm	100.0	$^{245}\text{Cm}(\alpha)^{241}\text{Pu}$				
^{245}Cf	96.3	$^{245}\text{Cf}(\alpha)^{241}\text{Cm}$	3.7	$^{249}\text{Fm}(\alpha)^{245}\text{Cf}$		
^{246}Pu	54.1	$^{244}\text{Pu}(t,p)^{246}\text{Pu}$	45.9	$^{246}\text{Pu}(\beta^-)^{246}\text{Am}^m$		
$^{246}\text{Am}^m$	56.7	$^{246}\text{Am}^m(\beta^-)^{246}\text{Cm}$	43.3	$^{246}\text{Pu}(\beta^-)^{246}\text{Am}^m$		
^{246}Cm	98.9	$^{246}\text{Cm}(\alpha)^{242}\text{Pu}$	1.0	$^{246}\text{Cm}(d,p)^{247}\text{Cm}$	0.1	$^{246}\text{Am}^m(\beta^-)^{246}\text{Cm}$
^{246}Cf	98.9	$^{246}\text{Cf}(\alpha)^{242}\text{Cm}$	1.1	$^{250}\text{Fm}(\alpha)^{246}\text{Cf}$		
^{247}Cm	63.6	$^{247}\text{Cm}(\alpha)^{243}\text{Pu}$	24.4	$^{246}\text{Cm}(d,p)^{247}\text{Cm}$	12.0	$^{248}\text{Cm}(d,t)^{247}\text{Cm}$
^{248}Cm	75.7	$^{248}\text{Cm}(\alpha)^{244}\text{Pu}$	24.3	$^{248}\text{Cm}(d,t)^{247}\text{Cm}$		
^{248}Fm	76.6	$^{248}\text{Fm}(\alpha)^{244}\text{Cf}$	23.4	$^{252}\text{No}(\alpha)^{248}\text{Fm}$		
^{249}Bk	92.4	$^{249}\text{Bk}(\beta^-)^{249}\text{Cf}$	7.6	$^{249}\text{Bk}(\alpha)^{245}\text{Am}$		
^{249}Cf	98.5	$^{249}\text{Cf}(\alpha)^{245}\text{Cm}$	1.5	$^{249}\text{Bk}(\beta^-)^{249}\text{Cf}$		
^{249}Fm	76.2	$^{249}\text{Fm}(\alpha)^{245}\text{Cf}$	23.8	$^{253}\text{No}(\alpha)^{249}\text{Fm}$		
^{250}Fm	80.2	$^{250}\text{Fm}(\alpha)^{246}\text{Cf}$	19.8	$^{254}\text{No}(\alpha)^{250}\text{Fm}$		
^{252}No	69.0	$^{252}\text{No}(\alpha)^{248}\text{Fm}$	31.0	$^{252}\text{No}-^{133}\text{Cs}_{1.895}$		
^{253}No	66.8	$^{253}\text{No}(\alpha)^{249}\text{Fm}$	33.2	$^{253}\text{No}-^{133}\text{Cs}_{1.902}$		
^{254}No	54.8	$^{254}\text{No}(\alpha)^{250}\text{Fm}$	45.2	$^{254}\text{No}-^{133}\text{Cs}_{1.910}$		

Table III. Nuclear-reaction and separation energies**EXPLANATION OF TABLE**

We present, for all nuclei for which such data can be derived, separation energies (in keV) of particles or groups of particles and nuclear-reaction energies obtained as the following combinations of atomic masses (see accompanying diagram):

$Q(\beta^-)$	=	$M(A, Z) - M(A, Z + 1)$ (in part I)	(a)
$Q(2\beta^-)$	=	$M(A, Z) - M(A, Z + 2)$	(b)
$Q(4\beta^-)$	=	$M(A, Z) - M(A, Z + 4)$	(c)
$Q(\beta^-n)$	=	$M(A, Z) - M(A - 1, Z + 1) - n$	(d)
$S(n)$	=	$-M(A, Z) + M(A - 1, Z) + n$	(e)
$S(p)$	=	$-M(A, Z) + M(A - 1, Z - 1) + {}^1\text{H}$	(f)
$Q(\epsilon p)$	=	$M(A, Z) - M(A - 1, Z - 2) - {}^1\text{H}$	(g)
$S(2n)$	=	$-M(A, Z) + M(A - 2, Z) + 2n$	(h)
$Q(d, \alpha)$	=	$M(A, Z) - M(A - 2, Z - 1) - {}^2\text{H} - {}^4\text{He}$	(i)
$S(2p)$	=	$-M(A, Z) + M(A - 2, Z - 2) + {}^2\text{H}$	(j)
$Q(p, \alpha)$	=	$M(A, Z) - M(A - 3, Z - 1) - {}^4\text{He} + p$	(k)
$Q(n, \alpha)$	=	$M(A, Z) - M(A - 3, Z - 2) - {}^4\text{He} + n$	(l)
$Q(\alpha)$	=	$M(A, Z) - M(A - 4, Z - 2) - {}^4\text{He}$	(m)



A Mass number.
 Elt. Element symbol (for $Z > 103$ see part I, sect. 2).
 Z Atomic number.

2224.57 0.04 2224.57 \pm 0.04 keV. The errors are derived from the adjusted masses and the correlation matrix. For the most precise very light nuclides the precisions are often better than 5 eV and could not be given conveniently in this table. In Table B, the correlation matrix for these nuclides allows easy derivation.

- * in place of value: not calculable from the present input data.
- # in place of decimal point: values and errors estimated from systematic trends.

Other reaction energies can be derived from the given data with the help of the following relations:

$$\begin{aligned}
 Q(\gamma, p) &= -S(p) \\
 Q(\gamma, n) &= -S(n) \\
 Q(\gamma, 2p) &= -S(2p) \\
 Q(\gamma, pn) &= Q(d, \alpha) - 26071.0939 \pm 0.0005 \\
 Q(\gamma, d) &= Q(d, \alpha) - 23846.5279 \pm 0.0002 \\
 Q(\gamma, 2n) &= -S(2n) \\
 Q(\gamma, t) &= Q(p, \alpha) - 19813.8611 \pm 0.0022 \\
 Q(\gamma, {}^3\text{He}) &= Q(n, \alpha) - 20577.6170 \pm 0.0024 \\
 Q(\gamma, \alpha) &= Q(\alpha) \\
 \\
 Q(p, n) &= Q(\beta^-) - 782.3466 \pm 0.0005 \\
 Q(p, 2p) &= -S(p) \\
 Q(p, pn) &= -S(n) \\
 Q(p, d) &= -S(n) + 2224.5660 \pm 0.0004 \\
 Q(p, 2n) &= Q(\beta^- n) - 782.3466 \pm 0.0005 \\
 Q(p, t) &= -S(2n) + 8481.7988 \pm 0.0024 \\
 Q(p, {}^3\text{He}) &= Q(d, \alpha) - 18353.0511 \pm 0.0023 \\
 \\
 Q(n, 2p) &= Q(\epsilon p) + 782.3466 \pm 0.0005 \\
 Q(n, np) &= -S(p) \\
 Q(n, d) &= -S(p) + 2224.5660 \pm 0.0004 \\
 Q(n, 2n) &= -S(n) \\
 Q(n, t) &= Q(d, \alpha) - 17589.2951 \pm 0.0023 \\
 Q(n, {}^3\text{He}) &= -S(2p) + 7718.0428 \pm 0.0024 \\
 \\
 Q(d, pn) &= 0 - 2224.5660 \pm 0.0004 \\
 Q(d, t) &= -S(n) + 6257.2328 \pm 0.0023 \\
 Q(d, {}^3\text{He}) &= -S(p) + 5493.4768 \pm 0.0023 \\
 \\
 Q({}^3\text{He}, t) &= Q(\beta^-) - 18.5906 \pm 0.0008 \\
 Q({}^3\text{He}, \alpha) &= -S(n) + 20577.6170 \pm 0.0024 \\
 \\
 Q(t, \alpha) &= -S(p) + 19813.8611 \pm 0.0022
 \end{aligned}$$

Table III. Nuclear-reaction and separation energies (Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		$Q(d,\alpha)$		$Q(p,\alpha)$		$Q(n,\alpha)$		
1	n	0	0.0	0.0	*		*	*	*	*	*	*	*	*	
	H	1	*		0.0	0.0	*	*	*	*	*	*	*	*	
2	H	1	2224.57	0.00	2224.57	0.00	*	23846.53	0.00	*	*	*	*	*	
3	H	1	6257.23	0.00	*		*	17589.30	0.00	19813.86	0.00	*	*	*	
	He	2	*		5493.48	0.00	*	18353.05	0.00	*	*	20577.62	0.00	*	
	Li	3	*		*		*	*	*	*	*	*	*	*	
4	H	1	-1600	100	*		*	*		21410	100	*	*	*	
	He	2	20577.62	0.00	19813.86	0.00	*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	Li	3	11420#	2010#	-3100	210	*	*	*	*	*	23680	210	*	
5	H	1	-200	130	*		*	*		*	*	*	*	*	
	He	2	-735	20	20680	100	*	6992	20	2960	20	*	*	*	
	Li	3	21720	220	-1960	50	*	7460	50	*	*	4190	50	*	
	Be	4	*		-4530#	2010#	*	19180#	2830#	*	*	*	*	*	
6	H	1	-910	270	*		-5440#	2020#	*	*	*	*	*	*	
	He	2	1710	20	22590	90	*	3680	100	7506.34	0.05	*	*	*	
	Li	3	5660	50	4433	20	*	22372.77	0.00	4019.72	0.00	4783.47	0.00	*	
	Be	4	26840#	2000#	590	50	*	3760	210	-5430#	2000#	9090	5	*	
	B	5	*		-2890#	2830#	*	*	*	*	*	24300#	2830#	*	
7	H	1	810#	1040#	*		21460#	1000#	*	*	*	*	*	*	
	He	2	-410	8	23090	250	*	3890	90	6320	100	*	*	*	
	Li	3	7251.09	0.01	9973.96	0.05	*	14387	20	17346.24	0.00	-4070	100	*	
	Be	4	10677	5	5606.85	0.07	*	14800	50	-4690	210	18990.48	0.07	*	
	B	5	27720#	2000#	-2013	26	*	1250#	2000#	*	*	8000	210	*	
8	He	2	2535	8	24810#	1000#	-3455	18	440	250	3580	90	*	*	
	Li	3	2032.62	0.05	12416	8	*	14064.51	0.07	14579	20	-6300	90	*	
	Be	4	18898.64	0.08	17254.40	0.04	*	1565.60	0.04	-1870	50	-643	20	*	
	B	5	12826	25	136.4	1.0	*	15257	6	-9350#	2000#	16890	50	*	
	C	6	*		-100	30	*	-1550#	2000#	*	*	3570#	2000#	*	
9	He	2	-1250	50	*		12020	50	2510#	1010#	3920	260	*	*	
	Li	3	4062.22	0.19	13943.75	0.21	*	9593	8	12226.86	0.19	-11270	250	*	
	Be	4	1664.54	0.08	16886.32	0.09	*	7152.15	0.08	2125.63	0.08	-597.24	0.09	*	
	B	5	18576.4	1.3	-185.8	0.9	*	7358.3	0.9	-1094	6	3976.0	0.9	*	
	C	6	14225	18	1299.6	2.4	*	11945	25	-13550#	2000#	16182	6	*	
10	He	2	-170	110	*		33470	100	*		4900#	1010#	*	*	
	Li	3	-26	13	15170	50	-5750	400	12154	13	11844	15	-10440#	1000#	*
	Be	4	6812.28	0.05	19636.39	0.20	*	2372.49	0.09	2564.44	0.08	-7819	8	*	
	B	5	8437.1	1.0	6586.7	0.4	*	17819.8	0.4	1145.7	0.4	2790.0	0.4	*	
	C	6	21283.5	2.2	4006.7	1.0	*	3488.0	1.1	-7114	25	5576.2	0.4	*	
	N	7	*		-2600	400	*	14450	400	*	*	16770	400	*	
11	Li	3	396	13	15730	100	16420	50	10500	50	13982.6	0.6	*	*	
	Be	4	501.64	0.25	20164	13	*	5933.1	0.3	4095.42	0.24	-5786.11	0.25	*	
	B	5	11454.12	0.16	11228.6	0.4	*	8030.2	0.4	8590.3	0.4	-6631.5	0.4	*	
	C	6	13119.8	0.9	8689.4	0.9	*	8944.6	1.3	-7407.2	1.4	11355.0	1.0	*	
	N	7	22570	400	-1320	50	*	6100	50	-5900	50	7030	50	*	
12	Li	3	-120	15	*		31581	15	10460	100	12850	50	*	*	
	Be	4	3170.7	1.9	22939.5	2.0	-6837	24	2736	13	4986.9	1.9	-10210	50	*
	B	5	3369.8	1.4	14096.7	1.3	*	11472.7	1.3	6885.0	1.3	-5939.1	1.3	*	
	C	6	18721.6	0.9	15956.9	0.4	*	-1339.9	0.4	-7552.4	0.9	-5702.05	0.08	*	
	N	7	15040	50	601.2	1.4	*	12350.1	1.1	-6708.8	2.4	10568.0	1.3	*	
	O	8	*		-320	50	*	3830	400	*	*	8650	24	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q($2\beta^-$)		Q(ϵp)		Q($\beta^- n$)	
1	n	0	*	*	*	*	*	*	*	*	*	*	*	*
	H	1	*	*	*	*	*	*	*	*	*	*	*	*
2	H	1	*	*	*	*	*	*	*	*	*	*	*	*
3	H	1	8481.80	0.00	*	*	*	-13720#	2000#	*	*	*	*	*
	He	2	*	*	7718.04	0.00	*	*	*	*	*	*	*	*
	Li	3	*	*	-6800#	2000#	*	*	*	*	8240#	2000#	*	*
4	H	1	4660	100	*	*	*	-700	230	*	*	*	1620	100
	He	2	*	*	*	*	0.0	0.0	*	*	*	*	-34310#	2000#
	Li	3	*	*	2390	210	*	*	*	*	3080	210	*	*
5	H	1	-1800	90	*	*	*	21210	100	*	*	*	22400	90
	He	2	19843	20	*	*	735	20	-25910#	2000#	*	*	-22160	210
	Li	3	33130#	2000#	17850	50	1960	50	*	*	-20230	110	*	*
	Be	4	*	*	-7630#	2000#	*	*	*	*	27430#	2000#	*	*
6	H	1	-1110	270	*	*	*	27790	250	*	*	*	22570	250
	He	2	975.45	0.05	*	*	*	-783	5	*	*	*	-2160	50
	Li	3	27380	210	25110	100	-1473.76	0.00	-33230#	2000#	-26090	90	-31120#	2000#
	Be	4	*	*	-1372	5	*	*	*	*	-145	21	*	*
	B	5	*	*	-7420#	2010#	*	*	*	*	28350#	2000#	*	*
7	H	1	-100#	1000#	*	*	*	34230#	1000#	*	*	*	23470#	1000#
	He	2	1301	21	*	*	*	10304	8	*	*	*	3915	8
	Li	3	12910	50	32560	90	-2467.62	0.01	-12769	25	-34260	250	-11539	5
	Be	4	37510#	2000#	10040	20	-1587.13	0.07	*	*	-9112.07	0.09	-39620#	2000#
	B	5	*	*	-1420	60	-3420#	2000#	*	*	6301	25	*	*
8	He	2	2125.05	0.10	*	*	*	26668.01	0.10	*	*	*	8631.26	0.09
	Li	3	9283.71	0.05	35510	250	-6100	100	-1975.8	1.0	-35480#	1000#	-2894.51	0.09
	Be	4	29576	5	27228.36	0.06	91.84	0.04	-30123	18	-28420	8	-30806	25
	B	5	40540#	2000#	5743.2	1.0	-4830	210	*	*	725.5	1.0	*	*
	C	6	*	*	-2111	19	*	*	*	*	12006	18	*	*
9	He	2	1280	50	*	*	*	29590	50	*	*	*	11920	50
	Li	3	6094.84	0.19	38760#	1000#	-10360	90	12538.4	0.9	*	*	11941.91	0.19
	Be	4	20563.18	0.10	29303	8	-2308	20	-17562.5	2.1	-27550.20	0.12	-19644.4	1.0
	B	5	31403	25	17068.6	0.9	-1690	50	*	*	-15818.3	0.9	-30719	18
	C	6	*	*	1436.0	2.1	-10650#	2000#	*	*	16680.3	2.1	*	*
10	He	2	-1420	100	*	*	*	36560	100	*	*	*	16150	100
	Li	3	4036	13	*	*	-11250	250	21002	13	*	*	13633	13
	Be	4	8476.82	0.09	33580.13	0.12	-7409.52	0.10	-3091.3	0.4	-35620	50	-7880.3	0.9
	B	5	27013.5	1.1	23473.1	0.4	-4461.1	0.4	-26750	400	-20193.2	0.4	-24931.6	2.2
	C	6	35508	18	3820.9	0.4	-5101	5	*	*	-2938.7	0.4	*	*
	N	7	*	*	-1300	400	-10950#	2040#	*	*	19090	400	*	*
11	Li	3	369.3	0.6	*	*	-10830#	1000#	32060.4	0.7	*	*	20049.4	0.6
	Be	4	7313.92	0.25	35340	50	-8321	8	9526.9	1.0	-36280	100	55.2	0.5
	B	5	19891.2	1.0	30865.0	0.5	-8664.1	0.4	-15640	50	-31674	13	-15102.19	0.17
	C	6	34403.3	2.3	15276.1	1.0	-7543.6	1.0	*	*	-9246.2	1.0	-36220	400
	N	7	*	*	2690	50	-5800	50	*	*	4960	50	*	*
12	Li	3	276	20	*	*	*	35550	15	*	*	*	20671	15
	Be	4	3672.4	1.9	38670	100	-8956.8	1.9	25077.8	1.9	*	*	8338.6	2.0
	B	5	14823.9	1.4	34261	13	-10001.3	1.3	-3968.7	1.7	-34647.8	1.5	-5352.2	1.6
	C	6	31841.4	0.4	27185.43	0.08	-7366.59	0.04	-31915	24	-27466.14	0.24	-32370	50
	N	7	37600	400	9290.6	1.1	-8008.4	1.4	*	*	1381.2	1.1	*	*
	O	8	*	*	-1638	24	-5570	30	*	*	13975	24	*	*

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	$S(n)$	$S(p)$	$Q(4\beta^-)$	$Q(d,\alpha)$	$Q(p,\alpha)$	$Q(n,\alpha)$						
13	Li	3	-1350	350	*	53000	350	*	14030	360	*			
	Be	4	-510	10	22549	18	10544	14	3642	10	5471	16	-9870	100
	B	5	4878.6	1.7	15804.6	2.2	*		7095.8	1.1	8818.7	1.1	-10844	13
	C	6	4946.31	0.00	17533.4	1.3	*		5167.9	0.4	-4061.6	0.4	-3836.08	0.08
	N	7	20063.9	1.0	1943.49	0.27	*		5406.0	1.0	-5489.2	0.5	-1058.8	0.5
	O	8	16871	26	1512	10	*		9520	50	-10820	400	13063	10
14	Be	4	1780	130	25680	370	31950	130	1750	130	4090	130	*	
	B	5	970	21	17284	24	-8300	50	9297	21	8351	21	-11418	21
	C	6	8176.43	0.00	20831.2	1.1	*		361.3	1.3	-783.9	0.4	-11510.87	0.24
	N	7	10553.38	0.27	7550.56	0.00	*		13574.22	0.00	-2922.8	0.9	-158.1	0.4
	O	8	23179	10	4626.99	0.29	*		1380.2	1.0	-11430	50	3003.6	1.0
	F	9	*		-1560	40	*		10760	50	*		13310	60
15	Be	4	-1740#	420#	*		46910#	400#	2130#	530#	5710#	400#	*	
	B	5	2777	30	18290	130	12150	70	6010	23	8744	21	-14315	26
	C	6	1218.1	0.8	21080	21	*		4021.8	1.3	1367.8	1.5	-9558.2	2.1
	N	7	10833.30	0.00	10207.42	0.00	*		7687.24	0.00	4965.49	0.00	-7621.6	1.3
	O	8	13223.2	0.5	7296.8	0.5	*		8220.9	0.6	-9618.4	1.1	8502.0	0.5
	F	9	23230	70	-1510	60	*		4400	60	-10240	70	5120	60
16	Be	4	390#	430#	*		62180	170	*		3970	390	*	
	B	5	-83	15	19940#	400#	26432	26	7870	130	8317	27	-15580	350
	C	6	4250	4	22553	21	-10292	21	741	22	1996	4	-14319	11
	N	7	2488.8	2.3	11478.2	2.4	*		13374.8	2.3	7423.0	2.3	-5231.8	2.5
	O	8	15663.9	0.5	12127.41	0.00	*		3110.39	0.00	-5218.43	0.27	-2215.61	0.00
	F	9	14200	60	-536	8	*		13384	8	-7571	13	10981	8
	Ne	10	*		110	70	*		2730	50	*		6517	23
17	B	5	1410	170	20970	240	41820	170	4720#	440#	8680	220	*	
	C	6	735	18	23370	30	4530	17	2784	27	2231	27	-13280	130
	N	7	5885	15	13113	15	*		8708	15	9714	15	-10147	26
	O	8	4143.08	0.00	13781.6	2.3	*		9800.60	0.00	1191.87	0.00	1817.74	0.00
	F	9	16800	8	600.27	0.25	*		9806.9	0.5	-1191.70	0.27	4734.69	0.25
	Ne	10	15557	20	1469	8	*		10400	60	-10600	40	14139.4	0.4
18	B	5	-5	5	*		50970	170	5110	240	6950#	440#	*	
	C	6	4180	30	26140	170	19600	30	-1480	40	820	40	-19200#	400#
	N	7	2828	24	15207	25	-11920	110	10130	19	8104	19	-10198	28
	O	8	8045.37	0.00	15942	15	*		4244.1	2.3	3979.80	0.00	-5009.6	0.8
	F	9	9149.9	0.5	5607.1	0.5	*		16320.9	0.5	2881.6	0.7	6418.1	0.5
	Ne	10	19254.1	0.5	3923.0	0.4	*		5348	8	-6630	60	8108.4	0.6
	Na	11	*		-1250	110	*		11760	110	*		13880	130
19	B	5	1140#	440#	*		60270#	400#	*		6190#	430#	*	
	C	6	580	90	26720	200	30660	100	-650	200	160	100	-19390	190
	N	7	5329	25	16350	30	2926	19	5536	24	7025	17	-15610	30
	O	8	3955.6	2.6	17069	19	-28500	50	6174	15	2513	3	-4715	4
	F	9	10431.9	0.5	7993.60	0.00	*		10032.13	0.00	8113.61	0.00	-1524.9	2.3
	Ne	10	11636.9	0.4	6410.0	0.5	*		10511.16	0.30	-4064	8	12135.46	0.16
	Na	11	20180	110	-323	11	*		7140	11	-6193	23	7896	13
	Mg	12	*		500	120	*		*		*		13490	50
20	B	5	-280#	810#	*		67150#	700#	*		*		*	
	C	6	2930	260	28510#	470#	44600	240	-3580	290	-1350	290	*	
	N	7	2160	60	17940	110	14910	60	7560	60	5600	60	-16360	180
	O	8	7608.0	2.8	19348	16	-13762	27	1394	19	790	15	-11588	17
	F	9	6601.34	0.03	10639.3	2.6	*		11476.16	0.03	5655.35	0.03	-2241	15
	Ne	10	16865.30	0.16	12843.46	0.00	*		2795.8	0.5	-4129.58	0.25	-586.77	0.00
	Na	11	14150	11	2190.4	1.1	*		12243.8	1.2	-4785.8	1.2	10545.3	1.1
	Mg	12	22340	60	2660	29	*		3230	120	*		6705	27

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q($2\beta^-$)		Q(ϵp)		Q($\beta^- n$)	
13	Li	3	-1470	350	*	*	*	41780	350	*	*	25190	350	
	Be	4	2661	10	*		-9700	50	30534	10	*	12218	10	
	B	5	8248.4	1.0	38744.1	1.2	-10817.7	1.1	11216.6	1.1	-39646	15	8490.8	1.1
	C	6	23667.9	0.9	31630.10	0.24	-10648.36	0.08	-19990	10	-29241.7	1.9	-22284.4	1.0
	N	7	35100	50	17900.3	0.5	-9495.9	0.9	*		-15312.9	1.3	-34641	24
	O	8	*		2113	10	-8220	10	*		15826	10	*	
14	Be	4	1270	130	*		-11640	170	36930	130	*		15320	130
	B	5	5848	21	39834	26	-11814	25	20800	21	-41970	350	12467	21
	C	6	13122.74	0.00	36635.8	1.9	-12012.51	0.08	-4987.56	0.11	-37928	10	-10396.91	0.27
	N	7	30617.3	1.0	25083.9	1.3	-11612.2	0.4	-29100	40	-20987.7	1.1	-28323	10
	O	8	40050	24	6570.48	0.11	-10116.2	0.4	*		-2406.52	0.11	*	
	F	9	*		-50	40	-9260	400	*		19330	40	*	
15	Be	4	40#	400#	*		*	39890#	400#	*		18030#	400#	
	B	5	3747	21	43960	350	-14195	21	28857	21	*		17867	21
	C	6	9394.5	0.8	38364	10	-12728.9	0.8	7017.5	0.9	-37370	130	-1061.6	0.8
	N	7	21386.68	0.27	31038.6	1.1	-10991.4	0.4	-16710	60	-30851	21	-15977.34	0.11
	O	8	36402	10	14847.3	0.5	-10219.6	1.1	*		-7453.3	0.5	-37180	40
	F	9	*		3120	60	-9920	80	*		6650	60	*	
16	Be	4	-1350	100	*		*	43750	170	*		20420	170	
	B	5	2690	30	*		-14232	29	31428	25	*		19168	25
	C	6	5468	4	40840	130	-13809	4	18431	4	-43360#	400#	5521	4
	N	7	13322.1	2.3	32558	21	-10110.4	2.7	-4996	9	-30563	21	-5243.0	2.4
	O	8	28887.09	0.11	22334.83	0.00	-7161.92	0.00	-28723	20	-21899.1	0.8	-29620	60
	F	9	37430	40	6761	8	-9083	8	*		3290	8	*	
	Ne	10	*		-1401	20	-10350	30	*		13842	20	*	
17	B	5	1330	170	*		-16990	390	35900	170	*		22010	170
	C	6	4985	17	43310#	400#	-15053	20	21840	17	-43710	170	7276	18
	N	7	8374	15	35666	26	-11117	15	5918	15	-36531	29	4536	15
	O	8	19807.0	0.5	25259.8	0.8	-6358.69	0.00	-17309.2	0.4	-21792	4	-19560	8
	F	9	31000	60	12727.68	0.25	-5818.7	0.4	*		-11021.2	2.3	-30106	20
	Ne	10	*		933.1	0.6	-9040	10	*		13948.5	0.4	*	
18	B	5	1410	170	*		*	38730	170	*		22750	170	
	C	6	4920	30	47110	170	-17460	140	25700	30	*		8980	30
	N	7	8713	19	38580	30	-12975	28	12240	19	-37950	170	5851	19
	O	8	12188.45	0.00	29055	4	-6227.62	0.00	-6100.4	0.4	-29103	17	-10805.83	0.25
	F	9	25950	8	19388.7	2.3	-4415.2	0.5	-24160	110	-14286	15	-23698.7	0.6
	Ne	10	34811	20	4523.3	0.4	-5114.7	0.4	*		-1162.6	0.4	*	
	Na	11	*		220	110	-9350	120	*		15800	110	*	
19	B	5	1140#	440#	*		*	42920#	400#	*		25790#	400#	
	C	6	4760	100	*		-19770#	410#	29080	100	*		11230	100
	N	7	8157	22	42490	170	-15527	27	17343	16	-43280	170	8567	16
	O	8	12001.0	2.6	32276	18	-8965.2	2.8	1580.8	2.6	-28870	30	-5611.6	2.7
	F	9	19581.78	0.25	23935	15	-4013.80	0.00	-14417	11	-21890	19	-14876.4	0.4
	Ne	10	30891.0	0.4	12017.12	0.16	-3528.5	0.5	-30080	50	-4754.10	0.16	-31360	110
	Na	11	*		3600	11	-6300	60	*		4767	11	*	
	Mg	12	*		-750	50	*	*	*		19220	50	*	
20	B	5	860#	720#	*		*	45370#	700#	*		26650#	710#	
	C	6	3500	240	*		-22310	290	33760	240	*		13630	240
	N	7	7490	60	44660	180	-17770	60	21780	60	-44300#	400#	10360	60
	O	8	11563.7	0.9	35700	30	-12323	4	10838.1	0.9	-35910	100	-2787.7	0.9
	F	9	17033.2	0.5	27709	19	-8126.3	2.3	-6868.1	1.1	-23162	16	-9840.83	0.16
	Ne	10	28502.2	0.4	20837.06	0.00	-4729.84	0.00	-24601	27	-17663.8	2.6	-28043	11
	Na	11	34330	110	8600.5	1.2	-6255	8	*		1049.1	1.1	-33050	50
	Mg	12	*		2337	27	-8850	30	*		8518	27	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		Q($4\beta^-$)		Q(d, α)		Q(p, α)		Q(n, α)	
21	B	5	-520#	1140#	*		75770#	900#	*		*		*	
	C	6	-10#	470#	28780#	810#	51380#	400#	-2420#	570#	-1340#	440#	*	
	N	7	4590	110	19600	260	27440	100	3550	140	5200	100	-20950	200
	O	8	3806	12	20990	60	-2852	20	2917	20	-187	22	-11210	30
	F	9	8101.5	1.8	11132.7	2.0	-27040#	400#	7330	3	5599.3	1.8	-7514	19
	Ne	10	6761.16	0.04	13003.28	0.05	*		6466.47	0.04	-1740.8	0.5	697.44	0.04
	Na	11	17106.6	1.1	2431.68	0.28	*		6774.1	0.3	-2638.2	0.5	2588.7	0.5
	Mg	12	14720	30	3226	16	*		8695	20	-9260	110	11242	16
	Al	13	*		-2140#	400#	*		5870#	400#	*		7600#	420#
22	C	6	120#	470#	29420#	940#	61610	250	-2830#	740#	-320#	470#	*	
	N	7	1280	210	20890#	440#	37220	190	5190	310	4490	220	-21090#	440#
	O	8	6850	60	23260	110	9680	60	-1770	80	-1710	60	-17480	110
	F	9	5230	13	12558	17	-15410#	400#	9708	12	4325	13	-7416	21
	Ne	10	10364.26	0.04	15266.1	1.8	-41360#	500#	2703.56	0.03	-1673.21	0.02	-5711.2	2.6
	Na	11	11068.2	0.3	6738.71	0.18	*		12571.22	0.17	-2069.52	0.23	1952.33	0.17
	Mg	12	19385	16	5504.3	0.4	*		3460.3	1.2	-8465	11	3494.4	0.4
	Al	13	16860#	570#	0#	400#	*		11350#	400#	-8760#	400#	10920#	400#
	Si	14	*		940#	640#	*		*		*		7160#	510#
23	C	6	-2510#	1030#	*		69330#	1000#	-840#	1350#	1900#	1220#	*	
	N	7	1790#	360#	22560#	390#	47850#	300#	3390#	500#	5630#	380#	-23170#	760#
	O	8	2730	110	24710	210	20090	90	80	130	-2280	110	-17290	260
	F	9	7550	50	13260	80	-3440	50	5960	50	4380	50	-12810	70
	Ne	10	5200.65	0.10	15236	12	-28850#	500#	5604.4	1.8	-272.53	0.11	-3303.8	0.9
	Na	11	12419.65	0.17	8794.11	0.02	*		6912.73	0.04	2376.13	0.00	-3865.99	0.03
	Mg	12	13144.6	0.8	7580.7	0.7	*		7422.2	0.7	-7459.8	1.3	7215.1	0.7
	Al	13	19530#	400#	141.0	0.5	*		6545	16	-5947	27	5543.9	1.2
	Si	14	17710#	710#	1790#	640#	*		7420#	640#	*		11790#	500#
24	N	7	-550#	500#	24520#	1070#	55360#	400#	4060#	470#	6160#	570#	-23140#	990#
	O	8	4190	140	27110#	320#	32430	110	-2830	220	-1890	150	-21500#	420#
	F	9	3820	90	14350	120	7610	70	8990	90	4360	70	-12050	120
	Ne	10	8868.9	0.5	16550	50	-16696	19	1966	12	-1040.0	1.9	-8367	12
	Na	11	6959.42	0.04	10552.88	0.11	-41740#	500#	10317.56	0.04	2177.87	0.05	-2723.9	1.8
	Mg	12	16531.6	0.7	11692.69	0.01	*		1958.76	0.17	-6884.88	0.28	-2555.39	0.04
	Al	13	14867.0	1.2	1863.3	1.3	*		11063.1	1.1	-6097	16	7783.4	1.1
	Si	14	21020#	500#	3293	19	*		3250#	400#	-11380#	400#	5477	25
	P	15	*		-2330#	710#	*		10690#	710#	*		11980#	640#
25	N	7	-970#	640#	*		65340#	500#	2520#	1120#	7260#	560#	*	
	O	8	-776	15	26880#	420#	40540	110	-260#	320#	170	220	-20600	270
	F	9	4270	100	14430	130	20280	80	7450	120	6940	90	-15030	210
	Ne	10	4180	40	16910	80	-5890	50	5340	70	10	50	-5700	70
	Na	11	9011.2	1.2	10695.1	1.3	-29100#	400#	6507.0	1.2	3531.0	1.2	-6505	12
	Mg	12	7330.52	0.05	12063.78	0.06	*		7047.89	0.05	-3147.20	0.18	478.34	0.05
	Al	13	16939.9	1.2	2271.6	0.5	*		7267.9	0.8	-3652.2	0.6	1911.8	0.5
	Si	14	14988	22	3414	10	*		7790	10	-9510#	400#	9874	10
	P	15	21650#	640#	-1710#	400#	*		6750#	640#	-8740#	640#	7180#	570#
26	O	8	690	110	28540#	530#	50950	160	-1490#	430#	1280#	340#	-23790#	1010#
	F	9	770	110	15970	140	30880	80	10880	130	8910	120	-14010#	310#
	Ne	10	5530	50	18170	80	7620	18	3630	70	2030	50	-8490	90
	Na	11	5574	4	12090	40	-17830#	200#	9802	4	3157	4	-4530	50
	Mg	12	11093.09	0.04	14145.7	1.2	-43290#	600#	2914.22	0.05	-1820.64	0.03	-5414.10	0.11
	Al	13	11365.3	0.5	6306.31	0.05	*		12434.26	0.06	-1872.8	0.7	2966.14	0.06
	Si	14	19040	10	5513.8	0.5	*		3617.4	1.1	-9025.0	0.4	3978.7	0.7
	P	15	16840#	450#	140#	200#	*		10940#	200#	-7860#	540#	9870#	200#
	S	16	*		-50#	720#	*		4470#	780#	*		9030#	780#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q(2 β^-)		Q(ϵp)		Q($\beta^- n$)	
21	B	5	-800#	990#	*	*	*	50470#	910#	*	*	30090#	940#	
	C	6	2910#	410#	*	*	*	37580#	400#	*	*	15810#	400#	
	N	7	6750	100	48100#	410#	-20940	200	25300	100	-49170#	710#	13380	100
	O	8	11414	12	38930	100	-15394	21	13794	12	-36780	240	8	12
	F	9	14702.8	1.8	30481	17	-10343	15	2137.0	1.8	-29100	60	-1077.0	1.8
	Ne	10	23626.46	0.16	23642.6	2.6	-7347.93	0.04	-16645	16	-16816.9	0.9	-20653.7	1.1
	Na	11	31257	11	15275.13	0.28	-6561.3	0.4	-29180#	400#	-9456.14	0.28	-27815	27
	Mg	12	37060	50	5416	16	-8012	16	*	*	10666	16	*	*
	Al	13	*	*	520#	400#	*	*	*	*	12850#	400#	*	*
22	C	6	110	60	*	*	*	44310	250	*	*	20270	260	
	N	7	5870	200	49670#	730#	-22230	260	29250	190	-50970#	920#	15910	190
	O	8	10660	60	42850	250	-18060	60	17310	60	-43650#	410#	1260	60
	F	9	13332	12	33550	60	-12745	22	7975	12	-29750	100	454	12
	Ne	10	17125.42	0.02	26398.8	0.9	-9666.81	0.02	-7624.8	0.3	-23376	12	-13911.39	0.28
	Na	11	28174.8	1.1	19742.00	0.17	-8479.5	0.5	-23380#	400#	-12422.9	1.8	-24166	16
	Mg	12	34101	27	7935.9	0.3	-8142.5	0.5	-33740#	500#	-1957.1	0.3	-35460#	400#
	Al	13	*	*	3230#	400#	-9260#	420#	*	*	13100#	400#	*	*
	Si	14	*	*	-1200#	500#	*	*	*	*	15140#	500#	*	*
23	C	6	-2390#	1070#	*	*	*	49550#	1000#	*	*	24060#	1020#	
	N	7	3070#	310#	51980#	950#	-22880#	500#	35010#	300#	*	*	20970#	300#
	O	8	9580	90	45600#	410#	-20220	130	19770	90	-46260	260	3760	90
	F	9	12780	50	36520	110	-14970	50	12840	50	-36010	200	3270	50
	Ne	10	15564.90	0.11	27794	12	-10911.8	2.6	319.2	0.7	-21730	60	-8043.84	0.20
	Na	11	23487.85	0.28	24060.2	1.8	-10467.32	0.00	-16277.9	0.3	-19612	12	-17201.2	0.3
	Mg	12	32529	16	14319.4	0.7	-9650.2	0.7	-29170#	500#	-4737.5	0.7	-31750#	400#
	Al	13	36390#	400#	5645.2	0.4	-8606	11	*	*	4640.6	0.4	-34660#	500#
	Si	14	*	*	1790#	500#	-10560#	510#	*	*	16810#	500#	*	*
24	N	7	1240#	440#	*	*	-22620#	810#	39380#	410#	*	*	24250#	410#
	O	8	6930	120	49670	270	-21480	260	24450	110	-52960#	1000#	7120	120
	F	9	11380	70	39060	210	-16630	90	15980	70	-38050#	310#	4640	70
	Ne	10	14069.6	0.5	29810	60	-12172.7	1.0	7981.9	0.5	-27860	90	-4493.1	0.5
	Na	11	19379.07	0.17	25789	12	-10825.41	0.05	-8370.3	1.1	-19020	50	-11016.0	0.7
	Mg	12	29676.3	0.3	20486.80	0.02	-9316.55	0.01	-24678	19	-16068.50	0.11	-28753.0	0.3
	Al	13	34390#	400#	9444.0	1.1	-9323.1	1.5	-33370#	500#	2193.3	1.1	-31820#	500#
	Si	14	38740#	500#	3434	19	-9240	30	*	*	8929	19	*	*
	P	15	*	*	-540#	640#	*	*	*	*	19280#	500#	*	*
25	N	7	-1520#	590#	*	*	-22160#	1030#	44620#	510#	*	*	29410#	520#
	O	8	3420	140	51400#	1000#	-20720#	420#	29410	120	*	*	11720	130
	F	9	8090	90	41540#	310#	-16310	120	20720	80	-42860#	410#	9240	80
	Ne	10	13050	40	31260	100	-12550	50	11130	40	-27850	120	-1710	40
	Na	11	15970.6	1.2	27250	50	-11735.1	2.2	-441.7	1.3	-24210	70	-3495.6	1.2
	Mg	12	23862.1	0.7	22616.67	0.11	-9885.91	0.06	-17020	10	-14530.1	0.5	-21216.5	1.1
	Al	13	31806.9	0.6	13964.3	0.5	-9156.4	0.5	-28660#	400#	-7787.2	0.5	-27732	19
	Si	14	36010#	500#	5277	10	-9511	19	*	*	10472	10	-37560#	500#
	P	15	*	*	1590#	400#	-9680#	570#	*	*	12500#	400#	*	*
26	O	8	-90	110	*	*	-21280	290	34250	160	*	*	15300	170
	F	9	5040	110	42850#	410#	-15800	210	25530	80	-44610#	510#	12650	90
	Ne	10	9712	18	32600	110	-11230	60	16694	18	-34160	110	1766	18
	Na	11	14585	4	29000	70	-12079	13	5349	4	-25510	80	-1739	4
	Mg	12	18423.61	0.03	24840.8	0.5	-10614.75	0.03	-9073.57	0.10	-21440	40	-15369.7	0.5
	Al	13	28305.1	1.1	18370.10	0.07	-9453.51	0.18	-23180#	200#	-10141.3	1.2	-24109	10
	Si	14	34028	19	7785.35	0.11	-9166.0	0.3	-34220#	600#	-1237.18	0.10	-34950#	400#
	P	15	38490#	540#	3560#	200#	-9650#	450#	*	*	12600#	200#	*	*
	S	16	*	*	-1760#	600#	-8690#	780#	*	*	15960#	600#	*	*

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		Q(4 β^-)		Q(d, α)		Q(p, α)		Q(n, α)	
27	O	8	-1650#	530#	*		59040#	500#	-820#	710#	2380#	640#	*	
	F	9	2110	210	17390	250	41830	190	7990	220	10990	220	-16660#	440#
	Ne	10	1510	70	18920	100	19420	70	6380	100	4340	100	-5820	130
	Na	11	6728	5	13286	19	-4795	27	7250	40	5298	4	-7430	70
	Mg	12	6443.39	0.04	15015	4	-31610#	400#	5482.0	1.2	-1304.60	0.06	-2988.6	0.5
	Al	13	13057.95	0.12	8271.17	0.11	*		6706.83	0.11	1600.88	0.10	-3132.39	0.11
	Si	14	13314.73	0.18	7463.25	0.16	*		7242.6	0.5	-7472.7	1.1	7195.58	0.14
	P	15	19770#	200#	870	26	*		6161	28	-6600	30	4972	26
	S	16	18120#	720#	1230#	450#	*		8000#	570#	-11430#	640#	11930#	400#
28	O	8	440#	860#	*		67100#	700#	*		960#	860#	*	
	F	9	-220	50	18820#	540#	49770	200	8900	250	10440	230	-17420#	540#
	Ne	10	3820	120	20630	210	32780	100	3340	120	4790	120	-10410	150
	Na	11	3542	11	15310	70	6159	10	9243	21	5940	50	-6710	80
	Mg	12	8503.4	2.0	16790	4	-19090	160	2553	4	-796.9	2.3	-7310	40
	Al	13	7725.10	0.06	9552.89	0.13	-44370#	600#	10074.82	0.12	1206.30	0.13	-1846.3	1.2
	Si	14	17179.72	0.14	11585.02	0.10	*		1428.12	0.06	-7712.6	0.5	-2653.62	0.05
	P	15	14497	26	2052.3	1.2	*		10704.0	1.2	-6111	10	7414.8	1.2
	S	16	21030#	430#	2490	160	*		3810#	250#	-10800#	430#	5890	160
	Cl	17	*		-3200#	720#	*		11150#	840#	*		13420#	720#
29	F	9	1370#	540#	19740#	860#	57830#	500#	5890#	710#	9760#	530#	*	
	Ne	10	960	140	21810	220	40290	100	4480	210	4600	130	-10690	180
	Na	11	4403	13	15900	100	19632	7	6350	70	7065	20	-10340	80
	Mg	12	3655	12	16903	15	-7450	50	5626	12	1122	12	-5436	21
	Al	13	9425.4	0.9	10474.9	2.2	-31970#	400#	7092.8	0.9	2873.9	0.9	-5697	4
	Si	14	8473.60	0.00	12333.52	0.12	*		6012.47	0.10	-4820.91	0.06	-34.13	0.03
	P	15	17876.0	1.3	2748.6	0.6	*		6142.7	0.6	-4947.4	0.6	904.1	0.6
	S	16	15300	170	3300	50	*		8280	60	-9270#	200#	9630	50
	Cl	17	21820#	720#	-2410#	430#	*		7450#	570#	-8450#	720#	8440#	450#
30	F	9	-420#	780#	*		63980#	600#	6740#	920#	8530#	780#	*	
	Ne	10	3430	300	23880#	580#	47470	280	830	340	3270	340	-15770#	580#
	Na	11	2277	9	17210	100	28675	5	7890	100	6300	70	-10510	190
	Mg	12	6352	12	18853	8	5175	3	2815	11	1498	5	-10270	70
	Al	13	5739	14	12559	18	-20320#	200#	9857	14	3578	14	-4708	15
	Si	14	10609.20	0.02	13517.3	0.9	-45920#	500#	3128.38	0.12	-2372.16	0.11	-4199.94	0.05
	P	15	11319.5	0.6	5594.5	0.3	*		12003.0	0.3	-2952.2	0.3	2642.5	0.3
	S	16	18970	50	4395.5	0.7	*		3799.5	1.2	-8472	26	3971.8	0.4
	Cl	17	17400#	450#	-310#	200#	*		11080#	250#	-7720#	450#	10810#	200#
	Ar	18	*		-430#	640#	*		4680#	780#	*		10110#	640#
31	F	9	570#	790#	*		70570#	530#	*		8400#	870#	*	
	Ne	10	290	1640	24580#	1730#	53770	1620	1910#	1700#	2760	1630	-15610#	1760#
	Na	11	4285	24	18070	280	36701	23	4570	100	5830	100	-15010	200
	Mg	12	2310	5	18886	6	15920	3	4908	8	2730	11	-8770	100
	Al	13	7154	25	13360	21	-7890	50	6359	23	4928	20	-8320	23
	Si	14	6587.39	0.04	14366	14	-34240#	210#	5966.4	0.9	-1234.45	0.13	-2283.9	2.0
	P	15	12311.3	0.3	7296.55	0.02	*		8165.34	0.00	1916.31	0.00	-1943.61	0.12
	S	16	13054.8	0.4	6130.9	0.4	*		8620.7	0.6	-7030.7	1.2	8096.67	0.23
	Cl	17	19580#	200#	300	50	*		6800	70	-6280	170	5730	50
	Ar	18	18270#	540#	440#	280#	*		8240#	450#	-11360#	630#	12870#	260#
32	Ne	10	1890#	1700#	25910#	730#	61080#	500#	-400#	780#	2240#	710#	*	
	Na	11	1520	120	19300	1620	43110	120	6480	310	5270	160	-15170#	520#
	Mg	12	5778	4	20379	24	25187	3	1407	6	1355	8	-13580	100
	Al	13	4215	24	15265	12	2236	12	8496	13	4368	17	-8132	14
	Si	14	9200.0	0.3	16412	20	-21877.3	1.8	2506	14	-1009.0	1.0	-7828	11
	P	15	7935.65	0.04	8644.81	0.06	-45400#	500#	10838.89	0.05	2454.26	0.04	-453.8	0.9
	S	16	15044.33	0.23	8863.96	0.00	*		4895.9	0.3	-4199.0	0.6	1525.95	0.00
	Cl	17	14340	50	1581.1	0.5	*		11435.1	0.7	-5310	50	9264.2	0.8
	Ar	18	21570#	210#	2420	50	*		4070#	200#	-11100#	400#	6600	50
	K	19	*		-2520#	540#	*		10320#	710#	*		12980#	640#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)	S(2p)	Q(α)	Q($2\beta^-$)	Q(ϵp)	Q(β^-n)						
27	O	8	-960#	520#	*	-22150#	1120#	37420#	510#	*	17720#	510#		
	F	9	2880	200	45930#	540#	-16120#	350#	30150	190	*	16080	190	
	Ne	10	7050	80	34890	130	-10010	110	21620	70	-34990	170	5830	70
	Na	11	12302	4	31460	80	-11260	50	11679	4	-31470	80	2626	4
	Mg	12	17536.48	0.06	27100	40	-11857.49	0.12	-2202.23	0.15	-22355	18	-10447.82	0.07
	Al	13	24423.2	0.5	22416.9	1.2	-10091.81	0.10	-16474	26	-17625	4	-18127.09	0.15
	Si	14	32354	10	13769.56	0.15	-9336.0	0.7	-29410#	400#	-3458.81	0.14	-31430#	200#
	P	15	36600#	400#	6384	26	-9895	26	*	4199	26	-35870#	600#	
	S	16	*	1380#	400#	-9100#	640#	*	*	16880#	400#	*	*	
28	O	8	-1200#	720#	*	*	40790#	710#	*	*	19380#	720#		
	F	9	1890	210	*	-16440#	450#	33910	200	*	17810	210		
	Ne	10	5330	100	38020	180	-9630	150	26310	100	-40450#	510#	8740	100
	Na	11	10270	11	34230	80	-10970	70	15862	10	-32910	190	5527	10
	Mg	12	14946.8	2.0	30076	18	-11492.0	2.1	6474.1	2.0	-29340	70	-5893.3	2.0
	Al	13	20783.05	0.14	24568	4	-10857.49	0.13	-9702.8	1.2	-18622	4	-12537.46	0.11
	Si	14	30494.45	0.11	19856.19	0.03	-9984.14	0.01	-25570	160	-14195.15	0.05	-28842	26
	P	15	34260#	200#	9515.6	1.2	-9525.0	1.5	-34660#	600#	2760.0	1.2	-32250#	400#
	S	16	39150#	620#	3360	160	-9100	160	*	9170	160	*	*	
	Cl	17	*	-1970#	630#	-8230#	780#	*	*	20950#	600#	*	*	
29	F	9	1150#	540#	*	-18780#	710#	36950#	500#	*	20260#	510#		
	Ne	10	4780	120	40630#	510#	-11370	150	29000	100	-40970#	710#	11320	100
	Na	11	7945	8	36530	190	-11110	80	20885	7	-37530	200	9627	8
	Mg	12	12159	11	32220	70	-10970	50	11292	11	-29180	100	-1824	11
	Al	13	17150.5	0.9	27265	4	-11271.8	1.5	-1252.2	1.1	-24505	10	-4783.2	0.9
	Si	14	25653.32	0.14	21886.41	0.05	-11127.22	0.05	-18740	50	-14165.3	2.0	-22818.7	1.2
	P	15	32373	26	14333.6	0.6	-10461.2	0.7	-30720#	400#	-7390.9	0.6	-29100	160
	S	16	36330#	400#	5350	50	-9410	50	*	11050	50	-38740#	600#	
	Cl	17	*	90#	400#	-8400#	570#	*	*	13630#	400#	*	*	
30	F	9	950#	630#	*	*	39640#	600#	*	*	21640#	600#		
	Ne	10	4390	300	43620#	750#	-14120	320	31920	280	*	12290	280	
	Na	11	6680	11	39020	200	-12620	80	24347	15	-38440#	500#	11006	12
	Mg	12	10008	4	34750	100	-11788	19	15549	3	-34570	100	1250	4
	Al	13	15165	14	29462	17	-11437	14	4328	14	-25841	16	-2049	14
	Si	14	19082.80	0.02	23992.2	2.0	-10643.33	0.04	-10374.0	0.4	-21119	11	-15551.8	0.6
	P	15	29195.5	1.2	17928.0	0.3	-10415.4	0.3	-24640#	200#	-9284.9	1.0	-25120	50
	S	16	34270	160	7144.2	0.4	-9342.9	0.4	-35550#	500#	547.1	0.4	-35900#	400#
	Cl	17	39220#	630#	2990#	200#	-8960#	280#	*	14110#	200#	*	*	
	Ar	18	*	-2840#	530#	-8010#	780#	*	*	17360#	510#	*	*	
31	F	9	150#	150#	*	*	43360#	530#	*	*	24510#	600#		
	Ne	10	3720	1620	*	-16060#	1700#	33940	1620	*	14270	1620		
	Na	11	6562	24	41940#	500#	-14790	190	27220	30	-43140#	600#	13073	24
	Mg	12	8662	12	36100	100	-12580	70	19827	3	-33450	280	4679	14
	Al	13	12893	20	32213	22	-11862	21	9486	20	-30719	21	1407	20
	Si	14	17196.59	0.04	26924	11	-10787.34	0.07	-3906.51	0.23	-21354	3	-10819.7	0.3
	P	15	23630.7	0.6	20813.8	0.9	-9668.71	0.10	-17370	50	-15857	14	-18452.9	0.4
	S	16	32030	50	11725.39	0.23	-9083.05	0.27	-30340#	210#	-1898.53	0.23	-31560#	200#
	Cl	17	36980#	400#	4690	50	-8770	60	*	5850	50	-36630#	510#	
	Ar	18	*	130#	210#	-8160#	450#	*	*	18060#	210#	*	*	
32	Ne	10	2180#	580#	*	-17510#	860#	37830#	500#	*	16670#	500#		
	Na	11	5810	120	43880#	610#	-16540	230	29910	120	-44100#	540#	13860	120
	Mg	12	8088	5	38450	280	-14550	100	23249	3	-38940	1620	6055	21
	Al	13	11369	19	34151	13	-12535	16	13206	12	-30648	26	3779	12
	Si	14	15787.36	0.30	29772	3	-11483.9	2.0	1937.85	0.30	-28244	3	-7708.46	0.30
	P	15	20246.9	0.3	23010	14	-9879.26	0.13	-10970.2	0.6	-16639	20	-13333.67	0.23
	S	16	28099.2	0.4	16160.51	0.02	-6947.65	0.00	-23815.2	1.8	-10355.47	0.04	-27020	50
	Cl	17	33920#	200#	7712.0	0.6	-8611.8	1.3	-34430#	500#	3816.9	0.6	-32700#	210#
	Ar	18	39830#	500#	2719.3	1.8	-8700	160	*	9553.2	1.8	*	*	
	K	19	*	-2080#	540#	-8840#	780#	*	*	20880#	510#	*	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		Q($4\beta^-$)		Q(d, α)		Q(p, α)		Q(n, α)	
33	Ne	10	-930#	780#	*		66510#	600#	1090#	790#	2750#	840#	*	
	Na	11	2910#	610#	20320#	780#	50310#	600#	3860#	1730#	5790#	660#	-18500#	840#
	Mg	12	2280	4	21140	120	31548.1	2.9	3412	23	1352	6	-12430	280
	Al	13	5440	80	14930	80	12540	80	5360	80	5280	80	-11300	80
	Si	14	4508.0	0.8	16705	12	-11130.0	0.8	5151	20	222	14	-5984	4
	P	15	10103.8	1.1	9548.6	1.1	-33380#	200#	7322.5	1.1	2959.7	1.1	-4818	14
	S	16	8641.64	0.00	9569.95	0.04	*		8565.49	0.00	-1521.2	0.3	3493.51	0.02
	Cl	17	15740.0	0.7	2276.8	0.4	*		8750.0	0.5	-2080.3	0.5	4843.7	0.5
	Ar	18	15255.3	1.8	3338.6	0.7	*		8390	50	-8960#	200#	10321.1	0.5
	K	19	22130#	540#	-1950#	200#	*		6460#	280#	-9580#	540#	8250#	280#
34	Ne	10	1230#	790#	*		72800#	510#	*		2090#	730#	*	
	Na	11	750#	780#	22000#	780#	55840#	500#	5000#	710#	5330#	1700#	-18680#	730#
	Mg	12	4710	29	22930#	600#	38255	29	220	120	930	40	-16850	1620
	Al	13	2670	100	15320	70	21370	70	8470	70	4920	70	-9680	70
	Si	14	7514	14	18780	80	-1578	14	1853	19	-138	25	-11188	14
	P	15	6282.7	1.4	11323.3	1.1	-23330#	300#	10239.8	0.9	3264.4	0.8	-3947	20
	S	16	11417.16	0.04	10883.3	1.1	-43780#	300#	5083.99	0.06	-627.10	0.04	-1336.25	0.06
	Cl	17	11508.1	0.4	5143.20	0.05	*		12286.25	0.05	-533.51	0.23	5646.86	0.05
	Ar	18	17065.3	0.4	4663.9	0.4	*		5667.2	0.6	-6450	50	6310.63	0.24
	K	19	16330#	360#	-880#	300#	*		11690#	300#	-7650#	360#	11490#	300#
Ca	20	*		480#	360#	*		3460#	590#	*		8200#	360#	
35	Na	11	1520#	300#	22290#	780#	62700#	590#	2550#	840#	5710#	770#	*	
	Mg	12	750	180	22940#	530#	44490	180	2380#	620#	1690	220	-15710#	530#
	Al	13	5220	100	15830	80	28790	70	5530	70	5470	70	-13380	140
	Si	14	2470	40	18580	80	8690	40	4820	80	1600	40	-7890	40
	P	15	8380.4	2.0	12190	14	-13684.9	1.9	6367.3	2.0	4084.0	1.9	-8113	12
	S	16	6985.84	0.04	11586.5	0.8	-33630#	200#	8201.9	1.1	322.71	0.06	877.9	0.3
	Cl	17	12644.77	0.05	6370.82	0.04	*		8283.12	0.04	1866.05	0.04	937.74	0.05
	Ar	18	12740.4	0.7	5896.3	0.7	*		8666.7	0.8	-4848.7	0.9	8614.5	0.7
	K	19	18020#	300#	83.6	0.5	*		8922.2	0.7	-4108.5	1.8	7808.2	0.8
	Ca	20	17140#	360#	1280#	360#	*		8460#	280#	-11450#	540#	12640#	200#
36	Na	11	0#	100#	*		66160#	590#	3780#	790#	4780#	840#	*	
	Mg	12	3330	490	24750#	750#	51040	460	-200#	680#	1280#	750#	-19970#	750#
	Al	13	1900	120	16980	210	35470	100	8340	100	5850	100	-12370#	600#
	Si	14	6100	80	19460	100	17840	70	1390	100	940	100	-11710	70
	P	15	3465	13	13180	40	-2834	13	10417	19	5127	13	-6140	80
	S	16	9889.22	0.19	13095.3	1.9	-24210	40	4595.4	0.8	537.3	1.1	-4503.4	0.7
	Cl	17	8579.79	0.01	7964.77	0.03	-44870#	300#	11120.48	0.04	1927.89	0.04	2461.7	1.1
	Ar	18	15255.4	0.7	8506.97	0.04	*		4919.35	0.06	-4364.1	0.4	2000.72	0.03
	K	19	14315.5	0.6	1658.6	0.8	*		11672.0	0.3	-3168.7	0.5	9232.7	0.5
	Ca	20	19310#	200#	2570	40	*		5480#	300#	-8630#	200#	8580	40
Sc	21	*		-3270#	360#	*		12210#	420#	*		13960#	360#	
37	Na	11	840#	180#	*		72140#	610#	*		5170#	790#	*	
	Mg	12	160#	680#	24910#	780#	55190#	500#	1160#	770#	1870#	710#	-18910#	720#
	Al	13	4210	160	17860	480	41570	120	4880	220	6350	120	-15830#	520#
	Si	14	2270	110	19830	130	24350	80	4340	110	1340	110	-9270	90
	P	15	6820	40	13890	80	5800	40	6080	50	5820	40	-10280	80
	S	16	4303.60	0.06	13934	13	-13760.3	0.7	8672.2	1.9	2516.3	0.8	-1293	14
	Cl	17	10310.82	0.06	8386.37	0.19	-35250#	300#	7795.50	0.07	3034.23	0.07	-1566.4	0.8
	Ar	18	8787.43	0.21	8714.60	0.21	*		8776.70	0.21	-1643.51	0.21	4630.45	0.21
	K	19	15454.5	0.4	1857.63	0.09	*		8958.0	0.8	-1557.85	0.12	5286.29	0.11
	Ca	20	14760	40	3008.0	0.7	*		8747.6	0.8	-7050#	300#	10888.6	0.6
Sc	21	19940#	420#	-2650#	300#	*		9410#	360#	-5500#	420#	10350#	420#	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\epsilon p)$		$Q(\beta^- n)$	
33	Ne	10	970#	1730#	*	*	*	41040#	600#	*	*	19120#	610#	
	Na	11	4440#	600#	46230#	790#	-18080#	780#	32440#	600#	*	16730#	600#	
	Mg	12	8058	4	40440	1620	-15860	100	25476.5	3.0	-39330#	500#	7989	12
	Al	13	9660	80	35310	80	-13570	80	17870	80	-34570	140	7540	80
	Si	14	13707.9	0.7	31970	3	-12336	11	6071.5	0.7	-26974	3	-4280.8	0.7
	P	15	18039.4	1.1	25960	20	-10557.6	1.4	-5334.0	1.2	-22528	12	-8393.1	1.1
	S	16	23685.96	0.23	18214.76	0.04	-7115.69	0.00	-17201.6	0.4	-9797.14	0.30	-21322.5	0.6
	Cl	17	30080	50	11140.7	0.4	-6475.8	0.7	-28050#	200#	-3987.4	0.4	-26874.3	1.8
	Ar	18	36820#	210#	4919.7	0.5	-8650	50	*	*	9342.3	0.4	-38550#	500#
	K	19	*	*	470#	200#	-9150#	450#	*	*	13090#	200#	*	*
34	Ne	10	300#	100#	*	*	*	44520#	510#	*	*	20800#	790#	
	Na	11	3660#	520#	*	*	-19250#	780#	34360#	510#	*	*	18260#	500#
	Mg	12	6990	29	43250#	500#	-17140	280	28280	30	-44960#	600#	8720	80
	Al	13	8110	70	36460	140	-13970	70	21480	70	-34330#	600#	9370	70
	Si	14	12022	14	33706	14	-13498	15	9975	14	-32208	14	-1691	14
	P	15	16386.5	0.8	28028	12	-11101	14	-108.6	0.8	-23370	80	-6034.2	0.8
	S	16	20058.79	0.04	20431.9	0.3	-7923.65	0.05	-11553.40	0.07	-16706.3	0.7	-16999.7	0.4
	Cl	17	27248.0	0.6	14713.15	0.06	-6664.4	0.3	-23220#	300#	-5391.7	1.1	-23127.1	0.4
	Ar	18	32320.6	1.8	6940.70	0.08	-6744.2	0.4	-32230#	300#	918.59	0.08	-33490#	200#
	K	19	38460#	590#	2460#	300#	-8090#	360#	*	*	12490#	300#	*	*
	Ca	20	*	*	-1470#	300#	-10060#	590#	*	*	15950#	300#	*	*
35	Na	11	2270#	840#	*	*	-20200#	790#	38060#	590#	*	*	21450#	590#
	Mg	12	5470	180	44940#	620#	-17610	1630	30000	180	-44490#	540#	10640	190
	Al	13	7890	100	38770#	600#	-14910	70	24640	70	-38800#	510#	11670	70
	Si	14	9990	40	33900	40	-13660	40	14490	40	-29970	50	2120	40
	P	15	14663.1	2.2	30970	80	-12328	20	4155.7	1.9	-29080	70	-2997.4	1.9
	S	16	18403.00	0.04	22909.8	0.7	-8322.10	0.06	-5798.8	0.7	-16178	14	-12477.45	0.05
	Cl	17	24152.8	0.4	17254.1	1.1	-6997.91	0.04	-17840.6	0.5	-11753.8	0.8	-18706.56	0.08
	Ar	18	29805.8	0.8	11039.5	0.7	-6429.8	0.8	-27840#	200#	-404.7	0.7	-29900#	300#
	K	19	34360#	200#	4747.5	0.6	-6530	50	*	*	5978.2	0.5	-33100#	300#
	Ca	20	*	*	410#	200#	-8930#	280#	*	*	15880#	200#	*	*
36	Na	11	1520#	320#	*	*	*	39960#	600#	*	*	22200#	620#	
	Mg	12	4090	460	47040#	690#	-19040#	680#	32770	470	*	*	12530	470
	Al	13	7120	120	39920#	510#	-15280	160	26200	100	-39180#	590#	12240	110
	Si	14	8580	70	35290	80	-13990	70	18270	70	-35320	190	4390	70
	P	15	11845	13	31760	70	-11577	18	9271	13	-27320	70	524	13
	S	16	16875.07	0.19	25285	14	-9011.4	0.4	-432.58	0.19	-23590	40	-9721.90	0.19
	Cl	17	21224.56	0.05	19551.3	0.8	-7642.06	0.05	-12105.0	0.3	-11953.2	1.9	-14545.9	0.7
	Ar	18	27995.88	0.08	14877.79	0.05	-6640.92	0.03	-23780	40	-8674.29	0.05	-27130.0	0.5
	K	19	32340#	300#	7554.9	0.3	-6507.3	0.6	-32770#	300#	4307.5	0.3	-30280#	200#
	Ca	20	36450#	300#	2650	40	-6680	40	*	*	9310	40	*	*
	Sc	21	*	*	-1990#	420#	-8170#	590#	*	*	19240#	300#	*	*
37	Na	11	840#	150#	*	*	*	43330#	620#	*	*	24690#	760#	
	Mg	12	3490#	530#	*	*	-20130#	780#	34880#	510#	*	*	14270#	510#
	Al	13	6110	140	42610#	600#	-16580#	610#	28810	130	-43390#	610#	14130	140
	Si	14	8380	90	36810	200	-13980	80	20300	80	-34260	470	5590	80
	P	15	10280	40	33350	80	-12950	80	12770	40	-32240	110	3600	40
	S	16	14192.83	0.20	27110	40	-8807.0	0.7	4051.24	0.28	-21790	70	-5445.71	0.20
	Cl	17	18890.62	0.06	21481.7	1.9	-7849.1	1.1	-6961.32	0.11	-18799	13	-9601.30	0.06
	Ar	18	24042.9	0.8	16679.37	0.21	-6786.71	0.21	-17811.6	0.7	-7572.49	0.27	-21601.9	0.4
	K	19	29769.9	0.5	10364.60	0.10	-6221.8	0.4	-28280#	300#	-2567.15	0.10	-26420	40
	Ca	20	34070#	200#	4666.6	1.0	-6176.7	0.8	*	*	9806.5	0.6	-36560#	300#
	Sc	21	*	*	-80#	300#	-5980#	360#	*	*	13610#	300#	*	*

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		$Q(d,\alpha)$		$Q(p,\alpha)$		$Q(n,\alpha)$	
38	Mg	12	2290#	710#	26360#	790#	60940#	500#	-1130#	780#	1100#	770#	*	
	Al	13	1670	280	19370#	560#	46010	250	6540	520	5430	310	-15980#	640#
	Si	14	5650	110	21270	140	30540	70	590	120	910	100	-14160	190
	P	15	3740	90	15360	120	14130	90	8430	110	4550	90	-8800	110
	S	16	8036	7	15150	40	-4803	7	4101	15	2861	7	-6850	40
	Cl	17	6107.88	0.08	10190.65	0.21	-25250#	200#	11576.84	0.20	3912.19	0.11	706.1	1.9
	Ar	18	11838.49	0.28	10242.27	0.20	-45380#	300#	5518.00	0.20	-837.22	0.20	-222.20	0.20
	K	19	12071.87	0.22	5142.08	0.28	*		12141.59	0.20	-889.3	0.8	5859.19	0.20
	Ca	20	16993.8	0.7	4547.27	0.22	*		6069.4	0.4	-6021.6	0.5	6635.3	0.8
	Sc	21	16100#	360#	-1300#	200#	*		12620#	200#	-4470#	280#	12270#	200#
	Ti	22	*		110#	420#	*		6030#	420#	*		11520#	360#
39	Mg	12	-130#	100#	*		65440#	520#	-160#	790#	1230#	790#	*	
	Al	13	3290#	560#	20370#	710#	50800#	500#	3420#	710#	5480#	680#	-19270#	780#
	Si	14	1580	110	21180	270	35560	90	3220	150	1230	130	-12410	470
	P	15	6230	130	15950	120	20980	90	4480	120	4430	120	-13130	140
	S	16	4370	50	15780	100	4120	50	6540	60	1950	50	-5120	90
	Cl	17	8073.4	1.7	10228	7	-15627	24	7807.0	1.7	5728.0	1.7	-3903	13
	Ar	18	6599	5	10733	5	-35440#	210#	9230	5	1144	5	3068	5
	K	19	13077.75	0.20	6381.34	0.19	*		7851.26	0.21	1288.40	0.03	1361.23	0.04
	Ca	20	13295.5	0.6	5770.9	0.6	*		8228.3	0.6	-5001.6	0.7	8595.2	0.6
	Sc	21	17700#	200#	-597	24	*		9674	24	-2860	50	8891	24
	Ti	22	16540#	360#	550#	280#	*		9430#	360#	-8290#	360#	14300#	210#
40	Mg	12	1740#	790#	*		71440#	600#	*		330#	850#	*	
	Al	13	1090#	710#	21590#	720#	55530#	500#	4610#	710#	4550#	710#	-19520#	790#
	Si	14	4960	250	22860#	550#	40470	230	-70	340	480	260	-17210#	550#
	P	15	3320	140	17680	140	25460	110	6810	130	3380	140	-12240	160
	S	16	7750	50	17300	90	12009	4	2540	90	1020	40	-10600	80
	Cl	17	5830	30	11680	60	-7030	30	10010	30	4200	30	-2920	50
	Ar	18	9869	5	12528.7	1.7	-26190	160	5469.00	0.10	1585.68	0.05	-2497.08	0.20
	K	19	7799.62	0.06	7582	5	-45420#	400#	11890.13	0.20	2276.21	0.21	3872.43	0.08
	Ca	20	15635.0	0.6	8328.17	0.02	*		4665.17	0.20	-5182.13	0.10	1747.66	0.21
	Sc	21	14422	24	529.6	2.9	*		12246.0	2.8	-2523.2	2.9	9923.3	2.8
	Ti	22	19120#	260#	1970	160	*		6410#	250#	-7470#	340#	9930	160
V	23	*		-2400#	450#	*		11930#	500#	*		14050#	500#	
41	Al	13	2160#	780#	22010#	840#	61200#	600#	2320#	790#	4680#	780#	*	
	Si	14	1380	440	23140#	620#	45190	370	1840#	620#	770	450	-16310#	620#
	P	15	4980	140	17700	240	30580	80	3410	120	4050	110	-15540	260
	S	16	4242	6	18220	110	16129	4	4530	90	530	90	-9190	70
	Cl	17	7820	80	11760	70	1340	70	6570	80	4420	70	-6990	110
	Ar	18	6098.9	0.3	12800	30	-17370	28	7443.5	1.8	1594.6	0.4	-560	7
	K	19	10095.37	0.06	7808.62	0.00	-35760#	300#	8393	5	4019.33	0.20	-115.06	0.10
	Ca	20	8362.82	0.14	8891.37	0.15	*		9380.11	0.14	-1473.08	0.24	5223.33	0.24
	Sc	21	16190.4	2.8	1085.00	0.08	*		9351.1	0.6	-1719.86	0.21	5804.74	0.21
	Ti	22	14920	160	2463	28	*		9190	40	-6290#	200#	12007	28
	V	23	19760#	500#	-1760#	340#	*		8710#	360#	-5610#	420#	10390#	360#
42	Al	13	1120#	840#	*		65750#	610#	2940#	840#	3430#	790#	*	
	Si	14	3630#	620#	24620#	780#	50990#	500#	-700#	710#	430#	710#	-20070#	720#
	P	15	2080	220	18400	430	36030	210	6290	310	3550	230	-14340#	550#
	S	16	6700	5	19950	80	20909.5	2.8	1150	110	60	90	-14310	90
	Cl	17	5680	160	13190	140	7210	140	8640	140	3110	150	-6440	170
	Ar	18	9426	6	14400	70	-9318	6	3850	30	242	6	-5610	50
	K	19	7533.80	0.11	9243.5	0.4	-27400#	300#	10728.67	0.11	3084	5	424.6	1.7
	Ca	20	11480.67	0.06	10276.67	0.15	-44790#	400#	5699.06	0.16	124.00	0.15	341	5
	Sc	21	11550.05	0.16	4272.23	0.10	*		13436.05	0.17	25.6	0.6	7332.45	0.17
	Ti	22	17478	28	3751.22	0.27	*		6129.5	2.8	-6068	24	7824.4	0.7
	V	23	15890#	420#	-790#	300#	*		11940#	340#	-4950#	360#	12200#	300#
Cr	24	*		1240#	500#	*		5070#	570#	*		9690#	450#	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q(2 β^-)		Q(ϵp)		Q($\beta^- n$)	
38	Mg	12	2450#	680#	*		-21190#	720#	38240#	510#	*		16190#	520#
	Al	13	5880	270	44280#	640#	-17500#	560#	30880	260	-44220#	650#	14730	260
	Si	14	7920	100	39130	470	-14920	80	22690	70	-39750#	510#	6750	80
	P	15	10560	90	35200	130	-14030	110	15130	90	-31770	150	4160	90
	S	16	12340	7	29050	70	-9329	16	7854	7	-27560	80	-3171	7
	Cl	17	16418.70	0.10	24125	13	-7674.3	0.8	-997.33	0.22	-18090	40	-6921.76	0.22
	Ar	18	20625.91	0.20	18628.64	0.27	-7208.04	0.20	-12656.32	0.06	-15107.38	0.28	-17985.94	0.22
	K	19	27526.3	0.4	13856.68	0.20	-6785.58	0.20	-24260#	200#	-4328.20	0.20	-23736.0	0.7
	Ca	20	31750	40	6404.90	0.20	-6105.12	0.21	-32720#	300#	1600.18	0.28	-33610#	300#
	Sc	21	36040#	360#	1710#	200#	-5750#	360#	*		12970#	200#	*	
	Ti	22	*		-2540#	300#	-5610#	420#	*		16510#	300#	*	
39	Mg	12	2160#	720#	*		*		39960#	520#	*		17990#	570#
	Al	13	4960#	520#	46730#	790#	-19270#	770#	33830#	510#	*		17100#	510#
	Si	14	7230	120	40550#	510#	-15740	200	25480	100	-39040#	510#	8920	130
	P	15	9980	100	37220	150	-15030	120	16970	90	-36330	270	5960	90
	S	16	12410	50	31150	100	-11230	60	10080	50	-26280	90	-1440	50
	Cl	17	14181.3	1.7	25380	40	-7367.3	2.5	4007.0	1.7	-22420	90	-3156.7	1.7
	Ar	18	18437	5	20924	5	-6821	5	-5959	5	-13670	9	-12513	5
	K	19	25149.63	0.09	16623.61	0.05	-7218.57	0.04	-19634	24	-11298.07	0.10	-19820.01	0.19
	Ca	20	30289.3	0.9	10913.0	0.6	-6660.2	1.0	-29480#	210#	143.1	0.6	-30810#	200#
	Sc	21	33800#	300#	3950	24	-5425	24	*		7339	24	-32910#	300#
	Ti	22	*		-760#	210#	-5010#	280#	*		16970#	210#	*	
40	Mg	12	1610#	780#	*		*		43180#	640#	*		19540#	780#
	Al	13	4380#	560#	*		-20360#	780#	36050#	520#	*		17580#	510#
	Si	14	6540	240	43220#	550#	-17380	510	28270	230	-44140#	560#	10190	250
	P	15	9550	140	38860	270	-16450	150	19480	120	-36360#	520#	7020	120
	S	16	12119	8	33250	70	-12870	70	12202	4	-32450	90	-1109	4
	Cl	17	13900	30	27470	90	-9730	30	5980	30	-22020	100	-2390	30
	Ar	18	16467.71	0.19	22757	7	-6800.69	0.19	-193.51	0.02	-19170	50	-9304.02	0.00
	K	19	20877.37	0.20	18315.35	0.11	-6438.39	0.07	-13012.2	2.8	-11024.3	1.7	-14324.1	0.6
	Ca	20	28930.52	0.20	14709.51	0.20	-7039.76	0.03	-26000	160	-8893	5	-28745	24
	Sc	21	32120#	200#	6300.5	2.8	-5531.2	2.8	-32410#	400#	5994.9	2.8	-30790#	210#
	Ti	22	35660#	340#	1370	160	-4820	160	*		11140	160	*	
	V	23	*		-1850#	450#	-5890#	500#	*		18770#	400#	*	
41	Al	13	3250#	780#	*		-21680#	850#	38870#	600#	*		20390#	640#
	Si	14	6340	380	44730#	630#	-18600#	620#	31130	370	-43780#	700#	12120	390
	P	15	8290	120	40550#	510#	-17210	140	22330	110	-40240#	510#	9790	80
	S	16	11990	50	35910	90	-14840	80	14059	4	-31730	230	480	30
	Cl	17	13650	70	29060	110	-10740	80	8250	70	-26520	130	-340	70
	Ar	18	15968	5	24480	50	-8596.0	0.4	2070.4	0.4	-17519	4	-7603.3	0.4
	K	19	17894.99	0.01	20337.3	1.7	-6222.94	0.05	-6917.13	0.08	-15290	30	-8784.47	0.02
	Ca	20	23997.8	0.6	16474	5	-6615.15	0.25	-19440	28	-7386.96	0.14	-22685.9	2.8
	Sc	21	30612	24	9413.16	0.08	-6267.13	0.13	-28840#	300#	-2395.89	0.10	-27860	160
	Ti	22	34040#	210#	2993	28	-4986	28	*		11860	28	-35660#	400#
	V	23	*		210#	300#	-5710#	420#	*		13430#	300#	*	
42	Al	13	3280#	780#	*		*		39830#	630#	*		20650#	700#
	Si	14	5010#	550#	46620#	780#	-19940#	710#	34200#	500#	*		13470#	510#
	P	15	7060	240	41540#	550#	-17630	330	25920	250	-40170#	630#	11950	210
	S	16	10943	5	37650	230	-15890	70	16785	6	-37050	370	1600	70
	Cl	17	13500	150	31420	180	-12670	170	10110	140	-27220	160	80	140
	Ar	18	15525	6	26163	7	-9986	9	4125	6	-22703	7	-6934	6
	K	19	17629.17	0.12	22040	30	-7648.86	0.14	-2900.88	0.20	-15000	70	-7955.46	0.17
	Ca	20	19843.49	0.15	18085.29	0.15	-6257.34	0.25	-13442.58	0.24	-12768.7	0.4	-17976.15	0.16
	Sc	21	27740.4	2.8	13163.59	0.18	-5745.30	0.26	-24500#	300#	-3850.57	0.17	-24495	28
	Ti	22	32400	160	4836.22	0.28	-5471.1	0.3	-31350#	400#	2744.25	0.24	-33370#	300#
	V	23	35650#	500#	1670#	300#	-5500#	360#	*		13730#	300#	*	
	Cr	24	*		-510#	430#	-6850#	500#	*		14650#	400#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		$Q(d,\alpha)$		$Q(p,\alpha)$		$Q(n,\alpha)$	
43	Al	13	960#	920#	*		72270#	710#	*		4200#	920#	*	
	Si	14	1530#	780#	25030#	840#	55110#	600#	-80#	840#	-10#	780#	-19860#	840#
	P	15	4400	430	19170#	620#	41260	370	3270	520	4110	440	-17650#	620#
	S	16	2629	6	20490	210	26213	5	3500	80	740	110	-11980	230
	Cl	17	7480	170	13970	100	11870	100	5400	100	3380	100	-10600	150
	Ar	18	5658	8	14390	140	-2689	9	6010	70	410	30	-3526	7
	K	19	9624.7	0.4	9442	6	-18660	40	7202.9	0.5	3328.6	0.4	-3370	30
	Ca	20	7932.89	0.17	10675.76	0.25	-36110#	400#	7861.53	0.23	-9.27	0.23	2277.48	0.23
	Sc	21	12138.3	1.9	4929.8	1.9	*		9660.6	1.9	3522.3	1.9	2993.8	1.9
	Ti	22	12288	7	4489	7	*		10032	7	-3934	8	11172	7
	V	23	18370#	300#	100	40	*		8490	50	-4200	170	8250	40
	Cr	24	16610#	570#	1970#	500#	*		8210#	500#	-9320#	570#	12200#	430#
	44	Si	14	2660#	840#	26720#	920#	61190#	600#	-1610#	840#	-510#	840#	*
P		15	2310#	620#	19950#	780#	46220#	500#	4590#	710#	3190#	620#	-17800#	780#
S		16	5080	7	21170	370	32264	5	500	210	640	80	-15680	370
Cl		17	4360	210	15700	190	17210	190	7740	190	3260	190	-9980	200
Ar		18	8735	6	15640	100	4875.3	1.7	2950	140	-500	70	-8018	4
K		19	7277.4	0.6	11061	5	-11670	180	9352	6	2150.1	0.5	-2830	70
Ca		20	11131.16	0.23	12182.2	0.5	-27830#	300#	4264.2	0.3	-1045.1	0.3	-2754.8	0.5
Sc		21	9699.2	2.6	6696.1	1.7	-44480#	500#	11442.1	1.7	2186.0	1.8	3390.0	1.8
Ti		22	16299	7	8649.4	2.0	*		5283.4	0.7	-4042.1	0.7	3235.7	0.7
V		23	14270	190	2080	180	*		11700	180	-3550	180	10170	180
Cr		24	19410#	500#	3010#	300#	*		4690#	420#	-8970#	420#	7710#	300#
Mn		25	*		-1670#	640#	*		11130#	640#	*		12110#	590#
45		Si	14	-630#	920#	*		66980#	700#	-20#	990#	1240#	920#	*
	P	15	3190#	780#	20480#	840#	51940#	600#	2930#	840#	3630#	780#	-19870#	840#
	S	16	2860	690	21720#	850#	36820	690	2040	780	-140	720	-14910#	850#
	Cl	17	5820	210	16440	100	22710	100	4550	100	4140	100	-13720	230
	Ar	18	5168.9	1.7	16450	190	9238.3	1.0	5260	100	10	140	-6486.6	2.8
	K	19	8905.5	0.7	11231.4	1.7	-4735	8	6105	5	2671	6	-6060	140
	Ca	20	7414.81	0.17	12319.6	0.6	-21300	40	6474.0	0.5	-926.1	0.4	-743	6
	Sc	21	11326.5	1.9	6891.5	0.8	-35940#	400#	8048.4	0.7	2340.1	0.7	-402.7	0.7
	Ti	22	9531.9	1.1	8482.1	2.0	-52440#	400#	7889.8	2.1	-2023.9	0.9	5184.5	0.9
	V	23	15840	180	1621	8	*		8151	11	-1912	8	5887	8
	Cr	24	13950#	300#	2690	190	*		9110	60	-7030#	300#	11240	40
	Mn	25	19860#	640#	-1220#	500#	*		7880#	570#	-6510#	570#	8130#	500#
	Fe	26	*		520#	640#	*		*		*		12840#	570#
46	P	15	610#	920#	21720#	990#	58200#	700#	4980#	920#	4550#	920#	-19510#	990#
	S	16	4040#	850#	22580#	780#	43180#	500#	310#	710#	220#	620#	-17420#	780#
	Cl	17	3520	190	17110	710	27950	160	6100	160	3250	160	-12840	400
	Ar	18	8030	40	18660	110	14400	40	1590	190	-540	100	-11890	40
	K	19	6869.6	0.9	12932.1	0.9	1660.7	0.8	7970.1	1.7	1460	5	-5440	100
	Ca	20	10397.6	2.3	13811.7	2.3	-13665	20	3353.9	2.3	-1699.0	2.3	-5482	6
	Sc	21	8760.64	0.10	8237.3	0.8	-28800#	400#	10419.0	0.8	1512.4	0.8	461.3	0.8
	Ti	22	13189.2	0.8	10344.8	0.7	-44710#	500#	4399.8	1.8	-3074.8	1.9	-71.8	0.4
	V	23	13265	8	5354.5	0.8	*		11184.8	0.8	-2889	7	4759.9	1.9
	Cr	24	18030	40	4882	22	*		5350	180	-6690	50	5494	21
	Mn	25	15900#	570#	730#	400#	*		11390#	500#	-5790#	570#	10610#	400#
	Fe	26	20920#	640#	1570#	640#	*		4640#	710#	*		8530#	640#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q(2 β^-)		Q($\epsilon\beta$)		Q(β^-n)	
43	Al	13	2090#	920#	*	*	43260#	790#	*	23310#	860#			
	Si	14	5160#	700#	*	-21600#	790#	35300#	600#	*	14020#	630#		
	P	15	6480	380	43790#	700#	-18740#	620#	29000	380	-43450#	700#	14250	370
	S	16	9330	6	38890	370	-16940	90	19814	7	-36050#	500#	4650	140
	Cl	17	13160	120	33920	120	-13920	130	12250	100	-32620	230	2030	100
	Ar	18	15085	5	27579	7	-11270	50	6399	5	-21661	6	-5059	5
	K	19	17158.5	0.4	23850	70	-9200.1	1.8	-387.3	1.9	-18950	140	-6099.5	0.4
	Ca	20	19413.56	0.18	19919.3	0.4	-7592	5	-9088	7	-11275	6	-14358.99	0.20
	Sc	21	23688.3	1.9	15206.5	1.9	-4805.8	1.9	-18270	40	-8455.0	1.9	-19154.8	1.9
	Ti	22	29766	29	8761	7	-4463	7	-27020#	400#	1937	7	-29770#	300#
	V	23	34260#	300#	3850	40	-6170	50	*	*	6920	40	-32230#	400#
	Cr	24	*	*	1180#	400#	-6920#	450#	*	*	15520#	400#	*	*
44	Si	14	4190#	780#	*	-22520#	840#	37720#	600#	*	15760#	700#		
	P	15	6710#	550#	44970#	780#	-19960#	710#	31050#	540#	-44790#	860#	14570#	500#
	S	16	7709	6	40340#	500#	-17060	230	23469	5	-39590#	600#	7050	100
	Cl	17	11840	240	36200	280	-14960	220	15170	190	-32580	420	3330	190
	Ar	18	14393	6	29613	3	-12260	4	8795.4	1.6	-27767	5	-4169.2	1.6
	K	19	16902.1	0.4	25450	140	-10650	30	2034.5	1.8	-18750	100	-5444.0	0.5
	Ca	20	19064.05	0.29	21624	6	-8853.7	0.3	-3920.1	0.8	-16748	5	-13351.9	1.9
	Sc	21	21837.5	1.8	17371.9	1.8	-6705.4	1.8	-13700	180	-8529.6	1.8	-16566	7
	Ti	22	28586.5	0.8	13579.3	0.7	-5127.1	0.7	-23910#	300#	-6428.7	0.7	-27700	40
	V	23	32640#	350#	6570	180	-6020	180	-30780#	540#	4780	180	-29890#	440#
	Cr	24	36020#	500#	3110#	300#	-7210#	340#	*	*	8400#	300#	*	*
	Mn	25	*	*	300#	590#	-7650#	640#	*	*	17290#	510#	*	*
45	Si	14	2030#	920#	*	*	41200#	980#	*	18700#	860#			
	P	15	5500#	700#	47200#	920#	-20990#	840#	33680#	600#	*	16460#	600#	
	S	16	7940	690	41670#	910#	-18530	780	25780	690	-39790#	910#	8550	720
	Cl	17	10180	140	37620	380	-15800	130	18260	100	-36090#	510#	6240	100
	Ar	18	13904	5	32153	5	-13187	4	11041.4	0.6	-27856	5	-2060.6	0.7
	K	19	16182.9	0.7	26870	100	-11730	70	4455.5	0.9	-23290	190	-3218.3	0.6
	Ca	20	18545.97	0.29	23380	5	-10169.6	0.5	-1803.0	0.9	-15427.9	1.6	-11067.5	1.8
	Sc	21	21025.7	2.0	19073.7	0.8	-7936.5	0.7	-9191	8	-12578.7	0.8	-11593.9	1.0
	Ti	22	25831	7	15178.2	0.9	-6296.1	0.9	-19490	40	-4829.4	0.9	-22960	180
	V	23	30110	40	10270	8	-5663	8	-26750#	400#	-1354	8	-26320#	300#
	Cr	24	33360#	400#	4770	40	-6240	50	-32950#	400#	10740	40	-34250#	500#
	Mn	25	*	*	1790#	400#	-7750#	500#	*	*	11700#	440#	*	*
Fe	26	*	*	-1154	16	*	*	*	*	19780#	500#	*	*	
46	P	15	3800#	860#	*	-20480#	920#	36600#	720#	*	18700#	980#		
	S	16	6900#	500#	43050#	780#	-18950#	710#	29770#	510#	-44470#	860#	10330#	510#
	Cl	17	9340	250	38830#	530#	-17240	260	21600	160	-36420#	620#	7890	160
	Ar	18	13200	40	35100	40	-14520	40	13410	40	-33030	690	-1190	40
	K	19	15775.1	0.8	29380	190	-12930	140	6346.6	1.0	-24340	100	-2673.1	0.8
	Ca	20	17812.4	2.3	25043.1	2.8	-11141	6	988.6	2.2	-20656.6	2.3	-10138.5	2.3
	Sc	21	20087.2	1.9	20556.9	0.8	-9163.4	0.7	-4685.9	0.7	-12433.8	0.9	-10822.7	0.5
	Ti	22	22721.1	0.8	17236.3	0.5	-8004.7	0.4	-14653	20	-10603.8	0.5	-20318	8
	V	23	29100	180	13836.6	1.8	-7378.4	0.4	-24120#	400#	-3292.4	0.7	-25630	40
	Cr	24	31980#	300#	6503	20	-6794	20	-30060#	500#	2247	20	-32410#	400#
	Mn	25	35760#	640#	3420#	440#	-7760#	500#	*	*	11630#	400#	-34460#	570#
	Fe	26	*	*	350#	590#	-8080#	640#	*	*	12810#	500#	*	*

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		$Q(d,\alpha)$		$Q(p,\alpha)$		$Q(n,\alpha)$	
47	P	15	1620#	1060#	*		64950#	800#	2740#	1060#	5590#	1000#	*	
	S	16	700#	710#	22670#	860#	49750#	500#	2790#	780#	1830#	710#	-15460#	780#
	Cl	17	4360#	430#	17420#	640#	34240#	400#	4600#	800#	3970#	400#	-14890#	640#
	Ar	18	3550	80	18690	180	19730	90	3860	130	260	210	-10360	90
	K	19	8369.4	1.6	13270	40	6293.8	1.4	4769.6	1.5	1825.3	2.1	-9460	190
	Ca	20	7276.37	0.27	14218.5	2.4	-7783	7	4983.0	2.3	-1697.9	2.3	-4023.8	2.7
	Sc	21	10646.4	2.0	8486.2	1.2	-21770	30	7187.3	2.0	1997.1	2.0	-2907.7	2.0
	Ti	22	8880.72	0.15	10464.9	0.7	-37350#	500#	6845.6	0.7	-2256.4	1.8	2178.7	0.5
	V	23	13002.52	0.11	5167.78	0.07	-51850#	800#	7714.1	0.8	406.8	0.8	1456.6	1.8
	Cr	24	13159	21	4775	7	*		8030	11	-5580	180	8634	7
	Mn	25	17680#	400#	380	40	*		7660	50	-4060#	300#	7200	180
	Fe	26	16250#	710#	1920#	640#	*		8250#	640#	-9390#	710#	11690#	590#
	Co	27	*		-1970#	950#	*		7130#	900#	*		8830#	950#
	48	S	16	2720#	780#	23770#	1000#	56990#	600#	690#	920#	2300#	840#	-18810#
Cl		17	2040#	640#	18760#	710#	40440#	500#	6610#	710#	4790#	850#	-13740#	780#
Ar		18	5300#	310#	19630#	500#	26050#	300#	2080#	340#	780#	310#	-12800#	750#
K		19	4643.8	1.6	14360	90	12192.3	1.3	8160	40	2350.4	0.9	-8280	100
Ca		20	9952.6	2.3	15801.8	1.4	-1403	7	1900.0	0.7	-2745.1	0.5	-8807.6	0.5
Sc		21	8239	5	9449	5	-15180	170	9346	5	1173	5	-2241	5
Ti		22	11626.65	0.04	11445.1	1.9	-30080#	400#	3979.6	0.7	-2556.5	0.7	-2033.2	0.5
V		23	10542.3	1.0	6829.3	1.0	-45340#	800#	10361.0	1.0	-603.6	1.3	2240.8	1.2
Cr		24	16332	10	8105	7	-59300#	510#	4964	7	-6077	11	1834	7
Mn		25	14830	170	2050	170	*		10860	170	-4940	170	8200	170
Fe		26	18900#	640#	3140#	400#	*		5250#	570#	-8420#	570#	6750#	400#
Co		27	17050#	1130#	-1170#	950#	*		10990#	950#	-7700#	900#	11650#	900#
Ni		28	*		660#	950#	*		*	*	*		8690#	650#
49		S	16	-370#	300#	*		62500#	670#	2670#	1040#	3280#	970#	*
	Cl	17	2860#	780#	18910#	840#	47710#	600#	4450#	780#	5970#	780#	-15990#	920#
	Ar	18	2490#	500#	20090#	640#	31700#	400#	3950#	570#	1810#	430#	-11250#	640#
	K	19	5398.3	1.1	14460#	300#	18349.5	1.2	6310	90	4980	40	-10150	160
	Ca	20	5146.45	0.18	16304.4	0.8	4032.8	2.4	5122.9	1.4	-1021.9	0.8	-5920	40
	Sc	21	10129	6	9625.3	2.7	-8924	10	6493	4	1441	4	-5500.7	2.8
	Ti	22	8142.39	0.03	11348	5	-23812	24	6483.6	1.9	-1938.3	0.7	222.0	2.2
	V	23	11555.5	1.3	6758.2	0.8	-37630#	700#	7686.3	0.8	1030.1	0.8	-554.1	1.1
	Cr	24	10582	8	8144.9	2.6	-52510#	800#	7383.9	2.4	-3394.0	2.4	4440.7	2.4
	Mn	25	16380	170	2104	13	*		7635	12	-3299	22	5084	10
	Fe	26	14410#	400#	2720	170	*		8530	40	-6930#	400#	10370	30
	Co	27	19270#	1060#	-800#	810#	*		7970#	860#	-6050#	860#	8270#	810#
	Ni	28	17380#	950#	980#	1130#	*		8040#	1130#	*		12230#	950#
	50	Cl	17	790#	840#	20060#	900#	52980#	600#	6380#	840#	5890#	780#	-15160#
Ar		18	4130#	640#	21360#	780#	38510#	500#	1850#	710#	2040#	640#	-14680#	710#
K		19	4188	8	16160#	400#	23496	8	7420#	300#	4350	90	-9980#	400#
Ca		20	6360.6	1.6	17266.7	1.8	10672.5	1.8	3406.1	1.8	986.8	2.1	-8730	90
Sc		21	6058	15	10537	15	-1920	15	10388	15	2660	15	-3189	15
Ti		22	10939.19	0.04	12158.6	2.7	-16940	60	3784	5	-2231.0	1.9	-3440.8	2.2
V		23	9334.2	1.2	7950.0	0.9	-31440#	600#	9978.7	0.9	576.6	0.9	758.2	2.1
Cr		24	13000.3	2.2	9589.7	1.2	-45360#	800#	4925.9	1.3	-3391.9	0.9	321.1	0.9
Mn		25	13062	10	4583.5	2.2	*		10905	7	-3202	7	5025.0	0.9
Fe		26	17810	60	4140	60	*		5550	180	-7060	70	5720	60
Co		27	15520#	920#	320#	600#	*		11340#	720#	-5330#	780#	10430#	600#
Ni		28	20140#	1130#	1860#	1060#	*		4950#	1130#	-9880#	1130#	8340#	950#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)	S(2p)	$Q(\alpha)$	$Q(2\beta^-)$	$Q(\epsilon p)$	$Q(\beta^- n)$						
47	P	15	2230#	1000#	*	-21130#	1060#	39340#	900#	*	21130#	950#		
	S	16	4750#	850#	44390#	860#	-18120#	780#	32620#	510#	*	13140#	530#	
	Cl	17	7880#	410#	40000#	720#	-17200#	550#	25620#	400#	-40170#	810#	11560#	400#
	Ar	18	11580	90	35800	700	-15440	90	17130	90	-32540#	510#	2130	90
	K	19	15239.0	1.5	31930	100	-13810	100	8623.7	2.4	-29190	160	-644.9	2.7
	Ca	20	17673.9	2.3	27150.6	2.3	-12759	6	2592.9	2.2	-19900	40	-8654.3	2.3
	Sc	21	19407.1	2.0	22297.9	2.0	-10185.2	2.0	-2329.8	1.9	-16210.7	2.1	-8280.0	1.9
	Ti	22	22069.9	0.8	18702.2	0.5	-8952.5	0.4	-10376	7	-9087.0	2.2	-15933.12	0.20
	V	23	26268	8	15512.6	0.7	-8242.6	1.9	-19440	30	-7534.3	0.7	-20604	20
	Cr	24	31190	40	10130	7	-7665	10	-26970#	500#	2277	7	-29680#	400#
	Mn	25	33580#	400#	5260	30	-7070	50	-32410#	800#	7220	30	-31220#	500#
	Fe	26	37170#	640#	2660#	500#	-7720#	640#	*	*	14590#	500#	*	*
	Co	27	*	-400#	900#	*	*	*	*	15510#	900#	*	*	*
48	S	16	3420#	780#	*	-18180#	840#	35200#	670#	*	*	14790#	720#	
	Cl	17	6390#	530#	41420#	860#	-16930#	710#	28220#	500#	-40590#	950#	13080#	510#
	Ar	18	8850#	300#	37060#	590#	-15660#	300#	21790#	300#	-37130#	590#	5200#	300#
	K	19	13013.2	1.1	33050	160	-14100	190	12219	5	-29480#	400#	1987.7	2.4
	Ca	20	17229.0	2.3	29070	40	-13976.4	1.6	4267.0	0.4	-26300	90	-7960.4	2.0
	Sc	21	18886	5	23667	5	-11147	5	-27	5	-16080	5	-7638	5
	Ti	22	20507.37	0.15	19931.3	2.2	-9448.0	0.5	-5670	7	-13437.3	2.2	-14557.25	0.15
	V	23	23544.8	1.0	17294.2	1.2	-9085.7	2.0	-15150	170	-7430.1	2.2	-17987	7
	Cr	24	29491	21	13273	7	-7698	7	-24410#	400#	-5174	7	-28330	30
	Mn	25	32510#	430#	6830	170	-7630	250	-30190#	820#	5390	170	-29800#	530#
	Fe	26	35150#	640#	3520#	400#	-7200#	500#	-34890#	650#	8860#	400#	-36330#	900#
	Co	27	*	760#	900#	-8220#	950#	*	*	16140#	800#	*	*	*
	Ni	28	*	-1310	50	*	*	*	*	16780#	710#	*	*	*
49	S	16	2350#	840#	*	-18440#	970#	38060#	780#	*	*	17190#	840#	
	Cl	17	4900#	720#	42670#	1000#	-16600#	840#	30760#	600#	*	*	15510#	670#
	Ar	18	7790#	410#	38840#	640#	-15300#	800#	24440#	400#	-36910#	720#	7350#	400#
	K	19	10042.1	1.6	34090#	400#	-13680	100	16949.6	2.8	-32840#	500#	6542.0	0.8
	Ca	20	15099.1	2.3	30670	90	-13954.0	0.6	7262.9	0.4	-26150#	300#	-4868	5
	Sc	21	18368	3	25427	3	-12370.4	2.7	1399.9	2.8	-21565.6	2.8	-6140.7	2.7
	Ti	22	19769.04	0.05	20797.3	2.2	-10175.6	0.5	-3230.1	2.4	-11627.0	0.4	-12157.4	1.0
	V	23	22097.8	0.8	18203.3	2.1	-9314.7	1.1	-10324	10	-10747	5	-13211	7
	Cr	24	26914	7	14974.2	2.4	-8748.5	2.5	-20582	24	-4129.9	2.4	-24080	170
	Mn	25	31210	30	10209	10	-8181	13	-27310#	700#	-449	10	-27290#	400#
	Fe	26	33300#	500#	4768	25	-7660	40	-31920#	800#	10782	25	-33690#	800#
	Co	27	36320#	1060#	2340#	700#	-7620#	810#	*	*	11700#	720#	-34880#	860#
	Ni	28	*	-190#	950#	-8680#	900#	*	*	18300#	900#	*	*	*
50	Cl	17	3650#	780#	*	-16780#	920#	34160#	600#	*	*	17220#	720#	
	Ar	18	6620#	590#	40260#	780#	-15380#	710#	26670#	500#	-41410#	840#	8620#	500#
	K	19	9586	8	36240#	500#	-14340	160	18820	17	-34160#	600#	7501	8
	Ca	20	11507.1	1.6	31730#	300#	-12280	40	11841.5	1.6	-30020#	400#	-1099	3
	Sc	21	16187	16	26841	15	-11559	15	4676	15	-22225	15	-4056	15
	Ti	22	19081.58	0.05	21783.9	0.4	-10717.2	2.2	-1169.0	0.9	-17419.8	0.4	-11541.0	0.8
	V	23	20889.7	1.3	19298	5	-9888.3	1.1	-6596.6	0.3	-9951.8	2.8	-11962.5	2.2
	Cr	24	23583	7	16347.9	0.9	-8559.6	0.9	-15770	60	-8987.9	0.9	-20696	10
	Mn	25	29450	170	12728.4	1.3	-7977.5	0.9	-24850#	600#	-1955.2	1.2	-25948	24
	Fe	26	32220#	410#	6240	60	-7440	60	-29590#	800#	3560	60	-32230#	700#
	Co	27	34790#	1000#	3040#	620#	-7250#	720#	*	*	12570#	600#	-33030#	1000#
	Ni	28	37520#	950#	1060#	900#	-7910#	950#	*	*	12560#	800#	*	*

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		$Q(d,\alpha)$		$Q(p,\alpha)$		$Q(n,\alpha)$	
51	Cl	17	2030#	920#	*		57700#	700#	3980#	970#	6580#	920#	*	
	Ar	18	1020#	780#	21590#	840#	43860#	600#	3700#	840#	3060#	780#	-12980#	840#
	K	19	4860	15	16890#	500#	29688	13	5060#	400#	4790#	300#	-12810#	500#
	Ca	20	4821	22	17900	24	15113	22	3984	22	810	22	-8250#	300#
	Sc	21	6753	25	10929	20	5015	20	8782	20	5860	20	-5298	20
	Ti	22	6372.5	0.5	12473	15	-9530	9	7540.0	2.8	-364	5	139.3	0.6
	V	23	11051.15	0.08	8062.0	0.9	-24860	50	7069.9	0.9	1152.1	0.9	-2054	5
	Cr	24	9260.66	0.20	9516.17	0.25	-38510#	800#	7220.7	1.2	-2110.2	1.3	2687.1	0.9
	Mn	25	13687.6	0.3	5270.76	0.30	*		7800.0	2.2	-558	7	1879.7	1.3
	Fe	26	13790	60	4864	9	*		8145	14	-6010	170	8266	12
	Co	27	17630#	600#	140	80	*		8120	50	-4060#	400#	7630	170
	Ni	28	16110#	1130#	2450#	1000#	*		8100#	1060#	-8940#	1130#	11120#	900#
52	Ar	18	3170#	840#	22730#	920#	48500#	600#	1310#	840#	2750#	840#	-16530#	900#
	K	19	2100#	400#	17960#	720#	34900#	400#	7090#	640#	5180#	570#	-12040#	720#
	Ca	20	6000	60	19040	60	21160	60	2180	60	210	60	-11760#	410#
	Sc	21	5010	140	11120	140	10540	140	10130	140	6000	140	-4910	140
	Ti	22	7808	7	13529	21	-1137	10	5789	17	1956	8	-2523	7
	V	23	7311.24	0.13	9000.7	1.0	-17450#	200#	10697.9	0.9	1983.3	0.9	763.9	2.8
	Cr	24	12038.4	0.9	10503.4	0.9	-31940#	700#	4516.6	0.9	-2593.1	1.0	-1208.9	0.6
	Mn	25	10534.7	2.0	6544.8	2.0	-47640#	800#	10265.7	2.0	-510.1	3.0	2900.5	2.1
	Fe	26	16201	11	7378	7	*		5006	7	-5831	12	2647	7
	Co	27	14720#	200#	1080#	200#	*		11210#	210#	-4380#	200#	9290#	200#
	Ni	28	18610#	1060#	3420#	700#	*		5020#	920#	-8280#	990#	6920#	700#
	Cu	29	*		-2590#	1130#	*		12550#	1130#	-5370#	1130#	12910#	1060#
53	Ar	18	310#	920#	*		53620#	710#	3030#	990#	3230#	920#	*	
	K	19	3210#	640#	18000#	780#	40170#	500#	4900#	780#	6100#	710#	-14470#	780#
	Ca	20	2270#	410#	19200#	570#	26830#	400#	4770#	400#	2140#	400#	-9890#	640#
	Sc	21	6010	310	11130	280	16580	270	8940	270	6350	270	-6730	270
	Ti	22	5430	100	13950	170	4120	100	7110	100	2580	100	-1590	100
	V	23	8478	3	9670	8	-9191	4	8593	3	4445	3	-1656	15
	Cr	24	7939.12	0.14	11131.3	0.9	-25655	25	7628.6	0.9	-1198.0	0.9	1791.2	0.6
	Mn	25	12053.5	1.9	6559.9	0.3	-40340#	800#	7472.8	1.0	436.7	1.0	181.2	1.0
	Fe	26	10686	7	7528.9	2.5	*		8007.6	1.8	-3455.4	1.8	4961.4	1.8
	Co	27	16740#	200#	1615	7	*		8255	9	-3310	60	5615.0	1.9
	Ni	28	14230#	700#	2930#	200#	*		8420	50	-6990#	600#	10500	70
	Cu	29	19360#	1130#	-1830#	1060#	*		9300#	1130#	-4590#	1130#	9070#	1000#
54	K	19	1390#	780#	19080#	920#	44890#	600#	6680#	840#	5730#	840#	-13830#	920#
	Ca	20	4390#	640#	20390#	710#	32160#	500#	2480#	640#	2600#	500#	-13260#	780#
	Sc	21	3560	450	12430#	540#	21960	360	11370	370	7600	360	-5440	360
	Ti	22	6840	160	14780	300	10660	120	5280	190	2500	130	-3610	130
	V	23	6113	15	10350	100	-1883	15	10288	17	4704	15	-1017	25
	Cr	24	9719.12	0.12	12373	3	-17710	50	5220.7	0.9	134.0	0.9	-1555.4	0.8
	Mn	25	8938.8	1.1	7559.6	1.0	-33820#	500#	10572.4	1.0	758.6	1.4	2293.6	1.4
	Fe	26	13378.5	1.6	8853.8	0.5	-48840#	700#	5163.8	1.8	-3146.3	0.8	843.6	0.8
	Co	27	13422.0	1.7	4351.6	1.6	*		11034	7	-2943	9	5880.6	0.8
	Ni	28	17660	60	3850	50	*		5480#	200#	-7020	70	6630	50
	Cu	29	15460#	950#	-600#	500#	*		12440#	860#	-3940#	950#	11250#	510#
	Zn	30	*		350#	1060#	*		6360#	1060#	*		11170#	1060#
55	K	19	2360#	920#	*		49850#	710#	4630#	990#	6540#	920#	*	
	Ca	20	1640#	710#	20640#	780#	36760#	500#	4040#	710#	3060#	640#	-11740#	780#
	Sc	21	4450	590	12490#	680#	27740	460	9190#	610#	9150	470	-7790#	610#
	Ti	22	4140	200	15360	400	15810	160	7150	310	3360	220	-1760	170
	V	23	7320	100	10840	160	4890	100	8400	140	5190	100	-3330	170
	Cr	24	6246.26	0.19	12506	15	-9773.4	0.8	7452	3	1199.0	0.9	7	7
	Mn	25	10226.5	1.1	8067.0	0.4	-26080	160	8285.0	0.4	2570.4	0.4	-621.7	0.9
	Fe	26	9298.09	0.19	9213.1	1.1	-42560#	700#	7919.2	0.5	-1909.7	1.8	3583.9	0.4
	Co	27	14091.3	0.3	5064.36	0.30	*		7628.3	1.7	-833	7	2324.0	1.9
	Ni	28	14180	50	4614.9	0.7	*		8034.2	1.8	-6480#	200#	8643	7
	Cu	29	17970#	530#	-300	160	*		8710	160	-3300#	720#	8000#	250#
	Zn	30	15580#	990#	470#	860#	*		10140#	1060#	-6990#	1060#	14200#	990#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)	S(2p)	Q(α)	Q($2\beta^-$)	Q(ϵp)	Q(β^-n)						
51	Cl	17	2810#	920#	*	-17190#	1060#	36990#	700#	*	19320#	860#		
	Ar	18	5150#	720#	41650#	900#	-15700#	780#	30470#	600#	*	11790#	600#	
	K	19	9047	13	38240#	600#	-14840#	400#	20713	24	-38240#	600#	9002	13
	Ca	20	11181	22	34060#	400#	-13550	90	13393	22	-30710#	500#	138	27
	Sc	21	12810	20	28195	20	-9942	20	8975	20	-24790	21	131	20
	Ti	22	17311.7	0.5	23009.9	0.6	-9813.3	2.3	1719.2	1.0	-17431.6	1.7	-8579.3	1.0
	V	23	20385.4	1.2	20220.6	2.8	-10293.0	2.1	-3960.2	0.4	-14945	15	-10013.3	0.3
	Cr	24	22261.0	2.2	17466.2	0.9	-8939.6	0.9	-11249	9	-7309.3	0.9	-16895.14	0.21
	Mn	25	26749	10	14860.5	1.2	-8662.6	0.9	-20900	50	-6308.6	0.4	-21830	60
	Fe	26	31594	26	9448	9	-8066	11	-27260#	800#	2770	9	-30490#	600#
	Co	27	33160#	700#	4280	50	-7200	60	*	*	8000	50	-30510#	800#
	Ni	28	36250#	1130#	2770#	800#	-7770#	950#	*	*	14260#	800#	*	*
52	Ar	18	4190#	780#	*	-16160#	840#	33290#	600#	*	*	13480#	600#	
	K	19	6960#	400#	39550#	720#	-14910#	640#	23620#	430#	-38310#	810#	11720#	400#
	Ca	20	10820	60	35920#	510#	-14250#	300#	15210	60	-35680#	600#	890	60
	Sc	21	11760	140	29020	140	-10310	140	11280	140	-24940	140	1490	140
	Ti	22	14181	7	24458	7	-7669	7	5949	7	-20419	23	-5336	7
	V	23	18362.39	0.15	21474	15	-9365	5	-736.8	2.0	-15504	20	-8063.87	0.27
	Cr	24	21299.0	0.9	18565.3	0.6	-9351.3	0.6	-7086	7	-12975.2	0.8	-15245.9	0.9
	Mn	25	24222.3	2.0	16060.9	2.0	-8655.0	2.1	-16720#	200#	-5792.1	2.0	-18576	9
	Fe	26	29990	60	12649	7	-7936	10	-24860#	700#	-4170	7	-29060	50
	Co	27	32350#	630#	5940#	200#	-7090#	260#	-30930#	830#	6960#	200#	-29120#	830#
	Ni	28	34720#	1060#	3560#	700#	-7480#	810#	*	*	9440#	700#	*	*
	Cu	29	*	-140#	1000#	-6360#	1130#	*	*	16990#	800#	*	*	*
53	Ar	18	3480#	920#	*	-16840#	970#	35250#	810#	*	*	15260#	810#	
	K	19	5310#	500#	40730#	860#	-15250#	780#	26430#	570#	*	*	14510#	510#
	Ca	20	8260#	400#	37170#	720#	-14020#	570#	18370#	410#	-34780#	720#	3640#	430#
	Sc	21	11020	270	30170	270	-10920	270	13740	270	-28850#	480#	3290	270
	Ti	22	13240	100	25070	100	-7960	100	8460	100	-19860	120	-3460	100
	V	23	15789	3	23199	20	-7714	4	2839	3	-18970	140	-4503	3
	Cr	24	19977.5	0.9	20132.0	0.8	-9148.0	0.6	-4339.2	1.7	-13106	7	-12650.4	1.9
	Mn	25	22588.2	0.9	17063.3	1.0	-9153.0	1.1	-12030.4	1.8	-10534.4	1.0	-14428	7
	Fe	26	26887	9	14073.6	1.8	-8039.0	2.9	-21316	25	-2817.6	1.7	-25030#	200#
	Co	27	31460	50	8993.1	1.9	-7447	10	-28300#	800#	759.3	2.5	-27260#	700#
	Ni	28	32840#	800#	4006	27	-7310	30	*	*	11412	26	-34640#	800#
	Cu	29	*	1590#	800#	-6450#	1060#	*	*	12350#	830#	*	*	*
54	K	19	4600#	720#	*	-15860#	840#	28600#	700#	*	*	15380#	720#	
	Ca	20	6660#	510#	38390#	780#	-14280#	710#	20820#	520#	-38860#	860#	5260#	570#
	Sc	21	9580	390	31630#	540#	-10300	360	16290	360	-29210#	620#	5160	380
	Ti	22	12270	120	25910	140	-8430	120	11340	120	-24430#	420#	-1820	120
	V	23	14591	15	24300	140	-7770	21	5664	15	-19070	270	-2678	15
	Cr	24	17658.24	0.19	22043	7	-7927.9	0.6	-679.8	0.4	-17390	100	-10316.0	0.4
	Mn	25	20992.3	2.1	18690.9	1.4	-8757.6	1.4	-7547.2	1.1	-10996	3	-12681.1	2.0
	Fe	26	24064	7	15413.7	0.5	-8417.1	0.8	-17030	50	-8256.9	0.4	-21666.6	1.7
	Co	27	30160#	200#	11880.4	1.8	-7807.0	0.8	-26270#	500#	-609.2	0.5	-26450	25
	Ni	28	31890#	700#	5470	50	-7160	80	-31810#	700#	4430	50	-32940#	800#
	Cu	29	34820#	950#	2330#	540#	-6380#	780#	*	*	13630#	500#	*	*
	Zn	30	*	-1480	20	-4940#	1060#	*	*	14930#	700#	*	*	*
55	K	19	3750#	860#	*	-16190#	990#	30680#	840#	*	*	17410#	860#	
	Ca	20	6040#	640#	39720#	860#	-14910#	780#	23320#	530#	*	*	7180#	620#
	Sc	21	8010	540	32870#	680#	-9890	460	19170	470	-32260#	760#	7550	480
	Ti	22	10980	190	27790#	430#	-7750	160	13440	160	-24180#	530#	150	160
	V	23	13440	100	25610	290	-8340	100	8570	100	-22830	380	-280	100
	Cr	24	15965.38	0.22	22860	100	-7801.7	0.8	2372.0	0.4	-16800	120	-7623.4	1.0
	Mn	25	19165.3	0.5	20440	3	-7933.0	0.9	-3682.5	0.3	-15109	15	-9529.18	0.25
	Fe	26	22676.5	1.6	16772.7	0.4	-8454.5	0.8	-12145.4	0.7	-7835.9	0.4	-17542.63	0.21
	Co	27	27513.3	1.7	13918.2	0.6	-8210.7	0.9	-22390	160	-5761.7	1.1	-22880	50
	Ni	28	31847	25	8966.4	1.8	-7558	9	-30410#	700#	3629.7	0.7	-31670#	500#
	Cu	29	33420#	820#	3550	160	-6720	160	*	*	9080	160	-32290#	720#
	Zn	30	*	-130#	700#	-4410#	1060#	*	*	17010#	700#	*	*	*

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		Q($4\beta^-$)		Q(d, α)		Q(p, α)		Q(n, α)	
56	K	19	850#	1060#	*		54050#	820#	*		6000#	1060#	*	
	Ca	20	3620#	780#	21900#	920#	41380#	600#	1820#	840#	2650#	780#	-15040#	920#
	Sc	21	2830#	610#	13670#	640#	32180#	400#	10760#	640#	8590#	570#	-7400#	640#
	Ti	22	5610	210	16520	480	21400	140	5100	390	3770	300	-5100#	420#
	V	23	5050	200	11740	240	9920	180	10180	220	5570	200	-2370	320
	Cr	24	8243.9	2.0	13430	100	-1374.3	1.9	5322	15	1433	4	-2800	100
	Mn	25	7270.44	0.13	9091.2	0.4	-18670#	200#	10733.7	0.4	3239.1	0.4	586	3
	Fe	26	11197.10	0.23	10183.67	0.16	-35030#	500#	5660.9	1.1	-1053.3	0.5	325.9	0.4
	Co	27	10081.9	0.5	5848.1	0.4	-51720#	600#	10924.9	0.5	-229.0	1.7	4295.6	0.6
	Ni	28	16643.0	0.7	7166.6	0.3	*		4813.2	0.4	-6384.2	1.7	2686.2	1.7
	Cu	29	14670#	250#	190#	200#	*		11700#	200#	-3740#	200#	10070#	200#
	Zn	30	18730#	860#	1230#	530#	*		6870#	710#	-6360#	950#	9700#	500#
	Ga	31	*		-3310#	920#	*		13800#	920#	*		15680#	1000#
57	Ca	20	1050#	840#	22090#	1000#	45650#	600#	3130#	920#	2990#	840#	*	
	Sc	21	4050#	640#	14100#	780#	36780#	500#	8350#	710#	8940#	710#	-10060#	780#
	Ti	22	2730	280	16430#	470#	26310	250	6820	530	4600	440	-3440#	560#
	V	23	6180	290	12310	260	15120	230	8150	280	6230	260	-4980	430
	Cr	24	5314.2	2.6	13690	180	3559.1	2.0	7330	100	2232	15	-1280	120
	Mn	25	8646.6	1.6	9493.9	2.4	-10177.9	1.6	8333.3	1.6	4311.6	1.6	-1948	15
	Fe	26	7646.08	0.04	10559.31	0.21	-27640#	210#	8241.35	0.17	239.4	1.1	2398.9	0.4
	Co	27	11376.5	0.6	6027.5	0.4	-43700#	300#	8846.5	0.5	1773.0	0.5	1858.0	1.2
	Ni	28	10247.6	0.5	7332.4	0.6	*		8656.8	0.6	-3209.8	0.6	5817.0	0.6
	Cu	29	17140#	200#	690.3	0.4	*		8737.8	0.8	-3220	50	6347.5	0.5
	Zn	30	15040#	540#	1600#	280#	*		9800#	260#	-5940#	540#	12320#	210#
	Ga	31	19400#	670#	-2640#	590#	*		9980#	760#	-3370#	760#	11740#	590#
58	Ca	20	3120#	920#	*		49920#	730#	870#	1060#	2240#	990#	*	
	Sc	21	2240#	780#	15290#	840#	40950#	600#	9730#	840#	8340#	780#	-9940#	920#
	Ti	22	5320#	470#	17690#	640#	31040#	400#	4330#	570#	3730#	610#	-7120#	640#
	V	23	4160	260	13740	280	19530	130	9600	190	6210	210	-4700	480
	Cr	24	7380	200	14900	300	8390	200	5000	270	2170	220	-4520	260
	Mn	25	6413	3	10592	3	-4160.4	2.8	10164	3	4145.1	2.8	-1040	100
	Fe	26	10044.60	0.18	11957.3	1.6	-19860	50	5467.18	0.28	421.31	0.25	-1399.4	0.5
	Co	27	8572.9	1.2	6954.3	1.1	-36350#	200#	11470.7	1.1	2498.1	1.1	3511.6	1.1
	Ni	28	12216.3	0.5	8172.2	0.4	-52520#	400#	6522.5	0.4	-1334.8	0.4	2898.9	0.3
	Cu	29	12430.2	0.6	2872.9	0.7	*		12950.6	0.6	-1467.9	0.8	8008.5	0.6
	Zn	30	17820#	210#	2280	50	*		6650#	200#	-5800	160	8680	50
	Ga	31	15910#	360#	-1770#	280#	*		12800#	540#	-3710#	730#	13790#	250#
	Ge	32	*		-650#	500#	*		7320#	720#	*		12860#	810#
59	Sc	21	3500#	840#	15670#	920#	45220#	600#	7280#	840#	8460#	840#	-12580#	1000#
	Ti	22	2600#	570#	18060#	720#	35020#	400#	5770#	640#	3950#	570#	-6100#	720#
	V	23	5580	210	14010#	430#	24400	160	6750	300	6240	210	-7450#	430#
	Cr	24	4130	320	14860	280	13260	240	7050	330	3100	300	-3040	280
	Mn	25	7769	4	10980	200	832.4	2.4	7709.6	3.0	4620.0	3.0	-3760	180
	Fe	26	6581.01	0.11	12125.6	2.7	-13449.2	0.7	7532.8	1.6	1110.74	0.30	263.5	1.9
	Co	27	10453.9	1.1	7363.6	0.4	-28260#	170#	8662.9	0.3	3241.4	0.3	328.1	0.4
	Ni	28	8999.28	0.05	8598.5	1.1	-44850#	300#	8899.6	0.4	-252.3	0.4	5096.70	0.26
	Cu	29	12761.9	0.6	3418.5	0.4	*		10436.3	0.6	2413.2	0.5	5328.5	0.6
	Zn	30	12990	50	2836.8	0.7	*		10804.1	0.8	-4110#	200#	12338.4	0.8
	Ga	31	18550#	260#	-1040#	180#	*		9290#	270#	-3530#	530#	9910#	260#
	Ge	32	16670#	500#	110#	360#	*		10050#	420#	-7120#	670#	14920#	590#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\epsilon p)$		$Q(\beta^- n)$	
56	K	19	3210#	1000#	*	*			32660#	900#	*		18210#	950#
	Ca	20	5260#	780#	*		-15350#	840#	25310#	610#	*		8010#	760#
	Sc	21	7280#	540#	34310#	720#	-10610#	570#	21390#	440#	-32730#	810#	8870#	430#
	Ti	22	9750	180	29010#	520#	-7370	150	16080	140	-28140#	520#	1870	170
	V	23	12370	180	27100	400	-8380	230	10790	180	-23440	500	910	180
	Cr	24	14490.2	1.9	24260	120	-8237	7	5325.2	1.9	-20900	160	-5640.8	1.9
	Mn	25	17497.0	1.1	21597	15	-7892.1	0.9	-871.0	0.4	-15060	100	-7501.52	0.22
	Fe	26	20495.19	0.28	18250.7	0.4	-7613.2	0.4	-6699.5	0.3	-12786.7	0.4	-14648.5	0.3
	Co	27	24173.1	0.5	15061.2	1.1	-7757.9	1.9	-17800#	200#	-5617.0	0.4	-18775.9	0.7
	Ni	28	30830	50	12231.0	0.4	-8000	7	-28330#	500#	-3715.2	0.4	-30340	160
	Cu	29	32640#	540#	4810#	200#	-6670#	280#	-33920#	630#	8500#	200#	-31390#	730#
	Zn	30	34310#	860#	930#	510#	-4530#	860#	*		12470#	500#	*	
	Ga	31	*		-2840#	780#	-3680#	1000#	*		20020#	620#	*	
57	Ca	20	4670#	780#	*		-16090#	920#	26990#	650#	*		9790#	720#
	Sc	21	6870#	680#	35990#	860#	-11450#	710#	23520#	550#	-35920#	950#	10430#	520#
	Ti	22	8340	300	30100#	560#	-7840#	470#	18660	250	-27260#	650#	4180	310
	V	23	11230	250	28830	520	-8550	350	13260	230	-26790#	460#	2980	230
	Cr	24	13558.1	2.0	25430	160	-8120	100	7657.0	1.9	-20610	140	-3684.6	1.9
	Mn	25	15917.0	1.5	22920	100	-8061	3	1858.8	1.6	-18650	180	-4951.0	1.6
	Fe	26	18843.18	0.24	19650.5	0.4	-7320.2	0.4	-4098.0	0.5	-12188.9	1.9	-12212.7	0.4
	Co	27	21458.3	0.5	16211.2	0.5	-7080.8	0.7	-12036.7	0.6	-9723.1	0.5	-13509.4	0.5
	Ni	28	26890.6	0.8	13180.5	0.5	-7561.4	1.7	-23540#	210#	-2765.8	0.5	-25920#	200#
	Cu	29	31820	160	7856.9	0.5	-7074.5	1.8	-31660#	300#	1442.6	0.5	-29800#	500#
	Zn	30	33770#	730#	1790#	210#	-5340#	210#	*		14070#	210#	-36300#	630#
	Ga	31	*		-1410#	340#	-3720#	860#	*		15300#	360#	*	
58	Ca	20	4160#	920#	*		*		29190#	810#	*		10720#	860#
	Sc	21	6290#	720#	37380#	1000#	-12300#	840#	25440#	610#	*		10920#	650#
	Ti	22	8050#	420#	31790#	720#	-8760#	640#	20720#	450#	-31530#	720#	5050#	460#
	V	23	10340	220	30170#	420#	-9150	390	15510	130	-26900#	520#	4130	130
	Cr	24	12700	200	27210	240	-8660	240	10320	200	-25260	320	-2420	200
	Mn	25	15059.3	2.7	24280	180	-8360	15	4019.0	3.0	-18890	230	-3717.7	2.7
	Fe	26	17690.68	0.19	21451.2	1.9	-7645.7	0.4	-1926.3	0.3	-16919.3	1.9	-10880.8	0.5
	Co	27	19949.4	1.2	17513.7	1.1	-6714.9	1.6	-8179.4	1.2	-9649.4	1.9	-11834.7	1.2
	Ni	28	22463.9	0.3	14199.67	0.25	-6399.2	0.4	-17930	50	-7335.94	0.25	-20991.2	0.4
	Cu	29	29570#	200#	10205.3	0.6	-6082.7	0.6	-28180#	200#	388.8	0.6	-27190#	210#
	Zn	30	32860#	510#	2970	50	-5500	70	-34590#	400#	6500	50	-34720#	300#
	Ga	31	35310#	630#	-170#	280#	-4180#	540#	*		16530#	200#	*	
	Ge	32	*		-3290#	640#	-2720#	810#	*		17550#	450#	*	
59	Sc	21	5740#	780#	*		-13440#	920#	27530#	620#	*		12740#	720#
	Ti	22	7920#	470#	33350#	720#	-9720#	640#	22250#	470#	-31010#	810#	6600#	420#
	V	23	9750	280	31700#	530#	-10280	490	17690	160	-30250#	620#	5930	260
	Cr	24	11510	240	28600	350	-8650	290	12770	240	-24070#	470#	-140	240
	Mn	25	14181.8	2.8	25870	230	-8810	100	6703.8	2.4	-22490	130	-1442.2	2.4
	Fe	26	16625.62	0.21	22718.0	1.9	-7980.4	0.5	492.0	0.3	-16120	200	-8888.9	1.1
	Co	27	19026.8	0.4	19320.9	1.6	-6942.3	0.3	-5871.4	0.4	-13690.5	2.8	-10072.28	0.20
	Ni	28	21215.5	0.5	15552.88	0.26	-6100.4	0.3	-13941.2	0.7	-6290.6	0.3	-17560.3	0.4
	Cu	29	25192.1	0.6	11590.7	0.6	-4753.4	0.5	-22390#	170#	-3800.1	1.2	-22130	50
	Zn	30	30810#	210#	5709.7	0.8	-4304.6	1.0	-30900#	300#	5724.2	0.7	-31790#	200#
	Ga	31	34470#	340#	1240#	170#	-4760#	230#	*		10410#	170#	-34330#	430#
	Ge	32	*		-1660#	360#	-3810#	760#	*		18700#	300#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		Q($4\beta^-$)		Q(d, α)		Q(p, α)		Q(n, α)		
60	Sc	21	1820#	920#	*		48920#	700#	8580#	990#	7690#	920#	*		
	Ti	22	4760#	640#	19320#	780#	39080#	500#	3260#	780#	3240#	710#	-9810#	780#	
	V	23	3480	270	14890#	460#	28410	220	8580#	460#	5490	330	-6890#	550#	
	Cr	24	6680	320	15960	270	17970	210	4530	250	2590	310	-6990	330	
	Mn	25	5514	3	12370	240	5376.6	2.9	9580	200	4420.3	3.0	-3090	230	
	Fe	26	8820	3	13176	4	-7239	3	5126	4	938	4	-3242	4	
	Co	27	7491.92	0.07	8274.5	0.4	-21870#	200#	11215.6	0.4	3395.5	0.3	1482.8	1.6	
	Ni	28	11387.73	0.05	9532.38	0.20	-36860#	200#	6084.8	1.1	-263.5	0.4	1355.05	0.26	
	Cu	29	10058.1	1.6	4477.4	1.6	-52640#	400#	12594.4	1.6	2602.7	1.7	6646.8	1.6	
	Zn	30	15030.1	0.7	5105.0	0.4	*		8204.2	0.6	-2001.4	0.6	7555.9	0.6	
	Ga	31	13880#	260#	-140#	200#	*		13230#	200#	-2370#	280#	13170#	200#	
	Ge	32	19370#	360#	930#	260#	*		6590#	280#	-7100#	360#	10580#	280#	
	As	33	*		-3320#	500#	*		12720#	570#	*		15600#	500#	
	61	Sc	21	3090#	1060#	*		52670#	800#	*		7710#	1060#	*	
Ti		22	2090#	780#	19590#	920#	42570#	600#	4670#	840#	3390#	840#	-8780#	920#	
V		23	5340	920	15470#	1030#	32390	890	5850#	980#	5470#	980#	-9980#	1080#	
Cr		24	4020	250	16500	260	21770	130	6090	210	2730	180	-5700#	420#	
Mn		25	6846	3	12530	210	10241.7	2.5	6860	240	4960	200	-5780	130	
Fe		26	5579	4	13242	3	-2572	16	7316	3	1771	4	-1440	200	
Co		27	9319.2	0.8	8774	3	-15760	40	8477.3	0.9	4120.9	0.8	-1423.7	2.8	
Ni		28	7820.11	0.05	9860.57	0.22	-30490#	300#	8718.60	0.21	489.3	1.1	3579.5	0.3	
Cu		29	11710.6	1.9	4800.3	1.0	-44400#	300#	9883.1	1.0	3108.4	1.0	3509.1	1.5	
Zn		30	10246	16	5293	16	*		10720	16	182	16	9526	16	
Ga		31	15420#	200#	250	40	*		10790	40	30	60	10180	40	
Ge		32	14190#	360#	1230#	360#	*		10950#	340#	-5370#	360#	14220#	300#	
As		33	19960#	500#	-2730#	360#	*		9440#	420#	-5010#	500#	11550#	360#	
62		Ti	22	4290#	920#	20790#	1060#	46310#	700#	2200#	990#	2600#	920#	*	
	V	23	3040#	940#	16420#	670#	35950#	300#	7560#	590#	5030#	500#	-9530#	670#	
	Cr	24	6510	200	17680	910	25850	150	3060	270	1800	220	-9610#	430#	
	Mn	25	4810#	150#	13320#	200#	14310#	150#	8730#	260#	4280#	290#	-5000#	220#	
	Fe	26	8029	4	14425	4	2289.5	2.9	4801	4	1511	4	-5340	240	
	Co	27	6598	19	9792	19	-9437	19	10699	19	4104	19	-252	19	
	Ni	28	10595.9	0.3	11137.2	0.7	-24850#	140#	5614.7	0.4	347.3	0.4	-435.3	0.4	
	Cu	29	8874.4	1.1	5854.6	0.6	-38210#	300#	12396.4	0.6	3233.2	0.6	5088.6	0.6	
	Zn	30	12890	16	6472.6	1.1	*		7887.8	1.7	54.3	0.7	5635.0	0.5	
	Ga	31	12920	40	2927	16	*		12898.1	0.7	92.6	0.9	10017.7	0.7	
	Ge	32	16240#	330#	2050#	150#	*		8600#	240#	-3060#	220#	10960#	140#	
	As	33	15070#	420#	-1860#	420#	*		13740#	360#	-3410#	420#	15040#	340#	
	63	Ti	22	1330#	990#	*		49810#	700#	3960#	1060#	3090#	990#	*	
		V	23	4590#	500#	16720#	810#	39860#	400#	5070#	720#	5200#	640#	-12290#	810#
Cr		24	2900	480	17540#	550#	29790	460	5500	1010	2380	510	-7750#	680#	
Mn		25	6480#	150#	13280	150	18692	4	6280	130	4480	210	-8000	220	
Fe		26	4829	5	14440#	150#	6577	5	6817	5	2196	5	-3490	210	
Co		27	8498	26	10262	19	-5304	19	7780	19	4425	19	-3237	19	
Ni		28	6837.78	0.06	11377	19	-18590	40	8096.1	0.7	1001.5	0.4	1546	3	
Cu		29	10863.6	0.5	6122.41	0.06	-31950#	200#	9352.8	0.3	3757.3	0.3	1716.8	0.4	
Zn		30	9116.9	1.6	6715.1	1.6	*		10481.5	1.6	995.5	2.2	7905.8	1.6	
Ga		31	12632.0	1.5	2668.6	1.5	*		10512	16	2490.7	1.5	7443.9	2.1	
Ge		32	13090#	150#	2220	40	*		10920	50	-2270#	200#	12900	40	
As		33	17120#	360#	-980#	240#	*		10810#	360#	-1150#	280#	11800#	280#	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)	S(2p)	$Q(\alpha)$	$Q(2\beta^-)$	$Q(\epsilon p)$	$Q(\beta^-n)$						
60	Sc	21	5320#	920#	*	-14400#	1060#	29190#	730#	*	13520#	810#		
	Ti	22	7360#	640#	34990#	860#	-10860#	780#	24180#	550#	*	7430#	530#	
	V	23	9070	250	32940#	640#	-10940#	460#	19730	220	-30230#	640#	6580	330
	Cr	24	10810	290	29970#	450#	-9720	250	14910	210	-28150#	450#	950	210
	Mn	25	13283	4	27230	130	-9270	180	8681.8	2.4	-22420	160	-375.1	2.4
	Fe	26	15401	3	24160	200	-8556	4	3060	3	-20810	240	-7255	3
	Co	27	17945.8	1.1	20400.1	2.8	-7163.8	0.4	-3305.2	1.6	-13413.4	2.4	-8564.92	0.21
	Ni	28	20387.01	0.07	16896.0	0.3	-6291.03	0.26	-10298.8	0.4	-11097.3	0.3	-16186.1	0.4
	Cu	29	22820.1	1.6	13075.9	1.9	-4729.7	1.6	-18560#	200#	-3404.4	1.6	-19200.9	1.7
	Zn	30	28020	50	8523.5	0.4	-2691.7	0.5	-26560#	200#	-306.6	0.4	-28270#	170#
	Ga	31	32430#	280#	2700#	200#	-3970#	280#	-34080#	450#	9290#	200#	-31550#	360#
	Ge	32	36040#	450#	-110#	200#	-4460#	540#	*	12320#	200#	*	*	*
	As	33	*	-3210#	450#	-3800#	720#	*	*	20980#	430#	*	*	*
61	Sc	21	4910#	1000#	*	*	*	31440#	1200#	*	*	15190#	950#	
	Ti	22	6850#	720#	*	-11900#	840#	26110#	610#	*	*	8820#	640#	
	V	23	8820	910	34780#	1080#	-12220#	1030#	21240	890	-33740#	1140#	7930	920
	Cr	24	10710	280	31390#	420#	-11010	280	16470	130	-27420#	520#	2440	130
	Mn	25	12359	3	28490	160	-9940	230	11155.5	2.5	-25790	220	1599	4
	Fe	26	14399.0	2.7	25610	240	-8821	3	5300.8	2.7	-19710	210	-5342.1	2.7
	Co	27	16811.1	0.8	21950.2	2.5	-7836.4	1.7	-913.8	1.2	-17218.7	2.5	-6496.4	0.8
	Ni	28	19207.84	0.07	18135.1	0.3	-6465.06	0.26	-7873	16	-10098	3	-13948.1	1.6
	Cu	29	21768.7	1.1	14332.7	1.0	-5063.8	1.1	-14850	40	-7623.1	1.0	-15881.4	1.1
	Zn	30	25276	16	9771	16	-2690	16	-22620#	300#	835	16	-24640#	200#
	Ga	31	29310#	170#	5350	40	-2250	40	-29550#	300#	3920	40	-27600#	200#
	Ge	32	33560#	420#	1090#	300#	-3610#	360#	*	*	13160#	300#	-36100#	500#
	As	33	*	-1810#	340#	-4360#	420#	*	*	14910#	360#	*	*	*
62	Ti	22	6380#	860#	*	-13070#	990#	28330#	710#	*	*	9870#	1140#	
	V	23	8380#	370#	36000#	760#	-13030#	670#	23010#	330#	-33700#	860#	8910#	330#
	Cr	24	10530	260	33150#	520#	-12210#	430#	17980	150	-31840#	610#	2780	150
	Mn	25	11660#	150#	29820#	270#	-10590#	200#	12940#	150#	-25260#	910#	2370#	150#
	Fe	26	13608	4	26950	210	-9470	200	7867.8	2.8	-23710	130	-4051.7	2.9
	Co	27	15917	19	23034	19	-8021	19	1363	19	-16971	19	-5274	19
	Ni	28	18416.0	0.3	19911	3	-7016.3	0.4	-5578.4	0.4	-15114.3	2.7	-12833.3	1.0
	Cu	29	20585.0	1.7	15715.2	0.6	-5365.3	1.2	-10800.5	0.7	-7178.3	0.9	-14510	16
	Zn	30	23136.4	0.7	11272.9	0.5	-3364.3	0.5	-19270#	140#	-4235.2	0.5	-22100	40
	Ga	31	28350#	200#	8219.8	1.7	-2744.2	0.7	-27400#	300#	2708.4	1.1	-26330#	300#
	Ge	32	30430#	240#	2300#	140#	-2030#	150#	*	*	7160#	140#	-32380#	330#
	As	33	35020#	500#	-620#	360#	-3520#	360#	*	*	15260#	300#	*	*
63	Ti	22	5620#	920#	*	*	*	29900#	840#	*	*	11580#	760#	
	V	23	7630#	980#	37500#	900#	-14120#	720#	24890#	400#	*	*	10830#	430#
	Cr	24	9410	480	33950#	750#	-12500#	610#	19910	460	-30450#	840#	4690#	480#
	Mn	25	11288	4	30960	890	-11480	160	14964	19	-28700#	300#	3920	5
	Fe	26	12858	5	27760	130	-10170	240	9877	4	-22030	150	-2283	19
	Co	27	15096	19	24687	19	-8751	19	3728	19	-20660#	150#	-3176	19
	Ni	28	17433.6	0.3	21169.8	2.7	-7273.1	0.4	-3299.2	1.5	-13923.2	2.8	-10796.7	0.5
	Cu	29	19738.1	1.0	17259.6	0.7	-5775.1	0.4	-9032.2	1.4	-11444	19	-12483.1	0.4
	Zn	30	22007	16	12569.7	1.6	-3481.9	1.6	-15290	40	-2756.2	1.5	-18298.0	1.6
	Ga	31	25560	40	9141.2	1.6	-2614.3	1.4	-22920#	200#	-1049.1	1.5	-22720#	140#
	Ge	32	29330#	300#	5150	40	-2130	40	*	*	6960	40	-30410#	300#
	As	33	32180#	360#	1070#	200#	-2080#	260#	*	*	11070#	200#	*	*

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		Q($4\beta^-$)		Q(d, α)		Q(p, α)		Q(n, α)	
64	V	23	2250#	570#	17640#	810#	43620#	400#	7110#	810#	5040#	720#	-11460#	900#
	Cr	24	5810#	550#	18760#	500#	33640#	300#	2730#	420#	1910#	940#	-11470#	670#
	Mn	25	4173	5	14560	460	22435	4	8620	150	4330	130	-6840	890
	Fe	26	7405	7	15371	6	11034	5	4220#	150#	1637	6	-6870	130
	Co	27	6012	27	11445	20	-959	20	9797	20	3993	20	-2403	20
	Ni	28	9657.47	0.20	12536	19	-12783	4	5036	19	663.2	0.7	-2531.6	2.7
	Cu	29	7916.11	0.10	7200.74	0.10	-25770#	300#	12032.57	0.11	3661.3	0.3	3119.9	0.7
	Zn	30	11862.0	1.5	7713.5	0.7	-39070#	500#	7494.0	0.8	844.1	0.7	3863.9	0.7
	Ga	31	10357.0	1.9	3908.6	2.1	*	*	13045.6	1.6	2380	16	8797.5	1.6
	Ge	32	15470	40	5057	4	*	*	8382	4	-2320	40	7680	16
	As	33	14100#	360#	20#	300#	*	*	12960#	330#	-1060#	430#	13130#	310#
	Se	34	*	*	590#	540#	*	*	8360#	590#	-4480#	590#	12450#	590#
	65	V	23	3540#	640#	*	*	47540#	500#	4890#	860#	5790#	860#	*
Cr		24	2590#	420#	19100#	500#	37140#	300#	4720#	500#	2360#	420#	-9770#	760#
Mn		25	6050	5	14800#	300#	26296	4	5470	460	4790	150	-9850#	300#
Fe		26	4323	8	15521	8	14690	7	6376	8	2120#	150#	-4680	150
Co		27	7465	20	11505	5	3472.1	2.2	7161	5	4557	3	-5060#	150#
Ni		28	6098.08	0.14	12622	20	-8647.0	2.2	7437	19	1163	19	-600.8	2.9
Cu		29	9910.7	0.7	7453.9	0.7	-20330	80	8959.7	0.7	4346.5	0.7	-193	19
Zn		30	7979.33	0.17	7776.7	0.7	-32750#	600#	10378.3	0.7	1739.2	0.8	6480.5	0.7
Ga		31	11895.9	1.6	3942.5	0.6	*	*	10266.6	1.6	3374.2	1.0	5776.0	1.0
Ge		32	10234	4	4934.4	2.6	*	*	10779.7	2.5	372.3	2.3	10335.7	2.3
As		33	15360#	310#	-90	80	*	*	10690	90	-170#	160#	10700	80
Se		34	14300#	780#	800#	670#	*	*	11180#	630#	-3720#	670#	14380#	610#
66		V	23	2040#	780#	*	*	50800#	600#	*	*	5080#	920#	*
	Cr	24	4630#	590#	20180#	710#	41470#	500#	2350#	640#	2320#	640#	-13070#	860#
	Mn	25	3854	12	16060#	300#	29508	11	7420#	300#	3840	460	-9110#	400#
	Fe	26	6918	8	16389	6	18831	4	3632	5	1683	6	-8700	460
	Co	27	5295	14	12476	16	7316	14	9272	15	4091	15	-3875	14
	Ni	28	8952.4	1.5	14110.1	2.5	-4399.3	2.8	4496	20	709	19	-4724	5
	Cu	29	7065.93	0.09	8421.8	0.7	-14233	6	11551.2	0.7	4118.3	0.7	1239	19
	Zn	30	11058.6	1.0	8924.6	1.0	-27530#	300#	7235.8	0.8	1544.3	0.8	2259.7	0.8
	Ga	31	9138	3	5101	3	*	*	12991	3	3353	3	7502	3
	Ge	32	13200	3	6238.7	2.5	*	*	7936.5	2.8	-195.9	2.7	6252.5	2.9
	As	33	13160	80	2836	6	*	*	13001	7	-240	40	10168	6
	Se	34	16280#	670#	1720#	310#	*	*	9000#	430#	-2880#	360#	11200#	300#
	67	Cr	24	2020#	710#	20160#	780#	45260#	500#	3870#	710#	2550#	640#	*
Mn		25	4630#	400#	16060#	640#	34010#	400#	5380#	500#	5010#	500#	-11490#	570#
Fe		26	4070	220	16610	220	21810	220	5610	220	1780	220	-6960#	370#
Co		27	6985	15	12543	8	11557	7	6611	9	4512	8	-6686	7
Ni		28	5808	3	14623	14	-1085	5	6153	4	913	20	-3127	6
Cu		29	9132.0	1.4	8601.5	1.8	-10731.6	1.3	8517.3	1.3	4643.8	1.3	-1880	20
Zn		30	7052.32	0.22	8911.0	1.0	-21300	70	10094.2	1.0	2408.1	0.8	4864.8	0.8
Ga		31	11226	3	5268.8	1.1	-33950#	500#	9743.7	1.3	3988.9	1.3	4191.6	1.2
Ge		32	9122	5	6223	6	*	*	10710	5	1039	5	8992	5
As		33	12633	6	2269.2	2.4	*	*	10601.8	2.2	2592	4	7891.9	1.5
Se		34	13280#	310#	1840	70	*	*	11070	110	-2060#	310#	13380	70
Br		35	*	*	-1150#	590#	*	*	10940#	780#	-1140#	710#	12370#	590#
68		Cr	24	4470#	860#	*	*	48590#	700#	1440#	920#	1630#	860#	*
	Mn	25	3060#	640#	17110#	710#	37270#	500#	6950#	710#	4550#	590#	-11010#	710#
	Fe	26	5830	430	17800#	540#	26180	370	3640	370	2010	370	-10200#	470#
	Co	27	4670	150	13140	260	15160	150	8850	150	4160	150	-5310	150
	Ni	28	7792	4	15431	7	3515	4	3656	14	585	4	-6596	7
	Cu	29	6319.6	2.0	9113	3	-6672.5	2.4	11150.1	2.1	4422.3	1.7	-735.4	2.6
	Zn	30	10198.10	0.19	9977.0	1.5	-15817.4	1.0	6962.0	1.0	2120.7	1.0	764.8	0.8
	Ga	31	8278.2	1.7	6494.7	1.2	-28640#	310#	12524.1	1.2	3690.1	1.6	5824.1	1.6
	Ge	32	12392	5	7388.9	2.2	*	*	7456	4	542.6	2.0	4579.4	2.0
	As	33	10378.6	1.9	3525	5	*	*	13423	3	2447.8	2.8	9409.2	2.0
	Se	34	15680	70	4891.2	0.7	*	*	8546	6	-2390	80	7935.2	2.2
	Br	35	13580#	590#	-850#	300#	*	*	13640#	430#	-420#	670#	14140#	320#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q(2 β^-)		Q(ϵp)		Q($\beta^- n$)	
64	V	23	6840#	500#	*		-14540#	810#	26820#	400#	*		11480#	610#
	Cr	24	8710#	330#	35470#	760#	-13560#	590#	21510#	300#	-34930#	760#	5360#	300#
	Mn	25	10650#	150#	32090#	300#	-12170	220	16803	20	-28290#	400#	4575	6
	Fe	26	12234	6	28650	150	-10890	210	12129	5	-26540	460	-1190	19
	Co	27	14511	27	25890#	150#	-9249	20	5632	20	-20194	20	-2351	20
	Ni	28	16495.25	0.21	22798.4	2.8	-8111	3	-1094.7	0.7	-18752	4	-9590.50	0.20
	Cu	29	18779.8	0.5	18578	19	-6199.3	0.4	-6591.3	1.5	-10862	19	-11282.3	1.6
	Zn	30	20978.9	0.8	13835.9	0.7	-3956.2	0.7	-11688	4	-7780.4	0.7	-17528.0	1.5
	Ga	31	22988.9	1.6	10623.7	1.6	-2913.1	2.2	-19180#	300#	-542.4	1.5	-19980	40
	Ge	32	28560#	140#	7726	4	-2567	4	-27390#	500#	609	4	-28760#	200#
	As	33	31210#	430#	2240#	300#	-2290#	360#	*	*	9610#	300#	*	*
	Se	34	*	*	-390#	520#	-1750#	540#	*	*	12700#	500#	*	*
	65	V	23	5790#	640#	*		-15000#	950#	29320#	500#	*		13740#
Cr		24	8400#	550#	36740#	760#	-14060#	670#	23240#	300#	*		6940#	300#
Mn		25	10223	5	33550#	400#	-12890	890	18218	4	-32090#	400#	5931	6
Fe		26	11729	8	30080	460	-11190	130	13904	7	-25050#	300#	499	21
Co		27	13477	19	26876	4	-9868	3	8078.3	2.2	-23485	4	-158.0	2.2
Ni		28	15755.55	0.25	24068	4	-8629.7	2.7	786.6	0.7	-17445	5	-7772.47	0.26
Cu		29	17826.8	0.7	19990	19	-6790.7	1.0	-4606.1	0.7	-14761	20	-9331.0	0.4
Zn		30	19841.3	1.5	14977.4	0.7	-4115.4	0.7	-9433.6	2.3	-6102.3	0.7	-15150.4	1.5
Ga		31	22252.9	1.5	11656.0	0.9	-3098.4	1.0	-15720	80	-4522.2	0.9	-16413	4
Ge		32	25700	40	8843.0	2.7	-2554	16	-23320#	600#	2236.6	2.3	-24900#	300#
As		33	29450#	210#	4970	80	-2230	90	*	*	4610	80	-28080#	510#
Se		34	*	*	820#	600#	-1860#	670#	*	*	13870#	600#	*	*
66		V	23	5580#	720#	*		*		31140#	600#	*		14300#
	Cr	24	7220#	590#	*		-14400#	860#	25530#	500#	*		8360#	500#
	Mn	25	9904	12	35160#	400#	-13700#	300#	19658	18	-32400#	500#	6400	13
	Fe	26	11241	6	31190#	300#	-11600	150	15938	4	-29380#	300#	1046	5
	Co	27	12759	24	27997	14	-10350#	150#	9850	14	-22730	14	645	14
	Ni	28	15050.4	1.5	25615	5	-9553	3	2892.8	1.6	-22074	7	-6814.1	1.5
	Cu	29	16976.6	0.7	21044	20	-7259	19	-2534	3	-14361.8	2.2	-8417.6	0.4
	Zn	30	19037.9	1.0	16378.5	0.8	-4578.1	0.8	-7292.0	2.6	-11062.8	0.8	-14313.1	1.1
	Ga	31	21034	3	12878	3	-3362	3	-11699	6	-3750	3	-15317	4
	Ge	32	23434	4	10181.2	2.5	-2864.4	2.5	-20240#	300#	-2984.2	2.5	-22740	80
	As	33	28520#	300#	7770	6	-2464	6	*	*	3343	6	-26940#	600#
	Se	34	30580#	590#	1630#	300#	-1890#	330#	*	*	7820#	300#	*	*
	67	Cr	24	6640#	590#	*		-15080#	860#	27590#	550#	*		10200#
Mn		25	8490#	400#	36240#	640#	-13740#	570#	22010#	400#	-34990#	720#	8690#	400#
Fe		26	10990	220	32660#	370#	-12770	510	17670	220	-28820#	550#	2270	220
Co		27	12279	7	28932	7	-10860	7	11997	7	-25860	13	2613	7
Ni		28	14760.1	2.9	27099	7	-10532	5	4137	3	-20964	5	-5555.9	3.0
Cu		29	16198.0	1.4	22711.5	2.4	-7893	19	-439.9	1.7	-18199	14	-6491.0	1.5
Zn		30	18110.9	1.0	17332.8	0.8	-4792.7	0.8	-5222	5	-9162.8	1.7	-12227	3
Ga		31	20364.2	1.4	14193.4	1.3	-3724.5	1.2	-10291.7	1.3	-7909.8	1.3	-13343.2	2.7
Ge		32	22322	5	11324	5	-2870	5	-16080	70	-1048	5	-18704	7
As		33	25790	80	8507.8	0.9	-2465.0	1.4	-23660#	500#	-152	3	-23290#	300#
Se		34	29560#	600#	4680	70	-2080	80	*	*	7740	70	*	*
Br		35	*	*	570#	510#	-1730#	540#	*	*	11810#	500#	*	*
68		Cr	24	6480#	860#	*		*		28950#	790#	*		10360#
	Mn	25	7690#	500#	37270#	780#	-14550#	640#	23630#	530#	*		9700#	550#
	Fe	26	9900	370	33870#	620#	-12790#	470#	19640	370	-32630#	620#	3430	370
	Co	27	11660	150	29750	150	-11360	150	13640	150	-25900#	430#	3750	150
	Ni	28	13600	3	27974	5	-10919	6	6543	3	-24680	220	-4216	3
	Cu	29	15451.6	1.7	23736	14	-8200	20	1518.7	2.2	-17534	7	-5758.3	1.8
	Zn	30	17250.42	0.29	18578.5	1.7	-5333.3	0.8	-3028.1	2.1	-13553	3	-11199.3	1.2
	Ga	31	19504	3	15405.6	1.6	-4086.6	1.4	-8191.2	2.4	-7055.9	1.9	-12499	5
	Ge	32	21514	3	12657.7	2.1	-3399.9	2.0	-12789.3	1.9	-6387.7	2.1	-18462.9	1.9
	As	33	23012	6	9748	4	-2486.7	2.3	-20450#	310#	695.4	2.2	-20390	70
	Se	34	28960#	300#	7160.3	2.5	-2299	4	*	*	1180	5	-29330#	500#
	Br	35	*	*	990#	310#	-1210#	430#	*	*	10860#	310#	*	*

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		Q($4\beta^-$)		Q(d, α)		Q(p, α)		Q(n, α)	
69	Mn	25	4310#	780#	16950#	920#	41200#	600#	4660#	780#	4860#	780#	-13280#	840#
	Fe	26	3300#	540#	18050#	640#	29360#	400#	4960#	570#	2560#	400#	-8880#	640#
	Co	27	6320	240	13630	410	19160	190	6610	290	4760	190	-7770	190
	Ni	28	4586	5	15340	150	7122	4	6054	7	1294	14	-4264	6
	Cu	29	8240.5	2.1	9561	3	-2620	30	8717	3	5134.1	2.0	-3681	14
	Zn	30	6482.07	0.16	10139.5	1.8	-11982.9	1.8	9612.0	1.5	2704.5	1.0	3235.1	1.7
	Ga	31	10313.4	1.9	6609.9	1.5	-23220	40	9263.1	1.5	4435.3	1.5	2576.7	1.4
	Ge	32	8193.2	2.3	7303.9	2.0	-34670#	400#	10489.0	1.8	1487	3	7444.8	1.6
	As	33	12290	30	3420	30	*	*	10260	30	3360	30	6260	30
	Se	34	10316.6	1.6	4829.2	2.4	*	*	10863.3	1.6	454	6	10818.7	2.8
	Br	35	15740#	310#	-790	40	*	*	11180	80	120#	300#	11560	40
	Kr	36	*	*	1280#	510#	*	*	11200#	640#	*	*	14580#	500#
70	Mn	25	2750#	920#	*	*	43760#	700#	6370#	990#	4130#	860#	*	*
	Fe	26	5320#	640#	19060#	780#	33260#	500#	2700#	710#	1870#	640#	-12180#	710#
	Co	27	4820	350	15150#	500#	21990	300	7620	470	4010	370	-7960#	500#
	Ni	28	7307	4	16330	190	11348.0	2.3	3420	150	972	7	-7500	220
	Cu	29	5311.5	1.8	10287	4	1370	50	11198	3	5630	3	-2008	7
	Zn	30	9218.4	2.1	11117.5	2.4	-7634.8	2.5	6713.1	2.5	2618.1	2.3	-176	3
	Ga	31	7653.65	0.17	7781.5	1.5	-17485	15	11807.5	1.5	3834.0	1.5	4055.0	1.7
	Ge	32	11532.5	1.6	8523.0	1.5	-29610#	200#	7234.7	1.6	1181.1	1.2	2964.6	1.1
	As	33	9300	60	4530	50	*	*	13350	50	3180	50	8180	50
	Se	34	13566.5	2.2	6110	30	*	*	7675.4	2.4	-478.6	1.6	6375	5
	Br	35	13390	40	2280	15	*	*	13475	15	20	70	10808	15
	Kr	36	16590#	450#	2130#	200#	*	*	8200#	360#	-3160#	540#	11280#	210#
71	Mn	25	4060#	990#	*	*	47510#	700#	*	*	4540#	990#	*	*
	Fe	26	2760#	780#	19070#	920#	36330#	600#	4250#	840#	2160#	780#	-10480#	920#
	Co	27	5520	550	15350#	690#	25770	470	5400#	610#	4320	590	-10430#	690#
	Ni	28	4264	3	15780	300	14500.2	2.4	5470	190	1380	150	-5930	370
	Cu	29	7806.1	1.8	10786.2	2.6	5182	4	7978	4	5617	3	-5140	150
	Zn	30	5835	3	11641.4	2.9	-4182	4	9118.2	3.0	3102	3	1781	4
	Ga	31	9300.3	1.4	7863.4	2.1	-13637	5	8989.3	1.1	4731.8	1.1	1074.3	1.8
	Ge	32	7415.94	0.11	8285.3	1.5	-23580	130	10132.1	1.5	2043.3	1.6	5746.8	1.1
	As	33	11620	50	4620	4	-35590#	500#	9918	4	3950	5	4839	4
	Se	34	9288	3	6090	50	*	*	10680	30	612	3	9479	3
	Br	35	13148	16	1861	6	*	*	10643	6	2551	5	8039	6
	Kr	36	13450#	230#	2190	130	*	*	10500	130	-3020#	330#	13510	130
Rb	37	*	*	-1360#	540#	*	*	10840#	640#	*	*	11780#	590#	
72	Fe	26	5170#	920#	20190#	990#	40040#	700#	1820#	990#	1300#	920#	*	*
	Co	27	3490#	610#	16070#	720#	28800#	400#	7240#	640#	4140#	570#	-9600#	720#
	Ni	28	6891	3	17150	470	18359.8	2.2	3400	300	810	190	-9520#	400#
	Cu	29	5143.2	2.0	11665.7	2.6	8447	4	10141.7	2.6	5060	4	-3970	190
	Zn	30	8888	3	12723.3	2.6	-277.3	2.9	5541.7	2.4	2454.8	2.6	-2520	4
	Ga	31	6520.48	0.19	8548.5	2.8	-9521	7	11687.3	2.1	4693.4	1.1	2794.4	1.6
	Ge	32	10750.8	0.8	9735.8	0.8	-18645	8	7035.0	1.2	1606.0	1.2	1478.1	0.9
	As	33	8408	6	5612	4	-30110#	500#	13043	4	3735	4	6744	4
	Se	34	12793	3	7264	5	*	*	7180	50	110	30	4878.9	2.4
	Br	35	10636	9	3210	7	*	*	13573	7	2231	7	9690	30
	Kr	36	15680	130	4727	10	*	*	8196	17	-2970	40	8141	8
	Rb	37	13880#	710#	-920#	520#	*	*	13540#	540#	-820#	640#	13640#	500#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q(2 β^-)		Q(ϵp)		Q($\beta^- n$)	
69	Mn	25	7370#	720#	*		-15320#	780#	25630#	630#	*		11220#	700#
	Fe	26	9130#	460#	35160#	640#	-13500#	500#	20920#	400#	-31470#	810#	4800#	430#
	Co	27	10990	190	31440#	440#	-11630	190	15570	190	-29160#	540#	5220	190
	Ni	28	12379	5	28490	220	-11182	8	8439	4	-23440	370	-2483	4
	Cu	29	14560.1	1.8	24992	7	-8975.9	2.5	3591.6	1.8	-21100	150	-3800.7	1.7
	Zn	30	16680.17	0.25	19253	3	-5717.3	0.8	-1316.9	1.6	-12243	3	-9403.2	1.2
	Ga	31	18591.5	1.7	16587.0	1.7	-4489.3	1.4	-6220	30	-11049.7	2.0	-10420.3	2.2
	Ge	32	20585	5	13798.5	1.6	-3613.8	1.5	-10665.9	2.0	-4382.8	1.6	-16277.5	2.3
	As	33	22670	30	10810	30	-2880	30	-17000	50	-3320	30	-16990	30
	Se	34	26000	70	8355	5	-2381.4	2.6	-24000#	400#	3255.1	2.4	-26070#	310#
	Br	35	29330#	500#	4100	40	-1600	90	*	*	5490	40	*	*
	Kr	36	*	*	430#	410#	-1700#	720#	*	*	14470#	400#	*	*
	70	Mn	25	7060#	860#	*		-16030#	920#	27700#	760#	*		11770#
Fe		26	8630#	620#	36010#	860#	-14200#	710#	22900#	500#	*		5790#	540#
Co		27	11140	330	33200#	590#	-12590	300	16060	300	-29670#	670#	4990	300
Ni		28	11893	4	29970	370	-11571	5	10350.8	2.9	-27450#	400#	-1549.0	2.6
Cu		29	13552.0	1.9	25630	150	-8993	14	5933.8	1.6	-20100	190	-2630.1	1.4
Zn		30	15700.5	2.1	20679	4	-5983.3	2.4	997.1	2.1	-16875	4	-8308.2	1.6
Ga		31	17967.0	1.9	17921.0	2.0	-5077.0	1.4	-4570	50	-10462.9	1.8	-9880.8	0.6
Ge		32	19725.7	2.1	15132.9	1.1	-4087.7	1.1	-8631.9	1.8	-9433.2	1.1	-15520	30
As		33	21590	50	11830	50	-3040	50	-12920	50	-2300	50	-15980	50
Se		34	23883.1	1.7	9529.0	2.5	-2747.8	2.9	-20980#	200#	-2118.2	2.1	-23890	40
Br		35	29130#	310#	7109	15	-1825	16	*	*	4400	40	-27060#	400#
Kr		36	*	*	1340#	200#	-2010#	360#	*	*	8200#	200#	*	*
71		Mn	25	6810#	920#	*		*		29170#	840#	*		13040#
	Fe	26	8090#	720#	*		-14940#	780#	24410#	600#	*		7850#	670#
	Co	27	10340	500	34410#	760#	-13490#	610#	18340	470	-32440#	840#	6770	470
	Ni	28	11570	4	30930#	400#	-11760	220	11923	3	-26390#	500#	-501.2	2.5
	Cu	29	13117.5	2.0	27120	190	-9814	7	7428.0	1.7	-23080	300	-1217.7	2.4
	Zn	30	15053.8	2.8	21928	5	-6011	4	2577.7	2.8	-15404	3	-6490.0	2.9
	Ga	31	16953.9	1.4	18980.8	1.6	-5245.2	1.5	-2246	4	-14451.7	1.4	-7648.58	0.25
	Ge	32	18948.4	1.6	16066.8	1.1	-4451.3	1.1	-6760.0	2.9	-7630.7	2.1	-13640	50
	As	33	20920	30	13143	4	-3439	4	-11391	7	-6272	4	-14034	4
	Se	34	22854	3	10624	3	-2913	5	-16820	130	126.4	2.9	-19792	15
	Br	35	26530	40	7970	30	-2340	5	-24200#	500#	550	50	-23630#	200#
	Kr	36	30040#	420#	4470	130	-2170	150	*	*	8310	130	*	*
	Rb	37	*	*	770#	500#	-1800#	710#	*	*	11830#	500#	*	*
72	Fe	26	7940#	860#	*		-15650#	990#	26120#	700#	*		8200#	840#
	Co	27	9010#	500#	35150#	810#	-13910#	640#	20000#	400#	-31870#	810#	7550#	400#
	Ni	28	11155	3	32490#	500#	-12830	370	13919	3	-30520#	600#	413.7	2.7
	Cu	29	12949.3	1.8	27440	300	-10280	150	8805.3	1.6	-22700	470	-525.5	3.0
	Zn	30	14723.4	2.9	23510	3	-7107	4	4440.4	2.1	-20028	3	-6077.7	2.3
	Ga	31	15820.8	1.5	20189.8	1.4	-5446.1	1.8	-358	4	-13166.1	1.7	-6753.12	0.29
	Ge	32	18166.7	0.8	17599.1	1.9	-5004.0	0.9	-4717.7	2.0	-12546.1	2.7	-12764	4
	As	33	20030	50	13898	4	-3569	4	-9162	8	-5380	4	-13155	5
	Se	34	22080.9	2.5	11884.3	2.1	-3314.3	2.7	-13928	8	-5250.7	2.1	-19437	6
	Br	35	23784	16	9300	50	-2598	7	-20950#	500#	1537	8	-20810	130
	Kr	36	29140#	200#	6589	8	-2176	8	*	*	1917	8	-29710#	500#
	Rb	37	*	*	1270#	500#	-2100#	590#	*	*	11100#	500#	*	*

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	El.	Z	S(n)		S(p)		$Q(4\beta^-)$		$Q(d,\alpha)$		$Q(p,\alpha)$		$Q(n,\alpha)$	
73	Fe	26	2590#	990#	*		42980#	700#	3300#	990#	1460#	990#	*	
	Co	27	5180#	640#	16080#	860#	32800#	500#	4810#	780#	4280#	710#	-12030#	860#
	Ni	28	3953	3	17610#	400#	21189.4	2.4	4970	470	1680	300	-8150#	500#
	Cu	29	7275.8	2.4	12050.3	3.0	11965	4	7129.6	3.0	5090.5	2.9	-6420	300
	Zn	30	5519.2	2.8	13099.4	2.3	2634	8	7828.5	2.4	2247.0	2.2	-733.1	2.8
	Ga	31	9182.4	1.9	8842.8	2.7	-6052	7	8340	3	4729.4	2.5	-1076.6	2.0
	Ge	32	6782.94	0.05	9998.2	0.8	-14746	7	9552.4	0.8	2476.7	1.2	3913.6	1.9
	As	33	10794	6	5656	4	-24870#	100#	9665	4	4473	4	3604	4
	Se	34	8431	8	7287	8	-36280#	400#	10376	9	980	50	7981	7
	Br	35	12652	10	3068	8	*		10210	8	3146	7	6340	50
	Kr	36	10682	10	4773	9	*		10661	9	-262	16	11025	7
	Rb	37	16040#	510#	-570#	100#	*		10960#	160#	-270#	220#	10990#	100#
	Sr	38	*		1120#	640#	*		11070#	640#	*		14650#	450#
74	Fe	26	4690#	1060#	*		46520#	800#	*		830#	1060#	*	
	Co	27	3640#	780#	17140#	920#	35590#	600#	6350#	920#	3400#	840#	-11610#	920#
	Ni	28	6420#	400#	18850#	640#	24970#	400#	2040#	570#	780#	610#	-11810#	720#
	Cu	29	5090	6	13187	7	14854	6	8931	7	4264	7	-5990	470
	Zn	30	8235	3	14058	3	6456.5	2.5	4737.1	2.9	1818.5	2.9	-4704	3
	Ga	31	6422	3	9745	4	-2761	7	10807	4	4143	4	308	3
	Ge	32	10196.24	0.06	11012.1	1.7	-11090.6	2.0	5876.6	0.8	1580.7	0.8	-447.3	2.7
	As	33	7979	4	6851.5	1.7	-18944	3	12436.7	1.7	3910.5	1.9	4925.4	1.9
	Se	34	12057	7	8549	4	-31390#	100#	6727	4	544	4	3339.7	0.8
	Br	35	9712	9	4350	9	*		13291	6	2722	6	8251	7
	Kr	36	13851	7	5973	8	*		7446	7	-965	6	6461	3
	Rb	37	13910#	100#	2653	7	*		12735	9	-720	130	10233	6
	Sr	38	16950#	410#	2040#	140#	*		8000#	510#	-3660#	510#	11150#	160#
75	Co	27	4710#	920#	17150#	1060#	39370#	700#	4230#	990#	3870#	990#	*	
	Ni	28	3860#	500#	19070#	670#	27610#	300#	3360#	590#	400#	500#	-10500#	760#
	Cu	29	6536	7	13300#	400#	18562.8	2.5	6348	3	4619	3	-9040#	400#
	Zn	30	4874	3	13842	6	9610.6	2.0	7139.3	2.8	2088.1	2.4	-2686.4	3.0
	Ga	31	8486	4	9997	3	643	5	7840	3	4545	3	-3035.2	2.8
	Ge	32	6505.84	0.05	11096.3	3.0	-7533	8	8553.2	1.7	1595.3	0.8	1934.9	2.1
	As	33	10245.5	1.9	6900.7	0.9	-15815.5	1.5	8974.1	0.9	4415.8	0.9	1200.5	1.2
	Se	34	8027.60	0.07	8598.4	1.7	-25550	220	9494	4	924	4	6062.82	0.10
	Br	35	11890	7	4183	4	*		9831	9	3625	5	4769	6
	Kr	36	10063	8	6324	10	*		10035	11	-392	11	9191	8
	Rb	37	13374	3	2175.8	2.3	*		10044	7	1586	8	7495	7
	Sr	38	13860#	240#	1990	220	*		10170#	240#	-3640#	550#	12970	220
76	Co	27	3070#	1060#	*		42200#	800#	5850#	1130#	3380#	1060#	*	
	Ni	28	5440#	590#	19800#	860#	31600#	500#	1560#	780#	150#	710#	-13350#	860#
	Cu	29	4576	7	14020#	300#	21315	7	8190#	400#	3996	7	-8430#	500#
	Zn	30	7815.4	2.4	15120.6	2.7	12948.9	1.5	4414	6	1548.5	2.4	-6548.5	2.8
	Ga	31	5903	3	11026.7	2.8	3992	10	10171	3	4160.8	2.7	-1662.8	2.8
	Ge	32	9427.24	0.05	12037.3	2.4	-4199	4	5547.5	3.0	1350.5	1.7	-1973.1	1.9
	As	33	7328.50	0.07	7723.4	0.9	-11812.3	1.3	11841.9	0.9	3870.2	0.9	3054.4	1.9
	Se	34	11153.79	0.07	9506.7	0.9	-21000	30	6318.9	1.7	565	4	1691.97	0.06
	Br	35	9253	10	5409	9	-31690#	500#	12635	9	2802	12	6310	10
	Kr	36	12762	9	7196	6	*		6985	7	-502	8	4860	8
	Rb	37	11331.7	1.5	3444	8	*		12563.6	2.2	937	7	8815	7
	Sr	38	15700	220	4320	30	*		8380	30	-3300#	110#	7950	40
	Y	39	*		-730#	550#	*		12940#	510#	-1790#	640#	13130#	510#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)	S(2p)	$Q(\alpha)$	$Q(2\beta^-)$	$Q(\epsilon p)$	$Q(\beta^- n)$						
73	Fe	26	7760#	920#	*	*	27490#	700#	*	9100#	810#			
	Co	27	8670#	690#	36270#	860#	-14790#	780#	22090#	500#	*	9260#	500#	
	Ni	28	10845	3	33690#	600#	-13480#	400#	15485	3	-29290#	700#	1603.5	2.8
	Cu	29	12418.9	2.4	29200	470	-11240	190	10711.9	2.6	-26490#	400#	1086.7	2.9
	Zn	30	14407	3	24765.1	2.9	-8040	4	5704.1	1.9	-18656.3	2.9	-5076.5	2.0
	Ga	31	15702.9	1.9	21566.1	2.2	-6388.0	2.2	1253	4	-17205.3	2.2	-5184.8	1.7
	Ge	32	17533.7	0.8	18546.7	2.7	-5304.8	0.9	-3070	7	-10441.0	2.1	-11139	4
	As	33	19202	6	15392	4	-4050	4	-7305	8	-9653	4	-11156	4
	Se	34	21224	8	12899	7	-3552	8	-11676	10	-2930	7	-17231	10
	Br	35	23288	9	10332	8	-2960	30	-17570#	100#	-2707	8	-17778	11
	Kr	36	26370	130	7983	7	-2542	7	-24600#	400#	4027	7	-26510#	500#
	Rb	37	29920#	510#	4160#	100#	-2400#	110#	*	*	5700#	100#	*	*
	Sr	38	*	200#	420#	-1940#	570#	*	*	14700#	400#	*	*	
74	Fe	26	7280#	1060#	*	*	29220#	900#	*	*	9590#	950#		
	Co	27	8820#	720#	*	-15670#	920#	23540#	600#	*	*	9570#	600#	
	Ni	28	10370#	400#	34930#	810#	-14570#	640#	17300#	400#	-33130#	810#	2460#	400#
	Cu	29	12366	6	30800#	400#	-11510	300	12043	7	-26400#	500#	1516	6
	Zn	30	13754	3	26109	3	-8968	3	7665.7	2.5	-22938	3	-4129	3
	Ga	31	15604	3	22845	3	-7498	3	2810	3	-16351	4	-4823.4	3.0
	Ge	32	16979.18	0.07	19854.9	2.1	-6282.6	1.9	-1209.24	0.01	-15118.0	1.9	-10541	4
	As	33	18773	4	16849.7	1.9	-4374.8	2.1	-5572	6	-8449.7	2.4	-10704	8
	Se	34	20487.7	2.0	14205.24	0.08	-4076.3	0.8	-9881.4	2.0	-8204.65	0.06	-16637	7
	Br	35	22364	9	11636	7	-3370	50	-13372	7	-1624	7	-16808	9
	Kr	36	24534	8	9041.6	2.8	-2826.9	2.6	-21500#	100#	-1393	8	-24320#	100#
	Rb	37	29940#	500#	7427	7	-2915	15	*	*	4443	8	-28040#	400#
	Sr	38	*	1470#	100#	-2300#	220#	*	*	8440#	100#	*	*	
75	Co	27	8350#	860#	*	-16320#	990#	25370#	700#	*	*	11290#	810#	
	Ni	28	10280#	300#	36210#	760#	-15670#	670#	18310#	300#	-32300#	860#	3690#	300#
	Cu	29	11627	3	32150#	500#	-12530	470	13993	3	-29300#	600#	3214	3
	Zn	30	13108.1	2.7	27029	3	-9577.6	3.0	9298.1	2.0	-21390#	400#	-2581	4
	Ga	31	14907.9	2.9	24055	3	-8178.4	2.8	4569.6	2.6	-19747	7	-3113.5	2.4
	Ge	32	16702.08	0.07	20841.5	1.9	-6953.1	2.7	312.52	0.09	-13389.2	2.5	-9068.2	1.7
	As	33	18224	4	17912.8	1.9	-5320.0	1.2	-3927	4	-12274	3	-8892.3	0.9
	Se	34	20085	7	15449.90	0.09	-4687.9	0.8	-7846	8	-6036.01	0.07	-14953	6
	Br	35	21602	8	12732	6	-3639	6	-11888	4	-5536	5	-14847	5
	Kr	36	23915	10	10674	11	-3602	9	-17700	220	601	8	-20479	9
	Rb	37	27280#	100#	8149	7	-3141	6	*	*	781	6	-24460#	100#
	Sr	38	30810#	460#	4640	220	-2720	250	*	*	8420	220	*	*
76	Co	27	7780#	1000#	*	*	26880#	800#	*	*	12080#	860#		
	Ni	28	9300#	640#	36950#	950#	-15930#	860#	20690#	500#	*	*	4790#	500#
	Cu	29	11112	9	33090#	600#	-13620#	400#	15321	7	-29170#	700#	3512	7
	Zn	30	12688.9	2.9	28430#	400#	-10501.9	2.7	10909.9	1.5	-25350#	300#	-1909.8	2.8
	Ga	31	14390	4	24868	6	-8938.6	2.4	5994.7	2.1	-19114	3	-2511.0	2.0
	Ge	32	15933.08	0.02	22034.1	2.5	-7492.3	2.1	2039.06	0.01	-17943.0	2.0	-8250.0	0.9
	As	33	17574.0	1.9	18820	3	-6128.0	1.2	-2002	9	-11115.8	2.6	-8193.2	0.9
	Se	34	19181.38	0.02	16407.45	0.02	-5090.96	0.08	-6238	4	-10683.96	0.05	-14216	4
	Br	35	21143	11	14007	9	-4484	10	-9810	9	-4544	9	-14037	12
	Kr	36	22825	4	11379	4	-3571	4	-14770	30	-4134	4	-19867	4
	Rb	37	24706	3	9769	6	-3837	7	-21880#	500#	1339	4	-21930	220
	Sr	38	29560#	110#	6490	30	-2730	40	*	*	2790	40	*	*
	Y	39	*	1260#	500#	-2910#	710#	*	*	11330#	500#	*	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)	S(p)	$Q(4\beta^-)$	$Q(d,\alpha)$	$Q(p,\alpha)$	$Q(n,\alpha)$						
77	Ni	28	3210#	710#	19940#	950#	34470#	500#	3060#	860#	580#	780#	-11870#	950#
	Cu	29	5610#	150#	14190#	530#	25400#	150#	6450#	330#	4810#	430#	-10400#	620#
	Zn	30	4557.5	2.5	15102	7	15810.3	2.0	6393	3	2081	6	-4690#	400#
	Ga	31	7767	3	10978.3	2.8	7242	4	7277	3	4628	3	-4340	7
	Ge	32	6071.29	0.05	12205.2	2.0	-1043.4	2.0	7962.5	2.4	1700.8	3.0	190.3	2.5
	As	33	9696.3	1.9	7992.4	1.7	-9085.8	2.2	8651.5	1.7	4370.2	1.7	-220	3
	Se	34	7418.85	0.06	9597.1	0.9	-16796	8	9145.5	0.9	1124.6	1.7	4469.36	0.06
	Br	35	11017	10	5271.8	2.8	-26460#	60#	9645.5	2.8	3842.5	2.8	3272	3
	Kr	36	9227	4	7169	10	*	*	9648	5	-17	6	7690.2	2.0
	Rb	37	12422.7	1.6	3105	4	*	*	10204	8	2365.4	2.4	6104	6
	Sr	38	11630	40	4613	8	*	*	10126	8	-1023	8	10175	8
	Y	39	16250#	510#	-180#	50#	*	*	10550#	230#	-1090#	120#	10780#	60#
78	Ni	28	5450#	950#	*	*	37730#	800#	680#	1130#	-170#	1060#	*	*
	Cu	29	4060#	530#	15040#	710#	28320	500	7820#	710#	4610#	590#	-9750#	860#
	Zn	30	6765.4	2.8	16260#	150#	19542.7	2.0	4204	7	1852	3	-7590#	300#
	Ga	31	5785	3	12205.7	2.7	9746	4	9307.9	2.4	3717.0	2.7	-3588	3
	Ge	32	8721	4	13159	4	2318	4	5145	4	1467	4	-3657	4
	As	33	6972	10	8893	10	-5882	10	11107	10	3904	10	1294	10
	Se	34	10497.74	0.17	10398.6	1.7	-13852	7	5976.3	0.9	872.3	0.9	477.46	0.19
	Br	35	8289	5	6142	4	-20930#	400#	12511	4	3581	4	5228	4
	Kr	36	12081.5	2.1	8233.7	2.9	-32880#	500#	6820	9	-208	4	3636.3	0.7
	Rb	37	10176	3	4055	4	*	*	12790	5	2252	9	7818	5
	Sr	38	13442	11	5632	8	*	*	8016	8	-1091	8	6796	11
	Y	39	13820#	410#	2010#	400#	*	*	12430#	400#	-1040#	460#	10340#	400#
	Zr	40	*	*	1810#	510#	*	*	8010#	710#	*	*	10960#	550#
79	Ni	28	1650#	1130#	*	*	41820#	800#	*	*	1250#	1130#	*	*
	Cu	29	5470#	640#	15060#	900#	31740#	400#	5560#	640#	4580#	640#	-12150#	900#
	Zn	30	4020.4	3.0	16220	500	22485.1	2.2	5790#	150#	2408	7	-6180#	500#
	Ga	31	6913.0	2.7	12353.4	2.7	13520.4	2.3	6952.3	2.7	4619.4	2.4	-5925	7
	Ge	32	5740	40	13110	40	4920	40	7180	40	1630	40	-1580	40
	As	33	8890	11	9063	6	-2833	6	8288	5	4441	5	-1693	6
	Se	34	6962.83	0.13	10389	10	-10441	8	8709.7	1.7	1238.0	0.9	2941.87	0.22
	Br	35	10687	4	6331.1	1.3	-17710	450	9242.2	1.3	4047.9	1.3	1869.7	1.6
	Kr	36	8334	4	8279	5	-27380#	400#	9503	5	711	10	6456	4
	Rb	37	11939	4	3912.4	2.3	*	*	10077.3	2.9	3075	5	5132	10
	Sr	38	10374	11	5830	9	*	*	10064	8	-134	8	9184	9
	Y	39	13900#	600#	2470	450	*	*	10160	450	750	450	7770	450
	Zr	40	13830#	640#	1820#	570#	*	*	10430#	410#	-3590#	640#	12840#	400#
80	Cu	29	2600#	720#	16010#	1000#	35780#	600#	8410#	1000#	5180#	780#	*	*
	Zn	30	6288	3	17040#	400#	26110.9	2.9	3560	500	1730#	150#	-9260#	500#
	Ga	31	4747	3	13080	4	16665	3	8970	3	4430	3	-5070#	150#
	Ge	32	8080	40	14276.6	2.8	8358.0	2.2	4881.5	2.8	1321	3	-5099.7	2.8
	As	33	6650	6	9980	40	-39	4	10358	5	3862	3	-576	4
	Se	34	9913.4	1.3	11412	5	-7448	4	5768	10	1020.9	1.8	-900.2	1.2
	Br	35	7892.28	0.13	7260.6	1.3	-14742	6	11847.7	1.3	3574.5	1.3	3673.7	1.9
	Kr	36	11522	4	9114.2	1.4	-22380	1490	6270	4	205.5	2.9	2352.6	0.7
	Rb	37	9443.8	2.8	5022	4	*	*	12714.9	2.0	2858.0	2.7	6706	3
	Sr	38	12906	9	6797	4	*	*	7335	5	-617	4	5504	4
	Y	39	10860	450	2959	10	*	*	12738	10	1521	10	9330	6
	Zr	40	16530#	1540#	4450	1560	*	*	7720#	1540#	-3870#	1490#	7930	1490

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)	S(2p)	Q(α)	Q($2\beta^-$)	Q(ϵp)	Q($\beta^- n$)						
77	Ni	28	8640#	590#	*	-16560#	860#	22040#	500#	*	6160#	500#		
	Cu	29	10180#	150#	33990#	710#	-14040#	530#	17480#	150#	-31700#	820#	5720#	150#
	Zn	30	12372.9	2.8	29120#	300#	-11106	3	12423.7	2.0	-24470#	500#	-563.9	2.8
	Ga	31	13670	3	26099	3	-9430	3	7924.0	3.0	-22305	7	-850.8	2.4
	Ge	32	15498.53	0.07	23231.9	2.0	-8044.4	1.9	3386.62	0.08	-16198.8	1.5	-6992.8	0.9
	As	33	17024.8	1.9	20029.7	3.0	-6641.9	2.4	-682	3	-14908.7	2.6	-6735.7	1.7
	Se	34	18572.64	0.10	17320.46	0.08	-5726.88	0.08	-4430.0	2.0	-8675.57	0.06	-12382	9
	Br	35	20270	5	14778.6	2.9	-4707	5	-8404	3	-8232.4	2.9	-12292	5
	Kr	36	21988	8	12577.9	2.0	-4367	8	-12366	8	-2206.5	2.0	-17761.7	2.2
	Rb	37	23754.4	1.8	10301	4	-3608	7	-18050#	60#	-1830	9	-18650	30
	Sr	38	27330	220	8058	11	-3677	10	*	*	3922	9	-27270#	500#
	Y	39	*		4140#	60#	-3120#	120#	*	*	6410#	60#	*	
78	Ni	28	8660#	950#	*	-17320#	1130#	23350#	800#	*		6310#	820#	
	Cu	29	9660	500	34980#	950#	-14460#	780#	19210	500	*	6220	500	
	Zn	30	11322.9	2.4	30450#	500#	-11450#	400#	14379	4	-28030#	500#	438	3
	Ga	31	13551.9	2.7	27308	7	-10125	6	9111	10	-22480#	150#	-564.4	1.9
	Ge	32	14792	4	24137	4	-8530	4	5164	4	-20362	4	-6017	4
	As	33	16668	10	21098	10	-7192	10	635	10	-14114	10	-6289	10
	Se	34	17916.59	0.18	18390.96	0.18	-6028.38	0.18	-2846.3	0.7	-13102.02	0.19	-11862.4	2.8
	Br	35	19306	10	15739	4	-5017	4	-6517	5	-6825	4	-11354	4
	Kr	36	21308	4	13505.6	0.7	-4391.3	0.7	-11006	7	-6869.1	0.7	-17420.4	1.5
	Rb	37	22599	3	11224	10	-4072	7	-14410#	400#	-990	4	-17203	9
	Sr	38	25070	40	8738	8	-3267	8	-21870#	500#	-293	8	-24470#	60#
	Y	39	30070#	640#	6630#	400#	-3040#	400#	*	*	5020#	400#	*	
	Zr	40	*		1630#	500#	-2900#	510#	*	*	9210#	500#	*	
79	Ni	28	7110#	950#	*	*		25720#	800#	*		8720#	950#	
	Cu	29	9530#	430#	*	-15220#	810#	20650#	400#	*		7510#	400#	
	Zn	30	10785.7	3.0	31260#	500#	-11610#	300#	16090	40	-26590#	800#	2202.3	2.9
	Ga	31	12698	3	28610#	150#	-10501.3	3.0	11088	6	-25340	500	1243	4
	Ge	32	14460	40	25320	40	-9390	40	6390	40	-19330	40	-4780	40
	As	33	15862	6	22222	6	-7596	6	2432	5	-17219	6	-4681	5
	Se	34	17460.57	0.22	19282.50	0.23	-6485.38	0.23	-1475	4	-11344	4	-10537	4
	Br	35	18976	3	16729.7	1.9	-5458.8	1.6	-5265.1	2.5	-10540	10	-9959.8	1.5
	Kr	36	20415	4	14421	4	-4698	4	-8965	9	-4705	4	-15578	5
	Rb	37	22115.1	2.5	12146	4	-4121	5	-12450	450	-4640	4	-15700	8
	Sr	38	23816	12	9885	9	-3578	12	-18420#	400#	1414	8	-21020#	400#
	Y	39	27720#	450#	8100	450	-3560	450	*	*	1290	450	-25130#	680#
	Zr	40	*		3830#	400#	-2870#	460#	*	*	8830#	400#	*	
80	Cu	29	8080#	780#	*	-14760#	1000#	22790#	600#	*		8930#	600#	
	Zn	30	10308	3	32100#	800#	-12460#	500#	17887	3	-31230#	800#	2828	3
	Ga	31	11660	3	29300	500	-10673	7	12991	4	-24610#	400#	2230	40
	Ge	32	13816	4	26630.0	2.8	-9657.2	2.5	8224.2	2.4	-23392	3	-3971	6
	As	33	15540	10	23086	4	-8343	4	3675	4	-16956	4	-4368	3
	Se	34	16876.2	1.3	20475	4	-6971.5	1.2	133.8	1.3	-15520	40	-9762.7	0.3
	Br	35	18580	4	17650	10	-6022.6	1.6	-3713.5	2.3	-9542	5	-9518	3
	Kr	36	19856.4	1.0	15445.3	0.7	-5066.3	0.7	-7582	4	-9264.9	0.7	-15161.6	2.3
	Rb	37	21383	4	13301	4	-4311	10	-11029	7	-3396.4	2.3	-14770	9
	Sr	38	23280	8	10710	4	-3722	5	-14790	1490	-3158	5	-20030	450
	Y	39	24760#	400#	8789	7	-3093	6	*	*	2367	7	-22160#	400#
	Zr	40	30360#	1570#	6920	1490	-3690	1490	*	*	2670	1490	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		Q(4β ⁻)		Q(d,α)		Q(p,α)		Q(n,α)	
81	Cu	29	3430#	1000#	*		40740#	800#	6630#	1130#	7200#	1130#	*	
	Zn	30	2622	6	17060#	600#	30189	5	6410#	400#	3160	500	-6420#	800#
	Ga	31	6476	4	13268	4	20348	4	6515	4	4719	4	-7480	500
	Ge	32	4827.7	2.9	14357	4	11403.1	2.5	6966.8	2.8	2278.3	2.8	-3162.1	2.8
	As	33	8390	4	10287	3	2923	6	7700	40	4193	4	-3181	3
	Se	34	6700.8	0.3	11464	4	-4861	3	7958	5	1292	10	1119	4
	Br	35	10158.0	1.7	7505.1	1.7	-12264	6	8652.6	1.3	3914.3	1.3	488	10
	Kr	36	7872.8	1.5	9094.8	1.8	-19300	160	9084.0	1.8	621	4	4977.5	1.4
	Rb	37	11353	5	4852	5	-28510#	400#	9696	6	3587	5	3642	6
	Sr	38	9288	5	6642	4	*		9986	4	271	5	8298	3
	Y	39	12636	8	2689	6	*		10476	10	2326	9	6870	6
	Zr	40	10950	1500	4540	160	*		10670	480	-1010#	430#	10420	160
	Nb	41	*		-1280#	1540#	*		10820#	570#	-780#	640#	11230#	570#
82	Cu	29	1950#	1130#	*		44430#	800#	*		6900#	1130#	*	
	Zn	30	4480#	300#	18110#	850#	34990#	300#	4540#	670#	4160#	500#	-9250#	850#
	Ga	31	3374	4	14020	6	24566.6	2.7	9429	4	5366	3	-5390#	400#
	Ge	32	7195	3	15076	4	15175.3	2.4	4519	4	1996.7	2.9	-6336	3
	As	33	5641	5	11100	5	6085	5	10143	5	4290	40	-1909	5
	Se	34	9276.2	1.1	12349.6	2.8	-1584	6	5331	4	906	5	-2420	40
	Br	35	7592.94	0.12	8397.2	1.7	-9434	6	10973.0	1.7	3284.2	1.3	1785	6
	Kr	36	10966.8	1.1	9903.6	1.0	-16650#	200#	6009.5	1.4	341.8	1.4	973.5	0.9
	Rb	37	8802	6	5782	3	-23990#	300#	12416	3	3119	5	5527	3
	Sr	38	12553	7	7842	8	*		6876	6	-343	6	4079	7
	Y	39	10423	8	3824	6	*		12959	7	2278	10	8386	6
	Zr	40	13620#	260#	5520#	200#	*		7920#	200#	-720#	490#	7180#	200#
	Nb	41	13330#	500#	1090#	340#	*		14030#	1520#	-280#	500#	11800#	540#
83	Zn	30	2200#	590#	18360#	950#	38600#	500#	5760#	950#	4560#	780#	*	
	Ga	31	4398	4	13940#	300#	29756	5	7653	6	7256	4	-7180#	600#
	Ge	32	3633	3	15335	3	19013.6	2.4	7362	4	3111	4	-3681	4
	As	33	7638	5	11543	4	9401	4	7333	3	4730	3	-4799	4
	Se	34	5818	3	12526	5	1457	8	7904	4	1738	5	-159	4
	Br	35	9587	4	8708	4	-6809	19	8086	4	3610	4	-1153	5
	Kr	36	7471.0	0.9	9781.7	1.3	-14080	6	8696.4	1.3	763.0	1.3	3415.8	1.3
	Rb	37	10954	4	5769.3	2.5	-20660	300	9335.0	2.7	3686.7	2.4	2464.8	2.7
	Sr	38	8859	9	7899	7	-30110#	400#	9370	8	242	7	6742	7
	Y	39	12213	19	3483	20	*		10034	19	2971	19	5617	19
	Zr	40	10040#	200#	5137	8	*		10512	8	100	9	10047	7
	Nb	41	14280#	420#	1760#	360#	*		10700	340	1970	1520	8380	300
	Mo	42	*		1780#	500#	*		10970#	570#	*		14480#	1540#
84	Zn	30	3740#	780#	*		43540#	600#	3970#	1000#	4240#	1000#	*	
	Ga	31	3100#	400#	14830#	640#	33500#	400#	9030#	500#	6780#	400#	-6850#	900#
	Ge	32	5243	4	16180	4	24291	3	5493	4	4344	5	-6302	6
	As	33	4256	4	12166	4	13905	4	10272	4	5302	4	-2579	5
	Se	34	8678	4	13567	3	4701.8	2.3	4866	5	1450	3	-4009.6	2.8
	Br	35	6841	26	9731	26	-3890	26	10522	26	3470	26	397	26
	Kr	36	10520.62	0.30	10715	4	-11019	6	5768.7	1.3	400.4	1.3	-403.9	1.3
	Rb	37	8760	3	7057.9	2.2	-18740#	300#	11542.2	2.4	2799.9	2.6	3863.1	2.5
	Sr	38	11923	7	8867.9	2.6	-26150#	400#	6249	3	-329	5	2691.7	1.8
	Y	39	9760	19	4385	8	*		12827	7	2499	5	7210	7
	Zr	40	13581	8	6505	19	*		7353	8	-845	8	5754	6
	Nb	41	10680#	420#	2400#	300#	*		13630#	360#	2240#	340#	10340#	300#
	Mo	42	15890#	570#	3380#	500#	*		8410#	500#	-2690#	570#	9540#	430#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q(2 β^-)		Q(ϵp)		Q($\beta^- n$)	
81	Cu	29	6030#	900#	*	*	25840#	800#	*	11790#	800#			
	Zn	30	8910	6	33070#	800#	-11880#	500#	20092	5	*	4953	6	
	Ga	31	11223	4	30310#	400#	-11540#	150#	14905	4	-28490#	600#	3836	4
	Ge	32	12910	40	27437	3	-9927.4	2.8	10097.3	2.4	-21932	3	-2149	4
	As	33	15040	6	24564	3	-8966	4	5442.3	2.9	-20599	4	-2845.2	2.8
	Se	34	16614.2	1.3	21440	40	-7601.1	1.3	1305.8	1.8	-14142.7	2.4	-8571.3	0.5
	Br	35	18050.2	1.7	18918	6	-6484.2	2.1	-2519	5	-13050	4	-8153.7	1.4
	Kr	36	19395	4	16355.3	1.4	-5520.2	1.4	-6167	3	-7224.3	1.7	-13590.7	2.3
	Rb	37	20796	5	13967	5	-4647	6	-9745	7	-6857	5	-13216	6
	Sr	38	22194	9	11664	5	-3784	4	-13130	160	-924	3	-18453	7
	Y	39	23500	450	9487	6	-3306	6	-18760#	400#	-825	6	-18270	1490
	Zr	40	27480#	430#	7500	160	-3020	160	*	*	4630	160	*	*
	Nb	41	*	*	3170#	600#	-2590#	410#	*	*	6910#	400#	*	*
82	Cu	29	5380#	1000#	*	*	27260#	800#	*	12460#	800#			
	Zn	30	7100#	300#	*	-10900#	860#	22810#	300#	*	6950#	300#		
	Ga	31	9850	4	31080#	600#	-10860	500	17172	5	-28430#	800#	5290	3
	Ge	32	12022	3	28344	3	-10356.7	3.0	12178.9	2.6	-26504	6	-953	3
	As	33	14031	5	25457	5	-8822	5	7394	4	-19764	5	-1785	4
	Se	34	15977.1	1.1	22636.6	2.5	-8157	4	2996.4	1.5	-18591.2	2.5	-7689.6	1.8
	Br	35	17750.9	1.7	19861	4	-7105	10	-1309	3	-12252.9	2.9	-7873.8	0.5
	Kr	36	18839.6	1.1	17408.8	1.4	-5989.3	0.9	-4580	6	-11490.3	1.4	-13205	5
	Rb	37	20155	4	14877	3	-5161	5	-8125	6	-5501	3	-12731	4
	Sr	38	21841	7	12695	6	-4255	6	-12070#	200#	-5604	6	-18370	8
	Y	39	23059	8	10465	6	-3552	6	-15860#	300#	105	7	-17740	160
	Zr	40	24570#	1500#	8210#	200#	-3190#	200#	*	*	300#	200#	-25070#	450#
	Nb	41	*	*	5630#	300#	-2100#	500#	*	*	6220#	300#	*	*
83	Zn	30	6680#	500#	*	-11450#	950#	24240#	500#	*	8120#	500#		
	Ga	31	7772	4	32050#	800#	-9780#	400#	20412	4	-30880#	800#	8087	3
	Ge	32	10827	3	29355	6	-9969	3	14364	4	-25660#	300#	1055	5
	As	33	13279	4	26619	4	-9547	3	9344	5	-24028	4	-147	3
	Se	34	15094	3	23627	4	-8240	40	4649	3	-17214	4	-5915	3
	Br	35	17180	4	21058	5	-7802	7	57	4	-16199	6	-6494	4
	Kr	36	18437.9	1.4	18179.0	1.3	-6497.5	0.4	-3192	7	-9685.1	1.4	-11874	3
	Rb	37	19757	5	15672.9	2.7	-5427.5	2.7	-6866	19	-8862.3	2.7	-11132	6
	Sr	38	21412	8	13681	7	-4780	8	-10887	9	-3496	7	-16806	9
	Y	39	22635	19	11326	19	-3826	19	-13790	300	-3306	19	-16330#	200#
	Zr	40	23660	160	8960	7	-2859	11	-19220#	400#	2811	9	-21780#	300#
	Nb	41	27610#	500#	7280	300	-2480	540	*	*	2360	300	*	*
	Mo	42	*	*	2870#	430#	-2050#	570#	*	*	9970#	450#	*	*
84	Zn	30	5950#	670#	*	*	25740#	600#	*	8780#	600#			
	Ga	31	7500#	400#	33190#	900#	-10280#	720#	21570#	400#	*	8620#	400#	
	Ge	32	8876	4	30120#	300#	-8925	4	17799	4	-28700#	500#	3450	4
	As	33	11893	5	27501	4	-9055	4	11930	26	-23885	4	1416	5
	Se	34	14496.4	2.4	25110.6	3.0	-8837.3	2.8	6491.6	2.0	-22260	3	-5006	4
	Br	35	16428	26	22258	26	-7994	26	1976	26	-15403	26	-5864	26
	Kr	36	17991.7	0.9	19423.4	1.4	-7104.8	1.2	-1789.8	1.2	-14388	3	-11440.0	2.3
	Rb	37	19714	4	16839.6	2.5	-6294.9	2.5	-5865	5	-8035	4	-11033	7
	Sr	38	20782	6	14637.2	1.5	-5181.2	1.4	-9229	6	-7948.5	1.3	-16516	19
	Y	39	21973	7	12284	5	-4143	5	-12870#	300#	-2112	5	-16054	8
	Zr	40	23620#	200#	9988	8	-3534	7	-16920#	400#	-1912	9	-21080	300
	Nb	41	24960#	420#	7540#	300#	-2300#	300#	*	*	3900#	300#	-22410#	500#
	Mo	42	*	*	5140#	450#	-1410#	1540#	*	*	4120#	400#	*	*

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	El.	Z	S(n)	S(p)	$Q(4\beta^-)$		$Q(d,\alpha)$		$Q(p,\alpha)$		$Q(n,\alpha)$			
85	Zn	30	1500#	920#	*	46570#	700#	*	4700#	1060#	*			
	Ga	31	3850#	500#	14940#	670#	38510#	300#	7390#	590#	7410#	420#	-8750#	850#
	Ge	32	3046	5	16130#	400#	28357	4	6845	5	4671	4	-4870#	300#
	As	33	5407	4	12330	4	18978	3	8498	4	7090	4	-4612	4
	Se	34	4537	3	13849	4	8690	4	7966	4	2554	5	-1352	3
	Br	35	8864	26	9917	4	-733	19	7476	5	3883	3	-2826	5
	Kr	36	7112.3	2.0	10986	26	-8306	7	8244	4	881.0	2.4	1760.0	2.4
	Rb	37	10479.7	2.2	7016.96	0.00	-15888	4	8533.51	0.30	3287.0	0.9	976.3	1.3
	Sr	38	8525	3	8633	4	-23594	16	8678	4	-51	4	5133.4	2.9
	Y	39	12020	19	4482	19	-31810#	400#	9666	20	3032	20	3992	19
	Zr	40	9825	8	6570	8	*	*	9741	20	-247	8	8482	9
	Nb	41	13330#	300#	2148	7	*	*	10342	8	2530#	200#	7430	7
	Mo	42	11080#	400#	3780#	300#	*	*	11610	300	-450#	300#	12080#	200#
	Tc	43	*		-1180#	570#	*	*	11360#	570#	*		11810#	500#
86	Ga	31	2460#	760#	15910#	990#	41180#	700#	8670#	920#	7150#	860#	*	
	Ge	32	4710#	300#	16990#	420#	33510#	300#	5230#	500#	4360#	300#	-7380#	590#
	As	33	3844	5	13128	5	23785	3	9897	5	6878	4	-4059	4
	Se	34	6161	4	14603	4	14020.0	2.7	6061	4	4030	4	-3880	3
	Br	35	5128	4	10508	4	3651	15	11026	4	4572	5	-317	4
	Kr	36	9856.7	2.0	11979	3	-5297	4	5228	26	612	4	-2279	3
	Rb	37	8651.00	0.20	8555.7	2.0	-13614	6	10403.13	0.20	2107.1	0.4	1913	4
	Sr	38	11491	3	9644.8	1.1	-20413	4	5946.6	2.4	-588.5	2.6	1113.2	1.1
	Y	39	9512	24	5469	14	-27990#	300#	12077	14	2378	16	5434	14
	Zr	40	12866	7	7416	19	*	*	6636	6	-900	19	4475	8
	Nb	41	10925	7	3248	8	*	*	12998	8	1642	8	8718	19
	Mo	42	14672	16	5120	6	*	*	7620#	300#	-840	300	7447	7
	Tc	43	13330#	500#	1080#	300#	*	*	13920#	500#	250#	500#	12760#	420#
87	Ga	31	3200#	1060#	*		44310#	800#	6970#	1060#	7700#	1000#	*	
	Ge	32	2390#	500#	16910#	810#	36630#	400#	6700#	500#	5070#	570#	-6020#	720#
	As	33	4727	5	13150#	300#	28979.9	3.0	8216	5	7395	4	-5690#	400#
	Se	34	3994	3	14753	4	18453.9	2.5	7474	4	4291	4	-2631	4
	Br	35	6331	4	10677	4	9127	4	9233	4	6920	4	-2392	4
	Kr	36	5515.17	0.25	12366	3	-1363	4	8577	3	1938	26	884.6	2.0
	Rb	37	9922.10	0.20	8621.10	0.01	-10724	7	7593.3	2.0	2705.60	0.01	-1168	26
	Sr	38	8428.15	0.12	9422.0	1.1	-17995	3	7998.1	1.1	-257.0	2.4	3205.7	1.1
	Y	39	11806	14	5784.1	1.1	-25328	4	8796	3	2495.3	2.0	2387.0	2.7
	Zr	40	9449	5	7352	15	-33420#	400#	9206	19	-589	6	6949	4
	Nb	41	12812	9	3194	8	*	*	10012	9	2411	9	5667	8
	Mo	42	10846	5	5041	6	*	*	10106	5	-1000#	300#	10182	6
	Tc	43	14460#	300#	869	6	*	*	10531	16	1680#	400#	8980#	300#
	Ru	44	*		1920#	500#	*	*	10810#	570#	*		14220#	570#
88	Ge	32	4130#	640#	17850#	950#	39550#	500#	5030#	860#	4790#	590#	-8650#	860#
	As	33	3170#	200#	13930#	450#	31890#	200#	9750#	360#	7270#	200#	-5010#	360#
	Se	34	5529	4	15555	4	24037	4	5789	5	4169	5	-5114	5
	Br	35	4896	4	11579	4	13583	4	10498	4	6562	4	-1880	4
	Kr	36	7053.1	2.6	13089	4	3937	6	6652	4	3748	4	-1631	4
	Rb	37	6082.52	0.16	9188.44	0.29	-6430	60	11367.48	0.16	3735.4	2.0	1613	3
	Sr	38	11112.64	0.16	10612.5	1.1	-15235	4	5536.5	1.1	-890.0	1.1	-794.6	2.3
	Y	39	9351.7	1.9	6707.7	1.5	-22620	150	10935.3	1.5	1669	3	3515.0	1.9
	Zr	40	12353	7	7899	6	-29230#	300#	6366	15	-922	20	3121	6
	Nb	41	10370	60	4120	60	*	*	12500	60	1860	60	7310	60
	Mo	42	13873	5	6102	8	*	*	7157	7	-1543	6	6134	7
	Tc	43	12060	150	2090	150	*	*	13140	150	690	150	10240	150
	Ru	44	16540#	500#	4000#	300#	*	*	7610#	420#	-3500#	500#	8760#	300#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q($2\beta^-$)		Q(ϵ_p)		Q(β^-n)	
85	Zn	30	5240#	860#	*	*	27280#	700#	*	10370#	810#			
	Ga	31	6950#	300#	*	-10700#	850#	23130#	300#	*	10010#	300#		
	Ge	32	8290	4	30960#	500#	-9349	6	19290	5	-28000#	600#	4659	5
	As	33	9662	4	28510	4	-7986	4	15386	4	-26200#	400#	4687	4
	Se	34	13216	4	26015	4	-8547	3	9067	3	-21554	4	-2702	26
	Br	35	15705	5	23484	4	-8467	4	3592	3	-20011	4	-4207	3
	Kr	36	17632.9	2.0	20718	4	-7516.2	2.4	-377	3	-12821.6	2.8	-9792.7	3.0
	Rb	37	19239.3	2.3	17732	4	-6616.6	1.3	-4325	19	-11673	26	-9589.1	1.2
	Sr	38	20448	7	15691.2	2.8	-5833	3	-7929	7	-5952.9	2.8	-15281	5
	Y	39	21780	27	13349	19	-4810	20	-11562	19	-5372	19	-14493	20
	Zr	40	23406	9	10954	9	-4071	7	-15664	17	187	7	-20230#	300#
	Nb	41	24010	300	8653	19	-2993	7	-20250#	400#	325	6	-19850#	400#
	Mo	42	26970#	400#	6177	17	-1540	170	*		6622	17	*	
Tc	43	*		2200#	500#	-1510#	570#	*		7700#	500#	*		
86	Ga	31	6320#	810#	*	-11210#	1060#	24510#	700#	*	10600#	700#		
	Ge	32	7760#	300#	31930#	670#	-9580#	420#	20740#	300#	-31210#	760#	5360#	300#
	As	33	9251	5	29260#	400#	-8456	4	16670	5	-26190#	300#	5380	4
	Se	34	10698	3	26933	4	-7513	3	12762.5	2.5	-24669	4	1	4
	Br	35	13992	26	24357	4	-7954	5	7115	3	-19732	4	-2223	4
	Kr	36	16968.96	0.00	21895.9	2.0	-8096.7	1.4	1257.5	1.1	-18141.0	2.6	-9169.65	0.00
	Rb	37	19130.7	2.2	19542	26	-7674.6	1.3	-3464	14	-11461	3	-9715.1	2.8
	Sr	38	20016.3	1.6	16661.8	1.1	-6357.8	1.4	-6555	4	-10331.8	2.3	-14752	19
	Y	39	21532	15	14102	14	-5520	14	-10150	15	-4405	14	-14180	16
	Zr	40	22691	7	11897	4	-4384	7	-13858	5	-4154	5	-19760	5
	Nb	41	24260#	300#	9817	7	-3495	8	-17840#	300#	1420	20	-19694	17
	Mo	42	25750#	400#	7268	7	-2590#	200#	*		1775	7	-26150#	400#
	Tc	43	*		4860#	420#	-1520#	420#	*		7690#	300#	*	
87	Ga	31	5660#	850#	*	*	26040#	800#	*	12110#	850#			
	Ge	32	7100#	400#	32820#	810#	-9770#	640#	22350#	400#	*	6810#	400#	
	As	33	8571	4	30130#	300#	-8786	4	18274	4	-28450#	700#	6814	4
	Se	34	10155	3	27881	4	-7875	3	14283.4	2.3	-23960#	300#	1135	4
	Br	35	11459	4	25280	4	-6647	4	10706	3	-22219	5	1303	3
	Kr	36	15371.8	2.0	22873.8	2.6	-7794	3	4170.5	1.1	-17495.3	2.5	-6033.8	0.3
	Rb	37	18573.09	0.01	20600	3	-8009	4	-1579.4	1.6	-16255	3	-8145.9	1.1
	Sr	38	19919	3	17977.6	2.3	-7314.9	1.1	-5533	4	-8903.3	1.1	-13668	14
	Y	39	21319	19	15429.0	1.6	-6372.6	2.8	-9145	7	-7560.3	1.6	-13121	4
	Zr	40	22315	8	12821	5	-4974	8	-12462	5	-2112	4	-18285	7
	Nb	41	23736	8	10609	20	-4094	20	-16183	8	-1879	16	-17834	8
	Mo	42	25518	16	8289	7	-3399	7	-20950#	400#	3795	5	-23660#	300#
	Tc	43	27800#	400#	5988	6	-1700	300	*		4154	7	*	
Ru	44	*		3000#	400#	-1670#	570#	*		10890#	400#	*		
88	Ge	32	6520#	590#	*	-10150#	780#	23750#	500#	*	7410#	500#		
	As	33	7900#	200#	30840#	730#	-8860#	450#	20000#	200#	-28430#	820#	7640#	200#
	Se	34	9524	4	28700#	300#	-8161	5	15807	4	-27100#	400#	1936	5
	Br	35	11226	4	26332	5	-7287	4	11893	3	-22387	4	1922	3
	Kr	36	12568.3	2.6	23766	4	-6168	3	8230.1	2.8	-20554	3	-3164.8	2.6
	Rb	37	16004.62	0.26	21555	3	-7251	26	1689.8	1.9	-16006	3	-5800.3	1.1
	Sr	38	19540.79	0.20	19233.6	1.1	-7906.9	1.1	-4293	6	-14500.8	1.1	-12974.3	1.1
	Y	39	21158	14	16129.7	1.9	-6964.7	2.9	-8120	60	-6989.9	1.9	-13024	5
	Zr	40	21802	6	13683	6	-5404	6	-10942	7	-6037	6	-17826	9
	Nb	41	23190	60	11470	60	-4710	60	-14490	160	-450	60	-17360	60
	Mo	42	24719	5	9296	5	-3691	7	-18290#	300#	-629	6	-23068	6
	Tc	43	26530#	330#	7130	150	-3090#	340#	*		4900	150	-23820#	430#
	Ru	44	*		4870#	300#	-2320#	500#	*		5200#	300#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		Q($4\beta^-$)		Q(d, α)		Q(p, α)		Q(n, α)	
89	Ge	32	1660#	780#	*		42810#	600#	6560#	1000#	5590#	920#	*	
	As	33	4150#	360#	13950#	590#	34910#	300#	7990#	500#	7830#	420#	-6700#	760#
	Se	34	3180	5	15560#	200#	27216	4	7336	5	4834	5	-3590#	300#
	Br	35	5630	5	11679	5	19435	4	8863	4	7093	4	-3666	5
	Kr	36	4916	3	13109	4	8341	4	8067	4	3961	4	-386	3
	Rb	37	7175	5	9310	6	-1087	24	9708	5	6417	5	-434	6
	Sr	38	6358.72	0.09	10888.7	1.1	-11194	4	9099.8	1.1	1402.3	1.1	2703.3	1.1
	Y	39	11481.7	2.8	7076.8	2.3	-20314	4	7881.7	2.3	1678.1	2.3	684.3	2.2
	Zr	40	9319	6	7867	4	-26770#	300#	8853	4	-729	15	5293	4
	Nb	41	12520	60	4286	24	-34600#	360#	9432	24	2207	24	4304	28
	Mo	42	10400	5	6130	60	*	*	9569	8	-1018	7	8600	5
	Tc	43	13780	150	1997	5	*	*	10201	5	1579	5	7384	7
	Ru	44	11780#	420#	3710#	330#	*	*	10290#	300#	-1950#	420#	11650#	300#
	Rh	45	*		-1080#	200#	*	*	10610#	540#	*		10910#	470#
90	Ge	32	3560#	920#	*		45740#	700#	*		5220#	1060#	*	
	As	33	2600#	670#	14890#	850#	38030#	600#	9520#	780#	7610#	720#	-6100#	1000#
	Se	34	4880	330	16290#	450#	30150	330	5630#	380#	4680	330	-6080#	520#
	Br	35	3797	5	12297	5	22495	4	10595	5	7290	4	-2736	4
	Kr	36	6494.8	2.8	13974	4	13814.3	2.6	6468	4	3796	4	-2886.7	2.9
	Rb	37	5724	8	10118	7	3297	7	11037	7	6209	7	173	7
	Sr	38	7811.5	2.7	11526	6	-5776	4	7370.9	2.6	3512.9	2.6	407.0	2.6
	Y	39	6857.03	0.10	7575.1	2.3	-15770.2	2.5	12137.3	2.3	3249.2	2.3	3749.3	2.2
	Zr	40	11968	3	8353.4	1.6	-23890	4	6236.0	2.5	-891.2	2.3	1752.9	2.0
	Nb	41	10108	24	5075	5	-30700#	400#	11677	6	1548	5	6003	4
	Mo	42	13229	5	6836	24	*	*	6710	60	-1436	8	4820	5
	Tc	43	11401	4	2999	4	*	*	12673	4	1024	3	8795	7
	Ru	44	14850#	300#	4778	5	*	*	7510	150	-2330	6	7647	5
	Rh	45	14000#	540#	1140#	500#	*	*	13150#	500#	-1160#	570#	11380#	400#
91	As	33	3640#	840#	14960#	920#	40850#	600#	7540#	850#	8110#	780#	*	
	Se	34	2610#	600#	16300#	780#	33310#	500#	7170#	590#	5250#	540#	-4550#	710#
	Br	35	5178	5	12600	330	25245	4	8596	5	7641	5	-4740#	200#
	Kr	36	4086.0	2.9	14263	4	16922.2	2.9	8011	4	4606	4	-1443	4
	Rb	37	6452	10	10075	8	8893	8	9501	8	6810	8	-1383	8
	Sr	38	5775	6	11577	9	-1444	8	8771	8	3821	6	1685	6
	Y	39	7928.3	2.5	7691.9	2.9	-10366	3	10567.7	2.7	6433.5	2.7	1903.5	2.6
	Zr	40	7193.9	0.4	8690.3	1.7	-19656.6	2.9	10523.8	1.7	1266.6	2.5	5671.6	2.0
	Nb	41	12048	4	5154.0	3.0	-27840#	400#	8949	4	1854	6	3307	4
	Mo	42	10107	7	6835	7	-35930#	500#	9127	24	-1170	60	7066	8
	Tc	43	13332.9	2.6	3102	4	*	*	9739	5	1564	4	5840	60
	Ru	44	11427	4	4803.8	2.4	*	*	9866	4	-1690	150	10093	4
	Rh	45	14910#	570#	1200#	400#	*	*	10020#	500#	470#	500#	8530#	430#
	Pd	46	*		1610#	640#	*	*	10460#	620#	*		13770#	590#
92	As	33	2160#	920#	*		43790#	700#	8950#	990#	7610#	920#	*	
	Se	34	4460#	780#	17120#	840#	36140#	600#	5320#	840#	4940#	670#	-7350#	850#
	Br	35	3197	8	13180#	500#	28584	11	10280	330	7624	8	-3790#	300#
	Kr	36	5867	4	14951	4	19690	3	5942	4	4369	4	-4131	5
	Rb	37	5099	10	11088	7	11681	7	10898	6	6627	6	-852	7
	Sr	38	7286	7	12411	9	3940	4	7208	7	3709	6	-685	4
	Y	39	6536	9	8454	11	-5891	10	11843	9	6256	9	2542	11
	Zr	40	8634.79	0.11	9396.7	1.8	-14158	3	8746.0	1.7	4113.6	1.7	3395.5	2.0
	Nb	41	7886	3	5846.6	1.8	-23455	5	13030.6	1.8	3287	4	6901.8	2.4
	Mo	42	12670	6	7458	3	-31740#	500#	6565	4	-1318	24	3715	4
	Tc	43	11011	4	4006	7	*	*	11958	5	953	5	7346	24
	Ru	44	14133	4	5604	4	*	*	7134.3	2.9	-2042	5	6360	5
	Rh	45	12280#	400#	2049	5	*	*	12596	6	-30#	300#	10042	6
	Pd	46	16870#	710#	3560#	640#	*	*	7600#	640#	-4180#	620#	8680#	590#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q($2\beta^-$)		Q(ϵp)		Q($\beta^- n$)	
89	Ge	32	5790#	720#	*		-10320#	920#	25260#	600#	*		8920#	630#
	As	33	7320#	300#	31800#	850#	-9160#	420#	21480#	300#	*		9020#	300#
	Se	34	8709	4	29490#	400#	-8294	5	17543	4	-26140#	500#	3652	5
	Br	35	10525	5	27234	4	-7510	4	13438	6	-24840#	200#	3346	4
	Kr	36	11968.9	2.2	24688	3	-6547	3	9673.0	2.4	-19941	4	-1998.1	2.1
	Rb	37	13257	5	22399	6	-5562	6	5997	6	-18285	6	-1862	5
	Sr	38	17471.35	0.18	20077.2	1.1	-7153.3	2.3	-1332	4	-13806.4	2.8	-9981.3	1.5
	Y	39	20833.4	2.6	17689.3	2.2	-7966.7	2.2	-7084	24	-12389.1	2.2	-12152	6
	Zr	40	21672	5	14574	4	-6198	4	-9861	5	-4244	4	-16770	60
	Nb	41	22895	25	12185	24	-5210	30	-13231	24	-3616	24	-16010	24
	Mo	42	24273	5	10246	6	-4266	8	-16910#	300#	1324	7	-21400	150
	Tc	43	25847	6	8099	8	-3540	6	-21370#	360#	1490	60	-21070#	300#
	Ru	44	28320#	500#	5800#	300#	-3020#	300#	*		7290#	300#	*	
	Rh	45	*		2920#	360#	-2420#	540#	*		8360#	390#	*	
90	Ge	32	5230#	860#	*		*		26580#	770#	*		9510#	760#
	As	33	6750#	630#	*		-9300#	920#	22670#	600#	*		9590#	600#
	Se	34	8060	330	30240#	600#	-8470#	450#	19160	330	-29360#	690#	4400	330
	Br	35	9427	5	27860#	200#	-7463	5	15364	7	-24490#	300#	4464	4
	Kr	36	11411	3	25653	4	-6881	3	10990	3	-23256	4	-1318	6
	Rb	37	12898	7	23227	7	-6157	7	7130	7	-18379	7	-1227	7
	Sr	38	14170.2	2.7	20836	4	-5108.2	2.6	2824.6	2.2	-16702	3	-6311.1	1.4
	Y	39	18338.7	2.8	18463.8	2.2	-6172.8	2.2	-3833	4	-12072	6	-9689.8	2.8
	Zr	40	21288	6	15430.1	2.0	-6675.3	2.0	-8601	4	-9853.8	2.0	-16219	24
	Nb	41	22630	60	12941	4	-5804	15	-11938	4	-2242	4	-15719	5
	Mo	42	23629	5	11122	6	-4629	5	-15289	5	-2585	5	-20849	5
	Tc	43	25190	150	9130	60	-4017	6	-18770#	400#	2612	24	-20690#	300#
	Ru	44	26630#	300#	6775	5	-3198	5	*		2842	5	-26930#	360#
	Rh	45	*		4860#	430#	-3090#	500#	*		8150#	400#	*	
91	As	33	6240#	670#	*		-9740#	1000#	24210#	600#	*		10830#	680#
	Se	34	7490#	500#	31190#	780#	-8690#	640#	20640#	500#	-28410#	860#	5590#	500#
	Br	35	8976	5	28890#	300#	-7914	5	16638	9	-27070#	600#	5781	4
	Kr	36	10581	3	26560	4	-6973	3	12678	6	-22460	330	319	7
	Rb	37	12176	9	24049	8	-6278	8	8607	8	-21034	8	132	8
	Sr	38	13586	6	21695	6	-5368	6	4244	5	-15982	6	-5229	6
	Y	39	14785.4	2.5	19218	6	-4179.0	2.6	287	3	-14276	7	-5649.6	1.9
	Zr	40	19162	3	16265.3	2.0	-5441.0	2.0	-5687	6	-9236.2	2.2	-13305	3
	Nb	41	22156	24	13507	3	-6045	4	-10652	4	-7433	3	-14537	5
	Mo	42	23336	7	11910	7	-5287	8	-13969	7	-724	6	-19555	6
	Tc	43	24734	4	9939	24	-4538	7	-17190#	400#	-613	4	-19174	4
	Ru	44	26280#	300#	7803	4	-3780	4	-21960#	500#	4644	4	-24350#	400#
	Rh	45	28910#	540#	5980#	400#	-3530#	400#	*		4640#	400#	*	
	Pd	46	*		2750#	590#	-2770#	640#	*		11320#	500#	*	
92	As	33	5790#	920#	*		*		25250#	700#	*		11290#	860#
	Se	34	7070#	680#	32080#	920#	-9010#	780#	22050#	600#	*		6310#	600#
	Br	35	8375	7	29480#	600#	-7940#	200#	18540	9	-26630#	600#	6670	7
	Kr	36	9953	3	27550	330	-7310	4	14098	4	-25720#	500#	904	8
	Rb	37	11550	9	25350	7	-6481	7	10045	11	-20954	7	809	8
	Sr	38	13061	4	22486	4	-5601	4	5592	4	-19182	4	-4587	4
	Y	39	14465	9	20030	11	-4633	9	1637	9	-14361	12	-4992	9
	Zr	40	15828.7	0.4	17088.7	2.2	-2963.2	2.0	-1651.8	2.0	-12096	5	-9892.4	2.9
	Nb	41	19934	4	14536.8	2.4	-4579.9	3.0	-7528	4	-7390.8	2.6	-12316	7
	Mo	42	22778	4	12612.2	2.0	-5604	5	-12506.6	2.8	-6200.6	2.0	-18892.9	2.5
	Tc	43	24344	3	10841	5	-5170	60	-15927	5	424	5	-18757	4
	Ru	44	25560	5	8706	4	-4040	5	-19230#	500#	619	7	-23580#	400#
	Rh	45	27180#	400#	6852	4	-3740	150	*		5698	5	-24790#	500#
	Pd	46	*		4760#	500#	-3100#	590#	*		5880#	500#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		Q(4 β^-)		Q(d, α)		Q(p, α)		Q(n, α)	
93	Se	34	2060#	1000#	17020#	1060#	39370#	800#	6890#	1000#	5480#	1000#	-5850#	1060#
	Br	35	4810	450	13540#	750#	31260	450	8080#	680#	7690	560	-5990#	750#
	Kr	36	3438	4	15192	7	22987	3	7682	4	4728	4	-2690	330
	Rb	37	5919	10	11140	8	14593	8	9065	8	7203	8	-2973	9
	Sr	38	5290	8	12602	10	6720	8	8370	11	4143	10	520	8
	Y	39	7482	14	8649	11	-622	11	10136	12	6585	11	783	12
	Zr	40	6734.4	0.4	9595	9	-9906.0	2.8	9940.0	1.9	4236.2	1.7	4472.6	2.2
	Nb	41	8830.6	2.0	6042.3	1.6	-18201	3	11394.0	1.6	6424.6	1.6	4928.3	2.2
	Mo	42	8069.81	0.09	7641.5	2.5	-27670#	400#	10543	3	720	4	7613.6	2.0
	Tc	43	12751	3	4086.5	1.0	-37340#	500#	9314	6	1432	4	4703	4
	Ru	44	10987	3	5580	4	*	*	9480	3	-1628.0	2.3	8603	4
	Rh	45	14084	5	2000	4	*	*	9939	3	736	5	7359.3	2.8
	Pd	46	12140#	640#	3430#	400#	*	*	10370#	570#	-2320#	570#	11390#	400#
	Ag	47	*	*	-1510#	710#	*	*	10720#	710#	*	*	11340#	640#
94	Se	34	4160#	1130#	*	*	42040#	800#	4890#	1060#	4960#	1000#	*	*
	Br	35	2700#	600#	14170#	900#	34750#	400#	9840#	720#	7600#	640#	-5060#	720#
	Kr	36	5283	12	15670	450	25923	12	5596	14	4624	13	-5360#	500#
	Rb	37	4014	8	11716	3	17806.4	2.7	10917	3	7275	3	-1809	4
	Sr	38	6831	8	13515	8	9567.1	1.7	6638	6	3763	8	-2225.4	2.8
	Y	39	6197	12	9556	10	1804	8	11225	7	6164	9	1039	10
	Zr	40	8219.5	1.9	10332	11	-4687	4	8257	9	3945.0	2.7	2028	6
	Nb	41	7227.54	0.08	6535.5	1.6	-13462	4	12801.2	1.6	6391.0	1.6	5629.1	2.4
	Mo	42	9677.8	0.9	8488.8	1.8	-22312	4	8751.7	2.4	3090	3	5129.7	1.8
	Tc	43	8623	4	4640	4	-31750#	640#	13362	4	2916	7	8128	5
	Ru	44	13438	4	6267	3	*	*	7053	4	-1733	4	5272	7
	Rh	45	11967	4	2980	4	*	*	12104	4	196	4	8725	4
	Pd	46	15030#	400#	4378	5	*	*	7609	6	-2440#	400#	7785	5
	Ag	47	14220#	810#	560#	500#	*	*	13370#	810#	-1270#	810#	12030#	760#
95	Se	34	1730#	1130#	*	*	44660#	800#	*	*	5390#	1060#	*	*
	Br	35	4240#	450#	14260#	830#	37440#	200#	7660#	830#	7820#	630#	-7140#	730#
	Kr	36	2882	22	15850#	400#	29503	19	7520	450	4938	20	-3790#	600#
	Rb	37	5402	20	11835	24	20891	20	8953	20	7739	20	-4015	21
	Sr	38	4348	6	13848	6	12588	6	8209	10	4514	8	-707	6
	Y	39	6930	9	9655	7	4809	9	9585	10	6520	8	-792	9
	Zr	40	6462.0	0.9	10598	6	-2205	10	9277	11	4020	9	2852	4
	Nb	41	8487.2	1.9	6803.1	1.9	-8444	4	11048.4	1.9	6538.6	1.9	3678	9
	Mo	42	7369.10	0.10	8630.4	1.8	-17746	3	10213.2	1.8	3607.2	2.4	6395.4	1.8
	Tc	43	9934	7	4896	5	-26420#	400#	11497	5	5652	5	6080	6
	Ru	44	8944	10	6588	10	-36830#	500#	10860	10	333	10	8998	10
	Rh	45	13504	5	3046	5	*	*	9587	4	825	5	6231	5
	Pd	46	11935	5	4346	5	*	*	9758	4	-2102	5	9983	4
	Ag	47	15260#	760#	790#	400#	*	*	10250#	570#	340#	640#	9050#	400#
	Cd	48	*	*	1510#	810#	*	*	10350#	710#	*	*	14090#	710#
96	Br	35	2460#	360#	14990#	850#	40180#	300#	9350#	860#	7420#	860#	*	*
	Kr	36	4992	28	16600#	200#	32365	21	5230#	400#	4750	450	-6720#	800#
	Rb	37	3532	20	12484	19	24252	5	10704	13	7646	4	-2740	450
	Sr	38	5879	10	14325	22	15864	9	6344	9	4554	12	-3147	9
	Y	39	5202	9	10508	8	7479	8	11215	7	6608	10	-75	10
	Zr	40	7854.4	2.1	11522	7	634.5	2.0	7619	7	3647	11	288	8
	Nb	41	6893	3	7234	4	-5920	11	12375	4	6380	4	4267	11
	Mo	42	9154.32	0.05	9297.5	0.5	-12611	4	8286.4	1.8	3283.4	1.8	3975.5	1.8
	Tc	43	7872	7	5399	5	-21310	90	13303	5	5850	5	7039	5
	Ru	44	10694	10	7348	5	-30510#	400#	8789	4	2390.3	1.3	6373.6	0.9
	Rh	45	9417	11	3519	14	*	*	13608	10	2394	10	9565	10
	Pd	46	14289	5	5131	6	*	*	7436	5	-2306	5	6681	5
	Ag	47	12990#	410#	1840	90	*	*	12300	90	-510#	410#	10150	90
	Cd	48	17010#	640#	3270#	570#	*	*	7550#	760#	-4440#	640#	9210#	570#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)	S(2p)	$Q(\alpha)$	$Q(2\beta^-)$	$Q(\epsilon p)$	$Q(\beta^- n)$						
93	Se	34	6520#	950#	*	-9410#	1000#	23420#	800#	*	7450#	800#		
	Br	35	8010	450	30650#	750#	-8600#	540#	19650	450	-29280#	830#	7730	450
	Kr	36	9305	3	28380#	500#	-7569	4	15950	8	-24700#	600#	2565	7
	Rb	37	11017	11	26091	9	-6771	8	11608	13	-23676	10	2176	9
	Sr	38	12576	9	23690	8	-5975	8	7037	8	-18606	8	-3340	12
	Y	39	14018	11	21060	13	-4940	12	2985	11	-16744	12	-3839	10
	Zr	40	15369.2	0.5	18048	5	-3338.8	2.0	-316.4	1.9	-11544	4	-8740.3	1.8
	Nb	41	16717	3	15439.0	2.4	-1928.7	2.2	-3607.6	2.2	-9685	9	-8476.5	1.9
	Mo	42	20740	6	13488.1	2.0	-4355	4	-9589.6	2.2	-5635.7	2.0	-15952	3
	Tc	43	23761.7	2.7	11545	4	-5405	24	-14593.6	2.9	-4440.6	2.7	-17375.5	3.0
	Ru	44	25120	3	9586	7	-4627	4	-18080#	400#	2302.1	2.2	-22289	5
	Rh	45	26360#	400#	7603	4	-4042	5	-22740#	500#	2625	4	-22010#	500#
	Pd	46	29010#	640#	5480#	400#	-3460#	500#	*		7870#	400#	*	
	Ag	47	*		2050#	640#	-2660#	620#	*		9440#	500#	*	
94	Se	34	6220#	1000#	*	-10010#	1060#	24540#	800#	*		8100#	920#	
	Br	35	7510#	400#	31200#	810#	-8690#	720#	20960#	400#	*		8470#	400#
	Kr	36	8721	12	29200#	600#	-7970	330	17498	12	-27920#	800#	3201	14
	Rb	37	9933	6	26908	7	-6987	4	13790	7	-22880	450	3452	8
	Sr	38	12121	4	24654	3	-6311.4	2.5	8425.2	2.5	-21999	3	-2689	11
	Y	39	13678	11	22158	9	-5413	9	4016	7	-17022	10	-3301	7
	Zr	40	14953.9	1.9	18981	4	-3746.9	2.8	1141.9	1.9	-14474	8	-8129.2	2.2
	Nb	41	16058.1	2.0	16130	9	-2299.3	2.2	-2212	4	-9431	11	-7634.2	1.9
	Mo	42	17747.7	0.9	14531.2	1.8	-2064.2	1.8	-5829	3	-8579.1	1.8	-12878.8	1.3
	Tc	43	21374	5	12281	5	-3920	5	-11249	5	-4233	4	-15012	5
	Ru	44	24425	4	10354	3	-4836	5	-16483	5	-3066	3	-21643	4
	Rh	45	26051	6	8560	5	-4608	4	-20500#	640#	3409	4	-21840#	400#
	Pd	46	27170#	500#	6378	5	-3642	6	*		3827	5	-27910#	500#
	Ag	47	*		3990#	640#	-2880#	760#	*		9310#	640#	*	
95	Se	34	5890#	1130#	*	*		25700#	800#	*		9070#	900#	
	Br	35	6940#	490#	*	-9300#	630#	22120#	200#	*		9510#	200#	
	Kr	36	8166	19	30020#	800#	-8250#	500#	18963	20	-26650#	800#	4333	19
	Rb	37	9417	22	27500	450	-7212	21	15317	21	-25580#	400#	4881	20
	Sr	38	11179	10	25564	6	-6573	6	10539	6	-21063	13	-841	9
	Y	39	13126	13	23169	10	-5891	10	5574	7	-19938	7	-2012	7
	Zr	40	14681.5	1.9	20154	8	-4434	6	2049.1	1.8	-14104.8	2.4	-7363.7	2.2
	Nb	41	15714.7	1.9	17135	11	-2858.1	2.6	-765	5	-11721	6	-6443.5	0.5
	Mo	42	17046.9	0.9	15165.9	1.8	-2239.4	1.8	-4254	10	-7728.7	1.9	-11625	4
	Tc	43	18557	5	13385	5	-1806	6	-7680	6	-6940	5	-11508	6
	Ru	44	22382	10	11228	10	-3673	11	-13492	10	-2333	10	-18620	10
	Rh	45	25471	5	9313	4	-4779	5	-18740#	400#	-1472	6	-20311	6
	Pd	46	26970#	400#	7326	4	-4150	4	-23330#	500#	5330	4	-25630#	640#
	Ag	47	29470#	640#	5160#	400#	-3230#	570#	*		6020#	400#	*	
	Cd	48	*		2070#	640#	-2780#	710#	*		12180#	500#	*	
96	Br	35	6710#	500#	*	-9610#	760#	23190#	300#	*		9920#	300#	
	Kr	36	7875	24	30850#	800#	-8780#	600#	19850	22	-29910#	800#	4743	29
	Rb	37	8934	4	28330#	400#	-7546	7	16987	7	-24870#	200#	5697	7
	Sr	38	10227	9	26160	15	-6585	9	12515	8	-24060	21	210	11
	Y	39	12131	9	24357	7	-5994	9	7265	7	-19737	21	-751	6
	Zr	40	14316.3	2.2	21176.8	2.6	-5002	4	3349.0	2.0	-17611	6	-6730.9	2.0
	Nb	41	15380	4	17832	7	-3215	10	214	6	-11684	8	-5968	3
	Mo	42	16523.42	0.11	16100.7	1.9	-2758.9	1.8	-2714.50	0.12	-10421.0	1.8	-10845	5
	Tc	43	17806	7	14029	5	-1792	6	-6134	11	-6324	5	-10435	11
	Ru	44	19638	3	12244.22	0.16	-1696.2	0.9	-9897	4	-5657.47	0.13	-15810	4
	Rh	45	22921	11	10107	11	-3186	10	-15170	90	-955	11	-17793	10
	Pd	46	26224	6	8177	5	-4306	5	-20610#	400#	-15	10	-24660#	400#
	Ag	47	28240#	650#	6180	90	-3940	90	*		6540	90	-25950#	510#
	Cd	48	*		4050#	400#	-2930#	640#	*		7100#	400#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		Q(4 β^-)		Q(d, α)		Q(p, α)		Q(n, α)	
97	Br	35	3960#	500#	*		42070#	400#	7120#	900#	7610#	900#	*	
	Kr	36	2420	130	16550#	330#	35520	130	7060#	240#	5040#	420#	-4970#	810#
	Rb	37	5236	4	12728	21	27089.0	2.6	8351	19	7693	12	-5270#	400#
	Sr	38	3724	9	14517	5	18961	3	8022	20	4845	4	-1588	13
	Y	39	5857	9	10486	11	11092	8	9706	9	7583	7	-1918	7
	Zr	40	5575.1	0.4	11896	6	3171	3	8974	7	4268	7	1543.7	2.6
	Nb	41	8073	4	7452.4	1.8	-3010	40	10764.3	2.2	6526.9	2.3	2391	7
	Mo	42	6821.25	0.21	9226	3	-9738	5	9952.3	0.5	3689.7	1.8	5373.7	1.9
	Tc	43	9470	6	5714	4	-16390	110	11203	4	6058	4	4797	4
	Ru	44	8111.5	2.8	7588	6	-25670#	300#	10612	6	2902	5	7939.9	2.8
	Rh	45	10980	40	3810	40	-35410#	500#	11570	40	4850	40	7210	40
	Pd	46	9695	6	5408	11	*	*	11246	6	-34	6	10424	6
	Ag	47	14390	140	1930	110	*	*	9850	110	140	110	7730	110
	Cd	48	12950#	500#	3230#	310#	*	*	9850#	500#	-3180#	710#	11290#	300#
In	49	*		-1090#	640#	*	*	10150#	710#	*	*	10870#	810#	
98	Br	35	2460#	570#	*		43850#	400#	*		6880#	900#	*	
	Kr	36	4960#	330#	17550#	500#	36980#	300#	4560#	420#	4320#	360#	-8210#	850#
	Rb	37	3871	4	14180	130	29212	6	9472	21	6705	19	-4900#	200#
	Sr	38	5915	5	15196	4	21689	4	5639	5	4332	21	-4621	19
	Y	39	4245	10	11007	9	14131	9	11340	12	7686	10	-760	22
	Zr	40	6415	8	12454	11	6932	11	7760	10	4783	11	-524	10
	Nb	41	5994	5	7871	5	-355	13	12625	5	6995	5	3327	9
	Mo	42	8642.60	0.07	9795.7	1.7	-6794	5	8203	3	3534.3	0.5	3193.1	1.8
	Tc	43	7284	5	6177	3	-13360	30	13073	3	6144	3	6000	3
	Ru	44	10177	7	8295	7	-20590	50	8306	8	2659	8	5132	6
	Rh	45	8650	40	4345	12	-29280#	200#	13615	12	5145	15	8491	13
	Pd	46	11586	7	6010	40	*	*	9076	11	1884	6	7782	11
	Ag	47	10310	110	2550	30	*	*	13830	30	1760	30	10920	30
	Cd	48	15250#	300#	4100	120	*	*	7590	100	-3180#	400#	7970	50
In	49	14780#	540#	730#	360#	*	*	12390#	450#	-2400#	540#	11350#	450#	
99	Kr	36	2520#	590#	17600#	640#	38870#	500#	6010#	640#	4270#	590#	*	
	Rb	37	4960	110	14180#	320#	31130	110	6930	170	6740	110	-7400#	320#
	Sr	38	4157	5	15483	5	23457	4	6718	4	3706	5	-3786	21
	Y	39	6426	10	11519	8	16671	7	8637	8	7138	11	-3655	8
	Zr	40	4403	13	12613	13	9997	11	9214	12	5581	12	952	14
	Nb	41	6873	13	8328	15	3246	14	11327	12	7977	12	1656	14
	Mo	42	5925.44	0.15	9728	5	-3788	5	10349.9	1.7	4502	3	5122.0	2.0
	Tc	43	8967	3	6500.9	0.9	-10614	6	10927.6	0.9	6330.9	0.9	3926	3
	Ru	44	7468	7	8480	3	-17690.7	1.9	10308	4	3063	5	6818.2	1.1
	Rh	45	10474	14	4642	9	-24200#	200#	11252	7	5365	7	5889	8
	Pd	46	8932	7	6295	13	-34240#	500#	11130	40	2369	11	9544	5
	Ag	47	11720	30	2680	8	*	*	11804	8	4334	8	8620	12
	Cd	48	10370	50	4150	30	*	*	11610	110	-560	90	11897	5
	In	49	15550#	280#	1030#	200#	*	*	9790#	360#	-940#	450#	8780#	220#
Sn	50	*		1340#	540#	*	*	9960#	710#	*	*	13280#	640#	
100	Kr	36	4360#	640#	*		41330#	400#	4110#	570#	3870#	570#	*	
	Rb	37	3410#	230#	15080#	540#	33260#	200#	8480#	360#	5740#	240#	-6850#	450#
	Sr	38	5390	10	15910	110	26359	10	5199	10	3553	10	-6760	130
	Y	39	4749	13	12110	12	18687	11	9803	12	6113	12	-3168	12
	Zr	40	6829	13	13015	11	12842	8	6629	11	4609	11	-2153	9
	Nb	41	5543	15	9468	13	5785	20	12200	12	8009	8	1970	10
	Mo	42	8291.8	1.1	11147	12	-962	18	8052	5	4282.7	2.0	2405.3	2.2
	Tc	43	6764.4	1.0	7339.9	1.3	-7882	5	12805.8	1.3	6387.8	1.3	5234.6	2.2
	Ru	44	9673.32	0.03	9186.0	1.1	-15029.2	2.0	7918	3	2859	4	3966.1	1.1
	Rh	45	8082	19	5255	18	-21280	180	13347	19	5395	18	7277	19
	Pd	46	11117	18	6938	19	-27940	300	8659	21	2230	40	6538	18
	Ag	47	9497	8	3246	7	*	*	13894	7	4532	7	10100	40
	Cd	48	12334.8	2.3	4771	6	*	*	9580	30	1500	110	9258	5
	In	49	11010#	270#	1670	180	*	*	14030	190	1010#	350#	12160	210
Sn	50	17410#	590#	3200#	360#	*	*	7320#	360#	-5230#	590#	8820#	420#	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q($2\beta^-$)		Q(ϵp)		Q($\beta^- n$)	
97	Br	35	6430#	450#	*	*	*	24460#	400#	*		10950#	400#	
	Kr	36	7410	130	31540#	810#	-9130#	810#	21160	130	*		5860	130
	Rb	37	8768	20	29330#	200#	-7970	450	17608	7	-27650#	300#	6339	9
	Sr	38	9603	7	27001	19	-6871	4	14366	4	-22792	21	1688	7
	Y	39	11058	10	24811	21	-5932	10	9481	7	-22062	8	1246	7
	Zr	40	13429.5	2.1	22404	6	-5287	8	4595.1	2.0	-17308	8	-5413	4
	Nb	41	14965.7	1.8	18975	7	-3805	11	1611	4	-14555	6	-4885.8	1.7
	Mo	42	15975.57	0.21	16459.9	1.8	-2845.8	1.8	-1424.3	2.8	-9387.9	2.0	-9794	5
	Tc	43	17341	6	15012	4	-2431	4	-4620	40	-8901	5	-9211	4
	Ru	44	18805	10	12986.6	2.8	-1737.9	2.9	-8313	6	-4614.6	2.8	-14504	10
	Rh	45	20400	40	11150	40	-1420	40	-11770	120	-4060	40	-14490	40
	Pd	46	23984	6	8927	11	-3014	5	-17350#	300#	984	5	-21370	90
	Ag	47	27370#	420#	7060	110	-4240	110	-23640#	520#	1570	110	-23320#	420#
	Cd	48	29970#	590#	5070#	300#	-3740#	500#	*		8440#	300#	*	
In	49	*		2170#	640#	-3350#	710#	*		10030#	510#	*		
98	Br	35	6430#	500#	*	*	*	25870#	400#	*		10900#	420#	
	Kr	36	7370#	300#	*		-9930#	860#	22120#	300#	*		6140#	300#
	Rb	37	9107	5	30730#	300#	-9140#	400#	17982	9	-27550#	400#	6193	5
	Sr	38	9639	9	27924	21	-7503	13	14867	9	-26290	130	1630	8
	Y	39	10102	10	25524	9	-6163	8	11230	9	-21070	8	2577	8
	Zr	40	11991	8	22941	12	-4872	9	6822	9	-19999	9	-3756	9
	Nb	41	14066	6	19767	8	-3602	8	2901	6	-14692	8	-4058	5
	Mo	42	15463.85	0.22	17248.2	2.0	-3268.9	1.9	110	6	-12455.4	2.0	-8967	4
	Tc	43	16753	6	15402	5	-2487	4	-3256	12	-8112	4	-8383	4
	Ru	44	18288	6	14009	6	-2237	6	-6904	8	-7970	6	-13700	40
	Rh	45	19631	16	11933	13	-1443	13	-10110	30	-3245	12	-13441	13
	Pd	46	21281	6	9820	5	-1162	6	-13680	50	-2491	6	-18570	110
	Ag	47	24700	100	7960	30	-2580	30	-19170#	200#	2240	50	-20680#	300#
	Cd	48	28210#	400#	6030	50	-3960	50	*		2880	50	-28520#	510#
In	49	*		3960#	220#	-3910#	670#	*		9640#	220#	*		
99	Kr	36	7480#	520#	*		-10730#	950#	23750#	500#	*		7490#	500#
	Rb	37	8830	110	31730#	420#	-9860#	230#	19450	110	-30050#	420#	7150	110
	Sr	38	10072	5	29670	130	-8778	19	15112	11	-25490#	300#	1717	9
	Y	39	10671	9	26715	7	-7187	21	11676	14	-23626	8	2565	11
	Zr	40	10819	11	23620	11	-4927	12	8345	11	-18487	11	-2165	12
	Nb	41	12866	12	20783	14	-3545	14	4995	12	-17320	15	-2288	12
	Mo	42	14568.05	0.16	17598.5	2.0	-2732.3	1.8	1652.9	1.1	-11965	9	-7609	3
	Tc	43	16251	4	16296.6	1.9	-2966.6	1.0	-1749	7	-11085	5	-7173	7
	Ru	44	17645.2	3.0	14656.2	1.1	-2336.1	1.1	-5441	5	-6796.0	1.1	-12518	12
	Rh	45	19120	40	12937	8	-1983	8	-8866	9	-6436	8	-12328	8
	Pd	46	20518	7	10640	6	-1150	11	-12250	5	-1245	8	-17190	30
	Ag	47	22030	110	8690	40	-797	7	-15340#	200#	-826	13	-17150	50
	Cd	48	25620#	300#	6703	5	-2391	3	-21990#	500#	4101	5	-24110#	200#
	In	49	30330#	540#	5130#	220#	-4200#	450#	*		4400#	200#	*	
Sn	50	*		2070#	590#	-3740#	710#	*		12400#	510#	*		
100	Kr	36	6880#	500#	*		*	24780#	400#	*		8080#	420#	
	Rb	37	8370#	200#	32680#	450#	-10810#	360#	20790#	200#	*		7890#	200#
	Sr	38	9547	10	30100#	300#	-9175	23	16552	12	-28360#	500#	2754	11
	Y	39	11175	14	27593	12	-8404	12	12470	14	-23420	110	2220	15
	Zr	40	11232	12	24534	9	-5877	12	9808	8	-21159	9	-2121	15
	Nb	41	12416	9	22081	11	-3887	10	6217	8	-16437	10	-1906	8
	Mo	42	14217.3	1.1	19475	9	-3169.8	2.2	3034.37	0.17	-15854	11	-6934.0	1.1
	Tc	43	15731	4	17067	6	-2838	3	-432	18	-10977	12	-6469.3	1.5
	Ru	44	17142	7	15686.9	1.1	-2855.1	1.1	-3997	18	-10543.8	1.1	-11717	7
	Rh	45	18556	22	13735	18	-2193	19	-7450	19	-5550	18	-11478	19
	Pd	46	20049	18	11580	19	-1573	18	-11033	18	-4894	18	-16586	19
	Ag	47	21210	30	9541	13	-876	11	-13820	180	151	8	-16278	5
	Cd	48	22700	50	7452	5	-437	5	-16910	300	698	5	-20890#	200#
	In	49	26560#	270#	5820	190	-2230	200	*		5110	180	-24440#	540#
Sn	50	*		4220	310	-4140#	500#	*		5360	300	*		

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		Q(4 β^-)		Q(d, α)		Q(p, α)		Q(n, α)	
101	Kr	36	2150#	640#	*		44040#	500#	*		4180#	640#	*	
	Rb	37	4340#	290#	15050#	460#	36080#	220#	6660#	550#	6360#	370#	-8720#	460#
	Sr	38	3800	80	16300#	210#	27950	80	6350	140	3620	80	-5600#	310#
	Y	39	5805	13	12526	12	21274	25	8156	8	6223	8	-5102	8
	Zr	40	4860	12	13126	14	14784	9	8196	11	3994	11	-1098	9
	Nb	41	7156	9	9795	9	8523	7	9447	11	7269	9	-941	9
	Mo	42	5398.24	0.07	11002	8	1914	5	9526	12	4878	5	3423	9
	Tc	43	8393	24	7441	24	-5007	25	10339	24	6638	24	2836	25
	Ru	44	6802.05	0.24	9223.7	1.5	-12118.1	1.8	10083.0	1.2	3341	3	5806.7	1.1
	Rh	45	9894	19	5476	6	-18800#	300#	10922	6	5678	9	4667	7
	Pd	46	8275	18	7131	19	-25130	300	10858	8	2609	13	8441	8
	Ag	47	11268	7	3396	18	*	*	11558	7	4851	7	7487	13
	Cd	48	9713.2	2.2	4987	5	*	*	11587	6	2090	30	11131	5
	In	49	12370#	350#	1710#	300#	*	*	12030#	300#	3890#	300#	10100#	300#
Sn	50	11090	430	3280	350	*	*	11780#	360#	-1550#	360#	12980	300	
102	Rb	37	2970#	370#	15870#	590#	38600#	300#	8060#	500#	5920#	590#	*	
	Sr	38	4870	110	16840#	230#	31210	70	4900#	210#	3710	130	-7950#	510#
	Y	39	4178	8	12900	80	23397	10	9368	10	6203	5	-4320	110
	Zr	40	6494	12	13816	11	17509	9	6450	14	3926	11	-3435	10
	Nb	41	5494	5	10429	9	10470	6	10782	9	6178	11	-8	7
	Mo	42	8125	9	11971	9	4361	9	6944	12	3625	15	-300	13
	Tc	43	6301	26	8343	9	-2324	12	12330	9	6262	9	3408	15
	Ru	44	9219.64	0.05	10051	24	-9443.4	2.0	7627.8	1.5	3087.9	1.2	2512.5	1.1
	Rh	45	7441	7	6115	5	-16087	7	13154	5	5705	5	6193	5
	Pd	46	10572	5	7809	6	-23000	100	8368	18	2511	7	5337.2	2.4
	Ag	47	8983	9	4105	9	*	*	13691	19	4799	10	8978	11
	Cd	48	11894.4	2.2	5614	5	*	*	9189	5	1917	6	8168	5
	In	49	10150#	300#	2146	5	*	*	14212	5	4101	5	11665	8
	Sn	50	12700	320	3610#	310#	*	*	10090	210	1310#	220#	10640	100
103	Rb	37	3970#	500#	*		41420#	400#	6230#	640#	6310#	570#	*	
	Sr	38	3140#	210#	17000#	360#	33540#	200#	6100#	290#	3990#	280#	-6720#	450#
	Y	39	5356	12	13390	70	26144	15	7820	80	6236	15	-6270#	200#
	Zr	40	4299	13	13937	10	19442	10	7956	12	4376	14	-2345	13
	Nb	41	6786	5	10720	10	13003	4	8856	9	6221	9	-2045	12
	Mo	42	5468	12	11945	10	6518	10	8632	10	3701	12	1062	12
	Tc	43	8103	13	8320	13	198	11	9625	10	6452	10	848	13
	Ru	44	6232.05	0.15	9982	9	-6611.6	2.1	9788	24	3620.3	1.5	4572.2	0.3
	Rh	45	9319	5	6214.1	2.2	-13399	9	10637.3	2.2	6059.8	2.2	3638.2	2.7
	Pd	46	7625.4	0.8	7994	5	-20520	70	10637	6	2967	18	7385.2	2.3
	Ag	47	10625	9	4158	5	-28620#	300#	11341	6	5291	18	6434	19
	Cd	48	9063.8	2.4	5694	8	*	*	11393	5	2350	5	10222	18
	In	49	12007	10	2259	9	*	*	11918	9	4429	9	9155	10
	Sn	50	10110	120	3560	70	*	*	12360#	310#	2210	200	12870	70
Sb	51	*		-1470#	310#	*	*	14840#	420#	5970#	420#	13780#	350#	
104	Sr	38	4760#	360#	17790#	500#	36250#	300#	4310#	420#	3570#	370#	-9330#	590#
	Y	39	3680#	400#	13930#	450#	28440#	400#	9010#	410#	6360#	410#	-5610#	460#
	Zr	40	5980	13	14561	15	22364	10	6154	10	4201	12	-4520	80
	Nb	41	4871	5	11293	10	15131	4	10479	9	6210	9	-1112	8
	Mo	42	7460	13	12620	10	9039	9	6665	9	3396	10	-1539	12
	Tc	43	5977	27	8829	27	2609	25	11774	26	5873	25	2027	25
	Ru	44	8901.4	2.5	10781	9	-4125	3	7188	9	3111	24	1069.1	2.5
	Rh	45	6998.96	0.08	6981.0	2.2	-10773	6	12858.0	2.2	5862.9	2.2	5032	24
	Pd	46	9981.3	2.9	8655.9	2.8	-17768	6	8096	5	2880	6	4206.0	1.7
	Ag	47	8387	6	4920	5	-25950	120	13525	5	5178	6	7941	7
	Cd	48	11387.6	2.4	6457	4	*	*	8989	8	2230	5	7109	5
	In	49	9624	11	2820	6	*	*	14188	6	4518	6	10798	8
	Sn	50	12730	70	4286	11	*	*	9778	7	1850#	300#	9856	6
	Sb	51	11060#	320#	-510	100	*	*	16470	160	6000	320	15090#	320#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q($2\beta^-$)		Q(ϵp)		Q($\beta^- n$)	
101	Kr	36	6510#	710#	*	*	26430#	510#	*	9350#	540#			
	Rb	37	7750#	240#	*	-11180#	460#	22260#	220#	*	8950#	220#		
	Sr	38	9190	80	31380#	510#	-10560	150	17610	80	-27800#	410#	3700	80
	Y	39	10554	10	28440	110	-8973	8	13821	8	-25810#	200#	3244	11
	Zr	40	11689	13	25237	9	-7013	9	10346	9	-20630	13	-1439	12
	Nb	41	12699	13	22810	8	-5186	8	7453	24	-18844	12	-770	4
	Mo	42	13690.1	1.1	20470	11	-2992.9	2.2	4438.17	0.30	-14423	8	-5567.9	1.5
	Tc	43	15157	24	18587	27	-3158	24	1070	25	-13827	25	-5189	24
	Ru	44	16475.37	0.24	16563.5	1.1	-2835.9	1.1	-2524	5	-9054.07	0.29	-10438	18
	Rh	45	17975	9	14662	6	-2617	7	-6076	8	-8680	6	-10255	19
	Pd	46	19392	7	12387	5	-1736	5	-9594	5	-3496	5	-15364	7
	Ag	47	20765	8	10334	8	-1160	40	-12720#	300#	-3035	19	-15211	5
	Cd	48	22048.0	2.2	8233	5	-456	5	-15530	300	2102	18	-19590	180
	In	49	23380#	360#	6480#	300#	-210#	320#	*		2240#	300#	-19400#	420#
Sn	50	28500#	590#	4950	300	-2280#	420#	*		6600	300	*		
102	Rb	37	7300#	360#	*	-11680#	500#	23470#	300#	*	9780#	310#		
	Sr	38	8670	70	31880#	410#	-10470#	310#	19240	70	-30520#	510#	4640	70
	Y	39	9983	12	29210#	200#	-9280	5	15137	5	-25650#	220#	3926	9
	Zr	40	11354	12	26342	13	-7593	10	11977	12	-23320	80	-777	10
	Nb	41	12650	8	23555	11	-6435	8	8260	10	-18533	8	-866	3
	Mo	42	13524	9	21766	12	-4703	12	5532	9	-17689	12	-5301	25
	Tc	43	14693	9	19345	12	-3465	11	2210	10	-12972	10	-4687	9
	Ru	44	16021.69	0.24	17491.36	0.29	-3413.0	1.1	-1171.9	2.4	-12875.5	0.3	-9763	6
	Rh	45	17335	19	15339	5	-2774	6	-4534	9	-7728	24	-9421	7
	Pd	46	18846	18	13285.1	2.4	-2131	7	-8271	3	-7265.4	2.4	-14668	6
	Ag	47	20251	10	11236	20	-1496	14	-11553	9	-2125	10	-14481	8
	Cd	48	21607.6	2.4	9010	18	-763	5	-14730	100	-1518	5	-19120#	300#
	In	49	22520	180	7134	7	-50	30	*		3352	7	-18460	300
	Sn	50	23790	320	5320	100	280	110	*		3610	100	*	
103	Rb	37	6940#	460#	*	*	24850#	400#	*	10680#	410#			
	Sr	38	8000#	210#	32870#	540#	-11090#	540#	20400#	200#	*	5680#	200#	
	Y	39	9533	13	30220#	220#	-9680	110	16567	12	-28040#	300#	5065	14
	Zr	40	10793	12	26840	80	-7734	10	13145	13	-22750	70	418	10
	Nb	41	12280	5	24536	8	-6794	8	9577	11	-21141	6	474	9
	Mo	42	13593	10	22374	12	-5767	14	6297	10	-16662	13	-4468	13
	Tc	43	14403	26	20292	10	-4695	16	3426	10	-15580	10	-3570	10
	Ru	44	15451.69	0.16	18325.2	0.3	-3719.6	1.1	221.4	2.3	-10982	9	-8555	5
	Rh	45	16760	6	16265	24	-3126.2	2.5	-3228	5	-10746	9	-8168.4	1.1
	Pd	46	18197	5	14108.4	2.3	-2288.1	2.3	-6833	3	-5671.1	2.3	-13310	9
	Ag	47	19609	6	11967	7	-1647	8	-10171	10	-5309	6	-13212	4
	Cd	48	20958.2	2.3	9799	5	-896	5	-13680	70	-10	3	-18030	5
	In	49	22160#	300#	7873	10	-342	11	-18450#	300#	328	12	-17770	100
	Sn	50	22810	310	5710	70	540	70	*		5400	70	*	
Sb	51	*		2140#	420#	2770#	360#	*		7230#	300#	*		
104	Sr	38	7890#	310#	*	-11480#	500#	21620#	300#	*	6280#	300#		
	Y	39	9030#	400#	30940#	500#	-9940#	450#	17760#	400#	-27750#	570#	5690#	400#
	Zr	40	10279	13	27950	70	-8325	13	14626	13	-25600#	200#	1224	10
	Nb	41	11657	4	25230	5	-6917	11	10682	25	-20656	12	1070	10
	Mo	42	12928	12	23340	12	-6399	12	7738	9	-19823	13	-3825	13
	Tc	43	14079	27	20775	25	-5129	26	4449	25	-14771	25	-3315	25
	Ru	44	15133.5	2.5	19101	9	-4329.2	2.5	1301.2	2.7	-14416	10	-8137	3
	Rh	45	16318	5	16963	9	-3360.7	2.7	-1839	5	-9643	10	-7542.0	0.8
	Pd	46	17606.6	2.9	14870.0	1.7	-2596.0	1.7	-5426.7	2.1	-9420.3	1.7	-12666	4
	Ag	47	19012	9	12914	6	-1953	19	-8934	7	-4377	5	-12536	5
	Cd	48	20451.3	2.4	10615	3	-1166	18	-12341	6	-3772	3	-17410	9
	In	49	21632	7	8514	10	-470	8	-17010	120	1329	7	-17280	70
	Sn	50	22840	100	6545	6	143	6	*		1736	6	-23520#	300#
	Sb	51	*		3050	120	2720	220	*		8170	120	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		Q(4 β^-)		Q(d, α)		Q(p, α)		Q(n, α)	
105	Sr	38	2580#	590#	*		38730#	500#	5710#	640#	3960#	590#	*	
	Y	39	4830#	640#	14010#	590#	31470#	500#	7310#	540#	6400#	510#	-7470#	590#
	Zr	40	3812	15	14700#	400#	24462	13	7698	17	4566	13	-3470	70
	Nb	41	6158	5	11471	10	17939	5	8620	10	6546	10	-3092	6
	Mo	42	5059	13	12807	9	11075	9	8393	10	3831	9	-103	13
	Tc	43	7860	40	9230	40	4780	40	9380	40	6140	40	-340	40
	Ru	44	5910.10	0.11	10714	25	-1598.7	2.9	9380	9	3502	9	3284	9
	Rh	45	8966	3	7045.8	2.9	-8210	11	10123.9	2.6	6116.4	2.6	2366	9
	Pd	46	7094.1	0.7	8751.0	2.7	-15080	4	10321.1	2.7	3227	5	6331.5	1.5
	Ag	47	10026	6	4965	5	-23055	22	11125	5	5724	5	5356	7
	Cd	48	8436.9	2.2	6506	4	-31520	300	11177	4	2777	8	9243.6	3.0
	In	49	11529	12	2961	10	*		11722	10	4883	10	8252	13
	Sn	50	9782	7	4444	7	*		12002	10	2220	6	11968	4
	Sb	51	12920	120	-322	22	*		13660	70	5780	100	12324	22
Te	52	*		930	320	*		14080#	420#	*		17770	320	
106	Sr	38	4250#	780#	*		41350#	600#	*		3680#	720#	*	
	Y	39	3300#	710#	14730#	710#	33720#	500#	8760#	590#	6230#	540#	-6800#	640#
	Zr	40	5510#	200#	15370#	540#	27420#	200#	5870#	450#	4410#	200#	-5840#	280#
	Nb	41	4359	6	12018	13	20162	7	10241	10	6486	10	-2096	12
	Mo	42	6869	13	13518	10	13767	9	6395	10	3748	10	-2673	13
	Tc	43	5550	40	9721	15	7167	13	11291	15	6055	15	896	13
	Ru	44	8461	5	11320	40	810	5	6896	25	3144	11	291	11
	Rh	45	6583	6	7718	5	-5754	13	12443	5	5766	5	3887	11
	Pd	46	9560.96	0.28	9345.8	2.4	-12554	5	7759.1	2.7	2984.7	2.7	3002.6	1.5
	Ag	47	7943	5	5813.5	2.8	-20469	8	13163.5	2.9	5407	4	6732	4
	Cd	48	10869.5	1.8	7350	5	-28910	100	8695	4	2532	4	5999.4	2.8
	In	49	9039	16	3563	12	*		14071	12	4908	12	9839	13
	Sn	50	12087	6	5002	11	*		9540	8	2140	10	8945	5
	Sb	51	10529	23	424	8	*		15865	9	5360	70	13803	12
Te	52	13480	320	1490	100	*		11660	160	2820#	320#	14400	120	
107	Sr	38	2180#	920#	*		43660#	700#	*		*		*	
	Y	39	4380#	710#	14860#	780#	36380#	500#	6960#	710#	6610#	590#	*	
	Zr	40	3430#	360#	15510#	590#	29590#	300#	7260#	590#	4660#	500#	-4520#	420#
	Nb	41	5592	9	12100#	200#	23144	15	8462	15	6874	13	-4010#	400#
	Mo	42	4488	13	13647	10	15815	10	8065	10	4131	10	-1181	13
	Tc	43	7044	15	9896	13	9659	9	9306	13	6472	13	-1276	9
	Ru	44	5609	10	11374	15	3130	9	9140	40	3511	26	2142	13
	Rh	45	8573	13	7830	13	-3300	16	9779	12	6094	12	1290	28
	Pd	46	6536.4	0.5	9300	5	-9860	5	10188.8	2.4	3447.2	2.7	5367.6	2.7
	Ag	47	9536	4	5788.2	2.3	-17753	5	10722.0	2.3	5852.4	2.4	4195	3
	Cd	48	7929.5	1.9	7337	3	-26450	70	10791	5	2990	5	8051.1	2.1
	In	49	11028	17	3721	11	-33990#	300#	11480	11	5268	11	7198	12
	Sn	50	9230	7	5193	13	*		11839	12	2534	8	11102	6
	Sb	51	12251	9	589	7	*		13396	6	5838	7	11176	7
Te	52	10390	120	1350	70	*		14190	70	3500	100	16740	70	
I	53	*		-1360#	320#	*		13950#	420#	*		15240#	320#	
108	Y	39	3000#	780#	15690#	920#	38620#	600#	8200#	850#	6180#	780#	*	
	Zr	40	5160#	500#	16280#	640#	32310#	400#	5410#	640#	4330#	640#	-7100#	640#
	Nb	41	3897	12	12570#	300#	25486	16	10070#	200#	6789	15	-3080#	500#
	Mo	42	6276	13	14331	12	18762	10	6148	10	4014	10	-3645	15
	Tc	43	5244	12	10652	13	11686	9	10931	13	6287	13	-362	10
	Ru	44	7870	12	12200	12	5593	9	6827	15	3500	40	-670	13
	Rh	45	6239	18	8460	16	-912	16	12001	15	5765	14	2910	40
	Pd	46	9223.2	1.6	9949	12	-7454	5	7548	6	3190.2	2.7	2054.6	2.8
	Ag	47	7271.41	0.17	6523.1	2.3	-15161	6	13011.5	2.3	5675.1	2.4	5890	3
	Cd	48	10333.6	2.0	8134.9	2.6	-23471	6	8401	3	2682	5	4811.6	1.6
	In	49	8627	14	4419	9	-31470	130	13723	9	5078	9	8597	10
	Sn	50	11629	8	5795	12	*		9249	13	2435	12	7910	6
	Sb	51	9863	7	1222	8	*		15619	7	5757	7	12842	12
	Te	52	13320	70	2417	7	*		11402	9	3098	21	13203	7
I	53	11140#	330#	-600	110	*		16280	170	5030	330	17020	130	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q(2 β^-)		Q(ϵ_p)		Q(β^-n)	
105	Sr	38	7330#	540#	*		-11910#	710#	22860#	500#	*		7380#	640#
	Y	39	8510#	500#	31790#	640#	-10440#	550#	19090#	500#	*		6840#	500#
	Zr	40	9792	15	28630#	200#	-8330	80	15872	15	-24650#	300#	2283	12
	Nb	41	11029	6	26032	12	-7270	8	12380	40	-23140#	400#	2373	10
	Mo	42	12519	13	24100	13	-6597	12	8589	10	-18902	13	-2907	26
	Tc	43	13830	40	21850	40	-5830	40	5560	40	-17760	40	-2270	40
	Ru	44	14811.5	2.5	19544	10	-4841.0	2.5	2485.2	2.7	-12866	9	-7048	3
	Rh	45	15965	3	17827	10	-3934	24	-780	5	-12632	25	-6526.9	2.5
	Pd	46	17075.4	2.8	15732.1	1.5	-2888.1	1.5	-4083.9	1.8	-7613.0	2.7	-11373	4
	Ag	47	18413	6	13621	5	-2085	7	-7430	11	-7404	5	-11174	5
	Cd	48	19824.5	2.3	11426.7	2.9	-1328	5	-10996	4	-2227.8	1.9	-16222	6
	In	49	21154	14	9418	11	-731	11	-15624	24	-1813	11	-16085	12
	Sn	50	22510	70	7264	4	74	4	-20530	300	3341	4	-22240	120
	Sb	51	23980#	300#	3965	23	2170#	300#	*		4878	22	*	
Te	52	*		420	310	5069	3	*		11530	300	*		
106	Sr	38	6830#	670#	*		*		24120#	630#	*		7960#	780#
	Y	39	8130#	640#	*		-10770#	590#	20150#	500#	*		7350#	500#
	Zr	40	9320#	200#	29380#	360#	-8970#	210#	17230#	200#	-27590#	540#	2930#	200#
	Nb	41	10517	5	26710#	400#	-7451	6	13576	13	-22670#	500#	3072	10
	Mo	42	11928	13	24989	13	-6972	13	10182	11	-21959	15	-1920	40
	Tc	43	13411	28	22528	13	-5890	13	6586	11	-17152	13	-1914	12
	Ru	44	14371	5	20544	11	-5177	10	3585	5	-16268	11	-6543	6
	Rh	45	15549	6	18433	25	-4216	10	580	6	-11360	40	-6015	5
	Pd	46	16655.1	0.8	16391.6	2.6	-3229.4	1.5	-2775.39	0.10	-11263.9	2.6	-10908	5
	Ag	47	17969	5	14565	4	-2587	6	-6334	12	-6381	4	-10680	3
	Cd	48	19306.4	2.0	12315.0	0.8	-1625.9	2.8	-9778	5	-6003.2	0.3	-15563	10
	In	49	20568	14	10070	13	-786	15	-14135	14	-826	13	-15341	13
	Sn	50	21869	8	7963	5	-119	5	-19130	100	-309	5	-21409	22
	Sb	51	23450	120	4869	9	1796	9	*		5878	13	-21730	300
Te	52	*		1170	100	4290	9	*		7830	100	*		
107	Sr	38	6430#	860#	*		*		25370#	760#	*		9080#	860#
	Y	39	7690#	710#	*		-11180#	640#	21360#	500#	*		8470#	540#
	Zr	40	8940#	300#	30240#	590#	-9270#	360#	18290#	300#	-26770#	670#	3860#	300#
	Nb	41	9951	9	27480#	500#	-7687	14	15028	12	-24960#	500#	4349	12
	Mo	42	11357	13	25665	15	-7161	13	11303	13	-20940#	200#	-854	15
	Tc	43	12600	40	23414	10	-6148	10	8116	15	-19837	10	-497	10
	Ru	44	14071	8	21095	13	-5319	13	4512	9	-15009	13	-5570	10
	Rh	45	15156	12	19150	40	-4687	16	1543	12	-14377	17	-5028	12
	Pd	46	16097.4	0.6	17017.9	2.7	-3533.8	1.6	-1382.3	2.0	-9339	5	-9501.6	2.9
	Ag	47	17478	5	15134	3	-2803	3	-4842	11	-9334	6	-9345.9	2.3
	Cd	48	18799.0	2.2	13150.4	2.0	-1930	3	-8478	6	-4371.8	1.9	-14454	12
	In	49	20066	15	11071	12	-1189	12	-12911	12	-3911	12	-14282	12
	Sn	50	21317	7	8756	5	-285	6	-17980	70	1331	5	-20110	9
	Sb	51	22780	22	5591	11	1551	10	-21080#	300#	2666	13	-20510	100
Te	52	23870	310	1780	70	4008	5	*		9530	70	*		
I	53	*		140#	300#	4180#	420#	*		9610#	300#	*		
108	Y	39	7390#	780#	*		*		22250#	600#	*		8900#	670#
	Zr	40	8590#	450#	31140#	720#	-9670#	500#	19410#	400#	-29740#	810#	4300#	400#
	Nb	41	9489	9	28070#	500#	-7910#	400#	16375	12	-24470#	500#	4941	13
	Mo	42	10764	13	26430#	200#	-7457	13	12897	13	-23780#	300#	-86	13
	Tc	43	12288	15	24299	10	-6520	9	9111	17	-19490	12	-132	12
	Ru	44	13480	10	22096	13	-5728	13	5865	9	-18390	13	-4867	15
	Rh	45	14813	15	19834	19	-4950	29	2575	14	-13573	16	-4731	14
	Pd	46	15759.6	1.6	17780	6	-3855.5	2.8	-271.8	0.8	-12953	9	-9189.1	2.6
	Ag	47	16807	4	15823	6	-3076	3	-3487	9	-8032	12	-8687.8	2.6
	Cd	48	18263.2	1.6	13923.1	1.6	-2282.5	1.7	-7183	5	-8169.0	1.6	-13760	11
	In	49	19655	15	11756	9	-1429	10	-11675	10	-3002	9	-13679	10
	Sn	50	20859	7	9516	5	-527	6	-16288	8	-2369	6	-19488	7
	Sb	51	22115	9	6415	13	1312	8	-19800	130	3830	12	-19980	70
	Te	52	23710	100	3006	7	3420	8	*		5442	8	-24280#	300#
I	53	*		750	130	4100	50	*		10720	130	*		

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		Q($4\beta^-$)		Q(d, α)		Q(p, α)		Q(n, α)	
109	Y	39	3980#	920#	*		41080#	700#	6410#	990#	6450#	920#	*	
	Zr	40	2910#	640#	16190#	780#	34540#	500#	6880#	710#	4720#	710#	-5760#	780#
	Nb	41	5150	530	12560#	660#	28380	530	8360#	600#	7150#	560#	-4920#	730#
	Mo	42	3981	14	14415	14	20934	11	7758	14	4391	12	-2120#	200#
	Tc	43	6431	13	10807	14	14439	10	8988	14	6724	13	-2435	11
	Ru	44	5148	12	12105	12	7768	9	8722	12	3903	15	1051	13
	Rh	45	8039	15	8630	10	1488	6	9571	10	6187	7	422	13
	Pd	46	6153.59	0.15	9864	14	-4976	8	9968	12	3619	6	4362	6
	Ag	47	9184.5	2.7	6484.5	1.4	-12469	5	10363.4	1.8	6051.6	1.7	3288	6
	Cd	48	7323.1	1.8	8186.6	2.8	-20789	5	10613.0	2.8	3302	3	7049.4	1.9
	In	49	10439	9	4524	4	-28815	7	11213	4	5508	4	6101	5
	Sn	50	8632	10	5800	12	-36460	300	11644	14	2841	15	10148	8
	Sb	51	11877	8	1470	8	*	*	12972	7	5967	7	10003	13
	Te	52	10005	7	2559	7	*	*	13649	6	3622	9	15285	7
	I	53	13100	130	-819.5	1.9	*	*	13570	70	5410	100	14447	9
Xe	54	*		810	330	*	*	14120#	420#	*	*	17700	320	
110	Zr	40	4770#	780#	16980#	920#	37190#	600#	5120#	840#	4340#	780#	-8340#	920#
	Nb	41	3590#	560#	13230#	540#	30690#	200#	9930#	450#	7000#	360#	-4130#	540#
	Mo	42	5948	27	15220	530	23782	24	5708	26	4035	26	-4630#	300#
	Tc	43	4823	13	11649	15	16425	10	10441	13	6390	13	-1666	12
	Ru	44	7406	12	13079	13	10278	9	6561	12	3541	12	-1866	13
	Rh	45	5900	18	9382	20	3642	21	11541	20	5896	20	1565	20
	Pd	46	8796.2	1.3	10621	4	-2490	14	7411	14	3396	12	1175	9
	Ag	47	6809.19	0.10	7140.1	1.4	-10008	6	12777.4	1.4	5778.8	1.8	5052	12
	Cd	48	9915.7	1.6	8917.9	1.3	-18119	7	7968.7	2.5	2921.9	2.4	3670.2	1.3
	In	49	8054	12	5255	12	-26010	50	13493	12	5384	12	7582	12
	Sn	50	11282	16	6643	14	-33920	100	8989	16	2586	18	6795	14
	Sb	51	9270	8	2108	10	*	*	15331	8	5927	8	11761	13
	Te	52	12586	8	3268	8	*	*	10926	9	3287	8	11929	8
	I	53	10860	50	40	50	*	*	16030	50	4940	90	15840	50
	Xe	54	13820	320	1530	100	*	*	11440	170	2520#	320#	14260	120
111	Zr	40	2750#	920#	*		39220#	700#	6350#	990#	4600#	920#	*	
	Nb	41	4810#	360#	13280#	670#	33430#	300#	8030#	590#	7340#	500#	-5930#	670#
	Mo	42	3460	27	15090#	200#	26049	13	7390	530	4472	15	-2940#	400#
	Tc	43	6061	14	11762	27	19194	11	8361	16	6604	14	-3830	13
	Ru	44	4784	13	13040	13	12470	10	8208	13	4002	13	-374	14
	Rh	45	7547	19	9523	11	6086	8	9143	11	6219	11	-738	11
	Pd	46	5726.3	0.4	10447	18	-47	5	9724	4	3909	14	3319	9
	Ag	47	8829.8	1.9	7173.7	1.5	-7380	9	10101.2	1.9	6172.1	1.9	2462	14
	Cd	48	6975.63	0.17	9084.3	1.3	-15666	6	10177.6	1.3	3217.7	2.5	5917.7	1.2
	In	49	9991	12	5331	4	-23437	6	10824	4	5726	4	4862	4
	Sn	50	8169	15	6758	13	-31550	90	11259	7	3044	10	8959	5
	Sb	51	11458	11	2284	16	*	*	12505	12	6097	10	8930	12
	Te	52	9429	9	3427	9	*	*	13374	8	3722	8	14129	8
	I	53	12560	50	13	8	*	*	13472	6	5692	7	13138	7
	Xe	54	10550	130	1220	100	*	*	13990	90	3120	120	17040	90

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q(2 β^-)		Q(ϵp)		Q($\beta^- n$)	
109	Y	39	6980#	860#	*	*	*	23420#	880#	*	10080#	810#		
	Zr	40	8070#	590#	31870#	860#	-10010#	710#	20480#	500#	*	5280#	500#	
	Nb	41	9040	530	28830#	730#	-8220#	730#	17660	530	-26610#	800#	6070	530
	Mo	42	10257	14	26980#	300#	-7626	16	14064	15	-22610#	400#	1177	14
	Tc	43	11675	12	25139	13	-6794	10	10719	10	-22024	13	1307	12
	Ru	44	13018	12	22756	13	-5818	13	6870	9	-17263	13	-3776	17
	Rh	45	14279	13	20830	10	-5130	40	3720	4	-16368	10	-3547	4
	Pd	46	15376.7	1.6	18324	9	-4099.0	2.8	897.7	1.8	-11236	9	-8071.3	2.6
	Ag	47	16455.9	2.7	16434	12	-3294.2	2.8	-2232	4	-10977	14	-7538.6	1.5
	Cd	48	17656.7	2.3	14709.8	2.0	-2511.5	1.9	-5873	8	-6269.0	1.8	-12456	9
	In	49	19066	12	12659	5	-1842	6	-10237	7	-6170	5	-12489	7
	Sn	50	20261	10	10219	8	-722	8	-14916	9	-667	8	-18257	10
	Sb	51	21740	7	7265	12	965	12	-18578	8	580	10	-18541	8
	Te	52	23320	70	3781	7	3198	6	-21550	300	7066	7	-23140	130
	I	53	24240#	300#	1598	7	3918	21	*	*	7483	8	*	*
	Xe	54	*	*	210	310	4217	7	*	*	12320	300	*	*
110	Zr	40	7680#	720#	*	-10520#	850#	21660#	600#	*	5660#	800#		
	Nb	41	8730#	200#	29420#	630#	-8510#	540#	18900#	200#	-26220#	730#	6470#	200#
	Mo	42	9929	26	27770#	400#	-8070#	200#	15521	26	-25650#	500#	1660	26
	Tc	43	11254	12	26064	13	-7258	10	11797	20	-21700	530	1633	13
	Ru	44	12554	12	23886	13	-6355	13	8261	9	-20687	14	-3142	10
	Rh	45	13940	23	21486	20	-5479	22	4629	18	-15837	20	-3294	18
	Pd	46	14949.8	1.3	19250	9	-4434	5	2017.2	0.5	-14884	9	-7683.0	1.4
	Ag	47	15993.7	2.7	17004	14	-3521	6	-987	12	-9747	4	-7024.7	1.8
	Cd	48	17238.8	1.2	15402.3	1.2	-2866.3	1.2	-4507	14	-10031.1	1.2	-11932	4
	In	49	18493	14	13442	12	-1953	12	-9021	13	-5040	12	-11911	14
	Sn	50	19915	15	11167	14	-1135	14	-13612	15	-4627	14	-17662	15
	Sb	51	21147	8	7908	10	733	14	-16990	50	1749	7	-17806	7
	Te	52	22591	9	4738	8	2699	8	-20310	100	3112	10	-22628	9
	I	53	23960	140	2600	50	3580	50	*	*	8500	50	-22370	300
	Xe	54	*	*	710	100	3875	11	*	*	8510	100	*	*
	111	Zr	40	7510#	860#	*	-11090#	990#	22380#	700#	*	6510#	730#	
Nb		41	8400#	600#	30250#	760#	-8940#	590#	20150#	300#	*	7600#	300#	
Mo		42	9408	17	28320#	500#	-8090#	300#	16846	15	-24340#	600#	3023	15
Tc		43	10884	14	26980	530	-7727	13	13282	13	-24180#	200#	2977	13
Ru		44	12189	13	24689	15	-6650	14	9203	10	-19523	26	-2026	20
Rh		45	13447	8	22602	12	-5982	11	5912	7	-18561	12	-2044	7
Pd		46	14522.5	1.3	19828	9	-4551	9	3266.6	0.7	-13205	9	-6600.1	1.4
Ag		47	15639.0	1.9	17794	4	-3777	12	175	4	-12676	18	-5938.8	1.4
Cd		48	16891.4	1.6	16224.4	1.2	-3305.5	1.3	-3314	5	-8210.5	0.6	-10854	12
In		49	18045.6	2.7	14249	4	-2409	4	-7554	10	-8222	4	-10620	14
Sn		50	19451	10	12013	6	-1374	6	-12352	8	-2880	5	-16561	8
Sb		51	20728	10	8927	10	303	14	-15883	10	-1655	15	-16678	11
Te		52	22015	8	5535	10	2500	8	-19190	90	4966	15	-21190	50
I		53	23423	7	3281	7	3274	5	*	*	5207	8	-21110	100
Xe		54	24370	310	1260	90	3720	50	*	*	10550	90	*	*

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	El.	Z	S(n)	S(p)	$Q(4\beta^-)$	$Q(d,\alpha)$	$Q(p,\alpha)$	$Q(n,\alpha)$						
112	Zr	40	4320#	990#	*	41820#	700#	*	4250#	990#	*			
	Nb	41	3470#	420#	14000#	760#	35460#	300#	9320#	670#	6780#	590#	-5430#	760#
	Mo	42	5600#	200#	15880#	360#	28860#	200#	5380#	280#	4020#	560#	-5630#	540#
	Tc	43	4304	12	12606	14	21329	6	10005	25	6281	13	-2990	530
	Ru	44	6917	13	13895	14	14947	10	6115	13	3516	13	-3310	15
	Rh	45	5500	40	10240	50	8260	40	11050	40	5870	40	190	50
	Pd	46	8407	7	11306	9	2334	7	7218	19	3542	8	61	11
	Ag	47	6438.8	2.9	7886.2	2.6	-4985	18	12458.6	2.5	5887.0	2.7	4063	5
	Cd	48	9394.04	0.29	9648.5	1.4	-13008	8	7592.8	1.3	3008.1	1.3	2677.2	1.2
	In	49	7671	6	6027	4	-20928	11	13068	4	5377	5	6375	4
	Sn	50	10788	5	7554	4	-28630	8	8526	12	2696	4	5494.8	1.6
	Sb	51	8834	20	2948	19	-35310	90	14954	23	5896	20	10535	18
	Te	52	12051	11	4020	12	*		10593	10	3548	10	10710	12
	I	53	10181	11	765	12	*		15877	12	5516	11	14834	12
	Xe	54	13710	90	2362	10	*		11150	50	2511	7	13335	9
Cs	55	*		-816	4	*		16340	130	4750	310	17030	90	
113	Nb	41	4310#	500#	13990#	810#	38260#	400#	7760#	810#	7240#	720#	*	
	Mo	42	3380#	360#	15780#	420#	30820#	300#	6820#	420#	4230#	360#	-4240#	670#
	Tc	43	5628	7	12640#	200#	24215	17	7837	13	6602	25	-5030#	200#
	Ru	44	4310	40	13900	40	17170	40	7860	40	4030	40	-1670	40
	Rh	45	7110	40	10428	12	10598	7	8726	12	6167	11	-2089	12
	Pd	46	5341	9	11150	40	4737	7	9424	10	4102	19	2126	11
	Ag	47	8514	17	7994	18	-2610	24	9671	17	6169	17	1449	24
	Cd	48	6538.8	0.5	9748.5	2.5	-10696	28	9883.8	1.5	3278.6	1.3	4934.7	0.7
	In	49	9446	4	6079.0	0.9	-18246	8	10598.1	0.9	5847.0	0.9	3738.3	1.5
	Sn	50	7743.6	1.6	7626	5	-26125	7	10773	4	3007	12	7666.9	1.6
	Sb	51	10889	25	3050	17	-32653	19	12233	18	6289	22	7700	21
	Te	52	8851	29	4040	30	*		13201	29	3967	29	13140	30
	I	53	12127	13	841	12	*		13179	10	5974	10	11977	10
	Xe	54	10249	11	2429	12	*		13461	8	3120	50	15673	9
	Cs	55	13550	90	-973.5	2.6	*		13340	90	5020	100	14350	50
114	Nb	41	2950#	640#	*		40330#	510#	9130#	860#	7040#	860#	*	
	Mo	42	5110#	420#	16590#	500#	33680#	300#	5180#	420#	3930#	420#	-6600#	760#
	Tc	43	4030#	100#	13290#	320#	26160#	100#	9410#	220#	6030#	100#	-4250#	320#
	Ru	44	6420	40	14699	5	19793	4	5744	7	3665	11	-4638	13
	Rh	45	5020	70	11130	80	12850	70	10630	70	5930	70	-1040	70
	Pd	46	7971	10	12012	10	7066	7	6950	40	3678	10	-1062	12
	Ag	47	5975	17	8628	8	-435	22	12102	8	5920	5	3020	8
	Cd	48	9042.91	0.14	10277	17	-8126	28	7279.7	2.5	3065.5	1.5	1618.1	0.8
	In	49	7273.89	0.27	6814.1	0.8	-15770#	300#	12718.2	0.9	5548.7	1.0	5294.3	1.7
	Sn	50	10300.4	1.7	8480.5	0.7	-23471	11	8145	4	2698	3	4342.1	1.1
	Sb	51	8150	28	3456	22	-29810	70	14871	22	6308	22	9542	22
	Te	52	11610	40	4760	30	-35930	110	10420	30	3812	29	9697	28
	I	53	9750#	300#	1740#	300#	*		15480#	300#	5660#	300#	13690#	300#
	Xe	54	12954	13	3255	14	*		10688	15	2732	12	12148	13
	Cs	55	10990	70	-230	70	*		16050	70	4570	110	15920	70
Ba	56	*		1480	110	*		11040	140	*		14080	140	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\varepsilon p)$		$Q(\beta^- n)$	
112	Zr	40	7070#	920#	*	*			23650#	730#	*		6990#	760#
	Nb	41	8280#	360#	*		-9400#	670#	20980#	300#	*		7590#	300#
	Mo	42	9060#	200#	29160#	630#	-8540#	450#	18170#	200#	-27190#	730#	3490#	200#
	Tc	43	10365	11	27700#	200#	-8134	10	14480	40	-23670#	300#	3457	11
	Ru	44	11701	13	25658	26	-7291	14	10693	12	-22980	15	-1395	12
	Rh	45	13050	50	23280	50	-6240	40	6850	40	-18000	50	-1820	40
	Pd	46	14133	7	20829	11	-5087	11	4254	7	-16828	12	-6177	7
	Ag	47	15268.6	2.8	18333	18	-3977	14	1407	5	-11568	7	-5402.0	2.5
	Cd	48	16369.7	0.3	16822.2	0.6	-3476.4	1.2	-1919.82	0.16	-11878.3	0.7	-10256	4
	In	49	17663	12	15111	4	-2809	5	-6392	18	-7064	4	-10123	7
	Sn	50	18957	14	12885.2	0.4	-1828.4	1.2	-11088	8	-6691.9	0.3	-15891	9
	Sb	51	20292	19	9706	21	96	20	-14536	21	-497	18	-16083	19
	Te	52	21480	11	6303	16	2078	10	-17541	12	1083	10	-20685	10
	I	53	22740	50	4192	12	2957	12	-20780	90	6484	14	-20740	90
	Xe	54	24250	100	2375	11	3330	6	*		6272	10	*	
	Cs	55	*		400	100	3930	120	*		11380	90	*	
113	Nb	41	7780#	500#	*		-9740#	810#	22300#	400#	*		8880#	450#
	Mo	42	8970#	300#	29790#	760#	-9000#	590#	19100#	300#	-26250#	760#	4420#	300#
	Tc	43	9932	11	28510#	300#	-8620	530	15956	8	-25830#	300#	4746	10
	Ru	44	11230	40	26510	40	-7620	40	11720	40	-21700#	200#	-210	60
	Rh	45	12606	10	24323	13	-6912	12	8259	18	-20802	9	-517	10
	Pd	46	13747	7	21386	12	-5280	11	5452	7	-15252	12	-5079	7
	Ag	47	14953	17	19300	18	-4452	17	2339	17	-14580	50	-4522	17
	Cd	48	15932.8	0.6	17634.7	0.8	-3861.5	1.2	-715.0	1.6	-10010	7	-9123	4
	In	49	17118	3	15727.5	1.7	-3070.9	1.5	-4949	17	-10071.1	2.6	-8781.1	0.9
	Sn	50	18531	6	13653.1	1.6	-2248.8	2.2	-9981	28	-5041.4	1.6	-14801	18
	Sb	51	19723	19	10604	18	-354	18	-13298	19	-3715	18	-14921	19
	Te	52	20902	29	6985	28	1859	29	-16143	29	3020	28	-19355	30
	I	53	22308	9	4861	12	2707	10	-19356	12	3190	20	-19164	12
	Xe	54	23950	90	3194	9	3087	8	*		8075	11	-23990	90
	Cs	55	*		1388	10	3484	7	*		8010	13	*	
	114	Nb	41	7260#	590#	*		*		23380#	510#	*		9310#
Mo		42	8490#	360#	30570#	760#	-9350#	670#	20420#	300#	*		4930#	300#
Tc		43	9660#	100#	29070#	320#	-9060#	220#	16950#	120#	-25550#	410#	5030#	110#
Ru		44	10736	10	27340#	200#	-8098	25	13269	8	-24740#	300#	474	8
Rh		45	12120	80	25040	70	-7110	70	9220	70	-20190	70	-190	70
Pd		46	13312	9	22440	12	-5845	11	6524	7	-18910	40	-4536	18
Ag		47	14490	5	19780	40	-4527	18	3638	5	-13452	8	-3959	5
Cd		48	15581.7	0.5	18271	7	-4108.2	0.7	542.5	0.9	-13713	7	-8720.3	0.8
In		49	16720	4	16562.6	2.6	-3535.6	1.5	-4073	22	-8831	17	-8311.5	1.7
Sn		50	18044.0	1.0	14559.5	1.0	-2633.5	1.1	-8669	28	-8803.1	0.9	-14212	17
Sb		51	19039	28	11083	22	-450	25	-11700#	300#	-2419	22	-14220	40
Te		52	20464	29	7811	28	1530	30	-14800	30	-849	28	-18840	29
I		53	21880#	300#	5780#	300#	2230#	300#	-18110#	310#	4330#	300#	-18660#	300#
Xe		54	23202	14	4096	14	2719	13	-21130	110	3970	30	-23393	14
Cs		55	24540	110	2200	70	3360	50	*		9150	70	*	
Ba		56	*		510	110	3530	40	*		8960	110	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)	S(p)	$Q(4\beta^-)$		$Q(d,\alpha)$		$Q(p,\alpha)$		$Q(n,\alpha)$			
115	Nb	41	4040#	710#	*	42880#	500#	*	7320#	860#	*			
	Mo	42	3010#	500#	16650#	640#	35680#	400#	6470#	570#	4390#	500#	-5290#	810#
	Tc	43	5210#	220#	13390#	360#	29070#	200#	7570#	360#	6420#	280#	-5990#	360#
	Ru	44	4150	70	14830#	120#	21780	70	7220	70	3820	70	-3190#	210#
	Rh	45	6590	70	11296	8	15307	7	8350	40	6263	12	-3328	9
	Pd	46	5007	15	12000	70	9607	14	9052	15	4170	50	849	17
	Ag	47	8123	19	8780	20	2021	24	9319	20	6203	19	400	50
	Cd	48	6140.9	0.6	10443	5	-6022	28	9653	17	3363.4	2.5	3884	7
	In	49	9039.3	0.9	6810.5	0.4	-13199	29	10217.7	0.4	5903.5	0.6	2693.8	2.4
	Sn	50	7547.8	1.0	8754.4	0.9	-21377	12	10042.8	0.9	2821	4	6188.4	0.6
	Sb	51	10579	27	3735	16	-27300#	300#	12036	16	6517	16	6634	17
	Te	52	8250	40	4860	40	-33040#	500#	13070	30	4400	30	12240	28
	I	53	11610#	300#	1740	40	*		12720	40	6090	30	10910	30
	Xe	54	9642	16	3150#	300#	*		13174	15	3271	16	14557	15
Cs	55	13090#	310#	-100#	300#	*		13220#	300#	5190#	300#	13010#	300#	
Ba	56	11140#	520#	1630#	510#	*		13450#	500#	2130#	510#	16650#	500#	
116	Mo	42	4820#	640#	17440#	710#	38330#	500#	4600#	710#	3880#	640#	*	
	Tc	43	3620#	360#	14000#	500#	31090#	300#	9060#	420#	6180#	420#	-5300#	500#
	Ru	44	5840	70	15450#	200#	24644	4	5410#	100#	3607	5	-5650#	300#
	Rh	45	4580	70	11720	100	17510	70	10190	70	6000	80	-2280	70
	Pd	46	7477	15	12892	10	11694	7	6590	70	3800	10	-2320	40
	Ag	47	5631	19	9405	14	4279	6	11659	8	5913	8	1871	8
	Cd	48	8699.5	0.7	11019	18	-3444	28	6929	5	3178	17	525	7
	In	49	6784.72	0.22	7454.3	0.7	-10760	100	12475.9	0.5	5657.6	0.5	4423	17
	Sn	50	9563.48	0.09	9278.62	0.10	-18479	13	7753.2	0.9	2703.9	0.9	3163.7	0.4
	Sb	51	7890	17	4077	5	-24760#	100#	14446	5	6371	5	8191	5
	Te	52	11280	40	5550	30	-30570#	300#	9940	40	4010	30	8706	28
	I	53	9230	100	2720	100	-36790#	240#	15110	100	5720	100	12570	100
	Xe	54	12461	18	4000	30	*		10460#	300#	2937	15	10950	30
	Cs	55	10430#	320#	700#	100#	*		15730#	100#	5010#	100#	14700#	100#
Ba	56	13740#	590#	2290#	420#	*		10700#	310#	1930#	300#	13150#	300#	
La	57	*		-1030#	550#	*		15970#	240#	*		16710#	220#	
117	Mo	42	2740#	710#	*	40260#	500#	5900#	710#	4080#	710#	*		
	Tc	43	5000#	500#	14170#	640#	33800#	400#	7080#	570#	6290#	500#	-7350#	640#
	Ru	44	3520	590	15350#	660#	26900	590	7100#	620#	4110#	590#	-4070#	660#
	Rh	45	6230	70	12118	10	20045	10	8120	70	6188	9	-4480#	100#
	Pd	46	4664	10	12970	70	13973	7	8515	10	4150	70	-556	8
	Ag	47	7711	14	9639	15	6458	16	8955	19	6173	15	-820	70
	Cd	48	5777.2	1.0	11165	3	-1323	13	9275	18	3376	5	2719	7
	In	49	8765	5	7519	5	-8507	27	9852	5	5936	5	1634	7
	Sn	50	6943.1	0.5	9437.0	0.5	-16212	10	9849.4	0.5	3034.7	1.0	5263.5	0.6
	Sb	51	9889	10	4403	8	-22150	60	12105	8	6782	8	5575	8
	Te	52	7900	30	5563	14	-27470	190	12619	21	4264	26	11108	13
	I	53	11020	100	2460	40	-33850#	300#	12340	40	6320	40	9710	30
	Xe	54	9210	17	3980	100	*		12860	30	3480#	300#	13350	30
	Cs	55	12500#	120#	740	60	*		12870	60	5460	60	11950#	310#
Ba	56	11000#	360#	2850#	220#	*		12790#	360#	1920	210	15110	190	
La	57	13960#	370#	-820	3	*		13150#	590#	4240#	320#	13740#	310#	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\epsilon p)$		$Q(\beta^-n)$	
115	Nb	41	6990#	640#	*	*	*	24550#	540#	*	10380#	590#		
	Mo	42	8120#	500#	*		-9610#	810#	21560#	410#	*	5950#	410#	
	Tc	43	9240#	200#	29980#	450#	-9460#	360#	18320#	200#	-27810#	540#	6240#	200#
	Ru	44	10580	80	28110#	310#	-8790	70	14120	70	-23790#	310#	1340	100
	Rh	45	11604	10	25996	8	-7632	13	10753	20	-22750#	100#	1191	10
	Pd	46	12978	15	23130	40	-6068	17	7658	14	-17494	14	-3567	14
	Ag	47	14099	25	20793	20	-5103	20	4554	18	-16560	70	-3039	18
	Cd	48	15183.8	0.6	19071	7	-4522.8	1.0	1949.4	0.7	-11882	7	-7587.3	1.0
	In	49	16313.2	0.9	17087	17	-3745.0	1.5	-2533	16	-11895	5	-7050.3	1.0
	Sn	50	17848.2	1.6	15568.5	0.4	-3205.7	0.6	-7971	28	-7308.0	0.4	-13610	22
	Sb	51	18729	24	12216	16	-1037	16	-10670	30	-5724	16	-13190	30
	Te	52	19860	40	8312	28	1452	28	-13410	30	1206	28	-17340#	300#
	I	53	21361	30	6500	30	2070	30	-16640#	300#	870	40	-17320	30
	Xe	54	22596	14	4890	30	2506	14	-19630#	500#	5940	30	-22050	70
	Cs	55	24080#	300#	3160#	300#	2830#	300#	*	*	5810#	420#	-21810#	320#
	Ba	56	*		1400#	500#	2940#	510#	*	*	10770#	500#	*	*
116	Mo	42	7840#	580#	*		-10110#	860#	22570#	500#	*	6340#	540#	
	Tc	43	8830#	320#	30650#	590#	-9610#	420#	19280#	310#	-27390#	590#	6780#	310#
	Ru	44	9990	5	28840#	300#	-9030#	200#	15763	8	-26610#	400#	2089	8
	Rh	45	11170	100	26550#	120#	-7910	70	11800	70	-22120#	210#	1620	70
	Pd	46	12483	10	24188	8	-6628	12	8881	7	-20820	70	-2921	20
	Ag	47	13754	6	21410	70	-5230	40	5707	3	-15602	8	-2530	3
	Cd	48	14840.3	0.4	19799	7	-4816	7	2813.44	0.13	-15575	14	-7247.53	0.16
	In	49	15824.0	0.9	17897	5	-4090.9	2.4	-1428	5	-10556	18	-6287.23	0.22
	Sn	50	17111.3	1.0	16089.1	0.4	-3375.1	0.6	-6257	28	-10730.6	0.7	-12594	16
	Sb	51	18469	22	12831	5	-1255	7	-9330	100	-4574	5	-12830	28
	Te	52	19520	40	9290	28	962	28	-12220	30	-2524	28	-17000	40
	I	53	20840#	310#	7570	100	1680	100	-15430#	140#	2220	100	-16910	100
	Xe	54	22103	17	5740	30	2096	16	-18350#	300#	1730	30	-21420#	300#
	Cs	55	23520#	120#	3840#	320#	2580#	100#	-21360#	240#	6990#	100#	-21110#	510#
	Ba	56	24880#	320#	2190#	300#	2900#	300#	*	*	6670#	300#	*	*
	La	57	*		600#	230#	3160#	200#	*	*	11710#	370#	*	*
117	Mo	42	7560#	640#	*		*	23350#	770#	*	7210#	580#		
	Tc	43	8620#	450#	31610#	640#	-10300#	570#	20520#	400#	*	7620#	400#	
	Ru	44	9360	590	29350#	710#	-9180#	660#	16910	590	-25310#	770#	3150	590
	Rh	45	10811	11	27570#	200#	-8511	10	13284	16	-24730#	300#	2863	11
	Pd	46	12141	15	24700	70	-6980	40	9994	7	-19645	8	-1953	8
	Ag	47	13342	23	22531	15	-5839	15	6761	14	-18730	70	-1541	14
	Cd	48	14476.7	1.2	20570	14	-5252	7	3979.3	1.1	-13876	7	-6240.0	1.0
	In	49	15549	5	18538	19	-4341	17	-304	10	-13689	6	-5488	5
	Sn	50	16506.6	0.5	16891.3	0.9	-3779.4	0.6	-5302	13	-8974.2	0.5	-11647	5
	Sb	51	17779	18	13681	8	-1699	8	-8203	27	-7679	8	-11442	29
	Te	52	19180	30	9640	13	808	14	-10910	17	-858	13	-15670	100
	I	53	20240	40	8010	30	1560	30	-13940	70	-903	27	-15461	29
	Xe	54	21671	16	6701	30	1737	30	-16560	190	3795	30	-20190#	100#
	Cs	55	22940#	310#	4730	70	2200	60	-19910#	310#	3710	110	-19870#	310#
	Ba	56	24740#	540#	3540	190	2160	190	*	*	8140	190	-24990#	290#
	La	57	*		1470#	420#	2750#	300#	*	*	8190#	320#	*	*

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)	S(p)	$Q(4\beta^-)$	$Q(d,\alpha)$	$Q(p,\alpha)$	$Q(n,\alpha)$						
118	Tc	43	3480#	570#	14910#	640#	35760#	400#	8420#	640#	5820#	570#	-6790#	640#
	Ru	44	5810#	660#	16170#	500#	29440#	300#	4910#	420#	3510#	360#	-6860#	500#
	Rh	45	4061	26	12660	590	22341	25	9892	25	6280	70	-3330#	200#
	Pd	46	7036	8	13780	9	16264.0	2.5	6060	70	3704	8	-3440	70
	Ag	47	5443	14	10418	8	8442	4	10989	8	5737	14	322	8
	Cd	48	8355	20	11809	24	995	27	6552	20	3145	27	-629	24
	In	49	6356	6	8099	8	-6257	21	12195	8	5720	8	3401	20
	Sn	50	9326.42	0.13	9999	5	-13574	10	7307.7	0.5	2747.5	0.5	2077.9	0.9
	Sb	51	7428	9	4887.4	3.0	-19587	13	14241	3	6902	3	7186	3
	Te	52	10673	23	6346	20	-25340#	200#	9836	19	4171	24	7983	18
	I	53	8610	30	3165	24	-31350#	300#	15010	30	5960	30	11679	25
	Xe	54	11965	15	4932	28	*	*	10120	100	3120	30	9630	30
	Cs	55	9990	60	1513	16	*	*	15348	18	5111	18	13570	30
	Ba	56	12800#	270#	3150#	210#	*	*	10420#	220#	2210#	360#	11950#	200#
	La	57	11100#	420#	-710#	360#	*	*	15790#	420#	4270#	590#	15730#	420#
119	Tc	43	4650#	640#	*	*	38280#	500#	6510#	710#	5990#	710#	*	*
	Ru	44	3380#	420#	16060#	500#	31410#	300#	6530#	500#	3760#	420#	-5420#	580#
	Rh	45	6006	26	12850#	300#	24877	12	7410	590	6110	10	-5720#	300#
	Pd	46	4091	9	13809	26	18657	8	8200	12	4190	70	-1693	9
	Ag	47	7163	15	10546	15	10828	17	8490	16	6050	16	-2260	70
	Cd	48	5350	40	11710	40	3200	40	8920	40	3430	40	1500	40
	In	49	8543	8	8287	21	-3934	29	9430	7	5877	7	490	8
	Sn	50	6483.5	0.5	10126	8	-11271	10	9589	5	3048.7	0.8	4293.9	0.7
	Sb	51	9549	8	5110	8	-17169	16	11634	8	6916	8	4422	8
	Te	52	7556	20	6474	8	-22590	200	12169	12	4504	9	9991	8
	I	53	10870	30	3360	30	-28800#	300#	12040	30	6370	40	8703	28
	Xe	54	8787	15	5112	22	-34740#	500#	12352	28	3560	100	12121	30
	Cs	55	11967	19	1515	17	*	*	12591	17	5606	19	10830	100
	Ba	56	10310#	280#	3470	200	*	*	12610	210	2340#	220#	14100	200
	La	57	13420#	420#	-100#	360#	*	*	13370#	360#	4590#	420#	12740#	320#
Ce	58	*	*	1720#	590#	*	*	13250#	590#	1520#	550#	16290#	590#	
120	Tc	43	3220#	710#	*	*	40130#	500#	*	*	5520#	710#	*	*
	Ru	44	5520#	500#	16930#	640#	33950#	400#	4490#	570#	3230#	570#	-8200#	640#
	Rh	45	4060#	200#	13540#	360#	26910#	200#	9160#	360#	5570#	620#	-4790#	450#
	Pd	46	6943	8	14746	10	20818.4	2.2	5318	24	3481	9	-5110	590
	Ag	47	5077	15	11532	9	12766	8	10448	5	5637	9	-1108	10
	Cd	48	8050	40	12601	15	5411	5	6307	4	3089	14	-1886	8
	In	49	6100	40	9040	50	-1980	40	11680	40	5550	40	2100	40
	Sn	50	9104.8	1.1	10688	7	-8926	12	6840	8	2709	5	966.3	1.4
	Sb	51	7015	11	5642	7	-14529	12	13946	7	6844	7	6171	9
	Te	52	10258	9	7183	8	-20480	300	9339	4	4135	9	6676	3
	I	53	8060	30	3861	17	-26070#	300#	14654	24	6206	20	10533	17
	Xe	54	11449	16	5700	30	-32380#	500#	9509	23	3128	29	8569	18
	Cs	55	9655	17	2383	14	*	*	14901	14	5161	14	12194	28
	Ba	56	12370	360	3870	300	*	*	10230	300	2470	310	10940	300
	La	57	10790#	420#	390#	360#	*	*	15380#	360#	4800#	360#	14450#	310#
Ce	58	13820#	710#	2120#	590#	*	*	10530#	590#	1660#	590#	13470#	540#	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q($2\beta^-$)		Q(ϵp)		Q($\beta^- n$)	
118	Tc	43	8480#	500#	*		-10830#	640#	21100#	400#	*		7660#	710#
	Ru	44	9330#	300#	30340#	580#	-9880#	420#	18130#	300#	-28380#	580#	3570#	300#
	Rh	45	10290	70	28010#	300#	-8550#	100#	14666	24	-23800#	400#	3466	25
	Pd	46	11700	7	25898	4	-7592	4	11313	20	-23160	590	-1278	14
	Ag	47	13154	4	23390	70	-6270	70	7674	8	-17945	9	-1206.6	2.7
	Cd	48	14132	20	21448	21	-5635	21	4951	20	-17566	21	-5830	21
	In	49	15121	8	19264	8	-4722	9	768	8	-12335	16	-4902	8
	Sn	50	16269.5	0.5	17518.3	0.5	-4063.0	0.6	-3956	18	-12523.4	1.1	-11085	8
	Sb	51	17317	6	14324	3	-1853	3	-7025	20	-6342	6	-10972	14
	Te	52	18570	30	10749	18	436	19	-9618	21	-4588	18	-15330	30
	I	53	19620	100	8727	20	1100	29	-12562	24	380	21	-14857	22
	Xe	54	21175	17	7388	30	1385	30	-15730#	200#	-273	17	-19660	60
	Cs	55	22490#	100#	5500	100	1960#	300#	-18790#	300#	4738	29	-18860	190
	Ba	56	23800#	360#	3890#	200#	2310#	200#	*		4540#	200#	-23840#	360#
La	57	25060#	370#	2140#	320#	2640#	310#	*		9580#	310#	*		
119	Tc	43	8130#	640#	*		-11440#	710#	22450#	500#	*		8820#	590#
	Ru	44	9190#	660#	30970#	580#	-10240#	500#	18840#	300#	*		4250#	300#
	Rh	45	10068	13	29020#	400#	-9340#	200#	15823	17	-26320#	400#	4495	10
	Pd	46	11126	11	26470	590	-7530	70	12570	40	-21440#	300#	74	9
	Ag	47	12606	20	24326	17	-6841	16	9054	16	-21047	28	-15	25
	Cd	48	13700	40	22130	40	-5980	40	6090	40	-15880	40	-4820	40
	In	49	14899	6	20095	15	-5142	20	1775	11	-15435	8	-4118	7
	Sn	50	15809.9	0.6	18224.5	1.2	-4405.6	1.0	-2884	8	-10652	20	-10140	3
	Sb	51	16977	11	15109	9	-2363	8	-5709	29	-9535	11	-9849	20
	Te	52	18228	16	11361	8	428	8	-8387	13	-2817	8	-14281	21
	I	53	19470	40	9704	29	810	30	-11460	30	-3058	28	-13758	30
	Xe	54	20752	15	8277	17	843	30	-14200	200	1613	21	-18456	16
	Cs	55	21950	60	6447	30	1610	30	-17340#	300#	1377	24	-18020#	200#
	Ba	56	23110	280	4980	200	1640	200	-20540#	540#	6200	200	-23040#	360#
La	57	24520#	420#	3050#	310#	2310#	420#	*		6150#	300#	*		
Ce	58	*		1010#	540#	2550#	710#	*		11020#	540#	*		
120	Tc	43	7870#	640#	*		*		23300#	540#	*		8980#	590#
	Ru	44	8900#	500#	*		-10940#	640#	20270#	400#	*		4740#	400#
	Rh	45	10070#	200#	29600#	450#	-9780#	360#	16840#	200#	-25730#	540#	4520#	200#
	Pd	46	11034	3	27600#	300#	-8636	4	13677	4	-25010#	300#	294	15
	Ag	47	12240	5	25342	25	-7340	70	10080	40	-20118	10	250	40
	Cd	48	13398	20	23146	4	-6550	8	7141	4	-19838	9	-4329	8
	In	49	14640	40	20750	40	-5610	40	2690	40	-14370	40	-3730	40
	Sn	50	15588.3	1.0	18975	20	-4811.0	0.9	-1730	3	-14410	40	-9696	8
	Sb	51	16564	8	15768	11	-2593	7	-4665	17	-8007	10	-9308	11
	Te	52	17814	18	12293	3	-267	3	-7196	12	-6592	3	-13674	28
	I	53	18925	25	10335	16	644	16	-9865	18	-1568	17	-13030	19
	Xe	54	20236	16	9054	22	670	30	-13280	300	-2280	14	-17939	18
	Cs	55	21622	16	7496	22	1180	100	-16200#	300#	2588	30	-17370	200
	Ba	56	22680#	360#	5390	300	1730	300	-19090#	590#	2620	300	-21990#	420#
La	57	24210#	420#	3860#	300#	1950#	320#	*		7330#	300#	-21710#	590#	
Ce	58	*		2020#	540#	2480#	590#	*		7500#	540#	*		

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)	S(p)	$Q(4\beta^-)$	$Q(d,\alpha)$	$Q(p,\alpha)$	$Q(n,\alpha)$						
121	Ru	44	3110#	570#	16820#	640#	36030#	400#	6040#	640#	3610#	570#	*	
	Rh	45	5690#	360#	13710#	500#	29410#	300#	6850#	420#	5690#	420#	-6990#	500#
	Pd	46	3973	4	14660#	200#	23015	3	7351	10	3569	24	-3280#	300#
	Ag	47	6823	13	11412	12	15196	12	7716	15	5850	12	-3869	27
	Cd	48	5188	4	12711	5	7470	26	8283	15	3344	3	-39	3
	In	49	8180	50	9168	28	415	28	8850	50	5730	30	-636	28
	Sn	50	6170.2	0.3	10760	40	-6717	10	9213	7	2895	8	3151	20
	Sb	51	9252	8	5789.0	2.9	-12496	15	11177.3	2.9	6918.4	2.8	3276	8
	Te	52	7247	26	7415	27	-17800	140	11641	27	4316	26	8755	26
	I	53	10570	16	4172	4	-23980#	300#	11640	10	6309	19	7391	6
	Xe	54	8380	16	6017	18	-29710#	400#	11995	30	3354	22	10862	21
	Cs	55	11285	17	2219	19	-35480#	500#	12403	18	5841	18	9515	24
	Ba	56	9930	330	4150	140	*	*	12270	140	2530	140	12980	140
	La	57	12650#	420#	670#	420#	*	*	13030#	360#	4950#	360#	11790#	300#
	Ce	58	11040#	640#	2370#	500#	*	*	12910#	500#	1720#	500#	15230#	450#
	Pr	59	*	*	-890	10	*	*	13140#	710#	*	*	13650#	590#
	122	Ru	44	5440#	640#	*	*	38200#	500#	3820#	710#	2820#	710#	*
Rh		45	3810#	420#	14420#	500#	31400#	300#	8550#	500#	5260#	420#	-6160#	590#
Pd		46	6505	20	15480#	300#	25325	20	4910#	200#	3071	22	-6410#	300#
Ag		47	4770	40	12210	40	17230	40	9880	40	5170	40	-2640	40
Cd		48	7610	3	13499	12	9702.1	2.7	5750	5	2897	15	-3558	9
In		49	5810	60	9790	50	2510	50	11100	50	5270	60	720	50
Sn		50	8815.4	2.3	11394	27	-4587	11	6500	40	2622	8	-320	40
Sb		51	6806.37	0.13	6425.1	2.9	-10190	30	13475.8	2.9	6595.5	2.9	5012	8
Te		52	9841	26	8004.8	2.4	-15705	28	8814	7	4024	8	5397.0	1.7
I		53	7900	7	4825	26	-21540#	300#	13999	6	5965	10	9040	9
Xe		54	10945	15	6392	12	-27480#	400#	9109	19	3270	30	7473	14
Cs		55	9110	40	2950	40	-33200#	500#	14740	40	5510	40	11270	40
Ba		56	11940	140	4800	30	*	*	9991	30	2560	30	9832	30
La		57	10340#	420#	1090#	330#	*	*	15060#	420#	4910#	360#	13410#	300#
Ce		58	13180#	570#	2890#	500#	*	*	10530#	500#	1960#	500#	12360#	450#
Pr		59	11400#	710#	-540#	640#	*	*	15560#	710#	3970#	710#	15670#	590#
123		Ru	44	3020#	710#	*	*	40050#	500#	*	*	3020#	710#	*
	Rh	45	5410#	500#	14390#	640#	33920#	400#	6250#	570#	5370#	570#	-8350#	640#
	Pd	46	3870#	200#	15530#	360#	27400#	200#	6720#	360#	3260#	280#	-4760#	450#
	Ag	47	6510	50	12220	40	19680	30	7350	30	5600	30	-5090#	200#
	Cd	48	4873	4	13600	40	11758	3	7699	12	3101	5	-1488	4
	In	49	7930	50	10107	20	4513	20	8354	20	5391	20	-2133	20
	Sn	50	5946.2	1.2	11530	50	-2568	10	8731	27	2780	40	1787	4
	Sb	51	8962.5	2.6	6572.3	3.0	-8181	12	10683.5	2.3	6737.8	2.2	2150	40
	Te	52	6929.01	0.08	8127.5	2.4	-13517	12	11137.2	2.4	4110	7	7572.9	1.7
	I	53	9935	6	4918	3	-19290#	200#	11311	26	6289	4	6121	8
	Xe	54	7965	15	6457	11	-24960#	300#	11714	11	3369	18	9766	10
	Cs	55	10970	40	2978	16	-30710#	400#	12148	16	5993	17	8356	20
	Ba	56	9120	30	4800	40	*	*	12158	19	3098	16	12164	17
	La	57	12180#	360#	1330#	200#	*	*	12810#	240#	5100#	360#	10880#	200#
	Ce	58	10480#	500#	3030#	420#	*	*	12700#	420#	2270#	420#	14250#	420#
	Pr	59	13470#	640#	-250#	570#	*	*	13140#	570#	4320#	640#	13000#	500#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q($2\beta^-$)		Q($\epsilon\beta$)		Q(β^-n)	
121	Ru	44	8630#	500#	*		-11300#	640#	21140#	400#	*		5700#	450#
	Rh	45	9750#	300#	30640#	590#	-10470#	500#	17970#	300#	-28200#	590#	5780#	300#
	Pd	46	10917	9	28200#	300#	-9090	590	14891	4	-23460#	400#	1398	6
	Ag	47	11900	19	26158	15	-7930	15	11433	30	-22880#	200#	1483	13
	Cd	48	13240	40	24244	8	-7074	8	8123.7	2.2	-18083	3	-3420	40
	In	49	14279	28	21770	30	-6080	30	3762	28	-17474	28	-2809	27
	Sn	50	15275.1	1.1	19800	40	-5203.9	1.4	-653	26	-12529	4	-8851	7
	Sb	51	16267	8	16477	8	-3080	6	-3347	6	-11160	40	-8302	4
	Te	52	17506	27	13057	26	-571	26	-6063	28	-4735	26	-12862	30
	I	53	18629	28	11355	9	-37	10	-9149	15	-5123	9	-12151	13
	Xe	54	19829	15	9878	13	190	17	-11740	140	-402	11	-16664	14
	Cs	55	20940	20	7910	30	909	30	-14830#	300#	-638	21	-16290	300
	Ba	56	22300	250	6530	140	1020	140	-17980#	430#	4140	140	-21130#	330#
	La	57	23450#	420#	4540#	300#	1800#	310#	-20650#	590#	4330#	300#	-20540#	590#
	Ce	58	24860#	640#	2760#	450#	2430#	440#	*		8830#	500#	*	
	Pr	59	*		1230#	590#	2540#	590#	*		8780#	590#	*	
122	Ru	44	8540#	640#	*		*		22210#	500#	*		5950#	590#
	Rh	45	9500#	360#	31230#	590#	-10810#	500#	18930#	300#	*		5940#	300#
	Pd	46	10479	20	29180#	400#	-9780#	300#	15996	20	-26860#	400#	1715	23
	Ag	47	11600	40	26870#	200#	-8640	50	12470	60	-21970#	300#	1900	40
	Cd	48	12798	4	24910	3	-7648	3	9329	3	-21719	4	-2848	28
	In	49	13990	60	22500	50	-6440	50	4760	50	-16460	50	-2450	50
	Sn	50	14985.6	2.3	20562	4	-5665	20	372.9	2.7	-16157	3	-8414	4
	Sb	51	16058	8	17180	40	-3530	8	-2253	6	-9786	28	-7861	26
	Te	52	17088.9	2.7	13793.8	1.7	-1086.5	1.6	-4959	11	-8405.9	1.7	-12134	5
	I	53	18470	16	12240	9	-509	6	-7940	30	-3771	6	-11671	11
	Xe	54	19325	16	10565	12	-83	22	-10750	30	-4100	28	-16324	18
	Cs	55	20400	40	8970	40	400	40	-13600#	300#	820	30	-15470	150
	Ba	56	21860	300	7010	30	1045	30	-16740#	400#	583	30	-20410#	300#
	La	57	23000#	420#	5230#	300#	1440#	300#	-19600#	590#	5270#	300#	-19850#	500#
	Ce	58	24220#	640#	3560#	500#	2060#	450#	*		5580#	430#	-24330#	640#
	Pr	59	*		1840#	590#	2250#	590#	*		10040#	590#	*	
123	Ru	44	8460#	640#	*		*		23050#	540#	*		6740#	590#
	Rh	45	9220#	500#	*		-11560#	640#	20040#	400#	*		7040#	400#
	Pd	46	10380#	200#	29950#	450#	-10280#	360#	17000#	200#	-25300#	540#	2620#	200#
	Ag	47	11290	30	27700#	300#	-9150	30	13880	40	-24660#	300#	2990	30
	Cd	48	12483	3	25810	4	-8431	9	10402	4	-20087	20	-1910	50
	In	49	13740	30	23606	23	-7210	25	5794	20	-19610	40	-1560	20
	Sn	50	14761.5	2.4	21321	3	-6260	40	1355.7	2.7	-14493	3	-7554	4
	Sb	51	15768.9	2.6	17967	27	-3950	8	-1281	4	-12940	50	-6981.7	1.6
	Te	52	16771	26	14552.6	1.7	-1532.0	1.7	-3923	10	-6519.6	2.7	-11163	5
	I	53	17835	6	12923	4	-894	9	-6900	13	-6899	4	-10660	12
	Xe	54	18910	14	11282	28	-492	12	-9594	15	-2223	10	-15180	40
	Cs	55	20084	19	9370	13	300	30	-12390#	200#	-2252	13	-14510	30
	Ba	56	21050	140	7752	16	715	16	-15370#	300#	2411	16	-19180#	300#
	La	57	22520#	360#	6130#	200#	1230#	200#	-18310#	450#	2210#	200#	-18850#	450#
	Ce	58	23660#	500#	4120#	330#	1880#	360#	*		7030#	300#	-23410#	590#
	Pr	59	24860#	640#	2650#	500#	2210#	500#	*		6920#	500#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)	S(p)	$Q(4\beta^-)$		$Q(d,\alpha)$		$Q(p,\alpha)$		$Q(n,\alpha)$			
124	Ru	44	5130#	780#	*	42280#	600#	*	*	*	*	*		
	Rh	45	3730#	570#	15100#	640#	35700#	400#	7950#	640#	4740#	570#	*	
	Pd	46	6210#	360#	16330#	500#	29680#	300#	4330#	420#	2740#	420#	-7860#	500#
	Ag	47	4720	250	13070#	320#	21420	250	9130	250	4850	250	-4120#	390#
	Cd	48	7359	4	14440	30	13824	3	5120	40	2565	12	-4873	4
	In	49	5510	40	10750	30	6500	30	10450	30	5070	30	-820	30
	Sn	50	8489.2	2.4	12093	20	-573.2	2.0	6050	50	2466	27	-1514.0	2.2
	Sb	51	6467.50	0.06	7093.6	3.0	-5890	9	13031.3	3.0	6440.5	2.3	3862	27
	Te	52	9424.48	0.09	8589.4	1.6	-11436	13	8519.1	2.4	3937.3	2.4	4318.6	1.7
	I	53	7493	4	5482.6	1.9	-17110	60	13659.5	1.9	6043	26	7879	3
	Xe	54	10484	10	7006	4	-22750#	300#	9130	5	3455	6	6530	26
	Cs	55	8759	15	3772	13	-28580#	400#	14334	14	5614	13	10167	10
	Ba	56	11506	17	5335	17	-34560#	500#	9770	40	2877	19	9038	16
	La	57	9680#	200#	1890	60	*	*	15060	60	5350	150	12490	60
	Ce	58	12700#	420#	3550#	360#	*	*	10340#	420#	2220#	420#	11480#	330#
	Pr	59	10880#	570#	150#	500#	*	*	15430#	570#	4480#	570#	14770#	500#
	Nd	60	*	*	1480#	640#	*	*	11130#	710#	1960#	710#	13890#	640#
125	Rh	45	5110#	640#	15080#	780#	38270#	500#	5870#	710#	5070#	710#	*	*
	Pd	46	3740#	500#	16340#	570#	31670#	400#	6000#	570#	2820#	500#	-6170#	640#
	Ag	47	6100	650	12970#	670#	24030	600	6900#	630#	5250	600	-6410#	670#
	Cd	48	4718	4	14440	250	15675	3	6910	30	2620	40	-3086	20
	In	49	7680	40	11064	27	8360	27	7648	27	5000	27	-3720	50
	Sn	50	5733.50	0.20	12320	30	1296.6	2.1	8245	20	2540	50	362.4	2.5
	Sb	51	8706.6	2.6	7311.0	2.6	-4168	8	10271	3	6549	3	960	50
	Te	52	6568.97	0.03	8690.9	1.6	-9354	11	10912.7	1.6	4174.7	2.4	6565.0	2.7
	I	53	9542.8	1.9	5600.85	0.07	-15078	26	11045.76	0.12	6341.31	0.14	5142.8	2.4
	Xe	54	7603.3	0.4	7116.3	2.9	-20540#	200#	11462	4	3751	5	8767.8	2.2
	Cs	55	10428	11	3716	8	-26060#	300#	11872	12	6131	14	7639	9
	Ba	56	8651	17	5227	14	-32070#	400#	12085	16	3340	40	11332	16
	La	57	11570	60	1959	29	*	*	12606	29	5710	40	10030	40
	Ce	58	9810#	360#	3690#	200#	*	*	12700#	280#	2750#	360#	13600#	200#
	Pr	59	12950#	500#	410#	420#	*	*	12970#	420#	4710#	500#	12160#	420#
Nd	60	11150#	640#	1740#	570#	*	*	13450#	570#	2210#	640#	15920#	570#	
126	Rh	45	3630#	710#	*	40010#	500#	7370#	780#	4460#	710#	*	*	
	Pd	46	5860#	640#	17100#	710#	34000#	500#	3860#	640#	2360#	640#	-9010#	710#
	Ag	47	4620#	630#	13850#	450#	25610#	200#	8490#	360#	4500#	280#	-5630#	450#
	Cd	48	6980	4	15320	600	17808.5	2.9	4650	250	2160	30	-6190#	200#
	In	49	5370	40	11714	27	10138	27	9640	27	4505	27	-2580	40
	Sn	50	8190	10	12827	29	3130	11	5570	30	2279	22	-2955	11
	Sb	51	6210	30	7790	30	-2040	30	12550	30	6290	30	2680	40
	Te	52	9113.69	0.08	9098.0	2.1	-7395	13	8266.5	1.6	4023.6	1.6	3397.5	2.7
	I	53	7145	4	6177	4	-12940	90	13325	4	6125	4	6960	4
	Xe	54	10024	4	7597	4	-18325	28	8931	4	3662	5	5673	4
	Cs	55	8334	13	4446	11	-24030#	200#	14021	11	5762	14	9240	11
	Ba	56	11072	17	5871	15	-29680#	300#	9772	15	3238	17	8225	16
	La	57	9290	90	2590	90	-35780#	510#	14830	90	5550	90	11720	90
	Ce	58	12230#	200#	4350	40	*	*	10150	60	2700#	200#	10480	30
	Pr	59	10360#	360#	960#	280#	*	*	15300#	360#	4830#	360#	13970#	280#
	Nd	60	13470#	500#	2250#	420#	*	*	10870#	500#	2210#	500#	12940#	420#
	Pm	61	*	*	-1110#	640#	*	*	16040#	710#	*	*	16790#	640#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q(2 β^-)		Q($\epsilon\beta$)		Q(β^-n)	
124	Ru	44	8150#	780#	*	*	24140#	670#	*	7020#	720#			
	Rh	45	9140#	500#	*	-12080#	640#	21030#	470#	*	7180#	450#		
	Pd	46	10080#	300#	30720#	590#	-10970#	500#	18150#	300#	-28480#	590#	2920#	300#
	Ag	47	11240	250	28610#	390#	-9810#	320#	14670	250	-23980#	470#	3140	250
	Cd	48	12232	4	26663	20	-8846	4	11533	3	-23570#	200#	-1343	20
	In	49	13440	60	24340	50	-7640	30	6750	30	-18610	40	-1130	30
	Sn	50	14435.3	2.4	22199.8	2.5	-6702	4	2291.1	1.5	-18109.0	2.9	-7080.7	2.1
	Sb	51	15430.0	2.6	18630	50	-4320	40	-255.3	2.4	-11480	20	-6520.2	1.6
	Te	52	16353.50	0.12	15161.7	2.7	-1851.6	1.7	-2864.3	2.2	-9997.9	2.7	-10653	3
	I	53	17428	5	13610	3	-1373	8	-5634	9	-5429.9	2.4	-10188	10
	Xe	54	18449	11	11924.6	2.2	-718	3	-8571	13	-5777.9	2.2	-14689	12
	Cs	55	19730	30	10229	10	-403	17	-11470	60	-1077	9	-14148	15
	Ba	56	20620	30	8313	17	658	17	-14170#	300#	-1130	16	-18510#	200#
	La	57	21860#	300#	6690	70	1210	60	-17110#	410#	3500	60	-18040#	300#
	Ce	58	23190#	500#	4890#	300#	1550#	420#	-20390#	590#	3450#	300#	-22650#	500#
	Pr	59	24350#	640#	3190#	500#	2110#	500#	*	*	8210#	450#	*	*
	Nd	60	*	*	1230#	640#	2850#	710#	*	*	8470#	590#	*	*
125	Rh	45	8840#	640#	*	*	22020#	780#	*	8280#	590#			
	Pd	46	9950#	450#	31440#	640#	-11600#	570#	19130#	400#	-27090#	720#	3910#	470#
	Ag	47	10820	600	29300#	720#	-10230#	670#	16250	600	-26350#	720#	4400	600
	Cd	48	12077	4	27510#	200#	-9591	4	12548	3	-22080#	300#	-550	30
	In	49	13190	30	25510	40	-8499	30	7779	27	-21570	250	-314	27
	Sn	50	14222.7	2.4	23060.2	2.9	-7247.5	2.2	3126.5	1.5	-16484	3	-6346.7	2.1
	Sb	51	15174.1	2.6	19404	20	-4845	28	580.9	2.1	-14680	30	-5802.3	2.1
	Te	52	15993.45	0.10	15784.5	2.7	-2250.4	1.7	-1829.9	2.2	-8077.7	1.5	-9728.6	1.9
	I	53	17036	3	14190.3	1.6	-1663.5	2.4	-4749	8	-8505.2	1.6	-9247.5	2.2
	Xe	54	18087	10	12598.8	2.2	-1074	26	-7524	11	-3956.7	2.2	-13533	9
	Cs	55	19187	14	10722	9	-261	9	-10328	27	-4011	8	-13069	15
	Ba	56	20157	16	8998	15	387	15	-13010#	200#	703	11	-17480	60
	La	57	21250#	200#	7294	29	918	30	-15730#	300#	683	27	-16920#	300#
	Ce	58	22510#	360#	5580#	200#	1660#	240#	-19060#	450#	5140#	200#	-21580#	450#
	Pr	59	23840#	500#	3960#	360#	1810#	420#	*	*	4940#	300#	-21580#	590#
	Nd	60	*	*	1890#	500#	2750#	570#	*	*	10030#	500#	*	*
	126	Rh	45	8740#	640#	*	*	23020#	540#	*	8390#	640#		
Pd		46	9600#	590#	32170#	780#	-12030#	710#	20240#	500#	*	4140#	780#	
Ag		47	10720#	320#	30190#	450#	-11030#	360#	16990#	200#	-25860#	540#	4500#	200#
Cd		48	11698	4	28280#	300#	-10066	20	13758	11	-25320#	400#	149	27
In		49	13050	40	26150	250	-9090	50	8620	40	-20830	600	52	27
Sn		50	13924	10	23892	11	-7828	11	4050	11	-19956	11	-5830	11
Sb		51	14910	30	20100	40	-5250	60	1520	30	-13210	40	-5440	30
Te		52	15682.66	0.09	16409.0	1.5	-2548.7	2.7	-920	4	-11457.9	1.5	-9299.46	0.10
I		53	16688	4	14868	4	-2003	4	-3561	11	-6944	4	-8790	4
Xe		54	17627	4	13198	4	-1256	4	-6476	13	-7412	4	-13129	9
Cs		55	18762	13	11563	11	-695	12	-9380	90	-2802	11	-12753	15
Ba		56	19723	18	9587	13	260	17	-11850	30	-2766	13	-16982	29
La		57	20860	110	7820	90	750	100	-14650#	220#	1830	90	-16390#	220#
Ce		58	22050#	300#	6310	30	1360	40	-17830#	300#	1560	30	-20860#	300#
Pr		59	23320#	450#	4640#	200#	1800#	360#	-21130#	540#	6150#	200#	-20800#	450#
Nd		60	24610#	590#	2660#	420#	2460#	500#	*	*	6380#	360#	*	*
Pm		61	*	*	620#	640#	3320#	710#	*	*	11550#	590#	*	*

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	El.	Z	S(n)		S(p)		Q(4 β^-)		Q(d, α)		Q(p, α)		Q(n, α)	
127	Pd	46	3500#	710#	16970#	710#	36030#	500#	5480#	710#	2590#	640#	-7380#	780#
	Ag	47	5870#	280#	13860#	540#	28120#	200#	6350#	450#	4840#	360#	-7770#	450#
	Cd	48	4305	13	15000#	200#	19791	13	6450	600	2570	250	-4290#	300#
	In	49	7200	30	11930	21	12086	21	7161	21	4667	21	-5050	250
	Sn	50	5527	14	12987	29	4850	11	7716	29	2260	30	-1123	10
	Sb	51	8380	30	7973	12	-459	8	9908	5	6399	5	-180	30
	Te	52	6287.65	0.18	9180	30	-5464	11	10685.4	2.1	4203.4	1.6	5599.0	1.5
	I	53	9143.9	2.7	6208	4	-11088	26	10750	4	6405	4	4284	4
	Xe	54	7247	5	7699	3	-16342	29	11226	4	3908	4	7850	4
	Cs	55	9961	12	4384	7	-21700#	200#	11664	6	6285	6	6772	6
	Ba	56	8219	17	5756	15	-27280#	300#	11981	14	3777	14	10490	11
	La	57	10990	90	2515	29	-33110#	400#	12484	28	6058	29	9482	27
	Ce	58	9230	40	4290	100	*		12490	40	3140	60	12760	30
	Pr	59	12290#	280#	1010#	200#	*		12830#	280#	5240#	360#	11360#	200#
	Nd	60	10610#	420#	2500#	360#	*		13210#	420#	2480#	500#	15030#	420#
Pm	61	13660#	640#	-920#	500#	*		13520#	570#	4600#	640#	14010#	570#	
128	Pd	46	5500#	780#	*		38490#	600#	3600#	780#	2200#	780#	*	
	Ag	47	4390#	360#	14750#	590#	29730#	300#	7820#	590#	4180#	500#	-7050#	590#
	Cd	48	6823	15	15950#	200#	21752	7	4250#	200#	1850	600	-7370#	400#
	In	49	5320	150	12940	150	13590	150	8820	150	4070	150	-4270	620
	Sn	50	7962	20	13753	28	6498	18	5120	30	1980	30	-4368	18
	Sb	51	6002	20	8448	22	1301	20	12096	22	6130	19	1490	30
	Te	52	8783.4	1.7	9583	5	-3615	5	8110	30	4126.6	2.7	2549.1	1.3
	I	53	6826.13	0.05	6746	4	-9110	50	13037	4	6148	4	6164	4
	Xe	54	9610	4	8165	4	-14326	28	8762	4	3841.0	1.8	4809.1	1.8
	Cs	55	7763	8	4899	7	-19600	30	13925	7	6126	6	8552	6
	Ba	56	10632	13	6428	8	-25070#	200#	9682	12	3573	9	7461	6
	La	57	8800	60	3100	60	-30840#	300#	14760	60	5910	60	11110	50
	Ce	58	11630	40	4930	40	-36800#	500#	10150	90	3090	40	9780	30
	Pr	59	9860#	200#	1640	40	*		15200	40	5190#	200#	13080	40
	Nd	60	12850#	360#	3060#	280#	*		10720#	280#	2580#	360#	11990#	280#
Pm	61	11070#	500#	-460#	420#	*		15920#	420#	4680#	500#	15890#	420#	
Sm	62	*		1230#	640#	*		11180#	710#	*		14510#	640#	
129	Ag	47	5380#	420#	14630#	670#	32420#	300#	5940#	590#	4670#	590#	-8800#	590#
	Cd	48	4340#	200#	15900#	360#	23500#	200#	5780#	280#	2140#	280#	-5850#	540#
	In	49	6760	150	12885	8	15669	4	6363	13	4283	4	-6410#	200#
	Sn	50	5316	26	13750	150	8089	19	7002	29	2030	30	-2704	20
	Sb	51	8070	29	8556	28	2870	22	9553	23	6250	24	-1210	30
	Te	52	6082.41	0.08	9664	19	-1942	11	10405	5	4250	30	4657	10
	I	53	8840	5	6802	3	-7183	22	10485	3	6422	3	3530	30
	Xe	54	6907.1	1.1	8246	4	-12409	28	10999	4	4079	4	7015.7	1.5
	Cs	55	9639	7	4928	5	-17730	30	11533	6	6510	6	6058	6
	Ba	56	7756	11	6421	12	-22750#	200#	11888	12	4151	15	9729	11
	La	57	10770	60	3235	22	-28440#	300#	12204	24	6209	25	8672	24
	Ce	58	8820	40	4950	60	-34150#	500#	12320	40	3550	90	12030	30
	Pr	59	11510	40	1530	40	*		12920	40	5910	40	10850	100
	Nd	60	10070#	280#	3270#	200#	*		12940#	280#	2870#	280#	14150#	200#
	Pm	61	13170#	420#	-140#	360#	*		13370#	420#	4980#	420#	13090#	360#
Sm	62	11480#	710#	1640#	590#	*		13360#	640#	1920#	710#	16500#	590#	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)	S(2p)	Q(α)	Q($2\beta^-$)	Q(ϵp)	Q(β^-n)						
127	Pd	46	9360#	640#	*	-12500#	710#	21050#	500#	*	5270#	540#		
	Ag	47	10490#	630#	30950#	540#	-11500#	450#	18320#	200#	-28110#	540#	5600#	200#
	Cd	48	11285	13	28850#	400#	-10500#	200#	14981	16	-23770#	500#	1211	30
	In	49	12560	30	27250	600	-9780	40	9801	22	-23410#	200#	1046	24
	Sn	50	13717	10	24701	10	-8482	10	4810	10	-18503	10	-5150	30
	Sb	51	14586	5	20801	27	-5694	20	2284	6	-16216	27	-4705	5
	Te	52	15401.34	0.20	16963.2	1.5	-2890.2	2.7	40	4	-9555	11	-8442	4
	I	53	16289	4	15306	4	-2184	4	-2744	6	-9880	30	-7910	5
	Xe	54	17271	4	13877	4	-1574	4	-5504	12	-5545	4	-12042	11
	Cs	55	18295	10	11981	6	-721	7	-8344	27	-5618	6	-11642	14
	Ba	56	19292	16	10203	12	6	15	-10840	30	-961	12	-15920	90
	La	57	20280	40	8386	27	723	29	-13350#	200#	-835	28	-15150	40
	Ce	58	21460#	200#	6890	30	1250	30	-16440#	300#	3400	30	-19730#	200#
	Pr	59	22650#	360#	5360#	200#	1680#	280#	-19760#	450#	3140#	220#	-19620#	360#
	Nd	60	24080#	500#	3460#	360#	2330#	420#	*	*	8000#	300#	-24410#	590#
	Pm	61	*	*	1330#	500#	3130#	570#	*	*	8250#	450#	*	*
128	Pd	46	9000#	780#	*	-12880#	840#	22370#	600#	*	5640#	630#		
	Ag	47	10270#	360#	31720#	590#	-12160#	500#	19240#	340#	*	5520#	300#	
	Cd	48	11128	8	29810#	500#	-11110#	300#	16120	19	-27090#	500#	1585	22
	In	49	12520	160	27940#	250#	-10370	290	10480	150	-22850#	250#	1250	150
	Sn	50	13489	21	25683	18	-9085	18	5632	18	-22160	22	-4734	18
	Sb	51	14380	40	21440	30	-6190	40	3108	19	-15021	29	-4420	19
	Te	52	15071.0	1.7	17556	10	-3184.4	1.3	866.5	0.9	-12811	10	-8081	4
	I	53	15970.0	2.7	15920	30	-2543	4	-1807	7	-8328	6	-7488.5	2.0
	Xe	54	16857	4	14372.9	1.8	-1759.9	1.8	-4481	5	-8867.6	1.8	-11691	6
	Cs	55	17724	12	12598	7	-991	6	-7310	50	-4237	7	-11185	13
	Ba	56	18852	14	10811	6	-143	6	-9845	28	-4346	7	-15554	27
	La	57	19790	110	8850	60	680	60	-12290	60	330	50	-14720	60
	Ce	58	20860	40	7440	30	1130	30	-15220#	200#	-0	30	-19060#	200#
	Pr	59	22150#	200#	5940	100	1500	60	-18550#	300#	4280	40	-18870#	300#
	Nd	60	23460#	360#	4070#	200#	2180#	360#	-21580#	540#	4380#	200#	-23600#	450#
	Pm	61	24730#	590#	2040#	360#	2940#	500#	*	*	9470#	360#	*	*
Sm	62	*	*	320#	590#	3370#	710#	*	*	9520#	590#	*	*	
129	Ag	47	9770#	360#	*	-12430#	590#	20630#	300#	*	6960#	300#		
	Cd	48	11160#	200#	30650#	540#	-11710#	450#	17100#	200#	-25930#	630#	2570#	250#
	In	49	12082	21	28830#	200#	-11030	600	11791	21	-25230#	300#	2453	18
	Sn	50	13279	22	26695	23	-9684	20	6398	19	-20654	21	-4048	27
	Sb	51	14072	22	22309	30	-6580	30	3878	21	-17770	150	-3707	21
	Te	52	14865.8	1.7	18112	10	-3533.3	1.3	1691.2	0.9	-10932	18	-7337	4
	I	53	15666	5	16386	6	-2676	4	-1008	6	-11166	19	-6718	3
	Xe	54	16517	4	14992.3	1.5	-2098.0	1.5	-3633	11	-6991.3	0.9	-10836	5
	Cs	55	17402	7	13093	6	-1087	5	-6175	22	-7050	6	-10192	7
	Ba	56	18388	16	11320	11	-295	11	-8776	30	-2492	11	-14510	60
	La	57	19570	30	9662	22	338	23	-11550	40	-2682	22	-13860	40
	Ce	58	20450	40	8050	30	960	30	-13970#	200#	1802	28	-18030	40
	Pr	59	21370#	200#	6460	40	1560	40	-16890#	300#	1560	60	-17530#	200#
	Nd	60	22920#	360#	4910#	200#	1920#	280#	-20170#	540#	5930#	200#	-22600#	360#
	Pm	61	24240#	500#	2920#	360#	2730#	420#	*	*	6160#	300#	-22220#	590#
	Sm	62	*	*	1180#	590#	3030#	640#	*	*	10880#	540#	*	*

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)	S(p)	$Q(4\beta^-)$	$Q(d,\alpha)$	$Q(p,\alpha)$	$Q(n,\alpha)$						
130	Ag	47	1780#	450#	*	36370#	330#	9660#	680#	6390#	600#	*		
	Cd	48	6100#	260#	16610#	340#	25820	160	4080#	340#	1910#	260#	-8450#	530#
	In	49	5120	40	13660#	200#	17050	40	8070	40	3470	40	-5660#	200#
	Sn	50	7597	19	14584	3	9747.6	2.1	4720	150	1629	21	-5996	13
	Sb	51	5728	26	8968	24	4613	17	11787	23	6049	17	258	26
	Te	52	8419.4	0.9	10013	21	-91.2	2.6	7988	19	4211	5	1765	10
	I	53	6500.33	0.04	7220	3	-5309	26	12768	3	6210	3	5410	6
	Xe	54	9255.72	0.01	8662	3	-10458	28	8569	4	3967	4	4047.6	1.5
	Cs	55	7472	10	5493	8	-15720	60	13671	8	6286	9	7731	9
	Ba	56	10270	11	7051	5	-20666	28	9381	6	3842	6	6706	5
	La	57	8370	30	3853	28	-26230#	200#	14462	26	6055	28	10259	27
	Ce	58	11210	40	5390	40	-31920#	400#	9910	60	3340	40	9040	30
	Pr	59	9470	70	2180	70	-37350#	510#	15070	70	5670	70	12370	70
	Nd	60	12350#	200#	4110	40	*		10450	40	2810#	200#	11030	40
	Pm	61	10590#	360#	370#	280#	*		15630#	280#	5000#	360#	14790#	280#
	Sm	62	13440#	640#	1910#	500#	*		10990#	500#	2140#	570#	13680#	500#
	Eu	63	*		-1028	15	*		15620#	710#	*		16610#	640#
131	Cd	48	1870#	260#	16700#	390#	29880#	200#	7590#	360#	4440#	360#	-4810#	630#
	In	49	6210	40	13780	160	19417.2	2.8	6190#	200#	4080	8	-7480#	300#
	Sn	50	5211	6	14680	40	11142	6	6277	7	1740	150	-4384	9
	Sb	51	7767	14	9138.0	3.0	6077	5	9336	19	6244	18	-2190	150
	Te	52	5929.38	0.06	10214	14	1472.9	2.6	10129	21	4283	19	3797	18
	I	53	8578	3	7378.8	0.6	-3674	28	10272.9	1.1	6415.0	1.1	2834	19
	Xe	54	6604.49	0.22	8766	3	-8710	30	10804	3	4189	4	6226.5	0.9
	Cs	55	9230	10	5467	5	-13760	50	11348	5	6665	5	5326	6
	Ba	56	7493.50	0.30	7073	9	-18916	28	11526	5	4112	6	8822.8	2.8
	La	57	10210	40	3796	28	-23850#	200#	12005	30	6474	28	7809	28
	Ce	58	8360	40	5370	40	-29580#	400#	12330	40	3780	60	11320	30
	Pr	59	11200	80	2170	50	-35030#	400#	12700	50	6100	50	9970	70
	Nd	60	9240	40	3880	70	*		12720	40	3430	40	13410	40
	Pm	61	12600#	280#	620#	200#	*		13100#	280#	5260#	280#	12050#	200#
	Sm	62	10700#	570#	2030#	450#	*		13460#	500#	2520#	500#	15830#	450#
	Eu	63	13520#	640#	-947	5	*		13580#	640#	4330#	640#	14160#	500#
	132	Cd	48	3000#	280#	*		34930#	200#	6370#	390#	6810#	360#	*
In		49	2450	60	14370#	210#	23290	60	9840	180	5960#	210#	-4550#	300#
Sn		50	7343	7	15807	4	12735.1	2.9	4050	40	1158	4	-7390#	200#
Sb		51	5725	3	9652	7	7521	3	11208	3	5836	20	-1151	4
Te		52	8048	3	10495	4	3247	4	7809	15	4305	22	1065	20
I		53	6332	4	7781	4	-1980	40	12360	4	6165	4	4572	22
Xe		54	8936.65	0.22	9125.1	0.6	-6808	20	8368	3	4092	3	3372.3	0.9
Cs		55	7169	5	6031.6	2.0	-11940	60	13435.0	2.0	6403.9	2.0	6997	4
Ba		56	9822.4	2.7	7665	5	-17009	24	9176	8	3928	5	5907.5	1.1
La		57	8030	50	4330	40	-22100#	150#	14250	40	6200	40	9420	40
Ce		58	10830	40	5990	30	-27390#	300#	9870	30	3718	30	8239	23
Pr		59	8980	70	2790	70	-32990#	410#	14920	60	5940	60	11760	60
Nd		60	11730	40	4410	50	*		10460	70	3210	40	10510	40
Pm		61	9780#	250#	1150#	150#	*		15680#	150#	5550#	250#	13790#	150#
Sm		62	13020#	500#	2450#	360#	*		11030#	360#	2670#	420#	12880#	360#
Eu		63	11030#	570#	-620#	570#	*		15990#	570#	4780#	640#	16300#	500#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)	S(2p)	$Q(\alpha)$	$Q(2\beta^-)$	$Q(\epsilon p)$	$Q(\beta^- n)$						
130	Ag	47	7160#	150#	*	-10580#	600#	23960#	340#	*	9520#	390#		
	Cd	48	10430	160	31240#	620#	-11940#	530#	18600	160	*	3230	160	
	In	49	11880	160	29560#	300#	-11530#	200#	12400	40	-24960#	300#	2650	40
	Sn	50	12913	18	27469	8	-10301	3	7220.1	2.1	-23910#	200#	-3575	21
	Sb	51	13799	24	22720	150	-6940	30	4650	15	-16737	14	-3353	14
	Te	52	14501.8	0.9	18569	18	-3763	10	2527.51	0.01	-14035	19	-6917	3
	I	53	15340	5	16884	19	-2970	30	-36	9	-9596	21	-6311	3
	Xe	54	16162.8	1.1	15464.7	0.9	-2240.0	1.5	-2618.7	2.6	-10164.6	0.9	-10453	5
	Cs	55	17111	10	13739	9	-1413	9	-5272	27	-5682	9	-9908	13
	Ba	56	18025.5	2.9	11979.4	2.8	-541	4	-7839	28	-5854.6	2.6	-14008	21
	La	57	19140	60	10274	27	298	28	-10450	70	-1417	26	-13410	40
	Ce	58	20030	40	8622	28	820	30	-12830	40	-1649	30	-17720	40
	Pr	59	20990	70	7130	80	1370	110	-15780#	210#	2860	70	-16930#	210#
	Nd	60	22430#	200#	5640	40	1800	40	-19090#	400#	2400	40	-21790#	300#
	Pm	61	23750#	360#	3640#	200#	2500#	280#	-21570#	540#	7090#	200#	-21330#	540#
	Sm	62	24920#	640#	1770#	450#	3060#	500#	*	*	7520#	450#	*	*
	Eu	63	*	*	620#	590#	2950#	710#	*	*	11770#	590#	*	*
131	Cd	48	7960#	280#	*	-10320#	540#	21940#	200#	*	6480#	200#		
	In	49	11330	4	30390#	300#	-11870#	200#	13956	3	-29400#	330#	4036	3
	Sn	50	12808	20	28340#	200#	-11207	14	7939	6	-23030	160	-3057	15
	Sb	51	13495	21	23722	3	-7509	21	5460.9	2.2	-19390	40	-2700.3	2.1
	Te	52	14348.8	0.9	19182	19	-4165	10	3202.62	0.23	-12367.1	2.1	-6346	3
	I	53	15078	3	17391	21	-3168	5	616	5	-12445	14	-5633.6	0.6
	Xe	54	15860.21	0.22	15986.7	0.9	-2556.9	1.5	-1729.7	2.6	-8349.66	0.22	-9585	8
	Cs	55	16702	7	14130	6	-1500	6	-4290	28	-8412	6	-8868	5
	Ba	56	17763	11	12565.8	2.6	-787	5	-6980	30	-4092.4	2.6	-13128	26
	La	57	18590	40	10848	28	46	28	-9470	50	-4158	29	-12420	40
	Ce	58	19560	40	9220	30	680	30	-11940	40	260	30	-16600	70
	Pr	59	20670	60	7550	50	1170	50	-14380#	200#	40	50	-15780	50
	Nd	60	21600#	200#	6060	40	1790	40	-17640#	400#	4370	40	-20440#	200#
	Pm	61	23190#	360#	4730#	200#	2200#	280#	-20650#	450#	3960#	210#	-20490#	450#
	Sm	62	24140#	640#	2400#	450#	2980#	500#	*	*	9170#	400#	-24380#	640#
	Eu	63	*	*	970#	500#	3090#	570#	*	*	8840#	450#	*	*
	132	Cd	48	4870#	260#	*	-7820#	630#	26280#	200#	*	9690#	200#	
In		49	8670	70	31070#	340#	-9930#	300#	17230	60	*	6790	60	
Sn		50	12554	4	29590	160	-11727	8	8644	5	-28500#	200#	-2633	4
Sb		51	13492	14	24330	40	-7910	150	6068	5	-18899	4	-2495.9	2.7
Te		52	13978	3	19633	4	-4251	18	4091	3	-15205	7	-5817	4
I		53	14910	5	17995	15	-3498	20	1453	5	-11011	5	-5361	4
Xe		54	15541.14	0.01	16503.96	0.01	-2710.1	0.9	-844.0	1.1	-11356.92	0.06	-9291	5
Cs		55	16399	9	14798	4	-1842	4	-3430	40	-7002.4	2.1	-8544	3
Ba		56	17315.9	2.7	13132.5	1.1	-999.6	1.5	-5964	20	-7310.3	1.1	-12737	28
La		57	18240	40	11400	40	-220	40	-8510	70	-2950	40	-12090	50
Ce		58	19190	30	9787	20	483	21	-11050	30	-3076	20	-16240	50
Pr		59	20180	90	8160	60	990	80	-13590#	160#	1270	60	-15520	60
Nd		60	20970	40	6580	40	1680	40	-16350#	300#	990	40	-19570#	200#
Pm		61	22370#	250#	5030#	160#	2280#	150#	-19400#	430#	5380#	160#	-19570#	430#
Sm		62	23720#	500#	3060#	300#	2810#	360#	*	*	5400#	300#	-23880#	500#
Eu		63	24540#	640#	1410#	450#	3140#	500#	*	*	10410#	450#	*	*

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		Q(4 β^-)		Q(d, α)		Q(p, α)		Q(n, α)	
133	Cd	48	1730#	360#	*		39010#	300#	*		6860#	450#	*	
	In	49	3130#	210#	14490#	280#	28420#	200#	8580#	280#	8930#	260#	-5900#	390#
	Sn	50	2402	4	15750	60	16769	3	7862	4	3870	40	-3690	160
	Sb	51	7358	4	9668	4	9148	3	9060	7	6074	4	-3390	40
	Te	52	5815	5	10585	5	4622	4	9761	4	4218	15	2847	4
	I	53	8254	6	7987	6	-392	28	10035	5	6330	5	2046	15
	Xe	54	6435.9	2.4	9229	5	-5225	17	10510.0	2.5	4157	4	5355.8	2.4
	Cs	55	8986.0	2.0	6080.94	0.01	-10133	12	11053.51	0.22	6673.59	0.01	4512	3
	Ba	56	7189.9	0.4	7686.3	2.2	-15220	50	11216	5	4210	8	7973.3	1.0
	La	57	9840	50	4348	28	-20090	60	11900	28	6631	28	7052	29
	Ce	58	8019	26	5980	40	-25190#	300#	12060	30	4070	30	10490	17
	Pr	59	10800	60	2756	24	-30700#	300#	12480	40	6350	30	9336	29
	Nd	60	8980	50	4410	70	-36310#	510#	12680	70	3710	80	12740	50
	Pm	61	11850#	160#	1270	60	*	*	13070	60	6050	60	11410	80
	Sm	62	10220#	420#	2890#	330#	*	*	13400#	360#	3030#	360#	15010#	300#
	Eu	63	13080#	500#	-550#	420#	*	*	13610#	500#	5130#	500#	13810#	360#
	Gd	64	*		1090#	640#	*	*	13960#	640#	2670#	710#	17130#	640#
134	In	49	2270#	360#	15030#	420#	32400#	300#	9310#	360#	8530#	360#	*	
	Sn	50	3629	4	16260#	200#	21692	3	6690	60	6457	4	-5460#	200#
	Sb	51	3169	4	10435.3	2.9	12870.6	1.7	13234	3	8116	6	-349	3
	Te	52	7675	5	10902	4	6414.1	2.8	7810	4	4310	3	383	7
	I	53	6244	7	8416	7	1160	21	11840	7	6016	6	3569	6
	Xe	54	8552.0	2.5	9527	5	-3291	20	8290	4	4182.5	1.1	2733.1	0.8
	Cs	55	6891.54	0.01	6536.6	2.4	-8363	20	13098.62	0.02	6386.53	0.22	6198.0	0.6
	Ba	56	9467.8	1.0	8168.09	0.28	-13304	12	8917.0	2.0	3973	5	5110.0	0.4
	La	57	7800	30	4954	20	-18480	60	13927	20	6329	20	8487	21
	Ce	58	10486	26	6630	30	-23460#	200#	9600	40	3800	30	7497	21
	Pr	59	8662	24	3399	26	-28600#	300#	14654	29	6040	40	10890	30
	Nd	60	11390	50	4998	17	-34340#	400#	10280	60	3520	50	9710	30
	Pm	61	9400	80	1700	70	*	*	15400	60	5890	60	13210	70
	Sm	62	12220#	360#	3260#	200#	*	*	10960#	250#	3410#	280#	12040#	200#
	Eu	63	10760#	420#	-10#	420#	*	*	15860#	420#	5070#	500#	15640#	360#
	Gd	64	13350#	640#	1360#	500#	*	*	11630#	570#	2830#	570#	14480#	570#
	135	In	49	2940#	500#	*		37260#	400#	8100#	500#	8600#	450#	*
Sn		50	2271	4	16260#	300#	25785	5	7540#	200#	6640	60	-4720#	200#
Sb		51	3740	3	10546	4	17892	3	11895	4	11718	4	-1630	60
Te		52	3263	4	10996	3	10122.9	2.7	11905	4	6772	4	4462	4
I		53	7801	8	8542	6	2855	11	9854	6	6263	6	1493	6
Xe		54	6364	4	9647	7	-1800	11	10181	6	4151	6	4418	5
Cs		55	8762.0	1.0	6746.5	1.3	-6646	12	10772.6	2.6	6561.2	1.0	3768	4
Ba		56	6971.97	0.10	8248.53	0.27	-11637	19	10931.02	0.27	4169.6	2.0	7074.65	0.27
La		57	9496	22	4982	9	-16620	70	11621	9	6656	9	6159	10
Ce		58	7855	23	6687	22	-21760	150	11589	30	3970	40	9465	10
Pr		59	10479	24	3392	24	-26790#	200#	12193	20	6399	24	8430	40
Nd		60	8638	22	4975	28	-31920#	400#	12435	23	3860	60	11904	28
Pm		61	11360	90	1670	70	-37200#	410#	13020	80	6260	70	10830	90
Sm		62	9550#	250#	3410	170	*	*	13260	160	3630#	220#	14210	160
Eu		63	12290#	360#	60#	280#	*	*	13790#	360#	5800#	360#	13130#	250#
Gd		64	11060#	570#	1650#	500#	*	*	13650#	500#	2800#	570#	16430#	500#
Tb		65	*		-1188	7	*	*	13910#	640#	*		15050#	570#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q($2\beta^-$)		Q(ϵp)		Q($\beta^- n$)	
133	Cd	48	4730#	360#	*	*			26950#	300#	*		10420#	300#
	In	49	5580#	200#	*		-7680#	360#	21460#	200#	*		11010#	200#
	Sn	50	9745	7	30120#	200#	-9790#	200#	12058	4	-27900#	200#	690	4
	Sb	51	13083	4	25475	4	-8510	4	6964	6	-23800	60	-1806	5
	Te	52	13864	4	20238	7	-4750	20	4712	4	-13677	5	-5300	5
	I	53	14586	5	18483	5	-3682	22	2184	5	-13540	5	-4679	5
	Xe	54	15372.6	2.4	17010.5	2.4	-3063.6	2.6	-90.0	2.6	-9744	4	-8559	3
	Cs	55	16155	5	15206.1	0.6	-1989	3	-2577	28	-9656	4	-7707.3	1.1
	Ba	56	17012.3	2.7	13717.9	1.0	-1282.4	1.0	-5135	16	-5563.6	1.0	-11900	40
	La	57	17870	40	12013	28	-420	28	-7560	30	-5627	28	-11090	30
	Ce	58	18850	40	10312	17	220	19	-10090	50	-1272	16	-15280	60
	Pr	59	19780	50	8750	30	962	25	-12530	50	-1500	40	-14583	27
	Nd	60	20710	50	7200	60	1530	50	-15100#	300#	2850	50	-18780#	160#
	Pm	61	21630#	200#	5680	70	1940	60	-18170#	300#	2520	80	-18400#	300#
	Sm	62	23240#	500#	4040#	300#	2660#	360#	-21210#	590#	6910#	300#	-23080#	500#
	Eu	63	24110#	500#	1890#	360#	3220#	420#	*	*	7100#	330#	*	*
Gd	64	*		470#	640#	3700#	710#	*	*	11770#	590#	*	*	
134	In	49	5390#	300#	*		-8170#	450#	22360#	300#	*		11140#	300#
	Sn	50	6031	4	30750#	200#	-7320	160	16104	4	-29800#	300#	4419	5
	Sb	51	10528	3	26190	60	-6560	40	10039	6	-23850#	200#	840	4
	Te	52	13490	4	20570	4	-4828	3	5588.3	2.9	-18951	4	-4721	5
	I	53	14498	7	19001	6	-4198	15	2832	6	-12426	6	-4487	6
	Xe	54	14988.0	0.8	17514	4	-3196.3	0.8	825.8	0.9	-12481	4	-8124.7	0.8
	Cs	55	15877.5	2.0	15766	4	-2380	3	-1673	20	-8294	5	-7408.9	1.0
	Ba	56	16657.7	1.1	14249.03	0.28	-1494.51	0.28	-4117	20	-8595.5	2.4	-11527	28
	La	57	17640	40	12640	20	-744	22	-6691	28	-4437	20	-10872	26
	Ce	58	18505	29	10976	20	4	21	-9186	24	-4568	20	-14967	24
	Pr	59	19460	60	9380	40	670	30	-11790	60	-320	30	-14270	50
	Nd	60	20363	27	7753	24	1350	30	-14270#	200#	-517	20	-18310	50
	Pm	61	21250#	160#	6100	80	2010	90	-16810#	300#	3910	60	-17580#	300#
	Sm	62	22440#	360#	4530#	200#	2800#	200#	-20070#	450#	3670#	200#	-22210#	360#
	Eu	63	23850#	500#	2880#	330#	3040#	360#	*	*	8190#	300#	-21980#	590#
	Gd	64	*		800#	500#	3780#	570#	*	*	8640#	500#	*	*
135	In	49	5210#	450#	*		*	23160#	400#	*		11830#	400#	
	Sn	50	5901	4	31290#	300#	-7730#	200#	17096	4	*		5317	4
	Sb	51	6910	4	26800#	200#	-4089	4	14099	6	-25320#	300#	4775	4
	Te	52	10938	5	21432	4	-2881	7	8689	5	-18585	4	-1740	6
	I	53	14045	7	19444	6	-4232	6	3793	5	-17057	6	-3736	5
	Xe	54	14916	5	18063	5	-3631	4	1434	4	-11170	5	-7597	4
	Cs	55	15653.5	1.0	16273	5	-2563.9	1.2	-938	9	-10812	6	-6703.1	1.0
	Ba	56	16439.8	1.0	14785.1	2.4	-1862.0	0.4	-3234	10	-7015.4	0.9	-10703	20
	La	57	17292	29	13151	9	-1010	11	-5708	15	-7041	9	-9882	22
	Ce	58	18341	19	11641	10	-357	11	-8403	22	-2955	10	-14160	23
	Pr	59	19141	17	10020	30	410	30	-10910	70	-3006	23	-13361	17
	Nd	60	20020	50	8373	25	1070	40	-13360	160	1330	28	-17550	60
	Pm	61	20760	80	6670	70	1850	80	-15880#	210#	1210	70	-16720#	210#
	Sm	62	21770#	340#	5100	160	2490	160	-18570#	430#	5500	160	-21000#	340#
	Eu	63	23050#	360#	3320#	200#	3350#	280#	-21320#	450#	5300#	200#	-20920#	450#
	Gd	64	24410#	640#	1640#	500#	3420#	570#	*	*	9800#	450#	*	*
Tb	65	*		170#	500#	4020#	570#	*	*	9810#	500#	*	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)	S(p)	$Q(4\beta^-)$	$Q(d,\alpha)$	$Q(p,\alpha)$	$Q(n,\alpha)$						
136	Sn	50	3340#	400#	16660#	570#	30530#	400#	6470#	500#	6430#	450#	-6330#	500#
	Sb	51	2891	7	11167	7	21829	7	12633	7	11228	7	-1400#	200#
	Te	52	4769	4	12025	4	14461.3	2.5	10305.5	3.0	9361	4	2095	3
	I	53	3828	15	9107	14	6490	60	13701	14	8251	15	5023	15
	Xe	54	8084	4	9929	5	79.4	0.4	8341	6	4321	5	2149	4
	Cs	55	6828.4	2.1	7211	5	-4998	12	12496.2	2.1	6169	3	5194	5
	Ba	56	9107.74	0.04	8594.3	1.0	-9688	12	8714.82	0.27	4047.85	0.27	4402.8	2.4
	La	57	7470	50	5480	50	-14860	90	13620	50	6380	50	7680	50
	Ce	58	9964	10	7154	9	-19698	13	9421	20	3850	28	6691.4	1.1
	Pr	59	8476	16	4013	15	-25100#	200#	14203	23	5942	20	9800	30
	Nd	60	11057	22	5552	17	-30110#	300#	10040	24	3602	17	8865	20
	Pm	61	9220	100	2260	70	-35120#	510#	15180	70	6020	90	12400	70
	Sm	62	12020	160	4070	70	*	*	10640	60	3460	50	11170	50
	Eu	63	10170#	280#	680#	250#	*	*	15840#	280#	5850#	360#	14810#	200#
	Gd	64	12870#	500#	2230#	360#	*	*	11550#	420#	3010#	420#	13790#	420#
Tb	65	11300#	640#	-950#	640#	*	*	15960#	640#	4830#	710#	16820#	590#	
137	Sn	50	1960#	640#	*	*	32600#	500#	7450#	640#	6740#	590#	*	*
	Sb	51	3590	300	11420#	500#	26520	300	11310	300	11270	300	-2720#	420#
	Te	52	2950	4	12083	7	18417.2	2.5	11096	4	9580	3	2774	4
	I	53	4882	16	9219	9	10785	9	12082	9	11044	9	3311	9
	Xe	54	4025.56	0.10	10127	14	3535.4	0.4	12116	5	6540	6	5799.0	2.8
	Cs	55	8278.2	1.9	7405.6	0.3	-3344	8	10582	4	6442.5	0.9	3160	6
	Ba	56	6905.63	0.07	8671.5	1.9	-8137	12	10571.2	1.0	4033.76	0.28	6049.3	0.9
	La	57	9170	50	5542.7	1.6	-13068	13	11420.6	1.6	6673.2	1.6	5396.7	1.7
	Ce	58	7481.53	0.16	7170	50	-17890	40	11436	9	4164	20	8677.7	0.3
	Pr	59	9933	14	3982	8	-23080#	200#	12125	13	6495	22	7663	22
	Nd	60	8457	17	5533	16	-28370#	300#	12062	17	3807	23	10895	24
	Pm	61	10960	70	2163	18	-33110#	500#	12852	23	6438	18	10102	24
	Sm	62	9290	40	4130	80	*	*	12710	80	3580	70	13270	40
	Eu	63	11950#	280#	600#	200#	*	*	13450#	250#	6120#	280#	12270#	200#
	Gd	64	10200#	420#	2260#	360#	*	*	13650#	360#	3580#	420#	15810#	360#
Tb	65	12980#	710#	-830#	590#	*	*	14040#	640#	5200#	640#	14610#	590#	
138	Sn	50	3140#	780#	*	*	35110#	600#	*	*	6530#	720#	*	*
	Sb	51	2580#	420#	12040#	590#	28350#	300#	12070#	500#	10960#	300#	-2360#	500#
	Te	52	4463	5	12960	300	22566	4	9524	8	8857	5	582	5
	I	53	3695	10	9965	6	14542	7	13157	6	10612	7	3356	7
	Xe	54	5660.2	2.8	10905	9	7597	10	10284	14	8681	6	3402	4
	Cs	55	4413	9	7793	9	245	17	14253	9	8394	10	6548	11
	Ba	56	8611.72	0.04	9005.00	0.18	-6244	12	8787.9	1.9	4184.0	1.0	3801	4
	La	57	7452	4	6089	3	-11581	28	13076	3	6193	3	6706	4
	Ce	58	9721	10	7717	10	-16071	15	9180	50	3939	14	5928	10
	Pr	59	8001	16	4502	14	-21380	30	14088	14	6349	17	9158	17
	Nd	60	10505	17	6105	14	-26360#	200#	10033	16	3782	17	8244	15
	Pm	61	8940	30	2640	30	-31270#	300#	14970	30	6140	30	11640	30
	Sm	62	11540	40	4714	18	-36570#	400#	10390	70	3390	70	10362	22
	Eu	63	9700#	200#	1010	50	*	*	15770	30	5970	160	13920	70
	Gd	64	12520#	360#	2830#	280#	*	*	11300#	280#	3360#	280#	12850#	250#
Tb	65	10770#	590#	-260#	420#	*	*	16130#	420#	5490#	500#	16130#	360#	
Dy	66	*	*	1250#	640#	*	*	11840#	640#	2760#	570#	15010#	570#	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)	S(2p)	Q(α)	Q($2\beta^-$)	Q(ϵp)	Q($\beta^- n$)						
136	Sn	50	5610#	400#	*	-8060#	450#	18530#	400#	*	5720#	400#		
	Sb	51	6632	7	27430#	300#	-4530	60	15036	16	-25270#	400#	5147	7
	Te	52	8032	4	22572	4	-307	4	12003.3	2.4	-21083	4	1292	6
	I	53	11629	15	20103	14	-2335	14	6793	14	-17145	14	-1200	15
	Xe	54	14447.5	0.8	18471.1	2.8	-3666	3	2457.99	0.27	-15990.3	2.7	-6918.7	1.0
	Cs	55	15590.4	1.9	16858	6	-3060	4	-300	50	-9839	6	-6559.5	1.9
	Ba	56	16079.72	0.11	15340.8	0.9	-2033.09	0.27	-2378.55	0.27	-9759	4	-10315	9
	La	57	16960	60	13720	50	-1310	50	-4700	50	-5740	50	-9490	50
	Ce	58	17818	20	12136.47	0.29	-498.5	1.1	-7309	12	-5946.85	0.27	-13644	12
	Pr	59	18955	23	10700	23	-40	40	-10160	70	-1986	15	-13198	22
	Nd	60	19695	17	8944	24	847	24	-12388	17	-1872	16	-17240	70
	Pm	61	20580	90	7230	70	1610	90	-14940#	210#	2470	70	-16390	170
	Sm	62	21580#	200#	5742	17	2190	27	-17720#	300#	2114	23	-20730#	200#
	Eu	63	22460#	360#	4080#	200#	2960#	250#	-20190#	540#	6490#	210#	-20020#	450#
	Gd	64	23930#	500#	2290#	360#	3570#	420#	*	6480#	340#	340#	-24340#	500#
	Tb	65	*	710#	590#	3740#	640#	*	*	10800#	540#	540#	*	*
137	Sn	50	5300#	500#	*	-8290#	590#	19520#	500#	*	6650#	500#		
	Sb	51	6480	300	28080#	500#	-4990#	360#	16330	300	*	6320	300	
	Te	52	7719	4	23250	4	-855	3	13079.2	2.5	-20690#	400#	2170	14
	I	53	8710	10	21245	9	141	9	10190	8	-19135	11	2002	8
	Xe	54	12109	4	19233.5	2.7	-1876	4	5338.1	0.3	-15246.6	2.4	-4115.8	1.9
	Cs	55	15106.6	1.0	17335	5	-3084	5	595.1	1.6	-14289	14	-5730.00	0.19
	Ba	56	16013.37	0.08	15883	4	-2502.8	2.4	-1802.6	0.3	-8581.27	0.28	-9760	50
	La	57	16640	10	14137.0	1.9	-1494.9	1.7	-3939	8	-8091.0	2.5	-8703.6	1.6
	Ce	58	17445	10	12646.0	0.3	-790.1	1.1	-6334	12	-4320.6	0.3	-12650	11
	Pr	59	18409	14	11136	12	-132	29	-9129	15	-4450	50	-12074	14
	Nd	60	19514	22	9546	16	409	20	-11560	40	-365	12	-16480	70
	Pm	61	20190	70	7715	18	1440	18	-13950#	200#	-21	17	-15333	18
	Sm	62	21310	160	6390	50	1880	60	-16810#	300#	3880	40	-19850#	200#
	Eu	63	22110#	280#	4670#	210#	2860#	200#	-19150#	540#	3770#	210#	-19100#	360#
	Gd	64	23060#	500#	2930#	340#	3590#	420#	*	8310#	300#	300#	-23230#	590#
	Tb	65	24280#	640#	1400#	540#	3840#	590#	*	7990#	540#	540#	*	*
138	Sn	50	5100#	720#	*	*	20840#	600#	*	7100#	670#			
	Sb	51	6170#	300#	*	-5300#	420#	17440#	300#	*	6690#	300#		
	Te	52	7413	5	24380#	400#	-1689	5	14276	5	-23200#	500#	2589	9
	I	53	8577	15	22048	9	-384	6	10907	11	-19240	300	2332	6
	Xe	54	9685.7	2.8	20124	4	139	4	8289.6	2.8	-17957	4	-1497.7	2.8
	Cs	55	12691	9	17920	17	-1253	11	3635	10	-13820	12	-3237	9
	Ba	56	15517.35	0.08	16410.65	0.29	-2562.5	0.9	-693	10	-13167.4	0.3	-9192.3	1.6
	La	57	16630	50	14761	4	-2056	3	-3390	14	-7265	3	-8674	3
	Ce	58	17203	10	13260	10	-1044	10	-5550	15	-7136	10	-12438	13
	Pr	59	17934	18	11670	50	-338	24	-8190	30	-3280	14	-11618	18
	Nd	60	18962	17	10088	12	390	23	-10521	17	-3388	12	-16017	17
	Pm	61	19900	80	8180	30	1160	30	-13190	40	972	29	-14990	50
	Sm	62	20830	17	6876	17	1724	17	-15840#	200#	798	17	-19450#	200#
	Eu	63	21650#	200#	5150	80	2560	60	-18080#	300#	5030	30	-18610#	300#
	Gd	64	22710#	360#	3420#	200#	3290#	280#	-20730#	450#	5080#	200#	-22760#	540#
	Tb	65	23750#	590#	2000#	360#	3840#	420#	*	9160#	360#	360#	*	*
	Dy	66	*	420#	500#	3950#	570#	*	*	8990#	500#	500#	*	*

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)	S(p)	$Q(4\beta^-)$		$Q(d,\alpha)$		$Q(p,\alpha)$		$Q(n,\alpha)$			
139	Sb	51	3320#	500#	12220#	720#	30910#	400#	10710#	640#	10980#	570#	*	
	Te	52	2580	6	12960#	300#	24709	4	10540	300	9169	7	1340#	400#
	I	53	4550	29	10052	29	18770	29	11556	29	10831	29	1697	30
	Xe	54	3744	4	10954	6	11306	8	11422	9	8765	14	4428	3
	Cs	55	5885	10	8018	4	4120	8	12393	3	10592	3	4491	15
	Ba	56	4723.43	0.04	9316	9	-2899	28	12342.66	0.18	6289.0	1.9	7161.58	0.29
	La	57	8778.0	2.6	6255.7	2.3	-9728	14	11203.7	2.3	6522.6	2.3	4756.7	2.9
	Ce	58	7453	12	7717	7	-14570	13	10902	7	3950	50	7583	7
	Pr	59	9761	16	4541	12	-19423	15	11808	8	6552	8	6860	50
	Nd	60	8068	30	6170	30	-24380#	200#	11898	29	4190	30	10140	28
	Pm	61	10630	30	2771	18	-29370#	300#	12795	18	6563	18	9486	18
	Sm	62	8954	16	4729	30	-34740#	500#	12403	17	3660	70	12465	16
	Eu	63	11720	30	1189	18	*	*	13340	40	6277	18	11430	70
	Gd	64	10050#	280#	3170#	200#	*	*	13200#	280#	3480#	280#	14830#	200#
	Tb	65	12530#	420#	-240#	360#	*	*	13790#	420#	5820#	420#	13760#	360#
	Dy	66	10780#	640#	1260#	590#	*	*	14040#	710#	3280#	710#	17090#	590#
140	Sb	51	2220#	720#	*	*	33110#	600#	11630#	840#	10710#	780#	*	
	Te	52	4223	28	13860#	400#	26914	29	8890#	300#	8540	300	-920#	500#
	I	53	3210	180	10680	180	20720	180	12810	180	10570	180	2080	350
	Xe	54	5413	3	11816	29	15093	3	9704	6	8234	9	1964	3
	Cs	55	4421	9	8695	8	7641	10	13633	9	10197	8	4952	12
	Ba	56	6428	8	9858	9	984	27	10328	12	8140	8	4760	8
	La	57	5160.98	0.04	6693.2	2.3	-6110	40	14654.4	2.3	8267.3	2.3	7874.0	2.3
	Ce	58	9200	7	8139.6	1.8	-12623	13	9154	3	3925.8	2.7	5288.7	2.2
	Pr	59	7941	10	5030	9	-17710	50	13588	11	6092	6	8096	7
	Nd	60	10310	40	6722	27	-22470	40	9589	30	3812	27	7311	26
	Pm	61	8780	40	3480	40	-27730	800	14520	40	6240	40	10640	40
	Sm	62	11147	17	5244	18	-32630#	500#	10200	30	3481	18	9775	17
	Eu	63	9660	50	1890	50	-37730#	510#	15220	50	5900	70	12730	50
	Gd	64	12220#	200#	3670	30	*	*	10680	40	3200#	200#	11890	50
	Tb	65	10420#	850#	140#	820#	*	*	15890#	820#	5600#	850#	15280#	820#
	Dy	66	13260#	710#	1990#	590#	*	*	11550#	590#	3000#	710#	14030#	590#
Ho	67	*	*	-1094	10	*	*	16380#	640#	*	*	17360#	710#	
141	Te	52	2200#	400#	13840#	720#	29250#	400#	10010#	570#	8920#	500#	20#	720#
	I	53	4380#	270#	10840#	200#	23030#	200#	11010#	200#	10660#	200#	280#	360#
	Xe	54	3282	4	11890	180	17239	4	10973	29	8647	7	3145	5
	Cs	55	5498	12	8780	9	11539	9	11878	9	10359	10	3149	11
	Ba	56	4534	9	9971	10	4461	6	11679	6	8018	11	5886	6
	La	57	6688	4	6953	9	-2412	15	12690	4	10191	4	5599	10
	Ce	58	5428.14	0.10	8406.7	1.8	-9502	9	12503.4	1.8	5950	3	8472.3	2.2
	Pr	59	9397	6	5226.2	1.1	-16091	13	11645	7	6416	10	6152	3
	Nd	60	8011	26	6791	7	-20969	20	11339	8	3802	14	9022	10
	Pm	61	10390	40	3558	30	-25980	110	12200	30	6359	18	8255	20
	Sm	62	8549	15	5010	40	-30550#	300#	12278	16	3871	29	11731	14
	Eu	63	11010	50	1759	18	-35560#	500#	13165	17	6436	17	10660	30
	Gd	64	9510	30	3530	60	*	*	12885	24	3390	30	13920	23
	Tb	65	12130	810	50	110	*	*	13800#	220#	5980#	220#	12860	110
	Dy	66	10620#	590#	2190#	850#	*	*	13460#	420#	3150#	420#	15920#	360#
	Ho	67	13180#	710#	-1177	7	*	*	13990#	710#	5430#	640#	14950#	590#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)	S(2p)	$Q(\alpha)$	$Q(2\beta^-)$	$Q(\epsilon p)$	$Q(\beta^- n)$						
139	Sb	51	5900#	500#	*	-5690#	570#	18670#	400#	*	7840#	400#		
	Te	52	7043	4	25000#	500#	-1998	5	15440	4	-22630#	600#	3704	7
	I	53	8250	30	23010	300	-1194	29	12242	29	-21210#	300#	3442	29
	Xe	54	9403.8	2.1	20918	3	-342	3	9269.4	2.2	-17237	5	-829	9
	Cs	55	10298	3	18923	9	663	6	6527	4	-16010	7	-511	3
	Ba	56	13335.15	0.06	17108.5	0.3	-922	4	2036	7	-12230.7	2.8	-6463	3
	La	57	16230.3	2.8	15260.7	2.3	-2071.7	2.5	-2407	8	-11631	9	-7731	10
	Ce	58	17174	7	13807	7	-1524	7	-4936	28	-5977	7	-11890	16
	Pr	59	17762	11	12258	8	-603	12	-7321	15	-5588	8	-10874	14
	Nd	60	18573	30	10674	28	177	29	-9634	30	-1735	29	-15150	40
	Pm	61	19570	19	8877	16	1010	18	-12103	19	-1658	20	-14074	18
	Sm	62	20500	40	7374	16	1408	22	-14750#	200#	2349	16	-18702	30
	Eu	63	21420#	200#	5903	19	2200	70	-17270#	300#	2250	30	-17810#	200#
	Gd	64	22560#	360#	4180#	200#	2800#	250#	-19990#	540#	6580#	200#	-22030#	360#
Tb	65	23310#	590#	2590#	360#	3590#	360#	*		6330#	300#	-21270#	500#	
Dy	66	*		1010#	590#	4230#	640#	*		10730#	540#	*		
140	Sb	51	5540#	670#	*	*		19660#	620#	*		8200#	600#	
	Te	52	6803	28	26070#	600#	-2880#	400#	16630	28	*	4030	40	
	I	53	7760	180	23640#	350#	-1510	180	13450	180	-21100#	440#	3980	180
	Xe	54	9157	4	21868	5	-986	3	10284	8	-20070	4	-357	4
	Cs	55	10306	12	19648	10	70	16	7268	8	-15880	30	-208	8
	Ba	56	11151	8	17876	8	734	8	4809	8	-14915	8	-4113	8
	La	57	13939.0	2.6	16009	9	-404.2	2.9	373	6	-10906	4	-5439	7
	Ce	58	16653	10	14395.3	2.2	-1617.0	2.2	-3825	26	-10454.2	2.2	-11329	8
	Pr	59	17702	15	12747	7	-1080	50	-6480	40	-4752	6	-10748	28
	Nd	60	18378	28	11263	28	-170	26	-8798	29	-4593	27	-14824	29
	Pm	61	19410	40	9650	40	710	40	-11220	60	-680	40	-13900	40
	Sm	62	20101	17	8016	17	1318	17	-13670	30	-730	30	-18129	18
	Eu	63	21380	60	6620	60	1770	90	-16500	800	3230	50	-17430#	200#
	Gd	64	22270#	200#	4860	30	2600	30	-18950#	500#	3309	30	-21720#	300#
Tb	65	22960#	850#	3310	800	3340#	820#	-21220#	950#	7630	800	-20910#	950#	
Dy	66	24040#	640#	1750#	540#	3840#	590#	*		7510#	540#	*		
Ho	67	*		170#	590#	4370#	710#	*		11580#	590#	*		
141	Te	52	6430#	400#	*	-3120#	640#	17710#	400#	*		5040#	440#	
	I	53	7590#	200#	24690#	450#	-2300#	360#	14570#	200#	-23260#	630#	5010#	200#
	Xe	54	8695	4	22570	5	-1318	4	11535	6	-19130	28	782	9
	Cs	55	9919	10	20600	30	-546	12	8457	10	-18170	180	722	12
	Ba	56	10961	5	18666	6	226	5	5703	6	-14035	6	-3486	6
	La	57	11849	4	16811	5	1186	4	3082	4	-13173	9	-2927	4
	Ce	58	14628	7	15100.0	2.2	-139.5	2.2	-1242.6	3.0	-9455	8	-8816	6
	Pr	59	17338	8	13365.8	2.0	-1300.4	2.7	-5494	14	-8987.1	2.0	-9834	26
	Nd	60	18321	28	11821	8	-700	4	-8260	9	-3403	3	-14060	40
	Pm	61	19165	19	10280	16	254	16	-10597	19	-3121	15	-13138	19
	Sm	62	19696	14	8497	29	1226	15	-12710	22	1031	27	-17020	50
	Eu	63	20670	18	7003	19	1722	18	-15380	110	990	40	-16210	30
	Gd	64	21740#	200#	5422	23	2380	50	-17840#	300#	4943	23	-20810	800
	Tb	65	22550#	320#	3720	110	3150#	220#	-20180#	510#	5160	120	-19780#	510#
Dy	66	23880#	590#	2330#	360#	3410#	420#	*		9110#	300#	-24200#	590#	
Ho	67	*		810#	590#	4180#	710#	*		8830#	950#	*		

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		Q(4 β^-)		Q(d, α)		Q(p, α)		Q(n, α)	
142	Te	52	3950#	640#	*		31470#	500#	8280#	780#	8280#	640#	*	
	I	53	2940#	420#	11570#	550#	25250	370	12300	380	10300	370	670#	550#
	Xe	54	5104	4	12610#	200#	19303	4	9080	180	8093	29	622	4
	Cs	55	4112	12	9610	8	13270	8	13179	8	9991	8	3588	30
	Ba	56	6181	8	10655	11	8107	6	9918	10	7722	7	3448	6
	La	57	5161	7	7580	8	1118	24	13957	10	9754	6	6324	7
	Ce	58	7168.0	2.4	8887	5	-5546	4	10496.3	2.8	7559.9	2.8	6027.6	2.7
	Pr	59	5843.15	0.08	5641.2	1.1	-12470	30	15001.7	1.1	8026	7	9086.7	2.0
	Nd	60	9828	3	7222.4	1.5	-18990	28	9452	6	3735	8	6647	7
	Pm	61	8690	27	4238	24	-24580	700	13820	40	5740	40	9325	25
	Sm	62	11124	9	5753	14	-28870#	730#	9930	40	3378	14	8674	28
	Eu	63	9460	30	2670	30	-34060#	500#	14850	30	5930	30	11830	30
	Gd	64	11810	30	4320	30	-39110#	500#	10740	60	3300	30	11067	30
	Tb	65	10090	710	620	700	*		15930	700	5940#	730#	14480	700
	Dy	66	12810#	790#	2870#	740#	*		11070#	1080#	2880#	790#	13160#	750#
	Ho	67	10960#	710#	-840#	590#	*		16290#	710#	5260#	710#	16530#	590#
Er	68	*		780#	710#	*		12120#	710#	*		15440#	710#	
143	Te	52	1980#	710#	*		33660#	500#	*		8530#	780#	*	
	I	53	3930#	480#	11550#	590#	27550#	300#	10570#	500#	10590#	300#	-1040#	670#
	Xe	54	3045	5	12720	370	21403	5	10410#	200#	8260	180	1800	28
	Cs	55	5227	23	9733	22	15394	22	11234	22	10177	22	1570	180
	Ba	56	4166	9	10708	10	10065	7	11251	11	7977	11	4696	7
	La	57	6219	10	7618	9	4789	8	12272	9	9963	11	4525	11
	Ce	58	5144.80	0.09	8871	6	-2090	3	12039	5	7576.1	2.8	7310	8
	Pr	59	7351.1	1.9	5824.3	1.8	-8827	11	13078.8	2.0	9875.2	2.0	6896.6	2.5
	Nd	60	6123.57	0.07	7502.9	1.5	-15770	200	12725.1	1.5	5553	6	9723.4	1.7
	Pm	61	9890	24	4299.6	2.7	-22540	50	11944	4	6157	26	7377	7
	Sm	62	8601	4	5664	24	-27348	13	11717	14	3560	40	10383	26
	Eu	63	11000	30	2544	11	-32190#	400#	12403	14	6079	17	9610	40
	Gd	64	9340	200	4210	200	-37140#	450#	12410	200	3620	210	12870	200
	Tb	65	11930	700	750	60	*		13520	50	6230	60	12210	70
	Dy	66	10120#	730#	2900	700	*		13080	110	3180	800	15260	30
	Ho	67	12870#	640#	-780#	830#	*		14050#	500#	5650#	640#	14080#	900#
Er	68	11310#	640#	1130#	640#	*		13980#	640#	3030#	640#	17380#	640#	
144	I	53	2730#	500#	12290#	640#	29570#	400#	11800#	640#	10070#	570#	*	
	Xe	54	4741	7	13540#	300#	23559	6	8610	370	7900#	200#	-740#	400#
	Cs	55	3670	30	10357	26	17480	25	12670	25	9791	25	2280#	200#
	Ba	56	5901	10	11382	23	11981	7	9462	10	7574	12	2077	8
	La	57	4750	15	8202	15	6566	13	13704	14	9747	14	5274	16
	Ce	58	6897	3	9549	8	1533.7	2.7	10303	7	7367	5	4947	6
	Pr	59	5753.7	2.8	6433	3	-5131	11	14493	3	9549.6	2.9	7831	5
	Nd	60	7817.03	0.05	7968.8	1.4	-11988	28	10751.2	1.5	7132.6	1.5	7334.5	1.7
	Pm	61	6526.8	1.5	4702.8	2.6	-19048	28	15244.8	2.7	7642	4	10247	3
	Sm	62	10520.1	2.3	6293.9	2.7	-25395	7	9887	24	3422	14	7874	3
	Eu	63	9449	15	3391	11	-31010	14	14078	11	5179	14	10550	18
	Gd	64	11600	200	4810	30	-35150#	200#	10260	40	3030	30	9821	29
	Tb	65	10020	60	1430	200	-40280#	400#	15300	40	5720	30	13200	30
	Dy	66	12472	15	3440	50	*		10700	700	2830	110	12301	21
	Ho	67	10630#	400#	-270	16	*		16220#	730#	5640#	300#	15580	110
	Er	68	13590#	450#	1850#	450#	*		11350#	540#	2620#	540#	14420#	360#
Tm	69	*		-1712	16	*		16470#	640#	*		17920#	640#	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)	S(2p)	$Q(\alpha)$	$Q(2\beta^-)$	$Q(\epsilon p)$	$Q(\beta^- n)$						
142	Te	52	6160#	500#	*	-3930#	780#	18860#	500#	*	5460#	540#		
	I	53	7320	420	25410#	700#	-2660#	480#	15750	370	*	5360	370	
	Xe	54	8386	4	23451	28	-1958	5	12613	7	-22030#	400#	1176	10
	Cs	55	9610	11	21500	180	-963	9	9506	10	-17900#	200#	1144	9
	Ba	56	10715	10	19434	6	-295	7	6690	6	-16934	7	-2979	7
	La	57	11848	6	17551	10	438	11	3764	6	-12836	11	-2659	6
	Ce	58	12596.2	2.4	15840	8	1304.2	2.7	1417.2	2.1	-12089	6	-6587.6	2.4
	Pr	59	15240	6	14047.9	2.0	309	3	-2646	24	-8143	4	-7666.2	2.8
	Nd	60	17839	26	12448.6	1.7	-806	10	-6963.3	2.8	-7802.9	1.7	-13498	14
	Pm	61	19080	40	11029	24	-435	27	-9830	40	-2415	24	-13280	25
	Sm	62	19673	13	9311	26	607	12	-12027	28	-2082	4	-17132	13
	Eu	63	20470	60	7680	50	1200	40	-14750	700	1920	30	-16160	40
	Gd	64	21320	40	6080	30	2110	30	-16840#	730#	1685	29	-20490	110
	Tb	65	22220	1060	4150	700	2770	700	-19310#	860#	6080	700	-19250#	760#
	Dy	66	23430#	890#	2920#	730#	3110#	750#	-22270#	890#	5820#	730#	-23830#	890#
	Ho	67	24130#	710#	1350#	950#	3990#	590#	*	*	10000#	510#	*	*
	Er	68	*	*	-400#	710#	4650#	640#	*	*	10240#	590#	*	*
143	Te	52	5930#	640#	*	*	*	19930#	500#	*	*	6420#	630#	
	I	53	6870#	360#	*	-3260#	500#	17050#	300#	*	*	6530#	300#	
	Xe	54	8148	5	24290#	400#	-2423	6	13734	8	-21120#	500#	2244	9
	Cs	55	9339	24	22350#	200#	-1640	40	10498	23	-20190	380	2098	23
	Ba	56	10347	9	20318	7	-717	7	7669	7	-15996	7	-1985	9
	La	57	11379	9	18272	12	105	8	4897	8	-14943	10	-1710	8
	Ce	58	12312.8	2.4	16451	6	882.8	2.7	2395.9	2.1	-11052	6	-5889.3	2.4
	Pr	59	13194.2	1.9	14711	4	1735.6	2.5	-108	3	-10333	6	-5189.5	1.4
	Nd	60	15951	3	13144.1	1.7	523	7	-4485.4	2.5	-6758.4	2.1	-10931	24
	Pm	61	18580	14	11522	3	-564	8	-8719	11	-6461	3	-12045	4
	Sm	62	19725	9	9901	4	73	28	-11290	200	-855.8	2.5	-16270	30
	Eu	63	20458	17	8296	18	834	17	-13820	50	-388	26	-15350	30
	Gd	64	21150	200	6880	200	1720	200	-16060	200	3470	200	-19740	730
	Tb	65	22020	120	5070	50	2550	50	-18370#	400#	3610	60	-18370#	730#
	Dy	66	22930#	300#	3523	24	3040#	200#	-21080#	400#	7500	30	-22990#	500#
	Ho	67	23830#	640#	2090#	410#	3660#	500#	*	*	7220#	810#	-22270#	640#
	Er	68	*	*	290#	500#	4120#	640#	*	*	11740#	830#	*	*
144	I	53	6650#	550#	*	-3770#	720#	17990#	400#	*	*	6850#	400#	
	Xe	54	7785	6	25080#	500#	-2940	28	14895	9	-23880#	500#	2730	23
	Cs	55	8895	26	23080	380	-2100	180	11579	28	-19930#	300#	2595	26
	Ba	56	10067	9	21115	8	-1206	8	8665	8	-18853	9	-1667	10
	La	57	10968	14	18910	15	-224	15	5901	13	-14465	26	-1315	13
	Ce	58	12042	3	17167	7	414	8	3316.1	2.5	-13784	8	-5435.1	2.9
	Pr	59	13104.8	2.8	15305	7	1143	3	666	4	-9868	8	-4819.6	2.4
	Nd	60	13940.60	0.09	13793.1	2.1	1906.4	1.7	-1782.4	0.8	-9430.6	2.1	-8858.7	2.7
	Pm	61	16417	24	12206	3	850	7	-5797	11	-5636.9	3.0	-9971	4
	Sm	62	19121.5	2.7	10593.5	0.8	-137	26	-10206	28	-5252.3	0.8	-15795	11
	Eu	63	20450	30	9055	26	160	40	-13251	30	52	11	-15460	200
	Gd	64	20940	40	7351	28	1270	30	-15189	29	468	28	-19410	60
	Tb	65	21950	700	5630	40	2190	60	-17759	29	4580	30	-18270	30
	Dy	66	22590#	730#	4189	29	2787	29	-19960#	200#	4370	200	-22590#	400#
	Ho	67	23500#	500#	2630	700	3450	800	-22520#	400#	8520	50	-21590#	400#
	Er	68	24900#	540#	1070#	750#	3800#	540#	*	*	8270#	200#	*	*
	Tm	69	*	*	-580#	640#	4740#	640#	*	*	12670#	570#	*	*

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		Q($4\beta^-$)		Q(d, α)		Q(p, α)		Q(n, α)	
145	I	53	3730#	640#	*		31900#	500#	10050#	710#	10300#	710#	*	
	Xe	54	2692	12	13500#	400#	25570	40	9840#	300#	8140	370	520#	500#
	Cs	55	4857	26	10472	12	19570	13	10858	12	10038	11	360	370
	Ba	56	3820	11	11535	27	13916	9	10868	24	7866	11	3360	9
	La	57	6057	18	8357	14	8432	13	11813	14	9871	14	3329	14
	Ce	58	4710	30	9510	40	3580	30	11820	30	7820	30	6420	30
	Pr	59	6947	7	6483	7	-1634	8	12691	7	9771	7	6044	9
	Nd	60	5755.30	0.23	7970.4	2.4	-8508	20	12347.0	1.4	7220.5	1.5	8747.3	2.1
	Pm	61	7922.7	1.5	4808.4	2.5	-14970	100	13445.6	2.5	9546.6	2.5	8167.3	2.9
	Sm	62	6757.10	0.30	6524.3	2.7	-22409	7	13020.1	2.7	5355	24	10945.1	0.8
	Eu	63	10444	11	3315.1	2.7	-28871	8	12236	4	5859	4	8797	24
	Gd	64	9240	30	4594	22	-33850#	200#	12028	23	3250	40	11709	20
	Tb	65	12010	100	1830	100	-38720#	220#	12640	220	5520	100	10660	100
	Dy	66	9744	10	3163	29	*		12890	50	3180	700	14363	29
	Ho	67	12582	11	-161	10	*		13760	15	5860#	730#	13090	700
	Er	68	10540#	280#	1760#	200#	*		13680#	450#	3040#	540#	16690#	750#
Tm	69	13560#	450#	-1736	7	*		14220#	450#	5130#	540#	15310#	540#	
146	Xe	54	4533	27	14310#	500#	27680	29	8040#	400#	7540#	300#	-2030#	500#
	Cs	55	3580	40	11360	40	21110	50	12010	40	9500	40	700#	300#
	Ba	56	5495	22	12173	23	15985	21	9040	30	7600	30	909	21
	La	57	4280	40	8820	30	10410	30	13430	30	9750	30	4270	40
	Ce	58	6640	40	10089	20	5361	17	9925	21	7400	18	3948	18
	Pr	59	5130	40	6900	50	440	40	14460	30	9790	30	7140	40
	Nd	60	7565.23	0.09	8589	7	-4840	4	10535.5	2.4	7006.3	1.4	6326.9	2.1
	Pm	61	6258	5	5311	4	-11690	50	15004	4	9412	4	9260	4
	Sm	62	8416.3	2.9	7018	4	-18441	7	11131	4	6828	4	8652.3	2.8
	Eu	63	7197	7	3755	6	-25879	9	15559	6	7263	6	11489	7
	Gd	64	11233	20	5383	5	-31764	8	10244	11	3020	12	9078	5
	Tb	65	9530	110	2130	50	-36870#	200#	14710	50	5330	210	12120	50
	Dy	66	12384	9	3540	100	*		10524	29	2730	50	11320	200
	Ho	67	10189	10	285	9	*		16043	10	5795	15	14830	50
	Er	68	13320#	200#	2491	10	*		10998	11	2590#	400#	13493	15
	Tm	69	11380#	280#	-896	6	*		16430#	280#	5070#	450#	16800#	450#
147	Xe	54	2720#	200#	*		29410#	200#	9040#	540#	7540#	450#	*	
	Cs	55	4520	70	11350	60	23430	60	10190	50	9720	50	-1090#	400#
	Ba	56	3395	28	11980	40	17883	20	10503	22	7870	30	2255	20
	La	57	5700	40	9027	23	12364	11	11549	14	9953	13	2239	27
	Ce	58	4450	18	10260	30	7252	9	11532	15	7700	16	5400	11
	Pr	59	6830	40	7098	23	2100	16	12330	40	9852	16	5052	20
	Nd	60	5292.20	0.09	8750	30	-2790.1	1.5	12190	7	7467.8	2.4	7931.5	2.6
	Pm	61	7659	4	5405.2	0.9	-8299	8	13100.7	0.9	9570.0	0.9	7354.9	2.6
	Sm	62	6341.1	2.9	7101	4	-15070	9	12712.1	2.7	7014.0	2.8	10128.2	1.0
	Eu	63	8498	6	3837	4	-21787	6	13817.6	2.4	9285.1	2.4	9518	3
	Gd	64	7342	4	5528	6	-28750	40	13345.8	3.0	5127	11	12255.3	1.2
	Tb	65	11050	50	1946	9	-34768	11	12892	21	5881	29	10523	13
	Dy	66	9712	11	3720	50	*		12820	100	3036	29	13210	29
	Ho	67	12590	8	491	8	*		13196	8	5677	9	12257	28
	Er	68	10360	40	2660	40	*		13220	40	2870	40	15610	40
	Tm	69	13150#	200#	-1059	3	*		13810#	200#	5500#	200#	14282	11

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)	S(2p)	Q(α)	Q($2\beta^-$)	Q(ϵp)	Q($\beta^- n$)						
145	I	53	6460#	590#	*	*	19120#	500#	*	7860#	500#			
	Xe	54	7433	12	25790#	500#	-3430#	400#	16023	14	*	3706	28	
	Cs	55	8525	24	24010#	300#	-2580#	200#	12780	16	-22070#	400#	3640	13
	Ba	56	9722	11	21891	10	-1744	9	9550	30	-17933	10	-738	15
	La	57	10807	14	19740	25	-783	15	6791	14	-16854	28	-475	13
	Ce	58	11600	30	17710	30	240	30	4360	30	-12590	30	-4390	30
	Pr	59	12700	7	16032	10	884	8	1641	7	-12065	15	-3949	7
	Nd	60	13572.33	0.24	14403.6	2.1	1579.2	1.7	-780.6	0.9	-8289.0	2.6	-8087.2	2.7
	Pm	61	14449.5	2.1	12777.2	2.9	2324.2	2.9	-3276	4	-7806	3	-7373.2	2.5
	Sm	62	17277.2	2.4	11227.0	0.8	1117	3	-7727	20	-4192.3	0.8	-13103	11
	Eu	63	19893	11	9609	4	106	14	-11690	100	-3865	4	-14303	28
	Gd	64	20840	200	7985	20	585	21	-14681	21	1752	20	-18630	30
	Tb	65	22030	110	6640	100	1200	100	-17180	100	2030	100	-17800	100
	Dy	66	22216	15	4590	200	2557	21	-19170#	200#	6228	29	-21704	11
	Ho	67	23220#	400#	3280	50	3000	110	-21540#	200#	5959	29	-20580#	200#
	Er	68	24130#	450#	1490#	200#	3880#	360#	*	*	10210#	200#	-25060#	450#
	Tm	69	*	*	110#	450#	4360#	540#	*	*	9740#	200#	*	*
146	Xe	54	7225	25	*		-4010#	500#	16990	30	*		4030	27
	Cs	55	8440	50	24870#	400#	-3220	380	13480	50	-21920#	510#	3880	40
	Ba	56	9316	22	22646	21	-2136	21	10695	25	-20736	23	-176	24
	La	57	10340	40	20350	40	-950	30	7630	50	-16280	40	-50	50
	Ce	58	11346	17	18446	18	-217	17	5291	16	-15408	18	-4081	18
	Pr	59	12070	30	16410	40	920	40	2770	40	-11130	40	-3320	30
	Nd	60	13320.53	0.25	15071.9	2.6	1182.1	2.1	70.5	2.8	-11150	30	-7729.7	2.5
	Pm	61	14181	5	13282	5	1909	4	-2337	7	-7117	8	-6874	4
	Sm	62	15173.4	2.9	11826.3	2.8	2528.8	2.8	-4911	5	-6853.3	2.8	-11076	4
	Eu	63	17641	12	10279	6	1600	24	-9350	50	-3139	6	-12265	21
	Gd	64	20469	28	8698	4	476	5	-13531	8	-2723	4	-17850	100
	Tb	65	21540	50	6720	50	1130	50	-16530	50	2940	40	-17590	50
	Dy	66	22127	10	5373	29	1980	29	-18233	9	3080	21	-21506	10
	Ho	67	22771	11	3448	29	2900	700	-20350#	200#	7770	100	-20230#	200#
	Er	68	23860#	200#	2330	10	3370#	730#	*	*	6632	9	-24810#	200#
	Tm	69	24940#	450#	860#	200#	3930#	540#	*	*	10940#	200#	*	*
	147	Xe	54	7260#	200#	*		-4750#	540#	17660#	200#	*		4890#
Cs		55	8110	50	25660#	510#	-3820#	300#	14660	50	*		4850	60
Ba		56	8890	21	23349	23	-2486	20	11750	22	-19600	30	710	40
La		57	9986	16	21201	15	-1430	25	8766	19	-18400	40	885	20
Ce		58	11090	30	19076	12	-502	11	6133	9	-14363	22	-3400	40
Pr		59	11961	17	17187	20	303	17	3598	16	-13690	40	-2590	16
Nd		60	12857.43	0.12	15660	30	1034.7	2.1	1119.4	0.9	-9801	16	-6764	4
Pm		61	13917.2	2.7	13994	7	1601.2	1.6	-1497.5	2.3	-9650	30	-6117.0	2.9
Sm		62	14757.4	1.3	12412.1	1.0	2311.2	1.0	-3909.4	1.7	-5629.2	1.0	-10220	6
Eu		63	15695	4	10855	3	2991	3	-6802	8	-5379	5	-9530	5
Gd		64	18575	20	9283.3	1.3	1735.2	2.0	-11161	9	-1649	3	-15660	40
Tb		65	20580	100	7329	9	1074	14	-14985	10	-914	10	-16259	11
Dy		66	22096	11	5850	22	1610	200	-17590	40	4601	10	-21029	11
Ho		67	22780	9	4030	100	2240	50	-19783	8	4720	50	-19506	8
Er		68	23670#	200#	2940	40	3140	40	*	*	8660	40	-23790#	200#
Tm		69	24530#	200#	1432	10	3650#	400#	*	*	7975	9	*	*

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)	S(p)	$Q(4\beta^-)$	$Q(d,\alpha)$	$Q(p,\alpha)$	$Q(n,\alpha)$						
148	Xe	54	4470#	280#	*	31400#	200#	*	6800#	540#	*			
	Cs	55	3350	580	11980#	610#	25240	580	11370	580	580	-710#	760#	
	Ba	56	5400	70	12860	80	19810	60	8690	70	7330	60	-450	60
	La	57	4102	22	9734	28	14156	20	12942	28	9671	21	2993	22
	Ce	58	6456	14	11009	15	8938	11	9360	40	7301	17	2764	14
	Pr	59	5163	22	7810	17	3764	18	13811	22	9400	40	5946	19
	Nd	60	7332.5	1.7	9253	16	-1138.5	1.8	9980	30	7082	7	5310	30
	Pm	61	5894	6	6007	6	-6334	14	14771	6	9431	6	8407	9
	Sm	62	8141.37	0.28	7583.1	0.4	-11483	9	10829	4	6795.3	2.7	7742.2	1.0
	Eu	63	6826	10	4322	10	-18310	80	15408	10	9216	10	10614	10
	Gd	64	8984.1	1.2	6013.9	2.4	-24790	10	11559	6	6586.3	2.7	10028.3	0.3
	Tb	65	7860	15	2464	13	-31766	16	16265	13	7257	23	13107	13
	Dy	66	11728	13	4400	12	-37650#	600#	10620	50	3310	100	10717	22
	Ho	67	10310	80	1080	80	*		15270	80	5120	80	13960	130
	Er	68	12940	40	3011	11	*		10470	12	2505	13	12410	12
	Tm	69	10862	12	-550	40	*		16268	12	5180#	200#	16001	13
	Yb	70	*		1510#	600#	*		11400#	630#	2250#	630#	14520#	630#
149	Cs	55	4540#	610#	12050#	280#	27280#	200#	9560#	280#	9060#	200#	*	
	Ba	56	3500#	210#	13010#	610#	21360#	200#	9710#	200#	7410#	200#	580#	200#
	La	57	5580	200	9920	210	15840	200	10750	200	9580	200	1000	200
	Ce	58	4343	15	11250	22	10465	10	10719	15	7240	40	3917	23
	Pr	59	6575	18	7930	15	5401	11	11685	13	9460	19	3650	30
	Nd	60	5038.79	0.07	9129	15	751	4	11780	16	7170	30	6906	16
	Pm	61	7270	6	5944.8	2.5	-4575	4	12793.8	2.2	9726.1	2.2	6260	30
	Sm	62	5870.3	0.9	7559	6	-9436	9	12617.6	1.0	7183	4	9437.1	1.2
	Eu	63	8212	11	4393	4	-14778	15	13536	4	9420	5	8660	6
	Gd	64	6929	3	6116	10	-21385	28	13128	4	6855	7	11516	4
	Tb	65	9029	13	2509	3	-27610#	300#	14579	4	9461	5	11275	7
	Dy	66	7918	13	4457	16	-34500#	500#	13754	12	4930	50	14033	10
	Ho	67	11740	90	1098	17	*		13244	17	5757	16	11750	50
	Er	68	10334	30	3040	90	*		12726	28	2361	29	14460	29
	Tm	69	13190#	300#	-310#	300#	*		13440#	300#	5300#	300#	13000#	300#
Yb	70	11070#	780#	1720#	500#	*		13490#	500#	2560#	540#	16770#	500#	
150	Cs	55	3130#	360#	*		29490#	300#	10900#	360#	8660#	360#	*	
	Ba	56	5310#	360#	13780#	360#	23430#	300#	7750#	650#	6630#	300#	-2000#	360#
	La	57	4240#	280#	10650#	280#	17210#	200#	11920#	210#	8750#	200#	1280#	200#
	Ce	58	6248	16	11920	200	12204	12	8573	23	6696	16	1064	23
	Pr	59	5332	13	8919	14	6491	11	12809	14	8578	12	4024	14
	Nd	60	7375.1	2.0	9929	10	2085	6	9567	15	6629	16	3981	9
	Pm	61	5604	20	6510	20	-2491	21	14522	20	9414	20	7494	26
	Sm	62	7986.7	0.4	8275.8	1.9	-7741	4	10525	6	6855.5	1.0	6742.6	1.2
	Eu	63	6423	7	4946	6	-12846	15	15255	6	9338	6	9897	6
	Gd	64	8708	7	6612	7	-17932	18	11247	12	6645	6	9149	6
	Tb	65	7688	8	3268	8	-24620#	200#	15874	7	9115	7	12085	8
	Dy	66	9681	10	5110	5	-30670#	400#	11933	14	6297	9	11694	4
	Ho	67	8355	20	1535	17	-37310#	500#	16618	17	7114	17	14443	16
	Er	68	12160	30	3458	22	*		10870	90	2790	18	12011	19
	Tm	69	10680#	360#	40#	200#	*		15700#	200#	4980#	200#	14910#	200#
	Yb	70	13510#	640#	2050#	500#	*		10840#	400#	2200#	400#	13620#	400#
	Lu	71	*		-1269.6	2.3	*		16270#	780#	*		16980#	500#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q($2\beta^-$)		Q(ϵ_p)		Q(β^-n)	
148	Xe	54	7190#	200#	*	*			18590#	210#	*		4950#	200#
	Cs	55	7870	580	*		-4440#	700#	15410	580	*		4900	580
	Ba	56	8800	70	24220	70	-3150	60	12800	60	-22280#	210#	1010	60
	La	57	9800	40	21720	40	-1860	30	9827	25	-17980	60	1234	21
	Ce	58	10906	20	20036	23	-1056	13	7009	11	-17423	23	-3026	19
	Pr	59	12000	40	18070	40	-111	20	4330	16	-13146	18	-2460	15
	Nd	60	12624.7	1.7	16351	16	599	3	1928.3	1.9	-12683	9	-6437.2	1.9
	Pm	61	13554	7	14760	40	1460	6	-566	12	-8710	17	-5670	6
	Sm	62	14482.5	2.9	12988.3	1.0	1986.9	1.0	-3066.7	1.2	-8478.4	1.0	-9863.0	2.3
	Eu	63	15325	12	11423	11	2692	10	-5768	16	-4546	10	-9014	10
	Gd	64	16326	4	9851.1	2.9	3271.21	0.03	-8416	9	-4292.3	1.2	-13598	8
	Tb	65	18910	50	7992	14	2663	17	-12540	80	-276	13	-14407	16
	Dy	66	21441	11	6346	10	1481	29	-16374	14	214	10	-20167	11
	Ho	67	22900	80	4810	100	1950	90	-19230	80	5460	80	-19450	90
	Er	68	23300	12	3502	12	2666	13	-21280#	600#	5428	14	-23576	12
	Tm	69	24020#	200#	2105	12	3420	13	*	*	9703	11	*	*
	Yb	70	*		460#	600#	3980#	630#	*	*	9120#	600#	*	*
149	Cs	55	7890#	200#	*		-5250#	540#	16460#	280#	*		5760#	210#
	Ba	56	8900#	200#	24990#	280#	-3950#	200#	13650#	200#	-21310#	280#	1620#	200#
	La	57	9680	200	22780	210	-2590	200	10820	200	-20210	610	2110	200
	Ce	58	10799	13	20984	22	-1579	13	7705	11	-16370	60	-2206	18
	Pr	59	11738	19	18939	15	-629	16	5024	10	-15620	22	-1703	10
	Nd	60	12371.3	1.7	16939	9	270	30	2759.8	2.0	-11266	11	-5582	6
	Pm	61	13164.4	2.1	15198	16	1137	7	377	4	-10817	15	-4798.9	2.0
	Sm	62	14011.7	0.9	13566.4	1.2	1871.8	1.2	-2008	3	-7016.3	2.0	-8907	10
	Eu	63	15039	4	11976	4	2402	5	-4952	5	-6864	7	-8242	4
	Gd	64	15913	3	10439	3	3100	3	-7427	10	-3080	3	-12667	13
	Tb	65	16889	9	8522	4	4077.8	2.2	-9826	15	-2478	11	-11707	10
	Dy	66	19646	13	6921	9	2800	22	-13958	30	1281	9	-17780	80
	Ho	67	22048	15	5498	17	2210	100	-17780#	300#	1580	19	-18255	18
	Er	68	23280	50	4124	29	2076	29	-20540#	500#	6823	29	-23048	30
	Tm	69	24050#	300#	2700#	300#	2810#	300#	*	*	6820#	310#	-21760#	670#
	Yb	70	*		1170#	500#	3450#	540#	*	*	10990#	500#	*	*
	150	Cs	55	7660#	650#	*	*			17570#	360#	*		6130#
Ba		56	8800#	310#	25830#	360#	-4720#	300#	14590#	300#	*		1890#	360#
La		57	9820#	200#	23670#	610#	-3240#	200#	11920#	200#	-19910#	280#	2220#	200#
Ce		58	10591	16	21830	60	-2331	24	8832	12	-19120#	200#	-1879	15
Pr		59	11908	18	20170	21	-1680	30	5296	22	-15370	200	-1996	9
Nd		60	12413.9	2.0	17859	11	-469	16	3371.38	0.20	-14298	10	-5686.7	1.9
Pm		61	12874	21	15639	25	660	40	1195	21	-9846	22	-4533	20
Sm		62	13857.0	0.9	14220.6	2.0	1450.4	1.2	-1287	6	-9964.2	2.0	-8681	4
Eu		63	14635	12	12505	8	2237	7	-3686	9	-6017	6	-7736	7
Gd		64	15637	6	11005	6	2808	6	-6454	7	-5917	6	-12346	7
Tb		65	16717	15	9384	12	3587	5	-9160	16	-1954	8	-11478	12
Dy		66	17599	10	7618	4	4351.2	1.5	-11478	18	-1472	5	-15718	15
Ho		67	20100	90	5992	19	3390	50	-15460#	200#	2254	15	-16280	30
Er		68	22495	20	4556	20	2299	18	-19190#	400#	2579	20	-22020#	300#
Tm		69	23870#	200#	3080#	210#	2320#	200#	-21850#	540#	7880#	200#	-21360#	540#
Yb		70	24580#	720#	1740#	400#	3260#	400#	*	*	7810#	400#	*	*
Lu		71	*		450#	500#	3830#	540#	*	*	11950#	590#	*	*

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)	S(p)	$Q(4\beta^-)$	$Q(d,\alpha)$	$Q(p,\alpha)$	$Q(n,\alpha)$						
151	Cs	55	4110#	500#	*	31920#	400#	*	9010#	450#	*			
	Ba	56	3210#	420#	13870#	420#	25550#	300#	9080#	360#	6770#	650#	-740#	360#
	La	57	5420#	280#	10760#	360#	19660#	200#	10000#	280#	8730#	210#	-790#	610#
	Ce	58	4450	21	12130#	200#	13351	18	9710	200	6348	26	2020	70
	Pr	59	6550	15	9222	17	7873	12	10601	16	8483	16	1576	23
	Nd	60	5334.55	0.10	9931	9	3245.6	2.8	10808	10	6457	15	5102	11
	Pm	61	7860	20	6995	4	-1762	6	11701	5	8886	5	4796	16
	Sm	62	5596.45	0.11	8268	20	-5823	3	12198.9	1.9	7154	6	8478.6	2.0
	Eu	63	7931	6	4890.5	0.5	-11029	8	13193.9	0.7	9548.1	1.0	7859	6
	Gd	64	6496	7	6685	7	-15922	17	12963	5	6975	10	10794.5	2.9
	Tb	65	8589	8	3148	7	-20845	20	14215	5	9510	4	10323	11
	Dy	66	7514	5	4935	8	-27210	300	13448	4	6643	13	13163.6	2.9
	Ho	67	9748	16	1602	9	-33510#	400#	14788	12	9095	12	12555	15
	Er	68	8506	24	3609	22	*		14107	22	4590	90	15233	19
	Tm	69	12360#	200#	235	10	*		13670	30	5565	22	12860	90
Yb	70	10980#	500#	2340#	360#	*		13050#	420#	2090	300	15580	300	
Lu	71	13540#	640#	-1241.1	2.0	*		13800#	640#	4960#	720#	14300#	400#	
152	Ba	56	4770#	500#	14530#	570#	28060#	400#	7430#	500#	6530#	450#	*	
	La	57	3880#	360#	11430#	420#	21720#	300#	11430#	420#	8350#	360#	-130#	360#
	Ce	58	5900#	200#	12620#	280#	15710#	200#	8040#	280#	6030#	280#	-390#	280#
	Pr	59	5050	22	9822	26	9129	19	11800	22	7776	21	2110	200
	Nd	60	7278	24	10658	27	4558	24	8862	26	5755	26	2168	27
	Pm	61	5939	26	7600	26	-540	50	13136	26	7986	26	5432	28
	Sm	62	8257.7	0.6	8666	5	-4644	5	9545	20	6165.8	2.0	5259.7	2.1
	Eu	63	6306.71	0.10	5600.7	0.5	-9288	13	14873.9	0.6	9111.8	0.7	8822.7	2.0
	Gd	64	8589.7	2.9	7343.3	0.7	-14212	10	10796	6	6598	4	8075.2	0.7
	Tb	65	7160	40	3820	40	-18950	80	15760	40	9270	40	11370	40
	Dy	66	9437	5	5784	6	-23800	160	11699	9	6235	5	10655	5
	Ho	67	8048	15	2136	13	-30180#	200#	16421	14	8964	16	13536	13
	Er	68	10299	19	4160	13	*		12163	17	6033	17	12852	13
	Tm	69	9060	80	790	80	*		16770	80	6840	80	15540	80
	Yb	70	12850	340	2830	160	*		10880#	250#	2430#	340#	13070	160
Lu	71	11390#	450#	-830#	360#	*		15930#	450#	4640#	540#	16110#	360#	
153	Ba	56	2900#	570#	*	30410#	400#	8640#	570#	6760#	500#	*		
	La	57	4770#	420#	11430#	500#	24410#	300#	9860#	420#	8880#	420#	-1780#	420#
	Ce	58	4040#	280#	12780#	360#	17540#	200#	9420#	280#	6220#	280#	880#	360#
	Pr	59	5882	22	9800#	200#	11798	12	10367	21	8142	17	460#	200#
	Nd	60	5253	25	10861	19	5552	3	10160	12	5834	9	3163	12
	Pm	61	7465	27	7788	26	665	10	11006	9	7896	9	3299	13
	Sm	62	5868.40	0.13	8594	26	-3416	4	11537	5	5901	20	6766.4	0.7
	Eu	63	8550.27	0.12	5893.3	0.7	-8354	5	11920.1	0.6	8548.2	0.6	5877	20
	Gd	64	6246.96	0.13	7283.5	0.7	-12410	10	12480.9	0.7	6774	6	9814.9	0.6
	Tb	65	8670	40	3896	4	-17324	15	13586	5	9315	7	9125	7
	Dy	66	7096	6	5720	40	-21930#	200#	13191	6	6827	8	12267	7
	Ho	67	9485	14	2183	7	-26590	160	14451	6	9161	6	11740	9
	Er	68	8050	13	4162	16	-33170#	500#	13861	13	6338	17	14484	10
	Tm	69	10290	80	784	17	*		14988	22	8706	22	13603	20
	Yb	70	8960#	250#	2730#	210#	*		14280#	200#	4150#	280#	16270#	200#
Lu	71	13070#	250#	-609	10	*		13830	340	5080#	430#	13710#	250#	
Hf	72	*		1170#	540#	*		13520#	640#	2200#	710#	16980#	640#	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q(2 β^-)		Q(ϵ_p)		Q(β^-n)	
151	Cs	55	7240#	450#	*	*			18870#	450#	*		7330#	500#
	Ba	56	8510#	360#	*		-5210#	360#	15830#	300#	*		2920#	360#
	La	57	9650#	280#	24550#	280#	-4140#	200#	13050#	200#	-22200#	360#	3050#	200#
	Ce	58	10698	20	22780#	200#	-3386	27	9717	18	-18260#	300#	-996	20
	Pr	59	11883	15	21140	200	-2526	16	6606	13	-17690#	200#	-1172	12
	Nd	60	12709.7	2.0	18850	10	-1353	9	3633.29	0.24	-13384	12	-5417	20
	Pm	61	13464	5	16924	11	-366	17	1267	5	-12374	10	-4406	4
	Sm	62	13583.1	0.4	14778.3	2.0	1146.1	1.2	-387.6	2.8	-8185.49	0.22	-7855	6
	Eu	63	14354	4	13166.2	2.0	1965.0	1.1	-3029	4	-8344	20	-6960	6
	Gd	64	15204	4	11630.8	2.8	2653.1	2.9	-5436	4	-4426.5	2.8	-11154	8
	Tb	65	16277	5	9760	5	3497	4	-8000	9	-4120	7	-10385	6
	Dy	66	17195	10	8203	4	4179.5	2.6	-10486	17	-277	7	-14878	15
	Ho	67	18103	17	6712	9	4695.0	1.8	-12845	21	194	11	-13863	19
	Er	68	20670	30	5145	19	3505	19	-16720	300	3754	17	-19850#	200#
	Tm	69	23040#	300#	3693	24	2554	20	-20670#	400#	3879	17	-20210#	400#
	Yb	70	24490#	590#	2380	300	2640	300	*	*	9000	300	-24970#	590#
Lu	71	*		800#	500#	3440#	400#	*	*	9090#	450#	*	*	
152	Ba	56	7980#	500#	*		-5520#	450#	16960#	450#	*		3560#	450#
	La	57	9300#	360#	25300#	420#	-4670#	650#	14220#	300#	-21970#	500#	3620#	300#
	Ce	58	10350#	200#	23380#	360#	-3890#	210#	11090#	200#	-20950#	360#	-350#	200#
	Pr	59	11600	21	21950#	200#	-3474	27	7500	30	-17320#	200#	-887	19
	Nd	60	12612	24	19880	27	-2175	27	4613	24	-16210	30	-4835	25
	Pm	61	13800	30	17531	27	-1143	30	1634	26	-11763	28	-4749	26
	Sm	62	13854.1	0.6	15660.8	0.6	220.9	2.0	-55.68	0.18	-11108.6	0.7	-8181.3	0.7
	Eu	63	14238	6	13869	20	1553	6	-2170	40	-6791	5	-6770.7	2.8
	Gd	64	15085	6	12233.8	0.6	2204.9	1.1	-4588	5	-7419.7	0.6	-11155	4
	Tb	65	15750	40	10500	40	3160	40	-7120	40	-3350	40	-10040	40
	Dy	66	16951	6	8932	7	3726	4	-9624	11	-3219	5	-14567	9
	Ho	67	17796	19	7071	15	4507.3	1.3	-11830	70	735	14	-13404	21
	Er	68	18805	20	5762	10	4934.4	1.6	-14170	160	969	10	-17788	22
	Tm	69	21420#	210#	4400	70	3800	110	-18350#	210#	4560	70	-18300	310
	Yb	70	23830#	430#	3070	160	2730	160	*	*	4660	160	-24280#	430#
	Lu	71	24930#	540#	1510#	280#	2920#	200#	*	*	10070#	200#	*	*
153	Ba	56	7680#	500#	*				18100#	450#	*		4540#	500#
	La	57	8650#	360#	25960#	500#	-4900#	360#	15330#	300#	*		4750#	360#
	Ce	58	9940#	200#	24210#	360#	-4430#	280#	12310#	200#	-20220#	450#	660#	200#
	Pr	59	10932	17	22420#	200#	-3770	200	9079	15	-19320#	300#	509	27
	Nd	60	12531	3	20683	18	-3085	11	5229	3	-15560#	200#	-4148	26
	Pm	61	13405	10	18446	15	-2033	13	2719	9	-14178	21	-3957	9
	Sm	62	14126.1	0.6	16194.7	0.7	-608.7	2.1	322.88	0.25	-9699	24	-7743.0	0.7
	Eu	63	14856.99	0.16	14559	5	272.4	2.0	-2053	4	-9402	26	-6731.4	0.7
	Gd	64	14836.6	2.9	12884.3	0.6	1828.3	0.7	-3739	4	-5408.93	0.22	-10240	40
	Tb	65	15833	6	11239	4	2703	5	-6301	6	-5715	4	-9266	6
	Dy	66	16533	5	9533	5	3559	4	-8670	10	-1725	4	-13615	14
	Ho	67	17532	10	7967	6	4052	4	-11023	15	-1580	40	-12590	11
	Er	68	18349	19	6298	10	4802.3	1.4	-13260#	200#	2357	10	-16770	70
	Tm	69	19354	24	4945	17	5248.2	1.5	-15570	160	2321	19	-15740	160
	Yb	70	21810#	360#	3520#	200#	4110#	200#	-19910#	540#	6000#	200#	-21860#	280#
	Lu	71	24460#	430#	2220	160	3040#	340#	*	*	6060	140	*	*
Hf	72	*		340#	590#	3470#	710#	*	*	11730#	530#	*	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		Q(4 β^-)		Q(d, α)		Q(p, α)		Q(n, α)	
154	La	57	3590#	500#	12120#	570#	26730#	400#	11050#	570#	8500#	500#	-1260#	570#
	Ce	58	5400#	360#	13400#	420#	20110#	300#	7900#	420#	6240#	360#	-1310#	420#
	Pr	59	4700	150	10460#	250#	13540	150	11570#	250#	7890	150	1180#	250#
	Nd	60	6430	110	11400	110	8020	110	8780	120	5960	110	1190	120
	Pm	61	5920	50	8450	40	1660	60	12370	50	7320	40	3930	50
	Sm	62	7966.8	0.8	9096	9	-2061	7	9510	26	5795	5	4134.2	1.1
	Eu	63	6442.17	0.24	6467.1	0.7	-7098	8	13735.6	0.7	7702.5	0.6	7295	5
	Gd	64	8894.73	0.17	7628.0	0.7	-11100	5	9892.8	0.7	5810.7	0.7	6516.7	0.6
	Tb	65	6910	50	4560	50	-15730	50	15260	50	8900	50	10140	50
	Dy	66	9322	8	6370	8	-20462	19	11030	40	6093	8	9441	8
	Ho	67	7698	10	2786	9	-24920#	200#	16189	9	8977	9	12630	9
	Er	68	10204	11	4882	7	-29870#	500#	11705	14	5882	9	11794	6
	Tm	69	8509	20	1244	17	*	*	16778	17	8703	22	14842	17
	Yb	70	10800#	200#	3232	23	*	*	12550	80	5710	9	13981	24
	Lu	71	9360#	260#	-200	50	*	*	17320#	260#	6690#	360#	16710#	200#
	Hf	72	13500#	710#	1600#	530#	*	*	11400#	540#	2240#	640#	14460#	590#
155	La	57	4490#	570#	*	*	28760#	400#	9450#	570#	8780#	570#	*	*
	Ce	58	3650#	500#	13460#	570#	22270#	400#	9030#	500#	6480#	500#	-190#	570#
	Pr	59	5290	150	10350#	300#	16402	17	10320#	200#	8510#	200#	-230#	300#
	Nd	60	4670	110	11380	150	9786	9	9996	15	6338	21	2420#	200#
	Pm	61	6520	50	8540	110	4310	11	11101	5	8073	25	2465	19
	Sm	62	5806.96	0.27	8990	40	-1035	10	11168	9	5927	26	5605	24
	Eu	63	8151.3	0.4	6651.6	1.2	-5778	17	11452.7	0.8	7808.9	0.8	5083	26
	Gd	64	6435.23	0.18	7621.0	0.8	-9860	6	12007.9	0.7	5682.2	0.7	8339.1	0.3
	Tb	65	9170	50	4833	10	-14624	14	12343	10	8321	10	7284	10
	Dy	66	6833	12	6290	50	-18652	19	12869	10	6430	40	11198	10
	Ho	67	9471	19	2934	19	-23489	26	13814	18	8943	18	10320	40
	Er	68	7675	8	4859	10	-27850#	300#	13514	8	6254	14	13555	7
	Tm	69	10270	17	1310	11	-32640#	500#	14557	14	8732	14	12620	16
	Yb	70	8642	24	3364	22	*	*	14197	22	6130	80	15638	19
	Lu	71	10910#	200#	-93	9	*	*	15370#	200#	8630	160	14870	80
	Hf	72	9700#	590#	1940#	360#	*	*	14770#	340#	3920#	360#	17600#	340#
Ta	73	*	*	-1453	15	*	*	14020#	710#	*	*	15080#	540#	
156	Ce	58	5020#	570#	13980#	570#	24490#	400#	7600#	570#	6230#	500#	-2300#	570#
	Pr	59	4220#	300#	10930#	500#	18520#	300#	11490#	420#	8320#	360#	320#	420#
	Nd	60	6260	200	12350	200	12060	200	8430	250	5960	200	200#	280#
	Pm	61	5295	6	9169	10	5926	5	12230	110	8031	4	3051	12
	Sm	62	7244	9	9712	10	1166	9	9840	50	6149	13	3614	10
	Eu	63	6339	5	7184	5	-4610	60	13080	5	7338	5	6209	11
	Gd	64	8536.35	0.07	8006.1	0.9	-8324	25	9913.7	0.8	5696.1	0.7	5671.2	0.4
	Tb	65	6912	10	5310	4	-13261	15	14326	4	7656	4	8923	4
	Dy	66	9445	10	6568	10	-17270	10	10340	50	5649	4	7999.99	0.27
	Ho	67	7510	60	3610	60	-21730	100	15630	60	8530	60	11480	60
	Er	68	10073	25	5460	30	-26340	160	11140	26	5666	25	10579	25
	Tm	69	8274	18	1909	16	-30780#	300#	16487	15	8507	17	13830	15
	Yb	70	10827	19	3922	14	*	*	11880	18	5595	17	12860	14
	Lu	71	9270	80	540	80	*	*	16890	80	8320#	210#	15890	80
	Hf	72	11580#	340#	2610	160	*	*	12560#	260#	5420	9	14990#	250#
	Ta	73	10140#	590#	-1020	4	*	*	17390#	590#	6110#	590#	18020#	340#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q($2\beta^-$)		Q(ϵ_p)		Q(β^-n)	
154	La	57	8370#	500#	*		-5370#	500#	16440#	430#	*		5190#	450#
	Ce	58	9440#	360#	24830#	500#	-4520#	420#	13330#	320#	-22720#	500#	1150#	300#
	Pr	59	10580	150	23240#	330#	-4240#	250#	10300	160	-19240#	330#	1060	150
	Nd	60	11680	120	21210#	230#	-3260	110	6770	110	-17950#	230#	-3110	110
	Pm	61	13380	50	19310	50	-2620	50	3250	40	-14210	50	-4000	40
	Sm	62	13835.2	0.8	16884	24	-1200.4	1.1	1250.8	0.9	-12413	3	-7159.5	1.1
	Eu	63	14992.45	0.27	15062	26	-566	20	-1580	50	-8379	9	-6926.6	0.7
	Gd	64	15141.68	0.21	13521.31	0.27	920.2	0.7	-3312	7	-8435.3	0.3	-10464	4
	Tb	65	15580	60	11850	50	2210	50	-5520	50	-4080	50	-9080	50
	Dy	66	16418	9	10265	7	2945	5	-7789	9	-4801	7	-13453	9
	Ho	67	17183	15	8500	40	4041	4	-10212	17	-615	9	-12238	12
	Er	68	18254	11	7065	6	4279.6	2.6	-12673	18	-751	6	-16687	15
	Tm	69	18800	70	5406	19	5093.8	2.6	-14710#	200#	3296	15	-15290#	200#
	Yb	70	19750	160	4016	20	5474.2	1.7	-17200#	500#	3251	20	-19580	160
	Lu	71	22440#	280#	2520#	220#	4350#	280#	*		6990#	200#	-20480#	540#
	Hf	72	*		990#	530#	3480#	640#	*		7190#	540#	*	
155	La	57	8090#	500#	*		-5750#	570#	17230#	400#	*		6100#	500#
	Ce	58	9050#	450#	25580#	570#	-4960#	500#	14360#	400#	*		2200#	430#
	Pr	59	9989	21	23750#	300#	-4110#	200#	11525	18	-20950#	400#	2200	120
	Nd	60	11096	10	21840#	200#	-3484	20	7906	9	-17220#	300#	-1860	50
	Pm	61	12435	10	19949	13	-2585	13	4877	5	-16030	150	-2557	5
	Sm	62	13773.8	0.9	17438	3	-1672.8	1.1	1879.1	0.9	-11790	110	-6524.3	1.1
	Eu	63	14593.5	0.5	15748	9	-857	5	-568	10	-10610	40	-6183.1	0.8
	Gd	64	15329.96	0.25	14088.1	0.4	81.4	0.7	-2914	10	-6903.7	0.9	-9980	50
	Tb	65	16079	11	12461	10	978	10	-5210	17	-6801	10	-8927	12
	Dy	66	16155	10	10851	10	2608	10	-6946	11	-2739	10	-12587	13
	Ho	67	17169	18	9304	18	3159	18	-9413	20	-3170	50	-11506	18
	Er	68	17879	11	7644	7	4118	5	-11706	18	896	9	-15853	16
	Tm	69	18779	18	6191	11	4572	5	-14076	22	725	13	-14765	20
	Yb	70	19440#	200#	4608	19	5338.7	2.1	-16140#	300#	4813	17	-18860#	200#
	Lu	71	20270	160	3139	24	5802.7	2.6	-18560#	500#	4588	17	-17890#	500#
	Hf	72	23200#	590#	1730#	360#	4760#	420#	*		8280#	300#	*	
Ta	73	*		150#	530#	3690#	640#	*		8440#	540#	*		
156	Ce	58	8660#	500#	*		-5200#	570#	15600#	450#	*		2470#	400#
	Pr	59	9520#	330#	24390#	500#	-4460#	420#	12600#	300#	-20680#	500#	2650#	300#
	Nd	60	10930	230	22700#	360#	-3840#	280#	8890	200	-19840#	450#	-1610	200
	Pm	61	11810	40	20550	150	-2830	19	5922	7	-16037	18	-2045	4
	Sm	62	13051	9	18260	110	-1639	26	3172	9	-14368	13	-5617	9
	Eu	63	14491	5	16170	50	-1257	26	5	6	-10434	7	-6087	5
	Gd	64	14971.58	0.19	14657.7	0.9	-197.2	0.3	-2005.95	0.10	-9633.1	0.9	-9356	10
	Tb	65	16080	50	12931	4	372	4	-4610	60	-5562	4	-9006	10
	Dy	66	16277	7	11400.94	0.22	1753.0	0.3	-6318	25	-5748.06	0.12	-12560	17
	Ho	67	16980	60	9900	80	2810	70	-8650	60	-1520	60	-11340	60
	Er	68	17748	25	8395	26	3483	25	-10952	26	-2344	26	-15656	27
	Tm	69	18544	20	6768	17	4345	7	-13080	80	1921	23	-14398	22
	Yb	70	19469	20	5231	11	4811	4	-15390	160	1662	12	-18780	22
	Lu	71	20180#	220#	3900	80	5596	3	-17700#	310#	5590	70	-17460#	310#
	Hf	72	21280#	530#	2510	160	6028	4	*		5350	160	-21950#	530#
	Ta	73	*		920#	360#	4940#	360#	*		9210#	300#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		Q(4 β^-)		Q(d, α)		Q(p, α)		Q(n, α)	
157	Ce	58	3210#	640#	*		26670#	500#	8890#	640#	6620#	640#	*	
	Pr	59	5040#	500#	10960#	570#	20920#	400#	10100#	570#	8670#	500#	-1140#	570#
	Nd	60	4060	200	12180#	300#	14361	25	9660	30	6600	150	1540#	300#
	Pm	61	6205	8	9110	200	8466	7	10697	12	8250	110	1540	150
	Sm	62	5386	10	9803	6	2746	7	10973	6	6680	40	4650	110
	Eu	63	7444	7	7385	10	-2628	24	11443	4	7860	4	4680	40
	Gd	64	6359.86	0.15	8027	5	-7433	25	11705.1	0.9	5778.4	0.8	7278.1	0.9
	Tb	65	8744	4	5517.5	0.3	-12027	26	12017.3	0.3	7806.6	0.4	6620.8	0.8
	Dy	66	6967	5	6623	6	-15998	12	12537	11	5600	50	9928	5
	Ho	67	9420	60	3591	23	-20374	28	13035	25	8427	25	8970	50
	Er	68	7250	40	5200	70	-24490#	200#	13360	30	6114	26	12651	26
	Tm	69	9979	30	1810	40	-29090	160	14184	27	8733	27	11550	27
	Yb	70	8238	15	3886	18	-33720#	400#	13911	15	5866	18	14826	12
	Lu	71	10780	80	487	17	*		14757	22	8339	23	13617	21
	Hf	72	9110#	250#	2440#	210#	*		14360#	200#	5680	50	16680#	200#
	Ta	73	11660#	340#	-935	10	*		15430#	340#	7950#	530#	15720#	260#
	W	74	*		950#	500#	*		14990#	640#	*		18670#	640#
158	Pr	59	3860#	570#	11610#	640#	22930#	400#	11250#	570#	8460#	570#	-500#	570#
	Nd	60	5660#	300#	12800#	500#	16630#	300#	8220#	420#	6230#	300#	-480#	500#
	Pm	61	4863	15	9917	28	10381	14	12100	200	8059	16	1972	22
	Sm	62	6644	7	10242	9	5156	6	9624	6	6554	7	2680	10
	Eu	63	5868	11	7867	11	-1069	29	12818	14	7799	10	5331	11
	Gd	64	7937.39	0.06	8520	4	-5385	25	10107	5	5992.3	0.9	5147.7	0.9
	Tb	65	6778.5	1.0	5936.1	1.0	-10767	25	13775.1	1.0	7463.4	1.0	7993.6	1.3
	Dy	66	9054	5	6932.4	2.5	-14396	8	10395	4	5707	10	7309.5	2.5
	Ho	67	7430	40	4052	27	-18970	30	15053	27	7833	29	10709	29
	Er	68	9990	40	5760	30	-23200	30	10890	70	5600	30	9498	27
	Tm	69	8040	40	2600	40	-27540#	200#	16220	40	8370	26	12980	30
	Yb	70	10656	13	4563	27	-32320#	500#	11530	17	5480	13	11845	10
	Lu	71	8827	21	1076	19	*		16757	18	8154	22	15060	18
	Hf	72	11270#	200#	2935	23	*		12360	80	5312	9	14047	24
	Ta	73	9590#	260#	-450	50	*		17410#	260#	8060#	360#	17030#	200#
	W	74	12060#	640#	1340#	530#	*		13070#	590#	5160	15	16310#	590#
	159	Pr	59	4830#	640#	*		24960#	500#	9630#	710#	8650#	640#	*
Nd		60	3820#	500#	12770#	570#	18750#	400#	9440#	570#	6630#	500#	710#	570#
Pm		61	5536	17	9790#	300#	12977	10	10618	27	8780	200	660#	300#
Sm		62	5029	8	10408	15	6959	6	10800	9	6820	7	3910	200
Eu		63	6859	11	8082	7	1286	5	11345	6	8184	10	3767	6
Gd		64	5943.21	0.08	8595	10	-4001	4	11608	4	6388	5	6448	9
Tb		65	8133.0	0.6	6131.7	0.8	-8961	28	12002.0	0.8	7866.7	0.8	6200	5
Dy		66	6831.4	2.6	6985.3	1.3	-13328	18	12307.3	1.4	5788	4	9014.4	1.3
Ho		67	9214	27	4211	4	-17620	40	12806	6	8064	3	8408	5
Er		68	7328	26	5663	27	-21707	17	12981	24	5780	60	11615	4
Tm		69	9940	40	2560	40	-26130	30	13530	40	8500	40	10550	70
Yb		70	7900	19	4420	30	-30350#	300#	13610	30	5854	23	14020	30
Lu		71	10570	40	990	40	-34970#	510#	14430	40	8410	40	12770	40
Hf		72	8822	24	2929	23	*		14315	22	5760	80	16052	20
Ta		73	11350#	200#	-369	10	*		15170#	200#	8290	160	14950	80
W		74	9860#	590#	1610#	360#	*		14870#	340#	5431	6	18030#	340#
Re		75	*		-1670#	50#	*		15680#	650#	*		16960#	590#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)	S(2p)	Q(α)	Q($2\beta^-$)	Q(ϵp)	Q($\beta^- n$)						
157	Ce	58	8230#	640#	*	-5510#	640#	16450#	500#	*	3490#	590#		
	Pr	59	9270#	400#	24940#	570#	-4730#	500#	13760#	400#	*	3860#	450#	
	Nd	60	10320	27	23110#	400#	-3860#	200#	10216	25	-18880#	400#	-369	25
	Pm	61	11500	8	21460	19	-3153	14	7161	8	-18020#	300#	-1006	12
	Sm	62	12630	5	18972	10	-1772	5	4145	5	-13490	200	-4664	7
	Eu	63	13784	4	17096	6	-1236	10	1304	4	-12584	6	-4995	4
	Gd	64	14896.21	0.16	15210.6	0.9	-688.7	0.4	-1399	5	-8749	9	-8804	4
	Tb	65	15656	10	13523.6	0.9	178.6	0.8	-3932	23	-7967	5	-8305.8	0.3
	Dy	66	16411	11	11932	5	1033	5	-6034	26	-4178	5	-12020	60
	Ho	67	16934	29	10159	25	2057	24	-8090	30	-4029	24	-10690	30
	Er	68	17323	26	8812	27	3328	25	-9964	27	-150	25	-14632	29
	Tm	69	18253	28	7270	30	3851	27	-12280	30	-550	70	-13549	28
	Yb	70	19065	20	5794	12	4622	6	-14520#	200#	3496	27	-17750	70
	Lu	71	20049	24	4409	18	5107.7	2.9	-16810	160	3083	20	-16660	160
	Hf	72	20680#	360#	2980#	200#	5880	3	-19190#	450#	7070#	200#	-20920#	360#
	Ta	73	21800#	530#	1670	160	6355	6	*	*	6820	140	*	*
	W	74	*	*	-70#	500#	5170#	640#	*	*	10870#	430#	*	*
158	Pr	59	8910#	500#	*	-5000#	570#	14760#	400#	*	4060#	400#		
	Nd	60	9720#	360#	23760#	500#	-4130#	420#	11200#	300#	-21340#	590#	170#	300#
	Pm	61	11068	14	22100#	300#	-3320	150	8166	17	-17840#	400#	-483	14
	Sm	62	12030	11	19350	200	-1990	110	5439	5	-16078	25	-3863	7
	Eu	63	13313	12	17669	11	-1190	50	2215	10	-12247	12	-4504	10
	Gd	64	14297.25	0.16	15904	9	-659.3	0.9	-282.7	2.5	-11300	5	-7997.4	0.3
	Tb	65	15522	4	13963	5	-157.7	1.3	-3284	27	-7301	4	-8118	5
	Dy	66	16020.5	2.5	12449.8	2.5	874.3	2.5	-5102	25	-6872.3	2.5	-11647	24
	Ho	67	16850	70	10674	27	1540	50	-7480	40	-2713	27	-10870	40
	Er	68	17240	40	9353	25	2665	26	-9294	26	-3169	26	-14640	40
	Tm	69	18017	29	7800	70	3511	27	-11491	29	840	30	-13349	28
	Yb	70	18894	13	6378	26	4170	7	-13908	19	90	26	-17625	17
	Lu	71	19610	80	4961	21	4790	5	-16050#	200#	4230	30	-16380#	200#
	Hf	72	20380	160	3422	20	5404.7	2.7	-18410#	500#	4034	21	-20530	160
	Ta	73	21260#	360#	2000#	220#	6124	4	*	*	8000#	200#	-19530#	450#
	W	74	*	*	410#	530#	6613	3	*	*	7920#	540#	*	*
	159	Pr	59	8690#	640#	*	-5330#	640#	15470#	500#	*	4900#	590#	
Nd		60	9490#	400#	24380#	640#	-4310#	570#	12400#	400#	*	1210#	400#	
Pm		61	10400	12	22590#	400#	-3564	20	9489	11	-19510#	400#	625	11
Sm		62	11673	7	20324	26	-2349	11	6353	6	-15440#	300#	-3024	12
Eu		63	12727	4	18324	8	-1528	6	3489	4	-14243	14	-3425	4
Gd		64	13880.59	0.11	16461	5	-795.5	0.9	605.5	1.3	-10600	5	-7162.2	1.0
Tb		65	14911.5	0.8	14651	4	-139.4	1.2	-2203.0	2.9	-9565	10	-7196.8	2.5
Dy		66	15885	5	12921.4	1.3	478.1	1.4	-4606	3	-5766.3	1.3	-11051	27
Ho		67	16641	24	11144	3	1496	10	-6758	28	-5147.7	3.0	-10096	25
Er		68	17313	25	9714	6	2170	10	-8721	18	-1443	4	-13928	26
Tm		69	17980	40	8320	40	3040	30	-10860	50	-1670	40	-12631	29
Yb		70	18556	21	7030	30	3945	19	-12986	25	2180	30	-16698	23
Lu		71	19390	40	5550	50	4490	40	-15260	40	1710	50	-15680	40
Hf		72	20090#	200#	4005	20	5225.0	2.7	-17370#	300#	5868	19	-19760#	200#
Ta		73	20940	160	2565	25	5681	6	-19710#	510#	5479	18	-18820#	500#
W		74	21920#	500#	1160#	360#	6450	4	*	*	9330#	300#	*	*
Re		75	*	*	-330#	530#	6830#	60#	*	*	9140#	550#	*	*

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)	S(p)	$Q(4\beta^-)$	$Q(d,\alpha)$	$Q(p,\alpha)$	$Q(n,\alpha)$						
160	Nd	60	5400#	570#	13330#	640#	20810#	400#	7910#	570#	6270#	570#	-1480#	640#
	Pm	61	4520#	300#	10480#	500#	14830#	300#	11760#	420#	8320#	300#	1190#	500#
	Sm	62	6098	8	10969	12	9437	6	9565	15	6926	9	1873	26
	Eu	63	5509	10	8562	11	2901	18	12481	11	8061	10	4463	12
	Gd	64	7451.5	0.7	9187	4	-1877	24	10025	10	6381	4	4383	5
	Tb	65	6375.21	0.13	6563.7	0.8	-7530	30	13564.2	0.8	7851.3	0.8	7269	4
	Dy	66	8576.5	1.5	7428.8	1.3	-11507	16	10509.3	1.4	5955.4	1.3	6797.8	1.3
	Ho	67	7124	15	4504	15	-16110	60	14736	15	7906	16	10028	15
	Er	68	9575	25	6025	24	-20133	26	10830	40	5630	30	9006	25
	Tm	69	7800	40	3030	30	-24430	80	15710	40	7950	40	12170	40
	Yb	70	10397	23	4880	30	-28790	160	11249	30	5440	30	10871	30
	Lu	71	8630	70	1720	60	-33340#	300#	16450	60	8020	60	14110	60
	Hf	72	11150	20	3510	40	*	*	11992	18	5389	17	13141	15
	Ta	73	9500	80	310	80	*	*	16940	80	7890#	210#	16230	80
	W	74	11960#	340#	2220	160	*	*	12500#	260#	5131	9	15170#	250#
	Re	75	10270#	590#	-1267	7	*	*	17470#	590#	7640#	500#	18360#	340#
161	Nd	60	3530#	640#	*	*	22920#	500#	9210#	710#	6610#	640#	*	*
	Pm	61	5310#	420#	10390#	500#	17230#	300#	10280#	500#	8680#	420#	-260#	500#
	Sm	62	4508	9	10960#	300#	11383	7	10593	12	7281	15	3030#	300#
	Eu	63	6382	14	8846	12	5405	11	11127	12	8323	11	2944	17
	Gd	64	5635.4	1.0	9314	10	-305	9	11249	5	6614	10	5392	5
	Tb	65	7696.6	0.6	6808.9	1.0	-5562	28	11810.8	1.0	8092.1	1.0	5441	10
	Dy	66	6454.39	0.08	7507.9	1.3	-10215	15	12188.0	1.3	6279.5	1.4	8280.8	1.3
	Ho	67	8886	15	4814.1	2.2	-14634	28	12680.5	2.6	8074	3	7919.8	2.5
	Er	68	7207	26	6108	17	-18885	24	12839	9	5850	28	10852	9
	Tm	69	9670	40	3120	40	-23200	40	13372	28	8270	40	9930	40
	Yb	70	7746	22	4830	40	-27280#	200#	13440	30	5728	30	13111	30
	Lu	71	10360	60	1690	30	-31670	160	13990	30	8312	29	11790	40
	Hf	72	8455	25	3330	60	-36100#	400#	14100	40	5761	27	15341	24
	Ta	73	10900	80	59	23	*	*	14860	30	8270	30	14157	30
	W	74	9250#	250#	1970#	210#	*	*	14600#	200#	5480	50	17190#	200#
	Re	75	12030#	340#	-1197	5	*	*	15310#	340#	7670#	530#	15920#	260#
Os	76	*	*	580#	500#	*	*	15230#	650#	*	*	19120#	640#	
162	Pm	61	4210#	500#	11070#	640#	19310#	400#	11480#	570#	8300#	570#	370#	640#
	Sm	62	5930#	200#	11580#	360#	13650#	200#	9180#	360#	6890#	200#	920#	450#
	Eu	63	4970	60	9310	60	7350	60	12250	60	8380	60	3510	60
	Gd	64	6846	4	9777	11	2054	4	9912	10	6627	6	3575	7
	Tb	65	6290	40	7460	40	-4200	40	12980	40	7750	40	6010	40
	Dy	66	8196.99	0.06	8008.3	1.3	-8354	15	10366.2	1.3	6215.5	1.3	6027.0	1.3
	Ho	67	6916	4	5275	3	-13210	80	14341	3	7990	3	9137	3
	Er	68	9204	9	6425.6	2.2	-17164	9	10759	15	5860	3	8479.5	1.5
	Tm	69	7650	40	3565	27	-21700	60	15300	40	7948	26	11499	26
	Yb	70	10059	21	5220	30	-25826	23	11190	40	5610	30	10380	16
	Lu	71	8340	80	2280	80	-30330#	220#	16040	80	7870	80	13390	80
	Hf	72	10925	24	3896	29	-34670#	500#	11810	60	5400	40	12316	20
	Ta	73	9150	60	750	60	*	*	16860	50	7940	50	15570	60
	W	74	11520#	200#	2590	30	*	*	12580	80	5308	9	14499	24
	Re	75	9680#	260#	-770	50	*	*	17590#	260#	7850#	360#	17590#	200#
	Os	76	12360#	640#	900#	530#	*	*	13140#	590#	5100#	50#	16630#	590#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q($2\beta^-$)		Q(ϵp)		Q($\beta^- n$)	
160	Nd	60	9220#	500#	*		-4690#	570#	13100#	400#	*		1350#	400#
	Pm	61	10060#	300#	23250#	500#	-3860#	420#	10480#	300#	-19200#	590#	1130#	300#
	Sm	62	11127	8	20760#	300#	-2190	200	7706	6	-17720#	400#	-2263	7
	Eu	63	12368	14	18969	16	-1742	10	4355	10	-14215	14	-2991	10
	Gd	64	13394.7	0.7	17269	5	-1003	9	1730.5	1.3	-13022	6	-6480.6	1.0
	Tb	65	14508.2	0.7	15158	10	-175	5	-1454	15	-9082	4	-6740.6	1.2
	Dy	66	15407.9	2.3	13560.5	1.3	437.9	1.3	-3607	24	-8399.6	1.3	-10414	3
	Ho	67	16340	30	11489	15	1284	15	-6080	40	-4139	15	-9893	15
	Er	68	16900	30	10236	24	2039	24	-7899	29	-4187	24	-13570	40
	Tm	69	17740	40	8690	40	2750	70	-10030	70	-260	30	-12530	40
	Yb	70	18297	18	7439	30	3621	29	-12234	19	-894	16	-16530	40
	Lu	71	19200	60	6140	60	4130	60	-14400	90	3010	60	-15490	60
	Hf	72	19971	20	4499	13	4902.3	2.6	-16550	160	2619	21	-19558	22
	Ta	73	20850#	220#	3240	80	5451	5	-18940#	310#	6550	80	-18460#	310#
	W	74	21820#	530#	1850	160	6065	5	*	*	6190	160	-22710#	530#
	Re	75	*		340#	360#	6698	4	*	*	10220#	300#	*	*
161	Nd	60	8920#	640#	*		-5010#	710#	14080#	500#	*		2340#	590#
	Pm	61	9820#	300#	23730#	590#	-4120#	500#	11560#	300#	*		1930#	300#
	Sm	62	10607	9	21440#	400#	-2635	26	8833	7	-16830#	400#	-1263	12
	Eu	63	11891	11	19815	14	-1919	13	5669	11	-16080#	300#	-1922	11
	Gd	64	13086.9	1.2	17875	6	-1252	5	2549.5	1.6	-12559	6	-5740.8	1.4
	Tb	65	14071.8	0.6	15996	5	-427	4	-264.3	2.5	-11269	10	-5860.7	1.3
	Dy	66	15030.9	1.5	14071.7	1.3	343.4	1.3	-2854	9	-7402.5	1.3	-9744	15
	Ho	67	16011	4	12242.8	2.5	1141.3	2.5	-5298	28	-6650.0	2.5	-9204	24
	Er	68	16783	9	10612	9	1798	10	-7361	18	-2818	9	-12970	40
	Tm	69	17470	40	9148	28	2510	40	-9340	40	-2810	30	-11810	30
	Yb	70	18143	23	7857	16	3125	29	-11524	27	936	29	-15640	60
	Lu	71	19000	50	6570	40	3750	40	-13860	40	450	40	-14702	30
	Hf	72	19605	28	5055	29	4685	24	-15760#	200#	4561	28	-18510	80
	Ta	73	20400	30	3570	50	5330	29	-17810	160	4280	60	-17400	160
	W	74	21210#	360#	2280#	200#	5923	4	-20340#	450#	8090#	200#	-21700#	360#
	Re	75	22300#	530#	1020	160	6328	7	*	*	7690	140	*	*
Os	76	*		-690#	500#	7066	12	*	*	11870#	430#	*	*	
162	Pm	61	9510#	500#	*		-4470#	570#	12330#	410#	*		2230#	400#
	Sm	62	10440#	200#	21970#	450#	-2900#	360#	9750#	200#	-19230#	540#	-810#	200#
	Eu	63	11360	60	20270#	300#	-2030	60	6980	70	-15750#	300#	-1260	60
	Gd	64	12481	4	18623	7	-1454	6	3901	4	-14897	8	-4890	4
	Tb	65	13980	40	16770	40	-840	40	370	40	-11170	40	-5690	40
	Dy	66	14651.38	0.10	14817.2	1.3	83.8	1.3	-1846.96	0.30	-9964.1	1.6	-9055.0	2.2
	Ho	67	15802	15	12783	3	1004	3	-4564	26	-5869	3	-8912	9
	Er	68	16412	24	11239.7	0.3	1648.0	2.3	-6507	15	-5567.7	0.3	-12506	28
	Tm	69	17320	40	9670	30	2290	40	-8640	80	-1569	26	-11710	30
	Yb	70	17804	22	8340	29	3052	30	-10657	18	-1915	18	-15340	30
	Lu	71	18700	90	7110	80	3450	80	-13050	90	1780	80	-14590	80
	Hf	72	19380	14	5582	18	4416	5	-15169	20	1381	18	-18539	27
	Ta	73	20050	90	4090	80	5010	50	-17280#	210#	5490	60	-17300#	200#
	W	74	20770	160	2647	21	5677.3	2.7	-19500#	500#	5026	29	-21180	160
	Re	75	21710#	360#	1210#	220#	6240	5	*	*	8910#	200#	-20350#	450#
	Os	76	*		-300#	530#	6767	3	*	*	8760#	540#	*	*

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		Q($4\beta^-$)		Q(d, α)		Q(p, α)		Q(n, α)	
163	Pm	61	4950#	640#	*		21350#	500#	10050#	710#	8750#	640#	*	
	Sm	62	4260#	360#	11640#	500#	15660#	300#	10230#	420#	7150#	420#	2060#	500#
	Eu	63	6020	90	9400#	210#	9740	70	10740	70	8460	70	2010#	310#
	Gd	64	5106	9	9910	60	3853	10	11188	13	7031	13	4567	10
	Tb	65	6990	40	7604	6	-1867	7	11621	4	8210	4	4532	10
	Dy	66	6271.01	0.05	7990	40	-7081	15	11791.8	1.3	6319.7	1.3	7207.5	1.3
	Ho	67	8408	3	5486.11	0.05	-11586	28	12387.99	0.08	8158.17	0.11	7104.6	1.3
	Er	68	6905	5	6415	6	-15903	25	12741	5	6079	16	10151	5
	Tm	69	9322	27	3683	5	-20190	40	13184	10	8201	25	9300	16
	Yb	70	7544	21	5110	30	-24390	50	13310	30	5870	40	12411	29
	Lu	71	10030	80	2250	30	-28780	30	13760	30	8240	30	11160	40
	Hf	72	8166	26	3720	80	-32880#	300#	14010	40	5870	60	14547	29
	Ta	73	10830	60	650	40	*		14490	40	8260	40	13380	70
	W	74	8980	60	2420	70	*		14500	60	5830	90	16670	50
	Re	75	11580#	200#	-704	6	*		15260#	200#	8230	160	15510	80
	Os	76	9950#	590#	1170#	360#	*		15220#	340#	5410	50	18640#	340#
164	Sm	62	5450#	420#	12140#	590#	17860#	300#	8980#	500#	7000#	420#	130#	590#
	Eu	63	4770#	220#	9900#	360#	11650#	210#	11910#	290#	8200#	210#	2550#	360#
	Gd	64	6530#	200#	10420#	210#	6170#	200#	9630#	210#	6880#	200#	2540#	200#
	Tb	65	5550	100	8050	100	-170	100	12910	100	8290	100	5360	100
	Dy	66	7658.12	0.07	8661	4	-4949	15	10420	40	6358.2	1.3	5184.8	1.6
	Ho	67	6674.8	1.4	5889.9	1.4	-10338	28	13910.2	1.4	7937.8	1.4	8126.5	1.9
	Er	68	8846	5	6853.25	0.13	-14123	16	10810	3	6119.0	2.2	7759.31	1.6
	Tm	69	7247	25	4026	25	-18620	40	15140	24	8161	26	10939	25
	Yb	70	9790	21	5579	16	-22790	19	11170	30	5750	30	9829	18
	Lu	71	7920	40	2630	30	-27120	80	15890	30	8060	30	12900	40
	Hf	72	10626	29	4320	30	-31350	160	11720	80	5610	30	11667	22
	Ta	73	8820	50	1310	40	-35750#	320#	16597	29	7900	40	14930	40
	W	74	11390	50	2980	40	*		12260	50	5338	23	13734	25
	Re	75	9590	80	-100	90	*		17190	80	7900#	210#	16820	80
	Os	76	12160#	340#	1750	160	*		12740#	260#	5282	6	15730#	250#
	Ir	77	*		-1560#	110#	*		17680#	590#	7550#	510#	19000#	350#
165	Sm	62	3780#	500#	*		19800#	400#	10150#	640#	7430#	570#	*	
	Eu	63	5420#	380#	9870#	440#	14210#	320#	10750#	440#	8710#	380#	1330#	510#
	Gd	64	4780#	360#	10440#	360#	8040#	300#	10860#	310#	7070#	300#	3690#	360#
	Tb	65	6560#	220#	8080#	280#	2360#	200#	11460#	200#	8580#	200#	3780#	210#
	Dy	66	5715.96	0.05	8820	100	-3316	27	11694	4	6930	40	6315	4
	Ho	67	7988.8	1.1	6220.6	0.8	-8456	27	12192.4	0.8	8146.0	0.9	6420	40
	Er	68	6650.1	0.6	6828.6	1.5	-12885	28	12567.7	0.6	6384	3	9306.2	0.6
	Tm	69	9096	24	4276.2	1.6	-17081	14	12949	5	8268.5	1.6	8758	3
	Yb	70	7350	30	5680	40	-21430	40	13143	27	6050	40	11684	27
	Lu	71	9870	40	2710	30	-25800	40	13570	30	8250	30	10680	40
	Hf	72	7890	30	4280	40	-29840#	200#	13870	40	6060	80	13840	30
	Ta	73	10640	30	1318	20	-34200#	170#	14127	28	8186	17	12630	80
	W	74	8705	27	2870	40	*		14380	50	5780	60	15954	27
	Re	75	11190	80	-295	23	*		14980	60	8220	30	14780	60
	Os	76	9390#	260#	1560#	220#	*		14920#	200#	5570	10	17850#	200#
	Ir	77	12180#	360#	-1540#	50#	*		15450#	350#	7720#	530#	16510#	260#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)	S(2p)	$Q(\alpha)$	$Q(2\beta^-)$	$Q(\epsilon p)$	$Q(\beta^-n)$						
163	Pm	61	9160#	590#	*	-4590#	710#	13390#	510#	*	3210#	540#		
	Sm	62	10190#	300#	22710#	590#	-3340#	500#	10590#	300#	*	-100#	300#	
	Eu	63	10990	70	20980#	310#	-2510	70	7960	70	-17560#	410#	-430	70
	Gd	64	11951	9	19220	11	-1531	10	5066	9	-14070#	200#	-3710	40
	Tb	65	13277	4	17381	11	-977	6	1783	4	-13190	60	-4486	4
	Dy	66	14468.00	0.08	15452.8	1.6	-244.0	1.3	-1213	5	-9389	4	-8410	3
	Ho	67	15323.4	2.2	13494.4	1.3	729.4	1.3	-3650	5	-7990	40	-8115.4	0.3
	Er	68	16109	10	11690	5	1575	5	-5867	16	-4275	5	-11761	26
	Tm	69	16972	29	10109	6	2176	6	-7936	29	-3976	6	-10972	16
	Yb	70	17603	21	8677	18	2836	16	-10035	29	-255	15	-14540	80
	Lu	71	18370	40	7470	40	3350	40	-12260	50	-600	40	-13694	29
	Hf	72	19090	30	6003	29	4150	30	-14360	60	3274	29	-17550	60
	Ta	73	19980	50	4550	50	4749	5	-16530	40	3010	80	-16610	40
	W	74	20500#	200#	3170	60	5520	50	-18520#	310#	6970	50	-20480#	210#
Re	75	21260	160	1880	30	6012	8	*	*	6480	50	-19580#	500#	
Os	76	22310#	500#	410#	360#	6680	50	*	*	10330#	300#	*	*	
164	Sm	62	9720#	360#	*	-3390#	500#	11670#	360#	*	470#	310#		
	Eu	63	10780#	220#	21540#	450#	-2760#	360#	8740#	230#	-17370#	540#	-90#	210#
	Gd	64	11640#	200#	19820#	280#	-1960#	200#	6190#	200#	-16340#	360#	-3250#	200#
	Tb	65	12540	110	17960	120	-1020	100	2900	100	-12730	120	-3770	100
	Dy	66	13929.12	0.08	16265	4	-450.6	1.3	-25.07	0.11	-11942	9	-7660.67	0.07
	Ho	67	15083	3	13880	40	429.8	1.8	-3077	24	-7675	4	-7886	5
	Er	68	15751.0	0.3	12339.36	0.14	1304.92	0.17	-4924	15	-6850.70	0.13	-11285	5
	Tm	69	16570	40	10441	25	2053	29	-7260	40	-2815	24	-10676	29
	Yb	70	17334	21	9262	15	2622	29	-9199	22	-3140	16	-14300	30
	Lu	71	17950	80	7740	40	3230	40	-11360	40	796	29	-13450	40
	Hf	72	18792	18	6570	22	3922	22	-13590	19	192	22	-17350	40
	Ta	73	19650	60	5030	80	4560	60	-15760	80	4220	40	-16450	60
	W	74	20370	21	3637	14	5278.5	2.0	-17760	160	3747	27	-20292	22
	Re	75	21160#	220#	2320	90	5926	5	-19990#	320#	7720	80	-19210#	310#
Os	76	22110#	530#	1050	160	6479	5	*	*	7150	170	*	*	
Ir	77	*	*	-390#	370#	6970#	100#	*	*	11180#	320#	*	*	
165	Sm	62	9230#	500#	*	-3650#	640#	12680#	500#	*	1450#	450#		
	Eu	63	10190#	330#	22010#	600#	-2880#	440#	9880#	380#	*	1020#	380#	
	Gd	64	11320#	300#	20340#	420#	-2240#	300#	7130#	300#	-15670#	420#	-2480#	310#
	Tb	65	12110#	200#	18510#	210#	-1200#	200#	4330#	200#	-14520#	290#	-2670#	200#
	Dy	66	13374.07	0.09	16875	9	-531.2	1.6	909.1	0.6	-11130#	200#	-6701.9	1.4
	Ho	67	14663.6	0.8	14881	4	137.6	1.5	-1969.5	1.8	-10110	100	-7028.0	0.9
	Er	68	15496	5	12718.5	0.6	1109.2	0.6	-4225	27	-5842.7	0.6	-10688	24
	Tm	69	16344	6	11129.4	1.6	1842.8	2.7	-6487	27	-5237.0	2.1	-9983	15
	Yb	70	17140	30	9707	27	2480	28	-8660	40	-1643	27	-13720	40
	Lu	71	17790	40	8293	27	3030	40	-10595	30	-1830	40	-12700	30
	Hf	72	18510	40	6910	30	3780	30	-12770	40	2090	30	-16420	40
	Ta	73	19460	40	5630	30	4290	30	-15204	29	1510	30	-15691	17
	W	74	20100	60	4180	40	5029	30	-17070#	200#	5668	30	-19410	80
	Re	75	20780	30	2690	50	5633	5	-19000#	170#	5350	40	-18240	160
Os	76	21550#	360#	1470#	210#	6340	50	*	*	9140#	200#	-22330#	370#	
Ir	77	*	*	210#	170#	6820#	50#	*	*	8590#	150#	*	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)	S(p)	$Q(4\beta^-)$		$Q(d,\alpha)$		$Q(p,\alpha)$		$Q(n,\alpha)$			
166	Eu	63	4310#	440#	10410#	500#	16140#	300#	11880#	420#	8660#	420#	1970#	590#
	Gd	64	6120#	670#	11130#	680#	10400#	600#	9520#	630#	6970#	600#	1840#	670#
	Tb	65	5390#	210#	8690#	310#	4000	70	12600#	210#	8290	70	4400	100
	Dy	66	7043.5	0.4	9310#	200#	-988	7	10200	100	6875	4	4377	9
	Ho	67	6243.64	0.02	6748.3	0.8	-7050	30	13606.9	0.8	8173.3	0.9	7171	4
	Er	68	8476.5	1.3	7316.3	0.9	-11067	28	10766.0	1.5	6315.8	1.1	7100.7	1.1
	Tm	69	7030	12	4656	12	-15790	30	14764	12	8143	12	10136	12
	Yb	70	9371	28	5955	7	-19707	12	11019	25	5996	9	9218	8
	Lu	71	7650	40	3010	40	-24130	80	15710	30	8140	30	12350	30
	Hf	72	10290	40	4710	40	-28420	30	11490	40	5800	40	11090	30
	Ta	73	8320	30	1750	40	-32740#	200#	16430	30	8030	40	14340	40
	W	74	11098	27	3330	17	-37100#	500#	12105	30	5510	40	13022	27
	Re	75	9320	80	320	80	*	*	17050	70	7880	90	16290	80
	Os	76	11710#	200#	2080	30	*	*	12800	80	5435	5	15120	60
	Ir	77	9780#	260#	-1152	8	*	*	17830#	260#	7900#	360#	18300#	200#
	Pt	78	*	*	440#	530#	*	*	13460#	590#	*	*	17240#	590#
167	Eu	63	5030#	500#	*	*	18400#	400#	10640#	570#	9080#	500#	*	*
	Gd	64	4360#	720#	11170#	500#	12480#	400#	10580#	510#	7390#	450#	2940#	500#
	Tb	65	6120#	210#	8690#	630#	6620#	200#	11270#	360#	8710#	280#	3050#	290#
	Dy	66	5420	60	9340	90	660	60	11350#	210#	7010	120	5490#	210#
	Ho	67	7282	5	6987	5	-4780	30	12041	5	8550	5	5440	100
	Er	68	6436.46	0.18	7509.1	0.9	-9823	28	12318.4	0.9	6554.1	1.5	8322.3	1.1
	Tm	69	8727	12	4907.5	1.5	-14193	28	12687.2	1.8	8261.6	1.7	8083.1	2.0
	Yb	70	7067	8	5992	12	-18492	19	13049	4	6177	25	10997	4
	Lu	71	9550	40	3190	30	-22660#	50#	13510	40	8380	40	10050	40
	Hf	72	7680	40	4740	40	-26970	80	13690	40	6040	40	13200	30
	Ta	73	10320	40	1780	40	-31270	30	14000	40	8330	30	11940	40
	W	74	8282	21	3290	30	-35290#	310#	14459	23	6050	30	15365	24
	Re	75	11020#	80#	240#	40#	*	*	14730#	50#	8250#	40#	14090#	50#
	Os	76	9140	70	1900	100	*	*	14850	80	5880	100	17370	70
	Ir	77	11800#	200#	-1070	4	*	*	15430#	200#	8260	160	16090	80
	Pt	78	10080#	590#	740#	370#	*	*	15550#	350#	5600#	120#	19310#	350#
168	Gd	64	5620#	570#	11770#	570#	14630#	400#	9280#	500#	7190#	510#	1090#	570#
	Tb	65	4870#	360#	9200#	500#	8590#	300#	12520#	670#	8630#	420#	3610#	440#
	Dy	66	6700	150	9920#	240#	3020	140	10030	160	6870#	240#	3570#	330#
	Ho	67	5850	30	7420	70	-2990	50	13230	30	8410	30	6150#	200#
	Er	68	7771.31	0.12	7999	5	-7630	28	10790.7	0.9	6771.6	0.9	6267.0	1.1
	Tm	69	6840.6	1.8	5311.6	1.9	-12919	28	14323.0	1.9	8071.1	2.1	9231.3	2.0
	Yb	70	9062	4	6326.4	1.6	-16689	13	11017	12	6211.4	2.0	8585.4	1.3
	Lu	71	7640	50	3770	40	-21270	50	15240	40	8090	50	11510	40
	Hf	72	9960	40	5150	40	-25374	30	11370	40	5950	40	10580	40
	Ta	73	8110	40	2220	40	-29680	80	16180	40	8110	40	13690	40
	W	74	10865	23	3830	30	-33830	160	11920	30	5819	18	12390	30
	Re	75	9020#	50#	980	40	*	*	16800	30	7930	40	15700	30
	Os	76	11560	70	2430#	40#	*	*	12620	70	5521	23	14521	27
	Ir	77	9710	80	-500	100	*	*	17430	80	7940#	220#	17570	80
	Pt	78	12320#	350#	1270	160	*	*	13010#	260#	5450#	50#	16380#	260#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		$Q(\alpha)$		$Q(2\beta^-)$		$Q(\epsilon p)$		$Q(\beta^- n)$	
166	Eu	63	9740#	360#	*		-2980#	500#	10960#	310#	*		1490#	420#
	Gd	64	10900#	630#	21010#	670#	-2430#	630#	8050#	600#	-18010#	720#	-2040#	630#
	Tb	65	11950	120	19130#	220#	-1610	90	5190	70	-14490#	330#	-2340	70
	Dy	66	12759.5	0.4	17390#	200#	-729	4	2342.1	1.2	-13390#	300#	-5756.5	0.9
	Ho	67	14232.5	1.1	15570	100	180	40	-1183	12	-9790#	200#	-6621.5	1.0
	Er	68	15126.6	1.1	13536.9	1.1	829.7	1.1	-3330	7	-8603.2	1.1	-10068.1	2.0
	Tm	69	16127	27	11485	12	1728	12	-5870	30	-4279	12	-9664	29
	Yb	70	16720	17	10232	7	2313	7	-7736	29	-4364	7	-13224	28
	Lu	71	17520	40	8700	40	3030	40	-9920	40	-381	30	-12460	40
	Hf	72	18180	30	7420	30	3540	30	-11971	30	-850	40	-16080	30
	Ta	73	18960	40	6030	40	4310	80	-14200	80	3060	40	-15310	40
	W	74	19803	14	4648	18	4856	4	-16451	20	2458	30	-19316	27
	Re	75	20510	100	3190	80	5460	50	-18540#	220#	6670	70	-18170#	220#
	Os	76	21110	160	1787	21	6139	4	-20650#	500#	6140	30	-21870#	170#
	Ir	77	21960#	370#	410#	220#	6722	6	*	*	10000#	200#	*	*
	Pt	78	*		-1100#	530#	7286	15	*	*	9710#	540#	*	*
167	Eu	63	9340#	510#	*		-3060#	640#	12040#	450#	*		2580#	720#
	Gd	64	10470#	500#	21580#	570#	-2520#	500#	9120#	410#	*		-1000#	410#
	Tb	65	11500#	280#	19820#	380#	-1710#	210#	6350#	200#	-16290#	360#	-1420#	200#
	Dy	66	12460	60	18020#	300#	-1040	60	3360	60	-12690#	600#	-4930	60
	Ho	67	13525	5	16290#	200#	-111	7	263	5	-11690	70	-5427	5
	Er	68	14912.9	1.3	14257.4	1.1	664.2	1.1	-2700	4	-7996.2	1.2	-9474	12
	Tm	69	15757.9	2.1	12223.7	1.6	1408.3	1.7	-5040	30	-6762.4	1.6	-9020	7
	Yb	70	16438	27	10648	4	2151	6	-7123	28	-2954	4	-12640	30
	Lu	71	17200	40	9150	30	2800	30	-9150	40	-2900	30	-11710	40
	Hf	72	17970	40	7750	40	3410	30	-11370	30	839	29	-15440	40
	Ta	73	18650	30	6490	40	4020	40	-13510#	50#	380	40	-14534	30
	W	74	19380	30	5040	30	4740	28	-15600	70	4470	30	-18280	70
	Re	75	20340#	50#	3570#	40#	5267#	16#	-17770#	50#	3970#	50#	-17480#	50#
	Os	76	20850#	220#	2220	80	5980	50	-19700#	320#	8100	70	-21220#	220#
	Ir	77	21580#	170#	1010	30	6504.8	2.6	*	*	7530	70	-20360#	500#
	Pt	78	*		-410#	370#	7160	50	*	*	11340#	310#	*	*
168	Gd	64	9980#	720#	*		-2690#	500#	10200#	420#	*		-510#	450#
	Tb	65	10980#	310#	20370#	420#	-1810#	360#	7340#	300#	-16130#	500#	-860#	300#
	Dy	66	12120	140	18610#	610#	-1210#	240#	4430	140	-15040#	420#	-4350	140
	Ho	67	13130	30	16760	80	-410	100	1250	30	-11420#	200#	-4840	30
	Er	68	14207.77	0.22	14985.2	1.2	551.0	1.1	-1409.27	0.25	-10350	60	-8518.0	1.5
	Tm	69	15568	12	12820.7	2.0	1242.5	2.3	-4250	40	-6321	6	-8794	4
	Yb	70	16129	7	11233.8	0.3	1935.2	1.2	-6221	28	-5579.69	0.28	-12150	30
	Lu	71	17190	50	9760	40	2410	50	-8670	50	-1810	40	-11670	50
	Hf	72	17640	40	8343	29	3230	30	-10470	30	-2059	28	-15080	40
	Ta	73	18440	40	6950	40	3820	40	-12600	40	1820	40	-14370	30
	W	74	19147	16	5610	30	4500	11	-14906	17	1290	30	-18120#	40#
	Re	75	20040	80	4280	40	5063	13	-17080	80	5270	40	-17360	80
	Os	76	20693	21	2677	14	5816.1	2.7	-18930	160	4823	21	-20980	22
	Ir	77	21510#	220#	1400	100	6381	9	*	*	8840#	90#	-19980#	320#
	Pt	78	22410#	530#	200	160	6990	3	*	*	8160	170	*	*

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		Q(4β ⁻)		Q(d,α)		Q(p,α)		Q(n,α)	
169	Gd	64	3860#	640#	*		16770#	500#	10440#	640#	7640#	590#	*	
	Tb	65	5680#	420#	9250#	500#	10950#	300#	11200#	500#	9070#	670#	2250#	420#
	Dy	66	5110	330	10160#	420#	4780	300	11040#	360#	7150	310	4580#	670#
	Ho	67	6810	40	7530	140	-713	20	11840	60	8650	20	4730	70
	Er	68	6003.25	0.15	8150	30	-6206	28	12069	5	7012.0	0.9	7307.2	1.2
	Tm	69	8033.6	1.5	5573.9	1.1	-10985	28	12725.9	1.1	8514.0	1.1	7441.4	1.3
	Yb	70	6866.98	0.15	6352.7	1.9	-15459	16	12877.8	1.6	6375	12	10194.9	0.4
	Lu	71	9090	40	3792	3	-19675	12	13218	5	8375	8	9450	12
	Hf	72	7430	40	4940	50	-23990	40	13500	40	6170	40	12525	29
	Ta	73	9970	40	2220	40	-28210	40	13890	40	8430	40	11380	40
	W	74	8096	20	3810	30	-32410#	200#	14140	30	6040	30	14590	30
	Re	75	10690	30	805	16	-36620#	300#	14401	22	8343	15	13340	30
	Os	76	8807	27	2220	40	*		14830#	50#	6030	80	16812	27
	Ir	77	11430	80	-620	22	*		15140	80	8220	30	15460	80
Pt	78	9530#	260#	1090#	220#	*		15280#	200#	5706	9	18570#	200#	
Au	79	*		-1980#	340#	*		15730#	430#	7870#	590#	17210#	360#	
170	Tb	65	4470#	500#	9860#	640#	13070#	400#	12350#	570#	8950#	570#	2810#	570#
	Dy	66	6140#	360#	10620#	360#	7100#	200#	9770#	360#	7130#	280#	2800#	450#
	Ho	67	5510	50	7930	300	1070	50	13030	150	8560	80	5330#	200#
	Er	68	7257.8	1.5	8600	20	-3855	28	10660	30	7036	5	5470	60
	Tm	69	6591.97	0.17	6162.6	1.2	-9659	28	13905.2	1.1	8358.5	1.1	8131	5
	Yb	70	8458.9	1.3	6778.1	0.8	-13474	13	11259.4	1.7	6643.4	1.3	8172.4	1.3
	Lu	71	7294	17	4219	17	-18390	30	14985	17	8148	17	10883	17
	Hf	72	9610	40	5459	28	-22327	30	11520	50	6110	40	9983	28
	Ta	73	7920	40	2710	40	-26780#	90#	15930	40	8190	40	13010	40
	W	74	10444	20	4290	30	-30986	23	11810	30	5920	30	11820	30
	Re	75	8580	28	1290	30	-35170#	200#	16686	29	8050	30	15080	40
	Os	76	11275	27	2806	15	*		12580	30	5780#	40#	13819	21
	Ir	77	9350#	90#	-70#	90#	*		17340#	90#	8010#	120#	17130#	100#
	Pt	78	11860#	200#	1520	30	*		13120	80	5637	4	15840	80
Au	79	10040#	360#	-1472	12	*		18020#	260#	7920#	370#	18970#	200#	
171	Tb	65	5380#	640#	*		15180#	500#	10830#	710#	9200#	640#	*	
	Dy	66	4600#	360#	10750#	500#	9120#	300#	10850#	420#	7400#	420#	3820#	500#
	Ho	67	6350	600	8150#	630#	3310	600	11790	670	8900	620	3850#	670#
	Er	68	5681.6	0.4	8770	50	-2288	29	11789	20	7210	30	6490	140
	Tm	69	7486.5	1.3	6391.3	1.3	-7491	28	12422.0	1.6	8643.3	1.6	6500	30
	Yb	70	6614.6	0.6	6800.7	0.9	-12222	28	12678.4	0.9	6869.4	1.8	9329.1	1.3
	Lu	71	8594	17	4354.2	1.9	-16580	28	13257.9	2.2	8615.5	2.2	9129.8	2.5
	Hf	72	7250	40	5410	30	-21130	30	13364	29	6500	50	11796	29
	Ta	73	9650	40	2760	40	-25300	50	13710	40	8500	40	10990	50
	W	74	7870	30	4240	40	-29620	80	13920	40	6170	40	13920	40
	Re	75	10400	40	1250	30	-33680	30	14380	30	8510	30	12790	40
	Os	76	8448	20	2670	30	-37590#	310#	14817	21	6360	40	16236	22
	Ir	77	11130#	100#	-220	40	*		15020	50	8430	40	15020	50
	Pt	78	9240	80	1400#	120#	*		15320	80	6110	100	18160	70
Au	79	11890#	200#	-1448	10	*		15660#	200#	8350	160	16800	80	
Hg	80	*		250#	370#	*		15790#	430#	*		19990#	350#	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q(2 β^-)		Q(ϵp)		Q($\beta^- n$)	
169	Gd	64	9480#	640#	*		-2770#	640#	11450#	590#	*		500#	590#
	Tb	65	10540#	360#	21020#	500#	-2070#	440#	8470#	300#	*		160#	330#
	Dy	66	11810	310	19360#	500#	-1540#	420#	5330	300	-14520#	500#	-3610	300
	Ho	67	12659	21	17450#	200#	-660#	200#	2478	20	-13360#	300#	-3878	20
	Er	68	13774.56	0.19	15570	60	263.7	1.2	-545.5	0.3	-9650	140	-7680.6	1.9
	Tm	69	14874.2	1.0	13573	5	1197.7	1.3	-3192	3	-8500	30	-7765.5	1.2
	Yb	70	15929	4	11664.3	0.3	1718.4	1.3	-5660	28	-4675.36	0.29	-11380	40
	Lu	71	16730	30	10118	3	2420	4	-7794	28	-4060	4	-10795	28
	Hf	72	17390	40	8704	28	3150	40	-9800	30	-424	28	-14390	40
	Ta	73	18080	40	7370	40	3730	40	-11880	30	-510	50	-13470	30
	W	74	18961	24	6030	30	4290	30	-14195	30	3150	30	-17190	30
	Re	75	19710#	40#	4640	30	5014	14	-16331	27	2700	30	-16494	16
	Os	76	20360	80	3200	30	5713	3	-18210#	200#	6881	28	-20080	80
	Ir	77	21140	30	1810#	50#	6141	4	-20290#	300#	6430	40	-19090	160
Pt	78	21850#	370#	590#	220#	6858	5	*	*	10190#	200#	*	*	
Au	79	*		-710#	300#	7430#	340#	*	*	9640#	310#	*	*	
170	Tb	65	10140#	500#	*		-2220#	500#	9520#	400#	*		800#	500#
	Dy	66	11250#	240#	19880#	450#	-1560#	630#	6450#	200#	-16800#	540#	-2940#	200#
	Ho	67	12320	60	18090#	300#	-780	90	3560	50	-13200#	300#	-3390	50
	Er	68	13261.0	1.5	16130	140	49.5	1.9	655.6	1.7	-11800	300	-6904.8	1.9
	Tm	69	14625.6	1.5	14310	30	849.4	1.3	-2489	17	-8288	20	-7490.5	1.2
	Yb	70	15325.9	1.3	12352.0	1.3	1735.9	1.3	-4511	28	-7131.1	1.3	-10752	3
	Lu	71	16380	40	10572	17	2156	20	-7170	30	-3320	17	-10660	30
	Hf	72	17040	40	9250	28	2917	29	-8960	30	-3166	28	-14030	40
	Ta	73	17890	40	7650	50	3460	40	-11220	40	657	28	-13290	30
	W	74	18540	19	6510	30	4140	30	-13364	16	140	30	-16953	17
	Re	75	19270	40	5100	40	4760	40	-15560#	90#	4080	40	-16270	40
	Os	76	20082	15	3612	17	5536.8	2.7	-17622	21	3702	18	-19920	27
	Ir	77	20790#	120#	2140#	90#	6110#	50#	-19610#	220#	7760#	90#	-18920#	220#
	Pt	78	21390	160	896	21	6707	3	*	*	7130	30	-22590#	300#
Au	79	*		-390#	220#	7177	15	*	*	11040#	200#	*	*	
171	Tb	65	9850#	590#	*		-2570#	640#	10490#	780#	*		1560#	540#
	Dy	66	10730#	420#	20610#	590#	-1800#	500#	7530#	300#	*		-2020#	300#
	Ho	67	11860	600	18770#	670#	-1020#	630#	4690	600	-15090#	720#	-2480	600
	Er	68	12939.4	1.5	16700	300	-210	60	1588.6	1.6	-11350#	200#	-5994.4	1.9
	Tm	69	14078.5	1.3	14992	20	645	5	-1381.5	2.1	-10260	50	-6518.1	1.1
	Yb	70	15073.6	1.3	12963.3	1.3	1557.8	1.3	-3877	29	-6487.9	1.6	-10072	17
	Lu	71	15889	4	11132.3	2.0	2289.2	2.3	-6110	28	-5322.7	2.0	-9647	28
	Hf	72	16860	40	9632	29	2735	29	-8350	40	-1956	29	-13360	40
	Ta	73	17570	40	8214	28	3360	40	-10470	40	-1700	30	-12500	30
	W	74	18310	30	6950	40	3960	40	-12780	30	1880	40	-16240	40
	Re	75	18980	30	5540	40	4680	40	-14830	50	1600	40	-15395	30
	Os	76	19720	30	3963	24	5371	4	-16830	70	5698	22	-19020#	90#
	Ir	77	20480	50	2590	40	6001#	15#	-18850	40	5210	50	-18180	40
	Pt	78	21100#	220#	1320	80	6607	3	-20760#	320#	9170	70	-21790#	220#
Au	79	21920#	300#	70	30	7085	11	*	*	8500#	90#	*	*	
Hg	80	*		-1220#	370#	7668	15	*	*	12300#	310#	*	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		$Q(d,\alpha)$		$Q(p,\alpha)$		$Q(n,\alpha)$	
172	Dy	66	5890#	420#	11270#	590#	11250#	300#	9430#	500#	7180#	420#	1790#	590#
	Ho	67	5040#	630#	8580#	360#	5250#	200#	12890#	280#	8980#	360#	4490#	360#
	Er	68	6836	4	9250	600	-82	25	10470	50	7178	20	4760	300
	Tm	69	6235	5	6944	5	-6045	29	13445	5	8412	6	7069	21
	Yb	70	8019.47	0.14	7333.7	1.0	-10159	28	11250.9	0.9	6883.5	0.9	7312.9	1.3
	Lu	71	6979.5	2.7	4719.1	2.4	-15210	40	14737.4	2.4	8503.0	2.6	10183.9	2.5
	Hf	72	9040	40	5861	25	-19159	28	11616	30	6546	25	9621	25
	Ta	73	7680	40	3190	40	-23950	40	15630	40	8250	40	12401	28
	W	74	10080	40	4670	40	-28000	30	11750	40	6060	40	11270	40
	Re	75	8350	50	1730	50	-32160	80	16470	40	8260	40	14410	50
	Os	76	11012	22	3280	30	-36130	160	12385	29	6030	15	13320	20
	Ir	77	9030	50	370	40	*	*	17260	30	8210	40	16680	30
	Pt	78	11700	70	1970	40	*	*	12970#	90#	5844	22	15272	28
	Au	79	9870	80	-810	100	*	*	17650	80	8010#	220#	18360	80
Hg	80	12470#	350#	830	160	*	*	13350#	260#	5540#	340#	17050#	260#	
173	Dy	66	4000#	500#	*	*	13610#	400#	10800#	640#	7650#	570#	*	*
	Ho	67	5940#	360#	8630#	420#	7530#	300#	11550#	420#	9180#	360#	3020#	500#
	Er	68	5240#	200#	9460#	280#	1760#	200#	11580#	630#	7450#	200#	5660#	280#
	Tm	69	6951	7	7059	6	-3858	28	12176	5	8719	5	5630	50
	Yb	70	6367.4	0.3	7466	6	-8825	28	12370.0	1.0	7108.1	1.0	8203.3	1.6
	Lu	71	8215.8	2.2	4915.4	1.6	-13329	28	13136.2	1.6	8746.2	1.7	8560.1	1.8
	Hf	72	7080	40	5963	28	-17970	30	13129	28	6760	30	10999	28
	Ta	73	9140	40	3280	40	-22130	30	13750	40	8720	40	10560	30
	W	74	7700	40	4690	40	-26780	60	13700	40	6270	40	13170	40
	Re	75	10100	50	1750	40	-30740	40	14240	40	8600	30	12230	40
	Os	76	8266	20	3200	40	-34730#	200#	14520	30	6344	30	15499	20
	Ir	77	10960	30	314	15	*	*	14746	21	8522	15	14296	28
	Pt	78	8920	60	1850	60	*	*	15180	70	6280#	110#	17630	60
	Au	79	11520	80	-992	22	*	*	15360	80	8350	30	16190#	90#
Hg	80	9670#	260#	630#	220#	*	*	15570#	200#	5906	13	19240#	200#	
174	Ho	67	4410#	420#	9040#	500#	9880#	300#	13030#	420#	9360#	420#	3990#	590#
	Er	68	6370#	360#	9890#	420#	3900#	300#	10250#	360#	7430#	670#	3890#	420#
	Tm	69	5680	40	7500#	200#	-2120	50	13330	40	8720	40	6300	600
	Yb	70	7464.63	0.06	7980	5	-6718	28	11140	6	7130.0	1.0	6420.2	1.6
	Lu	71	6760.9	1.5	5308.9	1.6	-11899	28	14394.8	1.6	8599.9	1.6	9285.7	1.9
	Hf	72	8506	28	6253.0	2.2	-15852	11	11602.3	2.8	6847.4	2.6	9107.8	2.3
	Ta	73	7420	40	3620	40	-20870	40	15370	40	8550	40	11736	28
	W	74	9570	40	5120	40	-24909	30	11810	40	6360	40	10850	40
	Re	75	8190	40	2230	40	-29440#	90#	16130	40	8280	40	13690	40
	Os	76	10628	18	3730	30	-33349	22	12240	40	6119	30	12737	30
	Ir	77	8672	30	720	30	*	*	17090	30	8300	30	16030	40
	Pt	78	11450	60	2339	15	*	*	12770	30	5960	40	14631	21
	Au	79	9490#	90#	-420#	110#	*	*	17570#	90#	8100#	120#	17830#	100#
	Hg	80	12010#	200#	1120	30	*	*	13430	80	5785	11	16470	80
175	Ho	67	5580#	500#	*	*	11970#	400#	11450#	570#	9670#	500#	*	*
	Er	68	4770#	500#	10250#	500#	5830#	400#	11410#	500#	7700#	450#	5000#	500#
	Tm	69	6520	70	7650#	300#	100	60	12050#	200#	9040	50	4820#	200#
	Yb	70	5822.36	0.07	8120	40	-5064	28	12269	5	7542	6	7434	4
	Lu	71	7666.7	1.0	5511.0	1.3	-9879	28	13095.5	1.3	8952.7	1.3	7854	6
	Hf	72	6708.5	0.4	6200.7	2.2	-14379	12	13109.6	2.2	7118.3	2.8	10418.7	2.3
	Ta	73	8740	40	3851	28	-19010	30	13710	40	8860	40	9976	28
	W	74	7480	40	5180	40	-23930	30	13470	40	6560	40	12420	40
	Re	75	9690	40	2350	40	-27870	50	14150	40	8670	40	11690	40
	Os	76	8181	16	3720	30	-32130	70	14160	30	6290	40	14640	30
	Ir	77	10600	30	688	16	*	*	14755	19	8713	18	13780	40
	Pt	78	8453	21	2120	30	*	*	15279	21	6540	40	17190	22
	Au	79	11250#	100#	-610	40	*	*	15240	70	8550	40	15610	50
	Hg	80	9400	80	1030#	120#	*	*	15550	80	6260	100	18770	70

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)	S(2p)	Q(α)	Q($2\beta^-$)	Q(ϵp)	Q($\beta^- n$)						
172	Dy	66	10490#	360#	*	-2070#	500#	8480#	300#	*	-1560#	670#		
	Ho	67	11390#	200#	19340#	450#	-1190#	360#	5890#	200#	-14740#	540#	-1840#	200#
	Er	68	12518	4	17400#	200#	-350	140	2772	4	-13580#	300#	-5344	4
	Tm	69	13721	6	15710	50	260	30	-637	6	-10140	600	-6138	6
	Yb	70	14634.1	0.6	13725.0	1.6	1309.6	1.3	-2854	25	-8825.8	1.6	-9497.5	1.9
	Lu	71	15574	17	11519.8	2.5	2150.3	2.9	-5408	28	-4815.6	2.6	-9378	29
	Hf	72	16290	40	10215	25	2754	25	-7310	40	-4383	25	-12750	40
	Ta	73	17330	40	8600	30	3310	50	-9800	50	-789	28	-12320	40
	W	74	17950	30	7420	40	3840	40	-11850	30	-950	40	-15920	40
	Re	75	18750	50	5970	50	4440	50	-14150	50	2900	50	-15290	40
	Os	76	19460	16	4531	18	5224	7	-16146	17	2550	30	-18900	40
	Ir	77	20160#	90#	3040	40	5991	10	-18010	80	6580	40	-17980	80
	Pt	78	20936	22	1749	15	6464	4	-19990	160	5917	21	-21601	24
	Au	79	21760#	220#	590#	120#	6923	10	*	*	9760	80	-20730#	320#
Hg	80	*	*	-620	160	7524	6	*	*	9070	170	*	*	
173	Dy	66	9890#	500#	*	-2210#	640#	9720#	450#	*	-530#	450#		
	Ho	67	10970#	670#	19900#	590#	-1450#	420#	6900#	300#	*	-940#	300#	
	Er	68	12080#	200#	18040#	360#	-480#	360#	3900#	200#	-12930#	360#	-4350#	200#
	Tm	69	13186	5	16310	600	118	21	628	5	-12060#	200#	-5070	5
	Yb	70	14386.8	0.4	14410.8	1.6	945.5	1.3	-2140	28	-8357	4	-8885.4	2.4
	Lu	71	15195.2	2.0	12249.1	1.9	1968.1	1.8	-4486	28	-6797	6	-8552	25
	Hf	72	16120	40	10682	28	2540	28	-6680	40	-3445	28	-12150	40
	Ta	73	16820	40	9144	28	3263	28	-8840	40	-2947	28	-11370	40
	W	74	17780	40	7870	40	3560	40	-11290	30	390	40	-15270	50
	Re	75	18450	40	6410	40	4310	40	-13290	30	490	40	-14380	30
	Os	76	19278	23	4930	30	5055	6	-15500	60	4370	30	-18130	40
	Ir	77	19990	40	3600	30	5716	10	-17452	27	3970	40	-17242	16
	Pt	78	20620	90	2220	60	6350	50	-19230#	210#	8010	60	-20650	90
	Au	79	21390	30	980	50	6836	5	*	*	7270	40	-19780	160
Hg	80	22140#	370#	-180#	220#	7378	4	*	*	11100#	200#	*	*	
174	Ho	67	10350#	360#	*	-1390#	500#	8180#	300#	*	-110#	360#		
	Er	68	11610#	300#	18520#	420#	-710#	360#	5000#	300#	-15300#	500#	-3770#	300#
	Tm	69	12630	50	16960#	200#	-50	70	1710	40	-11800#	300#	-4380	40
	Yb	70	13832.0	0.3	15039	4	738.6	1.6	-1098.9	2.3	-10580#	200#	-8134.3	1.6
	Lu	71	14976.6	2.3	12775	6	1799.2	1.8	-3831	28	-6607	5	-8232	28
	Hf	72	15587	25	11168.4	2.3	2493.2	2.4	-5620	28	-5583.4	2.3	-11521	28
	Ta	73	16550	40	9581	28	3140	30	-8070	40	-2147	28	-11080	40
	W	74	17270	40	8400	40	3600	40	-10232	30	-2100	40	-14740	40
	Re	75	18290	50	6920	40	4040	40	-12800	40	1430	40	-14310	30
	Os	76	18894	16	5476	30	4870	10	-14677	15	1443	30	-17798	15
	Ir	77	19630	40	3920	50	5624	10	-16630#	90#	5400	40	-17000	60
	Pt	78	20364	16	2653	16	6183	3	-18672	22	4831	18	-20573	26
	Au	79	21010#	120#	1430#	100#	6699	7	*	*	8740#	90#	-19600#	220#
	Hg	80	21680	160	127	23	7233	6	*	*	8010	60	*	*
175	Ho	67	10000#	500#	*	-1600#	640#	9110#	400#	*	680#	500#		
	Er	68	11140#	450#	19290#	570#	-890#	500#	6050#	400#	*	-2860#	400#	
	Tm	69	12200	50	17540#	300#	-220	600	2860	50	-13910#	300#	-3440	50
	Yb	70	13286.99	0.09	15620#	200#	597.9	1.6	-212.7	2.3	-10040#	300#	-7195.8	1.6
	Lu	71	14427.6	1.1	13491	5	1619.0	1.6	-2759	28	-8590	40	-7392.2	1.9
	Hf	72	15215	28	11509.6	2.3	2399.3	2.3	-4851	28	-4827.3	2.3	-10814	28
	Ta	73	16150	40	10104	28	2996	28	-7120	40	-4125	28	-10250	40
	W	74	17050	40	8800	40	3370	40	-9530	30	-1075	28	-14030	40
	Re	75	17880	40	7470	40	4010	40	-11890	30	-840	40	-13365	30
	Os	76	18810	19	5960	30	4560	30	-14405	21	2830	30	-17310	30
	Ir	77	19269	17	4420	30	5430	30	-15980	40	2990	30	-16147	16
	Pt	78	19900	60	2840	23	6178.1	2.6	-17730	80	7006	21	-19540#	90#
	Au	79	20740	50	1730	40	6577	7	*	*	6160	50	-18840	40
	Hg	80	21410#	220#	610	90	7072	5	*	*	10060	70	*	*

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)	S(p)	$Q(4\beta^-)$		$Q(d,\alpha)$		$Q(p,\alpha)$		$Q(n,\alpha)$			
176	Er	68	6050#	570#	10720#	570#	7950#	400#	9770#	500#	7580#	500#	2950#	570#
	Tm	69	5130	110	8010#	410#	2000	100	13290#	310#	9150#	220#	5630#	310#
	Yb	70	6864.4	1.0	8470	50	-2848	28	11090	40	7629	4	5810#	200#
	Lu	71	6287.98	0.15	5976.6	1.3	-8321	28	14272.1	1.3	9032.1	1.3	8517	5
	Hf	72	8165.9	1.8	6699.9	0.9	-12481	28	11704.5	1.3	7168.2	1.4	8620.2	1.5
	Ta	73	7030	40	4170	30	-17510	40	15190	30	8910	40	11160	30
	W	74	9080	40	5520	40	-21710	30	11810	40	6620	40	10420	40
	Re	75	7850	40	2720	40	-26670	40	15880	40	8530	40	12980	40
	Os	76	10060	30	4100	40	-30320	30	12290	40	6320	40	12280	40
	Ir	77	8536	24	1043	24	-34440	80	16846	23	8443	25	15340	30
	Pt	78	11305	22	2828	18	*	*	12650	30	6199	15	14151	20
	Au	79	9050	50	-10	40	*	*	17630	30	8410	70	17520	30
	Hg	80	11870	70	1650	40	*	*	13170#	90#	5907	21	15820	60
	Tl	81	*	*	-1265	18	*	*	17940	80	8160#	220#	19040	80
177	Er	68	4300#	640#	*	*	10030#	500#	11060#	640#	7700#	590#	*	*
	Tm	69	6170#	310#	8130#	500#	4250#	300#	11890#	500#	9350#	420#	3870#	420#
	Yb	70	5566.40	0.22	8900	100	-1283	28	12040	50	7740	40	6610#	300#
	Lu	71	7072.90	0.16	6185.1	1.6	-6117	28	13021.6	1.3	9423.8	1.3	7130	40
	Hf	72	6375.9	1.0	6787.8	0.8	-10934	16	12995.3	0.8	7553.2	1.3	9708.9	1.5
	Ta	73	8420	30	4428	3	-15670	20	13478	4	8994	4	9501	3
	W	74	7130	40	5630	40	-20330	30	13420	40	6900	40	11791	28
	Re	75	9280	40	2920	40	-24724	30	14070	40	8820	40	11120	40
	Os	76	7920	30	4180	30	-29170	80	14050	30	6590	30	13920	30
	Ir	77	10259	28	1240	30	-32720	30	14769	23	8812	22	13270	30
	Pt	78	8508	20	2800	25	*	*	14735	19	6360	30	16271	18
	Au	79	11220	30	-100	15	*	*	14866	21	8637	15	14970	30
	Hg	80	9080	80	1670	80	*	*	15340	80	6320#	120#	18180	80
	Tl	81	11980	80	-1160	20	*	*	15360	80	8190	30	16560#	90#
178	Tm	69	4720#	500#	8550#	640#	6490#	400#	13230#	570#	9400#	570#	4730#	570#
	Yb	70	6780	10	9510#	300#	716	18	10390	100	7480	50	4600#	400#
	Lu	71	6025.3	1.9	6644.0	2.5	-4686	28	13860.7	2.5	9220.9	2.3	7620	50
	Hf	72	7625.95	0.18	7340.8	0.8	-8894	14	11657.3	0.8	7593.9	0.8	7905.3	1.5
	Ta	73	6960#	50#	5010#	50#	-14350#	60#	14690#	50#	8750#	50#	10210#	50#
	W	74	8780	30	5981	15	-18412	18	11670	30	6860	30	9721	15
	Re	75	7460	40	3240	40	-23330	60	15700	40	8840	40	12400	40
	Os	76	9666	21	4560	30	-27228	17	12230	30	6610	30	11740	30
	Ir	77	8276	28	1592	25	-31460#	100#	16560	30	8717	23	14680	30
	Pt	78	10698	18	3239	22	-35566	26	12573	23	6261	16	13754	16
	Au	79	8850	60	240	60	*	*	17320	60	8240	60	16710	60
	Hg	80	11600	80	2060	15	*	*	12790	30	5960	40	15030	21
	Tl	81	9540#	110#	-700#	130#	*	*	17690#	100#	8040#	130#	18270#	110#
	Pb	82	*	*	400	30	*	*	13700	80	*	*	17190	80
179	Tm	69	5560#	640#	*	*	8760#	500#	11970#	710#	9890#	640#	*	*
	Yb	70	4920#	200#	9710#	450#	2760#	200#	11640#	360#	7700#	220#	5740#	450#
	Lu	71	6792	5	6656	11	-2476	25	12635	5	9293	5	5960	100
	Hf	72	6098.99	0.08	7414.5	2.1	-7446	17	12631.3	0.8	7782.9	0.8	8670.7	1.8
	Ta	73	7830#	50#	5211.1	0.4	-12280	10	13234.1	0.5	9082.7	1.1	8670.8	0.9
	W	74	6959	21	5990#	50#	-17029	17	13130	15	6930	30	10927	15
	Re	75	9000	40	3464	29	-21596	27	13830	40	8920	40	10430	40
	Os	76	7547	21	4650	30	-26100	30	13960	30	6910	30	13270	30
	Ir	77	9899	22	1824	17	-29800	40	14581	18	8883	30	12630	30
	Pt	78	8342	13	3305	21	-34320	80	14490	21	6456	22	15476	29
	Au	79	10730	60	280	15	*	*	15093	19	8809	17	14517	24
	Hg	80	8679	29	1890	60	*	*	15332	29	6340	40	17660	30
	Tl	81	11560#	110#	-750	40	*	*	15210	80	8360	40	15760	50
	Pb	82	9590	80	450#	130#	*	*	16090	80	6333	27	19470	80

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)	S(2p)	Q(α)	Q($2\beta^-$)	Q(ϵp)	Q($\beta^- n$)						
176	Er	68	10820#	500#	*	-1050#	500#	6860#	400#	*	-2390#	400#		
	Tm	69	11650	110	18260#	310#	-310#	220#	4010	100	-13460#	410#	-2740	100
	Yb	70	12686.8	1.0	16120#	300#	569	4	1088.7	1.8	-12130#	400#	-6393.5	1.6
	Lu	71	13954.7	1.0	14100	40	1566	6	-2020	30	-8360	50	-6971.7	1.9
	Hf	72	14874.4	1.7	12210.8	1.5	2252.8	1.5	-3937	28	-7170.8	1.5	-10241	28
	Ta	73	15770	40	10370	30	2950	30	-6300	40	-3490	30	-9800	40
	W	74	16560	40	9373	28	3340	40	-8540	40	-3447	28	-13420	40
	Re	75	17530	40	7900	40	3840	40	-11200	30	60	40	-13030	30
	Os	76	18245	30	6450	40	4570	40	-13160	30	250	40	-16770	30
	Ir	77	19130	30	4760	30	5240	40	-15460	40	4140	30	-16231	27
	Pt	78	19758	16	3517	16	5885.0	2.1	-17160	18	3882	17	-19590	40
	Au	79	20300#	100#	2110	40	6558	7	-18980	80	7710	40	-18500	80
	Hg	80	21269	23	1033	16	6899	6	*	*	6638	22	*	*
	Tl	81	*	*	-240#	120#	7530	110	*	*	10710	80	*	*
177	Er	68	10350#	640#	*	-1340#	640#	8130#	500#	*	-1560#	510#		
	Tm	69	11300#	300#	18840#	500#	-540#	420#	4920#	300#	*	-2050#	300#	
	Yb	70	12430.8	1.0	16910#	400#	240#	200#	1898.3	1.8	-11640#	400#	-5671.9	1.6
	Lu	71	13360.88	0.22	14650	50	1444	5	-669	3	-10310	100	-5878.7	0.9
	Hf	72	14541.8	2.0	12764.4	1.5	2244.3	1.5	-3181	28	-6682.3	1.8	-9590	30
	Ta	73	15451	28	11127	3	2741	3	-5448	28	-5622	3	-9147	28
	W	74	16210	40	9796	28	3290	40	-7750	30	-2412	28	-12710	40
	Re	75	17120	40	8440	40	3700	40	-10220	30	-2190	40	-12240	40
	Os	76	17987	20	6890	30	4350	30	-12579	22	1400	30	-16161	26
	Ir	77	18796	23	5340	30	5080	30	-14502	22	1730	30	-15185	24
	Pt	78	19813	23	3843	19	5642.8	2.7	-16590	80	5440	30	-19050	40
	Au	79	20270	40	2729	16	6298	4	-18220	25	5025	23	-17843	17
	Hg	80	20950	100	1660	80	6740	50	*	*	8860	80	-21440	110
	Tl	81	*	*	490	50	7067	7	*	*	7780	40	*	*
178	Tm	69	10890#	410#	*	-850#	500#	6220#	400#	*	-1200#	400#		
	Yb	70	12347	10	17640#	400#	-170#	300#	2744	10	-14130#	500#	-5379	10
	Lu	71	13098.2	1.9	15550	100	1100	40	260#	50#	-10160#	300#	-5528.1	2.1
	Hf	72	14001.9	1.0	13525.9	1.8	2083.0	1.5	-2028	15	-8741.9	1.8	-8792	3
	Ta	73	15380#	60#	11790#	50#	2550#	50#	-4950#	60#	-5500#	50#	-8970#	60#
	W	74	15910	30	10409	15	3012	15	-6865	20	-4815	15	-12210	30
	Re	75	16730	40	8870	40	3660	40	-9400	30	-1225	28	-11780	30
	Os	76	17590	30	7480	30	4260	30	-11547	17	-1130	30	-15568	24
	Ir	77	18535	28	5770	30	5000	30	-13930	60	2730	30	-14953	25
	Pt	78	19206	16	4477	30	5572.9	2.2	-15681	15	2663	19	-18524	15
	Au	79	20070	70	3040	60	6120	50	-17530#	120#	6430	60	-17610	90
	Hg	80	20686	17	1960	17	6577.3	3.0	-19885	26	5765	18	-21063	26
	Tl	81	21520#	130#	980#	110#	7020	50	*	*	9460#	100#	*	*
	Pb	82	*	*	-764	27	7790	14	*	*	9060	80	*	*
179	Tm	69	10270#	590#	*	-820#	640#	7460#	500#	*	20#	500#		
	Yb	70	11700#	200#	18260#	540#	-310#	450#	3930#	200#	*	-4270#	200#	
	Lu	71	12818	5	16170#	300#	830	50	1299	5	-12230#	400#	-4695	5
	Hf	72	13724.95	0.19	14058.5	1.8	1806.3	1.5	-1168	15	-8060	10	-7940#	50#
	Ta	73	14785	3	12551.9	0.9	2382.9	0.9	-3775	25	-7309.0	2.1	-8022	15
	W	74	15740	30	10992	15	2762	15	-6278	22	-4149	15	-11720	30
	Re	75	16460	40	9446	25	3400	40	-8506	26	-3270#	60#	-11112	28
	Os	76	17213	23	7900	30	4190	30	-10751	18	101	22	-14839	26
	Ir	77	18175	22	6388	30	4784	30	-13091	15	285	30	-14153	14
	Pt	78	19040	17	4897	18	5412	9	-15344	28	3987	16	-18010	60
	Au	79	19586	16	3519	23	5981	5	-16710	40	3974	23	-16744	16
	Hg	80	20280	80	2130	30	6351	30	-18970	80	7784	29	-20200#	110#
	Tl	81	21100	50	1310	40	6710	5	*	*	6760	70	-19920	50
	Pb	82	*	*	-250	110	7598	20	*	*	11080	80	*	*

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		$Q(d,\alpha)$		$Q(p,\alpha)$		$Q(n,\alpha)$		
180	Yb	70	6130#	360#	10290#	590#	5040#	300#	10230#	500#	7730#	420#	3910#	590#	
	Lu	71	5690	70	7430#	210#	-840	70	13730	70	9170	70	6440#	310#	
	Hf	72	7387.76	0.15	8010	5	-5420	16	11268.8	2.1	7468.1	0.8	6849.4	1.8	
	Ta	73	6647.7	2.6	5759.8	2.6	-10959	22	14212.3	2.6	8810.9	2.6	9096.0	2.6	
	W	74	8412	15	6567.8	0.5	-15203	11	11670#	50#	6943	3	8890.9	0.4	
	Re	75	7320	30	3829	26	-20243	29	15283	26	8730	40	11526	22	
	Os	76	9414	23	5066	30	-24112	21	12000	30	6770	30	10990	30	
	Ir	77	7970	24	2247	27	-28720	60	16277	26	8836	27	13940	40	
	Pt	78	10239	14	3645	15	-32506	18	12527	23	6476	23	13160	19	
	Au	79	8677	23	615	22	*	*	17114	22	8640	25	16100	28	
	Hg	80	11400	30	2551	17	*	*	12790	60	6159	15	14766	20	
	Tl	81	9050	70	-370	70	*	*	17760	60	8380	100	17930	60	
	Pb	82	12050	80	940	40	*	*	13580#	100#	6259	20	16500	80	
	181	Yb	70	4560#	420#	*	*	7170#	300#	11220#	590#	7890#	500#	*	*
Lu		71	6190	170	7490#	340#	1720	160	12450#	250#	9760	160	4970#	430#	
Hf		72	5694.80	0.07	8020	70	-3855	25	12366	5	7798.6	2.1	7935	10	
Ta		73	7576.8	1.3	5948.8	2.2	-8970	26	12734.5	2.2	8860.1	2.2	7544.6	3.0	
W		74	6686	5	6606	5	-13879	16	12817	5	7210#	50#	9831	5	
Re		75	8755	25	4171	13	-18650	24	13487	19	8752	20	9730#	50#	
Os		76	7260	30	5000	30	-22889	30	13750	40	6970	40	12506	30	
Ir		77	9570	30	2400	30	-26673	27	14260	30	8936	29	11830	40	
Pt		78	8010	18	3686	26	-31260	80	14416	18	6742	25	14816	20	
Au		79	10348	28	725	23	*	*	15108	22	8990	22	14027	28	
Hg		80	8482	20	2356	25	*	*	15038	19	6530	60	16983	18	
Tl		81	11610	60	-163	14	*	*	14836	29	8382	14	15170	60	
Pb		82	9260	80	1140	100	*	*	15870	90	6540#	130#	18850	80	
182		Lu	71	5150#	250#	8080#	360#	3570#	220#	13430#	360#	9520#	280#	5370#	540#
	Hf	72	6718	6	8540	160	-1443	23	11340	70	7873	8	6130#	200#	
	Ta	73	6062.94	0.11	6316.9	2.2	-7382	21	14059.4	2.2	8896.2	2.2	8274	5	
	W	74	8066	5	7095.1	1.7	-12080	13	11399.3	2.2	6976.1	2.0	7864.0	1.9	
	Re	75	7000	100	4480	100	-17150	100	14900	100	8710	100	10560	100	
	Os	76	9130	30	5377	25	-21032	24	11940	30	6840	30	10335	26	
	Ir	77	7650	30	2790	30	-25740	60	16021	27	8832	27	13180	30	
	Pt	78	9865	20	3986	29	-29343	18	12520	25	6775	16	12497	21	
	Au	79	8501	28	1215	25	*	*	16846	23	8831	22	15425	22	
	Hg	80	10987	18	2994	22	*	*	12728	22	6276	15	14338	13	
	Tl	81	8580	60	-60	60	*	*	17650	60	8480	70	17330	60	
	Pb	82	11780	80	1316	15	*	*	13150	60	6320	40	15745	30	
	183	Lu	71	5910#	220#	*	*	6100	90	12080#	310#	9750#	310#	*	*
		Hf	72	5310	30	8700#	200#	380	60	12220	160	8260	80	6960#	300#
Ta		73	6934.18	0.20	6533	6	-5093	24	12820.0	2.2	9349.7	2.2	7030	70	
W		74	6190.81	0.05	7222.9	1.7	-10595	16	12785.2	1.7	7433.0	2.2	9061.0	1.9	
Re		75	8430	100	4852	8	-15622	12	13153	9	8691	8	8771	8	
Os		76	7130	50	5510	110	-19860	50	13570	50	7040	50	11620	50	
Ir		77	9220	30	2880	30	-23616	26	14060	40	9023	29	11280	30	
Pt		78	7675	20	4010	26	-28200	30	14410	30	7069	27	14236	22	
Au		79	9960	22	1310	16	*	*	14896	18	9110	14	13435	24	
Hg		80	8299	12	2793	21	*	*	14777	21	6654	21	16277	13	
Tl		81	11350	60	300	14	*	*	14785	18	8527	16	14653	22	
Pb		82	8820	30	1550	70	*	*	15938	30	6560	70	18330	30	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)	S(2p)	$Q(\alpha)$	$Q(2\beta^-)$	$Q(\epsilon p)$	$Q(\beta^- n)$						
180	Yb	70	11050#	300#	*	-390#	500#	5180#	300#	*	-3610#	300#		
	Lu	71	12480	70	17140#	410#	270	120	2260	70	-12370#	510#	-4280	70
	Hf	72	13486.75	0.17	14666	10	1283.0	1.8	-143.23	0.28	-10530#	200#	-7493.3	0.4
	Ta	73	14480#	50#	13174	3	2023.1	2.6	-3099	22	-7164	6	-7710	15
	W	74	15372	15	11778.8	0.3	2515.0	1.0	-5277	16	-6462.2	0.3	-11125	25
	Re	75	16330	40	9820#	60#	3100	40	-7860	30	-2767	21	-10889	27
	Os	76	16961	21	8531	22	3850	30	-9926	20	-2354	22	-14354	19
	Ir	77	17868	29	6900	40	4660	40	-12383	30	1320	30	-13781	23
	Pt	78	18581	15	5469	17	5240	30	-14185	17	1295	20	-17518	16
	Au	79	19410	60	3920	28	5840	18	-16330	60	5196	22	-16740	30
	Hg	80	20077	17	2831	16	6258.4	2.4	-18321	19	4729	15	-20040	40
	Tl	81	20610#	120#	1510	80	6710	50	*		8440	60	-19380	100
	Pb	82	21641	28	191	18	7419	5	*		7710	30	*	
181	Yb	70	10690#	360#	*	-660#	590#	6320#	300#	*	-2480#	310#		
	Lu	71	11880	160	17780#	530#	250#	340#	3640	160	*	-3090	160	
	Hf	72	13082.56	0.17	15450#	200#	1154.6	1.8	848	5	-10090#	300#	-6540.4	2.6
	Ta	73	14224.5	2.2	13959	5	1519.3	2.3	-1921	13	-9050	70	-6874.4	2.2
	W	74	15099	15	12366	5	2205	5	-4703	26	-5761	5	-10487	22
	Re	75	16079	28	10739	13	2771	13	-7049	29	-4874	13	-10230	21
	Os	76	16670	30	8830	29	3730	40	-9176	29	-1200	25	-13640	30
	Ir	77	17535	27	7460	40	4370	40	-11600	30	-920	30	-13107	28
	Pt	78	18249	17	5933	22	5150	5	-13713	21	2699	22	-16851	25
	Au	79	19025	23	4370	22	5751.3	2.9	-15072	22	2817	29	-15692	24
	Hg	80	19880	30	2971	17	6284	4	-17540	80	6485	19	-19470	60
	Tl	81	20660	40	2388	15	6321	6	*		5507	22	-18940	17
	Pb	82	21310	110	770	80	7240	7	*		9840	80	*	
182	Lu	71	11340#	210#	*	-190#	450#	4550#	200#	*	-2550#	200#		
	Hf	72	12413	6	16030#	300#	1217	12	2196	6	-12250#	300#	-5682	6
	Ta	73	13639.7	1.3	14330	70	1481.6	3.0	-990	100	-8920	160	-6251	5
	W	74	14751.8	2.0	13043.9	1.9	1765.0	1.9	-3639	22	-8131.4	1.9	-9798	13
	Re	75	15750	100	11090	100	2730#	120#	-6400	100	-4300	100	-9970	110
	Os	76	16390	27	9548	22	3375	27	-8441	25	-3645	22	-13210	30
	Ir	77	17220	30	7792	30	4180	30	-10751	29	180	24	-12749	26
	Pt	78	17875	17	6384	21	4951	5	-12591	16	93	29	-16368	24
	Au	79	18849	28	4901	30	5526	4	-14990	60	3880	30	-15711	25
	Hg	80	19469	16	3719	15	5996	5	-16751	16	3509	18	-18849	13
	Tl	81	20190	80	2290	60	6593	15	*		7270	60	-18260	100
	Pb	82	21038	18	1153	18	7066	6	*		6547	20	*	
	183	Lu	71	11060	180	*	-540#	510#	5580	90	*	-1740	90	
Hf		72	12020	30	16780#	300#	830#	200#	3080	30	*	-4920	30	
Ta		73	12997.12	0.23	15080	160	1340	5	515	8	-10710#	200#	-5119.7	1.7
W		74	14256	5	13539.9	1.9	1673.2	1.9	-2700	50	-7604	6	-8990	100
Re		75	15433	15	11948	8	2124	8	-5608	26	-6667	8	-9273	23
Os		76	16260	60	9990	50	3210	50	-7890	50	-2710	50	-12680	50
Ir		77	16870	40	8260	27	3960	30	-10014	26	-2040	100	-12106	28
Pt		78	17541	21	6800	30	4822	9	-11968	17	1548	27	-15543	26
Au		79	18461	22	5295	27	5465.3	2.9	-13602	13	1574	23	-14684	14
Hg		80	19286	17	4008	16	6038	4	-16233	29	5075	15	-18570	60
Tl		81	19931	13	3294	22	5976	9	*		4425	22	-17833	15
Pb		82	20600	80	1490	30	6928	7	*		8717	30	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)	S(p)	$Q(4\beta^-)$		$Q(d,\alpha)$		$Q(p,\alpha)$		$Q(n,\alpha)$			
184	Lu	71	4770#	310#	*	7810#	300#	*	9540#	420#	*			
	Hf	72	6290	50	9070	100	2760	40	11090#	200#	8160	160	5230#	300#
	Ta	73	5617	26	6840	40	-3230	40	13921	27	9428	26	7600	160
	W	74	7411.66	0.25	7700.4	1.7	-8369	15	11436.5	1.7	7598.1	1.7	7344.1	2.0
	Re	75	6485	9	5146	4	-13906	23	14734	4	8893	6	9863	5
	Os	76	8660	50	5734	8	-17908	10	11900	100	7128	13	9643	5
	Ir	77	7480	40	3240	60	-22740	30	15710	40	8800	40	12560	30
	Pt	78	9638	22	4424	29	-26287	20	12424	26	6997	30	11858	30
	Au	79	8201	24	1835	27	-31510	80	16560	26	8920	27	14800	30
	Hg	80	10615	12	3449	14	*	*	12663	23	6387	22	13672	18
	Tl	81	8357	22	358	21	*	*	17414	22	8652	25	16644	28
	Pb	82	11550	30	1753	16	*	*	12970	60	6611	14	15256	20
	Bi	83	*	*	-1470	80	*	*	18720	80	9170	110	19630	80
185	Lu	71	5550#	420#	*	9940#	300#	*	*	*	*	*		
	Hf	72	4890	100	9200#	310#	4490	90	12110	130	8420#	220#	*	
	Ta	73	6626	30	7180	40	-1060	30	12600	30	9520	15	6130#	200#
	W	74	5753.71	0.30	7837	26	-6702	26	12617.0	1.8	7907.4	1.7	8308	6
	Re	75	7669	4	5404.0	0.9	-11956	26	13255.4	0.9	9289.2	0.9	8257.0	1.9
	Os	76	6624.52	0.28	5874	4	-16634	16	13712	8	7500	100	11084.3	1.0
	Ir	77	8800	40	3368	28	-20580	30	14040	60	9140	40	10760	110
	Pt	78	7420	30	4370	40	-25150	30	14230	40	7230	30	13570	30
	Au	79	9620	30	1820	30	-29630#	90#	14620	30	9165	29	12830	30
	Hg	80	7898	19	3146	27	*	*	14724	18	6989	26	15639	20
	Tl	81	10956	29	698	23	*	*	14757	22	8683	23	14189	29
	Pb	82	8561	21	1957	26	*	*	15757	19	6630	60	17682	19
	Bi	83	11500#	110#	-1530#	80#	*	*	16050#	90#	9450#	80#	16720#	100#
186	Hf	72	6180	110	9830#	300#	6580	50	10700#	300#	8160	110	*	
	Ta	73	5280	60	7580	110	560	60	13600	70	9540	70	6750	110
	W	74	7192.2	1.3	8403	14	-4646	22	11042	26	7649.4	2.2	6420	30
	Re	75	6179.35	0.18	5829.7	0.9	-10216	21	14487.7	0.9	9300.6	0.9	9011.9	1.9
	Os	76	8263.9	1.1	6468.7	1.0	-14464	12	11933	4	7673	8	9011.2	1.2
	Ir	77	6910	30	3654	17	-19288	28	15793	17	9350	50	12283	18
	Pt	78	9250	30	4820	40	-23183	25	12460	40	7200	30	11450	50
	Au	79	7920	30	2320	30	-28590	60	16335	26	8922	26	14130	30
	Hg	80	10435	19	3961	29	-32630	30	12491	25	6514	15	12880	19
	Tl	81	8200	30	1000	27	*	*	17173	25	8782	23	15949	24
	Pb	82	11212	20	2213	24	*	*	12902	23	6769	15	14769	13
	Bi	83	8960#	100#	-1130	60	*	*	18640	60	9310	70	19110	60
	Po	84	*	*	960#	90#	*	*	13620	80	*	*	17310	40
187	Hf	72	4460#	300#	*	8400#	300#	11780#	420#	8460#	420#	*		
	Ta	73	6360	90	7760	90	2650	70	12130	110	9470	80	5160#	310#
	W	74	5466.79	0.05	8590	60	-3221	24	12201	14	7799	26	7240	40
	Re	75	7359.2	1.1	5996.7	1.2	-8191	22	12882.2	1.2	9353.1	1.2	7269	26
	Os	76	6289.9	0.6	6579.3	1.1	-13103	14	13312.4	1.1	7868	5	10132.9	1.2
	Ir	77	8450	30	3836	28	-17106	29	13971	28	9571	28	10322	28
	Pt	78	6890	30	4799	29	-21698	25	14360	40	7790	40	13218	24
	Au	79	9380	30	2450	30	-26644	24	14370	30	9175	27	12230	40
	Hg	80	7650	18	3692	25	-30950	30	14460	30	7065	26	14868	21
	Tl	81	10628	24	1193	14	*	*	14443	18	8770	13	13522	24
	Pb	82	8376	12	2389	23	*	*	15482	21	6750	21	17008	11
	Bi	83	11330	60	-1010	15	*	*	15869	19	9532	16	16136	22
	Po	84	9330	50	1330	70	*	*	15780#	90#	6510	80	19530	30

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)	S(2p)	Q(α)	Q($2\beta^-$)	Q(ϵp)	Q($\beta^- n$)						
184	Lu	71	10680#	360#	*	*	6430#	300#	*	-1200#	300#			
	Hf	72	11590	40	*	670#	300#	4210	40	*	-4280	40		
	Ta	73	12551	26	15540#	200#	1410	80	1383	26	-10410	90	-4546	26
	W	74	13602.48	0.26	14234	6	1649.3	2.0	-1450.9	1.0	-9710	30	-7968	8
	Re	75	14920	100	12369	5	2287	5	-4614	28	-6218	5	-8630	50
	Os	76	15790	22	10586.9	1.1	2957.0	2.2	-6918	15	-5178.4	1.1	-12125	24
	Ir	77	16700	30	8740	110	3800	40	-9290	40	-1089	29	-11910	30
	Pt	78	17313	20	7308	27	4598	8	-10990	18	-960	50	-15221	18
	Au	79	18160	30	5840	30	5234	5	-13445	30	2600	30	-14585	23
	Hg	80	18915	14	4758	16	5662	4	-15297	16	2135	18	-17833	14
	Tl	81	19710	60	3150	29	6296	26	-18060	80	6027	22	-17370	30
	Pb	82	20369	18	2053	16	6774	3	*	*	5464	15	*	*
	Bi	83	*	*	80	100	8020	50	*	*	10490	80	*	*
185	Lu	71	10310#	310#	*	*	7510#	300#	*	*	-460#	300#		
	Hf	72	11180	100	*	340#	310#	5070	90	*	-3550	90		
	Ta	73	12243	14	16260	90	980	160	2426	14	-12270#	300#	-3760	14
	W	74	13165.4	0.4	14680	30	1590.4	2.0	-580.1	1.0	-9180	40	-7237	4
	Re	75	14154	8	13104.4	1.9	2194.1	1.9	-3487	28	-8270	26	-7637.3	0.5
	Os	76	15290	50	11020.6	1.0	3019	5	-6122	26	-4391.3	1.0	-11270	28
	Ir	77	16270	40	9102	29	3760	30	-8470	40	-3400	28	-11070	30
	Pt	78	17060	30	7600	60	4437	10	-10510	30	280	26	-14440	30
	Au	79	17820	28	6240	40	5180	5	-12110	30	460	40	-13589	28
	Hg	80	18514	17	4981	22	5774	5	-14634	22	3874	22	-17374	25
	Tl	81	19313	23	4147	23	5688	5	-17520#	80#	3270	30	-16778	24
	Pb	82	20110	30	2315	18	6695	5	*	*	7519	19	-20800	80
	Bi	83	*	*	230#	80#	8140#	80#	*	*	7350#	80#	*	*
186	Hf	72	11070	70	*	*	6090	50	*	*	-3100	60		
	Ta	73	11910	70	16780#	300#	850#	210#	3320	60	-12010#	300#	-3290	60
	W	74	12945.9	1.3	15590	40	1116	6	491.6	1.3	-11480	90	-6759.5	1.3
	Re	75	13849	4	13667	26	2077.7	1.9	-2756	17	-7823	14	-7192.1	0.5
	Os	76	14888.4	1.1	11872.8	1.2	2820.4	1.2	-5138	22	-6901.4	1.2	-10738	28
	Ir	77	15710	30	9528	17	3850	100	-7460	27	-2641	17	-10560	30
	Pt	78	16668	27	8186	22	4320	18	-9326	25	-2344	22	-14070	30
	Au	79	17540	30	6680	30	4912	14	-11830	30	1330	30	-13611	26
	Hg	80	18333	15	5778	19	5204	10	-13857	16	860	28	-16852	24
	Tl	81	19160	30	4150	30	5990	30	-16760	60	4690	30	-16417	28
	Pb	82	19773	17	2911	15	6470	6	-18770	30	4205	19	-20520#	80#
	Bi	83	20460	100	830	60	7757	12	*	*	9340	60	*	*
	Po	84	*	*	-570	40	8490	30	*	*	8340	40	*	*
187	Hf	72	10640#	310#	*	*	7090#	300#	*	*	-2280#	300#		
	Ta	73	11650	70	17590#	310#	390	110	4320	70	*	-2460	70	
	W	74	12659.0	1.3	16160	90	950	30	1314.7	1.2	-10770	50	-6047.0	1.3
	Re	75	13538.6	1.1	14400	14	1652.7	2.1	-1669	28	-9900	60	-6287.5	0.6
	Os	76	14553.8	1.2	12409.0	1.2	2721.3	1.3	-4536	24	-5999.2	1.2	-10118	17
	Ir	77	15360	40	10305	28	3837	29	-6520	40	-4908	28	-9760	40
	Pt	78	16140	40	8453	24	4550	60	-8567	28	-972	24	-13040	30
	Au	79	17300	30	7270	40	4751	29	-10585	24	-1142	28	-12560	25
	Hg	80	18085	21	6007	29	5230	14	-13131	15	2458	26	-16302	26
	Tl	81	18828	22	5154	27	5321	7	-16060	13	1983	22	-15833	14
	Pb	82	19588	17	3389	16	6393	6	-17820	30	6263	13	-19930	60
	Bi	83	20290#	80#	1203	23	7779	4	*	*	6214	24	-18550	30
	Po	84	*	*	200	40	7979	15	*	*	10230	30	*	*

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		Q(4β ⁻)		Q(d,α)		Q(p,α)		Q(n,α)	
188	Hf	72	6130#	420#	*		10260#	300#	*		7870#	420#	*	
	Ta	73	4780	90	8080#	310#	4740	70	13520	90	9570	110	5920#	310#
	W	74	6835	3	9060	70	-841	6	10650	60	7591	15	5300	90
	Re	75	5871.65	0.04	6401.6	1.2	-6742	15	14202.7	1.2	9235.1	1.2	8024	14
	Os	76	7989.58	0.15	7209.70	0.15	-10928	11	11502.2	1.1	7547.4	1.1	7897.1	1.2
	Ir	77	6873	30	4419	9	-16010	30	15362	10	9323	9	11118	9
	Pt	78	9215	25	5569	29	-20014	12	12057	17	7371	29	10627	6
	Au	79	7320	27	2881	29	-25092	26	16298	27	9280	30	13710	30
	Hg	80	10165	18	4472	25	-29667	23	12214	24	6520	28	12123	28
	Tl	81	7960	30	1510	30	*		16910	30	8700	30	15180	40
	Pb	82	10899	12	2661	13	*		12782	25	6807	23	14007	19
	Bi	83	8873	23	-513	21	*		18208	24	9221	26	18220	29
	Po	84	11450	40	1450	22	*		13290	60	6560#	80#	16643	26
189	Hf	72	4360#	420#	*		11830#	300#	*		*		*	
	Ta	73	6290#	310#	8240#	420#	6630#	300#	11700#	420#	9460#	300#	*	
	W	74	5020	40	9290	80	870	40	11990	80	7860	70	6450	70
	Re	75	7033	8	6600	9	-4399	22	12636	8	9394	8	6280	60
	Os	76	5920.5	0.5	7258.6	0.5	-9360	30	12940.9	0.5	7806.2	1.2	9168.7	1.3
	Ir	77	8177	16	4606	13	-13855	17	13475	13	9410	13	9120	13
	Pt	78	6728	12	5423	14	-18610	40	13770	30	7553	20	12163	11
	Au	79	9376	25	3042	21	-23517	29	13810	30	9147	30	11239	26
	Hg	80	7490	30	4640	40	-28200	40	14110	40	6950	40	13880	40
	Tl	81	10340	30	1680	16	*		14226	18	8801	16	12759	24
	Pb	82	8130	40	2830	50	*		15280	40	6870	40	16310	40
	Bi	83	10951	29	-461	23	*		15633	21	9481	24	15470	30
	Po	84	8949	30	1530	30	*		15672	24	6570	60	18906	25
190	Ta	73	4760#	360#	8640#	360#	8240#	200#	13080#	360#	9170#	360#	*	
	W	74	6830	60	9840#	300#	2940	40	9940	80	7380	80	4080#	300#
	Re	75	5730	70	7310	80	-2750	70	13750	70	9140	70	6910	100
	Os	76	7792.30	0.19	8018	8	-7339	16	11020.2	0.6	7373.2	0.6	6843.2	1.3
	Ir	77	6370	13	5056.1	1.2	-12380#	50#	15094.5	1.3	9329.4	1.3	10109.3	1.3
	Pt	78	8911	10	6158	13	-16909	14	11737	10	7088	29	9542	6
	Au	79	7373	26	3687	18	-22284	28	15657	16	8666	29	12310	30
	Hg	80	9820	40	5077	26	-26806	21	11617	22	6522	27	10961	29
	Tl	81	7850#	50#	2040#	60#	*		16540#	50#	8600#	50#	14300#	60#
	Pb	82	10610	40	3103	17	*		12630	30	6891	15	13348	19
	Bi	83	8610	30	10	40	*		17927	25	9252	23	17491	24
	Po	84	11213	26	1788	25	*		13332	25	6684	17	16070	14
	191	Ta	73	6050#	360#	*		10220#	300#	11380#	420#	9250#	420#	*
W		74	4870	60	9950#	200#	4530	40	11360#	300#	7300	80	5350#	300#
Re		75	6790	70	7260	40	-540	40	11980	40	9182	11	4910	70
Os		76	5758.74	0.11	8050	70	-5804	23	12295	8	7486.1	0.6	7919	3
Ir		77	8026.5	0.4	5290.4	1.2	-10428	8	12988.4	1.2	9292.5	1.3	7954.4	1.3
Pt		78	6448	6	6235	4	-15470	40	13466	13	7514	10	11084	4
Au		79	9000	40	3770	40	-20570	40	13390	40	8880	40	10190	40
Hg		80	7294	28	4999	28	-25524	24	13700	30	6548	27	12882	23
Tl		81	9980#	50#	2202	18	-30147	18	14050	30	8792	13	11640	17
Pb		82	7890	40	3150#	60#	*		15080	40	6960	50	15620	40
Bi		83	10712	24	112	15	*		15350	40	9439	13	14740	30
Po		84	8576	15	1759	24	*		15707	22	6980	22	18393	13
At		85	*		-1139	21	*		15997	27	9272	26	16695	26

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)	S(2p)	Q(α)	Q($2\beta^-$)	Q(ϵp)	Q($\beta^- n$)						
188	Hf	72	10600#	300#	*	*	7790#	300#	*	-2050#	310#			
	Ta	73	11140	90	*	380#	310#	5410	70	*	-1780	70		
	W	74	12302	3	16820	60	410	40	2469	3	-13140#	300#	-5523	3
	Re	75	13230.9	1.1	14990	60	1398	26	-667	9	-9410	70	-5869.18	0.04
	Os	76	14279.5	0.6	13206.4	1.2	2143.4	1.2	-3310	6	-8522.0	1.2	-9661	28
	Ir	77	15319	19	10999	9	3448	10	-6075	18	-4422	9	-9738	26
	Pt	78	16107	22	9405	6	4003	6	-7618	13	-3897	6	-12872	23
	Au	79	16705	26	7680	23	4910	30	-9940	30	-20	30	-12230	21
	Hg	80	17815	16	6925	24	4703	15	-12396	15	-815	27	-15839	14
	Tl	81	18590	40	5200	40	5560	40	-15150	40	3400	40	-15420	30
	Pb	82	19276	16	3854	16	6109	3	-17271	23	3014	17	-19503	15
	Bi	83	20200	60	1880	30	7264	5	*	*	7969	22	-18090	40
	Po	84	20780	40	440	23	8082	15	*	*	7154	21	*	*
189	Hf	72	10490#	420#	*	*	8460#	300#	*	*	-1620#	310#		
	Ta	73	11070#	310#	*	-370#	420#	6150#	300#	*	-1230#	300#		
	W	74	11850	40	17380#	300#	280	100	3370	40	-12030#	300#	-4670	40
	Re	75	12905	8	15660	70	991	16	476	15	-11660	70	-4913	8
	Os	76	13910.1	0.5	13660.1	1.3	1976.6	1.3	-2503	11	-7608	3	-8708	10
	Ir	77	15050	30	11816	13	2941	13	-4875	24	-6727	13	-8699	14
	Pt	78	15943	27	9842	11	3900	11	-6860	30	-2635	11	-12280	19
	Au	79	16700	30	8610	30	4330	30	-8980	23	-2520	22	-11442	23
	Hg	80	17650	30	7520	40	4640	40	-11750	50	910	30	-15360	40
	Tl	81	18302	14	6152	25	4840	28	-14537	24	386	19	-14859	15
	Pb	82	19030	30	4340	40	5870	40	-16460	40	5040	40	-18760	40
	Bi	83	19824	23	2200	22	7268.1	2.7	*	*	4980	40	-17592	29
	Po	84	20400	40	1013	23	7694	15	*	*	9104	24	*	*
190	Ta	73	11040#	210#	*	*	7120#	210#	*	*	-970#	200#		
	W	74	11850	40	18080#	300#	-380	70	4330	40	-14510#	300#	-4470	40
	Re	75	12760	70	16600	100	550	90	1120	70	-11100#	310#	-4720	70
	Os	76	13712.8	0.5	14618	3	1376.4	1.3	-1384	6	-10380	40	-8324	13
	Ir	77	14547	10	12314.7	1.3	2750.1	1.7	-3872	16	-6064	8	-8342	11
	Pt	78	15639	7	10764	6	3252	6	-5955	17	-5626	6	-11815	21
	Au	79	16749	22	9110	18	3867	23	-8500#	50#	-1716	20	-11330	40
	Hg	80	17302	19	8119	17	4069	27	-10954	20	-2174	19	-14839	19
	Tl	81	18190#	60#	6680#	50#	4910#	60#	-13780#	60#	1910#	50#	-14570#	60#
	Pb	82	18744	16	4783	17	5697	5	-15853	18	1920	30	-18423	24
	Bi	83	19560	30	2840	40	6863	4	*	*	6714	25	-17250	30
	Po	84	20162	24	1327	17	7693	7	*	*	6030	40	*	*
	191	Ta	73	10810#	420#	*	*	7860#	300#	*	*	-180#	300#	
W		74	11700	60	18590#	300#	-790#	300#	5220	40	*	*	-3610	80
Re		75	12514	13	17100#	300#	120	70	2359	10	-13130#	200#	-3714	10
Os		76	13551.03	0.22	15360	40	1084.5	1.3	-695	4	-9300	40	-7712.6	1.2
Ir		77	14397	13	13308	8	2082.8	1.3	-2900	40	-8360	70	-7457	6
Pt		78	15359	12	11291	4	3095	4	-5109	23	-4281	4	-10890	16
Au		79	16370	40	9930	40	3310	50	-7530	40	-4340	40	-10510	40
Hg		80	17110	40	8685	25	3670	30	-10360	40	-557	23	-14290#	60#
Tl		81	17823	13	7279	21	4320	23	-13043	10	-689	18	-13938	15
Pb		82	18500	50	5190	50	5460	40	-15170	40	3850	40	-17710	40
Bi		83	19318	22	3215	13	6778	3	-17103	18	3850#	50#	-16747	15
Po		84	19789	23	1770	40	7493	5	*	*	8059	14	*	*
At		85	*	*	649	26	7822	14	*	*	7174	28	*	*

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$		$Q(d,\alpha)$		$Q(p,\alpha)$		$Q(n,\alpha)$	
192	Ta	73	4740#	500#	*		11680#	400#	*		8870#	500#	*	
	W	74	6550#	200#	10450#	360#	6640#	200#	9570#	280#	7040#	360#	3160#	360#
	Re	75	5310	80	7700	90	1190	80	13500	90	8890	90	5890#	310#
	Os	76	7558.4	2.2	8821	10	-3873	16	10460	70	6961	8	5380	40
	Ir	77	6198.13	0.11	5729.8	1.2	-8970	30	14582.6	1.2	9014.9	1.2	8789	8
	Pt	78	8662	3	6870.3	2.3	-13727	13	11174.3	2.4	7029	13	8342.7	2.6
	Au	79	7040	40	4363	16	-19240	30	15260	17	8574	19	11327	20
	Hg	80	9489	27	5490	40	-23941	19	11583	22	6435	25	10121	19
	Tl	81	7660	30	2570	40	-28810	50	16210	40	8620	40	13360	40
	Pb	82	10400	40	3572	14	*		12530#	50#	6901	16	12710	30
	Bi	83	8370	30	590	50	*		17590	30	9210	50	16710	30
	Po	84	11073	13	2120	13	*		13239	25	6858	24	15450	40
	At	85	9000	40	-720	30	*		18210	40	9220	40	18650	40
193	W	74	4710#	280#	10420#	450#	8200#	200#	10920#	360#	7090#	280#	*	
	Re	75	6720	90	7880#	200#	3170	40	11650	60	9010	50	3920#	200#
	Os	76	5583.42	0.20	9100	80	-2333	16	11667	10	7100	70	6630	40
	Ir	77	7771.99	0.20	5943.3	2.4	-7061	7	12569.3	1.2	9035.2	1.2	6740	70
	Pt	78	6260.8	2.4	6933.0	0.4	-12290	50	12940.0	0.4	7138.0	0.5	9874.2	1.2
	Au	79	8701	18	4403	9	-17533	13	13006	10	8783	10	8996	9
	Hg	80	7123	22	5576	22	-22700	40	13460	40	6684	22	11909	17
	Tl	81	9680	30	2755	17	-27410	23	13827	24	8757	17	11052	17
	Pb	82	7700	50	3610	60	-31240	60	14800	50	7050#	70#	14820	50
	Bi	83	10410	30	596	16	*		15070	40	9408	16	14150#	50#
	Po	84	8360	40	2110	50	*		15590	40	7100	40	17700	40
	At	85	11070	40	-714	24	*		15712	23	9360	25	16180	30
	Rn	86	*		1180	40	*		15890	30	*		19253	28
194	W	74	6310#	360#	*		10240#	300#	9340#	500#	6830#	420#	*	
	Re	75	5070#	200#	8240#	280#	4980#	200#	13120#	280#	8800#	200#	4900#	360#
	Os	76	7112	3	9490	40	-253	4	9860	80	6779	10	4390	40
	Ir	77	6066.79	0.11	6426.7	2.4	-5596	14	14061.0	2.4	8727.1	1.2	7465	10
	Pt	78	8352.2	2.1	7513.2	2.1	-10555	17	10785.9	2.1	6812.3	2.1	7280.7	1.8
	Au	79	6879	9	5020.4	2.9	-16180#	50#	14790	4	8352	5	10144.1	2.9
	Hg	80	9192	16	6067	9	-21179	13	11303	16	6490	40	9164	6
	Tl	81	7532	15	3164	21	-26230	30	15784	21	8519	27	12520	40
	Pb	82	10080	50	4019	19	-29931	24	12380	40	6939	19	12032	29
	Bi	83	8240#	50#	1130#	70#	*		17240#	50#	9060#	60#	15890#	50#
	Po	84	10720	40	2421	16	*		13240	30	7099	15	14880	40
	At	85	8720	30	-360	40	*		18070	29	9221	28	18175	28
	Rn	86	11390	30	1498	27	*		13500	40	6724	23	16439	18
195	Re	75	6410#	360#	8340#	420#	6990#	300#	11420#	360#	8940#	360#	3230#	500#
	Os	76	5150	60	9560#	210#	1490	60	11430	70	6940	100	5780#	210#
	Ir	77	7231.86	0.06	6546.1	2.0	-3539	11	12412.5	2.4	9053.7	2.4	5540	80
	Pt	78	6105.06	0.12	7551.5	2.1	-9083	23	12452.8	2.1	6905.4	2.1	8734.0	2.8
	Au	79	8427.6	2.4	5095.9	1.0	-14544	5	12623.0	2.3	8587	3	7914.6	2.3
	Hg	80	6887	23	6075	23	-19940	40	13117	25	6640	28	10939	23
	Tl	81	9289	18	3260	11	-24679	14	13619	19	8720	19	10267	19
	Pb	82	7577	29	4065	27	-28760	60	14475	24	7020	40	13944	28
	Bi	83	10060#	50#	1107	18	*		14880	50	9404	13	13490	30
	Po	84	8130	40	2310#	60#	*		15520	40	7340	50	17150	40
	At	85	10836	29	-240	16	*		15590	40	9459	14	15710	30
	Rn	86	8740	50	1530	60	*		15830	50	6980	60	18770	50

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)	S(2p)	Q(α)	Q($2\beta^-$)	Q(ϵp)	Q($\beta^- n$)						
192	Ta	73	10790#	450#	*	*	8430#	410#	*	-50#	400#			
	W	74	11410#	200#	*	-1200#	360#	6230#	200#	*	-3370#	200#		
	Re	75	12100	100	17650#	210#	-400	100	3250	80	-12390#	310#	-3260	80
	Os	76	13317.1	2.2	16080	40	361	4	408	3	-12000	40	-7244.4	2.4
	Ir	77	14224.7	0.4	13780	70	1756.3	1.3	-2062	16	-7775	10	-7208	4
	Pt	78	15110	6	12160.7	2.6	2422.2	2.6	-4281	16	-7184.3	2.6	-10550	40
	Au	79	16035	22	10598	16	3151	18	-6900	40	-3354	16	-10254	28
	Hg	80	16784	22	9264	17	3393	17	-9446	20	-3599	16	-13800	17
	Tl	81	17640#	60#	7570	40	3980	40	-12340	40	650	50	-13710	50
	Pb	82	18292	18	5773	20	5221	5	-14495	17	739	26	-17397	14
	Bi	83	19080	40	3730#	60#	6376	5	-16470	40	5460	30	-16540	30
	Po	84	19649	17	2232	17	7320	3	*	*	4880	40	-20006	20
	At	85	*		1040	40	7696	26	*	*	8890	30	*	
	193	W	74	11250#	200#	*	-1550#	360#	7110#	200#	*		-2770#	210#
Re		75	12030	40	18320#	300#	-830#	300#	4300	40	-14370#	400#	-2420	40
Os		76	13141.8	2.2	16800	40	-200	40	1085.6	2.4	-11040#	200#	-6629.7	2.4
Ir		77	13970.12	0.23	14764	10	1017	8	-1132	9	-10240	80	-6317.5	2.4
Pt		78	14923	4	12662.8	1.2	2081.9	1.2	-3419	16	-5886.7	2.4	-9777	16
Au		79	15740	40	11273	9	2626	15	-5929	11	-5857	9	-9466	18
Hg		80	16613	27	9939	16	2998	19	-8870	50	-2060	16	-13260	40
Tl		81	17337	10	8240	40	3680	21	-11604	12	-1990	17	-12983	14
Pb		82	18100	60	6180	50	5010	60	-13830	60	2530	50	-16730	60
Bi		83	18776	12	4168	12	6304	5	-15805	24	2710	30	-15874	15
Po		84	19430	40	2700	50	7094	4	-17400	40	6920	40	-19370	50
At		85	20074	27	1406	23	7572	7	*	*	6180	40	*	
Rn		86	*		466	26	8040	12	*	*	9824	27	*	
194		W	74	11020#	360#	*	*		7910#	300#	*		-2360#	300#
	Re	75	11790#	210#	18660#	450#	-1150#	280#	5300#	200#	*		-1910#	200#
	Os	76	12696	3	17370#	200#	-480	40	2325.4	2.9	-13440#	200#	-5970.2	2.0
	Ir	77	13838.78	0.23	15520	80	680	70	-320.6	2.9	-9590	40	-6123.4	0.3
	Pt	78	14613	3	13456.6	2.8	1522.0	1.8	-2579	3	-8655.5	2.9	-9428	9
	Au	79	15580	16	11953.5	2.9	2117.6	2.9	-5276	14	-4963.8	2.9	-9222	16
	Hg	80	16316	16	10470	4	2716	7	-7977	18	-4991	3	-12778	7
	Tl	81	17210	30	8740	21	3521	21	-10900#	50#	-821	16	-12810	50
	Pb	82	17785	21	6774	23	4738	17	-13203	22	-434	23	-16406	20
	Bi	83	18640#	60#	4740#	60#	5918	5	-15330#	60#	4150#	50#	-15750#	60#
	Po	84	19077	17	3017	18	6987	3	-16728	21	3900	50	-19008	25
	At	85	19790	40	1750	40	7462	15	*	*	7872	29	-17830	40
	Rn	86	*		784	20	7862	10	*	*	6790	40	*	
	195	Re	75	11490#	300#	*	-1510#	420#	6120#	300#	*		-1210#	300#
Os		76	12260	60	17800#	210#	-760	80	3280	60	-12270#	300#	-5050	60
Ir		77	13298.65	0.13	16040	40	233	10	875.1	2.3	-11750#	200#	-5003.1	2.1
Pt		78	14457.2	2.1	13978.2	2.9	1175.6	1.8	-1797	23	-7648.1	2.9	-8654.5	2.2
Au		79	15306	9	12609.1	2.3	1716.4	2.3	-4414	11	-7324.7	2.3	-8457	3
Hg		80	16079	28	11096	23	2277	24	-7290	30	-3526	23	-12133	27
Tl		81	16821	13	9327	14	3230	40	-10130	12	-3231	11	-12019	21
Pb		82	17660	50	7228	28	4450	30	-12650	40	1182	24	-15750#	60#
Bi		83	18295	11	5126	9	5832	5	-14550	11	1623	15	-15092	14
Po		84	18840	50	3440	60	6749.9	2.8	-16110	60	5860	40	-18420	50
At		85	19551	23	2181	13	7339	5	*	*	5270#	50#	-17271	19
Rn		86	20140	60	1170	60	7690	50	*	*	8770	50	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		Q(4 β^-)		Q(d, α)		Q(p, α)		Q(n, α)	
196	Re	75	5040#	420#	*		8600#	300#	12700#	420#	8610#	360#	*	
	Os	76	6840	70	9990#	300#	3550	40	9670#	200#	6820	60	3650#	200#
	Ir	77	5810	40	7220	70	-1940	40	13710	40	8820	40	6440	50
	Pt	78	7921.93	0.13	8241.6	2.1	-7286	14	10597.7	2.1	6755.5	2.1	6395.5	2.8
	Au	79	6642	3	5632.6	3.0	-13131	25	14333.4	3.0	8206	4	9045	4
	Hg	80	8898	23	6546	3	-18344	13	11097	4	6443	9	8301	4
	Tl	81	7413	16	3786	26	-23580	30	15398	12	8430	20	11556	15
	Pb	82	9719	27	4495	18	-27332	20	12288	20	6981	16	11349	21
	Bi	83	8055	25	1580	30	*		16910	30	9050	60	15115	25
	Po	84	10490	40	2746	14	*		13260#	50#	7254	16	14360	50
	At	85	8510	30	140	50	*		17800	30	9310	50	17610	30
Rn	86	11150	50	1842	17	*		13390	30	6903	26	15980	40	
197	Re	75	6030#	420#	*		10640#	300#	*		8890#	420#	*	
	Os	76	5100#	200#	10060#	360#	5230#	200#	10980#	360#	6790#	280#	4860#	360#
	Ir	77	6900	40	7280	40	74	26	11960	60	9035	20	4620#	200#
	Pt	78	5846.35	0.27	8270	40	-5673	6	11983.2	2.1	6975.9	2.1	7661.6	2.9
	Au	79	8072.4	2.9	5783.0	0.6	-11454	8	12366.1	0.7	8485.6	0.7	7039.2	2.0
	Hg	80	6785.6	1.5	6690	3	-17180	50	12739	3	6536	4	9868	3
	Tl	81	8915	20	3802	17	-22000	50	13371	28	8708	17	9520	17
	Pb	82	7459	15	4541	13	-26220	40	14117	12	7053	15	13082	6
	Bi	83	9749	26	1615	17	*		14737	25	9384	19	12897	16
	Po	84	7950	50	2640	60	*		15380	50	7540#	70#	16500	50
	At	85	10500	60	150	50	*		15430	60	9520	50	15340#	70#
Rn	86	8570	40	1900	50	*		15660	40	7050	40	18130	40	
198	Re	75	4710#	500#	*		12440#	400#	*		*		*	
	Os	76	6600#	280#	10620#	360#	7120#	200#	9420#	360#	6610#	360#	*	
	Ir	77	5630#	200#	7800#	280#	1670#	210#	13170#	200#	8560#	210#	5400#	360#
	Pt	78	7555.1	2.1	8929	20	-3856	15	10240	40	6652.7	2.9	5250	60
	Au	79	6512.34	0.09	6449.0	0.6	-10213	28	13775.7	0.7	8078.4	0.7	7758.7	2.0
	Hg	80	8485	3	7102.8	0.5	-15482	17	10895.9	3.0	6478.7	1.3	7487.9	0.9
	Tl	81	7230	80	4240	80	-20770#	100#	15040	80	8370	80	10720	80
	Pb	82	9373	16	4999	22	-24820	20	12157	19	6969	18	10596	27
	Bi	83	7754	29	1910	28	*		16700	30	9210	40	14430	30
	Po	84	10190	50	3075	19	*		13250	30	7417	18	13887	29
	At	85	8450#	70#	650#	70#	*		17470#	50#	9200#	60#	16950#	50#
Rn	86	10780	40	2180	50	*		13390	30	7110	16	15480	40	
199	Os	76	4720#	280#	10630#	450#	9060#	200#	10730#	360#	6920#	360#	*	
	Ir	77	6650#	200#	7850#	200#	3660	50	11620#	200#	8740	60	3790#	300#
	Pt	78	5556.0	0.5	8860#	200#	-2159	10	11586	20	6910	40	6530	40
	Au	79	7584.27	0.06	6478.2	2.1	-8297	11	12037.8	0.6	8416.0	0.7	5990	40
	Hg	80	6662.9	0.5	7253.4	0.6	-14332	23	12305.4	0.7	6457.6	3.0	8746.9	0.9
	Tl	81	8640	80	4394	28	-19236	28	13192	28	8631	28	8727	28
	Pb	82	7253	18	5030	80	-23730	60	13819	19	7129	16	12241	10
	Bi	83	9499	30	2036	18	-27560	40	14662	12	9427	18	12346	16
	Po	84	7812	29	3130	40	*		15184	25	7660	30	15793	27
	At	85	10170#	50#	639	18	*		15250	50	9523	14	14832	25
	Rn	86	8340	60	2070#	80#	*		15560	80	7280	70	17630	60
Fr	87	*		-700	40	*		16000	50	9650	40	16320	50	
200	Os	76	6370#	360#	*		10730#	300#	9070#	500#	6590#	420#	*	
	Ir	77	5280#	200#	8420#	280#	5440#	200#	12940#	280#	8560#	280#	4540#	360#
	Pt	78	7282	20	9490	50	-350	23	9930#	200#	6529	28	4350#	200#
	Au	79	6217	27	7139	27	-6870	30	13376	27	8046	27	6670	30
	Hg	80	8028.52	0.11	7697.6	0.7	-12549	14	10789.2	0.7	6501.4	0.7	6564.8	0.9
	Tl	81	7059	29	4790	6	-18060	25	14618	6	8358	7	9740	6
	Pb	82	9090	15	5480	30	-22236	17	11960	80	6953	20	9937	11
	Bi	83	7645	25	2428	24	-26510	60	16390	27	9242	23	13616	28
	Po	84	9812	28	3446	18	*		13130	30	7597	17	13441	15
	At	85	8236	25	1060	30	*		17200	30	9230	60	16345	26
	Rn	86	10590	60	2480	14	*		13420#	50#	7190	50	14990	50
Fr	87	8700	70	-350	90	*		18080	60	9520	70	18130	80	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)	S(2p)	Q(α)	Q($2\beta^-$)	Q(ϵp)	Q($\beta^- n$)						
196	Re	75	11450#	360#	*	-1810#	500#	6900#	300#	*	-1100#	300#		
	Os	76	11980	40	18330#	300#	-1050#	200#	4370	40	*	-4660	40	
	Ir	77	13050	40	16780#	200#	-270	90	1700	40	-11150#	300#	-4710	40
	Pt	78	14026.99	0.18	14787.7	2.9	812.1	2.8	-820	3	-10420	60	-8148.8	1.0
	Au	79	15069	4	13184	4	1273	4	-3643	12	-6735	4	-8212	23
	Hg	80	15785	4	11642	3	2040	4	-6466	15	-6319	3	-11743	11
	Tl	81	16702	18	9861	12	2854	20	-9488	27	-2216	12	-11855	26
	Pb	82	17296	22	7755	15	4226	21	-11878	19	-1650	27	-15406	15
	Bi	83	18120#	60#	5649	28	5440	40	-14100	40	2857	27	-15020	50
	Po	84	18621	18	3853	21	6658.0	2.4	-15454	19	2942	27	-18078	16
	At	85	19340	40	2450#	60#	7198	4	*	*	6820	30	-17030	60
Rn	86	19895	22	1602	19	7617	9	*	*	5740	40	*	*	
197	Re	75	11070#	420#	*	*	*	7760#	300#	*	*	-300#	300#	
	Os	76	11940#	210#	*	-1450#	280#	5110#	200#	*	*	-3940#	200#	
	Ir	77	12714	20	17270#	300#	-460	40	2875	20	-13010#	300#	-3690	20
	Pt	78	13768.3	0.3	15490	60	549.2	2.8	119	3	-9430	40	-7353.3	3.0
	Au	79	14714.1	1.2	14024.6	2.0	972.4	2.0	-2801	16	-8990	40	-7385.5	2.9
	Hg	80	15684	23	12323	3	1516	4	-5792	6	-5183	3	-11116	13
	Tl	81	16327	20	10348	16	2641	19	-8653	18	-4489	17	-11051	22
	Pb	82	17178	24	8327	24	3889	16	-11390	50	-211	6	-14811	25
	Bi	83	17804	10	6110	14	5365	11	-13340	50	521	15	-14276	15
	Po	84	18440	60	4220	50	6412	3	-14830	60	4710	50	-17520	60
	At	85	19010	50	2900	50	7100	50	*	*	4380	60	-16390	50
Rn	86	19720	60	2040	50	7411	7	*	*	7670	40	*	*	
198	Re	75	10740#	500#	*	*	*	8680#	450#	*	*	100#	450#	
	Os	76	11700#	200#	*	-1740#	360#	6070#	200#	*	*	-3640#	200#	
	Ir	77	12530#	200#	17860#	360#	-1010#	280#	3760#	200#	-12610#	360#	-3470#	200#
	Pt	78	13401.4	2.1	16200	40	107	4	1049.2	2.1	-11890#	200#	-6836.0	2.1
	Au	79	14584.7	2.9	14720	40	526.9	2.0	-2090	80	-8605	20	-7112	3
	Hg	80	15270.7	2.9	12885.9	0.8	1382.8	0.9	-4905	15	-7821.9	0.8	-10686	16
	Tl	81	16140	80	10930	80	2290	80	-8130	80	-3640	80	-10820	80
	Pb	82	16832	20	8801	15	3709	15	-10577	23	-2798	15	-14434	17
	Bi	83	17500	40	6450	30	5140	30	-12650#	60#	1680	30	-14080	60
	Po	84	18133	21	4690	22	6309.6	1.4	-14243	22	1987	18	-17200	50
	At	85	18950#	60#	3290#	60#	6889.8	2.1	*	*	5680#	50#	-16270#	60#
Rn	86	19344	20	2326	18	7349	4	*	*	4840	50	*	*	
199	Os	76	11320#	280#	*	*	*	6910#	200#	*	*	-2730#	280#	
	Ir	77	12280	50	18480#	300#	-1250#	300#	4690	40	-14550#	400#	-2570	40
	Pt	78	13111.1	2.1	16660#	200#	-300	60	2156.0	2.2	-10840#	200#	-5879.7	2.1
	Au	79	14096.61	0.11	15407	20	174.5	2.0	-1036	28	-10560#	200#	-6211.4	0.5
	Hg	80	15148	3	13702.4	0.9	825.0	0.9	-4315	10	-6929.7	2.2	-10120	80
	Tl	81	15860	30	11496	28	2085	28	-7262	30	-5766	28	-10080	30
	Pb	82	16626	11	9269	10	3343	25	-10018	25	-1566	10	-13934	30
	Bi	83	17253	13	7036	19	4933	7	-11974	12	-590	80	-13396	20
	Po	84	18000	50	5043	24	6074.2	1.9	-13710	70	3547	28	-16560#	60#
	At	85	18620	50	3714	10	6777.2	1.2	-15580	40	3257	28	-15664	14
	Rn	86	19120	70	2720	80	7140	50	*	*	6680	70	*	*
Fr	87	*	*	1470	70	7810	40	*	*	6190#	70#	*	*	
200	Os	76	11090#	360#	*	*	*	7820#	300#	*	*	-2450#	300#	
	Ir	77	11930#	280#	19050#	450#	-1490#	360#	5630#	200#	*	*	-2290#	200#
	Pt	78	12838	20	17340#	200#	-750	40	2903	20	-13410#	200#	-5577	20
	Au	79	13801	27	16000#	200#	-230	50	-193	27	-10130	50	-5765	27
	Hg	80	14691.4	0.5	14175.8	2.2	718.4	0.9	-3253	11	-9402.2	2.2	-9516	28
	Tl	81	15700	80	12043	6	1667	6	-6677	23	-5242	6	-9887	12
	Pb	82	16343	18	9874	11	3151	11	-9296	18	-3993	11	-13524	15
	Bi	83	17140	40	7450	80	4701	25	-11380	30	400	40	-13230	30
	Po	84	17624	23	5482	20	5981.4	1.9	-12940	19	988	18	-16202	15
	At	85	18410#	60#	4200	40	6596.1	1.3	-15120	60	4521	27	-15560	70
	Rn	86	18927	19	3119	22	7043.3	2.1	*	*	3911	27	-18850	40
Fr	87	*	*	1720#	80#	7620	50	*	*	7670	60	*	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)	S(p)	$Q(4\beta^-)$	$Q(d,\alpha)$	$Q(p,\alpha)$	$Q(n,\alpha)$						
201	Os	76	4530#	420#	*	12420#	300#	*	6760#	500#	*			
	Ir	77	6360#	280#	8410#	360#	7280#	200#	11300#	280#	8800#	280#	2890#	450#
	Pt	78	5210	50	9420#	200#	1520	50	11370	60	6940#	200#	5740#	200#
	Au	79	7232	27	7089	20	-4986	16	11700	4	8369	4	5070#	200#
	Hg	80	6230.5	0.6	7712	27	-11138	6	12143.0	0.8	6783.3	0.8	7889.4	2.2
	Tl	81	8203	15	4964	14	-16390	17	13078	14	8640	14	8049	14
	Pb	82	7080	24	5501	22	-21190	50	13510	40	7100	80	11342	22
	Bi	83	9115	27	2453	19	-25020	70	14528	18	9499	21	11730	80
	Po	84	7642	16	3443	23	-28370#	110#	14983	12	7709	29	15172	16
	At	85	9873	26	1124	17	*	*	15135	25	9548	19	14227	29
	Rn	86	8130	50	2370	60	*	*	15460	50	7510#	70#	17050	50
	Fr	87	10600	90	-330	70	*	*	15810	100	9700	70	15970#	90#
	Ra	88	*	*	1580#	120#	*	*	15790#	110#	*	*	18720#	110#
	202	Os	76	5920#	500#	*	14260#	400#	*	*	*	*	*	*
Ir		77	4950#	360#	8830#	420#	9210#	300#	12710#	420#	8570#	360#	*	
Pt		78	7020	60	10080#	200#	3248	25	9630#	200#	6570	50	3440#	200#
Au		79	6023	24	7900	60	-3612	28	12960	30	7901	23	5690	50
Hg		80	7754.09	0.20	8234	3	-9421	15	10605	27	6613.5	0.8	5691.3	2.3
Tl		81	6879	20	5613	14	-15400	30	14228	14	8424	14	8755	14
Pb		82	8752	22	6050	15	-19666	18	11818	7	6983	28	9253	4
Bi		83	7397	22	2770	27	-23830#	50#	16221	19	9355	18	12970	30
Po		84	9471	16	3798	21	-27015	28	13157	27	7737	18	12954	18
At		85	7873	29	1355	29	*	*	17070	30	9490	40	15853	30
Rn		86	10270	50	2774	19	*	*	13420	30	7413	18	14586	29
Fr		87	8580#	90#	120#	70#	*	*	17820#	50#	9460#	80#	17560#	50#
Ra		88	10820#	110#	1800	80	*	*	13670	60	7190	50	16240	70
203		Ir	77	5990#	500#	8890#	570#	11070#	400#	11260#	500#	8950#	500#	*
	Pt	78	5010#	200#	10140#	360#	5160#	200#	10980#	280#	6850#	280#	4800#	360#
	Au	79	6862	23	7740	25	-1619	13	11310	50	8321	20	4110#	200#
	Hg	80	5994.6	1.6	8205	23	-7958	9	11843	4	6835	27	6978	20
	Tl	81	7846	14	5704.3	1.2	-13598	11	12612.7	1.2	8606.8	1.3	7126	27
	Pb	82	6917	8	6089	16	-18627	24	13104	16	7126	9	10364	7
	Bi	83	8855	20	2873	13	-22401	14	14446	25	9590	17	11170	14
	Po	84	7458	17	3859	18	-25980	80	14815	18	7924	24	14586	14
	At	85	9643	30	1527	18	*	*	15073	12	9656	18	13855	25
	Rn	86	7956	29	2860	40	*	*	15341	25	7690	30	16441	28
	Fr	87	10290#	50#	138	19	*	*	15660	50	9755	14	15511	25
	Ra	88	8500	80	1710#	100#	*	*	15780	110	7400	100	18330	80
	204	Ir	77	3070#	570#	*	14660#	400#	14110#	570#	10420#	500#	*	
		Pt	78	6370#	280#	10520#	450#	7190#	200#	9570#	360#	6840#	280#	2960#
Au		79	5580#	200#	8310#	280#	-10#	200#	12750#	200#	7960#	210#	4890#	280#
Hg		80	7492.7	1.7	8836	3	-6349	11	10374	23	6575	3	4700	50
Tl		81	6656.09	0.29	6365.8	1.3	-12470	22	13710.7	1.1	8181.2	1.1	7702	3
Pb		82	8395	6	6637.5	0.3	-17126	14	11588	14	6934	14	8199.8	1.1
Bi		83	7193	16	3149	11	-21253	26	16005	10	9478	24	12180	17
Po		84	9101	14	4106	17	-24388	18	13111	19	7938	19	12565	24
At		85	7784	25	1854	24	*	*	16760	27	9514	23	15186	27
Rn		86	9895	28	3109	18	*	*	13320	30	7670	17	14188	16
Fr		87	8340	25	520	30	*	*	17590	30	9540	60	17043	26
Ra		88	10690	80	2118	16	*	*	13670#	50#	7310	70	15770	50

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q(2 β^-)		Q(ϵp)		Q($\beta^- n$)	
201	Os	76	10900#	360#	*	*	8500#	300#	*	-1700#	360#			
	Ir	77	11640#	200#	*	-1820#	360#	6500#	200#	*	-1370#	200#		
	Pt	78	12490	50	17840#	200#	-860#	200#	3920	50	-12250#	300#	-4570	60
	Au	79	13449	3	16580	40	-560	20	778	15	-12080#	200#	-4969	3
	Hg	80	14259.0	0.5	14850.3	2.3	334.3	1.0	-2403	22	-8351	20	-8686	6
	Tl	81	15260	30	12662	14	1537	14	-5764	21	-7230	30	-9000	18
	Pb	82	16170	24	10291	22	2857	22	-8735	22	-3045	22	-12960	30
	Bi	83	16760	19	7930	30	4500	6	-10625	17	-1656	16	-12532	21
	Po	84	17454	24	5871	12	5798.9	1.7	-12450	50	2437	12	-15608	25
	At	85	18109	10	4570	13	6472.8	1.6	-14390	70	2292	24	-14846	15
	Rn	86	18720	80	3440	50	6860.7	2.3	-15910#	120#	5590	50	-18280	80
	Fr	87	19300	80	2150	70	7520	50	*	*	5300	80	*	*
	Ra	88	*		1240#	120#	7940#	100#	*	*	8570#	110#	*	*
202	Os	76	10450#	500#	*	*	9610#	400#	*	-1260#	450#			
	Ir	77	11310#	360#	*	-2060#	500#	7580#	300#	*	-1110#	300#		
	Pt	78	12230	30	18490#	300#	-1280#	200#	4653	25	-14740#	300#	-4363	25
	Au	79	13260	40	17320#	200#	-960#	200#	1633	27	-11750#	200#	-4762	23
	Hg	80	13984.5	0.6	15323	20	135.3	2.2	-1405	4	-10890	50	-8238	14
	Tl	81	15081	15	13320	30	1171	14	-5246	21	-6874	15	-8798	26
	Pb	82	15832	12	11015	4	2590	4	-8016	15	-5566	4	-12597	16
	Bi	83	16513	27	8271	16	4330	80	-10150	30	-851	21	-12287	16
	Po	84	17112	20	6252	18	5701.0	1.7	-11650	23	46	26	-15206	17
	At	85	17750	40	4800	40	6353.8	1.3	-13680#	60#	3530	30	-14590	60
	Rn	86	18403	22	3898	23	6773.7	1.8	-15370	30	2962	18	-17950	70
	Fr	87	19190#	80#	2500#	60#	7389	4	*	*	6590#	50#	-16820#	120#
	Ra	88	*		1472	28	7897	20	*	*	5870	60	*	*
203	Ir	77	10940#	450#	*	*	8450#	400#	*	-70#	400#			
	Pt	78	12030#	200#	18970#	360#	-1570#	280#	5640#	200#	-13830#	450#	-3350#	200#
	Au	79	12885	4	17830#	200#	-1170	40	2617	3	-13660#	300#	-3869	3
	Hg	80	13748.7	1.6	16110	50	-303.3	2.8	-483	7	-9866	25	-7354	14
	Tl	81	14725	14	13938	3	909.2	1.4	-4237	13	-8697	23	-7892	4
	Pb	82	15669	23	11701	7	2335	7	-7475	11	-4729	7	-12117	17
	Bi	83	16252	20	8923	19	4110	30	-9362	17	-2827	19	-11671	19
	Po	84	16929	10	6629	23	5496	5	-11151	25	1340	9	-14791	29
	At	85	17516	13	5326	19	6210.0	0.8	-13039	12	1289	19	-13960	20
	Rn	86	18230	60	4212	24	6629.8	2.1	-14830	80	4476	28	-17320#	60#
	Fr	87	18870	70	2912	10	7275	4	*	*	4178	29	-16286	25
	Ra	88	19320#	130#	1840	90	7740	50	*	*	7650	80	*	*
	204	Ir	77	9050#	500#	*	*	10960#	450#	*	1870#	450#		
Pt		78	11370#	200#	19410#	450#	-1570#	360#	6770#	200#	*	-2850#	200#	
Au		79	12440#	200#	18450#	360#	-1460#	280#	3700#	200#	-13250#	450#	-3450#	200#
Hg		80	13487.3	0.7	16576	25	-514	20	419.2	1.3	-12350#	200#	-7000.7	1.3
Tl		81	14502	14	14571	23	470	27	-3700	9	-8491	3	-7631	6
Pb		82	15312	4	12341.8	1.1	1969.3	1.2	-6769	11	-7129.6	1.3	-11656	13
Bi		83	16047	18	9237	17	3977	11	-8770	24	-2174	9	-11406	13
Po		84	16559	18	6979	12	5484.8	1.4	-10358	18	-844	13	-14250	15
At		85	17430	40	5713	27	6070.3	1.2	-12480	30	2360	26	-13790	30
Rn		86	17851	23	4637	21	6546.4	1.8	-14030	20	2039	17	-16931	16
Fr		87	18630#	60#	3380	40	7170.4	2.5	*	*	5481	27	-16130	80
Ra		88	19187	28	2257	23	7637	7	*	*	4917	28	*	*

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)	S(p)	$Q(4\beta^-)$	$Q(d,\alpha)$	$Q(p,\alpha)$	$Q(n,\alpha)$						
205	Pt	78	3120#	360#	10570#	500#	10800#	300#	12430#	500#	8670#	420#	5770#	500#
	Au	79	6190#	280#	8140#	280#	2300#	200#	11570#	280#	8790#	200#	3650#	360#
	Hg	80	5669	4	8930#	200#	-4778	21	11567	5	6930	24	6051	25
	Tl	81	7546.0	0.5	6419.1	1.4	-10850	15	12159.2	1.3	8389.2	1.2	6179	23
	Pb	82	6731.66	0.11	6713.07	0.21	-16060	50	12701.9	0.4	7081	14	9222.2	1.1
	Bi	83	8490	11	3244	5	-19754	9	14433	8	9740	6	10569	15
	Po	84	7240	23	4153	22	-23350	70	14726	24	8096	25	14077	21
	At	85	9166	27	1918	19	*		15051	17	9818	21	13417	22
	Rn	86	7800	50	3130	60	*		15160	50	7740	60	15860	50
	Fr	87	9989	26	616	16	*		15560	25	9829	19	14927	29
Ra	88	8280	70	2060	70	*		15670	70	7610#	90#	17760	70	
206	Pt	78	4740#	420#	*		14150#	300#	10770#	500#	9920#	500#	*	
	Au	79	3520#	360#	8540#	420#	5810#	300#	14420#	360#	10280#	360#	6120#	500#
	Hg	80	6729	21	9470#	200#	-2757	21	10420#	200#	7062	21	4330#	200#
	Tl	81	6503.8	0.4	7254	4	-9824	15	13148.2	1.4	7880.0	1.4	6537	3
	Pb	82	8086.66	0.06	7253.7	0.5	-14670	15	11271.36	0.21	6839.8	0.4	7130.1	1.3
	Bi	83	7035	9	3547	8	-18785	29	15792	8	9622	10	11379	8
	Po	84	8750	21	4413	6	-21754	18	13168	10	8200	13	12244	8
	At	85	7530	21	2209	25	-25890#	70#	16623	19	9746	17	14742	20
	Rn	86	9470	50	3434	21	*		13471	27	7911	18	13842	17
	Fr	87	8004	29	820	60	*		17450	30	9780	40	16570	30
	Ra	88	10340	70	2413	20	*		13670	30	7554	19	15371	30
	Ac	89	*		-330#	100#	*		18130#	70#	9660#	110#	18230#	70#
207	Au	79	4660#	420#	8460#	420#	9250#	300#	12870#	420#	11980#	360#	4530#	500#
	Hg	80	3610	40	9560#	300#	660	30	12990#	200#	9030#	200#	7080#	200#
	Tl	81	6852	5	7377	21	-7806	14	11965	7	8521	6	5260#	200#
	Pb	82	6737.78	0.10	7487.7	0.6	-13817	9	12079.6	0.5	6758.15	0.23	7885.1	1.3
	Bi	83	8098	8	3558.0	2.1	-17210	18	14426.4	2.1	9919.3	2.1	9937.9	2.1
	Po	84	7028	8	4407	10	-20680	60	14630	8	8364	11	13610	7
	At	85	8869	19	2328	13	-24370	50	14993	24	9978	17	13065	15
	Rn	86	7591	17	3495	17	*		15046	17	8105	24	15352	14
	Fr	87	9670	30	1018	23	*		15580	50	10003	23	14677	28
	Ra	88	8100	60	2510	60	*		15560	60	7800	60	17170	60
Ac	89	10390#	90#	-290	50	*		16020	90	9960	50	16190	60	
208	Au	79	3370#	420#	*		12770#	300#	14240#	420#	11730#	420#	*	
	Hg	80	4850	40	9750#	300#	4200	30	11660#	300#	10370#	200#	5350#	300#
	Tl	81	3787	6	7551	30	-4280	9	14907	20	10402	4	7670#	200#
	Pb	82	7367.87	0.05	8004	5	-12093	11	11215.6	0.6	6936.3	0.5	6186	4
	Bi	83	6886.9	2.7	3707.2	2.0	-16204	12	15626.2	2.0	9764.1	2.0	10597.0	2.0
	Po	84	8395	7	4704.0	2.5	-19184	15	13269	8	8459	5	11947.0	1.3
	At	85	7314	15	2613	11	-23230	60	16430	10	9904	22	14241	10
	Rn	86	9092	14	3717	17	-26330	40	13485	19	8179	19	13500	23
	Fr	87	7893	21	1320	14	*		17160	19	9910	50	15951	19
	Ra	88	9900	60	2730	23	*		13670	30	7889	17	15080	50
Ac	89	8460	80	70	80	*		17900	60	9780	90	17720	60	
Th	90	*		1760	60	*		13920#	80#	*		16480	80	
209	Au	79	4440#	500#	*		15790#	400#	*		12030#	500#	*	
	Hg	80	3450#	150#	9830#	330#	7720#	150#	12870#	330#	10430#	330#	6630#	330#
	Tl	81	4960	8	7660	30	-755	9	13560	30	12172	22	6220#	300#
	Pb	82	3937.4	1.3	8153.9	2.2	-8685	20	14130	6	9502.8	1.4	8977	20
	Bi	83	7459.8	1.9	3799.0	0.8	-14490	15	14904.2	0.8	10391.0	0.8	9641.1	0.8
	Po	84	6967.7	1.9	4784.8	2.4	-18220	50	14399.3	2.5	8526	8	13065.9	1.4
	At	85	8484	10	2702	5	-21730	50	14974	8	10170	6	12792	9
	Rn	86	7345	23	3748	22	-25470	90	15009	24	8364	25	14906	21
	Fr	87	9173	19	1402	18	*		15578	17	10211	21	14307	21
	Ra	88	7930	50	2770	50	*		15410	50	7960	60	16620	50
Ac	89	9990	80	160	50	*		16020	70	10140	50	15730	60	
Th	90	8210	90	1510	100	*		16100	100	7940#	110#	18620	90	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)	S(2p)	Q(α)	Q($2\beta^-$)	Q(ϵp)	Q($\beta^- n$)						
205	Pt	78	9480#	360#	*	-150#	420#	9320#	300#	*	-390#	360#		
	Au	79	11770#	200#	18660#	450#	-1300#	280#	5050#	200#	-16370#	450#	-2150#	200#
	Hg	80	13161	4	17240#	200#	-970	50	1482	4	-11650#	200#	-6013	4
	Tl	81	14202.1	0.5	15255	3	156	3	-2756	5	-10460#	200#	-6782.3	0.5
	Pb	82	15126	6	13078.9	1.3	1468.1	1.1	-6261	20	-6368.5	1.3	-11195	9
	Bi	83	15683	14	9881	5	3690	15	-8094	16	-4008	5	-10795	12
	Po	84	16341	22	7301	21	5325	10	-9800	50	311	20	-13710	30
	At	85	16950	18	6024	20	6019.5	1.7	-11660	17	386	18	-13059	21
	Rn	86	17700	60	4980	50	6390	50	-13550	90	3340	50	-16390	60
	Fr	87	18329	10	3725	13	7054.6	2.4	*	*	3277	24	-15428	16
	Ra	88	18970	110	2580	70	7490	50	*	*	6530	70	*	*
206	Pt	78	7850#	360#	*	1030#	500#	11310#	300#	*		1070#	360#	
	Au	79	9710#	360#	19110#	500#	140#	420#	8040#	300#	*	0#	300#	
	Hg	80	12398	20	17600#	200#	-680	30	2840	20	-15270#	300#	-5196	20
	Tl	81	14049.9	0.6	16180#	200#	-325	23	-2225	8	-10770#	200#	-6554.4	0.6
	Pb	82	14818.33	0.12	13672.8	1.3	1135.5	1.1	-5597	4	-8787	4	-10792	5
	Bi	83	15525	12	10260	8	3534	16	-7599	17	-3496	8	-10590	22
	Po	84	15990	12	7657	4	5326.9	1.3	-9073	15	-1708	4	-13289	16
	At	85	16696	27	6361	18	5887	5	-11190	30	1346	16	-12790	50
	Rn	86	17275	21	5353	18	6383.8	1.6	-12681	23	1105	25	-15877	17
	Fr	87	17990	40	3940	40	6923	4	-14700#	80#	4440	30	-15150	80
	Ra	88	18624	23	3029	23	7415	4	*	*	3990	50	*	*
Ac	89	*		1720#	80#	7940	50	*	*	7480#	70#	*	*	
207	Au	79	8180#	360#	*	1460#	500#	10230#	300#	*		2070#	300#	
	Hg	80	10340	30	18100#	300#	710#	200#	5964	30	-14150#	300#	-2306	30
	Tl	81	13356	5	16840#	200#	-315	6	-979	6	-14110#	300#	-5320	5
	Pb	82	14824.44	0.11	14742	4	392.4	1.3	-5306	7	-8795	20	-10495	8
	Bi	83	15133	6	10811.7	2.1	3281.8	2.1	-6827	13	-5090.2	2.1	-9937	5
	Po	84	15779	21	7954	7	5215.8	2.5	-8511	11	-649	7	-12788	16
	At	85	16399	20	6741	13	5872	3	-10383	21	-488	15	-12183	19
	Rn	86	17060	50	5703	22	6251.1	1.6	-12170	60	2265	9	-15464	29
	Fr	87	17677	19	4452	23	6893	20	-13990	50	2296	23	-14481	25
	Ra	88	18440	90	3330	70	7270	50	*	*	5370	60	-17990#	90#
	Ac	89	*		2120	50	7840	50	*	*	5100	60	*	*
208	Au	79	8030#	420#	*	1160#	500#	10650#	300#	*		2320#	300#	
	Hg	80	8460	40	18210#	300#	2230#	200#	8480	30	*		-300	30
	Tl	81	10639.0	1.8	17110#	300#	1480#	200#	2120.5	2.6	-13230#	300#	-2369.0	1.7
	Pb	82	14105.65	0.11	15381	20	517.2	1.3	-4278.9	1.3	-12550	30	-9765.3	2.1
	Bi	83	14985	8	11194.8	2.0	3051.0	2.0	-6400	9	-5125	6	-9796	7
	Po	84	15423	4	8262.0	1.3	5215.3	1.3	-7814	11	-2306.6	1.3	-12314	13
	At	85	16183	17	7020	12	5751.0	2.2	-9804	14	296	9	-11906	12
	Rn	86	16682	18	6045	12	6260.7	1.7	-11370	19	201	13	-14882	21
	Fr	87	17570	30	4815	19	6785	24	-13420	60	3272	17	-14280	60
	Ra	88	17993	24	3748	21	7273	5	-14960	40	3061	18	-17500	50
	Ac	89	18850#	90#	2580	60	7730	50	*	*	6310	60	*	*
Th	90	*		1470	40	8200	30	*	*	5850	60	*	*	
209	Au	79	7810#	500#	*	*		11170#	400#	*		2730#	400#	
	Hg	80	8300#	150#	*	1900#	330#	8970#	150#	*		30#	150#	
	Tl	81	8747	10	17410#	300#	2710#	200#	4620	8	-14830#	300#	39	8
	Pb	82	11305.2	1.3	15705	30	2248	4	-1248.6	1.9	-11640	30	-6815.7	2.2
	Bi	83	14346.7	2.0	11803	5	3137.3	0.8	-5376	5	-8797.9	1.9	-8860.3	1.5
	Po	84	15363	7	8492.0	1.4	4979.2	1.4	-7437	20	-1906.5	1.4	-11967	9
	At	85	15798	13	7406	6	5756.9	2.0	-9114	16	-1302	5	-11298	12
	Rn	86	16437	22	6361	21	6155.5	2.0	-10780	50	1251	20	-14334	23
	Fr	87	17066	23	5119	19	6777	4	-12610	50	1413	17	-13554	21
	Ra	88	17830	70	4090	50	7143.0	2.7	-14680	100	4220	50	-16980	80
	Ac	89	18440	70	2890	50	7730	50	*	*	4220	50	-15900	60
Th	90	*		1580	100	8270	50	*	*	7530	90	*	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		Q(4 β^-)		Q(d, α)		Q(p, α)		Q(n, α)		
210	Au	79	3270#	570#	*		17120#	400#	*		*		*		
	Hg	80	4790#	250#	10190#	450#	10590#	200#	11450#	360#	10300#	360#	*		
	Tl	81	3680	14	7890#	150#	2726	14	14730	30	12110	30	7210#	300#	
	Pb	82	5185.2	1.3	8379	8	-5123	5	12732.0	1.9	11169	5	7406	30	
	Bi	83	4604.63	0.08	4466.3	1.1	-11459	15	17667.4	0.8	12524.1	0.8	11888	5	
	Po	84	7658.4	1.4	4983.5	0.8	-16413	15	13627.8	2.0	8965.5	2.1	12145.23	0.12	
	At	85	7161	9	2895	8	-20760	60	16208	8	10038	10	13729	8	
	Rn	86	8747	21	4011	7	-23664	19	13576	10	8486	13	13187	8	
	Fr	87	7636	21	1693	25	*		17034	19	10166	17	15541	20	
	Ra	88	9470	50	3061	21	*		13837	19	8169	23	14741	17	
	Ac	89	8130	80	350	80	*		17790	60	10110	80	17280	60	
	Th	90	10550	90	2070	50	*		14010	60	7780	50	16170	60	
	211	Hg	80	3330#	280#	10240#	450#	11810#	200#	12560#	450#	10340#	360#	*	
Tl		81	4900	40	8000#	200#	5570	40	13280#	160#	12050	50	5670#	300#	
Pb		82	3834.6	2.8	8534	12	-1736	7	13857	8	11121.9	2.8	8420	30	
Bi		83	5138	5	4419	5	-7718	13	16467	6	14754	5	10537	6	
Po		84	4550.7	0.5	4929.6	0.9	-13264	8	16536.8	0.9	11301.6	2.1	14962.3	0.5	
At		85	7746	8	2983.1	2.5	-18850	50	15429.5	2.8	10686.4	2.8	12869	3	
Rn		86	7222	8	4072	10	-22660	70	14838	8	8579	11	14361	7	
Fr		87	8879	19	1824	13	*		15500	24	10379	16	13976	15	
Ra		88	7700	17	3124	17	*		15311	17	8362	14	16134	14	
Ac		89	9660	80	550	60	*		16060	70	10350	60	15510	50	
Th		90	8220	80	2170	90	*		15770	90	8010	90	17840	80	
212		Hg	80	4690#	360#	*		13130#	300#	11140#	500#	10090#	500#	*	
		Tl	81	3540#	210#	8220#	280#	7080#	200#	14530#	280#	11960#	250#	6560#	450#
	Pb	82	5127.3	2.5	8760	40	1112	4	12410	12	10954	8	6740#	150#	
	Bi	83	4330	6	4914.7	2.8	-4601	9	17321.8	1.9	14361.2	2.2	11167	8	
	Po	84	6008.2	0.5	5800	5	-10170	11	15133.2	0.8	12753.2	0.8	12891.5	1.3	
	At	85	5052	3	3484.6	2.2	-15910	50	18035.7	2.1	12601.8	2.5	15276.8	2.0	
	Rn	86	7976	7	4301	4	-20757	16	14023	8	9087	6	13353	3	
	Fr	87	7447	15	2050	11	-25130	80	16800	10	10277	22	15013	10	
	Ra	88	9102	14	3348	16	*		13845	19	8433	18	14377	23	
	Ac	89	8000	70	840	50	*		17530	50	10290	70	16690	50	
	Th	90	9880	80	2390	60	*		14020	60	8120	50	15890	50	
	Pa	91	*		-420	110	*		18260	80	9940	110	18420	90	
	213	Hg	80	3160#	420#	*		14320#	300#	*		10200#	500#	*	
Tl		81	4740#	200#	8260#	300#	8363	27	13120#	200#	12010#	200#	5100#	400#	
Pb		82	3726	7	8940#	200#	2496	9	13590	40	10908	13	7810#	200#	
Bi		83	5185	5	4972	5	-1678	7	15972	5	14362	5	9662	13	
Po		84	4355.4	2.9	5825	3	-7011	21	15916	6	13002.4	2.8	13721.3	2.8	
At		85	6023	5	3499	5	-12740	50	16564	5	14238	5	13859	5	
Rn		86	5110	6	4359	6	-17820	70	16660	6	11138	9	15901	6	
Fr		87	8108	10	2182	6	-23220	70	15913	8	10916	7	14065	9	
Ra		88	7515	23	3415	22	*		15209	24	8554	26	15609	21	
Ac		89	9190	70	930	50	*		16040	50	10560	50	15140	50	
Th		90	8050	70	2450	90	*		15630	90	8190	90	17300	70	
Pa		91	10020	100	-280	70	*		16470	100	10470	70	16520	90	
214		Hg	80	4560#	500#	*		15650#	400#	*		*		*	
	Tl	81	3390#	200#	8490#	360#	9840#	200#	14420#	360#	11950#	280#	*		
	Pb	82	5050	7	9254	27	4139	9	12080#	200#	10760	40	6090#	200#	
	Bi	83	4041	12	5287	13	-242	14	17058	11	14156	11	10520	40	
	Po	84	5887.8	2.8	6528	5	-4562	5	14358.2	1.9	12253	5	11668.1	2.8	
	At	85	4872	6	4015	5	-9824	16	17700	4	13917	4	14125	7	
	Rn	86	6693	11	5029	10	-15032	18	15019	9	12192	9	13759	9	
	Fr	87	5477	10	2549	10	-20440	80	18412	9	12661	11	16335	9	
	Ra	88	8336	21	3643	7	*		14319	10	9097	13	14494	9	
	Ac	89	7780	50	1202	26	*		17354	19	10477	17	16231	19	
	Th	90	9480	70	2730	50	*		14150	50	8370	60	15527	18	
	Pa	91	8250	100	-80	100	*		18100	80	10440	110	17930	90	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q($2\beta^-$)		Q(ϵp)		Q($\beta^- n$)	
210	Au	79	7710#	500#	*	*			11580#	400#	*		2900#	430#
	Hg	80	8240#	200#	*		1840#	360#	9360#	200#	*		200#	200#
	Tl	81	8639	12	17720#	300#	2540#	300#	5545	12	-14070#	400#	297	12
	Pb	82	9122.5	0.9	16040	30	3792	20	1224.7	0.9	-13370#	150#	-4541.1	0.5
	Bi	83	12064.4	1.9	12620.2	1.9	5036.5	0.8	-2820	8	-8443	8	-6497.2	1.6
	Po	84	14626.2	1.3	8782.56	0.13	5407.45	0.07	-6348	5	-5627.5	1.3	-11142	5
	At	85	15645	12	7680	8	5631.2	1.0	-8639	17	-1002	8	-11114	22
	Rn	86	16092	12	6713	5	6158.9	2.2	-10065	16	-528	5	-13908	15
	Fr	87	16809	19	5441	18	6672	5	-12120	60	2261	16	-13260	50
	Ra	88	17397	22	4462	19	7151	3	-13599	24	2100	25	-16460	50
	Ac	89	18110	80	3120	60	7610	50	*		5270	60	-15820	100
	Th	90	18760	40	2233	24	8069	6	*		4920	50	*	
211	Hg	80	8120#	250#	*	*			9870#	200#	*		550#	200#
	Tl	81	8580	40	18190#	400#	2300#	300#	5780	40	-15700#	400#	580	40
	Pb	82	9019.8	3.0	16430#	150#	3571	30	1940.8	2.7	-12420#	200#	-3771.2	2.8
	Bi	83	9743	5	12798	10	6750.3	0.5	-211	6	-9901	13	-3977	5
	Po	84	12209.2	1.5	9395.9	1.4	7594.5	0.5	-3677	7	-4993.1	1.0	-8532	8
	At	85	14907	6	7966.6	2.4	5982.4	1.3	-7507	12	-4144.3	2.4	-10114	5
	Rn	86	15969	22	6967	7	5965.4	1.4	-9587	10	-91	7	-13494	17
	Fr	87	16514	19	5835	13	6662	3	-11340	50	543	14	-12671	19
	Ra	88	17160	50	4817	22	7042	3	-13070	70	3148	9	-16030	60
	Ac	89	17780	70	3610	50	7620	50	*		3250	60	-14930	60
	Th	90	18770	110	2530	90	7940	50	*		6160	80	*	
	212	Hg	80	8020#	360#	*	*			10300#	300#	*		760#
Tl		81	8450#	200#	18460#	450#	2130#	360#	6570#	200#	*		870#	200#
Pb		82	8961.9	2.3	16760#	200#	3290	30	2821.8	2.1	-14210#	200#	-3760	6
Bi		83	9468.2	1.9	13449	12	6207.26	0.03	510.8	2.7	-9330	40	-3756.2	1.8
Po		84	10558.98	0.17	10219.0	0.9	8954.12	0.11	-1709.8	2.9	-7166.7	2.7	-6793.5	2.5
At		85	12799	8	8414.3	2.0	7817.0	0.6	-5112	9	-4059	6	-7944	7
Rn		86	15197	5	7284.5	2.9	6385.0	2.6	-8461	12	-3516.1	3.0	-12591	12
Fr		87	16326	18	6122	12	6528.9	1.6	-10790	50	842	9	-12419	12
Ra		88	16802	19	5172	12	7031.6	1.7	-12297	20	1267	13	-15470	50
Ac		89	17650	80	3970	50	7520	50	-14340	90	4130	50	-14700	90
Th		90	18104	25	2940	22	7958	5	*		3977	18	*	
Pa		91	*		1750	90	8430	50	*		7120	90	*	
213	Hg	80	7850#	360#	*	*			10870#	300#	*		1150#	360#
	Tl	81	8280	50	*		1830#	400#	7014	28	*		1260	27
	Pb	82	8853	7	17160#	200#	3020#	150#	3451	7	-13250#	300#	-3156	7
	Bi	83	9515	7	13730	40	5982	6	1349	7	-10970#	200#	-2933	5
	Po	84	10363.6	2.9	10740	4	8536.1	2.6	-955	6	-6395	4	-6097	3
	At	85	11075	5	9299	7	9254	5	-3026	7	-5751	5	-5991	6
	Rn	86	13086	9	7844	6	8243	5	-6056	21	-2618	6	-10253	10
	Fr	87	15555	13	6484	6	6904.8	1.2	-9710	50	-2214	6	-11425	12
	Ra	88	16617	22	5465	22	6861.8	2.3	-11760	70	1728	21	-14990	60
	Ac	89	17190	70	4280	50	7500	50	-13510	90	2380	50	-14010	50
	Th	90	17930	100	3290	70	7840	50	*		5030	70	-17570	100
	Pa	91	*		2120	90	8390	50	*		5100	90	*	
214	Hg	80	7720#	500#	*	*			11360#	400#	*		1320#	400#
	Tl	81	8130#	280#	*		1710#	450#	7660#	200#	*		1600#	200#
	Pb	82	8776.2	2.0	17520#	300#	2760#	200#	4288.8	2.6	-15140#	300#	-3022	5
	Bi	83	9225	11	14230#	200#	5621	3	2180	12	-10273	29	-2618	12
	Po	84	10243.2	0.9	11500.3	2.3	7833.46	0.06	-150	9	-8557	7	-5962	5
	At	85	10894	5	9840	4	8987	4	-2421	10	-5438	7	-5753	7
	Rn	86	11803	10	8528	9	9208	9	-4412	11	-4955	10	-8838	10
	Fr	87	13585	12	6908	9	8589	4	-7403	18	-1668	10	-9387	22
	Ra	88	15851	12	5826	6	7272.5	2.6	-10619	17	-1498	8	-14130	50
	Ac	89	16980	50	4618	18	7352.1	2.5	-13040	80	2708	16	-13740	70
	Th	90	17528	23	3667	20	7827	5	*		3065	26	-17020	70
	Pa	91	18270	110	2370	90	8270	50	*		6040	90	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		Q($4\beta^-$)		Q(d, α)		Q(p, α)		Q(n, α)	
215	Hg	80	3040#	570#	*		16750#	400#	*		*		*	
	Tl	81	4630#	360#	8560#	500#	11170#	300#	12960#	420#	12020#	420#	*	
	Pb	82	3470#	100#	9340#	220#	5590#	100#	13340#	110#	10830#	220#	7310#	320#
	Bi	83	5223	19	5460	15	1330	17	15561	16	14060	15	8850#	200#
	Po	84	4141.8	2.7	6629	11	-3074	8	15401	5	12440.9	2.7	12653.5	2.4
	At	85	5947	8	4074	7	-7286	14	16109	7	13978	7	12509	7
	Rn	86	4920	12	5078	9	-12090	12	16122	9	12324	8	14847	8
	Fr	87	6795	11	2651	11	-17550	70	16727	9	13842	8	14593	7
	Ra	88	5630	9	3797	11	*		16798	9	10914	12	16840	8
	Ac	89	8485	20	1351	13	*		16384	24	11094	17	15193	15
	Th	90	7862	18	2812	18	*		15480	50	8510	50	16767	14
	Pa	91	9690	110	130	70	*		16460	100	10630	70	16240	90
216	Hg	80	4420#	570#	*		18080#	400#	*		*		*	
	Tl	81	3270#	420#	8780#	500#	12460#	300#	14250#	500#	11920#	420#	*	
	Pb	82	5010#	220#	9720#	360#	7230#	200#	11730#	280#	10560#	200#	5460#	360#
	Bi	83	3846	19	5830#	100#	2903	12	16766	11	13940	13	9737	29
	Po	84	5747.2	2.3	7154	15	-1507	9	13695	11	11878	5	10632	7
	At	85	4559	8	4491	4	-5887	11	17438	4	13775	5	13134	6
	Rn	86	6650	10	5781	9	-10045	13	14343	7	11696	8	12553	7
	Fr	87	5418	8	3149	9	-14830	50	18002	10	13533	7	15197	6
	Ra	88	7314	11	4316	11	*		14960	12	11708	10	14636	10
	Ac	89	5958	16	1679	13	*		18762	12	12651	23	17344	12
	Th	90	8694	15	3021	17	*		14565	20	9010	50	15587	24
	Pa	91	8140	90	410	50	*		17800	60	10550	90	17290	70
217	Tl	81	4480#	500#	8840#	570#	13920#	400#	12820#	570#	12000#	570#	*	
	Pb	82	3310#	360#	9770#	420#	8580#	300#	13040#	420#	10640#	360#	6710#	500#
	Bi	83	5215	21	6040#	200#	4415	19	15020#	100#	13775	18	7910#	200#
	Po	84	3970	6	7278	13	-2	11	14948	16	11949	13	11713	6
	At	85	5933	6	4677	5	-4308	12	15647	5	13730	5	11242	12
	Rn	86	4666	7	5888	5	-8559	21	15625	8	11902	6	13775	4
	Fr	87	6728	8	3227	9	-12760	50	16194	10	13498	11	13341	8
	Ra	88	5475	12	4373	9	-17080#	100#	16280	11	11710	12	15853	12
	Ac	89	7512	16	1877	14	*		16881	14	13475	13	15308	14
	Th	90	6152	24	3215	24	*		16898	24	10638	26	17772	22
	Pa	91	8800	70	520	50	*		16860	50	11220	50	16270	50
	U	92	*		2120#	110#	*		15810#	120#	8350#	130#	17910#	100#
218	Tl	81	3290#	570#	*		14990#	400#	13940#	570#	11750#	570#	*	
	Pb	82	4860#	420#	10150#	500#	10240#	300#	11450#	420#	10410#	420#	4890#	500#
	Bi	83	3590	30	6310#	300#	6157	27	16450#	200#	13660#	110#	8950#	300#
	Po	84	5598	6	7660	18	1707	11	13196	11	11574	15	9590#	100#
	At	85	4368	13	5075	13	-2750	50	17026	12	13503	12	12097	19
	Rn	86	6512	4	6467	5	-7149	11	13671	4	11337	7	11404	3
	Fr	87	5327	8	3888	6	-11625	19	17517	7	13092	9	13961	8
	Ra	88	7308	14	4952	13	-15261	21	14391	12	11197	13	13466	13
	Ac	89	5930	50	2330	50	*		18260	50	13170	50	16170	50
	Th	90	7923	23	3626	15	*		14933	15	11200	16	15479	13
	Pa	91	6460	60	823	28	*		19097	22	12627	20	18300	22
	U	92	9130#	100#	2450	60	*		14820	60	8910	80	16637	20
219	Pb	82	3250#	500#	10100#	570#	11450#	400#	12680#	570#	10430#	500#	6070#	570#
	Bi	83	5010#	200#	6460#	360#	7660#	200#	14750#	360#	13670#	280#	7210#	360#
	Po	84	3749	16	7820	30	3287	18	14662	24	11671	19	10850#	200#
	At	85	5773	12	5251	4	-1170	50	15223	7	13477	4	10170	12
	Rn	86	4458	3	6557	12	-5640	50	15146	5	11437	4	12693.3	2.3
	Fr	87	6512	8	3888	7	-9920	50	15670	8	13229	9	12007	8
	Ra	88	5328	14	4954	9	-13890	50	15790	10	11287	9	14788	10
	Ac	89	7350	70	2370	50	-17710#	200#	16390	50	13140	50	14240	50
	Th	90	5970	50	3660	70	*		16480	50	11190	50	16830	50
	Pa	91	8220	50	1120	50	*		17030	60	13110	50	16040	50
	U	92	6700	50	2690	50	*		16930	70	10350	70	18630	50
	Np	93	*		-80#	200#	*		17020#	220#	*		17120#	200#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q($2\beta^-$)		Q(ϵp)		Q($\beta^- n$)	
215	Hg	80	7600#	500#	*	*	*	*	11790#	410#	*	*	1670#	450#
	Tl	81	8020#	300#	*	*	*	*	8260#	300#	*	*	2020#	300#
	Pb	82	8530#	100#	17830#	320#	2620#	220#	4960#	100#	-14050#	410#	-2460#	100#
	Bi	83	9264	16	14710	30	5300	40	2903	16	-12110#	200#	-1953	15
	Po	84	10030	4	11916	7	7526.3	0.8	628	8	-7648.3	2.5	-5232	5
	At	85	10818	8	10603	8	8178	4	-1573	10	-7344	13	-5007	11
	Rn	86	11613	9	9093	8	8839	8	-3702	11	-3988	8	-8281	11
	Fr	87	12272	9	7680	8	9540	7	-5713	14	-3591	8	-7846	9
	Ra	88	13967	22	6346	9	8864	3	-8388	12	-436	12	-11982	17
	Ac	89	16270	50	4994	13	7746	3	-11840	70	-300	15	-12753	20
	Th	90	17340	70	4014	22	7665	4	*	*	3540	10	-16640	80
	Pa	91	17940	100	2870	90	8240	50	*	*	4140	70	*	*
216	Hg	80	7460#	570#	*	*	*	*	12380#	450#	*	*	1880#	500#
	Tl	81	7890#	360#	*	*	*	*	8840#	300#	*	*	2230#	320#
	Pb	82	8480#	200#	18280#	450#	2300#	360#	5700#	200#	-16020#	450#	-2240#	200#
	Bi	83	9069	16	15170#	200#	5000#	200#	3616	12	-11330#	300#	-1657	11
	Po	84	9889.0	2.3	12613.2	2.0	6906.3	0.5	1531	6	-9920#	100#	-5032	7
	At	85	10506	5	11121	12	7950	3	-714	5	-6680	15	-4646	8
	Rn	86	11570	11	9855	6	8197	6	-3038	10	-6496	6	-8137	9
	Fr	87	12213	9	8227	6	9174	3	-5173	12	-3063	8	-7634	9
	Ra	88	12944	10	6967	13	9526	8	-7007	15	-2829	12	-10811	15
	Ac	89	14443	19	5475	14	9235	6	-9660	50	537	13	-10848	14
	Th	90	16556	20	4372	13	8072	4	*	*	476	14	-15640	70
	Pa	91	17830	90	3220	60	8097	15	*	*	4480	50	*	*
217	Tl	81	7740#	500#	*	*	*	*	9580#	400#	*	*	2760#	450#
	Pb	82	8320#	320#	18550#	500#	2150#	420#	6360#	300#	-14910#	500#	-1710#	300#
	Bi	83	9061	23	15760#	300#	4520	30	4334	18	-13280#	300#	-1125	18
	Po	84	9717	6	13110#	100#	6662.1	2.4	2226	7	-8880#	200#	-4444	7
	At	85	10492	8	11831	16	7201.3	1.2	81	8	-8767	12	-3929	8
	Rn	86	11316	9	10379	5	7887.1	2.9	-2229	9	-5414	5	-7384	6
	Fr	87	12146	9	9008	9	8469	4	-4389	13	-5232	7	-7048	11
	Ra	88	12789	11	7522	11	9161	6	-6330	23	-1654	10	-10328	14
	Ac	89	13470	17	6193	13	9832	10	-8370	50	-1557	12	-9666	17
	Th	90	14846	23	4894	22	9435	4	-10750#	100#	1638	23	-13650	60
	Pa	91	16940	90	3540	50	8489	4	*	*	1640	50	*	*
	U	92	*	*	2530#	100#	8430#	70#	*	*	5380#	100#	*	*
218	Tl	81	7770#	500#	*	*	*	*	9880#	400#	*	*	2780#	500#
	Pb	82	8170#	360#	18980#	500#	1850#	500#	7100#	300#	*	*	-1350#	300#
	Bi	83	8801	29	16080#	300#	4330#	200#	5117	29	-12390#	400#	-741	28
	Po	84	9567.8	2.0	13700#	200#	6114.68	0.09	3141	3	-11170#	300#	-4108	5
	At	85	10301	12	12353	16	6874	3	1040	12	-7920	21	-3631	12
	Rn	86	11178	6	11144.1	2.9	7262.5	1.9	-1434	11	-7956	7	-7168	7
	Fr	87	12055	6	9776	6	8014.0	2.0	-3780	50	-4625	7	-6900	10
	Ra	88	12783	14	8180	13	8546	6	-5715	15	-4296	12	-10124	16
	Ac	89	13440	50	6710	50	9380	50	-7840	50	-760	50	-9450	50
	Th	90	14074	16	5502	14	9849	9	-9545	21	-810	14	-12770	50
	Pa	91	15260	60	4038	21	9815	10	*	*	2692	22	-12360#	100#
	U	92	*	*	2965	22	8775	9	*	*	2405	28	*	*
219	Pb	82	8100#	500#	*	*	1650#	570#	7600#	400#	*	*	-1010#	400#
	Bi	83	8590#	200#	16610#	450#	3950#	360#	5890#	200#	-14100#	450#	-150#	200#
	Po	84	9347	17	14140#	300#	5840#	100#	3850	16	-10060#	300#	-3489	20
	At	85	10141	6	12911	18	6324	15	1779	8	-10108	27	-2892	4
	Rn	86	10971	5	11632	6	6946.1	0.3	-564	9	-6816.9	2.5	-6300	5
	Fr	87	11839	10	10355	9	7448.5	1.8	-2950	50	-6769	14	-6104	13
	Ra	88	12636	12	8842	9	8138	3	-5080	50	-3112	8	-9520	50
	Ac	89	13280	50	7320	50	8830	50	-6970	70	-2780	50	-8870	50
	Th	90	13890	50	5990	50	9510	50	-8810	70	530	50	-12280	50
	Pa	91	14670	70	4740	50	10080	50	-10740#	200#	410	70	-11440	50
	U	92	15830#	110#	3510	50	9940	50	*	*	3630	50	*	*
	Np	93	*	*	2370#	200#	8980#	210#	*	*	3300#	200#	*	*

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		Q($4\beta^-$)		Q(d, α)		Q(p, α)		Q(n, α)	
220	Pb	82	4680#	570#	*		13060#	400#	11290#	570#	10220#	570#	*	
	Bi	83	3540#	360#	6750#	500#	9340#	300#	16080#	420#	13440#	420#	8150#	500#
	Po	84	5489	24	8310#	200#	4993	20	12760	30	11398	25	8670#	300#
	At	85	4093	14	5595	21	632	15	16728	14	13354	15	11292	23
	Rn	86	6288.7	2.3	7073	4	-4056	22	13225	12	11082	5	10375	6
	Fr	87	5207	8	4637	4	-8740#	50#	16976	4	12688	6	12734	6
	Ra	88	7195	12	5637	11	-12660#	100#	13922	9	10820	10	12258	9
	Ac	89	5900	50	2939	10	-16570#	200#	17803	13	12720	10	15076	9
	Th	90	7880	60	4190	60	*		14540	60	10830	25	14428	24
	Pa	91	6390#	70#	1540#	70#	*		18560#	50#	12860#	60#	17160#	50#
	U	92	8420#	110#	2900#	110#	*		14960#	100#	10730#	110#	16360#	100#
Np	93	7040#	280#	270#	200#	*		19110#	200#	12200#	220#	18890#	200#	
221	Bi	83	4790#	420#	6860#	500#	10820#	300#	14530#	500#	13510#	420#	6650#	500#
	Po	84	3561	26	8330#	300#	6810	20	14200#	200#	11420	30	9970#	300#
	At	85	5664	20	5770	23	2260	50	14812	21	13288	14	9210	30
	Rn	86	4212	6	7192	15	-2466	11	14786	7	11238	13	11760	6
	Fr	87	6276	6	4624	5	-7100	50	15159	5	12925	5	10826	13
	Ra	88	5378	9	5808	6	-11520#	100#	15056	8	10769	6	13393	5
	Ac	89	7290	50	3040	50	-15320#	200#	15840	50	12740	50	13110	50
	Th	90	5802	24	4095	11	*		16080	50	10960	50	15933	14
	Pa	91	7910#	70#	1580	60	*		16610	70	12870	50	15180	70
	U	92	6520#	140#	3020#	110#	*		16650#	110#	10660#	100#	17760#	100#
	Np	93	8540#	280#	380#	220#	*		17270#	200#	12800#	200#	16810#	200#
222	Bi	83	3500#	420#	*		12320#	300#	15710#	500#	13260#	500#	*	
	Po	84	5360	40	8900#	300#	8160	40	12380#	300#	11070#	200#	7850#	400#
	At	85	3901	21	6110	25	4331	17	16400	24	13136	22	10320#	200#
	Rn	86	6170	6	7698	14	-829	12	12709	14	10841	4	9339	16
	Fr	87	5000	22	5412	22	-5810#	80#	16447	21	12383	21	11599	21
	Ra	88	6714	6	6246	7	-9900#	100#	13549	6	10567	8	11137	5
	Ac	89	5970	50	3631	7	-14400#	200#	17062	10	12091	10	13650	9
	Th	90	7806	15	4610	50	*		14170	14	10500	50	13455	15
	Pa	91	6290#	90#	2070#	70#	*		18200#	80#	12550#	90#	16230#	90#
	U	92	8330#	140#	3440#	110#	*		14710#	110#	10550#	110#	15400#	110#
	Np	93	6900#	280#	750#	220#	*		18800#	220#	12600#	200#	18130#	200#
223	Bi	83	4610#	500#	*		13750#	400#	*		13330#	570#	*	
	Po	84	3480#	200#	8880#	360#	9840#	200#	13690#	360#	11120#	360#	9060#	450#
	At	85	5596	21	6350	40	5601	16	14365	24	13029	23	8260#	300#
	Rn	86	4056	8	7852	18	1004	12	14318	16	10878	16	10773	19
	Fr	87	6037	21	5279.0	2.3	-3940	70	14622	6	12634.5	2.1	9655	14
	Ra	88	5158	5	6404	21	-8600	70	14667	5	10616	4	12267.6	2.3
	Ac	89	6866	9	3784	8	-12770#	200#	15573	8	12420	11	11990	8
	Th	90	5889	15	4525	10	*		15570	50	10506	11	14762	12
	Pa	91	7910#	100#	2170	70	*		16090	70	12520	70	14220	70
	U	92	6450#	120#	3610#	100#	*		16170	90	10490#	90#	16820	70
	Np	93	8490#	280#	910#	220#	*		16830#	220#	12530#	220#	16030#	200#
224	Bi	83	3440#	570#	*		14970#	400#	*		*	*	*	
	Po	84	5240#	280#	9520#	450#	11080#	200#	11950#	360#	10680#	360#	*	
	At	85	3788	26	6660#	200#	7476	23	15940	50	12801	30	9260#	300#
	Rn	86	6016	13	8272	17	2451	14	12203	19	10526	17	8318	22
	Fr	87	4660	13	5884	15	-2068	15	16132	13	12186	14	10659	19
	Ra	88	6478.8	2.3	6845.6	2.1	-6887	25	13188	21	10413	5	10001	6
	Ac	89	5663	8	4289	5	-11640#	200#	16624	6	12135	6	12603	6
	Th	90	7463	14	5122	12	*		14083	11	10330	50	12676	11
	Pa	91	6530	70	2812	12	*		17370	14	11788	12	14990	50
	U	92	8200	80	3900	80	*		14270#	80#	10200	60	14422	27
	Np	93	6800#	280#	1250#	210#	*		18370#	220#	12260#	220#	17150#	200#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q($2\beta^-$)		Q(ϵp)		Q($\beta^- n$)	
220	Pb	82	7930#	500#	*		1390#	570#	8410#	400#	*		-690#	450#
	Bi	83	8540#	300#	16850#	500#	3680#	420#	6440#	300#	*		70#	300#
	Po	84	9238	18	14770#	300#	5360#	200#	4650	18	-12300#	400#	-3205	18
	At	85	9866	18	13420	30	6077	18	2893	15	-9200#	200#	-2526	14
	Rn	86	10746.9	2.9	12323.2	2.0	6404.66	0.10	343	8	-9357	16	-6076	7
	Fr	87	11719	6	11194	12	6800.7	1.9	-2261	7	-6203	5	-5983	9
	Ra	88	12524	14	9525	8	7592	6	-4399	24	-5849	9	-9370	50
	Ac	89	13240	50	7893	8	8348	4	-6470#	50#	-2163	9	-8800	50
	Th	90	13840	25	6560	25	8953	20	-8260#	100#	-2014	24	-11940	60
	Pa	91	14610#	50#	5200#	70#	9650#	50#	-10090#	200#	1360#	70#	-11140#	70#
	U	92	15120#	100#	4010#	100#	10210#	100#	*		1170#	110#	-14420#	220#
Np	93	*		2950#	200#	10090#	200#	*		4480#	200#	*		
221	Bi	83	8330#	360#	*		3360#	500#	7320#	300#	*		760#	300#
	Po	84	9050	25	15080#	400#	5110#	300#	5301	20	-11180#	400#	-2673	24
	At	85	9757	14	14080#	200#	5628	23	3504	15	-11330#	300#	-1902	14
	Rn	86	10501	6	12787	17	6162.4	2.1	1508	7	-8080	19	-5082	7
	Fr	87	11483	8	11697	6	6457.8	1.4	-1240	50	-8386	15	-5063	10
	Ra	88	12573	9	10445	5	6880.4	2.0	-3974	10	-4938	5	-8851	7
	Ac	89	13190	70	8670	50	7780	50	-5850	70	-4250	50	-8220	60
	Th	90	13680	50	7034	12	8626	4	-7550#	100#	-621	12	-11350#	50#
	Pa	91	14310	70	5770	70	9250	50	-9470#	200#	-660	50	-10630#	110#
	U	92	14950#	110#	4570#	110#	9840#	100#	*		2530#	110#	-13900#	220#
	Np	93	15570#	280#	3270#	200#	10350#	200#	*		2340#	200#	*	
222	Bi	83	8290#	420#	*		3160#	500#	7720#	300#	*		830#	300#
	Po	84	8920	40	15760#	400#	4610#	300#	6110	40	*		-2370	40
	At	85	9565	21	14440#	300#	5310	30	4603	26	-10430#	300#	-1591	17
	Rn	86	10382.2	1.9	13467	18	5590.3	0.3	2052	5	-10689	20	-4976	5
	Fr	87	11276	22	12604	25	5826	24	-272	22	-7722	25	-4686	22
	Ra	88	12092	9	10870	5	6679	4	-2882	13	-7440	7	-8270	50
	Ac	89	13265	8	9439	6	7137.4	2.0	-5530#	70#	-3946	7	-8388	11
	Th	90	13609	25	7645	15	8127	5	-7020#	100#	-3050	13	-11240	50
	Pa	91	14210#	90#	6170#	70#	8890#	50#	-8860#	210#	340#	90#	-10400#	130#
	U	92	14850#	140#	5030#	100#	9430#	100#	*		-10#	100#	-13700#	220#
	Np	93	15440#	280#	3780#	200#	9910#	200#	*		3350#	200#	*	
223	Bi	83	8100#	500#	*		*		8710#	400#	*		1580#	400#
	Po	84	8840#	200#	*		4380#	450#	6690#	200#	*		-1950#	200#
	At	85	9497	20	15250#	300#	4720#	200#	5044	14	-12530#	300#	-1017	14
	Rn	86	10226	10	13962	21	5283	18	3155	8	-9390	40	-4031	23
	Fr	87	11037	5	12977	14	5562	3	557	7	-9858	16	-4009	5
	Ra	88	11872	5	11816	6	5978.99	0.21	-2151	9	-6428.2	2.4	-7458	6
	Ac	89	12840	50	10030	8	6783.2	1.0	-4490	70	-5812	22	-7448	14
	Th	90	13695	13	8156	10	7567	4	-6450	70	-2224	10	-10840#	70#
	Pa	91	14200	90	6780	90	8330	50	-8280#	210#	-1590	70	-9970#	120#
	U	92	14790#	120#	5680	70	8940	50	*		1350	70	-13250#	210#
	Np	93	15390#	280#	4360#	200#	9630#	200#	*		1160#	210#	*	
224	Bi	83	8050#	500#	*		*		9060#	400#	*		1620#	450#
	Po	84	8720#	200#	*		3820#	450#	7470#	200#	*		-1590#	200#
	At	85	9385	27	15540#	300#	4470#	300#	5916	26	-11710#	400#	-750	24
	Rn	86	10072	10	14620	40	4757	20	3618	10	-11920#	200#	-4010	10
	Fr	87	10697	25	13736	21	4994	19	1560	14	-8922	19	-3511	13
	Ra	88	11637	5	12124.6	1.9	5788.85	0.15	-1167	10	-8851	8	-7071	7
	Ac	89	12529	6	10693	22	6326.9	0.7	-3628	9	-5438	4	-7222	10
	Th	90	13352	16	8906	11	7298	6	-5720	27	-4530	10	-10400	70
	Pa	91	14440#	70#	7337	9	7694	4	-8010#	200#	-1253	10	-10050	70
	U	92	14650#	100#	6067	28	8620	12	*		-961	27	-12960#	200#
	Np	93	15290#	280#	4860#	210#	9230#	200#	*		2270#	210#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)	S(p)	$Q(4\beta^-)$	$Q(d,\alpha)$	$Q(p,\alpha)$	$Q(n,\alpha)$						
225	Po	84	3450#	360#	9530#	500#	12540#	300#	13110#	500#	10720#	420#	*	
	At	85	5390#	300#	6810#	360#	8760#	300#	14030#	360#	12770#	300#	7370#	420#
	Rn	86	3982	15	8466	25	4224	12	13817	18	10445	19	9690	40
	Fr	87	6046	18	5913	15	-520	70	14142	14	12311	12	8514	20
	Ra	88	4904.3	2.8	7090	13	-5384	12	14321.1	2.9	10509	21	11266.7	2.9
	Ac	89	6668	6	4478	5	-9950	70	15115	5	12181	6	10935	22
	Th	90	5755	11	5213	6	*	*	15195	9	10553	7	13635	7
	Pa	91	7590	70	2940	70	*	*	15670	70	12000	70	13370	70
	U	92	6407	28	3774	14	*	*	15770	70	10090#	70#	15821	17
	Np	93	8360#	210#	1420	80	*	*	16460	100	12230#	120#	15080#	100#
226	Po	84	5050#	500#	*		13880#	400#	11490#	570#	10280#	570#	*	
	At	85	3850#	420#	7210#	420#	10300#	300#	15420#	360#	12400#	360#	8120#	500#
	Rn	86	5858	15	8940#	300#	5550	11	11747	25	10183	17	7320#	200#
	Fr	87	4352	17	6283	16	1507	17	15806	16	12015	14	9759	18
	Ra	88	6396.0	2.9	7440	12	-3660	13	12585	13	10149.6	2.3	8926	8
	Ac	89	5399	6	4973	4	-8470#	90#	16194	3	11940	3	11573	3
	Th	90	7185	7	5730	7	*	*	13673	6	10235	8	11609	5
	Pa	91	6380	70	3566	12	*	*	16750	15	11511	15	13853	13
	U	92	8120	18	4300	70	*	*	14177	15	9870	70	13589	16
	Np	93	6880#	110#	1890#	90#	*	*	17770#	90#	11800#	110#	16100#	110#
227	Po	84	3340#	570#	*		15100#	400#	*		10380#	570#	*	
	At	85	5200#	420#	7350#	500#	11630#	300#	13660#	420#	12440#	360#	6360#	500#
	Rn	86	3933	18	9020#	300#	7080	14	13200#	300#	10039	26	8620#	200#
	Fr	87	5926	18	6350	17	2854	15	13862	17	12105	16	7621	26
	Ra	88	4561.43	0.27	7650	12	-1843	17	14069	12	10248	13	10381	10
	Ac	89	6531	3	5107.5	2.3	-6710	70	14567.6	2.9	11887.8	2.1	9702	13
	Th	90	5462	5	5793	3	*	*	14879	5	10435	5	12625.4	2.3
	Pa	91	7273	14	3654	9	*	*	15232	9	11702	12	12243	8
	U	92	6378	21	4300	20	*	*	15390	70	10024	18	14675	20
	Np	93	8290#	110#	2060	70	*	*	15900	70	11710	80	14350	70
228	At	85	3870#	500#	7890#	570#	12790#	400#	14850#	570#	12020#	500#	*	
	Rn	86	5714	23	9530#	300#	8471	18	11340#	300#	9710#	300#	6360#	300#
	Fr	87	4388	19	6806	20	4445	14	15333	17	11699	17	8620#	300#
	Ra	88	6308.6	2.3	8033	13	-280	15	12112	12	9985	12	8054	11
	Ac	89	5026.0	2.5	5572.0	2.4	-4700	50	15937.6	2.4	11766.1	3.0	10722	12
	Th	90	7105.3	2.3	6367.7	2.1	-9310	30	13173	3	9998	5	10424.4	2.8
	Pa	91	5979	8	4171	5	*	*	16438	6	11478	7	12932	6
	U	92	7871	22	4899	16	*	*	13900	18	9750	70	12558	15
	Np	93	7040	90	2720	50	*	*	16980	50	11080	50	14900	90
	Pu	94	*		3770	80	*	*	14010#	90#	9360	80	14350	30
229	At	85	4930#	570#	*		14130#	400#	13250#	570#	12140#	570#	*	
	Rn	86	3952	22	9610#	400#	9776	13	12590#	300#	9610#	300#	7460#	400#
	Fr	87	5766	19	6858	23	5776	14	13499	20	11791	17	6710#	300#
	Ra	88	4465	15	8110	20	1338	16	13574	19	9872	19	9448	18
	Ac	89	6269	12	5533	12	-3080	90	14230	12	11893	12	8804	17
	Th	90	5256.9	2.6	6598.6	2.8	-7810	50	14446.5	2.7	10140	4	11563.6	2.7
	Pa	91	7097	5	4163	3	*	*	14803	3	11565	6	11234	4
	U	92	6083	15	5003	7	*	*	15090	9	10041	13	13660	7
	Np	93	7890	100	2730	90	*	*	15470	90	11310	90	13390	90
	Pu	94	6760	60	3490	70	*	*	15540	90	9480#	100#	15710	50

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q($2\beta^-$)		Q(ϵp)		Q($\beta^- n$)	
225	Po	84	8690#	360#	*	*	*	*	8000#	300#	*	*	-1250#	300#
	At	85	9180#	300#	16320#	500#	3870#	420#	6570#	300#	-13660#	500#	-120#	300#
	Rn	86	9998	14	15120#	200#	4335	23	4540	12	-10670#	200#	-3332	17
	Fr	87	10706	12	14185	18	4613	18	2182	13	-11179	25	-3078	12
	Ra	88	11383	3	12973	8	5097	5	-316	6	-7740	10	-6312	5
	Ac	89	12331	8	11323	5	5935.1	1.4	-2700	70	-7445	14	-6427	11
	Th	90	13218	10	9502	6	6921.4	2.1	-5067	13	-3806	5	-9623	9
	Pa	91	14120	100	8060	70	7390	50	-7250	100	-3180	70	-9440	80
	U	92	14600	70	6586	15	8015	7	*	*	95	15	-12570#	200#
	Np	93	15150#	210#	5310	100	8790	50	*	*	440	70	*	*
226	Po	84	8500#	450#	*	*	*	*	8800#	400#	*	*	-920#	500#
	At	85	9240#	300#	16730#	500#	3520#	420#	7070#	300#	*	*	10#	300#
	Rn	86	9841	14	15740#	200#	3840	40	5078	11	-13070#	300#	-3145	16
	Fr	87	10397	18	14748	25	4163	20	3230	13	-10140#	300#	-2525	12
	Ra	88	11300.4	1.9	13353	10	4870.62	0.25	472	5	-10154	11	-6040	5
	Ac	89	12067	5	12063	13	5536	21	-1723	12	-6799	12	-6071	6
	Th	90	12939	11	10208	5	6450.9	2.2	-4132	14	-6086	5	-9210	70
	Pa	91	13972	14	8779	12	6987	10	-6740#	90#	-2894	12	-9416	16
	U	92	14527	28	7243	16	7701	4	*	*	-2270	14	-12330	70
	Np	93	15240#	220#	5660#	90#	8200	50	*	*	1150#	110#	*	*
227	Po	84	8390#	500#	*	*	*	*	9400#	400#	*	*	-410#	500#
	At	85	9050#	420#	*	*	2920#	500#	7800#	300#	*	*	670#	300#
	Rn	86	9791	18	16220#	300#	3380#	200#	5706	14	-11950#	400#	-2726	19
	Fr	87	10278	18	15290#	300#	3833	19	3835	13	-12220#	300#	-2055	13
	Ra	88	10957.5	2.9	13933	11	4365	8	1373.1	2.4	-8857	11	-5202	3
	Ac	89	11930	5	12548	12	5042.19	0.14	-981	7	-8978	12	-5418	5
	Th	90	12647	6	10766	3	6146.60	0.10	-3216	17	-5152.2	2.4	-8298	12
	Pa	91	13650	70	9385	9	6580.4	2.1	-5730	70	-4767	8	-8569	15
	U	92	14498	21	7866	18	7211	14	*	*	-1464	17	-11830#	90#
	Np	93	15170	100	6360	100	7816	14	*	*	-760	70	*	*
228	At	85	9070#	500#	*	*	2490#	570#	8320#	400#	*	*	730#	400#
	Rn	86	9646	21	16880#	400#	2910#	200#	6301	18	-14330#	400#	-2514	22
	Fr	87	10314	18	15820#	300#	3233	26	4473	14	-11400#	300#	-1882	14
	Ra	88	10870.0	2.3	14383	11	4072	10	2169.9	2.6	-11233	14	-4980.2	2.4
	Ac	89	11557	3	13222	12	4676	13	-28	5	-8078	13	-4981.3	2.6
	Th	90	12568	5	11475.2	1.9	5520.08	0.22	-2450	14	-7696.1	1.9	-8131	8
	Pa	91	13252	12	9964	5	6264.5	1.5	-4670	50	-4216	5	-8169	17
	U	92	14249	19	8553	15	6803	10	-6860	30	-3873	15	-11410	70
	Np	93	15320#	100#	7020	50	7310	50	*	*	-520	50	*	*
	Pu	94	*	*	5830	30	7940	18	*	*	-230	40	*	*
229	At	85	8800#	500#	*	*	*	*	9150#	400#	*	*	1510#	400#
	Rn	86	9666	19	17500#	400#	2410#	300#	6814	19	*	*	-2078	19
	Fr	87	10154	19	16390#	300#	2860#	300#	4976	18	-13300#	400#	-1339	14
	Ra	88	10774	15	14915	20	3589	18	2962	15	-9984	23	-4419	15
	Ac	89	11296	12	13566	17	4452	17	800	12	-9960	18	-4145	12
	Th	90	12362.2	2.9	12170.6	2.7	5167.6	1.0	-1624	6	-6644.4	2.7	-7409	5
	Pa	91	13076	8	10530.6	3.0	5835	4	-3880	90	-6287	4	-7395	15
	U	92	13954	18	9173	6	6475	3	-6180	50	-2850	6	-10460	50
	Np	93	14930	110	7630	90	7010	50	*	*	-2430	90	-10370	90
	Pu	94	*	*	6210	50	7590	50	*	*	880	50	*	*

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		Q($4\beta^-$)		Q(d, α)		Q(p, α)		Q(n, α)	
230	Rn	86	5390#	200#	10070#	450#	11180#	200#	11070#	450#	9430#	360#	5410#	450#
	Fr	87	4235	21	7141	20	7336	16	14978	24	11489	21	7670#	300#
	Ra	88	6104	18	8447	17	2901	11	11858	17	9695	17	7277	17
	Ac	89	4931	20	5999	21	-1400	50	15607	16	11523	16	9799	21
	Th	90	6793.9	2.2	7123	12	-6070	15	12678.7	1.9	9877.2	1.7	9331.2	1.5
	Pa	91	5795	4	4701	4	-10760#	130#	16113	3	11233	3	11970	3
	U	92	7667	7	5572	6	*	*	13401	6	9647	9	11455	5
	Np	93	6610	100	3260	50	*	*	16720	50	11080	50	14050	50
	Pu	94	8530	50	4130	90	*	*	14050	50	9240	70	13558	23
	Am	95	*	*	1750#	140#	*	*	17560#	140#	*	*	16020#	150#
231	Rn	86	3670#	360#	*	*	12640#	300#	12340#	500#	9630#	500#	*	*
	Fr	87	5517	30	7270#	200#	8638	25	13413	28	11680	30	6030#	400#
	Ra	88	4371	15	8583	19	4409	12	13253	18	9711	18	8619	21
	Ac	89	6147	21	6042	17	140	50	13925	19	11685	13	8040	19
	Th	90	5118.02	0.20	7310	16	-4468	26	13830	12	9785.2	1.9	10521.7	1.8
	Pa	91	6820	3	4727.3	1.5	-9010#	300#	14550.0	2.6	11517.7	2.0	10176.0	2.3
	U	92	5879	5	5656	4	*	*	14620	3	9747	5	12681.6	2.8
	Np	93	7680	70	3280	50	*	*	15130	50	11270	50	12350	50
	Pu	94	6720	30	4240	60	*	*	15220	90	9550	60	14710	30
	Am	95	8570#	330#	1780#	300#	*	*	15760#	300#	11220#	300#	14490#	300#
232	Fr	87	4150#	160#	7760#	340#	10040#	160#	14650#	250#	11490#	160#	6810#	430#
	Ra	88	5791	15	8856	27	5886	9	11697	18	9687	17	6781	16
	Ac	89	4680	18	6351	17	1790#	100#	15349	17	11470	19	9126	19
	Th	90	6440.1	1.1	7603	13	-2914	18	12321	16	9615	12	8547	15
	Pa	91	5549	8	5159	8	-7320#	300#	15795	8	11225	8	10896	14
	U	92	7268.0	2.8	6104.1	2.0	-11790#	200#	13147	3	9577	3	10670.5	2.6
	Np	93	6340#	110#	3740#	100#	*	*	16460#	100#	11010#	100#	13110#	100#
	Pu	94	7990	30	4550	50	*	*	13840	50	9450	90	12799	19
	Am	95	7240#	420#	2310#	300#	*	*	17050#	300#	10740#	300#	15130#	310#
	Cm	96	*	*	3320#	360#	*	*	14180#	240#	*	*	14660#	210#
233	Fr	87	5020#	340#	*	*	11540#	300#	13290#	420#	11850#	360#	*	*
	Ra	88	4246	18	8950#	160#	7402	16	12969	30	9676	22	7920#	200#
	Ac	89	5918	18	6478	16	3360	50	13802	17	11656	17	7444	20
	Th	90	4786.39	0.09	7710	13	-1320	50	13682	13	9759	16	9864	10
	Pa	91	6529	8	5247.6	1.3	-5770#	100#	14383.3	1.3	11489.9	1.3	9298	16
	U	92	5761.9	2.5	6317	8	-10370	70	14205.1	2.5	9610	4	11702.4	2.1
	Np	93	7480#	110#	3950	50	*	*	14850	50	11200	50	11420	50
	Pu	94	6380	50	4600#	110#	*	*	15140	70	9680	70	14080	50
	Am	95	8080#	320#	2390#	100#	*	*	15690#	110#	11190#	100#	13670#	110#
	Cm	96	7180#	220#	3270#	310#	*	*	15560#	310#	9220#	150#	16000	70
234	Ra	88	5500	30	9430#	300#	8750	30	11620#	160#	9690	40	6090#	300#
	Ac	89	4538	19	6770	21	4885	16	15055	17	11489	18	8423	29
	Th	90	6191	3	7983	13	265	8	12171	13	9716	13	8044	12
	Pa	91	5221	5	5682	5	-4120#	160#	15602	5	11387	5	10224	14
	U	92	6844.7	2.0	6632.2	1.1	-8577	18	12910	8	9584.9	1.5	9975.7	0.7
	Np	93	6060	50	4253	9	-13390#	140#	16057	8	11013	9	12177	8
	Pu	94	7770	50	4890	50	*	*	13700#	100#	9590	50	12189	7
	Am	95	6870#	190#	2880#	170#	*	*	16810#	160#	11040#	160#	14480#	170#
	Cm	96	8640	70	3830#	100#	*	*	14170#	300#	9150#	300#	14080	30
	Bk	97	*	*	1240#	160#	*	*	17650#	250#	*	*	16550#	330#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q($2\beta^-$)		Q(ϵp)		Q($\beta^- n$)	
230	Rn	86	9340#	200#	*		2070#	450#	7530#	200#	*		-1700#	200#
	Fr	87	10001	21	16750#	400#	2470#	300#	5672	22	-12600#	400#	-1109	21
	Ra	88	10569	11	15305	20	3344	15	3652	10	-12135	17	-4253	16
	Ac	89	11201	16	14109	21	3873	20	1664	16	-9125	21	-3820	16
	Th	90	12050.7	1.1	12655.9	1.8	4769.8	1.5	-751	5	-8973	15	-7105	3
	Pa	91	12892	5	11300	3	5439.4	0.7	-3060	50	-5812	12	-7107	7
	U	92	13750	15	9735	5	5992.7	0.7	-5319	16	-5261	5	-10240	90
	Np	93	14500	70	8270	50	6780	50	-7700#	140#	-1950	50	-10230	70
	Pu	94	15290	30	6866	21	7180	8	*		-1566	16	*	
	Am	95	*		5240#	140#	7730#	100#	*		1860#	160#	*	
231	Rn	86	9050#	300#	*		1750#	500#	8240#	300#	*		-1130#	300#
	Fr	87	9753	29	17340#	400#	2160#	300#	6302	28	*		-523	27
	Ra	88	10475	18	15724	17	2906	18	4399	12	-11120#	200#	-3693	19
	Ac	89	11078	17	14489	19	3652	18	2337	13	-11037	20	-3173	13
	Th	90	11911.9	2.2	13309	15	4213.2	1.6	10.0	2.5	-7988	10	-6428.6	2.8
	Pa	91	12615.1	2.8	11850	12	5150.0	0.8	-2200	50	-7701	16	-6260	5
	U	92	13546	7	10357	3	5576.3	1.7	-4478	27	-4345.7	2.5	-9500	50
	Np	93	14300	100	8850	50	6370	50	-6810#	300#	-3840	50	-9380	50
	Pu	94	15250	60	7503	27	6839	20	*		-618	27	-12720#	140#
	Am	95	*		5920#	310#	7450#	310#	*		-90#	300#	*	
232	Fr	87	9670#	160#	*		1880#	430#	6830#	160#	*		-300#	160#
	Ra	88	10162	14	16130#	200#	2829	20	5048	9	-13250#	300#	-3337	16
	Ac	89	10827	21	14934	20	3360	19	3206	15	-10199	28	-2734	13
	Th	90	11558.2	1.1	13646	10	4081.6	1.4	837.8	2.1	-10057	12	-6048.6	1.7
	Pa	91	12369	8	12468	18	4627	8	-1410#	100#	-7104	15	-5931	8
	U	92	13147	5	10831.3	1.1	5413.63	0.09	-3752	18	-6495.6	1.2	-9090	50
	Np	93	14020#	110#	9390#	100#	6010#	100#	-5910#	310#	-3350#	100#	-9000#	100#
	Pu	94	14713	23	7830	18	6716	10	-8040#	200#	-2733	18	-12150#	300#
	Am	95	15810#	330#	6550#	300#	7250#	300#	*		350#	300#	*	
	Cm	96	*		5110#	200#	7900#	200#	*		830#	200#	*	
233	Fr	87	9170#	300#	*		1790#	500#	7730#	300#	*		470#	300#
	Ra	88	10037	19	16710#	300#	2535	21	5589	16	*		-2903	21
	Ac	89	10597	18	15334	28	3209	19	3818	13	-11970#	160#	-2212	13
	Th	90	11226.5	1.1	14061	12	3760	15	1813.4	2.2	-9052	9	-5286	8
	Pa	91	12078.5	1.9	12851	13	4367	12	-460	50	-8953	13	-5192.1	2.0
	U	92	13030	3	11475.2	2.1	4908.6	1.2	-3130	50	-5817.4	2.2	-8510#	100#
	Np	93	13820	70	10050	50	5630	50	-5310#	110#	-5290	50	-8480	50
	Pu	94	14380	60	8330	50	6420	50	-7240	90	-1850	50	-11290#	300#
	Am	95	15320#	320#	6940#	110#	7060#	50#	*		-1390#	140#	-11210#	230#
	Cm	96	*		5570	80	7470	50	*		1640	70	*	
234	Ra	88	9750	30	*		2420#	200#	6280	30	*		-2490	30
	Ac	89	10456	19	15720#	160#	2906	21	4501	15	-11480#	300#	-1964	14
	Th	90	10977	3	14460	10	3673	11	2468	3	-10997	16	-4947	3
	Pa	91	11750	9	13392	14	4077	17	384	9	-8257	14	-4651	5
	U	92	12606.7	1.6	11879.8	0.9	4857.7	0.7	-2203	7	-7875.8	0.9	-7870	50
	Np	93	13550#	100#	10569	11	5357	9	-4510#	160#	-4822	8	-8170	50
	Pu	94	14156	19	8839	7	6310	5	-6374	19	-3859	7	-10990#	100#
	Am	95	14950#	340#	7480#	190#	6800#	150#	-8880#	210#	-780#	170#	-10900#	170#
	Cm	96	15820#	200#	6217	25	7365	10	*		-620	50	*	
	Bk	97	*		4500#	330#	7990	50	*		2790#	180#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)	S(p)	$Q(4\beta^-)$	$Q(d,\alpha)$	$Q(p,\alpha)$	$Q(n,\alpha)$						
235	Ra	88	3760#	300#	*	10280#	300#	12880#	420#	10080#	340#	*		
	Ac	89	5555	20	6830	30	6312	14	13746	21	11724	17	7020#	160#
	Th	90	4668	13	8112	19	1834	24	13421	18	9727	18	9167	16
	Pa	91	6123	15	5615	14	-2340	50	14266	14	11704	14	8781	19
	U	92	5297.49	0.23	6709	4	-7090#	200#	14141.4	1.1	9837	8	11118.3	0.9
	Np	93	6983	8	4390.9	0.9	-11660#	400#	14835.4	2.2	11298.1	1.8	10743	8
	Pu	94	6237	22	5062	22	*		14940	50	9690#	100#	13219	21
	Am	95	7910#	170#	3010	50	*		15280	70	11130	60	12910#	110#
	Cm	96	6790#	200#	3740#	260#	*		15460#	230#	9610#	360#	15290#	200#
	Bk	97	8710#	430#	1310#	400#	*		16120#	410#	11160#	450#	15080#	500#
236	Ac	89	4210	40	7270#	300#	7840	60	15040	50	11760	40	7830#	300#
	Th	90	5834	19	8391	20	3352	14	12125	20	9811	19	7579	21
	Pa	91	5026	20	5973	19	-710#	110#	15430	14	11464	14	9672	19
	U	92	6545.46	0.26	7131	14	-5409	18	12817	4	9820.5	1.1	9359.3	0.9
	Np	93	5740	50	4830	50	-10160#	400#	15940	50	11320	50	11540	50
	Pu	94	7352	21	5431.0	1.8	*		13657	8	9820	50	11629.0	2.5
	Am	95	6660#	120#	3430#	110#	*		16400#	110#	10850#	120#	13740#	120#
	Cm	96	8230#	200#	4060	60	*		14100#	160#	9460#	100#	13450	50
	Bk	97	7230#	570#	1760#	450#	*		17530#	400#	11110#	410#	15930#	410#
	237	Ac	89	5010#	400#	*	9410#	400#	13790#	500#	12250#	400#	*	
Th		90	4371	21	8550	40	4862	16	13309	21	9978	21	8710	30
Pa		91	5878	19	6017	19	960#	60#	14221	18	11777	13	8333	19
U		92	5125.8	0.5	7231	14	-3860	70	13814	14	9916	5	10424	3
Np		93	6580	50	4862.02	0.23	-8320#	220#	14663.6	0.3	11590.7	0.4	10180	4
Pu		94	5880.7	2.1	5570	50	-12840	90	14759.4	1.6	10001	8	12593.0	1.3
Am		95	7540#	130#	3620#	60#	*		15100#	60#	11090#	60#	12260#	60#
Cm		96	6680	70	4080#	130#	*		15330	90	9650#	170#	14540	70
Bk		97	8430#	460#	1960#	230#	*		15890#	300#	11330#	230#	14370#	280#
Cf		98	*		2890#	410#	*		15940#	410#	9460#	170#	16860	90
238	Th	90	5400#	280#	8940#	490#	6460#	280#	12120#	290#	10130#	280#	7070#	410#
	Pa	91	4705	21	6350	22	2470	50	15350	21	11740	21	9183	21
	U	92	6154.3	1.3	7507	13	-2136	12	12686	14	9884	14	8938	13
	Np	93	5488.32	0.20	5224.6	0.5	-6760#	260#	15720.8	0.3	11399.9	0.4	10814	14
	Pu	94	6999.8	1.3	5997.5	0.4	-11110#	300#	13500	50	9984.1	0.9	10890.69	0.28
	Am	95	6220#	80#	3960	50	*		16230	50	11100	50	13020	50
	Cm	96	7870	70	4420#	60#	*		14110#	110#	9680	50	12908	24
	Bk	97	7040#	340#	2320#	270#	*		17070#	260#	11070#	330#	15240#	260#
	Cf	98	8730#	310#	3200#	370#	*		14450#	500#	9440#	500#	14910#	360#
	239	Th	90	4090#	490#	*	8020#	400#	13040#	570#	10250#	400#	*	
Pa		91	5630#	200#	6580#	340#	3950#	200#	14090#	200#	11950#	200#	7760#	200#
U		92	4806.38	0.17	7609	16	-570	50	13757	13	10104	14	9965	14
Np		93	6215.2	1.1	5285.5	1.5	-4940#	210#	14631.3	1.1	11730.1	1.0	9625	14
Pu		94	5646.2	0.3	6155.4	0.4	-9660#	210#	14427.41	0.29	10070	50	11789.96	0.25
Am		95	7100	50	4061.7	1.7	-14160#	300#	15009.5	2.1	11353.4	2.3	11660	50
Cm		96	6370	60	4560	70	*		15290#	80#	9970#	120#	13890	50
Bk		97	8040#	330#	2480#	210#	*		15720#	220#	11260#	210#	13860#	240#
Cf		98	7100#	360#	3260#	330#	*		15770#	310#	9570#	450#	16040#	210#
Es		99	*		1010#	420#	*		16330#	310#	*		15660#	500#
240	Pa	91	4610#	360#	7090#	500#	5290#	300#	14890#	410#	11710#	300#	8170#	500#
	U	92	5929	5	7910#	200#	991	5	12533	17	10053	14	8408	17
	Np	93	5066	17	5545	17	-3350#	150#	15719	17	11790	17	10437	22
	Pu	94	6534.20	0.23	6474.4	1.0	-7864	19	13381.53	0.27	10117.77	0.18	10381.5	0.5
	Am	95	5952	14	4367	14	-12690#	400#	16058	14	11283	14	12285	14
	Cm	96	7490	50	4955.6	2.3	*		14010	50	10020#	60#	12278.5	2.2
	Bk	97	6660#	260#	2770#	160#	*		16930#	150#	11280#	170#	14740#	160#
	Cf	98	8330#	210#	3550#	210#	*		14490#	260#	9670#	230#	14390	70
	Es	99	7430#	500#	1340#	450#	*		17630#	500#	11130#	410#	16660#	460#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q($2\beta^-$)		Q(ϵp)		Q($\beta^- n$)	
235	Ra	88	9260#	300#	*		2330#	420#	7190#	300#	*		-1710#	300#
	Ac	89	10094	19	16260#	300#	2868	29	5068	20	*		-1329	14
	Th	90	10859	13	14883	21	3376	17	3097	13	-10160	30	-4394	14
	Pa	91	11344	14	13597	19	4101	19	1244	14	-9841	20	-3929	14
	U	92	12142.2	2.0	12390.9	0.9	4678.2	0.7	-1263	21	-6983	3	-7107	8
	Np	93	13050	50	11023.1	1.4	5194.0	1.5	-3580	50	-6584	5	-7376	7
	Pu	94	14010	50	9314	21	5951	20	-5830#	200#	-3252	21	-10350#	160#
	Am	95	14780#	110#	7900	70	6576	13	-8080#	400#	-2620	50	-10170	60
	Cm	96	15420#	210#	6620#	210#	7300#	200#	*		370#	200#	-13410#	250#
	Bk	97	*		5140#	410#	7840#	500#	*		950#	430#	*	
236	Ac	89	9760	40	*		2810#	150#	5890	40	*		-870	40
	Th	90	10502	14	15220	30	3333	17	3809	14	-12240#	300#	-4105	20
	Pa	91	11149	15	14085	20	3755	19	1950	50	-9312	20	-3658	14
	U	92	11842.9	0.3	12746	3	4572.9	0.9	-456.3	1.6	-8860	13	-6669.7	0.9
	Np	93	12720	50	11540	50	5010	50	-2660#	120#	-6200	50	-6880	50
	Pu	94	13590	7	9821.9	1.6	5867.07	0.08	-4952	18	-5306.8	1.6	-9790	50
	Am	95	14560#	190#	8490#	110#	6260	50	-7500#	420#	-2290#	110#	-10040#	230#
	Cm	96	15012	26	7073	20	7067	5	*		-1618	28	-12920#	400#
	Bk	97	15940#	430#	5500#	430#	7850#	500#	*		1630#	400#	*	
	237	Ac	89	9220#	400#	*		2820#	500#	6750#	400#	*		-50#
Th		90	10205	21	15830#	300#	3208	22	4563	16	*		-3450	21
Pa		91	10904	19	14407	19	3795	18	2654	13	-10980	40	-2990	13
U		92	11671.2	0.5	13204	13	4233.5	1.0	298.6	1.4	-8152	14	-6060	50
Np		93	12314.0	0.9	11993	14	4958.5	1.1	-1700#	60#	-7749	14	-6100.7	1.7
Pu		94	13233	21	10405.1	1.3	5748.3	2.3	-4150	70	-4642.0	1.3	-9020#	110#
Am		95	14200#	80#	9050#	60#	6200#	30#	-6620#	230#	-4100#	80#	-9360#	60#
Cm		96	14910#	210#	7510	70	6770	50	-8690	110	-940	70	-12370#	410#
Bk		97	15660#	460#	6020#	230#	7500#	200#	*		-140#	250#	*	
Cf		98	*		4650#	220#	8220	50	*		2790	90	*	
238	Th	90	9770#	280#	*		3310#	290#	5320#	280#	*		-2970#	280#
	Pa	91	10583	21	14900	40	3628	21	3438	16	-10670#	400#	-2569	16
	U	92	11280.0	1.2	13524	14	4269.7	2.9	1144.2	1.2	-9935	16	-5635.7	1.2
	Np	93	12070	50	12455	14	4691	4	-970	50	-7360	13	-5708.3	1.3
	Pu	94	12880.5	1.6	10859.5	0.4	5593.20	0.19	-3280	12	-6516.1	0.6	-8480#	60#
	Am	95	13760#	120#	9530	70	6040	50	-5790#	260#	-3740	50	-8900	90
	Cm	96	14553	22	8036	12	6670	10	-7830#	300#	-2937	12	-11820#	230#
	Bk	97	15470#	480#	6400#	280#	7330#	200#	*		360#	260#	-11790#	270#
	Cf	98	*		5160#	300#	8130#	300#	*		740#	310#	*	
	239	Th	90	9490#	400#	*		2980#	500#	6030#	400#	*		-2360#
Pa		91	10330#	200#	15520#	450#	3560#	200#	4030#	200#	*		-2040#	200#
U		92	10960.6	1.3	13959	16	4131	13	1984.0	1.2	-9340#	280#	-4953.7	1.2
Np		93	11703.5	1.0	12793	13	4599	14	-79.6	1.9	-8870	16	-4923.7	1.0
Pu		94	12646.0	1.3	11379.9	0.5	5244.50	0.21	-2560	50	-6008.0	1.2	-7900	50
Am		95	13320#	60#	10059.2	1.7	5922.4	1.4	-4860#	210#	-5353.2	1.7	-8124	12
Cm		96	14240	90	8520	50	6540	50	-7100#	220#	-2310	50	-11140#	260#
Bk		97	15080#	310#	6900#	220#	7200#	200#	-9310#	360#	-1460#	210#	-11100#	360#
Cf		98	15830#	230#	5580#	220#	7810#	60#	*		1510#	210#	*	
Es		99	*		4210#	370#	8430#	500#	*		2050#	390#	*	
240	Pa	91	10230#	300#	*		3160#	300#	4490#	300#	*		-1840#	300#
	U	92	10735	5	14490#	280#	4036	15	2589	5	-11180#	400#	-4668	5
	Np	93	11281	17	13154	23	4559	22	806	22	-8310#	200#	-4344	17
	Pu	94	12180.4	0.4	11759.9	1.2	5255.76	0.14	-1598.4	1.7	-7735.8	1.2	-7336.3	1.7
	Am	95	13050	50	10522	14	5710	50	-4150#	150#	-5090	14	-7710	60
	Cm	96	13862	12	9017.3	1.7	6397.8	0.6	-6265	19	-4153.5	1.7	-10600#	210#
	Bk	97	14690#	300#	7340#	160#	7200#	190#	-8530#	430#	-1020#	150#	-10650#	260#
	Cf	98	15430#	300#	6032	22	7711	4	*		-450	60	-13640#	300#
Es	99	*		4600#	480#	8230#	570#	*		2660#	450#	*		

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)	S(p)	$Q(4\beta^-)$	$Q(d,\alpha)$	$Q(p,\alpha)$	$Q(n,\alpha)$						
241	Pa	91	5180#	500#	*	6750#	400#	13790#	570#	11930#	490#	*		
	U	92	4590#	300#	7890#	420#	2490#	300#	13570#	360#	10170#	300#	9220#	410#
	Np	93	6130	70	5740	70	-1770#	210#	14400	70	11820	70	9010	70
	Pu	94	5241.52	0.03	6650	17	-6370#	170#	14355.2	1.0	10364.57	0.27	11294.3	1.2
	Am	95	6647	14	4479.96	0.13	-10930#	230#	15056.93	0.27	11635.3	0.4	11126.14	0.23
	Cm	96	6093.3	2.1	5097	14	-15420#	300#	15022.2	2.0	10140	50	13185.0	1.2
	Bk	97	7700#	250#	2980#	200#	*	*	15600#	210#	11450#	200#	13260#	210#
	Cf	98	6740#	170#	3630#	220#	*	*	15790#	270#	9980#	300#	15530#	170#
	Es	99	8410#	460#	1420#	230#	*	*	16330#	310#	11450#	370#	15290#	340#
	Fm	100	*	*	2360#	500#	*	*	16280#	420#	*	*	17500#	420#
242	U	92	5650#	360#	8360#	450#	3820#	200#	12530#	360#	10150#	280#	7660#	450#
	Np	93	4910	210	6070#	360#	-320#	280#	15410	200	11710	200	9730#	280#
	Pu	94	6309.7	0.7	6830	70	-4668	13	13112	17	10270.0	1.2	9790.9	1.0
	Am	95	5537.64	0.10	4776.08	0.16	-9330#	260#	16053.50	0.16	11743.86	0.28	11803.7	1.0
	Cm	96	6969.5	1.2	5419.8	0.4	-13590#	400#	14004	14	10277.3	1.7	11861.7	0.3
	Bk	97	6370#	280#	3260#	200#	*	*	16720#	200#	11450#	210#	13990#	200#
	Cf	98	8010#	170#	3940#	200#	*	*	14430#	150#	10000#	210#	13880	60
	Es	99	7130#	340#	1820#	310#	*	*	17520#	260#	11420#	330#	16200#	330#
	Fm	100	8800#	500#	2750#	460#	*	*	14910#	570#	9710#	500#	15800#	450#
	243	U	92	4290#	450#	*	5220#	400#	13420#	570#	10460#	500#	*	
Np		93	5610#	200#	6030#	200#	1190#	30#	14390#	300#	12020#	30#	8720#	300#
Pu		94	5033.9	2.6	6950	200	-3240#	110#	14200	70	10302	17	10686	4
Am		95	6364.9	1.4	4831.2	1.6	-4870#	210#	14930.1	1.4	11913.2	1.4	10505	17
Cm		96	5692.9	1.0	5575.1	1.0	-12180#	220#	14958.4	1.0	10536	14	12703.0	1.0
Bk		97	7120#	200#	3403	4	*	*	15699	5	11830	5	12826	14
Cf		98	6470#	120#	4030#	230#	*	*	15670#	230#	10190#	190#	14910#	110#
Es		99	8120#	330#	1930#	210#	*	*	16130#	270#	11620#	210#	14730#	260#
Fm		100	7110#	460#	2730#	330#	*	*	16210#	310#	10030#	460#	17020#	220#
244		Np	93	4750#	300#	6490#	500#	2490#	300#	15290#	360#	11870#	420#	9160#
	Pu	94	6020	4	7360#	30#	-1673	5	13100	200	10410	70	9260#	300#
	Am	95	5366.5	1.7	5163.8	2.9	-6150#	180#	15873.4	1.2	11788.2	1.0	11270	70
	Cm	96	6801.3	1.0	6011.4	1.4	-10510#	200#	13694.77	0.17	10381.70	0.14	11143.26	0.06
	Bk	97	6047	15	3757	14	*	*	16621	14	11876	14	13426	14
	Cf	98	7580#	110#	4501	5	*	*	14460#	200#	10310#	200#	13422.2	2.8
	Es	99	6790#	280#	2250#	210#	*	*	17350#	180#	11560#	250#	15640#	270#
	Fm	100	8470#	290#	3070#	290#	*	*	14880#	330#	9970#	300#	15290#	260#
245	Np	93	5320#	500#	*	4130#	400#	14260#	570#	12190#	450#	*		
	Pu	94	4699	13	7310#	300#	-207	14	14010#	30#	10630	200	10210#	200#
	Am	95	6050.2	2.8	5194	6	-4470#	200#	14857	4	12047.8	2.7	10130	200
	Cm	96	5520.3	1.0	6165.2	1.4	-9180#	200#	14539.4	1.7	10399.1	1.0	11932.7	1.2
	Bk	97	6971	14	3927.2	1.4	-13460#	310#	15342.7	1.7	11874.3	1.5	11992.2	1.4
	Cf	98	6164	3	4618	15	*	*	15406	5	10520#	200#	14227.9	2.2
	Es	99	7730#	270#	2400#	200#	*	*	16090#	230#	11850#	200#	14280#	280#
	Fm	100	6850#	280#	3130#	270#	*	*	16150#	280#	10250#	320#	16450#	200#
Md	101	*	*	980#	370#	*	*	16620#	370#	11740#	500#	16120#	400#	
246	Pu	94	5855	20	7840#	400#	1304	15	12910#	300#	10380#	40#	8640#	400#
	Am	95	4978#	18#	5473#	23#	-2910#	220#	15899#	18#	12103#	18#	10770#	40#
	Cm	96	6457.6	1.5	6572.6	2.9	-7570	15	13448.3	1.5	10306.3	1.8	10509.0	2.7
	Bk	97	5920	60	4330	60	-12150#	270#	16230	60	11650	60	12440	60
	Cf	98	7366.3	2.4	5012.7	1.8	*	*	14087	14	10265	5	12554.6	1.4
	Es	99	6540#	300#	2770#	220#	*	*	17130#	220#	11780#	250#	14860#	220#
	Fm	100	8070#	200#	3470#	200#	*	*	14870#	180#	10300#	210#	14840#	120#
	Md	101	7230#	400#	1360#	320#	*	*	17860#	330#	11620#	340#	17010#	330#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q($2\beta^-$)		Q(ϵ_p)		Q(β^-n)		
241	Pa	91	9790#	450#	*		2990#	570#	5430#	410#	*		-1100#	400#	
	U	92	10520#	300#	14990#	500#	3820#	300#	3240#	300#	*		-4190#	300#	
	Np	93	11190	70	13650#	210#	4310	70	1330	70	-9830#	310#	-3940	70	
	Pu	94	11775.73	0.23	12195.0	1.2	5140.0	0.5	-746.6	1.2	-7048	5	-6626	14	
	Am	95	12598.6	1.7	10954.3	1.0	5637.82	0.12	-3100#	200#	-6671	17	-6860.7	1.8	
	Cm	96	13590	50	9464.4	1.2	6185.2	0.6	-5620#	170#	-3712.6	1.2	-10030#	150#	
	Bk	97	14360#	290#	7940#	200#	7040#	210#	-7830#	300#	-2770#	200#	-10030#	200#	
	Cf	98	15060#	270#	6400#	180#	7660#	150#	-9800#	340#	310#	170#	-12940#	430#	
	Es	99	15840#	370#	4970#	310#	8250	20	*		910#	270#	*		
	Fm	100	*		3700#	360#	8760#	310#	*		3850#	300#	*		
242	U	92	10240#	200#	*		3570#	200#	3900#	200#	*		-3710#	210#	
	Np	93	11040	200	13960#	360#	4100	200	1950	200	-9560#	450#	-3610	200	
	Pu	94	11551.2	0.7	12576	5	4984.5	1.0	-86.8	0.8	-8770#	300#	-6288.9	0.7	
	Am	95	12185	14	11426	17	5588.50	0.25	-2270#	200#	-6080	70	-6305.0	1.2	
	Cm	96	13062.8	1.7	9899.7	0.4	6215.56	0.08	-4581	13	-5440.5	0.4	-9300#	200#	
	Bk	97	14070#	250#	8350#	200#	6890#	210#	-7070#	330#	-2490#	200#	-9660#	260#	
	Cf	98	14747	23	6917	13	7517	4	-9010#	400#	-1606	13	-12550#	230#	
	Es	99	15540#	480#	5440#	300#	8160	20	*		1480#	330#	-12400#	390#	
	Fm	100	*		4170#	400#	8700#	500#	*		1780#	430#	*		
	243	U	92	9940#	500#	*		3370#	570#	4650#	400#	*		-3090#	450#
Np		93	10530#	80#	14390#	400#	4110#	200#	2700#	30#	*		-2910#	30#	
Pu		94	11343.6	2.7	13020#	300#	4757.0	2.8	572.2	2.9	-8150#	200#	-5785.2	2.7	
Am		95	11902.5	1.4	11660	70	5438.8	1.0	-1515	5	-7530	200	-5700.4	1.4	
Cm		96	12662.4	1.6	10351.1	1.0	6168.8	1.0	-3810#	110#	-4823.8	1.2	-8620#	200#	
Bk		97	13490#	200#	8823	4	6874	4	-6060#	210#	-4067	4	-8767	14	
Cf		98	14480#	200#	7290#	110#	7420#	100#	-8370#	240#	-1100#	110#	-11880#	280#	
Es		99	15260#	310#	5860#	290#	8072	10	*		-280#	290#	-11720#	450#	
Fm		100	15910#	370#	4540#	270#	8690	50	*		2690#	220#	*		
244		Np	93	10360#	360#	*		3970#	420#	3320#	300#	*		-2630#	300#
	Pu	94	11054	5	13390#	200#	4665.5	1.0	1353	5	-9880#	400#	-5441	5	
	Am	95	11731.4	1.0	12120	200	5138	17	-835	14	-7290#	30#	-5374.0	1.4	
	Cm	96	12494.2	0.4	10842.7	0.7	5901.74	0.05	-3025.5	2.5	-6591.1	2.7	-8309	4	
	Bk	97	13160#	200#	9332	14	6779	4	-5310#	180#	-3750	14	-8350#	120#	
	Cf	98	14050	13	7904.0	2.5	7328.9	1.8	-7490#	200#	-2993.4	2.7	-11340#	210#	
	Es	99	14920#	310#	6290#	270#	7940#	100#	*		50#	180#	-11410#	280#	
	Fm	100	15580#	450#	5000#	200#	8550#	200#	*		690#	230#	*		
	245	Np	93	10070#	400#	*		3840#	570#	4050#	400#	*		-1930#	400#
		Pu	94	10719	14	13800#	400#	4560#	300#	2175	14	*		-4773	14
Am		95	11416.7	3.0	12550#	30#	5220	70	86.6	3.0	-8590#	300#	-4622.9	2.6	
Cm		96	12321.5	1.4	11329.0	2.9	5623.0	1.0	-2382.0	2.4	-6091	5	-7782	14	
Bk		97	13018	5	9938.6	2.0	6454.5	1.4	-4550#	200#	-5354.5	1.7	-7735.0	2.9	
Cf		98	13750#	110#	8374.8	2.4	7258.4	1.8	-6800#	200#	-2355.9	2.2	-10710#	180#	
Es		99	14520#	290#	6900#	200#	7909	3	-8910#	370#	-1640#	200#	-10670#	280#	
Fm		100	15320#	290#	5380#	230#	8440#	100#	*		1420#	200#	*		
Md		101	*		4050#	370#	8980#	210#	*		1960#	360#	*		
246		Pu	94	10553	15	*		4350#	200#	2777	15	*		-4578	15
	Am	95	11028#	18#	12790#	300#	5150#	200#	1030#	60#	-8240#	400#	-4081#	18#	
	Cm	96	11977.9	1.1	11766	5	5475.1	0.9	-1473.3	1.5	-7850	14	-7268.4	1.8	
	Bk	97	12890	60	10490	60	6070	60	-3930#	230#	-5220	60	-7490	60	
	Cf	98	13530.0	2.7	8939.8	1.1	6861.6	1.0	-6097	15	-4201.9	1.5	-10350#	200#	
	Es	99	14270#	290#	7390#	220#	7740#	100#	-8210#	340#	-1200#	220#	-10360#	300#	
	Fm	100	14920#	200#	5869	16	8377	8	*		-487	16	-13160#	310#	
	Md	101	*		4490#	320#	8890	40	*		2460#	330#	*		

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		Q(4β ⁻)		Q(d,α)		Q(p,α)		Q(n,α)	
247	Pu	94	4360#	200#	*		3000#	200#	13870#	450#	10770#	360#	*	
	Am	95	5910#	100#	5530#	100#	-1420#	100#	14690#	100#	12210#	100#	9600#	310#
	Cm	96	5155	4	6750#	18#	-6140#	120#	14343	5	10517	4	11374	5
	Bk	97	6550	60	4417	5	-10450#	210#	15197	5	11901	5	11256	5
	Cf	98	6059	15	5150	60	*		14999	16	10252	21	13296	15
	Es	99	7400#	220#	2802	20	*		15902	20	11963	20	13509	24
	Fm	100	6590#	120#	3520#	250#	*		16020#	230#	10510#	220#	15840#	120#
	Md	101	8250#	330#	1540#	210#	*		16460#	280#	11840#	290#	15560#	280#
248	Am	95	4660#	220#	5830#	280#	260#	210#	15880#	200#	12250#	200#	10260#	450#
	Cm	96	6212	5	7050#	100#	-4505	10	13109#	18#	10355	6	9860	13
	Bk	97	5480#	70#	4740#	70#	-9070#	250#	16170#	70#	11940#	70#	11830#	70#
	Cf	98	6935	16	5540	7	-13380#	220#	13980	60	10288	5	11881	5
	Es	99	6350#	60#	3090#	60#	*		16920#	50#	11780#	50#	14130#	50#
	Fm	100	7850#	120#	3969	21	*		14710#	220#	10400#	200#	14158	9
	Md	101	6860#	320#	1810#	260#	*		17670#	240#	11830#	310#	16430#	310#
	No	102	*		2610#	310#	*		15220#	340#	10210#	380#	16080#	300#
249	Am	95	5530#	360#	*		1930#	300#	14710#	360#	12570#	300#	*	
	Cm	96	4713.37	0.25	7100#	200#	-2769	8	14310#	100#	10620#	18#	11002	15
	Bk	97	6300#	70#	4832	5	-7380#	200#	15027	4	12096.0	2.1	10502#	18#
	Cf	98	5585	5	5640#	70#	-12060#	280#	14946	5	10620	60	12753.8	1.7
	Es	99	7200#	60#	3350#	30#	*		15780#	30#	11950#	30#	12850#	70#
	Fm	100	6450	10	4070#	50#	*		15653	20	10480#	220#	15075	6
	Md	101	7990#	310#	1950#	200#	*		16270#	230#	11910#	200#	14980#	300#
	No	102	6910#	360#	2660#	370#	*		16560#	350#	10530#	380#	17240#	280#
250	Cm	96	5832	10	7400#	300#	-1083	14	13140#	200#	10700#	100#	9530#	200#
	Bk	97	4970	4	5089	6	-5680#	300#	16269	6	12281	5	11440#	100#
	Cf	98	6625.3	1.7	5967.6	2.1	-10390#	200#	13800#	70#	10545	5	11284	4
	Es	99	6020#	100#	3790#	100#	*		16700#	100#	11990#	100#	13380#	100#
	Fm	100	7518	10	4390#	30#	*		14480#	50#	10359	21	13616	17
	Md	101	6670#	360#	2180#	300#	*		17440#	300#	11820#	320#	15700#	300#
	No	102	8290#	340#	2960#	280#	*		15130#	310#	10490#	290#	15540#	230#
	Lr	103	*		1120#	360#	*		16660#	410#	11970#	370#	16230#	380#
251	Cm	96	4412	25	*		695	27	14260#	300#	10950#	200#	*	
	Bk	97	5794	11	5050	15	-3737	22	15189	11	12700	11	10310#	200#
	Cf	98	5107	4	6104	5	-8710#	120#	14997	5	10920#	70#	12389	5
	Es	99	6790#	100#	3947	6	-13220#	300#	15498	6	12138	8	1080#	70#
	Fm	100	6191	17	4560#	100#	*		15490#	30#	10520#	50#	14360	16
	Md	101	7740#	300#	2396	21	*		16157	20	11932	21	14310#	60#
	No	102	6780#	230#	3070#	320#	*		16330#	230#	10570#	260#	16600#	120#
	Lr	103	*		1120#	360#	*		16660#	410#	11970#	370#	16230#	380#
252	Cm	96	5670#	300#	*		2240#	300#	*		10820#	420#	*	
	Bk	97	4770#	200#	5400#	200#	-1980#	240#	16260#	200#	12650#	200#	11080#	360#
	Cf	98	6172	5	6483	11	-6837	11	13795	6	11049	5	10930.24	0.25
	Es	99	5290	50	4130	50	-11440#	240#	16830	50	12430	50	13090	50
	Fm	100	7208	16	4985	8	*		14300#	100#	10510#	30#	12738	6
	Md	101	6530#	130#	2730#	130#	*		17150#	130#	11850#	130#	14980#	130#
	No	102	8050#	120#	3384	21	*		14950#	300#	10500#	200#	14998	11
	Lr	103	7060#	380#	1400#	260#	*		17890#	310#	11820#	370#	17150#	310#
253	Bk	97	5680#	410#	5420#	470#	-250#	360#	14990#	360#	12800#	360#	*	
	Cf	98	4804	4	6520#	200#	-5058	9	14784	12	11215	7	11958	11
	Es	99	6350	50	4310	5	-9560#	200#	15589	5	12706.7	2.1	11710	4
	Fm	100	5540	6	5240	50	-14210#	410#	15546	7	10990#	100#	13823	3
	Md	101	7410#	130#	2930#	30#	*		15930#	40#	11970#	30#	13590#	110#
	No	102	6584	12	3440#	130#	*		16104	20	10590#	300#	15933	10
	Lr	103	8230#	310#	1580#	200#	*		16440#	230#	11880#	290#	15590#	360#
	Rf	104	*		2470#	470#	*		16540#	510#	*		17640#	460#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q($2\beta^-$)		Q(ϵ_p)		Q(β^-n)	
247	Pu	94	10220#	200#	*		4280#	450#	3570#	200#	*		-3960#	200#
	Am	95	10890#	100#	13370#	410#	4850#	110#	1660#	100#	*		-3540#	100#
	Cm	96	11613	4	12223	14	5354	3	-569	16	-7150	15	-6510	60
	Bk	97	12467	5	10989	6	5890	5	-3088	20	-6793#	19#	-6672	5
	Cf	98	13426	16	9479	15	6495	15	-5570#	120#	-3804	15	-9870#	220#
	Es	99	13930#	200#	7815	20	7462	20	-7360#	210#	-2680	60	-9681	25
	Fm	100	14660#	230#	6290#	120#	8258	10	*		290#	120#	-12510#	280#
	Md	101	15480#	370#	5010#	290#	8764	10	*		750#	310#	*	
248	Am	95	10570#	200#	*		4940#	360#	2480#	210#	*		-3040#	200#
	Cm	96	11368	5	12580	15	5161.73	0.25	154	7	-9000#	200#	-6169	7
	Bk	97	12030#	90#	11490#	70#	5780#	70#	-2220#	90#	-6360#	120#	-6090#	70#
	Cf	98	12995	5	9957	5	6361	5	-4659	10	-5583	6	-9410	20
	Es	99	13740#	230#	8250#	80#	7160#	50#	-6850#	240#	-2480#	50#	-9440#	130#
	Fm	100	14432	18	6771	9	7994	8	-8720#	230#	-1494	18	-12110#	210#
	Md	101	15110#	350#	5330#	330#	8700#	150#	*		1280#	240#	*	
	No	102	*		4150#	230#	9230#	100#	*		1660#	250#	*	
249	Am	95	10190#	310#	*		4730#	500#	3250#	300#	*		-2360#	300#
	Cm	96	10926	5	12930#	200#	5147	13	1025	5	*		-5400#	70#
	Bk	97	11783	6	11880#	100#	5523.4	2.1	-1330#	30#	-8000#	200#	-5461	5
	Cf	98	12521	15	10386	4	6296.1	0.7	-3795	6	-4956	5	-8650#	50#
	Es	99	13550#	40#	8890#	30#	6940#	30#	-6060#	200#	-4190#	80#	-8790#	30#
	Fm	100	14300#	120#	7161	17	7709	6	-8260#	280#	-1008	8	-11700#	240#
	Md	101	14850#	290#	5920#	200#	8441	18	*		-360#	210#	-11460#	300#
	No	102	*		4470#	300#	9170#	200#	*		2600#	280#	*	
250	Cm	96	10546	10	*		5169	18	1818	11	*		-4932	11
	Bk	97	11270#	70#	12190#	200#	5531#	18#	-280#	100#	-7440#	300#	-4846	4
	Cf	98	12211	5	10799	5	6128.44	0.19	-2901	8	-6868	5	-8080#	30#
	Es	99	13220#	110#	9430#	120#	6830#	120#	-5410#	320#	-3910#	100#	-8370#	100#
	Fm	100	13968	12	7745	9	7557	8	-7490#	200#	-2942	8	-11230#	200#
	Md	101	14660#	380#	6250#	310#	8310#	200#	*		170#	300#	-11220#	410#
	No	102	15200#	300#	4910#	200#	8950#	200#	*		750#	200#	*	
251	Cm	96	10245	23	*		5120#	200#	2513	22	*		-4374	23
	Bk	97	10764	11	12450#	300#	5650#	100#	716	12	*		-4014	11
	Cf	98	11732	4	11193	5	6177.0	0.9	-1818	16	-6143	11	-7160#	100#
	Es	99	12810#	30#	9915	6	6598	3	-4453	20	-5727	7	-7631	10
	Fm	100	13709	16	8350	15	7425.1	2.0	-6900#	120#	-2507	15	-10750#	300#
	Md	101	14410#	200#	6790#	40#	7963	4	-8760#	300#	-1550#	100#	-10670#	200#
	No	102	15070#	300#	5250#	120#	8752	4	*		1490#	120#	*	
	Lr	103	*		4080#	360#	9370#	360#	*		1810#	420#	*	
252	Cm	96	10080#	300#	*		*		3020#	300#	*		-4250#	300#
	Bk	97	10560#	200#	*		5550#	280#	1240#	210#	*		-3670#	200#
	Cf	98	11279	5	11533	10	6216.87	0.04	-782	7	-7903	23	-6550	8
	Es	99	12070#	110#	10230	50	6790#	50#	-3220#	140#	-5220	50	-6730	50
	Fm	100	13398	10	8932	6	7152.7	2.0	-6055	11	-4608	7	-10221	20
	Md	101	14260#	330#	7290#	160#	7790#	140#	-8230#	270#	-1290#	130#	-10410#	170#
	No	102	14830#	200#	5779	12	8548	5	*		-371	18	-12930#	300#
	Lr	103	*		4470#	380#	9164	17	*		2480#	240#	*	
253	Bk	97	10440#	360#	*		5400#	200#	1910#	360#	*		-3180#	360#
	Cf	98	10977	6	11925	23	6126	4	-47	7	-7040#	300#	-6060	50
	Es	99	11642	6	10793	11	6739.16	0.05	-2160#	30#	-6810#	200#	-5874	6
	Fm	100	12748	16	9365	5	7198.0	2.7	-5011	7	-3975	6	-9230#	130#
	Md	101	13940#	40#	7920#	30#	7573	8	-7400#	200#	-3410#	60#	-9770#	30#
	No	102	14630#	120#	6172	17	8414	4	-9200#	410#	253	9	-12450#	240#
	Lr	103	15290#	360#	4970#	200#	8918	20	*		780#	240#	*	
	Rf	104	*		3870#	430#	9350#	300#	*		3400#	410#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		Q($4\beta^-$)		Q(d, α)		Q(p, α)		Q(n, α)	
254	Bk	97	4610#	470#	*		940#	310#	16050#	420#	12610#	300#	*	
	Cf	98	6032	12	6880#	360#	-3383	16	13520#	200#	10977	16	10339	25
	Es	99	5094	4	4599	7	-7880#	300#	16668	6	12720	6	12409	11
	Fm	100	6516	4	5399.3	2.8	-12290#	280#	14320	50	11255	6	12414	5
	Md	101	5790#	110#	3180#	100#	*		17350#	100#	12360#	100#	14590#	100#
	No	102	7707	12	3740#	30#	*		14930#	130#	10622	21	14417	18
	Lr	103	6780#	360#	1780#	300#	*		17710#	300#	11890#	320#	16550#	300#
	Rf	104	8430#	500#	2670#	350#	*		15170#	370#	10330#	410#	15990#	310#
255	Cf	98	4600#	200#	6870#	360#	-2000#	200#	14590#	410#	11140#	280#	11400#	360#
	Es	99	5973	12	4540	16	-5857	21	15499	12	12919	11	11200#	200#
	Fm	100	5175	5	5480	6	-10530#	120#	15497	5	11370	50	13412	5
	Md	101	6680#	100#	3349	7	-14890#	420#	16206	7	12891	8	13200	50
	No	102	5989	18	3940#	100#	*		16340#	40#	11160#	130#	15636	16
	Lr	103	8000#	300#	2066	20	*		16298	19	11939	20	15080#	130#
	Rf	104	6940#	310#	2830#	320#	*		16470#	230#	10460#	260#	17110#	120#
	Db	105	*		750#	510#	*		16890#	590#	*		16640#	490#
256	Cf	98	5840#	370#	*		-780#	320#	13360#	430#	10980#	480#	*	
	Es	99	4980#	100#	4910#	220#	-4560#	130#	16560#	100#	12750#	100#	11910#	370#
	Fm	100	6385	7	5892	12	-8735	19	14206	8	11337	7	11831	6
	Md	101	5460#	120#	3630#	120#	-13040#	270#	17260#	120#	12970#	120#	14090#	120#
	No	102	7055	17	4309	10	*		15080#	100#	11510#	30#	14121	8
	Lr	103	6270	80	2350	80	*		17730	80	12250	80	16220#	90#
	Rf	104	8180#	120#	3014	25	*		15060#	300#	10510#	200#	15509	19
	Db	105	7310#	490#	1120#	270#	*		18010#	370#	11810#	480#	17570#	310#
257	Es	99	5860#	420#	4930#	520#	-3200#	410#	15300#	460#	12930#	410#	10660#	510#
	Fm	100	4968	6	5890#	100#	-7277	12	15211	12	11463	7	12895	12
	Md	101	6530#	120#	3779	7	-11210#	200#	15907	5	12957	3	12651	4
	No	102	5645	10	4500#	120#	*		16117	9	11660#	100#	14992	7
	Lr	103	7210#	90#	2510#	50#	*		16510#	50#	12750#	50#	14800#	110#
	Rf	104	6426	21	3170	80	*		16631	21	10860#	300#	16789	15
	Db	105	8360#	310#	1300#	200#	*		16590#	230#	11870#	350#	15980#	360#
258	Es	99	4770#	510#	*		-2080#	320#	16370#	430#	12760#	360#	*	
	Fm	100	6240#	200#	6270#	460#	-5920#	200#	13950#	220#	11200#	200#	11260#	280#
	Md	101	5380	5	4191	7	-10110#	310#	16912	8	12751	6	13244	12
	No	102	6840#	100#	4810#	100#	-13760#	430#	14730#	160#	11500#	100#	13330#	100#
	Lr	103	5900#	110#	2760#	100#	*		17670#	100#	12840#	100#	15590#	100#
	Rf	104	7600	30	3550#	60#	*		15310	90	11260	40	15180	40
	Db	105	6480#	370#	1360#	310#	*		18290#	310#	12330#	330#	17500#	310#
	Sg	106	*		2250#	460#	*		15460#	480#	10370#	590#	16560#	430#
259	Fm	100	4790#	350#	6290#	410#	-4660#	290#	15010#	500#	11380#	300#	12310#	420#
	Md	101	6130#	200#	4090#	280#	-8370#	210#	15750#	200#	13000#	200#	12090#	220#
	No	102	5440#	140#	4870#	100#	-12450#	150#	15830#	100#	11520#	160#	14270#	100#
	Lr	103	7000#	120#	2920#	120#	*		16310#	70#	12890#	70#	14040#	140#
	Rf	104	6050#	80#	3710#	130#	*		16470#	90#	11480#	110#	16190#	70#
	Db	105	7880#	310#	1640	60	*		16830	50	12630	60	15890	100
	Sg	106	6760#	430#	2530#	330#	*		17060#	230#	10920#	270#	17980#	120#
260	Fm	100	6010#	580#	*		-3380#	550#	13770#	590#	11230#	650#	*	
	Md	101	5150#	370#	4440#	420#	-7120#	330#	16840#	370#	12830#	320#	12800#	520#
	No	102	6570#	220#	5300#	280#	-10940#	200#	14640#	200#	11480#	200#	12670#	200#
	Lr	103	5650#	140#	3120#	160#	-15050#	280#	17510#	160#	12890#	120#	14930#	120#
	Rf	104	7290#	210#	3990#	210#	*		15080#	230#	11410#	210#	14550#	200#
	Db	105	6390#	110#	1980#	120#	*		18040#	100#	12670#	90#	16710#	100#
	Sg	106	8080#	120#	2730	60	*		15460#	310#	11200#	200#	16327	23
	Bh	107	*		520#	270#	*		18790#	480#	*		18760#	320#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q($2\beta^-$)		Q(ϵp)		Q($\beta^- n$)	
254	Bk	97	10290#	360#	*	*	*	2400#	300#	*		-2980#	300#	
	Cf	98	10836	11	12290#	300#	5927	5	438	12	*	-5744	12	
	Es	99	11450	50	11120#	200#	6615.7	1.5	-1460#	100#	-6230#	360#	-5428	5
	Fm	100	12056	6	9709	5	7307.5	1.9	-3820	10	-5687	6	-8340#	30#
	Md	101	13200#	160#	8420#	110#	7800#	140#	-6420#	320#	-2850#	100#	-8980#	100#
	No	102	14290	14	6671	11	8226	9	-8470#	280#	-1913	10	-11920#	200#
	Lr	103	15010#	380#	5220#	330#	8816	12	*	*	1410#	300#	-11760#	510#
	Rf	104	*	*	4250#	280#	9210#	200#	*	*	1550#	280#	*	*
255	Cf	98	10630#	200#	*	*	5740#	200#	1010#	200#	*		-5250#	200#
	Es	99	11067	11	11420#	360#	6436.3	1.3	-754	13	-7590#	300#	-4885	11
	Fm	100	11691	5	10079	6	7239.7	1.8	-3006	16	-4830	12	-7730#	100#
	Md	101	12470#	30#	8748	7	7905.9	2.6	-5103	19	-4437	8	-7952	12
	No	102	13695	16	7120	15	8428	3	-7520#	120#	-1386	15	-11140#	300#
	Lr	103	14770#	200#	5810#	40#	8556	7	-9790#	420#	-800#	100#	-11320#	280#
	Rf	104	15370#	430#	4610#	120#	9055	4	*	*	2320#	120#	*	*
	Db	105	*	*	3420#	470#	9580#	300#	*	*	2570#	520#	*	*
256	Cf	98	10440#	320#	*	*	5560#	100#	1550#	310#	*		-5120#	320#
	Es	99	10950#	100#	11780#	310#	6230#	220#	-270#	160#	*		-4690#	100#
	Fm	100	11560	7	10433	12	7027	5	-2337	10	-6610#	200#	-7428	10
	Md	101	12140#	160#	9110#	120#	7740#	110#	-4290#	150#	-3920#	120#	-7420#	120#
	No	102	13043	13	7658	8	8581	5	-6399	19	-3266	9	-10195	19
	Lr	103	14270#	310#	6290#	130#	8810#	100#	-8750#	250#	-390	80	-10660#	140#
	Rf	104	15120#	280#	5080	20	8926	15	*	*	126	23	-13580#	420#
	Db	105	*	*	3950#	390#	9340	30	*	*	3260#	240#	*	*
257	Es	99	10830#	410#	*	*	6050#	200#	410#	410#	*		-4160#	410#
	Fm	100	11353	6	10800#	200#	6863.5	1.4	-1660	9	-5740#	310#	-6940#	120#
	Md	101	11990	7	9671	11	7557.6	1.0	-3610#	40#	-5480#	100#	-6898	8
	No	102	12699	16	8128	8	8477	6	-5617	13	-2526	10	-9570	80
	Lr	103	13480#	50#	6820#	50#	9010#	30#	-7600#	210#	-2140#	130#	-9690#	50#
	Rf	104	14610#	120#	5518	18	9083	8	*	*	755	13	-12700#	240#
	Db	105	15670#	470#	4320#	200#	9206	20	*	*	1170#	220#	*	*
	258	Es	99	10630#	310#	*	*	5880#	420#	1010#	300#	*		-3960#
Fm		100	11200#	200#	11190#	370#	6660#	200#	-1050#	220#	*		-6640#	200#
Md		101	11910#	120#	10080#	100#	7271.3	1.9	-3100#	100#	-5000#	410#	-6633	8
No		102	12490#	100#	8590#	100#	8150#	100#	-4860#	110#	-4400#	100#	-9200#	110#
Lr		103	13110#	130#	7250#	160#	8904	19	-7020#	320#	-1500#	100#	-9160#	100#
Rf		104	14020	40	6060	30	9190	30	-8900#	410#	-1200	30	-11940#	210#
Db		105	14840#	390#	4530#	320#	9500	50	*	*	1900#	310#	*	*
Sg		106	*	*	3560#	410#	9620#	300#	*	*	2090#	410#	*	*
259	Fm	100	11030#	280#	*	*	6470#	200#	-410#	300#	*		-6050#	280#
	Md	101	11510#	200#	10360#	460#	7110#	200#	-2230#	210#	-6370#	360#	-5930#	220#
	No	102	12280#	100#	9060#	100#	7890#	100#	-4250#	120#	-3610#	220#	-8740#	140#
	Lr	103	12900#	80#	7720#	70#	8580#	70#	-6140#	90#	-3120#	70#	-8560#	80#
	Rf	104	13650#	70#	6470#	70#	9130#	70#	-8200#	140#	-410#	120#	-11510#	310#
	Db	105	14360#	210#	5190#	70#	9620	50	*	*	-80#	120#	-11320#	420#
	Sg	106	*	*	3890#	120#	9804	21	*	*	2930#	120#	*	*
	260	Fm	100	10800#	550#	*	*	6300#	400#	150#	550#	*		-5930#
Md		101	11280#	320#	10730#	440#	6940#	300#	-1730#	340#	*		-5630#	330#
No		102	12010#	220#	9390#	280#	7700#	200#	-3540#	280#	-5380#	350#	-8310#	210#
Lr		103	12650#	160#	7990#	120#	8400#	140#	-5400#	160#	-2640#	240#	-8160#	140#
Rf		104	13340#	200#	6910#	220#	8900#	200#	-7400#	200#	-2250#	220#	-10910#	210#
Db		105	14270#	320#	5690#	140#	9500#	40#	-9650#	260#	530#	120#	-10960#	150#
Sg		106	14840#	410#	4370	40	9901	10	*	*	900#	80#	*	*
Bh		107	*	*	3050#	390#	10400	50	*	*	4040#	250#	*	*

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		Q(4 β^-)		Q(d, α)		Q(p, α)		Q(n, α)	
261	Md	101	6050#	660#	4480#	770#	-5670#	580#	15580#	640#	13020#	610#	11520#	650#
	No	102	5230#	280#	5390#	370#	-9550#	200#	15540#	280#	11630#	200#	13680#	280#
	Lr	103	6790#	240#	3340#	280#	-13570#	290#	16160#	220#	12950#	220#	13520#	200#
	Rf	104	5900#	210#	4240#	130#	*		16180#	90#	11400#	110#	15490#	110#
	Db	105	7490#	140#	2190#	230#	*		16600#	130#	12770#	120#	15110#	150#
	Sg	106	6613	28	2960#	100#	*		16730	60	11070#	310#	17310	40
	Bh	107	8260#	320#	700#	210#	*		17290#	240#	12760#	460#	16980#	370#
262	Md	101	5020#	710#	*		-4630#	450#	16570#	660#	12790#	510#	*	
	No	102	6430#	410#	5770#	680#	-8270#	360#	14260#	480#	11340#	410#	12040#	460#
	Lr	103	5530#	280#	3640#	280#	-12440#	370#	17200#	280#	12860#	220#	14120#	280#
	Rf	104	7000#	230#	4460#	300#	*		14830#	260#	11410#	240#	13930#	250#
	Db	105	6060#	180#	2350#	150#	*		17820#	250#	12760#	160#	16050#	160#
	Sg	106	7710	40	3170#	120#	*		15410#	100#	11240	60	15650#	80#
	Bh	107	6660#	370#	750#	310#	*		18710#	310#	12850#	330#	18200#	310#
263	No	102	5040#	610#	5790#	650#	-7060#	500#	15260#	750#	11440#	580#	13010#	710#
	Lr	103	6440#	350#	3660#	460#	-10770#	420#	15990#	350#	12980#	350#	12830#	420#
	Rf	104	5680#	290#	4600#	270#	-14930#	220#	15940#	270#	11380#	220#	14820#	270#
	Db	105	7220#	220#	2570#	280#	*		16500#	180#	12830#	260#	14480#	210#
	Sg	106	6250#	100#	3360#	170#	*		16650#	150#	11380#	130#	16690#	220#
	Bh	107	8120#	430#	1160#	310#	*		17200#	310#	12810#	310#	16470#	320#
	Hs	108	*		2110#	330#	*		17290#	240#	11260#	280#	18820#	130#
264	No	102	6190#	810#	*		-5770#	710#	14090#	770#	11300#	870#	*	
	Lr	103	5430#	520#	4040#	660#	-9680#	470#	16990#	570#	12790#	480#	13450#	720#
	Rf	104	6780#	400#	4940#	460#	-13490#	360#	14690#	410#	11380#	410#	13270#	410#
	Db	105	5820#	290#	2720#	300#	*		17680#	330#	12900#	240#	15450#	310#
	Sg	106	7480#	300#	3620#	330#	*		15240#	320#	11400#	300#	15110#	290#
	Bh	107	6510#	350#	1420#	200#	*		18400#	180#	12920#	180#	17450#	210#
	Hs	108	8230#	130#	2220#	310#	*		15730#	310#	11290#	210#	17200	30
265	Lr	103	6220#	750#	4070#	890#	-8120#	650#	15810#	780#	13000#	710#	12250#	740#
	Rf	104	5460#	510#	4980#	570#	-12210#	360#	15670#	460#	11450#	410#	14240#	510#
	Db	105	6950#	330#	2880#	420#	-16190#	500#	16410#	290#	12960#	320#	14030#	300#
	Sg	106	6060#	310#	3850#	270#	*		16400#	210#	11400#	190#	16050#	260#
	Bh	107	7770#	290#	1720#	370#	*		16880#	250#	12850#	240#	15750#	270#
	Hs	108	6730	40	2450#	180#	*		17120#	310#	11220#	310#	18180	40
	Mt	109	*		170#	450#	*		17670#	470#	*		17780#	550#
266	Lr	103	4680#	800#	*		-6490#	540#	17320#	830#	13360#	710#	*	
	Rf	104	6690#	590#	5450#	770#	-11060#	470#	14410#	640#	11210#	550#	12590#	680#
	Db	105	5820#	360#	3240#	460#	-15230#	420#	17370#	460#	12810#	340#	14650#	400#
	Sg	106	7250#	270#	4160#	330#	*		14970#	340#	11370#	300#	14480#	310#
	Bh	107	6320#	290#	1980#	200#	*		18040#	330#	12780#	190#	16640#	230#
	Hs	108	7840	50	2510#	240#	*		15790#	180#	11510#	310#	16590#	100#
	Mt	109	6790#	550#	230#	310#	*		19110#	310#	13110#	330#	19110#	430#
267	Rf	104	4700#	740#	5470#	770#	-9210#	580#	15920#	840#	11930#	720#	14080#	870#
	Db	105	6730#	500#	3290#	630#	-13720#	650#	16100#	550#	12860#	550#	13350#	600#
	Sg	106	5850#	370#	4190#	400#	-18080#	310#	16060#	360#	11340#	360#	15410#	450#
	Bh	107	7410#	310#	2140#	360#	*		16680#	290#	12850#	390#	15050#	350#
	Hs	108	6560#	100#	2740#	190#	*		17010#	250#	11460#	200#	17520#	300#
	Mt	109	8240#	590#	640#	500#	*		17600#	500#	13090#	500#	17380#	530#
	Ds	110	*		1330#	340#	*		17950#	470#	*		20000#	140#
268	Rf	104	6040#	920#	*		-7360#	770#	14560#	880#	12110#	940#	*	
	Db	105	5090#	670#	3670#	780#	-12090#	580#	17700#	710#	13240#	640#	14480#	810#
	Sg	106	7110#	540#	4560#	630#	-16850#	560#	14780#	550#	11180#	520#	13760#	590#
	Bh	107	6030#	460#	2320#	470#	*		17900#	450#	12870#	400#	15970#	440#
	Hs	108	7890#	300#	3220#	390#	*		15430#	330#	11340#	370#	15680#	310#
	Mt	109	6710#	550#	790#	250#	*		18720#	240#	13110#	230#	18440#	330#
	Ds	110	8340#	330#	1430#	590#	*		16400#	430#	11830#	540#	18390#	300#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q($2\beta^-$)		Q(ϵp)		Q($\beta^- n$)	
261	Md	101	11190#	610#	*		6750#	400#	-980#	610#	*		-5110#	610#
	No	102	11800#	220#	9830#	350#	7440#	200#	-2870#	210#	-4600#	550#	-7890#	240#
	Lr	103	12430#	210#	8640#	280#	8140#	200#	-4690#	230#	-4280#	370#	-7660#	280#
	Rf	104	13180#	90#	7370#	110#	8650	50	-6680	50	-1580#	210#	-10420#	110#
	Db	105	13880#	120#	6180#	130#	9220#	100#	-8890#	240#	-1320#	170#	-10370#	110#
	Sg	106	14700#	120#	4930#	80#	9714	15	*		1570#	200#	-13390#	250#
	Bh	107	*		3430#	220#	10500	50	*		2170#	230#	*	
262	Md	101	11070#	530#	*		6500#	300#	-480#	470#	*		-4900#	470#
	No	102	11650#	410#	10240#	620#	7250#	300#	-2290#	420#	*		-7530#	410#
	Lr	103	12320#	240#	9030#	370#	7990#	200#	-4150#	250#	-3760#	610#	-7290#	210#
	Rf	104	12900#	300#	7800#	300#	8490#	200#	-5970#	230#	-3350#	300#	-9930#	250#
	Db	105	13560#	170#	6600#	190#	9050#	100#	-8290#	340#	-590#	250#	-9820#	140#
	Sg	106	14320	40	5360#	200#	9600	15	*		-240	60	-12840#	210#
	Bh	107	14920#	390#	3710#	320#	10319	15	*		3000#	330#	*	
263	No	102	11470#	530#	*		7000#	400#	-1660#	520#	*		-7040#	530#
	Lr	103	11970#	350#	9430#	640#	7680#	200#	-3380#	330#	-5190#	510#	-6740#	360#
	Rf	104	12680#	190#	8250#	270#	8250#	150#	-5400#	210#	-2600#	400#	-9540#	230#
	Db	105	13280#	200#	7030#	260#	8830#	150#	-7380#	350#	-2280#	260#	-9330#	170#
	Sg	106	13960#	100#	5710#	110#	9400	60	-9530#	160#	510#	240#	-12420#	320#
	Bh	107	14780#	370#	4330#	320#	10080#	300#	*		950#	340#	*	
	Hs	108	*		2870#	130#	10730	50	*		4060#	130#	*	
264	No	102	11230#	740#	*		6820#	400#	-1070#	740#	*		-6790#	710#
	Lr	103	11870#	480#	9830#	610#	7400#	300#	-2990#	500#	*		-6480#	470#
	Rf	104	12460#	420#	8600#	510#	8040#	300#	-4710#	460#	-4340#	610#	-9110#	400#
	Db	105	13040#	280#	7320#	310#	8660#	200#	-6700#	300#	-1660#	370#	-8900#	250#
	Sg	106	13730#	290#	6190#	360#	9210#	200#	-8780#	280#	-1290#	340#	-11780#	420#
	Bh	107	14630#	350#	4780#	230#	9960#	150#	*		1660#	240#	-11730#	220#
	Hs	108	*		3380	50	10591	20	*		2080#	100#	*	
265	Lr	103	11640#	670#	*		7230#	200#	-2250#	650#	*		-5920#	710#
	Rf	104	12240#	400#	9020#	610#	7810#	300#	-4110#	380#	-3610#	740#	-8740#	430#
	Db	105	12770#	280#	7820#	360#	8500#	100#	-5870#	320#	-3180#	490#	-8370#	360#
	Sg	106	13540#	160#	6570#	220#	9050#	110#	-8100#	130#	-570#	380#	-11330#	220#
	Bh	107	14280#	380#	5330#	290#	9680#	210#	-10320#	510#	-300#	330#	-11280#	240#
	Hs	108	14960#	130#	3870#	100#	10470	15	*		2830#	280#	*	
	Mt	109	*		2390#	540#	11120#	400#	*		3330#	490#	*	
266	Lr	103	10900#	680#	*		7570#	300#	-1120#	590#	*		-5140#	630#
	Rf	104	12140#	590#	9510#	800#	7550#	300#	-3540#	530#	*		-8480#	520#
	Db	105	12770#	370#	8220#	520#	8210#	200#	-5370#	330#	-2780#	670#	-8130#	310#
	Sg	106	13310#	370#	7040#	440#	8800#	100#	-7520#	250#	-2360#	440#	-10810#	340#
	Bh	107	14090#	240#	5830#	290#	9430#	80#	-9860#	350#	330#	280#	-10870#	160#
	Hs	108	14570	50	4220#	290#	10346	16	*		1050#	130#	-13610#	450#
	Mt	109	*		2670#	350#	10996	25	*		4320#	390#	*	
267	Rf	104	11390#	680#	*		7890#	300#	-2390#	640#	*		-7360#	640#
	Db	105	12550#	470#	8740#	730#	7920#	300#	-4690#	490#	-4840#	660#	-7620#	480#
	Sg	106	13100#	300#	7430#	450#	8630#	210#	-6820#	290#	-1530#	540#	-10340#	320#
	Bh	107	13730#	350#	6300#	350#	9230#	200#	-9020#	570#	-1260#	390#	-10440#	270#
	Hs	108	14390#	100#	4720#	160#	10037	13	-11270#	170#	1750#	260#	-13380#	320#
	Mt	109	15030#	680#	3140#	550#	10870#	400#	*		2390#	530#	*	
	Ds	110	*		1560#	140#	11780	50	*		5490#	140#	*	
268	Rf	104	10740#	850#	*		8040#	300#	-1330#	850#	*		-6670#	820#
	Db	105	11820#	600#	9140#	740#	8260#	300#	-3750#	650#	*		-6850#	600#
	Sg	106	12960#	530#	7850#	660#	8300#	300#	-6030#	550#	-3930#	740#	-10040#	540#
	Bh	107	13440#	420#	6510#	480#	9020#	300#	-8340#	450#	-560#	560#	-9920#	390#
	Hs	108	14450#	290#	5370#	380#	9623	16	-10820#	410#	-300#	400#	-13030#	580#
	Mt	109	14960#	390#	3540#	280#	10670#	150#	*		3100#	350#	-12840#	270#
	Ds	110	*		2070#	300#	11660#	300#	*		3710#	320#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)	S(p)	$Q(4\beta^-)$	$Q(d,\alpha)$	$Q(p,\alpha)$	$Q(n,\alpha)$						
269	Db	105	5990#	860#	3620#	980#	-10160#	820#	16410#	890#	13940#	820#	13170#	850#
	Sg	106	5060#	590#	4540#	640#	-15020#	370#	16450#	550#	11940#	460#	15390#	590#
	Bh	107	7400#	530#	2610#	600#	*		16360#	470#	12730#	450#	14390#	470#
	Hs	108	6310#	310#	3510#	400#	*		16530#	290#	11350#	210#	16620#	280#
	Mt	109	7910#	520#	810#	540#	*		17370#	470#	13040#	470#	16850#	490#
	Ds	110	6880#	300#	1600#	240#	*		17760#	500#	11740#	310#	19340	50
270	Db	105	4860#	900#	*		-8360#	620#	17590#	930#	13780#	830#	*	
	Sg	106	6400#	670#	4950#	880#	-13190#	560#	15140#	770#	12280#	690#	13690#	800#
	Bh	107	5330#	470#	2880#	460#	*		18140#	550#	13250#	400#	15800#	500#
	Hs	108	7570#	280#	3680#	450#	*		14990#	460#	11190#	360#	14900#	370#
	Mt	109	6670#	490#	1170#	210#	*		18590#	330#	12930#	200#	17590#	310#
	Ds	110	8230	60	1920#	470#	*		16240#	240#	11750#	510#	17670#	110#
271	Sg	106	4810#	810#	4890#	840#	-11190#	590#	16320#	900#	12560#	790#	14930#	920#
	Bh	107	6310#	530#	2790#	710#	*		16890#	570#	14050#	650#	14580#	690#
	Hs	108	5390#	390#	3740#	410#	*		17000#	480#	11830#	480#	16620#	560#
	Mt	109	7680#	370#	1280#	410#	*		17220#	350#	13130#	440#	15940#	500#
	Ds	110	6800#	110#	2060#	200#	*		17350#	470#	11660#	250#	18760#	300#
272	Sg	106	6250#	970#	*		-9440#	880#	14930#	980#	12300#	1030#	*	
	Bh	107	5270#	700#	3260#	800#	-13980#	590#	18010#	780#	13840#	650#	15290#	870#
	Hs	108	6840#	590#	4270#	680#	*		15490#	590#	12390#	630#	14840#	630#
	Mt	109	5590#	590#	1480#	570#	*		19200#	550#	13860#	500#	17750#	610#
	Ds	110	8000#	420#	2370#	530#	*		16010#	450#	11570#	620#	17070#	430#
	Rg	111	*		460#	250#	*		18800#	240#	12800#	240#	19110#	520#
273	Sg	106	4630#	920#	*		-8370#	520#	*		12530#	780#	*	
	Bh	107	6230#	920#	3240#	1070#	-12000#	910#	16590#	940#	14010#	930#	13920#	950#
	Hs	108	5110#	630#	4110#	650#	*		16690#	580#	12610#	470#	16130#	670#
	Mt	109	7150#	680#	1790#	700#	*		17450#	560#	14280#	540#	15930#	560#
	Ds	110	5710#	430#	2490#	500#	*		17990#	360#	12530#	220#	18940#	280#
	Rg	111	8210#	580#	670#	670#	*		17400#	540#	12820#	530#	17570#	550#
274	Bh	107	4990#	950#	3590#	780#	-10900#	630#	17840#	980#	13820#	840#	*	
	Hs	108	6560#	700#	4440#	950#	*		15410#	800#	12360#	740#	14380#	830#
	Mt	109	5420#	600#	2100#	510#	*		18860#	620#	14250#	460#	16810#	570#
	Ds	110	7280#	410#	2620#	620#	*		16300#	620#	12940#	510#	17050#	490#
	Rg	111	6090#	560#	1060#	220#	*		19310#	450#	13530#	200#	19160#	380#
275	Bh	107	6100#	850#	*		-9570#	790#	16380#	780#	13970#	980#	*	
	Hs	108	4940#	830#	4380#	840#	*		16700#	950#	12690#	800#	15690#	970#
	Mt	109	6600#	590#	2150#	750#	*		17360#	600#	14480#	690#	15480#	720#
	Ds	110	5630#	580#	2830#	550#	*		17820#	640#	12900#	640#	18260#	660#
	Rg	111	7430#	550#	1210#	650#	*		17580#	540#	14100#	660#	17320#	710#
276	Hs	108	6410#	990#	4690#	1000#	-12070#	1000#	15280#	1000#	12520#	1090#	13910#	940#
	Mt	109	5490#	720#	2700#	810#	*		18430#	810#	14100#	660#	16220#	920#
	Ds	110	7150#	690#	3370#	720#	*		16100#	650#	12900#	730#	16220#	660#
	Rg	111	5840#	820#	1420#	760#	*		19020#	740#	13970#	640#	18630#	790#
	Cn	112	*		2190#	790#	*		16450#	620#	12580#	800#	17620#	610#
277	Hs	108	4860#	970#	*		-10940#	560#	16510#	810#	12640#	810#	*	
	Mt	109	6510#	950#	2810#	1110#	*		16860#	970#	14150#	970#	14700#	980#
	Ds	110	5380#	670#	3270#	670#	*		17320#	610#	12940#	520#	17390#	710#
	Rg	111	7390#	850#	1660#	790#	*		17270#	710#	13860#	690#	16660#	670#
	Cn	112	5990#	610#	2350#	650#	*		17880#	540#	12680#	230#	18900#	420#
278	Mt	109	5240#	1000#	3180#	830#	-13290#	660#	18020#	1020#	13840#	860#	15560#	870#
	Ds	110	7020#	730#	3780#	990#	*		15780#	830#	12520#	780#	15310#	860#
	Rg	111	5810#	670#	2090#	520#	*		18600#	650#	13680#	550#	17450#	590#
	Cn	112	7590#	460#	2550#	720#	*		16130#	770#	12520#	680#	16940#	610#
	Ed	113	*		830#	230#	*		19250#	620#	*		19280#	550#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q($2\beta^-$)		Q(ϵp)		Q($\beta^- n$)	
269	Db	105	11070#	790#	*		8490#	300#	-2330#	770#	*		-5730#	820#
	Sg	106	12170#	460#	8210#	680#	8700	50	-4780#	390#	-2950#	800#	-9060#	530#
	Bh	107	13430#	460#	7170#	560#	8570#	300#	-7830#	600#	-2870#	650#	-9420#	470#
	Hs	108	14210#	160#	5830#	300#	9370#	160#	-10250#	130#	500#	490#	-12630#	260#
	Mt	109	14620#	680#	4030#	530#	10530#	400#	*		1220#	600#	-12410#	550#
	Ds	110	15230#	140#	2400#	100#	11509	30	*		4720#	290#	*	
270	Db	105	10850#	800#	*		8310#	300#	-1870#	660#	*		-5530#	700#
	Sg	106	11450#	730#	8560#	910#	8990#	300#	-3600#	610#	*		-8060#	670#
	Bh	107	12720#	480#	7410#	600#	9060	50	-6490#	330#	-2210#	740#	-8440#	310#
	Hs	108	13880#	380#	6290#	530#	9050	40	-9590#	250#	-2010#	440#	-12290#	530#
	Mt	109	14580#	290#	4670#	420#	10180	50	*		1940#	410#	-12190#	170#
	Ds	110	15110#	310#	2730#	290#	11117	28	*		2800#	130#	*	
271	Sg	106	11200#	690#	*		8890#	110#	-3020#	660#	*		-7540#	650#
	Bh	107	11630#	580#	7740#	810#	9490	160	-5110#	550#	-3660#	750#	-7170#	510#
	Hs	108	12960#	320#	6620#	470#	9510#	110#	-8170#	310#	-1010#	630#	-11010#	340#
	Mt	109	14350#	570#	4960#	500#	9910#	200#	*		-410#	440#	-11650#	330#
	Ds	110	15030#	100#	3220#	160#	10870	18	*		3570#	270#	*	
272	Sg	106	11050#	950#	*		8680#	300#	-2430#	930#	*		-7480#	890#
	Bh	107	11580#	610#	8140#	810#	9310#	110#	-4790#	730#	*		-7050#	620#
	Hs	108	12230#	570#	7060#	760#	9780#	200#	-7010#	660#	-3040#	780#	-10170#	610#
	Mt	109	13280#	510#	5220#	560#	10350#	300#	-9190#	540#	300#	660#	-10440#	500#
	Ds	110	14810#	420#	3650#	480#	10760#	300#	*		950#	510#	*	
	Rg	111	*		2520#	290#	11197	13	*		4380#	400#	*	
273	Sg	106	10880#	770#	*		*		-1960#	620#	*		-6850#	740#
	Bh	107	11500#	860#	*		9060#	300#	-3870#	880#	*		-6450#	900#
	Hs	108	11940#	470#	7360#	690#	9730	50	-6410#	390#	-1900#	860#	-9680#	610#
	Mt	109	12740#	580#	6060#	650#	10600#	300#	-8130#	710#	-1570#	720#	-9580#	630#
	Ds	110	13710#	170#	3970#	330#	11370	50	*		2090#	530#	-12460#	270#
	Rg	111	*		3040#	620#	10900#	250#	*		1770#	720#	*	
274	Bh	107	11220#	810#	*		8930	50	-3440#	700#	*		-6330#	710#
	Hs	108	11660#	780#	7670#	970#	9570#	200#	-5690#	710#	-3820#	780#	-9090#	760#
	Mt	109	12570#	600#	6210#	650#	10510#	210#	-7460#	400#	-760#	820#	-9300#	380#
	Ds	110	12980#	570#	4410#	640#	11660#	300#	*		-90#	540#	-11530#	660#
	Rg	111	14300#	290#	3540#	520#	11480	50	*		2820#	510#	*	
275	Bh	107	11090#	950#	*		*		-2940#	760#	*		-5870#	840#
	Hs	108	11500#	690#	7980#	770#	9440	50	-5000#	720#	*		-8610#	690#
	Mt	109	12020#	670#	6590#	880#	10210#	150#	-6630#	700#	-2380#	760#	-8620#	610#
	Ds	110	12910#	440#	4930#	560#	11420#	300#	*		840#	730#	-11070#	460#
	Rg	111	13520#	740#	3830#	710#	11730#	400#	*		810#	630#	*	
276	Hs	108	11340#	990#	*		9280#	200#	-4260#	970#	*		-8410#	930#
	Mt	109	12090#	660#	7080#	820#	9990#	110#	-6280#	840#	-1770#	810#	-8480#	700#
	Ds	110	12780#	670#	5520#	810#	11110#	200#	-7810#	810#	-1370#	800#	-10790#	750#
	Rg	111	13270#	650#	4250#	720#	11480#	400#	*		1570#	780#	*	
	Cn	112	*		3400#	710#	11910#	730#	*		1450#	730#	*	
277	Hs	108	11270#	800#	*		9050#	200#	-3740#	660#	*		-7790#	770#
	Mt	109	12000#	900#	7500#	970#	9710#	200#	-5400#	950#	*		-7850#	940#
	Ds	110	12530#	570#	5970#	700#	10840#	110#	-7200#	410#	-340#	890#	-10330#	740#
	Rg	111	13230#	770#	5030#	730#	11240#	300#	*		-330#	790#	-10250#	820#
	Cn	112	*		3770#	450#	11620	50	*		2600#	570#	*	
278	Mt	109	11750#	840#	*		9460#	200#	-4830#	730#	*		-7710#	740#
	Ds	110	12400#	830#	6580#	1010#	10370#	200#	-6630#	760#	-2500#	830#	-9960#	840#
	Rg	111	13200#	720#	5360#	660#	10850	50	-8460#	400#	370#	850#	-10070#	390#
	Cn	112	13590#	740#	4210#	700#	11310#	200#	*		390#	580#	*	
	Ed	113	*		3170#	660#	11850	50	*		3430#	600#	*	

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(n)		S(p)		$Q(4\beta^-)$	$Q(d,\alpha)$		$Q(p,\alpha)$		$Q(n,\alpha)$		
279	Mt	109	6430#	920#	*		-11990#	970#	16460#	860#	13820#	1040#	*	
	Ds	110	5220#	870#	3760#	870#	*		17070#	970#	12790#	810#	16490#	1000#
	Rg	111	6930#	590#	2000#	780#	*		17050#	610#	13900#	720#	16010#	730#
	Cn	112	5850#	640#	2590#	590#	*		17670#	730#	12510#	780#	18240#	720#
	Ed	113	7730#	720#	960#	830#	*		17520#	710#	13750#	920#	17400#	940#
280	Ds	110	6940#	1020#	4270#	1060#	*		15370#	1040#	12360#	1130#	14410#	990#
	Rg	111	5820#	730#	2590#	820#	*		18260#	840#	13460#	680#	16700#	950#
	Cn	112	7510#	750#	3170#	750#	*		15980#	680#	12390#	810#	16110#	700#
	Ed	113	6230#	990#	1340#	840#	*		18880#	830#	13520#	710#	18560#	900#
281	Ds	110	5090#	990#	*		*		16710#	870#	12510#	840#	*	
	Rg	111	6930#	1000#	2590#	1170#	*		16540#	1020#	13550#	1030#	15010#	1040#
	Cn	112	5650#	700#	3000#	680#	*		17250#	610#	12550#	530#	17480#	740#
	Ed	113	7560#	990#	1390#	910#	*		17170#	840#	13550#	830#	16810#	790#
282	Rg	111	5500#	1060#	3000#	870#	*		17980#	1060#	13270#	900#	15930#	940#
	Cn	112	7370#	760#	3440#	1050#	*		15700#	870#	12110#	810#	15330#	890#
	Ed	113	6030#	790#	1770#	530#	*		18650#	690#	13370#	590#	17710#	590#
283	Rg	111	6740#	990#	*		*		16330#	920#	13460#	1100#	*	
	Cn	112	5490#	900#	3420#	900#	*		17150#	1020#	12440#	830#	16790#	1020#
	Ed	113	7240#	600#	1630#	820#	*		17070#	620#	13640#	760#	16300#	740#
284	Cn	112	7250#	1040#	3920#	1120#	*		15400#	1080#	12130#	1180#	14630#	1010#
	Ed	113	6060#	750#	2210#	840#	*		18380#	870#	13230#	690#	17170#	1000#
285	Cn	112	5310#	1010#	*		*		16830#	920#	12310#	870#	*	
	Ed	113	7140#	1010#	2100#	1180#	*		16730#	1030#	13460#	1050#	15530#	1060#
	Fl	114	*		2710#	720#	*		17300#	650#	12290#	570#	17890#	790#
286	Ed	113	5760#	1060#	2550#	870#	*		18210#	1080#	13190#	900#	16510#	990#
	Fl	114	7520#	790#	3090#	1060#	*		15840#	870#	12000#	820#	15860#	900#
287	Ed	113	6970#	1010#	*		*		16550#	940#	13460#	1140#	*	
	Fl	114	5700#	900#	3030#	910#	*		17280#	1030#	12370#	840#	17410#	1050#
	Ef	115	*		1260#	820#	*		17290#	650#	*		16800#	750#
288	Fl	114	7340#	1050#	3390#	1140#	*		15710#	1080#	12170#	1180#	15390#	1010#
	Ef	115	6180#	760#	1740#	840#	*		18630#	870#	13340#	720#	17770#	1010#
289	Fl	114	5420#	1020#	*		*		17260#	940#	12510#	870#	*	
	Ef	115	7250#	1010#	1650#	1180#	*		17090#	1030#	13610#	1060#	16280#	1060#
	Lv	116	*		2240#	780#	*		17660#	720#	*		18620#	840#
290	Ef	115	5880#	1070#	2110#	880#	*		18540#	1090#	13430#	910#	17370#	1020#
	Lv	116	7630#	850#	2620#	1060#	*		16210#	880#	12260#	820#	16690#	900#
291	Ef	115	7050#	1060#	*		*		16910#	990#	13710#	1180#	*	
	Lv	116	5800#	900#	2540#	910#	*		17650#	1030#	12630#	840#	18230#	1050#
	Eh	117	*		870#	910#	*		17580#	820#	*		17570#	860#
292	Lv	116	7450#	1050#	2940#	1180#	*		16080#	1090#	12420#	1190#	16190#	1020#
	Eh	117	6280#	940#	1340#	930#	*		18930#	960#	13530#	880#	18540#	1090#
293	Lv	116	5510#	1020#	*		*		17620#	990#	12790#	880#	*	
	Eh	117	7350#	1090#	1240#	1190#	*		17380#	1030#	13800#	1060#	17070#	1070#
	Ei	118	*		1610#	1010#	*		18190#	960#	*		19550#	980#
294	Eh	117	6000#	1080#	1720#	890#	*		18830#	1090#	13610#	920#	18120#	1070#
	Ei	118	7740#	990#	1990#	1060#	*		16730#	970#	12680#	920#	17610#	900#
295	Ei	118	5910#	930#	1910#	940#	*		18170#	1050#	13040#	950#	19150#	1070#

Table III. Nuclear-reaction and separation energies (continued, Explanation of Table on page 1696)

A	Elt.	Z	S(2n)		S(2p)		Q(α)		Q($2\beta^-$)		Q(ϵp)		Q($\beta^- n$)	
279	Mt	109	11670#	1020#	*		9130#	300#	-4330#	820#	*		-7110#	910#
	Ds	110	12250#	710#	6940#	810#	10080#	110#	-6000#	760#	*		-9370#	700#
	Rg	111	12740#	740#	5770#	900#	10520	50	-7670#	840#	-1310#	790#	-9410#	640#
	Cn	112	13440#	490#	4680#	610#	11090#	200#	*		1560#	780#	-11830#	500#
	Ed	113	*		3510#	900#	11560#	870#	*		1520#	790#	*	
280	Ds	110	12160#	1030#	*		9550#	200#	-5440#	1010#	*		-9390#	950#
	Rg	111	12750#	670#	6350#	850#	10190#	110#	-7260#	900#	-710#	870#	-9380#	730#
	Cn	112	13360#	730#	5160#	850#	10730#	200#	*		-720#	840#	-11610#	910#
	Ed	113	13950#	720#	3930#	790#	11170#	940#	*		2220#	840#	*	
281	Ds	110	12030#	810#	*		9320#	110#	-4880#	680#	*		-8660#	790#
	Rg	111	12750#	950#	6860#	1060#	9770#	300#	-6630#	1080#	*		-8810#	1010#
	Cn	112	13160#	610#	5590#	710#	10460	50	*		570#	910#	-11040#	800#
	Ed	113	13790#	990#	4560#	840#	11000#	900#	*		480#	900#	*	
282	Rg	111	12440#	870#	*		9510#	210#	-6100#	760#	*		-8660#	770#
	Cn	112	13020#	880#	6020#	1050#	10110#	200#	*		-1710#	860#	-10850#	960#
	Ed	113	13590#	790#	4770#	670#	10780	50	*		1390#	900#	*	
283	Rg	111	12250#	1100#	*		9190#	300#	-5610#	880#	*		-8030#	980#
	Cn	112	12860#	720#	6420#	820#	9850#	110#	*		*		-10310#	710#
	Ed	113	13260#	850#	5070#	960#	10480#	110#	*		-350#	820#	*	
284	Cn	112	12730#	1070#	*		9540#	200#	*		*		-10320#	980#
	Ed	113	13300#	680#	5630#	880#	10230#	110#	*		330#	930#	*	
285	Cn	112	12560#	820#	*		9320	50	-6080#	710#	*		-9570#	800#
	Ed	113	13200#	960#	6020#	1100#	10030	50	*		*		*	
	Fl	114	*		4920#	750#	10520#	200#	*		1550#	950#	*	
286	Ed	113	12900#	880#	*		9770	50	*		*		-9410#	800#
	Fl	114	*		5190#	1070#	10370	30	*		-660#	860#	*	
287	Ed	113	12730#	1120#	*		9540#	200#	-6810#	900#	*		-8860#	1000#
	Fl	114	13220#	750#	5580#	830#	10160	50	*		*		*	
	Ef	115	*		4350#	960#	10740	60	*		630#	830#	*	
288	Fl	114	13030#	1070#	*		10072	13	*		*		-10990#	980#
	Ef	115	*		4770#	880#	10630	50	*		1420#	950#	*	
289	Fl	114	12760#	830#	*		9970	50	-7210#	770#	*		-10230#	800#
	Ef	115	13420#	960#	5040#	1120#	10520	50	*		*		*	
	Lv	116	*		3980#	810#	11100#	300#	*		2580#	1000#	*	
290	Ef	115	13130#	890#	*		10400#	110#	*		*		-10110#	860#
	Lv	116	*		4270#	1080#	10990	80	*		370#	870#	*	
291	Ef	115	12940#	1160#	*		10320#	300#	-7880#	1030#	*		-9530#	1050#
	Lv	116	13430#	810#	4650#	830#	10890	50	*		*		*	
	Eh	117	*		3490#	1040#	11390#	400#	*		1620#	930#	*	
292	Lv	116	13250#	1080#	*		10774	15	*		*		-11600#	1060#
	Eh	117	*		3880#	980#	11290#	400#	*		2390#	1080#	*	
293	Lv	116	12970#	830#	*		10680	50	-8450#	920#	*		-10840#	900#
	Eh	117	13630#	1040#	4180#	1160#	11180	50	*		*		*	
	Ei	118	*		2950#	950#	11920#	500#	*		3720#	1120#	*	
294	Eh	117	13350#	980#	*		11070#	110#	*		*		-10960#	1000#
	Ei	118	*		3230#	1080#	11810	60	*		1500#	870#	*	
295	Ei	118	13650#	970#	3630#	850#	11700#	200#	*		*		*	

Graphs of separation and decay energies

Figs.	1– 9.	S_{2n}	two-neutron separation energies.
Figs.	10–17.	S_{2p}	two-proton separation energies.
Figs.	18–26.	Q_{α}	α -decay energies.
Figs.	27–36.	$Q_{\beta\beta}$	double β -decay energies.

Mass numbers and element symbol are indicated only along the borders of the graphs; those for the intermediate points must be derived by enumeration.

Points represent experimental values.

Open circles represent values estimated from systematic trends.

Lines connect points for isotopes ($S_{2n}, Q_{\alpha}, Q_{\beta\beta}$) or isotones ($S_{2p}, Q_{\beta\beta}$).

Other types of graphs are available from the AMDC web-site (see text).

Fig. 1. Two-neutron separation energies $N = 0$ to 25

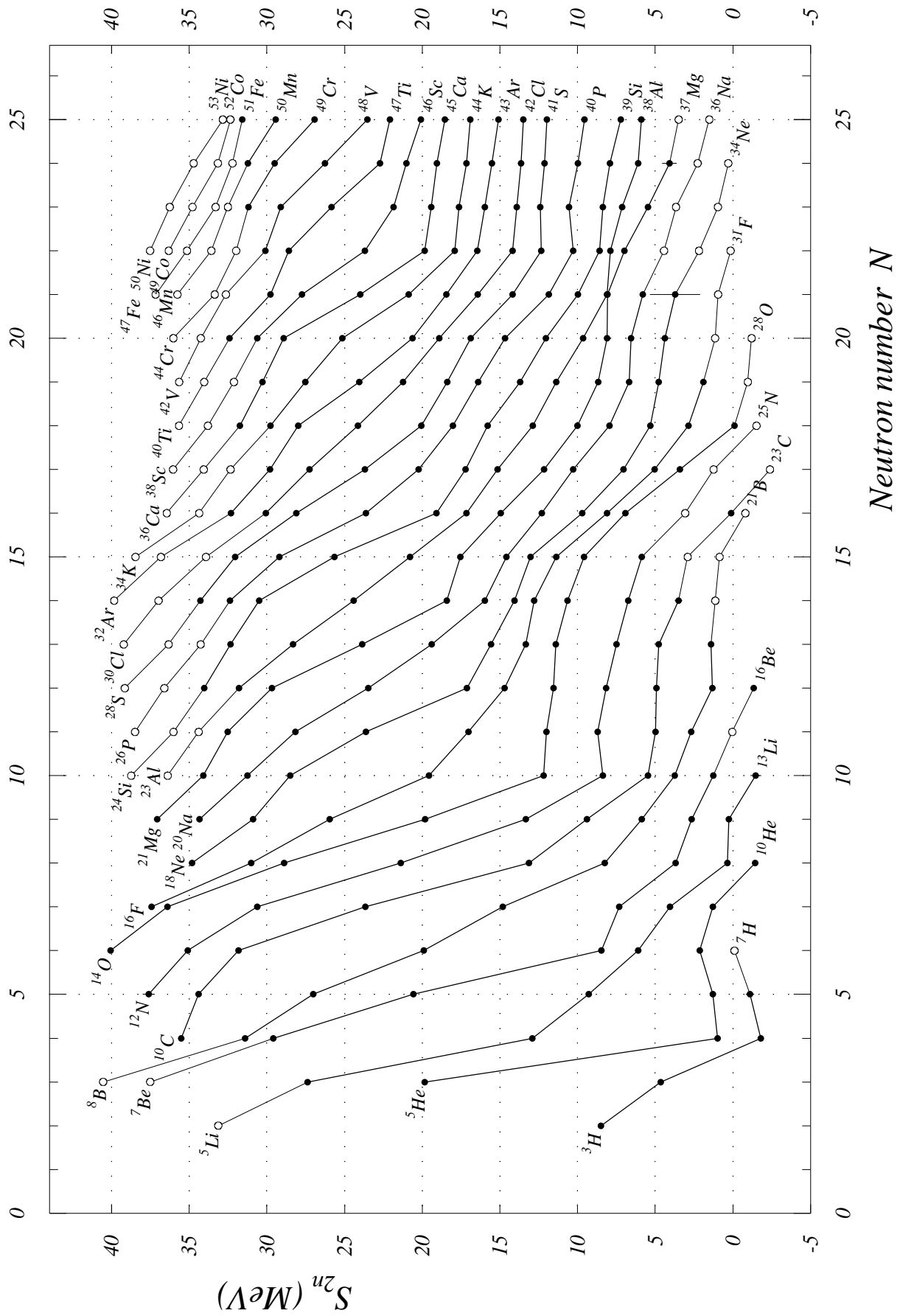


Fig. 3. Two-neutron separation energies $N = 42$ to 65

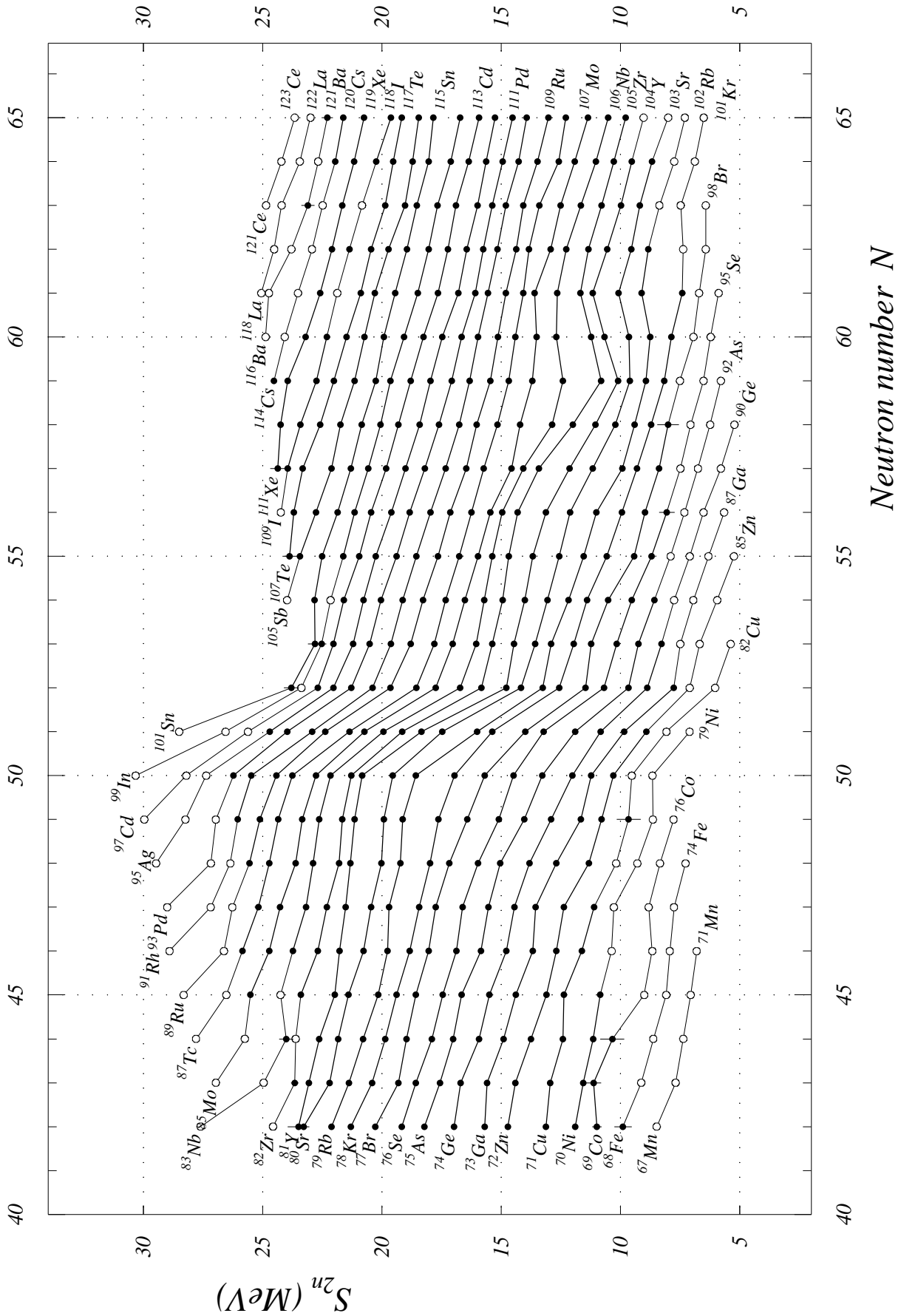


Fig. 6. Two-neutron separation energies $N = 102$ to 125

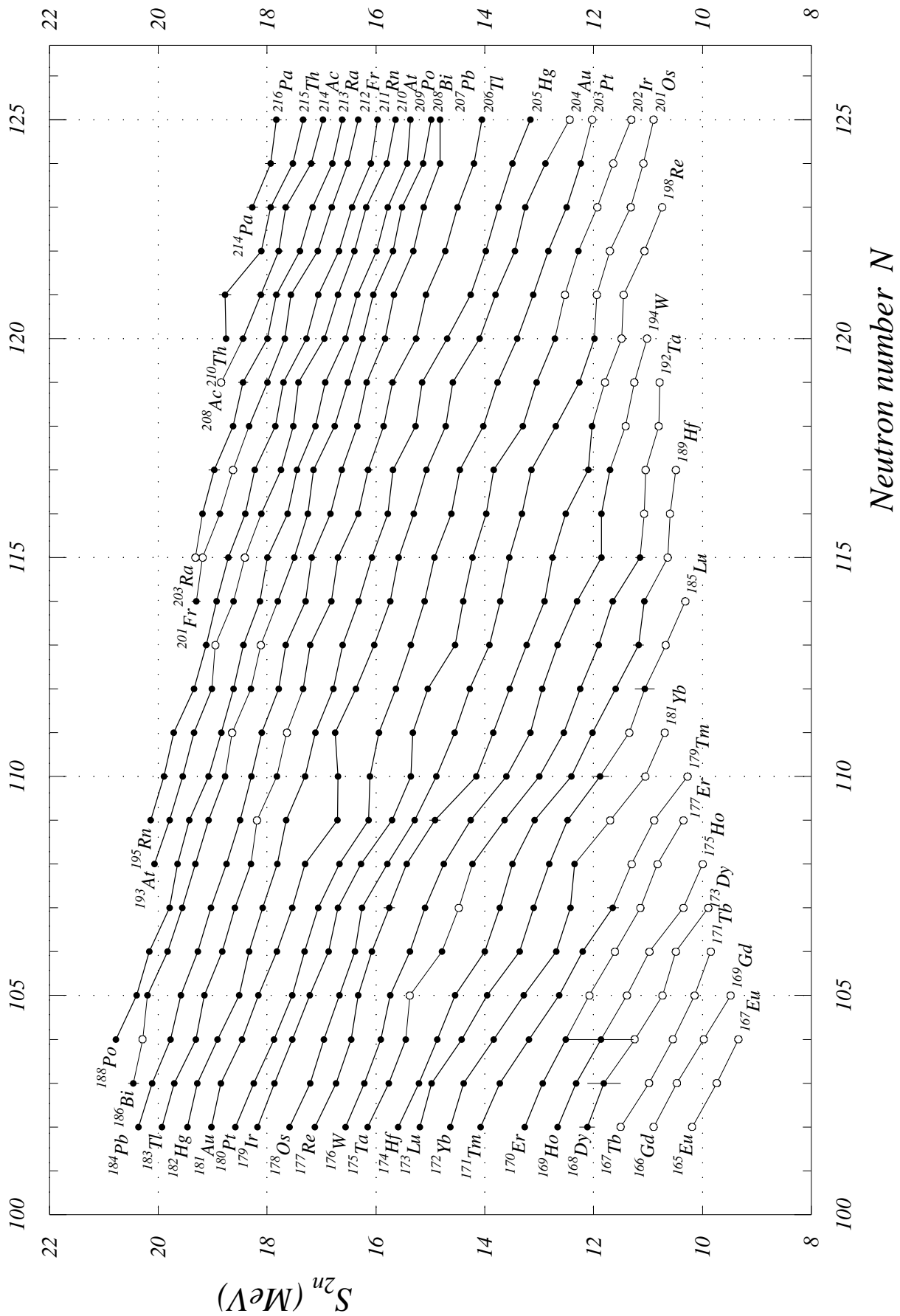


Fig. 7. Two-neutron separation energies $N = 122$ to 145

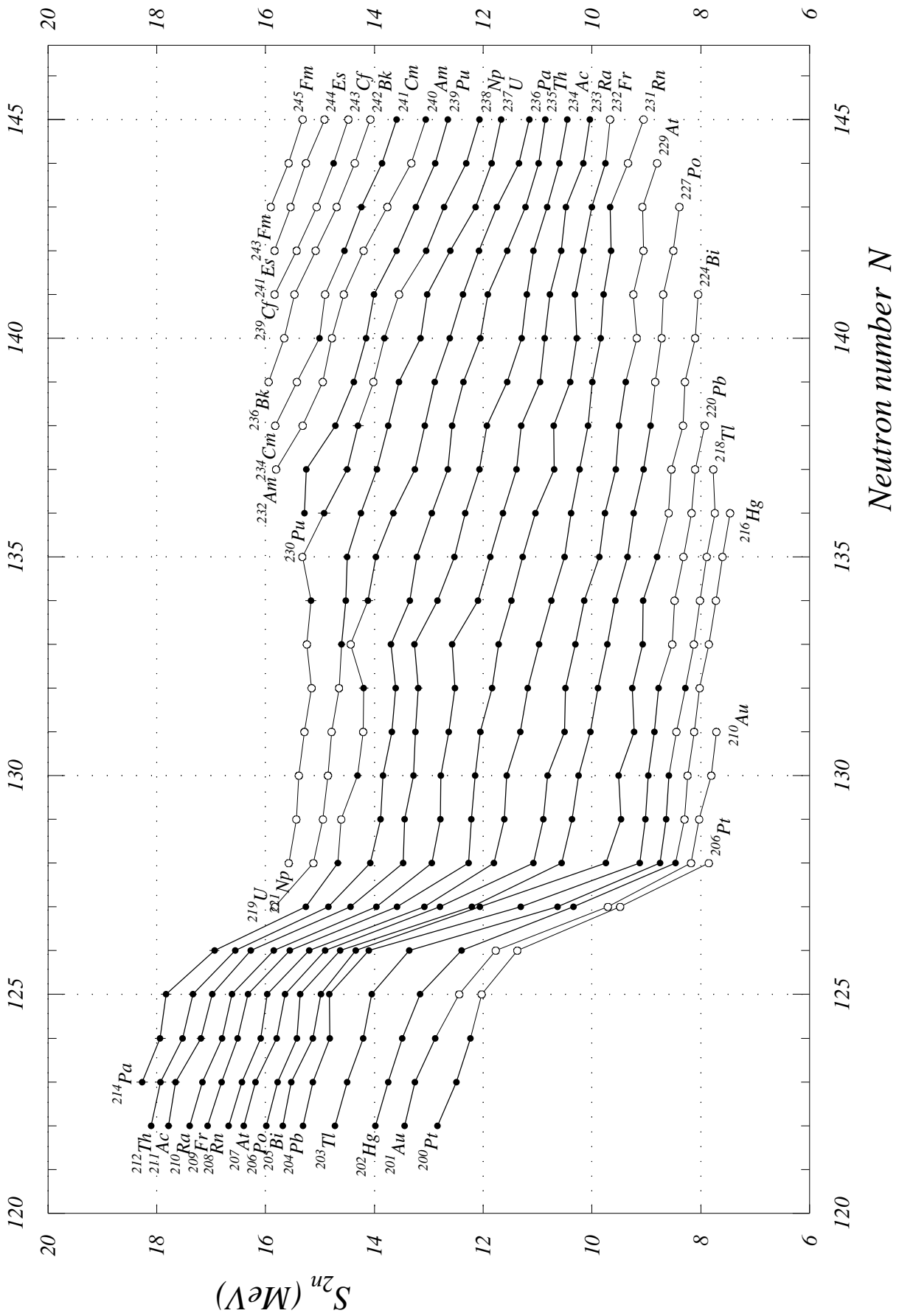


Fig. 9. Two-neutron separation energies $N = 155$ to 178

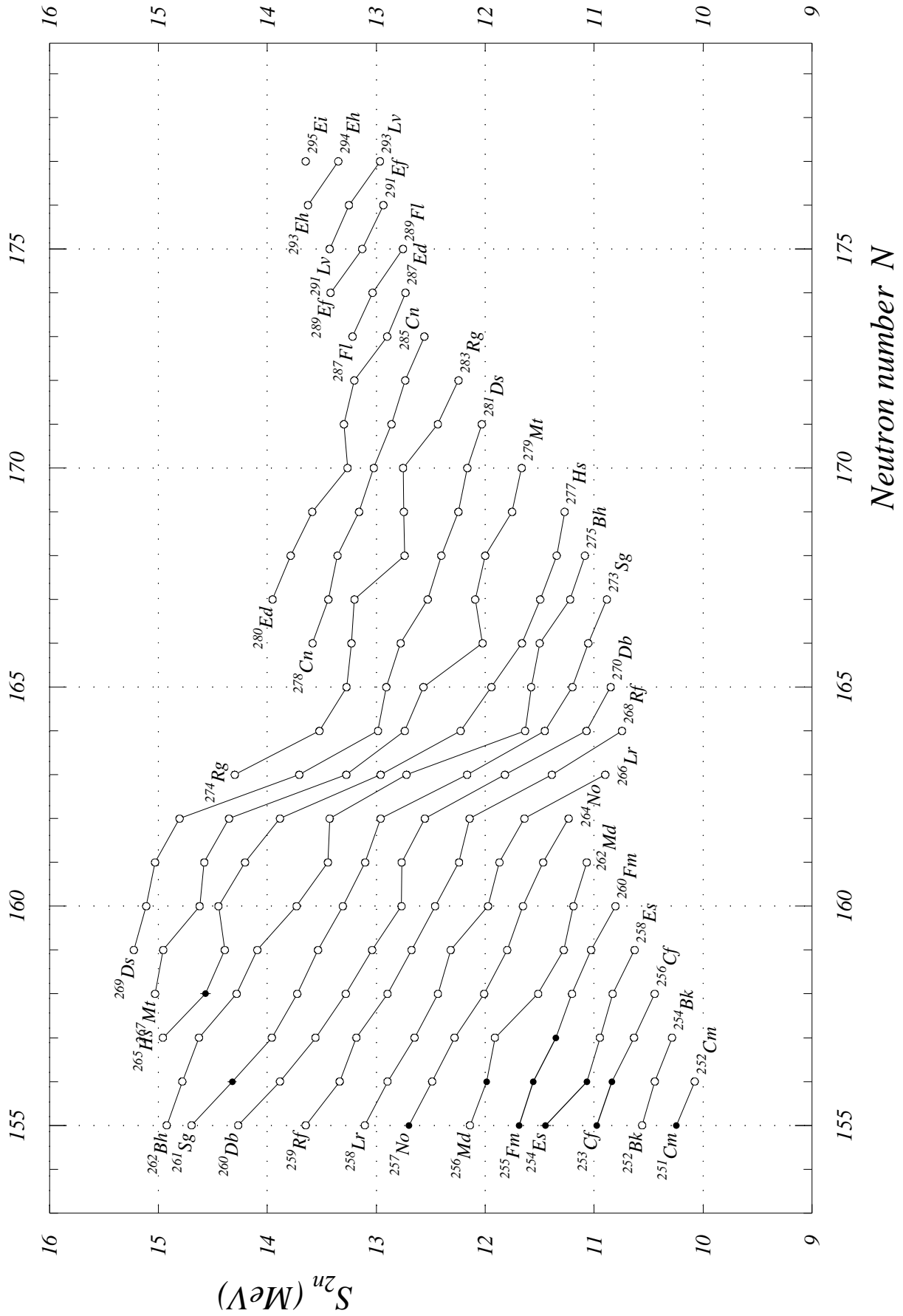


Fig. 10. Two-proton separation energies $Z = 0$ to 20

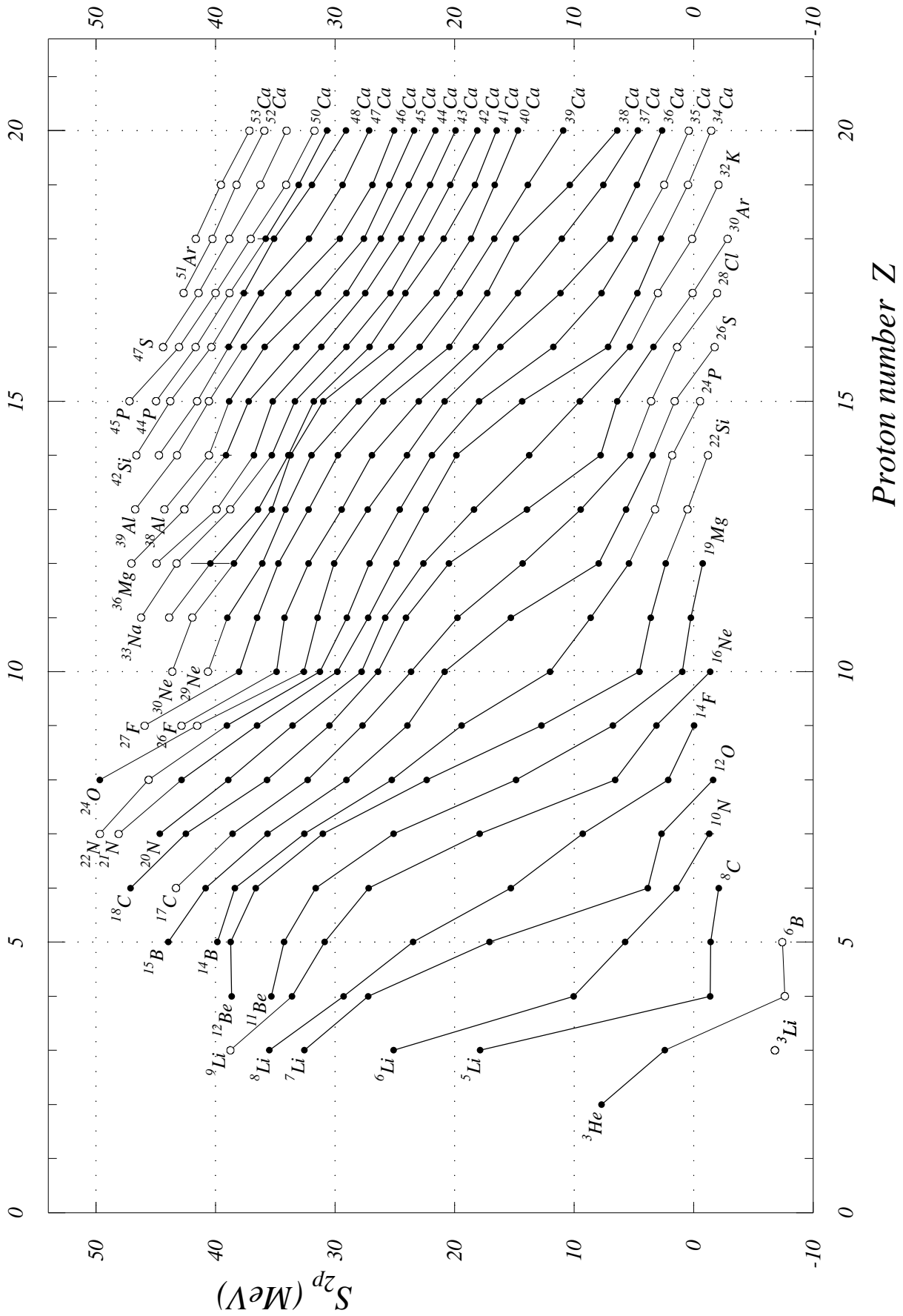


Fig. 11. Two-proton separation energies $Z = 17$ to 35

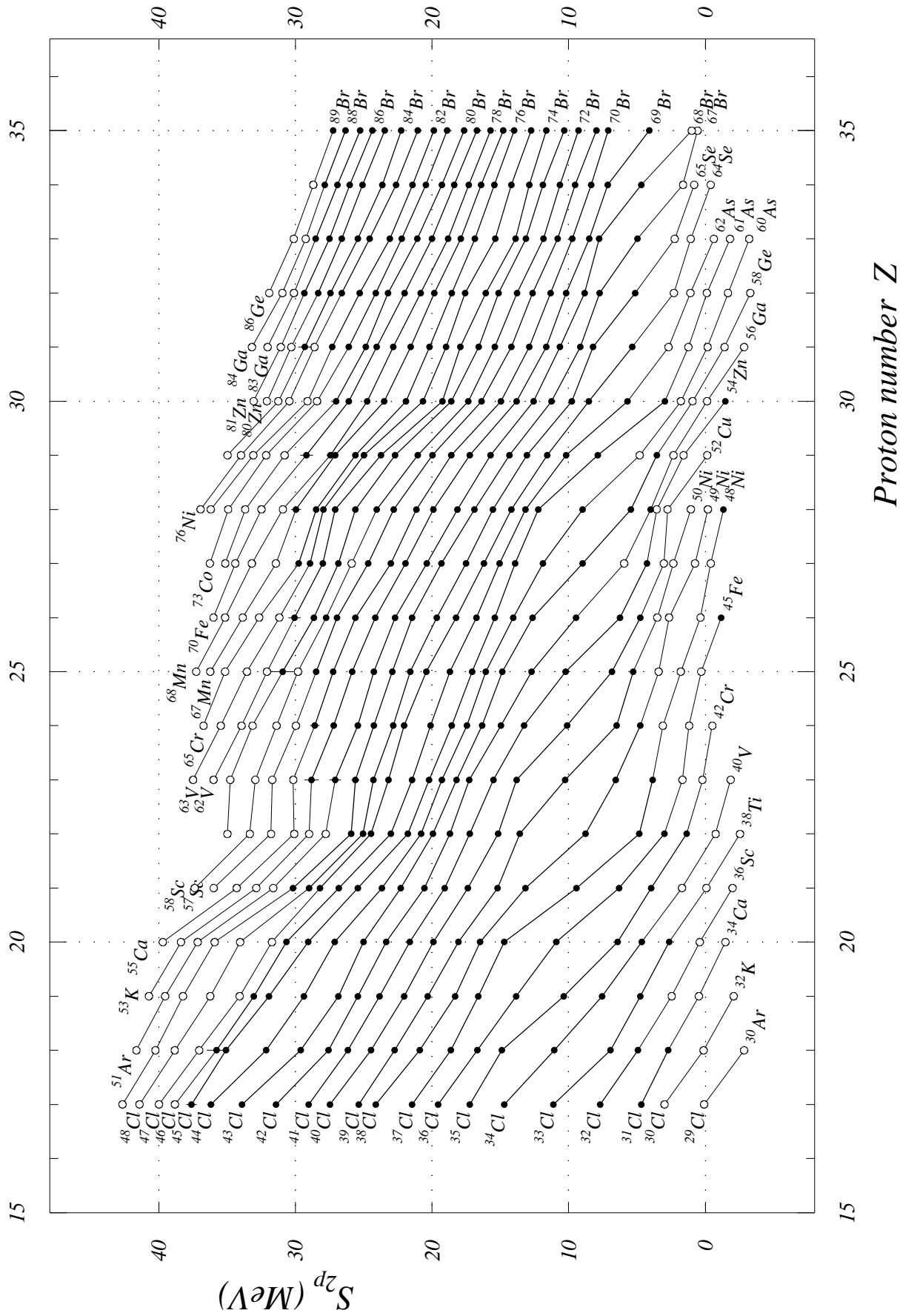


Fig. 12. Two-proton separation energies $Z = 32$ to 50

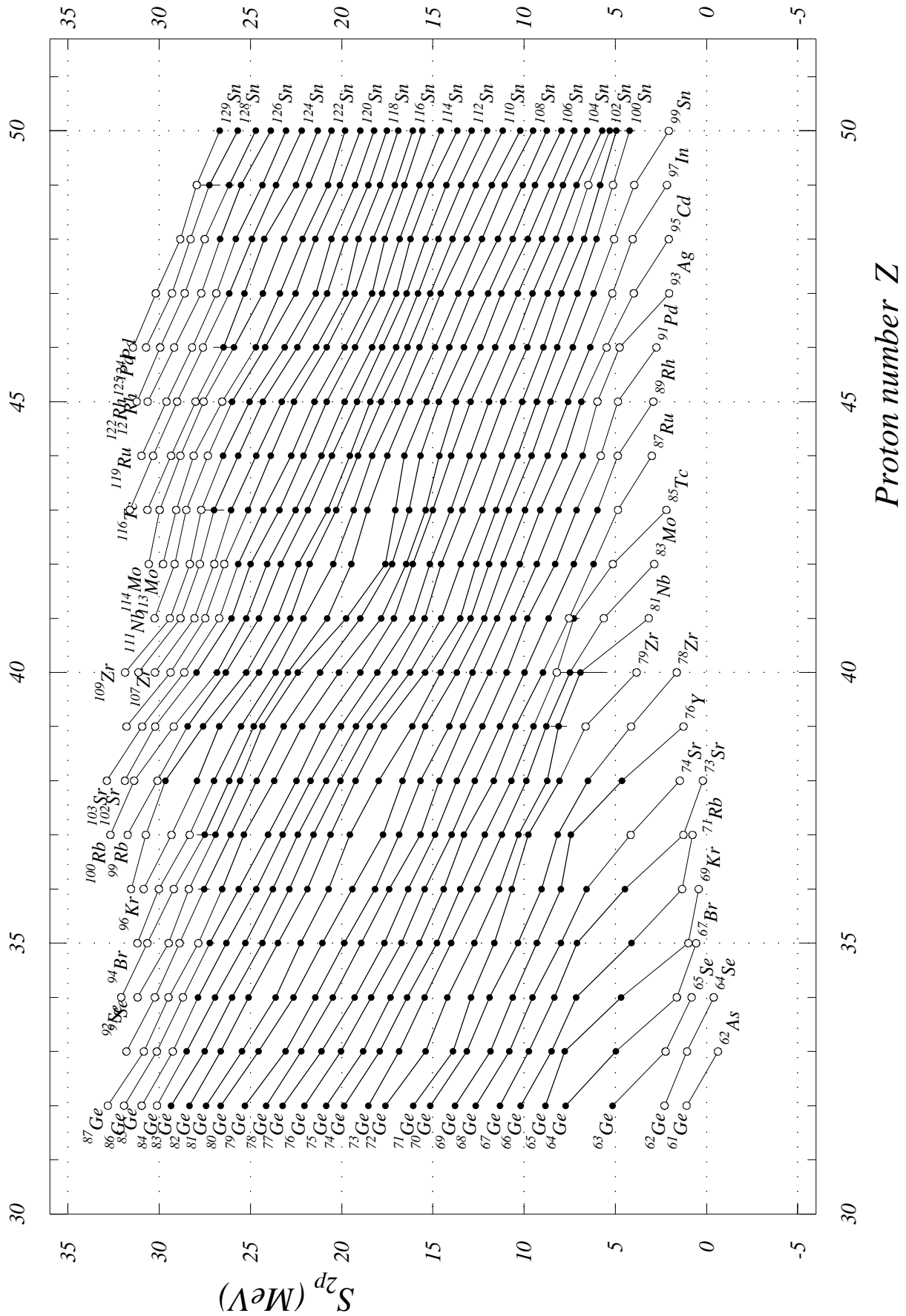


Fig. 14. Two-proton separation energies $Z = 62$ to 80

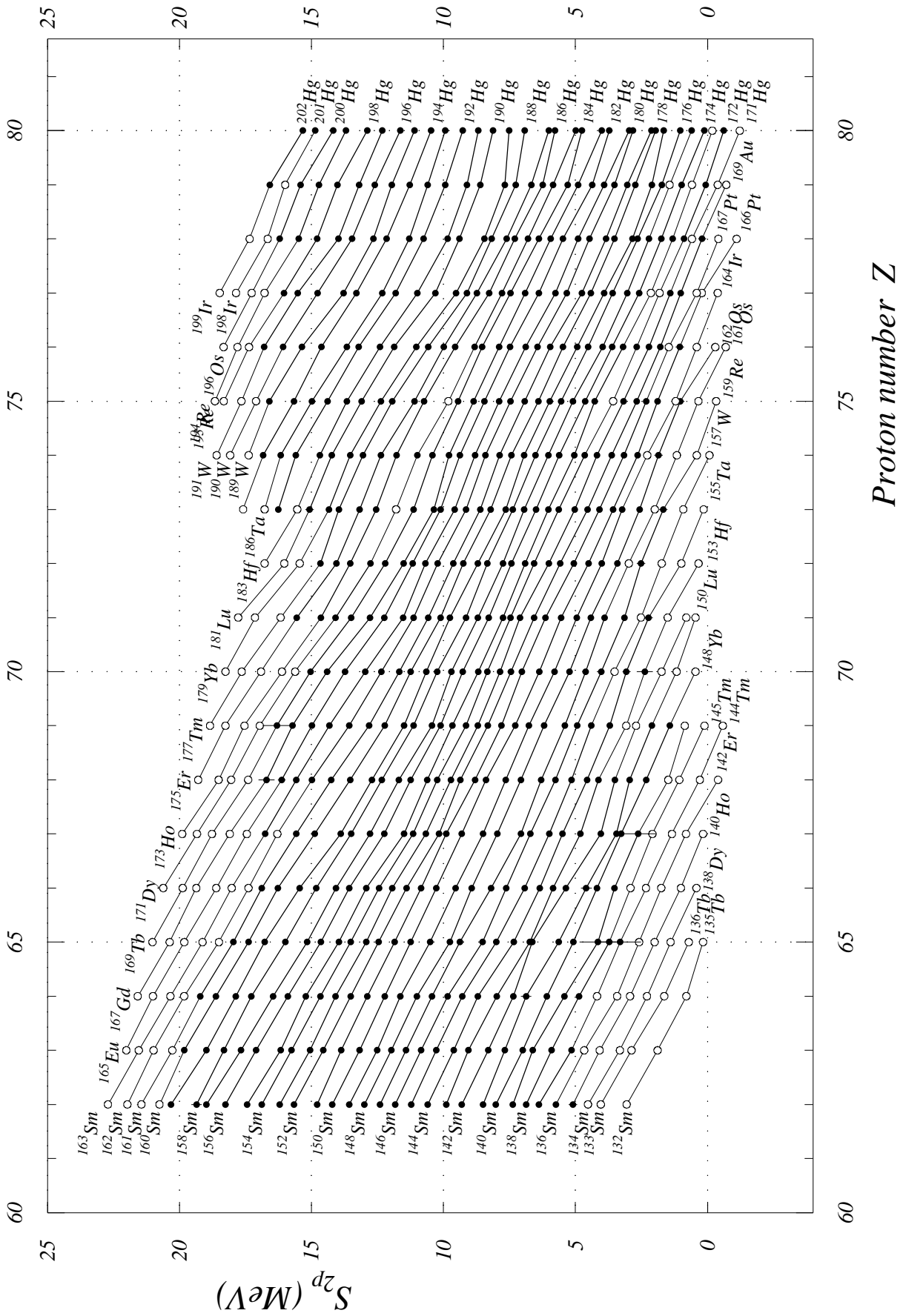


Fig. 16. Two-proton separation energies $Z = 92$ to 110

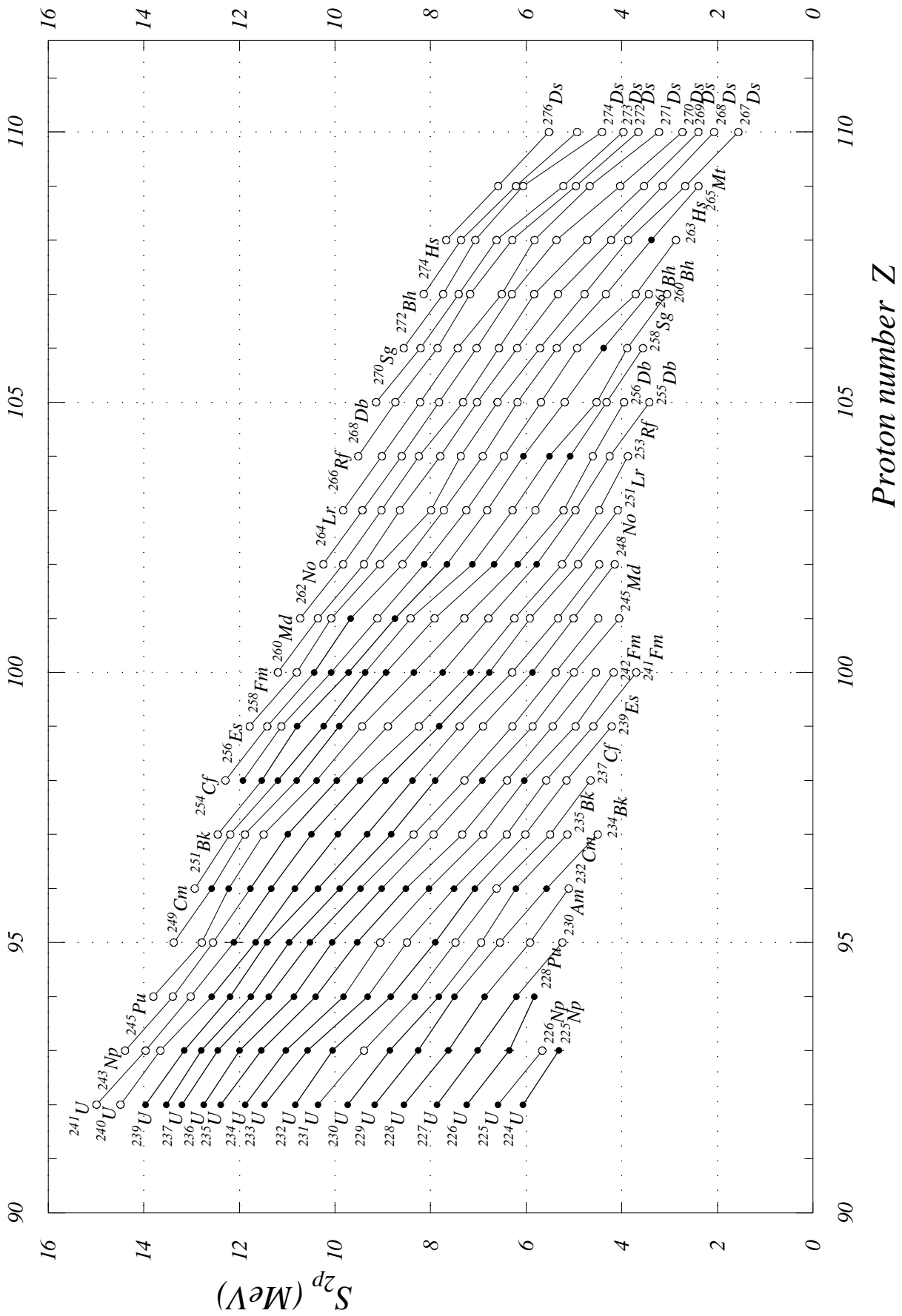


Fig. 17. Two-proton separation energies $Z = 100$ to 118

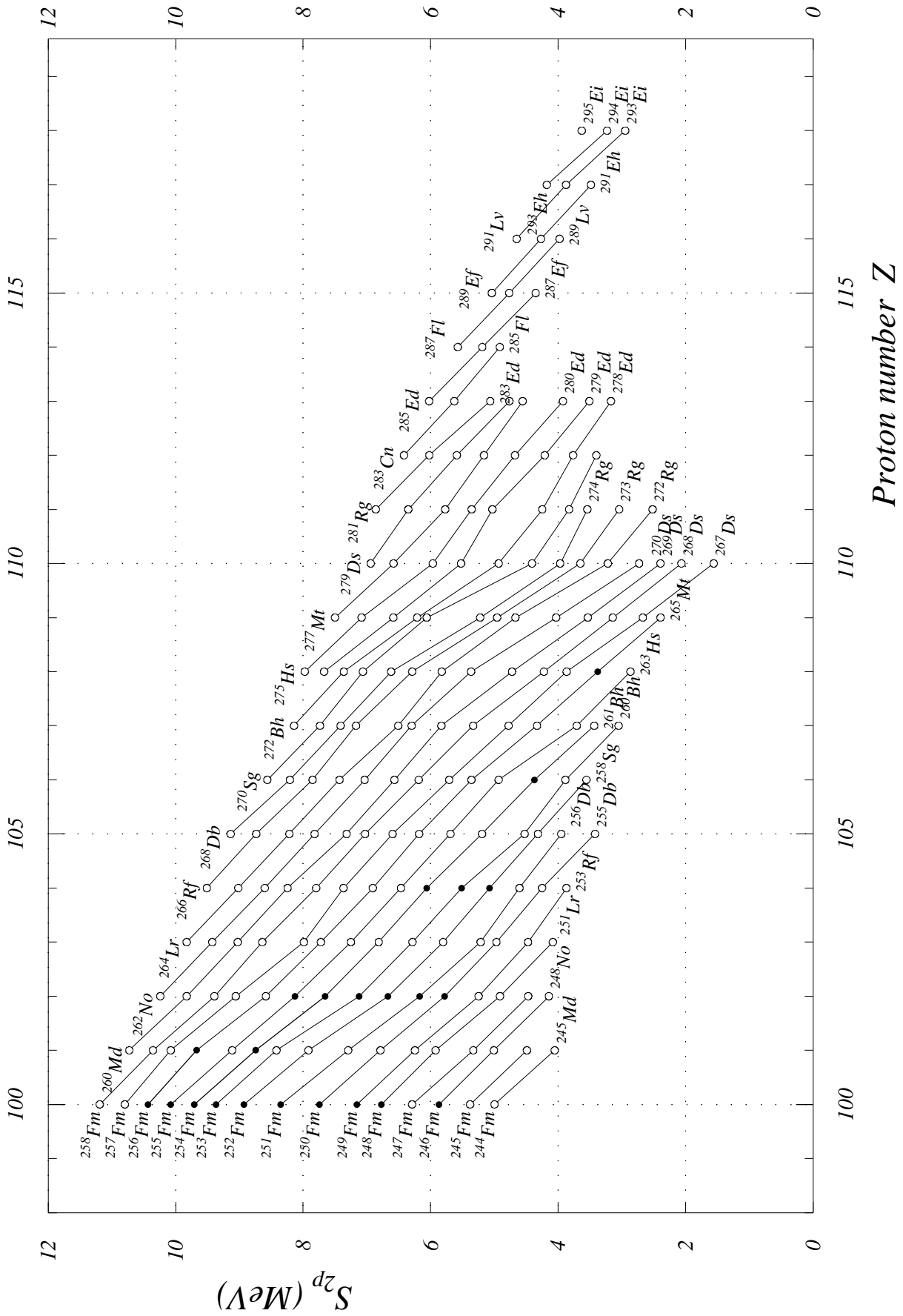


Fig. 19. α -decay energies $N = 22$ to 45

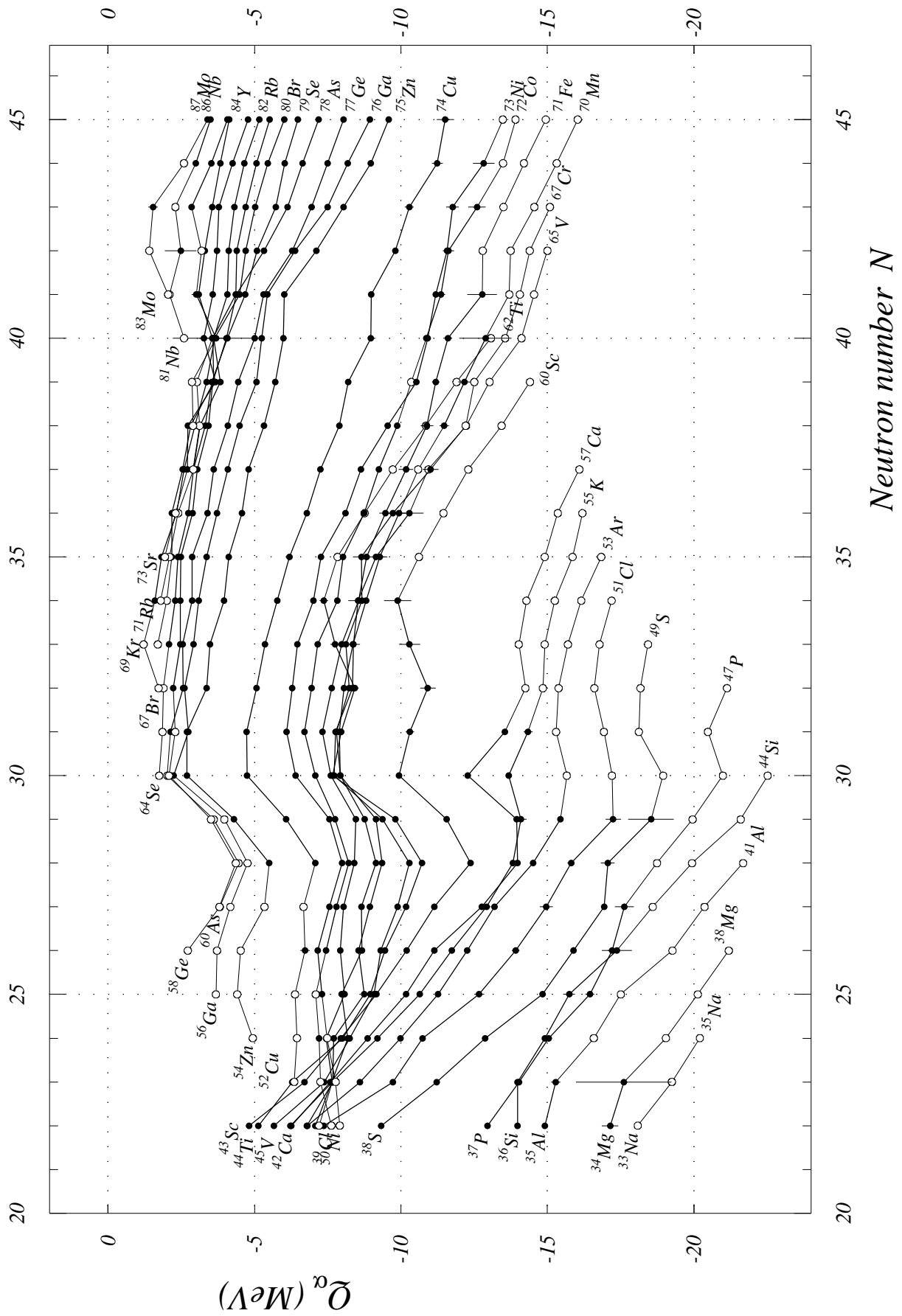


Fig. 20. α -decay energies $N = 42$ to 65

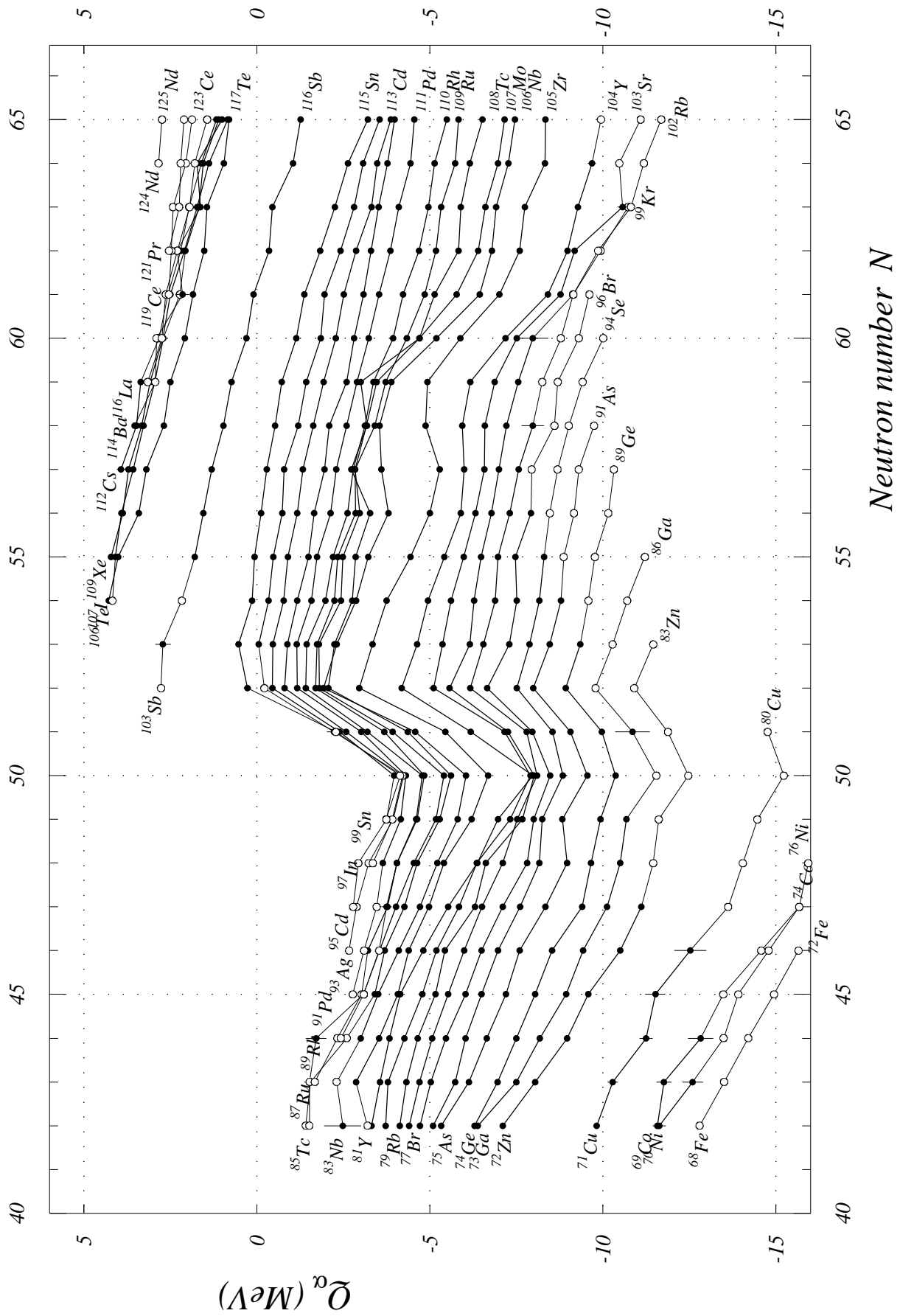


Fig. 22. α -decay energies $N = 82$ to 105

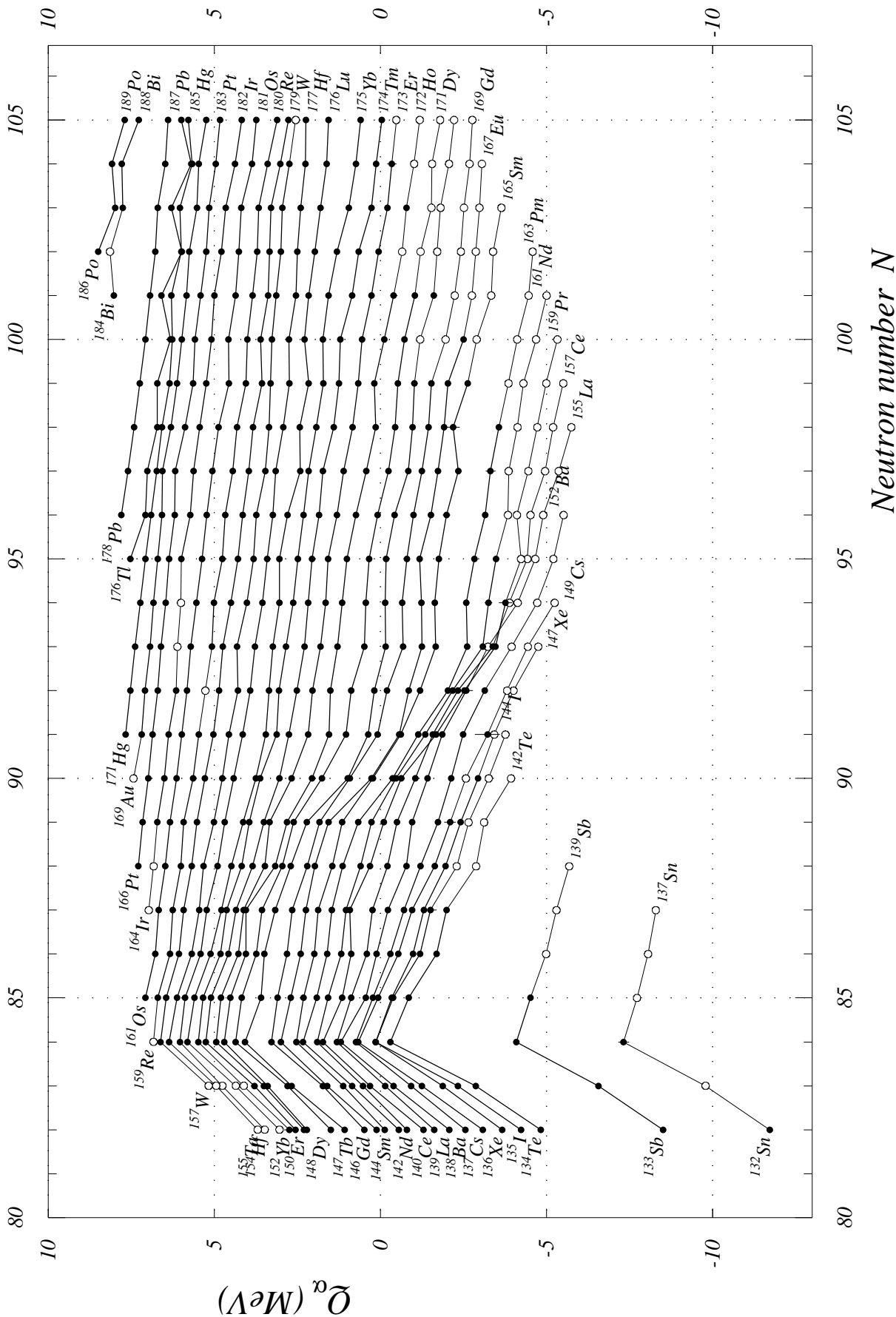


Fig. 23. α -decay energies $N = 102$ to 125

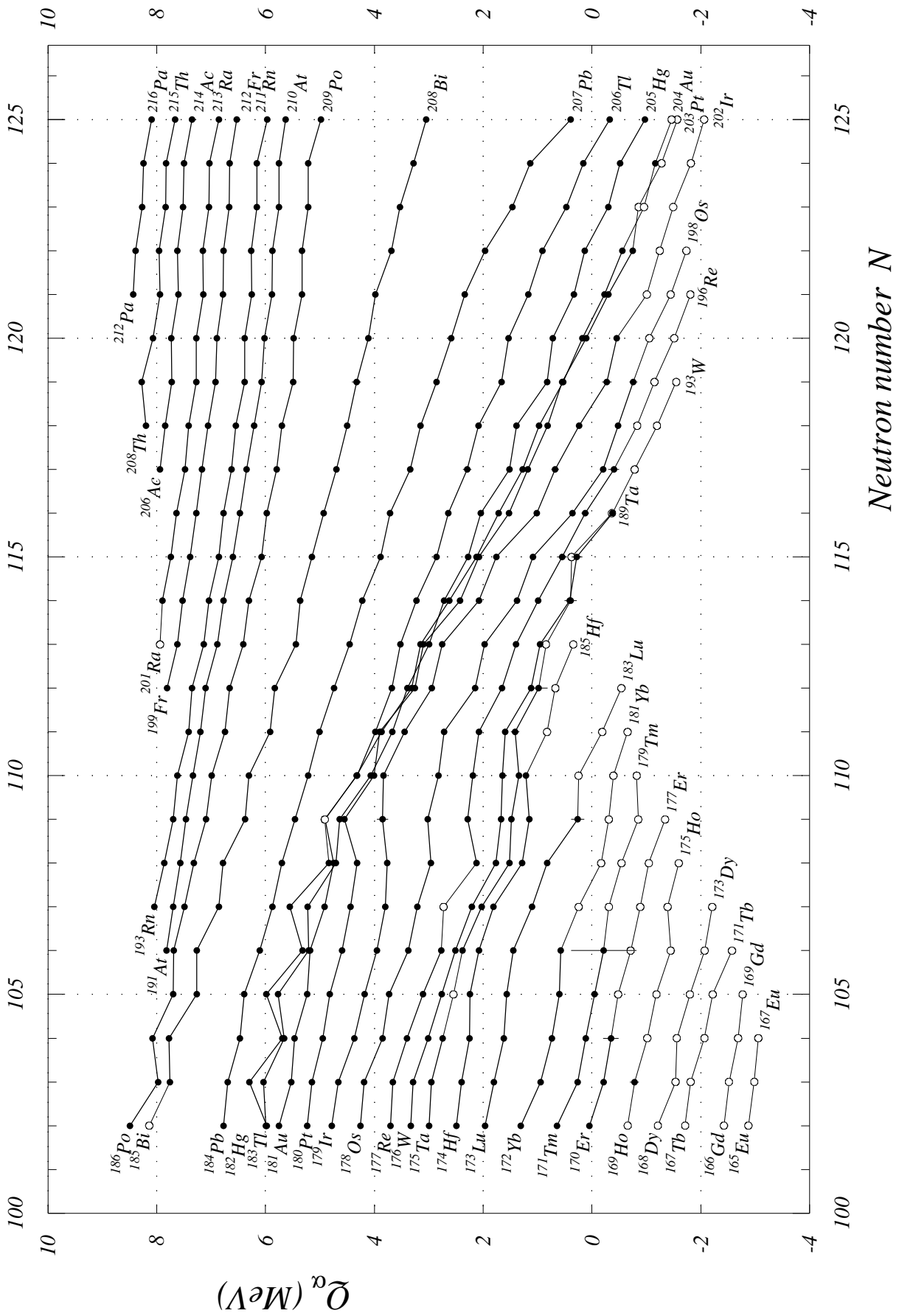


Fig. 24. α -decay energies $N = 122$ to 145

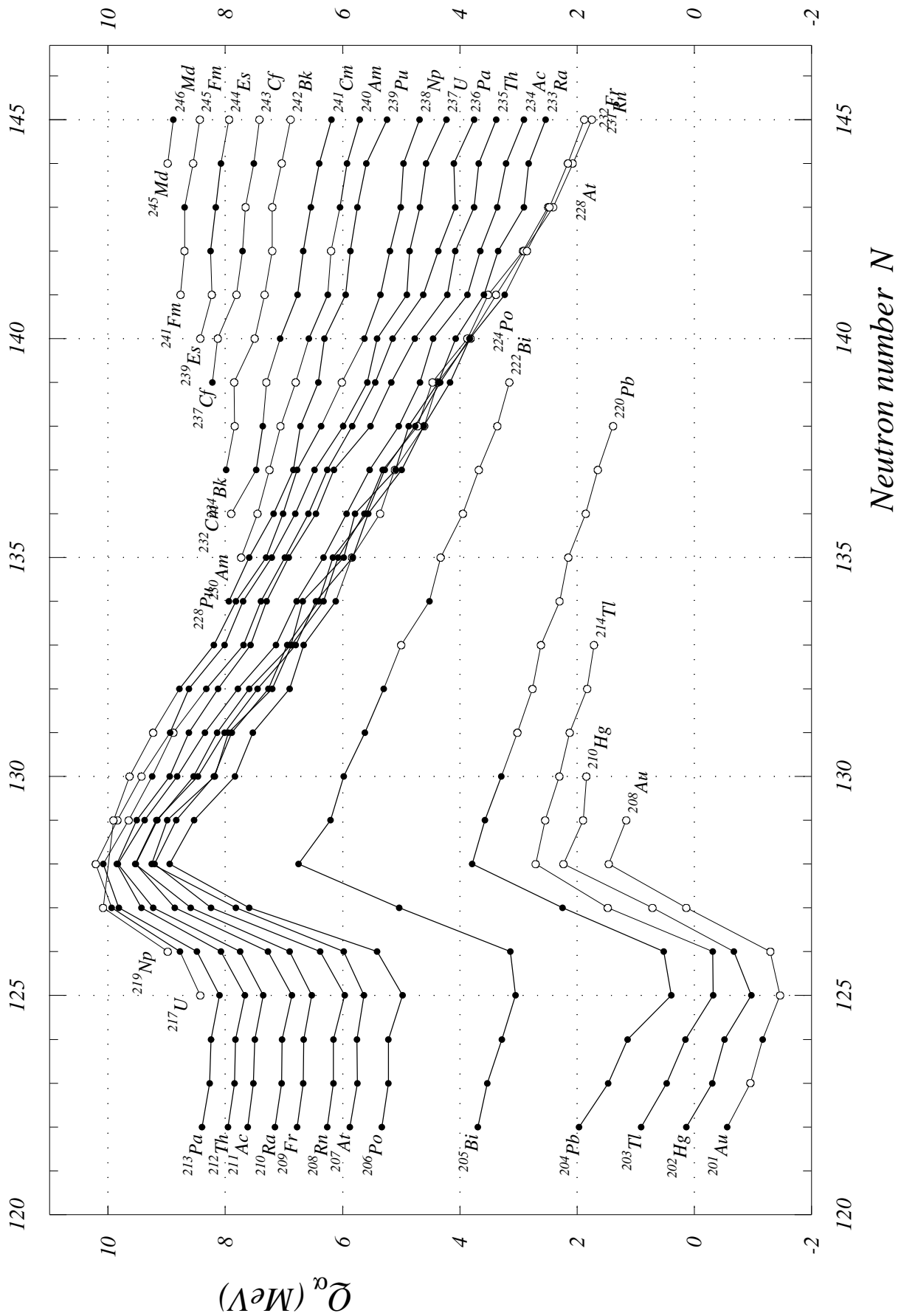


Fig. 25. α -decay energies $N = 142$ to 165

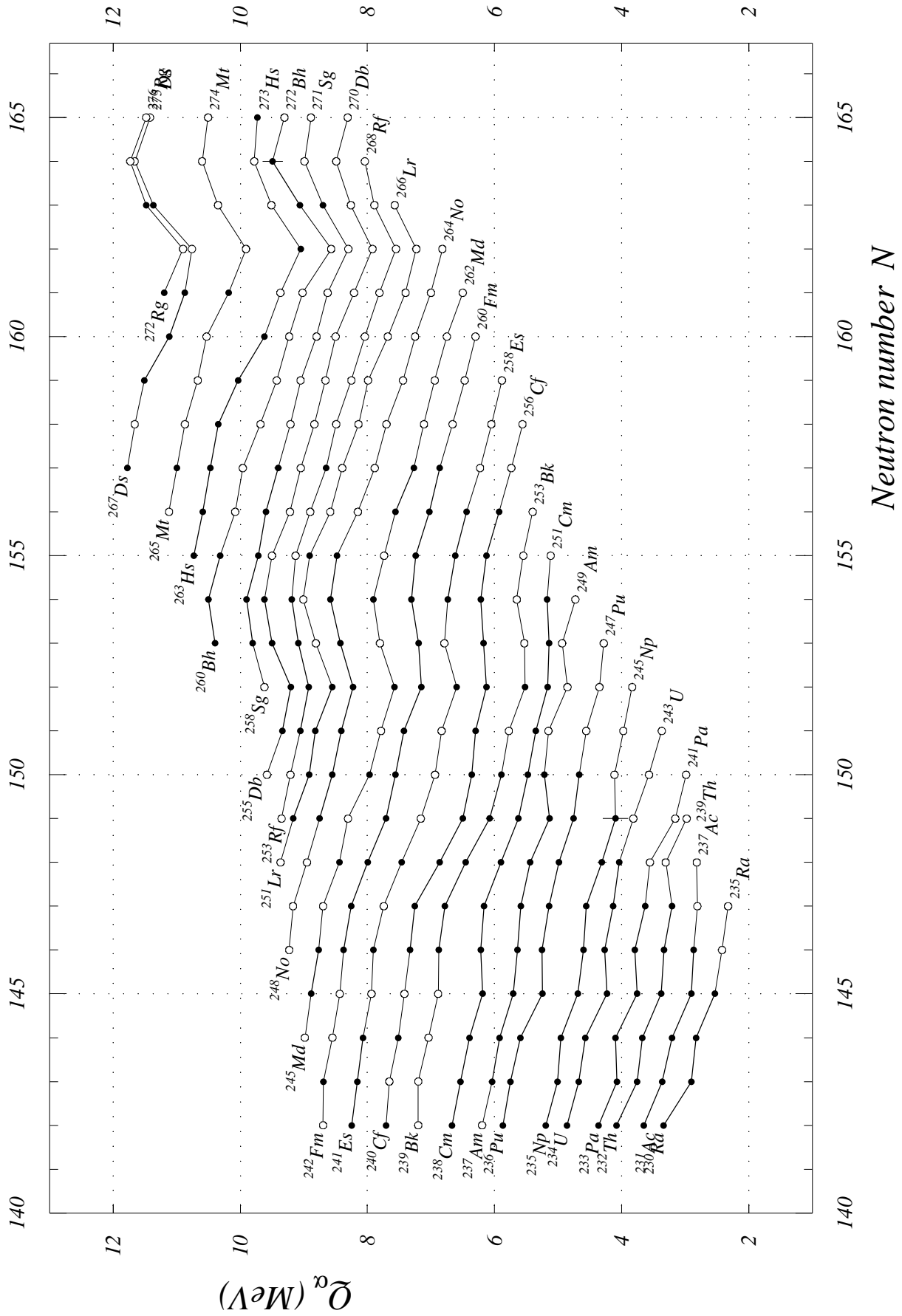


Fig. 26. α -decay energies $N = 157$ to 178

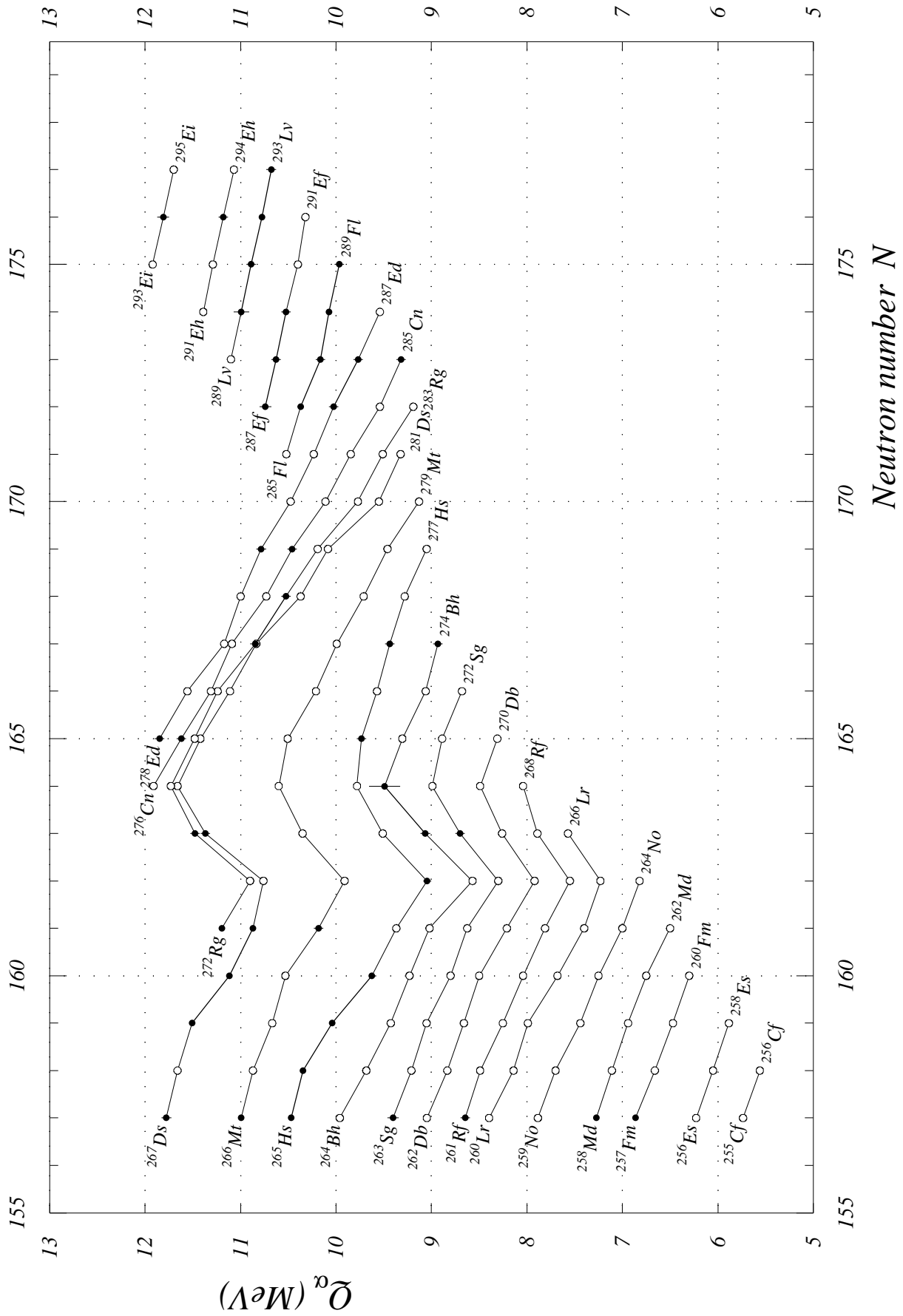


Fig. 27. Double β -decay energies $A = 0$ to 35

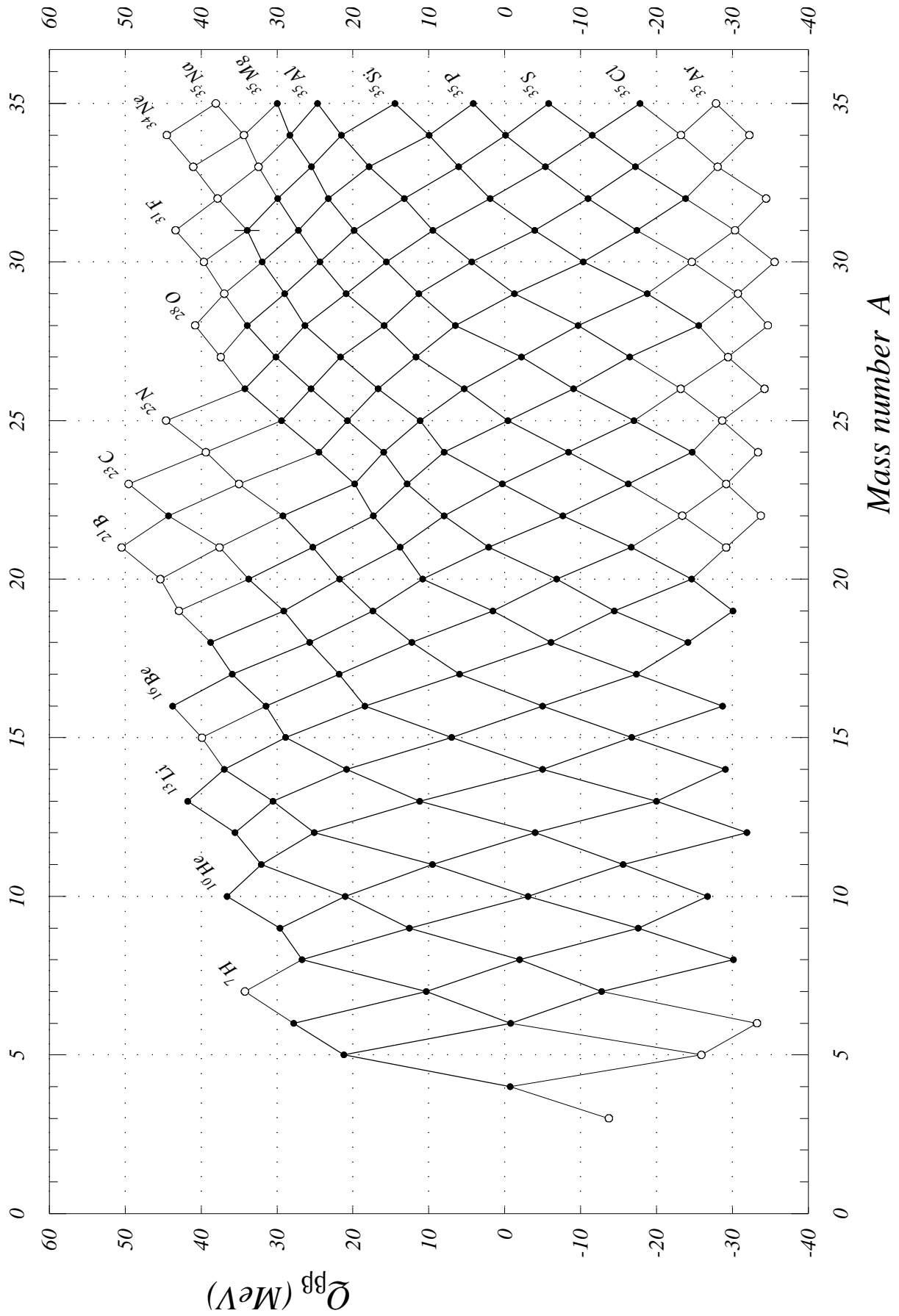


Fig. 28. Double β -decay energies $A = 32$ to 65

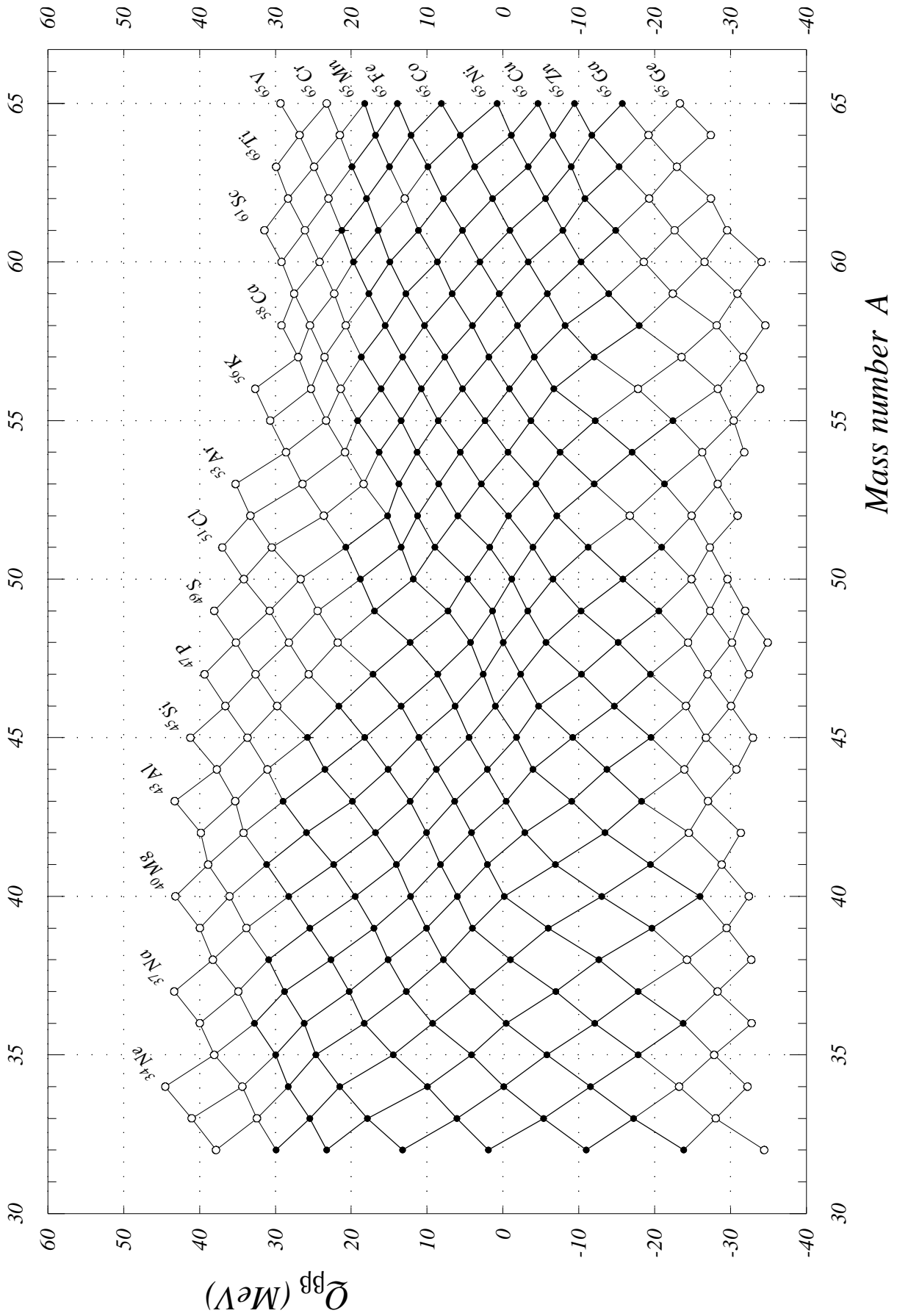


Fig. 29. Double β -decay energies $A = 62$ to 95

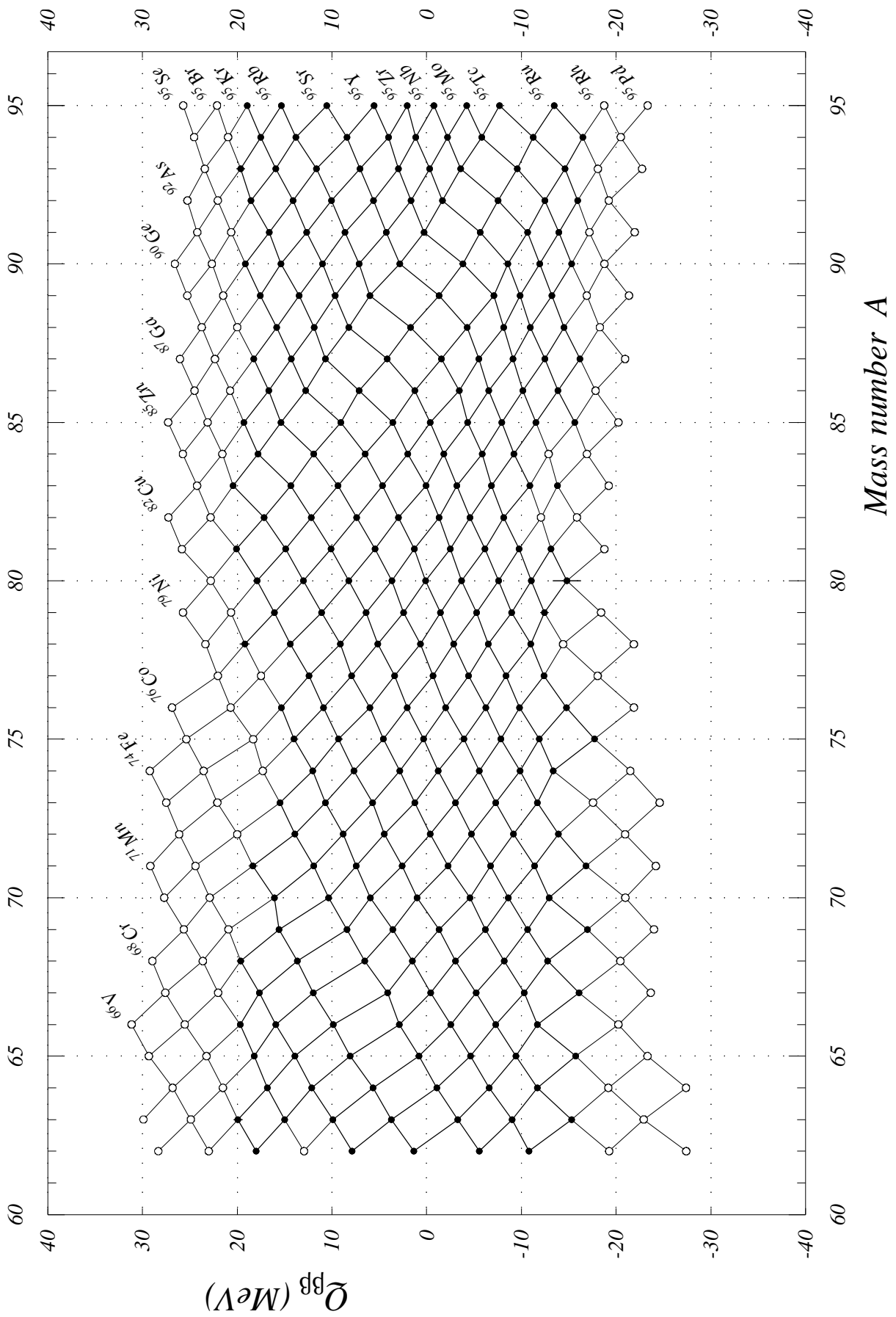


Fig. 30. Double β -decay energies $A = 92$ to 125

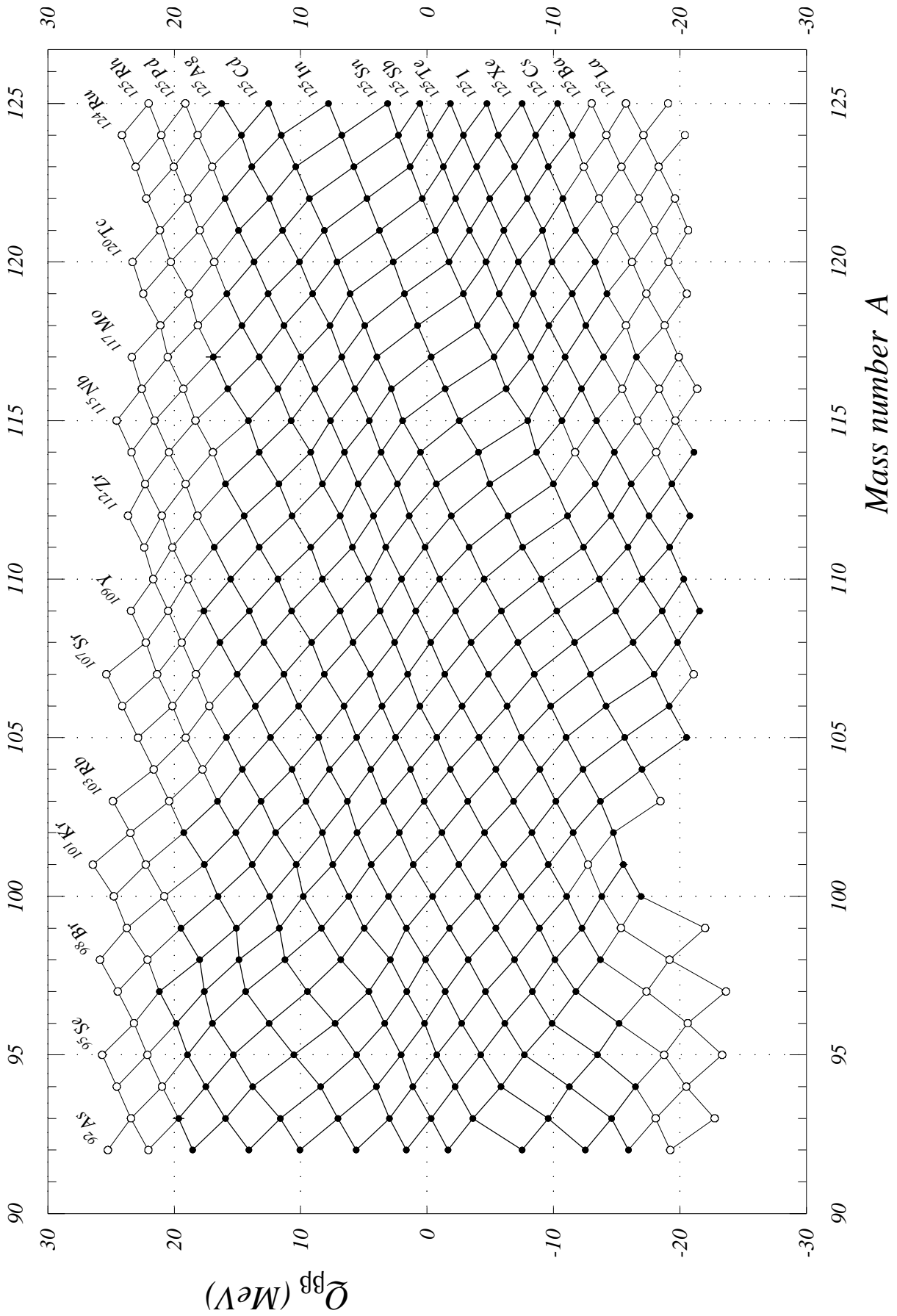


Fig. 31. Double β -decay energies $A = 122$ to 155

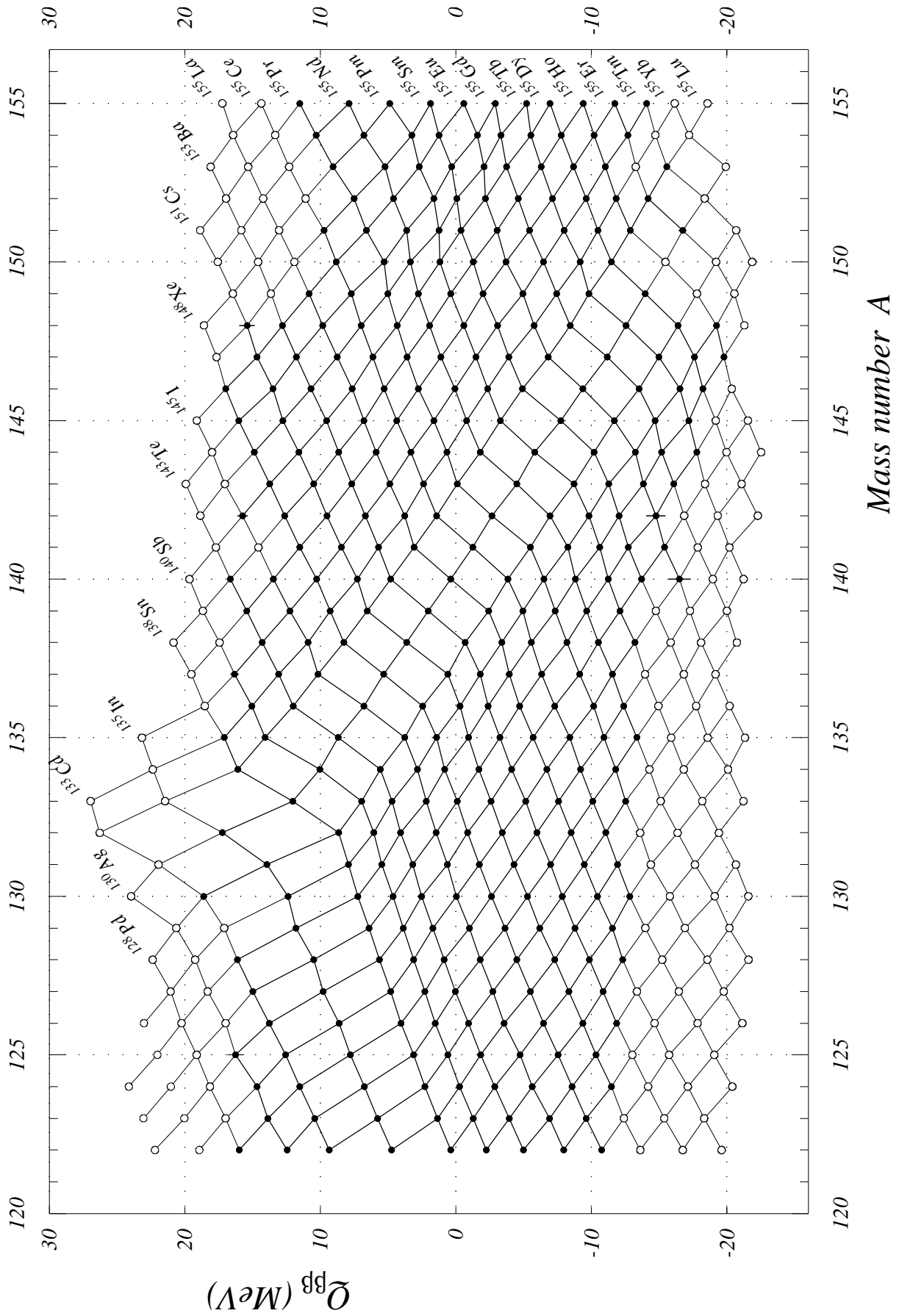


Fig. 32. Double β -decay energies $A = 152$ to 185

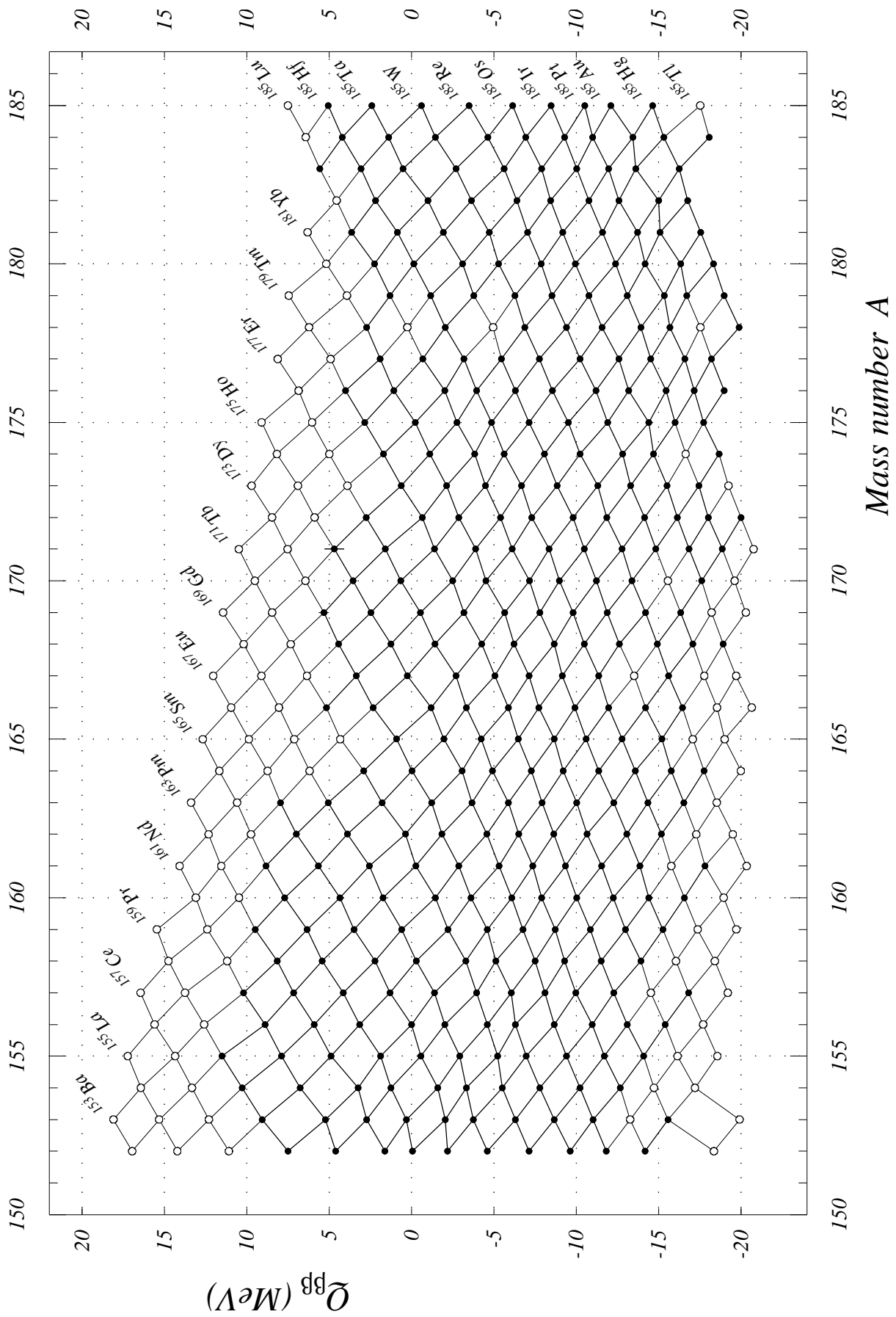


Fig. 33. Double β -decay energies $A = 182$ to 215

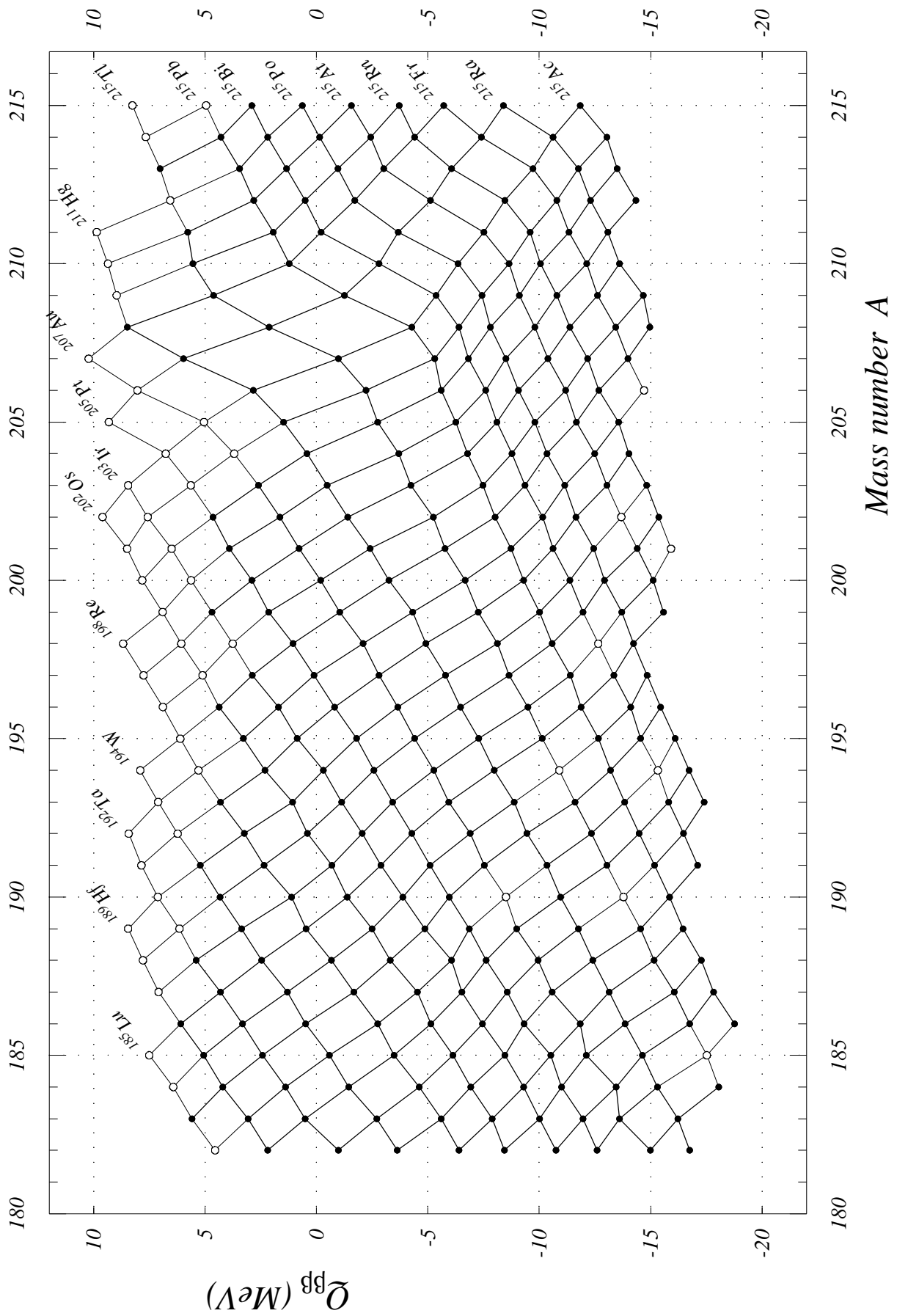


Fig. 34. Double β -decay energies $A = 212$ to 245

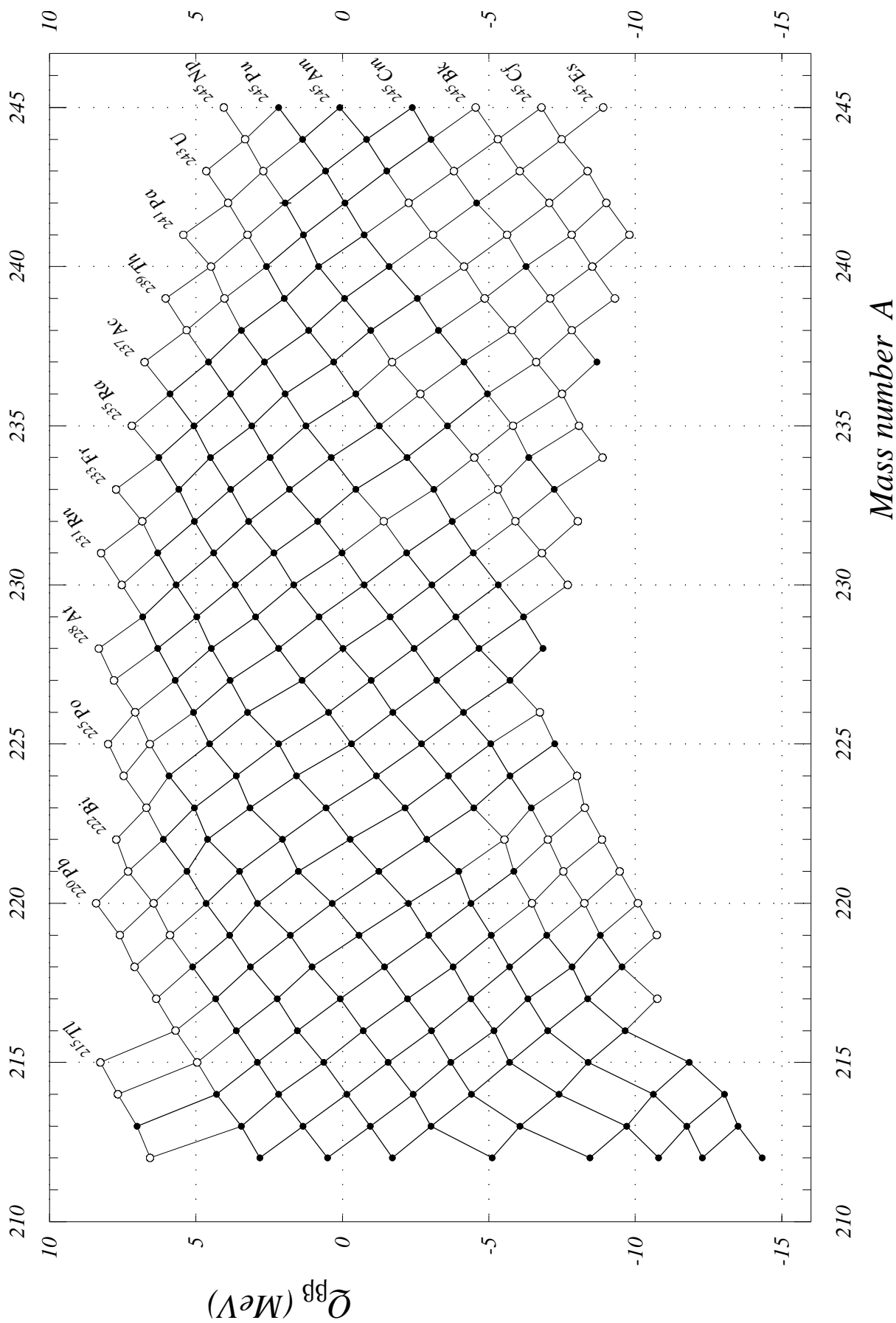


Fig. 35. Double β -decay energies $A = 242$ to 275

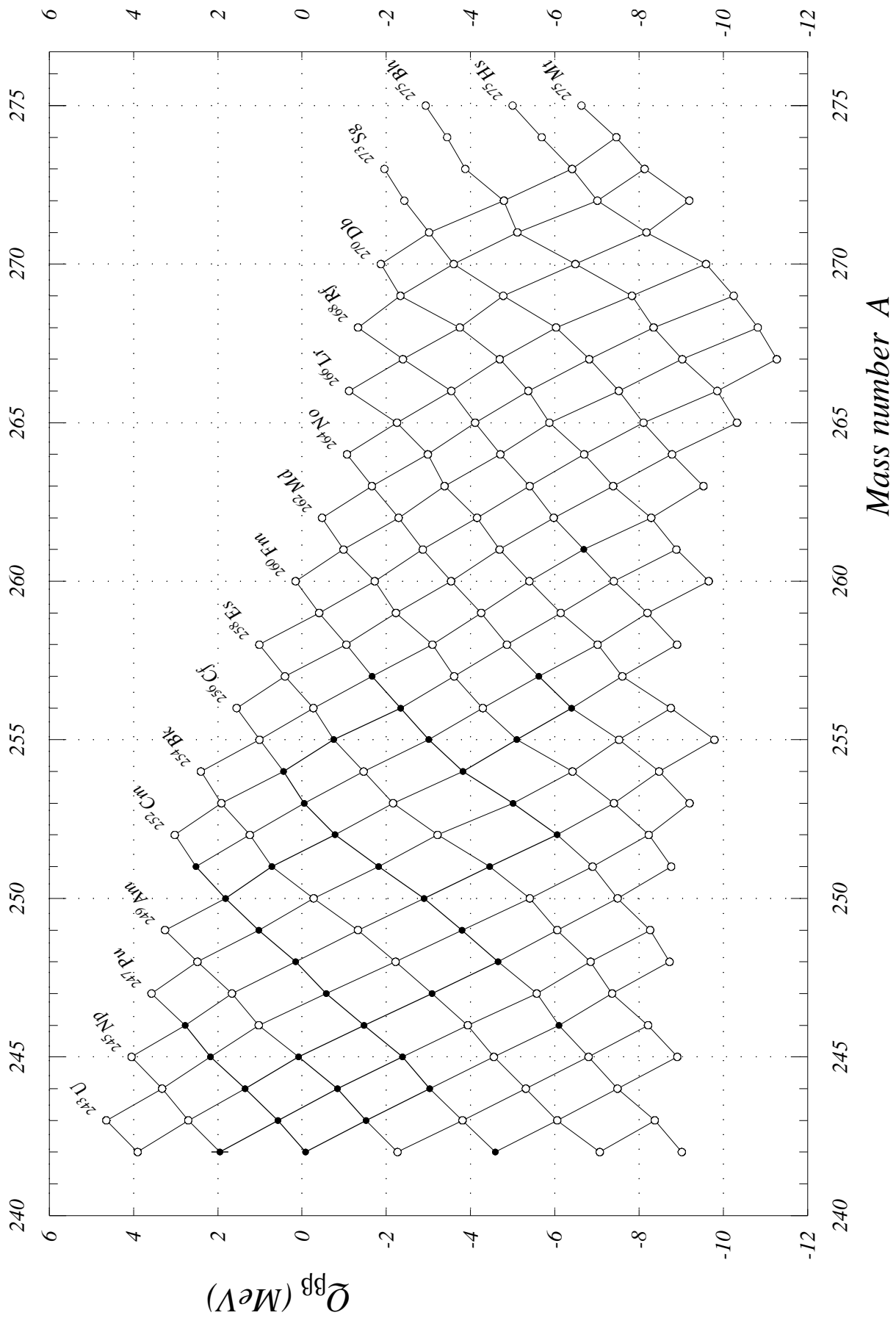
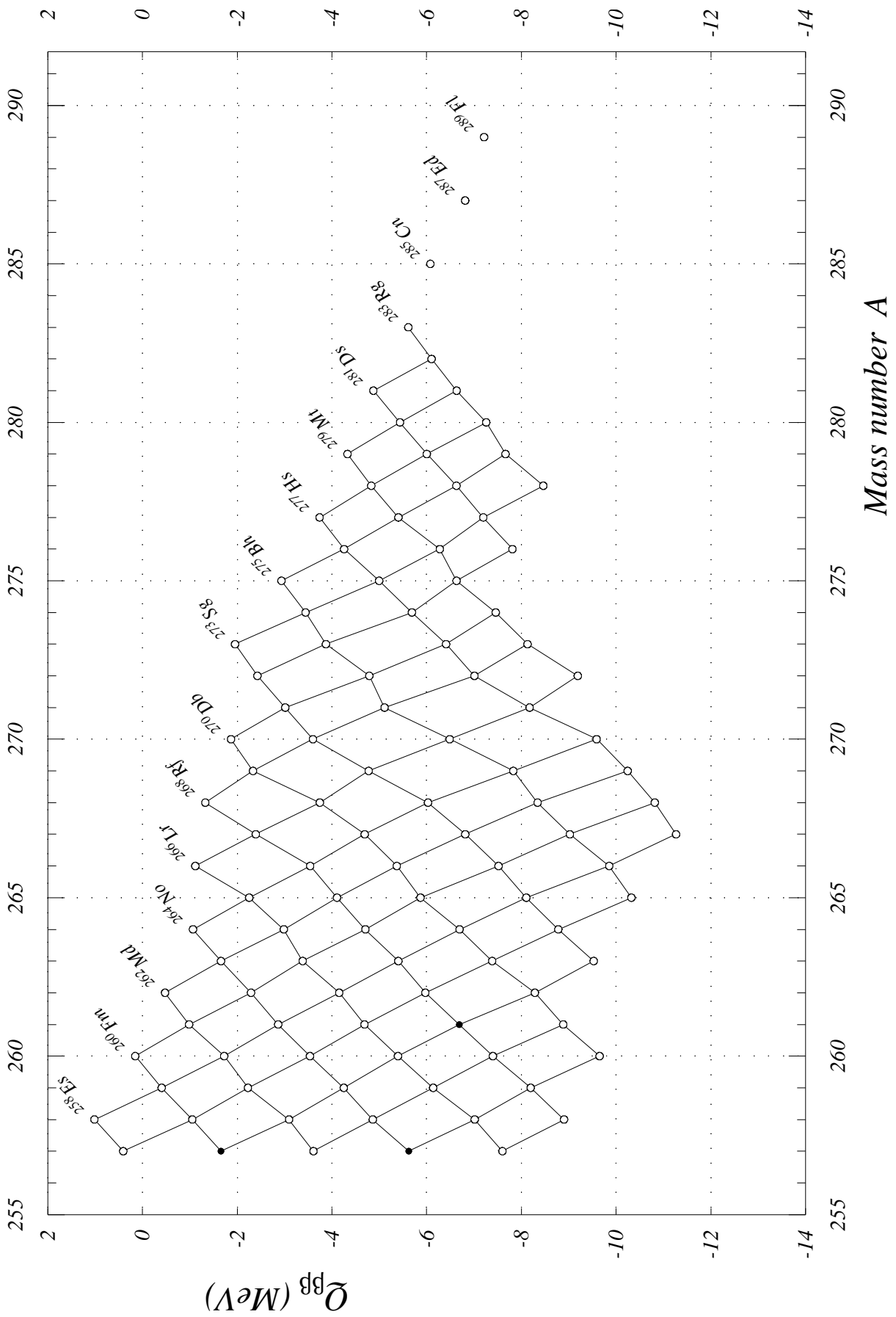


Fig. 36. Double β -decay energies $A = 257$ to 290



References used in the AME2012 and the NUBASE2012 evaluations

REGULAR JOURNALS (CODEN identifiers) AND BOOKS

AAFPA		Annales Academiae Scientiarum Fennicae, series A VI (Finland)
ADNDA		Atomic Data and Nuclear Data Tables (Elsevier, USA)
AENGA		Atomnaya Energiya (Russia)
AFYSA	1950-70	Arkiv för Fysik (Sweden)
ANPHA		Annales de Physique (France)
ANPYA		Annalen der Physik (Germany,DR)
APAHA		Acta Physica Academiae Scientiarum Hungaricae
APASA		Acta Physica Austriaca
APOBB	1970-...	Acta Physica Polonica Section B
APPOA	...-1969	Acta Physica Polonica
ARISE	1986-92	International Journal of Radiation Applications and Instrumentation - Part A - Applied Radiation and Isotopes (Great Britain)
ARISE	1993-...	Applied Radiation and Isotopes (Elsevier)
ATKEA		Atomkernenergie (Germany)
ATKOA		Atomki Kozlemanyek (Hungary)
AUJPA		Australian Journal Physics
BAPMA		Bulletin de l'Académie Polonaise des Sciences, Série des Sciences Mathématiques, Astronomiques et Physiques
BAPSA		Bulletin of the American Physical Society
BRSPE		Bulletin of the Russian Academy of Sciences, Physics
CHDBA	1966-...	Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences, serie B (France)
CHJPB		Acta Physica Sinica (Beijing)
CJCHA		Canadian Journal of Chemistry
CJPHA		Canadian Journal of Physics
CODBA		CODATA Bulletin (Committee on Data for Science and Technology - ICSU)
COREA	...-1965	Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences (France)
CPCHC	1977-...	Chinese Physics C (former "High-Energy Physics and Nuclear Physics")
CPHMA		Commentationes Physico-Mathematicae : Societas Scientiarum Fennicae (Finland)
CPLEE	1992-...	Chinese Physics Letters
CUSCA		Current Science (India)
CZYPA		Czechoslovak Journal of Physics (Kluwer, london)
DABBB	1953-96	Dissertation Abstract International B
DANKA		Doklady Akademii Nauk SSSR
EPJAA	1998-...	European Physical Journal A (replaces ZPAAD)
EPJDD	1998-...	European Physical Journal D
EPJDR	1999-...	European Physical Journal Direct
EPJST	2007-...	European Physical Journal Special Topics [nsr: ZSTNE]
EULEE	1986-...	Europhysics Letters (replaces JPSLB and NCLTA)
FECLA		Particles and Nuclei, Letters (Russia)
FZKAA		Fizika (Croatia)
GCACA		Geochimica et Cosmochimica Acta (Elsevier, USA)
HPACA		Helvetica Physica Acta
HYIND		Hyperfine Interactions
IANFA		Izvestiya Akademii Nauk SSSR, seriya Fizicheskaya
IEIMA		IEEE Transactions on Instrumentation and Measurement (USA)
IJARA	1956-85	International Journal of Applied Radiation and Isotopes (Great Britain)
IJMPD		International Journal of Mass Spectrometry and Ion Processes (Elsevier)
IJOPA		Indian Journal of Pure and Applied Physics
IJPYA		Indian Journal of Physics and Proceedings of the Indian Association for the Cultivation of Science
IMPAA		International Journal of Modern Physics A (World Scientific Publishing, Singapore)
IMPEE		International Journal of Modern Physics E (World Scientific Publishing, Singapore)

JCOMA	...-1991	Journal of the Less Common Metals (Switzerland)
JINCA	...-1981	Journal of Inorganic and Nuclear Chemistry (USA)
JMOPE		Journal of Modern Optics (Great Britain)
JNCEA		Journal of Nuclear Energy A and B (Great Britain)
JNRSA		Journal of Nuclear and Radiochemical Sciences (Japan)
JOPQA	1961-98	Journal de Physique (France)
JOPQS		Journal de Physique (France) Suppl. Colloques
JPAGB		Journal of Physics, A (Great Britain)
JPCRB		Journal of Physical and Chemical Reference Data (USA)
JPCSD		Journal of Physics, G Conference Series (Great Britain)
JPGPE	1989-...	Journal of Physics, G Nuclear Physics (Great Britain)
JPHGB	...-1988	Journal of Physics, G Nuclear Physics (Great Britain)
JPRAA	...-1960	Journal de Physique et le Radium (France)
JPSLB	...-1985	Journal de Physique Lettres (France)
JRNBA		Journal of Research of the National Institute of Standards and Technology
JRNCD		Journal Radioanal. Nuclear Chemistry
JUPSA		Journal of the Physical Society of Japan
KDVSA		Det Kongelige Danske Videnskabernes Selskab, Matematisk-Fysiske Meddelelser
KERNA		Kernenergie (Germany)
KPSJA		Journal of the Korean Physical Society
KURAA		Kyoto University, Research Reactor Institute : Annual Report
MPLAE		Modern Physics Letters section A (World Scientific Publishing, Singapore)
MTRGA		Metrologia
NATUA		Nature (Great Britain)
NCIAA	1970-...	Nuovo Cimento A (Italy)
NCLTA	...-1985	Nuovo Cimento Lettere (Italy)
NDSAA		Nuclear Data Tables, section A (USA)
NDSBA		Nuclear Data Sheets (USA)
NIMAE	1983-...	Nuclear Instruments and Methods in Physics Research A (Netherlands)
NIMBE	1983-...	Nuclear Instruments and Methods in Physics Research B (Netherlands)
NPBSE		Nuclear Physics, section B (Proceedings Supplements) (Netherlands)
NSENA		Nuclear Science and Engineering (American Nuclear Society, USA)
NUCIA	...-1969	Nuovo Cimento (Italy)
NUIMA	...-1983	Nuclear Instruments and Methods (Netherlands)
NUPAB	1967-...	Nuclear Physics, section A (Netherlands)
NUPBB	1967-...	Nuclear Physics, section B (Netherlands)
NUPHA	1957-66	Nuclear Physics (Netherlands)
PACHA		Pure and Applied Chemistry
PCPSA		Proceedings Cambridge Philosophical Society
PENUC		Particle Emission from Nuclei, ed. by D.N. Poenaru and M.S. Ivaşcu, CRC Press (USA), 1989
PHFEA		Physica Fennica (Finland)
PHLTA	...-1967	Physics Letters (Netherlands)
PHMAA	...-1955	Philosophical Magazine (Great Britain)
PHMAB	1956-...	Philosophical Magazine (Great Britain)
PHNOA		Physica Norvegia
PHRVA	1930-69	Physical Review (USA) (not 1964 and 1965)
PHSTB	1970-...	Physica Scripta (Sweden)
PHYSA		Physica (Netherlands)
PISAA		Proceedings of the Indian Academy of Sciences, section A
PLRBA	1964-65	Physical Review, section B (USA)
PLSSA		Planetary and Space Science (Netherlands)
PPNPD		Progress in Particle and Nuclear Physics
PPNUE	2005	Physics of Particle and Nuclei
PPSOA		Proceedings of the Physical Society (Great Britain)
PRAMC		Pramana, Journal of Physics (India)
PRLAA		Proceedings of the Royal Society of London, Series A

PRLTA		Physical Review Letters (USA)
PRVAA	1970-...	Physical Review, section A (USA)
PRVCA	1970-...	Physical Review, section C (USA)
PRVDA	1970-...	Physical Review, section D (USA)
PRYCA		Proceedings of the Royal Society of Canada
PTPSA		Progress in Theoretical Physics (Kyoto), Suppl.
PYLAA	1968-...	Physics Letters, section A (Netherlands)
PYLBB	1968-...	Physics Letters, section B (Netherlands)
PZETA		Pis'ma v Zhurnal Eksperimental'noi i Teoreticheskoi Fiziki (Russie)
RAACA		Radiochimica Acta (Germany)
RAEFB		Radiation Effects and Defects in Solids (Great Britain)
RBFSA		Revista Brasileira de Fisica
RMPHA		Reviews of Modern Physics (USA)
RMXFA		Revista Mexicana de Física
RPPHA		Reports on Progress in Physics (Great Britain)
RRALA		Radiochemical and Radioanalytical Letters (Hungary)
SAPHD		South African Journal of Physics
SCIEA		Science (American Association for the Advancement of Science)
SHIBA		Shitsuryo Bunseki (Mass Spectrometry, Japan)
THISc		Treatise on Heavy-Ion Science, ed. by D.A. Bromley, Plenum Press, 1989
UFZHA		Ukrains'kii Fizicheskii Zhurnal
VDPEA		Verhandlungen der Deutschen Physikalischen Gesellschaft
VHDPG		Verhandlungen der Deutschen Physikalischen Gesellschaft
YAFIA		Yadernaya Fizika (Russia)
YTHLD	...-1997	Chinese Journal of Nuclear Physics
YWPIF		Nuclear Physics Review (China)
ZDACE	1974-...	Zeitschrift für Physik D (Germany)
ZENAA		Zeitschrift für Naturforschung, part A (Germany)
ZEPYA	...-1974	Zeitschrift für Physik (Germany)
ZETFA		Zhurnal Eksperimental'noi i Teoreticheskoi Fiziki (Russia)
ZPAAD	1974-97	Zeitschrift für Physik A (Germany)

REPORTS, PREPRINTS, THESIS, ABSTRACTS, COMMUNICATIONS

AAAAA to be pd	To be published in journal AAAAA
PrvCom AHW Mon	Private communication to A.H. Wapstra in given Month
PrvCom BPf Mon	Private communication to B. Pfeiffer in given Month
PrvCom FGK Mon	Private communication to F.G. Kondev in given Month
PrvCom GAu Mon	Private communication to G. Audi in given Month
PrvCom JBI Mon	Private communication to J. Blachot in given Month
PrvCom NDG Mon	Private communication to Nuclear Data Group in given Month
PrvCom WgM Mon	Private communication to M. Wang in given Month
PrvCom Ref	Quoted by reference in question
Table of Isotopes	Table of Isotopes, LBL Brookhaven
Th.- City	Dissertation from corresponding University
Wallet Cards	Nuclear Wallet Cards, NNDC-BNL, Brookhaven, ed. J.K. Tuli
AnRpt Institute	Annual Report from Institute (or City)
ANL-	Argonne National Laboratory, report
CERN-	European Organization for Nuclear Research, report
COO-	Reports on work done with DOE support
DASA-	Defense Atomic Support Agency, Washington, DC, report
GANIL-	Grand Accelérateur National d'Ions Lourds, report
GSI-	Gesellschaft für Schwerionenforschung, report
IAEA-	International Atomic Energy Agency, report
IDO-	Idaho Operations Office of US Atomic Energy Commission, report
IPNO-DRE	Institut de Physique Nucléaire d'Orsay, report

ISOLDE-	Isotope Separator on Line (CERN), report
JINR-	Joint Institute for Nuclear Research Dubna, report
KFK-	Kernphysik Zentrum Karlsruhe, report
LBL-	Lawrence Berkeley National Laboratory, report
LNPI-	Leningrad report
Leninst YF-	Leningradskii Institut Yadernoi Fiziki
NEANDC-	Nuclear Energy Agency - Nuclear Data Center
ORNL-	Oak Ridge National Laboratory report
UCRL-	University of California Radiation Laboratory report
USIP-	University of Stockholm Institute of Physics report

CONFERENCE PROCEEDINGS AND ABSTRACTS

P-Aizu	2002	Proc. Frontiers of Collective Motion, Aizu, Japan, November 2002
P-Alma Ata	1978	Program of 28th USSR Conference on Nuclear Spectroscopy
P-Alma Ata	1984	Program of 34th USSR Conference on Nuclear Spectroscopy
P-Amsterdam	1974	Proc. Intern. Conference Nuclear Structure
P-Amsterdam	1982	Proc. Intern. Conference Nuclear Structure
P-Amsterdam	1996	2nd. North-West Europe Nuclear Physics Conference NWE'96
P-Argonne	2012	Int. Conf. on Nuclear Structure 2012
P-Arles	1995	Proc. Int. Conf. on Exotic Nuclei and Atomic Masses ENAM-95
B-Arles	1995	Abstracts ENAM-95
P-Aulanko	2001	Proc. Int. Conf. on Exotic Nuclei and Atomic Masses ENAM-2001
B-Aulanko	2001	Abstracts ENAM-2001
P-BadHonnet	1988	Proc. Int. Workshop Nucl. Struct. of the Zr Region
P-Baku	1976	Program of 26th USSR Conference on Nuclear Spectroscopy
P-Bellaire	1998	Proc. Int. Conf. on Exotic Nuclei and Atomic Masses ENAM-98
B-Bellaire	1998	Abstracts ENAM-98
P-Berkeley	1980	Proc. Intern. Conf. Nuclear Physics Berkeley
P-Bernkastel	1992	Proc. 9th Int. Conf. Atomic Masses and Fundamental Constants AMCO-9, and 6th Int. Conf. Nuclei far from Stability NUFAST-6
B-Bernkastel	1992	Abstracts AMCO-9 and NUFAST-6
P-Bombay	1974	Proc. Nucl. Phys. and Solid State Phys. Symposium
P-Bombay	1985	Symposium on Quantum Electronics
P-Bormio	1999	XXXVII International Winter meeting on Nuclear Physics
P-Brookhaven	1979	Proc. 3rd Int. Conf. Neutron Capture Gamma Ray Spectroscopy
P-Budapest	1972	Proc. 1st Int. Conf. Neutron Capture Gamma Ray Spectroscopy
P-Cadarache	2005	Proc. Nuclear Fission and Fission-Product Spectroscopy AIP-798
P-Cargese	1976	Proc. 3rd Int. Conf. Nuclei far from Stability NUFAST-3 CERN 76-13
P-Charkov	1986	Program of 38th USSR Conference on Nuclear Spectroscopy
P-Darmstadt	1984	Proc. 7th Int. Conf. Atomic Masses and Fundamental Constants AMCO-7
P-Debrecen	1968	Proc. Conf. Electron Capture and Higher Order Processes in Nuclear Decays
P-Debrecen	2005	Int. Symposium on Exotic Nuclear Systems AIP Conf. Proc. 802 (2005)
P-Dubna	1961	Repts. Third Conf. Neutron-deficient Isotopes
P-Dubna	1968	Proc. International Symposium on Nuclear Structure
P-Dubna	1989	Int. School-Seminar on Heavy-Ion Physics
P-Dubna	1999	Proc. 49th Ann. Conf. Nucl. Spectrosc. Struct. At. Nuclei
P-Florence	1983	Proc. Intern. Conf. Nuclear Physics Florence
P-Foros	1991	Proc. Intern. Conf. on Exotic Nuclei, South Crimea
P-Fribourg	1993	Proc. 8th Int. Symp. Capture Gamma Ray Spectroscopy and Related Topics
P-Gatlinburg	1967	Proc. Intern. Conf. Gatlinburg
P-Grenoble	1981	Proc. 4th Int. Conf. Neutron Capture Gamma Ray Spectroscopy
P-Helsingor	1981	Proc. 4th Int. Conf. Nuclei far from Stability NUFAST-4 CERN 81-09
P-Kiev	1982	Program of 32th USSR Conference on Nuclear Spectroscopy
P-Knoxville	1984	Proc. 5th Int. Symp. Capture Gamma-Ray Spectroscopy and Related Topics
P-Kyoto	1970	Conference on Mass Spectroscopy

P-Lansing	1979	Proc. 6th Int. Conf. Atomic Masses and Fundamental Constants AMCO-6
P-Legnaro	1971	Proc. Conf. Structure of 1f7/2 Nuclei, Legnaro
P-Leningrad	1975	Program of 25th USSR Conference on Nuclear Spectroscopy
P-Leningrad	1985	Program of 35th USSR Conference on Nuclear Spectroscopy
P-Leningrad	1990	Program of 40th USSR Conference on Nuclear Spectroscopy
P-Leuven	1987	Proc. 6th Int. Symp. Capture Gamma-Ray Spectroscopy and Related Topics
P-Leuven	2011	Int. Conf. on Advances in Radioactive Isotope Science ARIS2011
P-Leysin	1970	Proc. 2nd Int. Conf. Nuclei far from Stability NUFAST-2 CERN 70-30
P-Lisbon	2007	Proc. Proton Emitting Nuclei and Related Topics -PROCON 2007 [AIP Conf.961]
P-Miami	1989	Symposium on Exotic Nuclear Spectroscopy
P-Minsk	1991	Program of 41th USSR Conference on Nuclear Spectroscopy
P-Monterey	1990	Proc. Xth Int. Conf. Neutron Capture Gamma Ray Spectroscopy
P-Moscow	1955	Conf. Acad. Sci. USSR Peaceful Use of Atomic Energy
P-Moscow	1971	Program of 21st USSR Conference on Nuclear Spectroscopy
P-Moscow	1983	Program of 33rd USSR Conference on Nuclear Spectroscopy
P-Niigata	1991	Proc. Int. Symp. on Structure and Reactions of Unstable Nuclei
P-PacGrove	1991	Proc. 7th Int. Symp. Capture Gamma Ray Spectroscopy
P-Paris	1958	Compt.Rend.Congr.Intern.Phys.Nucl., Paris, P.Gugenberger, Ed., Dunod, Paris(1959)
P-Paris	1975	Proc. 5th Int. Conf. Atomic Masses and Fundamental Constants AMCO-5
P-Petten	1975	Proc. 2nd Int. Conf. Neutron Capture Gamma Ray Spectroscopy
P-Rosseau	1987	Proc. 5th Int. Conf. Nuclei far from Stability NUFAST-5 AIP Conf.Proc.164
P-Samarkand	1981	Program of 31st USSR Conference on Nuclear Spectroscopy
P-Santa Fe	2004	Int. Conf. Nuclear Data for Science and Technology
B-Seeheim	1999	1st Int. Conf. Chemistry and Physics of the Transactinide Elements (TAN'99)
P-StMalo	1988	Proc. 3rd Int. Conf. Nucleus-Nucleus Collisions
P-StPetersbg	1995	Low Energy Nuclear Dynamics, EPS XV Nucl. Phys. Div.
P-Studsvik	1969	Proc. Conf, Neutron Capture Gamma Ray Spectroscopy
P-Swansea	1985	10th Int. Mass Spectrometry Conf. (in Adv. in Mass Spectr. 1985)
P-Tashkent	1977	Program of 27th USSR Conference on Nuclear Spectroscopy
P-Tbilis	1964	Program of 14th USSR Conference on Nuclear Spectroscopy
P-Teddington	1972	Proc. 4th Int. Conf. Atomic Masses and Fundamental Constants
P-Tokai	1994	Symposium on Nuclear Data, JAERI
P-Vienna	1964	Proc. 2nd Intern. Conf. Nuclidic Masses
P-Winnipeg	1967	Proc. 3rd Int. Conf. Atomic Masses and Fundamental Constants
P-Yerevan	1969	Program of 19th USSR Conference on Nuclear Spectroscopy
P-Yurmala	1987	Program of 37th USSR Conference on Nuclear Spectroscopy

LIST OF REFERENCES

Before 1948

1934Le01 PRLAA 145, 235 W.B. Lewis, B.V. Bowden
 1940Kr08 PCPSA 36, 490 R.S. Krishnan, E.A. Nahum

1948

1948Fe09 PPSOA 61, 466 N. Feather, J. Kyles, R.W. Pringle
 1948Ma29 PPSOA 60, 466 D.G.E. Martin, H.O.W. Richardson, Y.K. Hsu
 1948Ma30 PRLAA 195, 287 D.G.E. Martin, H.O.W. Richardson
 1948Sa18 PHRVA 74, 1264 D. Saxon
 1948St.A PrvCom 58St50 K. Street, Jr., A. Ghiorso, D.A. Orth, G.T. Seaborg

1949

1949Be36 PHRVA 76, 1624 L.A. Beach, C.L. Peacock, R.G. Wilkinson
 1949Be53 PHRVA 76, 574 P.R. Bell, B.H. Ketelle, J.M. Cassidy
 1949Bo67 PHRVA 75, 1401 T.W. Bonner, J.E. Evans, J.C. Harris, G.C. Phillips
 1949Ch35 PHRVA 76, 586 C.Y. Chao, C.C. Lauritsen, A.V. Tollestrup
 1949Du15 PHRVA 76, 1272 R.B. Duffield, L.M. Langer
 1949Fe18 PHRVA 76, 1888 L. Feldman, L. Lidofsky, P. Macklin, C.S. Wu
 1949La06 PHRVA 76, 641 L.M. Langer, H.C. Price, Jr.
 1949Ma57 PHRVA 76, 1719 K.C. Mann, D. Rankin, P.N. Kaykin
 1949Pa.A ORNL-499 45 G.W. Parker, G.E. Creek, G.M. Hebert, P.M. Lantz, W.J. Martin
 1949Pa.B ORNL-336 42 G.W. Parker, G.E. Creek, G.M. Hebert, P.M. Lantz
 1949To16 PHRVA 76, 428 A.V. Tollestrup, C.C. Lauritsen, W.A. Fowler
 1949To23 PHRVA 75, 1947 A.V. Tollestrup, F.A. Jenkins, W.A. Fowler, C.C. Lauritsen

1950

1950Ag01 PHRVA 77, 655 H.M. Agnew
 1950B192 HPACA 23, 623 J.P. Blaser, F. Boehm, P. Marmier
 1950Br52 PHRVA 79, 606 J.A. Bruner, L.M. Langer
 1950Br66 PHRVA 79, 902 A.R. Brosi, H. Zeldes, B.H. Ketelle
 1950Ch53 PHRVA 79, 108 C.Y. Chao, A.V. Tollestrup, W.A. Fowler, C.C. Lauritsen
 1950Fr10 PHRVA 80, 30 G. Friedlander, M.L. Perlman, D.E. Alburger, A.W. Sunyar
 1950Fr58 PHRVA 79, 897 M.S. Freedman, D.W. Engelkemeir
 1950Ha58 PHRVA 79, 409 R.W. Hayward
 1950Ha65 PHRVA 79, 541 R.W. Hayward
 1950Hu27 PHRVA 77, 726 D.J. Hugheas, C. Egger, D.E. Alburger
 1950Ke11 PHRVA 79, 242 B.H. Ketelle, C.M. Nelson, G.E. Boyd
 1950La04 PHRVA 77, 798 L.M. Langer, J.W. Motz, H.C. Price, Jr.
 1950Ma14 PHRVA 78, 363 L.B. Magnusson, S.G. Thompson, G.T. Seaborg
 1950Ma76 PHRVA 80, 977 E.A. Martell, W.F. Libby
 1950Me55 PHRVA 79, 19 J.Y. Mei, A.C.G. Mitchell, C.M. Huddleston
 1950Mo56 PHRVA 80, 309 R.C. Mobley, R.A. Laubenstein
 1950Na09 PHRVA 77, 398 R.A. Naumann, F.L. Reynolds, I. Perlman
 1950Ok52 PHRVA 80, 293 G.D. O'Kelley, G.W. Barton, Jr.
 1950Ow03 PHRVA 78, 606 G.E. Owen, C. Sharp Cook, P.H. Owen
 1950Ri59 PHRVA 80, 524 H.T. Richards, R.V. Smith, C.P. Browne

1951

1951Bo48 PHRVA 83, 216 G.E. Boyd, B.H. Ketelle
 1951Bo49 PHRVA 83, 1091 T.W. Bonner, J.W. Butler
 1951Br10 PHRVA 82, 159 A.B. Brown, C.W. Snyder, W.A. Fowler, C.C. Lauritsen
 1951Br87 PHRVA 84, 292 H.N. Brown, W.L. Bendel, F.J. Shore, R.A. Becker
 1951Ca04 PHRVA 81, 485 R. Canada, A.C.G. Mitchell
 1951Ca28 PHRVA 83, 955 R. Canada, A.C.G. Mitchell
 1951Ca37 PHRVA 84, 749 R.R. Carlson

1951Ca43	PHRVA	83,	483	J.M. Cassidy
1951Du03	PHRVA	81,	203	R.B. Duffield, L.M. Langer
1951Du19	PHRVA	84,	1065	R.B. Duffield, L.M. Langer
1951Fr19	PHRVA	84,	231	G. Friedlander, D.E. Alburger
1951Hu38	PHRVA	84,	289	C.M. Huddleston, A.B. Smith
1951Hy24	PHRVA	82,	944	E.K. Hyde, G.D. O'Kelley
1951Je01	PHRVA	81,	143	E.N. Jensen, R.T. Nichols, J. Clement
1951Kl55	PHRVA	83,	212	E.D. Klema, G.C. Phillips
1951Ko17	AFYSA	3,	47	E. Kondaiah
1951Li26	PHRVA	83,	512	C.W. Li, W. Whaling, W.A. Fowler, C.C. Lauritsen
1951Li29	PHRVA	82,	122	C.W. Li, W. Whaling
1951Ly10	PHRVA	82,	276	W.S. Lyon
1951Mc11	PHRVA	81,	734	C.L. McGinnis
1951Mc48	PHRVA	84,	384	J.J.G. McCue, W.M. Preston
1951Or.A	UCRL-1951			D.A. Orth, K. Street, Jr.
1951Ro50	PHRVA	83,	349	J.M. Robson
1951Ta05	PHRVA	81,	461	S.I. Taimuty
1951Ve05	PHYSA	17,	637	N.F. Verster, G.J. Nijgh, R. van Lieshout, C.J. Bakker
1951Wh05	PHRVA	81,	150	W. Whaling, C.W. Li
1951Wi26	PHRVA	84,	731	R.M. Williamson, C.P. Browne, D.S. Craig, D.J. Donahue

1952

1952Al06	PHRVA	85,	734	D.E. Alburger
1952Be55	AFYSA	5,	191	I. Bergström
1952Be78	IANFA	16,	314	E.Y. Berlovich
1952Ch31	PHRVA	88,	887	L.S. Cheng, J.L. Dick, J.D. Kurbatov
1952Cr30	PHRVA	88,	808	D.S. Craig, D.J. Donahue, K.W. Jones
1952Fa14	PHRVA	87,	252	C.Y. Fan
1952Fe16	PHRVA	87,	1091	L. Feldman, C.S. Wu
1952Fr23	PPSOA	65,	911	J.H. Fremlin, M.C. Walters, and 95Tr07 and 02Tr04
1952Fu04	PHRVA	86,	347	S.C. Fultz, M.L. Pool
1952Ha44	PHRVA	88,	876	J.R. Haskins, J.E. Duval, L.S. Cheng, J.D. Kurbatov
1952Hi.A	Th.-Berkeley			G.H. Higgins
1952Ka41	PHRVA	85,	368	M.I. Kalkstein, W.F. Libby
1952Ko27	AFYSA	4,	81	E. Kondaiah
1952Lo06	PHRVA	85,	585	J.A. Lovington, J.J.G. McCue, W.M. Preston
1952Mc34	PHRVA	87,	202	C.L. McGinnis (also PrvCom NDG)
1952Me53	PHRVA	88,	1360	F.R. Metzger
1952Mi54	PHRVA	88,	1254	C. Mileikowsky, W. Whaling
1952Mo12	PHRVA	85,	501	H.T. Motz
1952Mo22	PHRVA	86,	165	H.T. Motz, D.E. Alburger
1952Or.A	Th.-Berkeley			D.A. Orth
1952Ro16	PHRVA	86,	863	D. Rose, G. Hinman, L.G. Lang
1952Sc09	PHRVA	85,	873	W.A. Schoenfeld, R.W. Duborg, W.M. Preston, C. Goodman
1952Sc11	PHRVA	85,	1046	C.L. Scoville, S.C. Fultz, M.L. Pool
1952Sc15	PHRVA	86,	248	G. Schrank, J.R. Richardson
1952Sm13	PHRVA	86,	98	A.B. Smith
1952Sm41	PHRVA	87,	454	A.B. Smith, A.C.G. Mitchell, R.S. Caird
1952Wa12	PHRVA	86,	561	A.H. Wapstra
1952Wi26	PHRVA	85,	687	R.G. Winter

1953

1953Am08	PHRVA	91,	68	D.P. Ames, M.E. Bunker, L.M. Langer, B.M. Sorenson
1953An01	PHRVA	90,	656	C.E. Anderson, G.W. Wheeler, W.W. Watson
1953As.A	UCRL-2180			F. Asaro
1953Ba81	IANFA	17,	437	A.A. Bashilov, N.M. Antoneva, B.S. Dzelepov, A.I. Dolgintseva
1953Ba82	IANFA	17,	468	A.A. Bashilov, N.M. Antoneva, D.C. Broder, B.S. Dzelepov
1953Be42	PHRVA	90,	888	W.L. Bendel, F.J. Shore, H.N. Brown, R.A. Becker
1953Bl44	PHRVA	90,	464	E. Bleuler, J.W. Blue, S.A. Chowdary, A.C. Johnson, D.J. Tendam
1953Bu63	PHRVA	91,	1219	J.P. Butler, J.S. Adams

1953Co02	PRLAA	216,	242	E.R. Collins, C.D. MacKenzie, C.A. Ramm
1953Cr18	PHRVA	90,	1124	B. Crasemann, H.T. Easterday
1953Cr.A	PrvCom		58St50	W.W.T. Crane
1953Do04	PHRVA	89,	824	D.J. Donahue, K.W. Jones, M.T. McEllistrem, H.T. Richards
1953Du03	PHRVA	89,	854	R.B. Duffield, L.M. Langer
1953Ea11	PHRVA	91,	653	H.T. Easterday
1953Fa18	PHRVA	91,	1195	K.F. Famularo, G.C. Phillips
1953Fi.A	Th.-Rochester			R.W. Fink
1953Gl.A	ANL-5000		55	L.E. Glendenin, E.P. Steinberg
1953Ha66	CJPHA	31,	278	J.A. Harvey
1953Hy83	PHRVA	90,	267	E.K. Hyde, A. Ghiorso
1953Jo20	CJPHA	31,	1136	F.A. Johnson
1953Kn23	PHRVA	91,	889	J.D. Knight, M.E. Bunker, B. Warren, J.W. Starnes
1953Ky19	PPSOA	66,	519	J. Kyles, C.G. Campbell, W.J. Henderson
1953Li01	PHRVA	90,	387	L. Lidofsky, E. Alperovitch, C.S. Wu
1953Ma23	PHRVA	90,	330	L. Marquez
1953Ma64	PHRVA	92,	1511	L. Marquez
1953Pe14	PHRVA	92,	687	J.F. Perkins, S.K. Haynes
1953Ph28	PHRVA	91,	462	G.C. Phillips, K.F. Famularo, C.R. Gosset
1953Sa26	COREA	236,	1249	M. Sakai, P. Hubert
1953Sh48	PHRVA	91,	1203	F.J. Shore, W.L. Bendel, H.N. Brown, R.A. Becker
1953St31	PHYSA	19,	279	P.H. Stoker, Ong Ping Hok
1953Wa05	PHRVA	89,	502	F. Wagner, Jr., M.S. Freedman, D.W. Engelkemeir, J.R. Huizenga
1953Yo03	JUPSA	8,	435	Y. Yoshizawa
1953Yu04	COREA	237,	1077	T. Yuasa

1954

1954Ah20	AFYSA	7,	459	K. Ahnlund
1954Ah37	PHRVA	96,	999	K. Ahnlund
1954Ah47	AFYSA	8,	489	K. Ahnlund, S. Thulin, R. Pauli
1954Al35	PHRVA	96,	684	K.W. Allen, E. Almqvist, J.T. Dewan, T. Pepper
1954Be10	PHRVA	93,	1073	W. Bernstein, S.S. Markowitz, S. Katcoff
1954Bo39	PHRVA	94,	1078	F.I. Boley
1954Br37	PPSOA	67,	397	W.D. Brodie
1954Br96	PHRVA	96,	1372	H.N. Brown, R.A. Becker
1954Da22	ZENAA	9,	402	H. Daniel, W. Bothe
1954Da31	ZENAA	9,	974	H. Daniel
1954De13	PHRVA	95,	646	E. Der Mateosian
1954De17	PHRVA	95,	458	E. Der Mateosian, C.S. Wu
1954El10	PRLAA	224,	129	R.B. Elliott, D.J. Livesey
1954El24	PRYCA	48,	12	L.G. Elliott, R.L. Graham, J. Walker, J.L. Wolfson
1954Gr19	PHRVA	94,	794	R.L. Graham, J. Walker
1954Ha68	PHRVA	96,	1003	T.H. Handley, E.L. Olsen
1954Hu61	PHRVA	96,	548	J.R. Huizenga, C.M. Stevens
1954Ki23	RMPHA	26,	327	R.W. King
1954Le08	PHRVA	93,	155	M.R. Lee, R. Katz
1954Li19	PHRVA	94,	780	L. Lidofsky, R. Gold, C.S. Wu
1954Li24	PHRVA	95,	444	T. Lindqvist, A.C.G. Mitchell
1954Li42	PHRVA	95,	1535	T. Lindqvist, A.C.G. Mitchell
1954Ma54	PHRVA	95,	708	H.B. Mathur, E.K. Hyde
1954Ma75	PHRVA	96,	126	H.B. Mathur, E.K. Hyde
1954Mi60	AFYSA	7,	89	C. Mileikowsky
1954Mi61	AFYSA	8,	117	C. Mileikowsky
1954Mi89	PHRVA	96,	996	C. Mileikowsky, K. Ahnlund
1954Na14	JPRAA	15,	570	M.E. Nahmias, A.H. Wapstra
1954Na18	COREA	239,	47	M.E. Nahmias, T. Yuasa
1954Ni06	PHRVA	94,	369	R.T. Nichols, E.N. Jensen
1954Nu26	PHYSA	20,	555	R.H. Nussbaum, R. van Lieshout, A.H. Wapstra, N.F. Verster, F.E.L. Ten Haaf, G.J. Nijgh, L. Th. M. Ornstein
1954Nu27	PHYSA	20,	571	R.H. Nussbaum, A.H. Wapstra, R. van Lieshout, G.J. Nijgh, L. Th. M. Ornstein, (and PrvCom NDG)

1954O103	PHRVA	93,	1125	J.L. Olsen, G.D. O'Kelley
1954O105	PHRVA	95,	1539	J.L. Olsen, G.D. O'Kelley
1954Pa39	AFYSA	8,	212	R. Pauli, K. Ahnlund, C. Mileikowsky
1954Po26	PHRVA	95,	1523	A.V. Pohm, W.E. Lewis, J.H. Talboy, Jr., E.N. Jensen
1954Pr31	PHRVA	96,	1390	C.H. Pruett, R.G. Wilkinson
1954Ri09	PHYSA	20,	107	L.H. Th. Rietjens, H.J. van den Bold, P.M. Endt
1954Sa22	PHRVA	94,	642	B. Saraf
1954Th17	AFYSA	7,	289	S. Thulin, K. Nybø
1954Th30	PHRVA	96,	850	J. Thirion, R. Cohen, W. Whaling
1954Th36	AFYSA	8,	219	S. Thulin, J. Moreau, H. Atterling
1954Th39	AFYSA	8,	229	S. Thulin, J. Moreau, H. Atterling
1954Wo23	PHRVA	95,	761	C. Wong
1954Za05	IANFA	18,	563	P.P. Zarubin
1955				
1955Ad10	COREA	240,	1421	J.P. Adloff
1955Ah41	AFYSA	9,	39	K. Ahnlund
1955At21	PHYSA	21,	543	A.H.W. Aten, Jr., G.D. De Feyfer
1955Ba.A	P-Moscow		251	S.A. Baranov, K.N. Shlyagin
1955Be20	ZEPYA	142,	585	W. Beekman
1955Be78	PHMAA	46,	341	E.H. Bellamy, F.C. Flack
1955Bi29	NUCIA	2,	1052	A. Bisi, E. Germagnoli, L. Zappa
1955Bi23	PHRVA	100,	1324	J.W. Blue, E. Bleuler
1955Br02	JINCA	1,	254	C.P. Browne, D.C. Hoffman, W.T. Crane, J.P. Balagna, G.H. Higgins, J.W. Barnes, R.W. Hoff, H.L. Smith, J.P. Mize, M.E. Bunker
1955Br16	PHRVA	100,	84	R.M. Brugger, T.W. Bonner, J.B. Marion
1955Bu01	PHRVA	97,	1272	M.E. Bunker, J.W. Starner
1955Bu.A	PHRVA	99,	659	M.E. Bunker, J.P. Mize, J.W. Starner
1955Da37	PHRVA	100,	796	M.C. Day, Jr., G.W. Eakins, A.F. Voigt
1955De18	PHMAA	46,	445	H. De Waard
1955De40	PHYSA	21,	803	E.F. De Haan, G.J.S. Sizoo, P. Kramer
1955Dr43	IANFA	19,	324	G.M. Drabkin, V.I. Orlov, L.I. Rusinov
1955En16	JINCA	1,	345	D.W. Engelkemeir, P.R. Fields, S. Fried, G.L. Pyle, C.M. Stevens, L.B. Asprey, C.P. Browne, H.L. Smith, R.W. Spence
1955Fa33	PHRVA	99,	1440	B. Farrelly, L. Koerts, N. Benczer, R. van Lieshout, C.S. Wu
1955Go.A	P-Moscow		226	L.L. Goldin, E.F. Tretyakov, G.I. Novikov
1955Gr08	PHRVA	97,	1033	W.E. Graves, A.C.G. Mitchell
1955Ha.A	Th.-Delft			H. Hagedoorn
1955Jo02	PHRVA	97,	1031	J.T. Jones, Jr., E.N. Jensen
1955Jo09	PHRVA	99,	1645	M.W. Johns, B.C. Chidley, I.R. Williams
1955Ki28	PHRVA	99,	1393	J.D. Kington, J.K. Bair, H.O. Cohn, H.B. Willard
1955Ko14	PHRVA	98,	1230	L. Koerts, P. Macklin, B. Farrelly, R. van Lieshout, C.S. Wu
1955Ma01	ZENAA	10,	168	Th. Mayer-Kuckuk, H. Daniel
1955Ma12	PHRVA	97,	103	P. Marmier, F. Boehm
1955Ma13	PHRVA	97,	117	H.B. Mathur, E.K. Hyde, C.A. Levine, P.K. Kofstad
1955Ma40	COREA	240,	291	N. Marty
1955Ma62	JPRAA	16,	458	N. Marty
1955Ma63	HPACA	28,	193	D. Maeder, P. Stahelin
1955Ma76	PHRVA	100,	847	J.B. Marion, T.W. Bonner, C.F. Cook
1955Ma84	PHRVA	100,	91	J.B. Marion, T.W. Bonner, C.F. Cook
1955Ma.A	ANL-5386			L.B. Magnusson, F. Wagner, Jr., D.W. Engelkemeir, M.S. Freedman
1955Mc17	PHRVA	97,	93	C.L. McGinnis
1955Mi90	PHRVA	100,	1390	J.P. Mize, M.E. Bunker, J.W. Starner
1955Mo69	JINCA	1,	274	F.F. Momyer, Jr., F. Asaro, E.K. Hyde
1955Mu19	PHRVA	97,	1007	J.J. Murray, F. Boehm, F. Marmier, J.W.M. Dumond
1955Nu11	PHYSA	21,	77	R.H. Nussbaum, A.H. Wapstra, M.J. Sterk, R.E.W. Kropveld
1955On05	PHYSA	21,	676	Ong Ping Hok, P. Kramer
1955Pa50	AFYSA	9,	571	R.T. Pauli
1955Pe24	PHRVA	98,	262	I. Perlman, F. Stephens, F. Asaro
1955Ra27	PHRVA	99,	42	J.O. Rasmussen, H. Slatis, T.O. Passel
1955Ro05	PHRVA	97,	97	H. Roderick, O. Lonsjo, W.E. Meyerhof

1955Sc09	PHRVA	99,	810	A.W. Schardt, J.P. Welker
1955Th01	AFYSA	9,	137	S. Thulin
1956				
1956Ar33	AFYSA	10,	1	E. Arbman, N. Svartholm
1956As38	PHRVA	104,	91	F. Asaro, I. Perlman
1956Av28	ANPHA	1,	10	P. Avignon
1956Ba39	ZETF	30,	225	S.A. Baranov, K.N. Shlyagin
1956Ba95	JNCEA	3,	132	S.A. Baranov, K.N. Shlyagin
1956Be18	PHRVA	101,	1027	N. Benczer, B. Farrelly, L. Koerts, C.S. Wu
1956Bi30	NUCIA	4,	758	A. Bisi, S. Terrani, L. Zappa
1956Bi10	PHRVA	104,	202	N.C. Blais, W.W. Watson
1956Ch67	PHRVA	104,	1314	A. Chetham-Strode, L.W. Holm
1956Ch.A	UCRL- 3322			A. Chetham-Strode, Jr. (thesis Berkeley)
1956Co13	PHRVA	101,	1042	J.M. Cork, M.K. Brice, D.W. Martin, L.C. Schmid, R.G. Helmer
1956Da06	ZENAA	11,	212	H. Daniel, R. Nierhaus
1956Do41	PHRVA	104,	1059	R.A. Douglas, J.W. Broer, R. Chiba, D.F. Herring, E.A. Silverstein
1956Dr11	PHRVA	102,	426	B.J. Dropesky, A.W. Schardt
1956Du31	PHRVA	103,	1413	V.S. Dubey, C.E. Mandeville, M.A. Rothman
1956Gr07	PHRVA	101,	776	D. Green, J.R. Richardson
1956Gr10	PHRVA	101,	701	W.E. Graves, A.C.G. Mitchell
1956Gr11	PHRVA	101,	1306	P.R. Gray
1956Gr12	PHRVA	101,	1368	W.E. Graves, S.K. Suri
1956Gr35	PHRVA	102,	761	L. Grodzins, H. Motz
1956Ha10	PHRVA	101,	93	R.W. Hayward, D.D. Hoppes
1956Ha59	PHRVA	104,	183	R.W. Hayward, D.D. Hoppes
1956Ho23	JINCA	2,	209	D.C. Hoffman, C.P. Browne
1956Ho66	PHRVA	104,	368	D.D. Hoppes, R.W. Hayward
1956Jo05	CJPHA	34,	69	M.W. Johns, C.V. McMullen, I.R. Williams, S.V. Nablo
1956Jo20	PHRVA	102,	831	N.R. Johnson, R.K. Sheline, R. Wolfgang
1956Ke23	PHRVA	103,	190	B.H. Ketelle, H. Thomas, A.R. Brosi
1956Ki29	PHRVA	104,	154	O.C. Kistner, A. Schwarzschild, B.M. Rustad
1956Kn20	PHRVA	102,	1592	J.D. Knight, J.P. Mize, J.W. Starnier, J.W. Barnes
1956Ko67	ZETF	31,	771	L.M. Kondratev, G.I. Novikova, Y.P. Sobolev, L.L. Goldin
1956La24	ANPHA	1,	152	J. Laberrigie-Frolow
1956Ma14	PHRVA	101,	283	J.B. Marion, R.A. Chapman
1956Ma27	PHRVA	102,	457	D.W. Martin, J.M. Cork, S.B. Burson
1956Ma87	PHRVA	104,	1028	J. Marion, F.B. Hagedorn
1956Nu02	PHRVA	101,	905	R.H. Nussbaum, A.H. Wapstra, W.A. Bruil, M.J. Sterk, G.J. Nijgh, N. Grobden
1956Ok02	PHRVA	101,	1059	G.D. O'Kelley, N.H. Lazar, E. Eichler
1956Pe38	PHRVA	104,	740	J.R. Penning, H.R. Maltrud, J.C. Hopkins, F.H. Schmidt
1956Po16	ZENAA	11,	143	W. Porschen, W. Riezler
1956Po28	PHRVA	103,	921	F.T. Porter, M.S. Freedman, T.B. Novey, F. Wagner, Jr.
1956Sa06	PHRVA	104,	1434	R.M. Sanders
1956Sc.A	BAPSA	1,	162	A.W. Schardt, B. Dropesky
1956Sh31	ZETF	30,	891	K.N. Shlyagin
1956Sm85	JINCA	3,	93	H.L. Smith, C.P. Browne, D.C. Hoffman, J.P. Mize, M.E. Bunker
1956Sm96	PHRVA	104,	706	F.B. Smith, N.B. Gove, R.W. Henry, R.A. Becker
1956Th11	PHRVA	102,	195	M.T. Thieme, E. Bleuler
1956Tu17	PHRVA	103,	1000	W. Turchinets, R.W. Pringle
1956Va14	PHRVA	103,	656	D.M. Van Patter, C.P. Swann, W.C. Porter, C.E. Mandeville
1956Wa24	PHRVA	102,	816	R.G. Waddell, E.N. Jensen
1956Wo09	CJPHA	34,	256	J.R. Wolfson
1957				
1957Ah19	AFYSA	11,	379	K. Ahnlund
1957Am47	PHRVA	106,	553	S. Amiel, A. Chetham-Strode, Jr., G.R. Choppin, A. Ghiorso, B.G. Harvey, L.W. Holm, S.G. Thompson
1957As.A	BAPSA	2,	393	F. Asaro, S.G. Thompson, F.S. Stephens, Jr., I. Perlman
1957Ba08	ZENAA	12,	520	G. Baro, P. Rey

1957Be44	PHRVA	107,	737	E.M. Bernstein, H.W. Lewis
1957Bi84	PHRVA	108,	1025	H. Bichsel, T.W. Bonner
1957Bj56	NUPHA	4,	313	S. Bjornholm, O. Nathan, O.B. Nielsen, R.K. Sheline
1957Br82	PHRVA	108,	1007	C.P. Browne
1957Bu37	PHRVA	106,	1224	J.W. Butler, K.L. Dunning, R.O. Bondelid
1957Bu41	PHRVA	105,	227	M.E. Bunker, J.P. Mize, J.W. Starner
1957Ch30	PHRVA	105,	633	R.A. Chapman, J.C. Slattery
1957Co62	PPSOA	70,	769	R.D. Connor, I.L. Fairweather
1957Da07	ZENAA	12,	363	H. Daniel
1957Dz64	IANFA	21,	978	B.S. Dzelepov, O.E. Kraft, V.B. Zhinkina
1957Fr.A	PrvCom		58St50	M.S. Freedman, D.W. Engelkemeir, F.T. Porter, F. Wagner, Jr.
1957Ga15	PHRVA	107,	1628	D.G. Gardner, W.W. Meinke
1957Gl20	PHMAB	2,	49	R.N. Glover, D.E. Watt
1957Gr47	PHRVA	105,	1570	H.G. Graetzer, A.B. Robbins
1957Ha08	CJPHA	35,	258	B.G. Harvey, H.G. Jackson, T.A. Eastwood, G.C. Hanna
1957Ha99	PHRVA	108,	735	F.B. Hagedorn
1957He39	PHRVA	105,	1011	R.L. Heath
1957He43	NUPHA	3,	161	C.J. Herrlander, T.R. Gerholm
1957Je.A	PrvCom	NDG	Jun	E.N. Jensen
1957Jo24	PISAA	45,	390	M.C. Joshi, B.N. Subba Rao, B.V. Thosar
1957Ki22	PHRVA	105,	1339	O.G. Kistner, A. Schwarzschild, B.M. Rustadt, D.E. Alburger
1957Kn.A	PrvCom	NDG	Apr	J.D. Knight
1957Le27	COREA	244,	1358	C. Levi, L. Papineau
1957Mi63	ANPHA	2,	116	A. Michalowicz
1957Na03	NUPHA	4,	125	O. Nathan
1957Ok.A	BAPSA	2,	24	G.D. O'Kelley, Q.V. Larson, G.E. Boyd
1957Ol05	PHRVA	106,	985	J.L. Olsen, L.G. Mann, M. Lindner
1957Ra04	PHRVA	107,	141	J.O. Rasmussen, F.L. Canavan, J.M. Hollander
1957Ri43	ZENAA	12,	665	W. Riezler, G. Kauw
1957Sm73	PHRVA	107,	1314	W.G. Smith, R.L. Robinson, J.H. Hamilton, L.M. Langer
1957Th10	PHRVA	106,	1228	T.D. Thomas, R. Vandenbosch, R.A. Glass, G.T. Seaborg
1957Va03	PHRVA	107,	171	D.M. Van Patter, M.A. Rothman, W.C. Porter, C.E. Mandeville
1957Va08	PHYSA	23,	753	B. Van Nooijen, J. Konijn, A. Heyligers, J.F. van den Brugge, A.H. Wapstra
1957Wa01	PHRVA	105,	639	E.K. Warburton, J.N. McGruer
1957Yo04	PHRVA	108,	72	T.E. Young, G.C. Phillips, R.R. Spencer

1958

1958Al99	PHRVA	112,	1998	D.E. Alburger, S. Ofer, M. Goldhaber
1958Ar56	AFYSA	13,	501	E. Arberman, J. Brude, T.R. Gerholm
1958Bi41	PHRVA	112,	1089	H. Bichsel
1958Br88	HPACA	31,	335	J. Brunner, J. Halter, P. Scherrer
1958Du78	PHRVA	110,	1076	K.L. Dunning, J.W. Butler, R.O. Bondelid
1958Ea06	JINCA	6,	261	T.A. Eastwood, R.P. Schuman
1958El44	PHRVA	112,	1200	A.J. Elwyn, H.H. Landon, S. Oleksa, G.N. Glasoe
1958Fe16	PHRVA	112,	1238	J.M. Ferguson
1958Gi05	PHRVA	109,	1263	J.E. Gindler, J.R. Huizenga, D.W. Engelkemeir
1958Gl56	IANFA	22,	941	M.P. Glazunov, B.F. Fulev
1958Go77	PRLTA	1,	251	H.E. Gove, J.A. Kuehner, A.E. Litherland, E. Almqvist, D.A. Bromley, A.D. Ferguson, P.H. Rose, R.P. Bastide, N. Brooks, R.D. Connor
1958Gr07	IANFA	22,	194	E.P. Grigorev, A.V. Zolotavin, I.I. Kuzmin, E.D. Pavlitskaia
1958Ha32	PHRVA	112,	2010	J.H. Hamilton, L.M. Langer, W.G. Smith
1958Hi.A	UCRL- 8423			M.W. Hill
1958Ho02	PHRVA	109,	1282	D.C. Hoffman, B.J. Dropesky
1958Jo01	PHRVA	109,	1243	C.H. Johnson, A. Galonsky, J.P. Ulrich
1958Jo28	PHRVA	112,	1252	K.W. Jones, L.J. Lidofsky, J.L. Weil
1958Ki40	PHRVA	112,	1972	O.C. Kistner, B.M. Rustad
1958Ko57	PHYSA	24,	377	J. Konijn, B. van Nooijen, H.L. Hagedoorn
1958Ko60	PHYSA	24,	129	J. Konijn, H.L. Hagedoorn, B. van Nooijen
1958Mc64	PHRVA	111,	1636	M.T. McEllistrem, H.J. Martin, D.W. Miller, M.B. Sampson
1958Na15	CJPHA	36,	1409	S.V. Nablo, M.W. Johns, A. Artna, R.H. Goodman
1958Ni28	NUPHA	9,	528	G.J. Nijgh, A.H. Wapstra, L.T.M. Ornstein, N. Salomons-Grobben

1958No30	AFYSA	14,	85	T. Novakov, R. Stockendal, M. Schmorak, B. Johansson
1958Pe17	PHRVA	110,	381	M.L. Perlman, J.P. Welker, M. Wolfsberg
1958Po79	PHRVA	112,	1954	N.T. Porile
1958Ri23	ZENAA	13,	904	W. Riezler, G. Kauw
1958Ro09	PHRVA	109,	1255	R.L. Robinson, L.M. Langer
1958Se71	IANFA	22,	198	V.A. Sergienko
1958St50	RMPHA	30,	585	D. Strominger, J.M. Hollander, G.T. Seaborg
1958Su60	PHRVA	109,	109	C.R. Sun, B.T. Wright
1958Wa.A	P-Paris		910	R.J. Walen, G. Bastin
1958Yt22	NUPHA	9,	108	C. Ythier, R.K. Girgis, R.A. Ricci, R. van Lieshout
1959				
1959Ac28	PHRVA	114,	137	W.T. Achor, W.E. Phillips, J.I. Hopkins, S.K. Haynes
1959Al06	PHRVA	116,	939	D.E. Alburger, A. Gallmann, D.H. Wilkinson
1959Am16	PISAA	50,	342	K.S.Y. Ambiyee, M.C. Yoshi, B.V. Thosar
1959An33	NUPHA	13,	310	S.L. Anderson, T. Holtebekk, O. Lonsjo, R. Tangen
1959Ba13	PPSOA	73,	513	F. De S. Barros, P.D. Forsyth, A.A. Jaffe, I.J. Taylor
1959Be72	PHRVA	115,	108	N. Benczer-Koller, A. Schwarzschild, C.S. Wu
1959Bo52	ZEPYA	155,	488	F. Bonhoeffer, H.H. Hennies, A. Flammersfeld
1959Bo61	NUPHA	14,	145	P. Boskma, H. De Waard
1959Br06	CJPHA	37,	1514	D.A. Bromley, A.J. Ferguson, H.E. Gove, J.A. Kuehner, A.E. Litherland, E. Almqvist, R. Batchelor
1959Br65	PHRVA	113,	239	A.R. Brosi, B.H. Ketelle, H.C. Thomas, R.J. Kerr
1959Br74	NUPHA	12,	662	C.P. Browne
1959Bu20	PHRVA	116,	143	M.E. Bunker, B.J. Droupesky, J.D. Knight, J.W. Stamer, B. Warren
1959Co63	PPSOA	74,	161	R.D. Connor, I.L. Fairweather
1959Cu86	PHRVA	114,	1600	J.B. Cumming
1959Dr.A	BAPSA	4,	57	B.J. Droupesky, D.C. Hoffman, W.R. Daniels
1959Fe99	CJPHA	37,	660	A.J. Ferguson, H.E. Gove
1959Fl40	PHRVA	116,	744	K.F. Flynn, L.E. Glendenin
1959Gh.A	UCRL- 8714			A. Ghiorso
1959Gi50	NUPHA	12,	204	R.K. Girgis, R. van Lieshout
1959Gi54	PHRVA	115,	1271	J.E. Gindler, J. Gray, Jr., J.R. Huizenga
1959Go68	PHRVA	113,	246	C.R. Gossett, J.W. Butler
1959Gr93	IANFA	23,	191	E.P. Grigorev, A.V. Zolotavin, B. Kratsik
1959Ha27	PHRVA	114,	1133	D.S. Harmer, M.L. Perlman
1959Hi66	PPSOA	73,	501	S. Hinds, R. Middleton
1959Hi67	PPSOA	73,	721	S. Hinds, R. Middleton
1959Hi68	PPSOA	73,	727	S. Hinds, R. Middleton
1959Hi75	PPSOA	74,	779	S. Hinds, R. Middleton
1959Ho97	AFYSA	15,	387	G. Holm, H. Ryde
1959Jo37	PHRVA	114,	279	N.R. Johnson, G.D. O'Kelley
1959Ju40	PHRVA	113,	602	J.O. Juliano, C.W. Kocher, T.D. Nainan, A.C.G. Mitchell
1959Ke26	NUPHA	11,	492	W.H. Kelly, G.B. Beard, R.A. Peters
1959Kn38	JINCA	10,	183	J.D. Knight, D.C. Hoffman, B.J. Droupesky, D.L. Frasco
1959Ku79	PHYSA	25,	600	J. Kuperus, P.J.M. Smulders, P.M. Endt
1959Me68	PPSOA	74,	693	R.E. Meads, J.E.G. McIldowie
1959Mi19	CJPHA	37,	1126	C.H. Millar, T.A. Eastwood, J.C. Roy
1959No41	ZETFA	37,	928	G.I. Novikova, E.A. Volkova, L.I. Goldin, D.M. Ziv, E.F. Tretyakov
1959Pe27	ZETFA	37,	1558	V.P. Pereygin, E.D. Donets, G.N. Flerov
1959Po77	PHRVA	114,	1286	F.T. Porter, P.P. Day
1959Ri35	NUPHA	10,	360	R.A. Ricci, R. van Lieshout
1959Ro53	CJPHA	37,	385	J.P. Roy, L.P. Roy
1959Su.A	BAPSA	4,	278	D.C. Sutton, H.A. Hill, R. Sherr, and PrvCom
1959To.A	BAPSA	4,	366	C.W. Townley, J.D. Kurbatov, M.H. Kurbatov
1959Va02	PHRVA	115,	115	S.E. Vandenbosch, H. Diamond, R.K. Sjoblom, P.R. Fields
1959Va32	PHRVA	113,	259	S.E. Vandenbosch
1959We30	PHRVA	113,	881	H.I. West, Jr., L.G. Mann, G.M. Iddings
1959Yo25	PHRVA	116,	962	T.E. Young, G.C. Phillips, R.R. Spencer, D.A.A.S.N. Rao

1960

1960An04	ZETFA	38,	372	S.F. Antonova, S.S. Vasilenko, M.G. Kaganskii, D.L. Kaminskii
1960Ar05	CJPHA	38,	1577	A. Artna, M.E. Law
1960Ba17	NUPHA	15,	566	G. Backstrom, O. Bergman, J. Burde, J. Lindskog
1960Ba44	IANFA	24,	1035	S.A. Baranov, A.G. Zelenkov, V.M. Kulakov
1960Bo21	PHRVA	120,	889	R.O. Bondelid, C.A. Kennedy, J.W. Butler
1960Cl02	NUPHA	14,	472	R.L. Clarke, E. Almqvist, E.B. Paul
1960Cr01	NUPHA	14,	578	C.B. Creager, C.W. Kocher, A.C.G. Mitchell
1960Dr03	NUPHA	16,	357	B.J. Dropesky, A.W. Schardt, T.T. Shull
1960Dz02	IANFA	24,	802	B.S. Dzelepov, I.F. Uchevatkin, S.A. Shestopalova
1960Fe03	ANPHA	5,	181	L. Feuvrais
1960Fo01	PPSOA	75,	291	P.D. Forsyth, F. De S. Barros, A.A. Jaffe, T.J. Taylor, S. Ramavataram
1960Fr04	PHRVA	120,	1436	J.M. Freeman
1960Ge01	PHRVA	118,	1302	K.N. Geller, J. Halpern, E.G. Muirhead
1960Gi01	NUPHA	14,	589	R.K. Girgis, R.A. Ricci, R. van Lieshout
1960Gu05	AFYSA	17,	337	R.K. Gupta
1960Ha26	PHRVA	119,	772	J.H. Hamilton, L.M. Langer, W.G. Smith
1960He09	PHRVA	119,	788	R.G. Helmer, S.B. Burson
1960Hi03	PPSOA	75,	444	S. Hinds, R. Middleton
1960Ho.A	PrvCom		Hyde	R.W. Hoff, F. Asaro, I. Perlman, in E.K. Hyde, I. Perlman, G.T. Seaborg, Nuclear Properties Heavy Elements p. 799
1960Ja07	PHRVA	117,	1086	T.H. Jacobi, H.A. Howie, J.R. Richardson
1960Ja13	PHRVA	120,	914	N. Jarmie, M.G. Silbert
1960Ja17	PPSOA	76,	914	A.A. Jaffe, F. De S. Barros, P.D. Forsyth, J. Muto, I.J. Taylor, S. Ramavataram
1960Je03	NUPHA	19,	654	B.S. Jensen, O.B. Nielsen, O. Skilbreit
1960Ka14	PHRVA	119,	1953	W.R. Kane, G.T. Emery, G. Scharff-Goldhaber, M. McKeown
1960Ka20	JUPSA	15,	2140	T. Katoh, M. Nozawa, Y. Yoshizawa, Y. Koh
1960Ko04	ZETFA	38,	1436	A.P. Komar, G.A. Korolev, G.E. Kocharov
1960Ko12	PHRVA	120,	1348	C.W. Kocher, A.C.G. Mitchell, C.B. Creager, T.D. Nainan
1960Ku06	JUPSA	15,	2179	T. Kuroyanagi
1960La04	PHRVA	119,	1308	L.M. Langer, D.R. Smith
1960Lu07	ZENAA	15,	939	G. Luhrs, C. Mayer-Boricke
1960Ma21	PPSOA	76,	56	B.E.F. Macefield, J.H. Towle
1960Ma.A	UCRL- 8740			T.V. Marshall
1960Mc12	NUPHA	17,	116	G.J. McCallum, A.T.G. Ferguson, G.S. Mani
1960Mi.A	Th.-Princeton			J.H. Miller III
1960Mo01	JUPSA	15,	213	H. Morinaga, T. Kuroyanagi, H. Mitsui, K. Shoda
1960Mo.A	BAPSA	5,	338	R.B. Moore
1960Mu07	PPSOA	75,	929	J. Muto, F. De S. Barros, A.A. Jaffe
1960Nu02	PHRVA	120,	1815	H. Nutley, J.B. Gerhard
1960Pr07	PHRVA	118,	113	W.W. Pratt, R.G. Cochran
1960Sc14	NUPHA	21,	55	W. Schneider
1960Se05	NUPHA	16,	138	O.J. Segart, J. Demuyneck, A.M. Hoogenboom, H. van den Bold
1960Sp08	NUPHA	21,	310	R.R. Spencer, G.C. Phillips, T.E. Young
1960Ta12	PPSOA	75,	772	I.J. Taylor, F. De S. Barros, P.D. Forsyth, A.A. Jaffe, S. Ramavataram
1960Ta19	NUPHA	21,	133	K. Takahashi, H. Morinaga
1960Vo05	ZETFA	39,	70	A.A. Vorobiev, A.P. Komar, V.A. Korolev
1960Vo07	IANFA	24,	1092	A.A. Vorobiev, A.P. Komar, V.A. Korolev
1960Wa03	PHRVA	117,	191	W.R. Ware, E.O. Wiig
1960Wa04	PHRVA	117,	1297	R. Wallace, J.A. Welch, Jr.
1960Wa10	PHRVA	118,	181	M.A. Wahlgren, W.W. Meinke
1960Wa14	NUPHA	16,	246	R.J. Walen, G. Bastin-Scoffier
1960Wi07	PHRVA	117,	1325	R.M. Williamson, T. Katman, B.S. Burton
1960Yu01	NUPHA	16,	119	H. Yuta, H. Morinaga
1960Ze02	PHRVA	120,	1723	B. Zeidman, J.L. Yntema, B.J. Raz
			1961	
1961Ar05	NUPHA	22,	341	E. Arbman, I.B. Haller
1961Ar15	CJPHA	39,	1817	A. Artna, M.W. Johns
1961Ba43	ZETFA	41,	1484	K.A. Baskova, S.S. Vasilev, N.S. Chang, L.Y. Shavtvalov
1961Ba44	ZETFA	41,	1733	S.A. Baranov, V.M. Kulakov, P.S. Samoilov, A.G. Zelenkov, Y.F. Rodionov

1961Be13	PHRVA	123,	2100	E.H. Beckner, R.L. Bramblett, G.C. Phillips, T.A. Eastwood
1961Be15	PHRVA	122,	1576	G.B. Beard, W.H. Kelly
1961Be20	ZETFFA	40,	91	A. Bedesku, O.M. Kalinkina, K.P. Mitrofanov, A.A. Sorokin, N.V. Forafontov, V.S. Shpinel
1961Be41	NUPHA	28,	570	G.B. Beard, W.H. Kelly
1961Bo13	PHRVA	124,	213	H.H. Bolotin, A.C. Li, A. Schwarzschild
1961Bo24	NUPHA	27,	581	N.A. Bonch-Osmolovskaya, B.S. Dzelepov, O.E. Kraft, Y.Y. Yang
1961Bo.B	P-Dubna			N.A. Bonch-Osmolovskaya, B.S. Dzelepov, O.E. Kraft
1961Bu04	PHRVA	121,	1770	J.W. Butler, R.O. Bondelid
1961Cu02	PHRVA	122,	1267	J.B. Cumming, N.T. Porile
1961Da01	ZEPYA	164,	303	H. Daniel, P. Panussi
1961De17	NUPHA	28,	148	H.G. Devare
1961De25	JOPQA	22,	656	P. Depommier, M. Chabre
1961Di04	NUPHA	25,	248	R.M. Diamond, J.M. Hollander, D.J. Horen, R.A. Naumann
1961Du02	PHRVA	123,	1321	K.L. Dunning, J.W. Butler
1961Er04	AFYSA	20,	209	P. Erman, Z. Sujkowski
1961Fi05	AFYSA	19,	323	R.W. Fink, G. Andersson, J. Kantele
1961Ga05	PHRVA	122,	1590	C.J. Gallagher, Jr., H.L. Nielsen, O.B. Nielsen
1961GI02	PHRVA	122,	229	C.E. Gleit, C.D. Coryell
1961GI06	PHRVA	124,	1914	C.E. Gleit, C.D. Coryell
1961Gr33	IANFA	25,	1217	E.P. Grigorev, K.Y. Gromov, B.S. Dzelepov, Z.T. Zhelev, V. Zvolaska, I. Zvolskii
1961Gu02	AFYSA	18,	443	R.K. Gupta, J. Svedberg, G. Andersson
1961Hi06	JUPSA	16,	1280	H. Hisatake
1961Hi11	PPSOA	78,	473	S. Hinds, H. Marchant, R. Middleton
1961Ho10	JUPSA	16,	841	S. Homma, T. Kuroyanagi, H. Morinaga
1961Ho13	JINCA	18,	1	R.W. Hoff, J.M. Hollander, M.C. Michel
1961Ja07	PHRVA	123,	909	N. Jarmie, M.G. Silbert
1961Ja21	PHRVA	124,	1142	H.E. Jackson, L.M. Bollinger
1961Ja22	ZEPYA	165,	94	J. Jaenecke, H. Jung
1961Ja23	RMXFA	10,	247	A. Jaidar, G. Lopez, M. Mazari, R. Dominguez
1961Jo08	PHRVA	122,	1546	N.R. Johnson, E. Eichler, G.D. O'Kelley, J.W. Chase, J.T. Wasson
1961Jo15	PHRVA	124,	157	R.C. Jopson, H. Mark, C.S. Swift, J.H. Zenger
1961Ju05	AFYSA	17,	429	B. Jung, T. Svedberg
1961Ko11	IANFA	25,	237	G.E. Kocharov, G.A. Korolev
1961Ku09	JUPSA	16,	2369	T. Kuroyanagi
1961Ku10	JUPSA	16,	2393	T. Kuroyanagi, H. Yuta, K. Takahashi, H. Morinaga
1961La05	DANKA	137,	551	A.K. Lavrukhina, T.V. Malysheva, B.A. Khotin
1961La16	ZEPYA	165,	393	H. Langhoff, P. Kilian, A. Flammersfeld
1961Ma03	PHRVA	121,	877	H.J. Martin, M.B. Sampson, D.W. Miller
1961Ma05	PHRVA	121,	1758	R.D. Macfarlane, T.P. Kohman
1961Ma08	PPSOA	77,	1050	B.E.F. Macefield, J.H. Towle, W.B. Gilboy
1961Ni02	PHRVA	122,	172	R.T. Nichols, R.E. McAdams, E.N. Jensen
1961Pe23	ZETFFA	41,	1780	K.A. Petrzhak, M.I. Yakunin
1961Re06	JINCA	18,	13	I. Rezanka, J. Frana, M. Vobecky, A. Mastalka
1961Ri02	NUPHA	24,	494	R. Rikmenspoel, C.M. Van Patter
1961Ro12	PHRVA	123,	1349	E.L. Robinson, O.E. Johnson
1961Ru06	UCRL- 9511			C.P. Ruiz
1961Ry02	HPACA	34,	240	A. Rytz
1961Ry04	HPACA	34,	819	A. Rytz, H. Winkler, F. Zamboni, W. Zych
1961Ry05	HPACA	34,	819	A. Rytz, H.H. Staub, H. Winckler
1961Sa11	PHRVA	123,	855	D. Sadeh
1961Sc11	PHRVA	123,	893	A.W. Schardt, A. Goodman
1961Se08	IANFA	25,	848	I.P. Selinov, V.L. Chikhladze, D.E. Khulelidze
1961Sh23	NUPHA	28,	649	S.M. Shafroth
1961Si03	PHRVA	123,	221	M.G. Silbert, N. Jarmie
1961Sm05	PHRVA	122,	1527	A.M. Smith, F.E. Steigert
1961Th01	PHRVA	124,	1526	T.T. Thwaites, W.W. Pratt
1961To03	PPSOA	77,	399	J.H. Towle, B.E.F. Macefield
1961To10	JOPQA	22,	683	J. Tousset, A. Moussa
1961Va08	ZETFFA	40,	475	S.S. Vasilev, No Hsieng Chang, L. Ya. Shavtvalov
1961Va19	IANFA	25,	1127	A.K. Valter, I.I. Zalubovski, A.P. Klyucharev, V.A. Lutsik
1961We11	PHRVA	124,	527	H.I. West, Jr., L.G. Mann, R.J. Nagle

1961Ya01	PHRVA	121,	600	S.S. Yamamoto, F.E. Steigert
1961Zy02	APPOA	20,	321	J. Żylicz, Z. Preibisz, S. Chojnacki, J. Wolowski, Y. Noursev
1962				
1962An05	ZENAA	17,	238	G. Andersson-Lindstrom
1962Ar05	PRLTA	9,	405	P.E. Argan, G. Bendiscioli, A. Piazzoli, V. Bisi, M.I. Ferrero, G. Piragino
1962Ba23	PRLTA	9,	16	R.C. Barber, L.A. Cambey, J.H. Ormrod, R.L. Bishop, H.E. Duckworth
1962Ba24	CJPHA	40,	1496	R.C. Barber, R.L. Bishop, L.A. Cambey, W. McLatchie, H.E. Duckworth
1962Ba26	PHRVA	127,	583	R.K. Bardin, C.A. Barnes, W.A. Fowler, P.A. Seeger
1962Ba28	NUPHA	33,	347	B. Basu, A.P. Patro
1962Ba32	AFYSA	21,	65	E. Bashandy, M.S. El-Nesr
1962Bj01	NUPHA	30,	488	S. Bjornholm, O.B. Nielsen
1962Bo22	IANFA	26,	975	N.A. Bonch-Osmolovskaya, K. Ya. Gromov, B.S. Dzelepov, O.E. Kraft, T.V. Malysheva, L.N. Nikityuk, B.A. Khotin, Chzhou, Yue-Va, V.G. Chumin
1962Bo25	AFYSA	22,	111	E.C.O. Bonacalza, P. Thieberger, I. Bergström
1962Br10	PHRVA	125,	992	C.P. Browne, W.E. Dorenbusch, J.R. Erskine
1962Br15	PHRVA	125,	1323	H.W. Brandhorst, Jr., J.W. Cobble
1962Bu16	PHRVA	127,	844	M.E. Bunker, B.J. Dropesky, J.D. Knight, J.W. Starner
1962Ch21	ZETFa	43,	453	V.L. Chikhladze, D.E. Khulelidze, R.A. Ryukhin
1962Cr04	NUPHA	34,	580	J.G. Cramer, Jr., C.M. Class
1962Da03	NUPHA	31,	293	H. Daniel
1962Ei02	NUPHA	35,	625	E. Eichler, G.D. O'Kelley, R.L. Robinson, J.A. Marinsky, N.R. Johnson
1962Ei02	NUPHA	31,	128	M.S. El-Nesr, E. Bashandy
1962Ew01	NUPHA	29,	153	G.T. Ewan, R.L. Graham, J.S. Geiger
1962Fr04	PHRVA	127,	1262	K. Fritze, T.J. Kennett
1962Fr07	ZEPYA	169,	456	L. Frevert
1962Fr09	NUPHA	38,	89	J.M. Freeman, D. West
1962Fu16	NUPHA	39,	147	E.G. Funk, Jr., J.W. Mihelich, C.F. Schwerdtfeger
1962Ga07	NUPHA	33,	285	C.J. Gallagher, Jr., M. Jorgensen, O. Skilbreid
1962Gu03	PHRVA	126,	642	R. Gunnink, A.W. Stoner
1962Hi01	NUPHA	31,	118	S. Hinds, M. Marchant, R. Middleton
1962Hi06	NUPHA	38,	81	S. Hinds, H. Marchant, R. Middleton
1962Ho14	PHRVA	128,	2748	D.A. Howe, L.M. Langer, E.H. Spejewaki, D.E. Wortman
1962In01	NUPHA	38,	50	H. Inoue, J. Ruan, S. Yasukawa, Y. Yoshizawa
1962Ka08	NUPHA	32,	25	T. Katoh, M. Nozawa, Y. Yoshizawa
1962Ka23	NUPHA	36,	394	T. Katoh, M. Nozawa, Y. Yoshizawa, Y. Koh
1962Ka27	AAFPA	6,	96	P. Kauranen
1962Kh05	IANFA	26,	1036	D.E. Khulelidze, V.L. Chikhladze, N.A. Vartenov, Y.A. Kyukhin
1962Ko10	NUPHA	39,	89	K. Kotajima
1962Ko12	IANFA	26,	235	G.A. Korolev, G.E. Kocharov
1962La10	NUPHA	35,	582	N.L. Lark, P.F.A. Goudsmit, J.F.W. Jansen, J.E.J. Oberski, A.H. Wapstra
1962Li03	NUPHA	31,	584	E.W.A. Lingeman, K.E.G. Lobner, G.J. Nijgh, A.H. Wapstra
1962Lo10	ZETFa	43,	1579	V.M. Lobashov, V.A. Nazarenko, L.F. Saenko
1962Ma06	PHRVA	125,	942	H.J. Martin, Jr., M.B. Sampson, R.L. Preston
1962Ne08	PHRVA	125,	2005	J.W. Nelson, H.S. Plendl, R.H. Davis
1962No06	NUPHA	36,	411	M. Nozawa
1962Nu01	PHRVA	127,	943	M. Nurmi, P. Kauranen, A. Siivola
1962Pa05	PHRVA	127,	1258	A.P. Patro, B. Basu
1962Pe08	HPACA	35,	175	C.F. Perdrisat, J.H. Brunner, H.J. Leisi
1962Pe15	PHRVA	127,	917	I. Perlman, F. Asaro, A. Ghiorso, A. Larsh, R. Latimer
1962Pi02	PHRVA	127,	1708	W.R. Pierson, H.C. Griffin, C.D. Coryell
1962Pu01	NUPHA	36,	1	D.J. Pullen, A.E. Litherland, S. Hinds, R. Middleton
1962Ru05	NUPHA	36,	431	J. Ruan, Y. Yoshizawa, Y. Koh
1962Sc04	PHRVA	125,	1641	C.F. Schwerdtfeger, E.G. Funk, Jr., J.W. Mihelich
1962Se03	PHRVA	125,	968	M.L. Seghal
1962Sh01	NUPHA	29,	177	R.K. Sheline, R.A. Harlan
1962Si14	AAFPA	6,	109	A. Siivola
1962Un01	NUPHA	36,	284	J. Unik, P. Day, S. Vandenbosch
1962Va08	NUPHA	30,	177	S.E. Vandenbosch, P. Day
1962Va10	NUPHA	31,	406	B. Van Nooijen, H. van Krugten, W.J. Wieschahn, A.H. Wapstra
1962Wa15	PHMAB	7,	105	D.E. Watt, R.N. Glover

1962Wa16	NUPHA	31,	575	A.H. Wapstra, J.F.W. Jansen, P.F.A. Goudsmit, J. Oberski
1962Wa18	NUPHA	35,	232	R.J. Walen, V. Nedovesov, G. Bastin-Scoffier
1962Wa20	NUPHA	36,	207	L.B. Warner, R.K. Sheline
1962Wa28	COREA	255,	1604	R.J. Walen
1962Ya01	NUPHA	30,	68	T. Yamazaki, H. Ikegami, M. Sakai
1963				
1963Ab02	PHLTA	5,	359	A. Abdumalikov, A. Abdurazakov, K. Gromov, Z. Zhelev, N. Lebedev, B. Dzelepov, A. Kudryavtseva
1963Ba20	CJPHA	41,	696	R.C. Barber, R.L. Bishop, W. McLatchie, P. Van Rookhuyzen, H.E. Duckworth
1963Ba31	NUPHA	43,	264	C.V.K. Baba, G.T. Ewan, J.F. Suarez
1963Ba32	NUPHA	43,	285	C.V.K. Baba, G.T. Ewan, J.F. Suarez
1963Ba37	ZETFa	44,	35	N.B. Badalov, S.S. Vasilenko, M.G. Kaganskii, D.L. Kaminskii, M.K. Nikitin
1963Ba47	CJPHA	41,	1482	R.C. Barber, W. McLatchie, R.L. Bishop, P. Van Rookhuyzen, H.E. Duckworth
1963Ba52	PHRVA	132,	1763	F.J. Bartis
1963Bi03	NUPHA	41,	21	K.M. Bisgard, P. Dahl, P. Hornshoj, A.B. Knutsen
1963Bi12	CJPHA	41,	1532	R.L. Bishop, R.C. Barber, W. McLatchie, J.D. Macdougall, P. Van Rookhuyzen, H.E. Duckworth
1963Bj01	NUPHA	42,	469	S. Bjornholm, F. Boehm, A.B. Knutsen, O.B. Nielsen
1963Bj02	NUPHA	42,	642	S. Bjornholm, O.B. Nielsen
1963Bo07	PHRVA	130,	1078	R.O. Bondelid, J.W. Butler
1963Bo14	PHYSA	29,	277	P. Born, C. Bobeldijk, W.A. Oost, J. Blok
1963Bo17	PHYSA	29,	535	P. Born, A. Veefkind, W.H. Elsenaar, J. Blok
1963Ca03	PHRVA	129,	1782	D.C. Camp, L.M. Langer
1963Ca06	PHRVA	132,	2239	T.A. Carlson
1963Ch03	NUCIA	27,	86	G. Chilosi, P. Cuzzocrea, G.B. Vingiani, R.A. Ricci, H. Morinaga
1963Cr06	PHRVA	132,	1681	B. Crasemann, G.T. Emery, W.R. Kane, M.L. Perlman
1963Da03	ZEPYA	172,	202	H. Daniel, O. Mehling, D. Schotte
1963Da10	PHRVA	132,	1673	R.A. Damerow, R.R. Ries, W.H. Johnson, Jr.
1963De11	JINCA	25,	741	P. Del Marmol, P.F. Fettweis
1963Do07	PHRVA	132,	2600	I. Dostrovsky, S. Katcoff, R.W. Stoenner
1963Dz07	ZETFa	45,	1360	B.S. Dzelepov, R.B. Ivanov, V.G. Nedovesov, V.P. Chechev
1963Em02	PHRVA	129,	2597	G.T. Emery, W.R. Kane, M. McKeown, M.L. Perlman, G. Scharff-Goldhaber
1963Fr04	PHRVA	131,	772	A.M. Friedman, J. Milsted
1963Fr10	PHRVA	132,	2169	G. Frick, A. Gallmann, D.E. Alburger, D.H. Wilkinson, J.P. Coffin
1963Fu17	KERNA	6,	152	L. Funke, K. Hohmuth, H. Jungclaussen, K.-H. Kaun, G. Muller, H. Sodan, L. Werner
1963Ga09	PHRVA	131,	1759	B.R. Gasten
1963Ge02	NUPHA	40,	177	K.N. Geller
1963Gl04	PHRVA	130,	299	N.W. Glass, R.W. Peterson
1963Go06	NUCIA	30,	14	K.P. Gopinathan, M.C. Joshi, M. Radha Menon
1963Gr08	AAFPA	6,	128	G. Graeffe
1963Gr.A	BAPSA	8,	486	D.E. Groce, J.H. McNally, W. Whaling
1963Gu04	PHRVA	131,	301	R. Gunnink
1963Ho18	JINCA	25,	1303	R.W. Hoff, F. Asaro, I. Perlman
1963Ho.A	PrvCom	AHW		A.M. Hoogenboom
1963Ik01	NUPHA	41,	130	H. Ikegami, K. Sugiyama, T. Yamazaki, M. Sakai
1963Ja06	NUPHA	41,	303	A. Jasinski, J. Kownacki, H. Lancman, J. Ludziejewski, S. Chojnacki, I. Yutlandov
1963Ja12	PHLTA	6,	69	J. Jaenecke
1963Jo04	NUPHA	41,	167	C.H. Johnson, F. Pleasonton, T.A. Carlson
1963Ka21	PHLTA	6,	98	M. Karras, J. Kantele
1963Ko08	PHRVA	130,	1503	P.F.M. Koehler, L. Slack, N.B. Gove
1963Kr04	CZYPA	13,	79	B. Kracik, Z. Miligui, V. Brabec, M. Vejs, A. Mastalka, T. Kucarova
1963Ku22	NUPHA	48,	675	T. Kuroyanagi, T. Tamura
1963La06	PHRVA	132,	324	L.M. Langer, D.E. Wortman
1963Ma27	NUPHA	44,	309	B.E.F. Macefield, R. Middleton, D.J. Pullen
1963Me06	NUPHA	46,	233	D.G. Megli, T.T. Thwaites
1963Me08	NUPHA	48,	90	M.K. Mehta, W.E. Hunt, H.S. Plendl, R.H. Davis
1963Mi17	NUPHA	49,	315	K. Miyano, T. Kuroyanagi
1963Ne05	PHRVA	129,	1723	J.W. Nelson, E.B. Carter, G.E. Mitchell, R.H. Davis

1963Ok01	JUPSA	18,	1563	K. Okano, K. Nishimira
1963Or01	PHRVA	132,	355	C.J. Orth, M.E. Bunker, J.W. Starner
1963Pa09	NUPHA	45,	336	M. Pasternak, T. Sonnino
1963Pe11	AFYSA	23,	1	L. Persson, R. Hardell, S. Nilsson
1963Pe13	NUPHA	44,	653	L. Persson, H. Ryde, K. Oelsner-Ryde
1963Pe16	PHLTA	6,	347	L. Persson
1963PI01	CZYPA	13,	23	Z. Plajner, L. Maly, N. Eissa, A. Benadek
1963Pr13	BAPMA	11,	691	Z. Preibisz, K. Pawlak, K. Stryczniewicz
1963Rh02	PHRVA	131,	1227	J.I. Rhode, O.E. Johnson
1963Ri07	PHRVA	132,	1662	R.R. Ries, R.A. Damerow, W.H. Johnson, Jr.
1963Ro10	PHRVA	129,	2653	P.C. Rogers, G.E. Gordon
1963Ry01	AFYSA	23,	171	H. Ryde, L. Persson, K. Oelsner-Ryde
1963Ry04	NUPHA	43,	229	A. Rytz, H.H. Staub, H. Winkler, F. Zamboni
1963Sc15	PHRVA	132,	2650	F. Schima, E.G. Funk, Jr., J.W. Mihelich
1963St06	NUPHA	41,	524	W.A. Stensland, A.F. Voigt
1963Su.A	UCRL-11082			V.B. Subrahmanyam (thesis Berkeley)
1963Ta05	NUPHA	41,	221	H.W. Taylor, G.N. White, R. McPherson
1963Th02	NUPHA	41,	380	B.V. Thosar, R.P. Sharma, K.G. Prasad
1963Th03	PHRVA	129,	1778	T.T. Thwaites
1963Va24	PHYSA	29,	990	C. van der Leun, P.M. Endt
1963Va37	ZETFA	45,	1385	S.S. Vasilev, L.Y. Shavtvalov
1963Ve09	PHRVA	132,	1736	M.N. Vergnes, R.K. Sheline
1963Wo01	PHRVA	131,	325	D.E. Wortman, L.M. Langer
1963Wo04	RAACA	1,	225	G. Wolzak, H. Morinaga
1963Wu01	CHJPB	19,	524	P.-K. Wung, G.-G. Yan, S.-K. Chu, S.-P. Chen, S. Huo, S.-F. Wang, L.-S. Chen
1963Yo07	NUPHA	46,	78	Y. Yoshizawa, H. Okamura, S. Iwata, I. Fugiwara, T. Shigematsu, M. Tabushi, T. Tarumoto, K. Sakamoto
1963Zy01	NUPHA	42,	330	J. Żylicz, Z. Sujkowski, J. Jastrzebski, O. Wolczek, S. Chojnacki, I. Yutlandov
			1964	
1964Ag.A	P-Tbilis		63	V.K. Ageev, K.Y. Gromov, B.S. Dzelepov, Z. Zhelev, V. Kalinnikov, A. Kudryavtseva
1964Al29	AFYSA	26,	235	N.H. Albins
1964An12	JOPQA	25,	673	S. Andre, P. Depommier
1964Ar17	AFYSA	26,	153	S.E. Arnell
1964As01	PLRBA	133,	291	F. Asaro, S. Bjornholm, I. Perlman
1964Ba03	CJPHA	42,	391	R.C. Barber, W. McLatchie, R.L. Bishop, J.D. Macdougall, P. van Rookhuyzen, H.E. Duckworth
1964Ba13	NUPHA	52,	125	H. Bakhru, S.K. Mukherjee
1964Ba15	PRLTA	12,	597	R.C. Barber, H.E. Duckworth, B.G. Hogg, J.D. Macdougall, W. McLatchie, P. Van Rookhuyzen
1964Ba36	PLRBA	136,	603	E.L. Bahn, Jr., B.D. Pate, R.D. Fink, C.D. Coryell
1964Ba46	ZETFA	47,	1162	K.A. Baskova, S.S. Vasilev, M.A. Khamo-LEILA, L.Y. Shavtvalov
1964Be10	NUPHA	50,	657	U. Bertelsen, G.T. Ewan, H.L. Nielsen
1964Bj02	PLRBA	136,	1348	J.H. Bjerregaard, H.R. Blieden, O. Hansen, G. Sidenius, G.R. Satchler
1964Bl11	NUPHA	55,	331	K.J. Blinowska, P.G. Hansen, H.L. Nielsen, O. Schult, K. Wien
1964Bo10	PLRBA	134,	591	R.O. Bondelid, E.E. Dowling Whiting
1964Bo13	NUPHA	53,	618	R.O. Bondelid, J.W. Butler
1964Bo25	AFYSA	26,	141	E.C.O. Bonacalza
1964Br08	PLRBA	134,	133	C.P. Browne, I. Michael
1964Br09	JINCA	26,	677	R.L. Brodzinski, J.R. Finkel, D.C. Conway
1964Bu10	PLRBA	136,	1	S.B. Burson, E.B. Shera, T. Gedayloo, R.G. Helmer, D. Zei
1964Bu12	JINCA	26,	1491	F.D.S. Butement, S.M. Qaim
1964Ch17	NUPHA	55,	577	P. Christmas
1964Ch19	PRLTA	13,	665	L.F. Chase, Jr., H.A. Grench, R.E. McDonald, F.J. Vaughn
1964Co11	PLRBA	135,	383	B.L. Cohen, R. Patell, A. Prakash, E.J. Schneid
1964Da11	NUPHA	55,	643	E.A. Davis, T.W. Bonner, D.M. Worley, Jr., R. Bass
1964Da15	NUPHA	56,	147	H. Daniel, J. Huefner, T. Lorenz, O.W.B. Schult, U. Gruber
1964Da16	PLRBA	136,	1240	H. Daniel, G. Th. Kaschl, H. Schmitt, K. Springer
1964De02	PLRBA	133,	568	S.H. Devare, H.G. Devare
1964De10	PLRBA	134,	705	S.H. Devare, H.G. Devare

1964De15	P-Vienna		430	R.A. Demirkhanov, V.V. Dorokhov, M.I. Dzkuya
1964De16	PHYSA	30,	1938	A. De Beer, H.P. Blok, J. Blok
1964Ej05	NUPHA	59,	625	H. Ejiri, Y. Nogami, Y. Nakajima, K. Horie, K. Etoh, A. Sugawara
1964Er02	PLRBA	133,	370	J.R. Erskine, W.W. Buechner
1964Er06	PLRBA	135,	110	J.R. Erskine
1964Fi02	PLRBA	133,	1502	T.R. Fisher, W. Whaling
1964FI02	RAACA	2,	210	J. Flegenheimer, G.B. Baro
1964Fr04	CZYPA	14,	152	J. Frana, I. Rezanka
1964Fu08	NUPHA	60,	294	M. Fujioka, K. Hisatake, K. Takahashi
1964Fu11	NUPHA	55,	401	L. Funke, H. Graber, K.-H. Kaun, H. Sodan, L. Werner
1964Go08	PLRBA	134,	297	K.P. Gopinathan, M.G. Joshi
1964Gr04	PHRVA	133,	1373	R.D. Griffioen, R.D. Macfarlane
1964Gr11	AAFPA	6,	145	G. Graeffe, K. Valli, J. Aaltonen
1964Ha29	PHYSA	30,	1802	J.H. Hamilton, K.E.G. Lobner, A.R. Sattler, R. van Lieshout
1964Ho03	JINCA	26,	1769	D.C. Hoffman, W.R. Daniels
1964Ho08	NUPHA	52,	590	K. Hohmuth, G. Muller, J. Schintlmeister
1964Ho14	PRLTA	13,	241	R.E. Holland, F.J. Lynch, K.-E. Nysten
1964Ho28	APASA	18,	309	I. Hofman
1964Jo03	PHLTA	8,	61	H.S. Johansen, M. Jorgensen, O.B. Nielsen, G. Sidenius
1964Jo09	NUPHA	52,	301	M.C. Joshi, B.V. Thosar, K.G. Prasad
1964Jo11	PLRBA	136,	1719	C.H. Johnson, C.C. Trail, A. Galonsky
1964Ka08	PLRBA	133,	1504	R.W. Kavanagh
1964Ka10	PLRBA	135,	9	J. Kantele, M. Karras
1964Ka16	AAFPA	6,	162	J. Kantele, K.M. Broom, D.M. Chittenden
1964Ka23	AFYSA	27,	61	S.E. Karlsson, O. Bergman, W. Scheuer
1964Ke03	PLRBA	133,	25	R.A. Kenefick, R.K. Sheline
1964Ku02	NUPHA	50,	417	T. Kuroyanagi, T. Tamura, K. Tanaka, H. Morinaga
1964La03	PLRBA	133,	1145	L.M. Langer, E.H. Spejewski, D.E. Wortman
1964La13	PLRBA	135,	581	L.M. Langer, E.H. Spejewski, D.E. Wortman
1964Le05	NUPHA	50,	648	H. Leutz, K. Ziegler
1964Le09	JOPQA	25,	326	J. Lehmann
1964Le10	PLRBA	134,	752	J.C. Legg, E. Rost
1964Li10	NUPHA	59,	504	P. Lipnik, G. Pralong, J.W. Sunier
1964Ma30	CJPHA	42,	1700	K.C. Mann, F.A. Payne, R.P. Chaturvedi
1964Ma36	CZYPA	14,	240	L. Maly, Z. Plajner, J. Jursik, M. Finger
1964Ma.A	P-Vienna		279	J.B. Marion
1964Ma.B	P-Vienna		305	M. Mazari, A. Jaidar, G. Lopez, A. Tejera, J. Caracea, R. Dominguez, F. Alba
1964Mc07	CJPHA	42,	926	W. McLatchie, R.C. Barber, R.L. Bishop, H.E. Duckworth
1964Mc11	PHLTA	10,	330	W. McLatchie, R.C. Barber, H.E. Duckworth, P. Van Rookhuizen
1964Mc21	CPHMA	30,	#4	J.D. McCoy
1964Mi04	NUPHA	51,	50	R. Middleton, D.J. Pullen
1964Mi.A	P-Vienna		329	R. Middleton, H. Marchant
1964Mo18	PHLTA	11,	148	H. Morinaga, G. Wolzak
1964Mo.A	P-Vienna		423	P.E. Moreland, Jr., K.T. Bainbridge
1964Ne10	PLRBA	135,	325	C.L. Nealy, R.K. Sheline
1964No06	PLRBA	136,	40	L.R. Norris, C.F. Moore
1964Nu02	AAFPA	6,	148	M. Nurmia, G. Graeffe, K. Valli, J. Aaltonen
1964On03	PLRBA	136,	365	R.J. Onega, W.W. Pratt
1964Pa03	APASA	18,	315	H. Paul
1964Pe17	PLRBA	136,	330	N.F. Peek, J.A. Jungerman, C.G. Patten
1964Ro17	PLRBA	136,	664	B. Rosner
1964Sa12	NUPHA	53,	457	R.C. Salgo, H.H. Staub, H. Winkler, F. Zamboni
1964Sa32	SHIBA	5,	54	K. Sato
1964Sc27	IDO-17042		11	R.P. Schuman
1964Sh04	PHLTA	8,	121	R.K. Sheline, C. Watson, E.W. Hamburger
1964Sh06	PLRBA	133,	624	W.N. Shelton, R.K. Sheline
1964Sh13	PLRBA	136,	351	R.K. Sheline, W.N. Shelton, H.T. Motz, R.E. Carter
1964Sh21	JUPSA	19,	245	Y. Shida
1964Si18	PLRBA	136,	618	R.J. Silva, G.E. Gordon
1964Sm03	PHYSA	30,	1197	P.J.M. Smulders
1964So01	NUPHA	54,	568	T. Sonino, E. Eichler, S. Amiel
1964Sp12	P-Vienna		289	A. Spereduto, W.W. Buechner

1964St01	PLRBA	133,	911	P.H. Stelson, F.K. McGowan
1964Ta11	JUPSA	19,	587	E. Takekoshi, Z.-I. Matumoto, M. Ishii, K. Sugiyama, S. Hayashibe, H. Sekiguchi, H. Natsume
1964Te02	JINCA	26,	1129	G.P. Tercho, J.A. Marinsky
1964Th05	NUPHA	60,	35	K.S. Thorne, E. Kashy
1964To04	PLRBA	136,	1233	K.S. Toth, T.H. Handley, E. Newman, I.R. Williams
1964Va05	PHLTA	9,	164	R. van Lieshout, S. Monaro, G.B. Vingiani, H. Morinaga
1964Va20	AAFPA	6,	165	K. Valli
1964Ve02	NUPHA	57,	451	E. Veje, C. Droste, O. Hansen, S. Holm
1964Wa14	NUPHA	54,	519	C. Watson, C.F. Moore, R.K. Sheline
1964We06	PLRBA	134,	257	P. Weinzierl, E. Ujlaki, G. Preinreich, G. Eder
1964Wi07	PLRBA	135,	289	D.C. Williams, R.A. Naumann
1964Yn03	PLRBA	134,	976	J.L. Yntema, G.R. Satchler

1965

1965An05	AFYSA	28,	37	G. Andersson, G. Rudstam, G. Sorensen
1965Ba29	PLRBA	140,	904	J.B. Ball, R.F. Sweet
1965Ba48	IANFA	29,	2255	Ts. Vylov, V.M. Gorodzankin, K. Ya. Gromov, V.V. Kuznetsov
1965Be19	PHLTA	18,	293	D. Berenyi, C. Ujhelyi, I. Feher
1965Be24	NUPHA	74,	459	H. Beekhuis, H. de Waard
1965Bi04	PLRBA	138,	514	W.N. Bishop
1965Bi12	IANFA	29,	151	E.I. Biryukov, V.T. Novikov, N.S. Shimanskaya
1965BI06	AFYSA	28,	415	P.H. Blichert-Toft
1965BI13	PLRBA	140,	1567	A.G. Blair, D.D. Armstrong
1965Br12	PLRBA	138,	1368	R.L. Brodzinski, D.C. Conway
1965Br28	NUPHA	72,	194	C.P. Browne, W.E. Dorenbusch, F.H. O'Donnell
1965Br31	NUPHA	72,	529	L. Broman, J. Dubois
1965Bu03	JINCA	27,	907	F.D.S. Butement, S.M. Quaim
1965Bu07	NUPHA	65,	561	J. Burde, M. Rakavi, G. Adam
1965Ce02	PRLTA	15,	300	J. Cerny, C. Détraz, R.H. Pehl
1965Co06	CJPHA	43,	383	C.R. Cothorn, R.D. Connor
1965Cr04	NUPHA	70,	129	T. Cretzu, K. Hohmuth, J. Schintlmeister
1965Da01	NUPHA	63,	145	H. Daniel, M. Kuntze, B. Martin, P. Schmidlin, H. Schmitt
1965De08	PRLTA	14,	708	C. Détraz, J. Cerny, R.H. Pehl
1965De09	PLRBA	138,	540	J.W. Dewdney, K.T. Bainbridge
1965De13	IANFA	29,	859	R.A. Demirkhanov, V.V. Dorokhov, M.I. Dzkuya
1965De15	YAFIA	1,	198	A.G. Demin, Y.P. Kushakevich
1965De20	NUPHA	73,	49	S.A. De Wit, A.H. Wapstra
1965De22	PLRBA	140,	536	S.H. Devare, R.M. Singru, H.G. Devare
1965Du02	COREA	261,	98	J.C. Duperrin, A. Guizon-Juillard
1965Er02	PLRBA	138,	851	J.R. Erskine
1965Er03	PLRBA	138,	66	J.R. Erskine
1965FI02	NSENA	22,	416	K.F. Flynn, L.E. Glendenin, E.P. Steinberg
1965Fr04	NUPHA	64,	303	K. Fritze
1965Fr12	PLRBA	140,	563	M.S. Freedman, F.T. Porter, F. Wagner, Jr.
1965Fu13	NUPHA	70,	335	L. Kunke, H. Graber, K.-H. Kaun, H. Sodan, L. Werner
1965Go05	PLRBA	137,	1466	S. Gorodetsky, A. Gallmann, R. Rebmeister
1965Gr35	YAFIA	2,	783	K.Y. Gromov, Z.T. Zhelev, V. Zvolzka, V.G. Kalinnikov
1965Gu03	NUPHA	64,	401	M. Guttman, E.G. Funk, Jr., J.W. Mihelich
1965Ha30	PHLTA	19,	304	P.G. Hansen, H.L. Nielsen, K. Wilsky, J. Treherne
1965Ho07	NUPHA	71,	449	C.G. Hoot, M. Kondo, M.E. Rickey
1965Hs02	NUPHA	73,	379	S.T. Hsue, L.M. Langer, S.M. Tang, D.A. Zollman
1965Is01	ZENAA	20,	541	A. Isola, M. Nurmia
1965Iv01	IANFA	29,	157	Y.F. Ivanov, I.A. Rumer, A.Y. Bukach
1965Iw01	JUPSA	20,	2105	T. Iwashita
1965Jo04	NUPHA	61,	385	M.W. Johns, M. Kawamura
1965Jo13	NUPHA	72,	617	N.R. Johnson, K. Wilsky, P.G. Hansen, H.L. Nielsen
1965Ka07	JINCA	27,	1451	P. Kauranen, H. Ihochi
1965Ke04	NUPHA	61,	513	W.J. Keeler, R.D. Connor
1965Ke09	PLRBA	139,	1479	R.A. Kenefick, R.K. Sheline
1965Ko09	ZENAA	20,	969	W. Kohler, K. Knopf

1965Ku02	NUPHA	64,	524	H.-M. Kuan, J.R. Risser
1965Kv01	NUPHA	74,	27	E. Kvale, A.C. Pappas
1965Le06	NUPHA	63,	263	H. Leutz, K. Schneckenberger, H. Wennige
1965Le07	NUPHA	65,	337	W.H.G. Lewin, J. Lettinga, B. van Nooijen, A.H. Wapstra
1965Ma07	PHLTA	14,	46	A. Marinov, J.R. Erskine
1965Ma12	PHLTA	14,	114	R.D. Macfarlane, A. Siivola
1965Ma32	NUPHA	67,	73	J.H.E. Mattauch, W. Thiele, A.H. Wapstra
1965Ma51	IANFA	29,	1121	I. Mahunka, T. Fenyes
1965Mc09	PLRBA	140,	1513	R. McPherson, R.A. Easterlund, A.M. Poskanzer, P.L. Reeder
1965Me02	JINCA	27,	33	D. Metta, H. Diamond, R.F. Barnes, J. Milsted, J. Gray, Jr., D.J. Henderson, C.M. Stevens
1965Me12	PHLTA	19,	133	R. Messlinger, H. Morinaga, C. Signorini
1965Mo05	NUPHA	61,	613	S. Morinobu, T. Hirose, K. Hisatake
1965Mo16	NUPHA	74,	403	R. Moreh, T. Daniels
1965Mo19	NUPHA	70,	293	R. Moreh
1965Mu09	NUPHA	67,	466	A. Mukerji, D.N. McNelis, J.W. Kane, Jr.
1965Ne02	NUPHA	62,	434	J.W. Nelson, J.D. Oberholtzer, H.S. Plendl
1965Og01	NUPHA	66,	119	I. Ogawa, T. Doke, M. Miyajima, A. Nakamoto
1965Pa08	NUPHA	72,	326	H. Paul
1965Pe18	AFYSA	29,	423	H. Pettersson, O. Berhman, C. Bergman
1965PI01	NUPHA	73,	131	H.S. Plendl, L.J. Defelice, R.K. Sheline
1965Pr03	NUPHA	67,	302	W.V. Prestwich, T.J. Kennett
1965Ra02	PLRBA	137,	13	A.V. Ramaya, Y. Yoshizawa
1965Re07	NUPHA	65,	609	R. Reising, B.D. Pate
1965Ri06	PHLTA	17,	296	M.E. Rickey, P.D. Kunz, J.J. Kraushaar, W.G. Anderson
1965Ry01	NUPHA	70,	369	A. Rytz
1965Sc19	PLRBA	140,	1496	F. Schima, T. Katoh
1965Si06	NUPHA	64,	161	A. Siivola, G. Graeffe
1965St06	PLRBA	137,	772	G.L. Struble, J. Kern, R.K. Sheline
1965Va02	NUPHA	63,	241	B. Van Nooijen, W. Lourens, H. van Krugten, A.H. Wapstra
1965Wa14	PLRBA	140,	882	W.N. Wang, E.J. Winhold
1965Wi08	PHLTA	15,	143	E.T. Williams, P.G. Hansen, J. Lipperts, H.L. Nielsen, K. Wilsky
1965Za01	PLRBA	137,	1479	C.D. Zafiratos, F. Ajzenberg-Selove, F.S. Dietrich
1966				
1966Ah.A	UCRL-16580		21	I. Ahmad, F. Asaro, I. Perlman
1966Ah.B	UCRL-16888			I. Ahmad
1966Ak01	AENGA	21,	243	G.N. Akapev, A.G. Demin, V.A. Druin, E.G. Imaev, I.V. Kolesov, Y.V. Lobanov, L.P. Pashchenko
1966An10	CHDBA	262,	214	S. Andre, P. Depommier
1966Au04	NUPHA	81,	441	R.L. Auble, W.H. Kelly
1966Av03	IANFA	30,	542	M.P. Avotina, E.P. Grigorev, B.S. Dzelepov, A.V. Zolotavin, V.O. Sergeev
1966Ba07	YAFIA	4,	1108	S.A. Baranov, Y.F. Rodionov, V.M. Kulakov, V.M. Shatinskii
1966Ba14	CHDBA	262,	89	G. Bastin, C.F. Leang, R.J. Walen
1966Ba19	CHDBA	262,	370	G. Bastin, C.F. Leang, R.J. Walen
1966Be10	PHRVA	141,	1112	J.L. Benson, W.H. Johnson, Jr.
1966Be12	PHLTA	21,	205	H. Beekhuis
1966Be21	IANFA	30,	1130	Yu. I. Belyanin, E.I. Biryukov, N.S. Shimanskaya
1966Bj01	NUPHA	86,	145	J.H. Bjerregaard, O. Hansen, O. Nathan, S. Hinds
1966Bj02	NUPHA	85,	593	J.H. Bjerregaard, O. Nathan, S. Hinds, R. Middleton
1966Bl04	NUPHA	76,	45	L.M. Blau, W.P. Alford, D. Cline, H.E. Gove
1966Bl15	PHRVA	151,	930	A.G. Blair, D.D. Armstrong
1966Bo20	NUPHA	86,	187	B.E. Bonner, G. Rickards, D.L. Bernard, G.C. Phillips
1966Br05	NUPHA	77,	365	G. Brown, S.E. Warren, R. Middleton
1966Br06	NUPHA	77,	385	G. Brown, A. Macgregor, R. Middleton
1966Br14	NUPHA	81,	233	H.F. Brinckmann, C. Heiser, K.F. Alexander, W. Neubert, H. Rotter
1966Br18	PHRVA	149,	767	D.G. Burke, B. Zeidman, B. Elbek, B. Herskind, M. Olesen
1966Bu16	KDVSA	35,	#2	D.G. Burke, B. Zeidman, B. Elbek, B. Herskind, M. Olesen
1966Ca09	NUPHA	82,	471	R.C. Catura, J.R. Richardson
1966Ca10	NUPHA	85,	317	M.J. Canty, W.F. Davidson, R.D. Connor
1966Cu02	NUPHA	86,	481	R.Y. Cusson

1966Da04	NUPHA	76,	97	H. Daniel, G.T. Kaschl
1966Da06	PHRVA	147,	845	W.R. Daniels, D.C. Hoffman
1966De11	NUPHA	83,	289	E.Y. De Aisenberg, J.F. Suarez
1966Do02	PHRVA	146,	734	W.E. Dorenbusch, T.A. Belote, O. Hansen
1966Do06	NUPHA	81,	390	W.E. Dorenbusch, O. Hansen, D.J. Pullen, T.A. Belote, G. Sidenius
1966Ei01	PHRVA	146,	899	E. Eichler, J.W. Chase, N.R. Johnson, G.D. O'Kelley
1966Ei09	ORNL-3889		49	J.S. Eldridge, W.S. Lyon
1966Er02	PHRVA	142,	633	J.R. Erskine, A. Marinov, J.P. Schiffer
1966Fi06	PHRVA	150,	941	H.J. Fischbeck, F.T. Porter, M.S. Freedman, F. Wagner, Jr., H.H. Bolotin
1966Fr11	RAACA	5,	192	A.M. Friedman, J. Milsted, D. Metta, D. Henderson, J. Lerner, A.L. Harkness, D.J. Rokop
1966Fu05	NUPHA	84,	461	L. Funke, H. Graber, K.-H. Kaun, R. Ross, H. Sodan, L. Werner, J. Frana
1966Fu08	NUPHA	84,	424	L. Funke, H. Graber, K.-H. Kaun, H. Sodan, G. Geske, J. Frana
1966Ga03	NUPHA	76,	353	R. Gaeta, M.A. Vigon
1966Ga06	PHLTA	20,	669	J. Gastebois, M. Berloutaud, J.M. Lagat, J. Quidort
1966Ga08	PHRVA	147,	753	A. Gallmann, P. Fintz, J.B. Nelson, D.E. Alburger
1966Gi02	NUPHA	86,	279	K.M. Glibert, H.T. Easterday
1966Gr26	PHNOA	2,	1	A. Graue
1966Gu05	NUPHA	85,	288	S.G. Gujrathi, S.K. Mukherjee
1966Ha15	NUPHA	76,	257	P.G. Hansen, H.L. Nielsen, K. Wilsky, Y.K. Agarwal, C.V.K. Baba, S.K. Bhat-tacherjee
1966Ha29	NUPHA	84,	62	G.R. Hagee, R.C. Lange, J.T. McCarty
1966Ha32	PHLTA	23,	487	J.C. Hardy, D.J. Skyrme, I.S. Towner
1966He10	NUPHA	88,	561	P.V. Hewka, C.H. Holbrow, R. Middleton
1966Hi01	PHLTA	21,	328	S. Hinds, J.H. Bjerregaard, O. Hansen, O. Nathan
1966Hi06	NUPHA	84,	651	S. Hinds, R. Middleton
1966Hs01	NUPHA	80,	657	S.T. Hsue, L.M. Langer, E.H. Spejewski, S.M. Tang
1966Ja12	PHRVA	151,	956	A.D. Jackson, Jr., J.S. Evans, R.A. Naumann, J.D. McCullen
1966Jo07	NUPHA	84,	569	M.H. Jorgensen, O.B. Nielsen, O. Skilbreid
1966Ki06	CJPHA	44,	2661	J.E. Kitching, M.W. Johns
1966Kl02	NUPHA	79,	27	H. Klein, H. Leutz
1966La04	NUPHA	78,	1	T. Lauritsen, F. Ajzenberg-Selove
1966Le06	NUPHA	75,	81	H. Leutz, G. Schulz, H. Wenniger
1966Li04	PHRVA	141,	1089	A.C. Li, I.L. Preiss, P.M. Strudler, D.A. Bromley
1966Ma05	ZENAA	21,	63	J.D. Macdougall, W.M. McLatchie, S. Whineray, H.E. Duckworth
1966Ma18	PHLTA	21,	661	N. Mangelson, M. Reed, C.C. Lu, F. Ajzenberg-Selove
1966Ma49	IANFA	30,	1185	E.P. Mazets, Y.V. Sergeenkov
1966Ma51	IANFA	30,	1375	I. Mahunka, L. Tron, T. Fenyes, V.A. Khalkin
1966Ma60	RMPHA	38,	660	J. Marion
1966Mc12	CJPHA	44,	3033	C.C. McMullen, K. Fritze, R.H. Tomlinson
1966Mc13	NUPHA	88,	257	J.H. McNally
1966Mo06	PHRVA	141,	1166	C.F. Moore, P. Richard, C.E. Watson, D. Robson, J.D. Fox
1966Ne01	PRLTA	16,	28	E. Newman, J.C. Hiebert, B. Zeidman
1966No05	NUPHA	86,	102	A.E. Norris, G. Friedlander, E.M. Franz
1966Ny01	NUPHA	88,	63	B. Nyman, A. Johansson, C. Bergman, G. Backstrom
1966Pa18	NUPHA	85,	504	P.B. Parks, P.M. Beard, E.G. Bilpuch, H.W. Newson
1966Pa20	PHLTA	23,	269	B. Parsa, G.E. Gordon
1966Pe10	NUPHA	83,	33	H. Pettersson, G. Backstrom, C. Bergman
1966Po04	PHRVA	146,	774	F.T. Porter, M.S. Freedman, F. Wagner, Jr., K.A. Orlandini
1966Qa02	NUPHA	88,	285	S.N. Qaim
1966Ra03	PHRVA	142,	768	P.V. Rao, B. Crasemann
1966Re02	PHLTA	20,	40	W. Reichart, H.H. Staub, H. Stussi, F. Zamboni
1966Rg01	PHRVA	148,	1192	Research-Group, Combined Radioactivity Group LRL-LASL-UCRL-ANL
1966Ri01	NUPHA	75,	381	P. Riehs
1966Ri09	NUPHA	86,	167	G. Rickards, B.E. Bonner, G.C. Phillips
1966Ry01	NUPHA	80,	241	H. Ryde, G.D. Symons, S. Szymanski
1966Sc17	PHRVA	149,	820	J.J. Schwartz, W. Parker, Q. Alford
1966Sc23	NUPHA	89,	401	D. Schwalm, B. Povh
1966Sc24	PHRVA	151,	950	F.J. Schima
1966Se07	NUPHA	85,	227	B. Sethi, S.K. Mukherjee
1966Sh03	PHRVA	143,	857	R.K. Sheline, C.E. Watson, B.P. Maier, U. Gruber, R.H. Koch, O.W.B. Shult, H.T. Motz, E.T. Jurney, G.L. Struble, T. von Egidy, T. Elze, E. Bieber

1966Sh14	PHLTA	22,	648	W.N. Shelton, C.E. Watson
1966Sh16	PHRVA	151,	1011	R.K. Sheline, W.N. Shelton, T. Udagawa, E.T. Jurney, H.T. Motz
1966Si08	NUPHA	84,	385	A. Siivola
1966Sm05	NUPHA	89,	561	K.M. Smith, G.M. Lewis
1966Sn02	PHRVA	147,	967	R.E. Snyder, G.B. Beard
1966St15	PHRVA	151,	969	M.M. Stautberg, J.J. Kraushaar
1966Va12	PHRVA	150,	886	J. Van Klinken, A.J. Bureau, G.W. Eakins, R.J. Hanson
1966Va.A	UCRL-16580		85	K. Valli, E.K. Hyde
1966Vo05	ZEPYA	195,	343	H. Vonach, H. Munzer, P. Hille
1966Wh01	PHRVA	150,	836	W. Whaling
1966Wi04	ZEPYA	191,	137	K. Wien
1966Wi11	PHLTA	22,	162	D.C. Williams, J.D. Knight, W.T. Leland
1966Wi12	NUPHA	84,	609	I.R. Williams, K.S. Toth, T.H. Handley
1966Yo01	PHLTA	22,	625	D.H. Youngblood, G.C. Morrison, R.E. Segel
1966Za01	NUPHA	77,	81	C.D. Zafiratos, F. Ajzenberg-Selove, F.S. Dietrich
1966Zy02	NUPHA	84,	13	J. Żylicz, P.G. Hansen, H.L. Nielsen, K. Wilsky
1967				
1967Ad03	PHRVA	159,	985	I. Adam, K.S. Toth, R.A. Meyer
1967Ah02	PHRVA	164,	1537	I. Ahmad, A.M. Friedman, R.F. Barnes, R.K. Sjoblom, J. Milsted, P.R. Fields
1967Al08	NUPAB	98,	323	A.M. Aldridge, H.S. Plendl, J.P. Aldridge, III
1967An01	NUPAB	94,	289	S. Antman, H. Pettersson, A. Suarez
1967Ar01	PYLBB	24,	84	E. Arei, H. Miessner
1967As02	PHRVA	158,	1073	F. Asaro, I. Perlman
1967Ba01	NUPAB	91,	465	V.A. Balalaev, B.S. Dzelepov, L.N. Moskvina, S.A. Shetopalova, N.A. Voinova
1967Ba15	PHRVA	155,	1319	P.D. Barnes, J.R. Comfort, C.D. Bockelman
1967Ba32	PHRVA	159,	920	P.D. Barnes, J.R. Comfort, C.D. Bockelman, O. Hansen, A. Sperduto
1967Ba34	PHRVA	160,	1011	A. Backlin, A. Suarez, O.W.B. Schult, B.P.K. Mayer, U. Gruber, E.B. Shera, D.W. Hafemeister, W.N. Shelton, R.K. Sheline
1967Ba42	YAFIA	5,	241	S.A. Baranov, I.G. Aliev, L.V. Chistyakov
1967Ba43	YAFIA	5,	518	S.A. Baranov, M.K. Chadzhiev, V.M. Kulakov, V.M. Shatinskii
1967Ba51	CHDBA	265,	863	G. Bastin-Scoffier
1967Ba.A	P-Gatlinburg		261	C.A. Barnes, E.G. Adelsberger, D.C. Hensley, A.B. Macdonald
1967Be46	NUPAB	104,	241	G. Berzins, W.H. Kelly, G. Graeffe, W.B. Walters
1967Bi04	NUPAB	97,	203	L. Birstein, C. Drory, A.A. Jaffe, Y. Zioni
1967Bj01	NUPAB	94,	457	J.H. Bjerregaard, O. Hansen, O. Nathan, S. Hinds
1967Bj02	PHRVA	155,	1229	J.H. Bjerregaard, O. Hansen
1967Bj05	PHRVA	160,	889	J.H. Bjerregaard, O. Hansen, G.R. Satchler
1967Bj06	NUPAB	103,	33	J.H. Bjerregaard, O. Hansen, O. Nathan, R. Chapman, S. Hinds, R. Middleton
1967Bl19	PYLBB	25,	215	R. Bloch, R.E. Pixley, P. Truol
1967Bo41	YAFIA	6,	893	D.D. Bogdanov, S. Darotsi, V.A. Karnaukhov, L.A. Petrov, G.M. Ter-Akopyan
1967Br10	NUPAB	101,	163	G. Brown, J.G.B. Haigh, F.R. Hudson, A.E. Macgregor
1967Ca18	NUPAB	104,	35	M.J. Canty, R.D. Connor
1967Ch05	NUPAB	94,	417	P. Charoenkwan, J.R. Richardson
1967Ch16	NUPAB	102,	481	P.R. Christensen, B. Herskind, R.R. Borchers, L. Westgaard
1967Co15	PHRVA	157,	1065	J.R. Comfort, C.K. Bockelman, P.D. Barnes
1967Da10	CJPHA	45,	2295	W.F. Davidson, C.R. Cothorn, R.D. Connor
1967De02	NUPAB	94,	673	M.E. De Lopez, M. Mazari, T.A. Belote, W.E. Dorenbusch, O. Hansen
1967De15	JNCEA	21,	833	A.J. De Ruytter, P. Pelfer
1967Do03	NUPAB	102,	681	W.E. Dorenbusch, J. Rapaport, T.A. Belote
1967Dz02	IANFA	31,	568	B.S. Dzelepov, R.B. Ivanov, M.A. Mikhailov, L.N. Moskvina, O.M. Nazarenko, V.F. Radionov
1967Eh02	ZEPYA	207,	268	D. Ehrlich
1967Er02	P-Winnipeg		622	J.R. Erskine, A.M. Friedman, T.H. Braid, R.R. Chasman
1967Es02	PHRVA	156,	1094	R.A. Esterlund, R. McPherson, A.M. Poskanzer, P.L. Reeder
1967Fi04	PYLBB	24,	340	P.R. Fields, R.F. Barnes, R.K. Sjoblom, J. Milsted
1967Fl05	YAFIA	5,	1186	G.N. Flerov, S.M. Polikhanov, V.L. Mikheev, V.I. Ilyushchenko, V.F. Kushniruk, M.B. Miller, A.M. Sukhov, V.A. Schegolov
1967Fl15	AEANGA	22,	342	G.N. Flerov, S.M. Polikhanov, V.L. Mikheev, V.I. Ilyushchenko, M.B. Miller, V.A. Shchegolev
1967Fo04	PHRVA	155,	1248	C.M. Fou, R.W. Zurmuhle, J.M. Joyce

1967Fr02	NUPAB	94,	366	J. Frana, I. Rezanka, Z. Plajner, A. Spalek, J. Jursik, M. Vobecky, A. Mastalka, L. Funke, A. Graber, H. Sodan
1967Gh01	PRLTA	18,	401	A. Ghiorso, T. Sikkeland, M.J. Nurmia
1967Go22	NUPAB	104,	497	P.F.A. Goudsmit, J. Konijn, F.W.N. De Boer
1967Go25	PHYSA	35,	479	P.F.A. Goudsmit
1967Go32	IANFA	31,	1618	N.A. Golovkov, K.Y. Gromov, N.A. Lebedev, B. Makhmudov, A.S. Rudnev, V.G. Chumin
1967Gr01	PYLBB	24,	171	M.W. Greene
1967Gr21	NUPAB	103,	209	A. Graue, E. Jastad, J.R. Lien, P. Torvund, W.H. Moore
1967Gu06	PHRVA	159,	909	S.C. Gujrathi, S.K. Mukherjee
1967Gu11	IJPYA	41,	633	S.C. Gujrathi, S.K. Mukherjee
1967Gu12	IJPYA	41,	667	S.C. Gujrathi, S.K. Mukherjee
1967Ha03	NUPAB	90,	573	S.K. Haynes, M. Velinsky, L.J. Velinsky
1967Ha04	PYLBB	24,	95	P.G. Hansen, H.L. Nielsen, K. Wilsky, J.G. Cuninghame
1967Ha08	NUPAB	92,	260	W.D. Harrison
1967Ha17	NUPAB	98,	330	H.J. Hay, D.C. Kean
1967Ha25	PHRVA	160,	1005	R.A. Harlan, R.K. Sheline
1967Ha.A	P-Winnipeg		527	O. Hansen
1967Hi01	PYLBB	24,	89	S. Hinds, H. Marchant, R. Middleton
1967Hi02	PYLBB	24,	34	S. Hinds, H. Marchant, R. Middleton
1967Hj01	AFYSA	33,	147	S.A. Hjorth
1967Hj03	AFYSA	33,	121	S.A. Hjorth, L.H. Allen
1967Ho01	NUPAB	90,	545	J.L. Honsaker
1967Ho12	PHRVA	159,	1000	K.J. Hofstetter, P.J. Daly
1967Ho19	AFYSA	36,	211	D.C. Hoffman, O.B. Michelsen, W.R. Daniels
1967Hs01	NUPAB	94,	146	S.T. Hsue, M.U. Kim, S.M. Tang
1967Hs03	NUPAB	101,	688	S.T. Hsue, M.U. Kim, L.M. Langer, E.H. Spejewski, J.B. Willet
1967Hu05	ZEPYA	203,	435	E. Huster, H. Verbeek
1967Hu07	CHDBA	265,	162	K. Hubenthal, J. Berthier, J.-C. Hocquenghem, A. Moussa
1967Ii01	YAFIA	6,	1117	V.I. Ilyushchenko, M.B. Miller, V.L. Mikheev, V.A. Shchegolev
1967Jo03	PHRVA	153,	1169	R.R. Johnson, N.M. Hintz
1967Jo18	P-Winnipeg		793	W.H. Johnson, M.C. Hudson, R.A. Britten, D.C. Kayser
1967Ka01	NUPAB	90,	23	V.A. Karnaukhov, G.M. Ter-Akopyan, L.S. Vertogradov, L.A. Petrov
1967Ka11	PHRVA	159,	931	A.A. Katsanos, J.R. Huizenga
1967Ke02	PHRVA	153,	1331	J. Kern, G.L. Struble, R.K. Sheline
1967Ki01	NUPAB	98,	337	J.E. Kitching, M.W. Johns
1967Ko01	NUPAB	90,	558	J. Konijn, E.W.A. Lingeman, S.A. De Wit
1967Le06	NUPAB	98,	273	J. Lehmann
1967Le21	AFYSA	36,	183	Y. Le Beyec, M. Lefort
1967Ma07	NUPAB	95,	632	A. Marelius, P. Sparrman, S.-E. Hagglund
1967Ma35	PHRVA	163,	1098	K.W. Marlow, M.A. Waggoner
1967Mc03	NUPAB	92,	401	W.R. McMurray, P. Van Der Merwe, I.J. Van Heerden
1967Mc07	NUPAB	99,	6	W.R. McMurray, M. Peisach, R. Pretorius, P. Van der Merwe, I.J. Van Heerden
1967Mc10	NUPAB	98,	577	M.F. McCann, G.M. Lewis, K.M. Smith
1967Mc14	PRLTA	19,	1442	R.L. McGrath, J. Cerny, E. Norbeck
1967Mi02	NUPAB	94,	261	R.G. Miller, R.W. Kavanagh
1967Mi03	AENGA	22,	90	V.L. Mikheev, V.I. Ilyushchenko, M.B. Miller, S.M. Polikanov, G.N. Flerov, Y.P. Kharitonov
1967Mi06	YAFIA	5,	49	V.L. Mikheev, V.I. Ilyushchenko, M.B. Miller
1967Mi13	JUPSA	23,	1191	K. Miyano
1967Mo10	CHDBA	264,	330	E. Monnard, J.A. Pinston, R. Henck
1967Mo11	PYLBB	25,	22	H. Morinaga, K. Miyano, K. Fujikawa, R. Chiba, K. Ebisawa, N. Kawai
1967Mo12	NUPAB	99,	652	J.A. Moragues, P. Reyes-Suter, T. Suter
1967Mo13	NUPAB	100,	45	Y. Motavalledi-Nobar, J. Berthier, J. Blachot, R. Henck
1967Mo17	NUPAB	102,	406	W.G. Mourad, K.E. Nielsen, M. Petrilak
1967Mo22	NUPAB	104,	327	W.H. Moore, G.K. Schlegel, S.O. Dell, A. Graue, J.R. Lien
1967Mu16	PHRVA	159,	1039	G. Muehlechner, A.S. Poltorak, W.C. Parkinson, R.H. Bassel
1967Na08	PHRVA	160,	1035	R.A. Naumann, P.K. Hopke
1967Ne04	PHRVA	155,	1314	C.L. Nealy, R.K. Sheline
1967Ne08	PHRVA	164,	1503	C.L. Nealy, R.K. Sheline
1967Ni02	NUPAB	93,	385	H.L. Nielsen, K. Wilsky, J. Żylicz, G. Sorensen
1967Nu01	PYLBB	26,	78	M. Nurmia, T. Sikkeland, R. Silva, A. Ghiorso

1967Oa01	PYLBB	24,	142	N.S. Oakey, R.D. McFarlane
1967Ob04	NUPAB	104,	609	B.J. O'Brien, W.E. Dorenbusch, T.A. Belote, J. Rapaport
1967Od01	PHRVA	158,	957	F.H. O'Donnell, C.P. Browne
1967Pa04	JOPQA	28,	388	P. Paris
1967Pa08	CJPHA	45,	2621	J.J.H. Park, P. Christmas
1967Pi03	PHRVA	159,	939	W.R. Pierson, K. Rengan
1967Pr04	PHRVA	157,	779	F.W. Prosser, Jr., G.U. Din, D.D. Tolbert
1967Pr10	PHRVA	161,	1080	W.V. Prestwich, R.E. Cote, G.E. Thomas
1967Ra13	NUPAB	99,	547	R.C. Ragaini, G.E. Gordon, W.B. Walters
1967Ra14	NUPAB	100,	280	J. Rapaport, T.A. Belote, W.E. Dorenbusch
1967Ri.A	BAPSA	12,	522	F.A. Rickey, Jr., H.C. Britt, and PrvCom AHW
1967Ro17	JOPQA	28,	637	G. Rotbart, J. Kalifa, G. Ronsin, M. Vergnes
1967Sc01	NUPAB	96,	337	S.O. Schriber, M.W. Johns
1967Sc05	PHRVA	154,	1146	O.W.B. Schult, M.E. Bunker, D.W. Hafemeister, E.B. Shera, E.T. Journey, J.W. Starner, A. Backlin, B. Fogelberg, U. Gruber, B.P.K. Maier, H.R. Koch, W.N. Shelton, M. Minor, R.K. Sheline
1967Sc10	ZEPYA	203,	289	G. Schulz
1967Sc15	NUPAB	101,	177	G. Schulte
1967Sc26	NUPAB	104,	692	G. Schulz, K. Ziegler
1967Sc30	PHRVA	164,	1548	O.W.B. Schult, W.R. Kane, M.A.J. Mariscotti, J.M. Simic
1967Se10	PHRVA	164,	1450	K.K. Seth, J.A. Biggerstaff, P.D. Miller, G.R. Satchler
1967Si02	NUPAB	92,	475	A. Siivola
1967Si07	PYLBB	24,	331	T. Sikkeland, A. Ghiorso
1967Si08	PYLBB	24,	333	T. Sikkeland, A. Ghiorso, J. Maly, M.J. Nurmia
1967Si09	NUPAB	101,	129	A. Siivola
1967Sp03	PHRVA	155,	1368	R.R. Spencer, K.T. Faler
1967Sp06	NUPAB	99,	625	E.H. Spejewski, J.B. Willett
1967Sp08	ZEPYA	204,	129	A. Spalek, I. Rezanka, J. Frana, A. Mastalka
1967Sp09	P-Winnipeg		657	A. Sperduto
1967St14	YAFIA	5,	1205	G.L. Struble, R.K. Sheline
1967St24	NUPAB	104,	67	M.M. Stautberg, R.R. Johnson, J.J. Kraushaar, B.W. Ridley
1967St30	P-Winnipeg		495	H.H. Staub
1967Su05	PHRVA	163,	1091	J.W. Sunier, A.J. Armini, R.M. Polichar, J.R. Richardson
1967Te02	NUPAB	98,	417	R.G. Tee, A. Aspinall
1967Th05	NUIMA	56,	325	G.F. Thomas, D.E. Blatchley, L.M. Bollinger
1967Ti04	NUPAB	100,	425	E. Tielsch-Cassel
1967Tj01	KDVSA	36,	#8	P.O. Tjom, B. Elbek
1967Tr06	NUPAB	97,	405	W. Treytl, K. Valli
1967Va01	NUPAB	91,	157	D. Varga, D. Berenyi, C. Ujhelyi, F. Molnar
1967Va14	NUPAB	99,	473	J. Van Klinken, L.M. Taff
1967Va17	PHRVA	159,	1013	K. Valli, M.J. Nurmia, E.K. Hyde
1967Va20	JINCA	29,	2503	K. Valli, E.K. Hyde, W. Treytl
1967Va22	PHRVA	161,	1284	K. Valli, W. Treytl, E.K. Hyde
1967Va23	NUPAB	102,	369	L. Van Neste, R. Coussement, J.P. Deutsch
1967Va27	IANFA	31,	284	S.S. Vasilev, E.T. George, L.Y. Shavtalo
1967Va.A	P-Winnipeg		296	K. Valli
1967Ve04	NUPAB	103,	188	E. Veje
1967Vo05	PHRVA	164,	1374	D. Von Ehrenstein, J.P. Schiffer
1967Vr04	IANFA	31,	604	J. Vrzal, K.Y. Gromov, J. Liptak, F. Molnar, V.A. Morozov, J. Urbanets, V.G. Chumin
1967Wa09	NUPAB	97,	641	A.H. Wapstra
1967Wa23	PHRVA	164,	1545	T.E. Ward, H. Ihochi, M. Karras, J.L. Meason
1967Wh03	PHRVA	160,	997	C.A. Whitten, Jr., L.C. McIntyre
1967Wi08	NUPAB	103,	433	C.A. Wiedner, A. Heusler, J. Solf, J.P. Wurm
1967Wi14	PHRVA	163,	1094	S. Wirjoamidjojo, B.D. Kern
1967Wi19	NUIMA	52,	77	J.B. Willet, E.H. Spejewski
1967Yt03	PHYSA	34,	559	C. Ythier, J.C. Meyer, J. Konijn, R. van Lieshout

1968

1968Ab14	IANFA	32,	749	A.A. Abdurazakov, J. Vrzal, K. Ya. Gromov, Zh. T. Zhelev, V.G. Kalinnikov, J. Liptak, S.K. Li, F.N. Mukhtasimov, U.K. Nazarov, J. Urbanets
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1968Ab17	IANFA	32,	793	L.N. Abesalashvili, K.Y. Gromov, Z.T. Zhelev, V.G. Kalinnikov, J. Liptak, U.K. Nazarov, J. Urbanets
1968Ad03	JPAGB	1,	549	J.M. Adams, A. Adams, J.M. Calvert
1968Ad04	NUPAB	121,	289	I. Adam, K.S. Toth, M.F. Roche
1968Ad08	APPOA	34,	529	B. Adamowicz, Z. Moroz, Z. Preibisz, A. Zglinski
1968Ah01	NUPAB	119,	27	I. Ahmad, A.M. Friedman, J.P. Unik
1968An03	NUPAB	110,	289	S. Antman, H. Petterson, Y. Grunditz
1968An11	NUPAB	121,	337	S. Andre, P. Liaud
1968Ar03	PHRVA	165,	1194	A.J. Armini, J.W. Sunier, J.R. Richardson
1968Au04	NUPAB	116,	14	R.L. Auble, J.B. Ball, C.B. Fulmer
1968Az01	ZEPYA	208,	234	A. Azman, A. Mojlk, J. Pahor
1968Ba25	YAFIA	7,	727	S.A. Baranov, V.M. Kulakov, V.M. Shatinskii
1968Ba53	YAFIA	7,	1153	I. Bacso, D.D. Bogdanov, S. Darocsy, V.A. Karnaukhov, L.A. Petrov
1968Ba73	JOPQS	1,C1	181	G. Bastin, C.F. Leang, R.J. Walen
1968Be02	NUPAB	106,	296	J.E. Benn, E.B. Dally, H.H. Muller, R.E. Pixley, H.H. Staub, H. Winkler
1968Be06	NUPAB	108,	382	H. Beekhuis, R.J. Van Duinen
1968Be10	NUPAB	109,	666	T.A. Belote, W.E. Dorenbusch, J. Rapaport
1968Be13	PHRVA	167,	1043	R.C. Bearse, D.H. Youngblood, J.L. Yntema
1968Be21	NUPAB	121,	433	C.E. Bemis, Jr., J. Halperin
1968Be35	ZEPYA	216,	229	E. Beck, H. Daniel
1968Be36	NUPAB	120,	401	T.A. Belote, W.E. Dorenbusch, J. Rapaport
1968Be.A	BAPSA	13,	1430	M.J. Bennet, R.K. Sheline
1968Bj01	NUPAB	107,	241	J.H. Bjerregaard, O. Hanson, O. Nathan, R. Chapman, S. Hinds
1968Bj02	NUPAB	110,	1	J.H. Bjerregaard, O. Hansen, O. Nathan, L. Vistisen, R. Chapman, S. Hinds
1968Bj03	NUPAB	113,	484	J.H. Bjerregaard, O. Hansen, O. Nathan, L. Vistisen, R. Chapman
1968Bj05	NUPAB	118,	241	S. Bjornholm, J. Dubois, B. Elbek
1968Br23	PHRVA	174,	1247	H. Brunnader, J.C. Hardy, J. Cerny
1968Bu02	PHRVA	166,	1096	G.W. Butler, J. Cerny, S.W. Cospser, R.L. McGrath
1968Ch20	NUPAB	119,	305	R. Chapman, S. Hinds, A.E. Macgregor
1968Ch.A	PrvCom	AHW	May	R.E. Chrien
1968Co20	PHRVA	172,	1126	E.R. Cosman, D.C. Slater
1968Co22	NUPAB	117,	449	M. Conjeaud, S. Harar, Y. Cassagnou
1968Da02	NUPAB	107,	569	W.R. Daniels, D.C. Hoffman, F.O. Lawrence, C.J. Orth
1968Da09	PHRVA	172,	1176	J.M. D'Auria, H. Bakhru, J.C. Preiss
1968Da13	NUPAB	112,	241	W.R. Daniels, F.O. Lawrence, D.C. Hoffman
1968De17	YAFIA	8,	255	R.A. Demirkhanov, V.V. Dorokhov, M.I. Dzkuya
1968Do02	PYLBB	26,	148	W.E. Dorenbusch, F.T. Dao, J. Rapaport, T.A. Belote
1968Do03	NUPAB	109,	649	W.E. Dorenbusch, T.A. Belote, J. Rapaport
1968Do06	NUPAB	112,	385	W.E. Dorenbusch
1968Do12	PHRVA	175,	1446	K.W. Dolan, D.K. Daniels
1968En01	NUPAB	107,	305	G.A.P. Engelbertink, H. Lindeman, M.J.N. Jacobs
1968Et01	PHRVA	168,	1249	R.C. Etherton, L.M. Beyer, W.H. Kelly, D.J. Horen
1968Fi01	NUPAB	111,	338	E. Fincke, U. Jahnke
1968Fi04	PHRVA	173,	1078	H.J. Fischbeck
1968Fu07	NUPAB	118,	97	L. Funcke, W. Andrejtscheff, H. Graber, U. Hagemann, K.-H. Kaun, P. Kemnitz, W. Meiling, H. Sodan, F. Sary, G. Winter
1968Fu11	JUPSA	25,	946	S. Fukumoto, T. Matsuo, H. Matsuda
1968Go34	APPOA	34,	511	M. Gonsior, G.I. Lizurei, G. Nevodnichanskii, A.V. Potempa
1968Go.A	BAPSA	13,	1452	K.P. Gopinathan, W. Rubinson
1968Go.B	P-Dubna		54	N.A. Golovkov, R.B. Ivanov, Y.V. Norseev, So Ki Kvan, V.A. Khalkin, V.G. Shumin
1968Go.C	P-Dubna		27	N.A. Golovkov, S.V. Khvan, V.G. Chumin
1968Gr09	NUPAB	113,	353	T.B. Grandy, W.J. McDonald, W.K. Dawson, G.C. Neilson
1968Gr14	PYLBB	27,	274	R.C. Greenwood
1968Gr16	NUPAB	120,	493	A. Graue, E. Hvidsen, J.R. Lien, G. Sandvik, W.H. Moore
1968Gr17	NUPAB	120,	513	A. Graue, L. Herland, J.R. Lien, E.R. Cosman
1968Ha09	PYLBB	26,	432	M. Hagen, K.H. Maier, R. Michaelsen
1968Ha10	PHRVA	168,	1373	R.A. Harlan, R.R. Sheline
1968Ha13	NUPAB	113,	75	O. Hansen, O. Nathan, L. Vistisen, R. Chapman
1968Ha14	NUPAB	113,	206	R.L. Hahn, M.F. Roche, K.S. Toth
1968He03	PYLBB	26,	435	D.C. Hensley, P.H. Nettles, C.A. Barnes
1968Ho10	JOPQA	29,	138	J.C. Hocquenghem, S. Andre, P. Liaud

1968Ho13	NUPAB	115,	225	R.W. Hoff, J.E. Evans, E.K. Hulet, R.J. Dupzyk, B.J. Qualheim
1968Ho22	AFYSA	37,	1	G. Holm
1968Hs01	NUPAB	109,	423	S.T. Hsue, M.U. Kim, L.M. Langer, E.H. Spejewski
1968Hs02	NUPAB	117,	686	S.T. Hsue, M.U. Kim, L.M. Langer, W.F. Piel, E.H. Spejewski
1968Hu05	PHRVA	167,	1064	H.C. Hudson, W.H. Johnson, Jr.
1968Ja06	NUPAB	115,	321	J.F.W. Jansen, W. Pauw, C.J. Tousef
1968Ja11	AFYSA	37,	585	A. Jasinski, C.J. Herrlander
1968Jo11	NUPAB	113,	104	L.V. Johnson, T.J. Kennett
1968Ki07	YAFIA	8,	1057	B.G. Kiselev, V.R. Burmistrov
1968Kl08	IANFA	32,	1640	A.A. Klyushnikov, N.F. Mitrokhovich, A.I. Feoktistov
1968La18	PHRVA	175,	1507	I.M. Ladenbauer-Bellis, H. Bakhru
1968Le07	CHDBA	266,	629	C.F. Leang, G. Bastin-Scoffier
1968Li01	ZEPYA	208,	208	E. Liukhonen, J. Kantele
1968Li12	NUPAB	122,	373	H. Lindeman, G.A.P. Engelbertink, M.W. Ockeloen, H.S. Pruys
1968Lo15	YAFIA	8,	849	Y.V. Lobanov, V.A. Durin
1968Ma35	PHRVA	174,	1485	M.A.J. Mariscotti, W. Gelletly, J.A. Moragues, W.R. Kane
1968Ma45	JUPSA	25,	950	H. Matsuda, T. Matsuo
1968Mc06	PHRVA	168,	1393	M. McDonnel, M.K. Ramaswami
1968Mc09	PHRVA	172,	1253	L.D. McIsaac
1968Mc10	PHRVA	171,	1254	W.J. McDonald, J.T. Sample, D.M. Sheppard, G.M. Stinson, K.W. Jon
1968Mc12	PYLBB	27,	443	R.L. McGrath, J.C. Hardy, J. Cerny
1968Mi08	NUPAB	119,	609	W. Michaelis, F. Weller, H. Schmidt, G. Markus, U. Fanger
1968Mo21	PHRVA	175,	1516	P.A. Moore, P.J. Riley, C.M. Jones, M.D. Mancusi, J.L. Foster, Jr.
1968My.A	P-Debrecen		102	B. Mysek, Z. Sujkowski, B. Kotlinska
1968Pa03	NUPAB	110,	674	B. Parsa, G.E. Gordon, W.B. Walters
1968Pe01	NUPAB	108,	124	H. Petterson, S. Antman, Y. Grunditz
1968Pi03	JOPQA	29,	257	R.A. Pinston, E. Monnand, A. Moussa
1968Re12	JINCA	30,	2887	K. Rengan, H.C. Griffin
1968Ri07	PHRVA	170,	1157	F.A. Rickey, R.K. Sheline
1968Ro09	PHRVA	170,	1013	J.E. Robertshaw, S. Mecca, A. Sperduto, W.W. Buechner
1968Sa09	NUPAB	118,	409	R. Santo, R. Stock, J.H. Bjerregaard, O. Hansen, O. Nathan, R. Chapman, S. Hinds
1968Sa13	NUPAB	121,	65	C. Samour, H.E. Jackson, J. Julien, A. Bloch, C. Lopata, J. Morgenstern
1968Sc01	PHRVA	165,	1184	I.G. Schröder, M. McKeown, G. Scharff-Goldhaber
1968Sc04	PHRVA	166,	1212	D. Schroer, P.S. Jastram
1968Sc10	JOPQA	29,	385	F. Schussler
1968Sc14	ZEPYA	217,	282	W.D. Schmidt-Ott, W. Weirauch, F. Smend, H. Langhoff, D.G. Foller
1968Sc15	PHRVA	175,	1453	J.J. Schwartz
1968Sh12	PHRVA	170,	1108	E.B. Shera, M.E. Bunker, R.K. Sheline, S.H. Vegors
1968Si01	NUPAB	109,	231	A. Siivola
1968Sn01	NUPAB	113,	581	R.E. Snyder, G.B. Beard
1968Sp01	NUPAB	113,	395	R. Spilling, H. Gruppelaar, H.F. de Vries, A.M.J. Spits
1968Su02	PRLTA	21,	237	A.W. Sunyar, G. Scharff-Goldhaber, M. McKeown
1968Te01	PYLBB	26,	371	B. Teitelman, G.M. Temmer
1968Tr01	NUPAB	111,	241	A. Trier, L. González, J. Rapaport, T.A. Belote, W.E. Dorenbusch
1968Tr07	ZENAA	23,	2127	N. Trautmann, R. Denig, N. Karfeel, G. Herrmann
1968Va04	PHRVA	167,	1094	K. Valli, W.J. Treytl, E.K. Hyde
1968Va06	NUPAB	112,	372	J. Van Klinken, F. Pleiter, H.T. Dijkstra
1968Va08	ATKOA	10,	27	E. Vatai, K. Hohmuth
1968Va17	PHYSA	40,	253	H. Van Krugten, E.W. Koopmans
1968Va18	PHRVA	176,	1377	K. Valli, E.K. Hyde
1968Vi01	PYLBB	26,	285	G.B. Vingiani, G. Chilosi, W. Bruynesteyn
1968Vi05	IANFA	32,	1625	V.D. Vitman, B.S. Dzelepov, A.I. Medvedev
1968We02	NUPAB	109,	561	H. Wenniger, J. Stiewe, H. Leutz
1968Wh03	NUIMA	66,	70	D.H. White, D.J. Groves, R.E. Birket
1968Wi21	IANFA	32,	187	K. Wilsky, K.Y. Gromov, Z.T. Zhelev, V.V. Kuznetsov, G. Muziol, O.B. Nielsen, O. Skillbreit
1968Wi25	ATKEA	13,	383	P. Wille
1968Wo01	NUPAB	107,	332	A.C. Wolff, M.A. Meyer, P.M. Endt
1968Wo02	NUPAB	112,	156	J.L. Wolfson, A.J. Collier
1968Wo09	PYLBB	28,	77	S.S.M. Wong, W.G. Davies
1968Yo01	PYLBB	26,	143	H.J. Young, J. Rapaport, and PrvCom AHW

1968Yo06	PHRVA	173,	949	P.G. Young, R.H. Stoker, G.G. Olsen
1968Ze04	APASA	27,	31	H. Zemmann, D. Zemrad
1968Zh04	IANFA	32,	1610	Zh. Zhelev, V.G. Kalinnikov, J. Liptak, L.K. Peker
			1969	
1969Aj03	PHRVA	188,	1813	F. Ajzenberg-Selove
1969Ak01	IANFA	33,	104	M.R. Akhmed, K.A. Baskova, S.S. Vasilev, L.Y. Shaftalov
1969An18	PYLBB	30,	160	S. Andre, P. Liaud, F. Perales, S.Y. van der Werf
1969Ar23	IANFA	33,	1218	R. Arlt, Z. Malek, G. Musiol, G. Pfrepper, H. Strusny
1969Ar.A	P-Studsvik			S.E. Arnell, R. Hardell, O. Skeppstedt, E. Wallander
1969Ba02	CJPHA	47,	419	H. Bakhru, R.I. Morse, I.L. Preiss
1969Ba07	PHRVA	177,	1686	H. Bakhru, I.M. Ladenbauer-Bellis
1969Ba31	PHRVA	184,	1142	H. Bakhru, I.M. Ladenbauer-Bellis
1969Ba57	YAFIA	10,	1110	S.A. Baranov, V.M. Shatinskii, V.M. Kulakov
1969Be06	JINCA	31,	599	C.E. Bemis, Jr., J. Halperin, R. Eby
1969Be17	NUPAB	129,	571	K. Beg, R.D. Macfarlane
1969Be74	NUIMA	76,	77	E. Beck
1969Bj01	NUPAB	131,	481	J.H. Bjerregaard, O. Hansen, O. Nathan, R. Chapman, S. Hinds
1969Bl01	PRLTA	22,	470	A.G. Blair, J.G. Beery, E.R. Flynn
1969Bl03	NUPAB	123,	129	R. Bloch, T. Knellwolf, R.E. Pixley
1969Bl16	NUPAB	139,	434	J. Blachot, J.A. Pinston, F. Schussler
1969Bo48	NUIMA	72,	40	H.M.W. Booij, E.A. Van Hoek, J. Blok
1969Bo49	NUIMA	73,	323	H.E. Bosch, M.A. Fariolli, N. Martin, M.C. Simon
1969Br11	PHRVA	185,	1553	H.C. Britt, J.D. Cramer
1969Br21	NUPAB	137,	487	H. Brunnader, J.C. Hardy, J. Cerny
1969Bu01	NUPAB	124,	683	D.G. Burke, D.E. Nelson, C.W. Reich
1969Bu05	PHRVA	179,	1113	D.L. Bushnell, R.P. Chaturvedi, R.K. Smither
1969Bu.A	P-Yerevan		71	V.R. Burmistrov, B.G. Kiselev
1969Ce01	PRLTA	22,	612	J. Cerny, E.A. Mendelson, Jr., G.J. Wozniak, J.E. Esterl, J.S. Har
1969Ch18	PYLBB	29,	652	J. Chaumont, E. Roeckl, Y. Nir-El, C. Thibault-Philippe, R. Klapisch, R. Bernas
1969Co03	NUPAB	129,	10	M. Conjeaud, S. Harar, E. Thuriere
1969Da15	PHRVA	181,	1618	J.W. Dawson, R.K. Sheline, E.T. Jurney
1969De19	YAFIA	10,	433	R.A. Demirkhanov, V.V. Dorokhov
1969De27	PYLBB	30,	639	P. De Wit, C. Van der Leun
1969Do01	NUPAB	133,	146	W.E. Dorenbusch, T.A. Belote, J. Rapaport
1969Fa01	NUPAB	123,	616	K.T. Faler, R.R. Spencer, R.A. Harlan
1969Fl02	ZEPYA	225,	164	D. Flothman, W. Wiesner, R. Lohken, H. Rebel
1969Fr01	NUPAB	127,	33	A.M. Friedman, I. Ahmad, J. Milsted, D.W. Engelkemeir
1969Fr08	NUPAB	132,	593	J.M. Freeman, J.G. Jenkin, G. Murray, D.C. Robinson, W.E. Burcham
1969Fr22	ANPYA	23,	168	V.R. Friedrich, M. Kiesling, G. Otto
1969Ge07	PHRVA	181,	1682	W. Gelletly, J.A. Moragues, M.A.J. Mariscotti, W.R. Kane
1969Gh01	PRLTA	22,	1317	A. Ghiorso, M. Nurmia, J. Harris, K. Eskola, P. Eskola
1969Go23	IANFA	33,	1622	N.A. Golovkov, S. Guetch, B.S. Dzelepov, Yu. V. Norseev, V.A. Chalkin, V.G. Shumin
1969Gr08	NUPAB	131,	180	H. Gruppelaar, A.M.F. Op den Kamp, A.M.J. Spits
1969Gr24	NUPAB	136,	513	A. Graue, J.R. Lien, S. Royrvik, O.J. Aaroy, W.H. Moore
1969Gr28	CHDBA	269,	652	B. Grennberg, A. Rytz
1969Gr31	YAFIA	10,	681	L.V. Groshev, V.N. Dvoretzkii, A.M. Demidov, M.S. Alvash
1969Ha11	NUPAB	127,	71	O. Hansen, O. Nathan, R. Chapman, S. Hinds
1969Ha32	PHRVA	182,	1329	R.L. Hahn, M.F. Roche, K.S. Toth
1969Ha44	NUPAB	136,	414	P.E. Hausteijn, A.F. Voigt
1969Ha.A	P-Studsvik		209	R. Hardell
1969He05	ZEPYA	218,	137	G. Heymann, P. van der Merwe, I.J. van Heerden, I.C. Dormehl
1969Ho10	NUPAB	131,	551	D.C. Hoffman, F.O. Lawrence, W.R. Daniels
1969Ho37	PHRVA	187,	1709	P.K. Hopke, R.A. Naumann, E.H. Spejewski
1969Jo16	NUPAB	133,	213	K.H. Johansen, B. Bengtson, P.G. Hansen, P. Hornshøj
1969Ka06	JUPSA	26,	1071	T. Katoh, T. Morii, H. Inoue, Y. Yoshizawa, H. Gotoh, E. Sakai
1969Ka13	NUCIA	61,	220	Y. Kabasakal, M.K. Ramaswamy
1969Ki15	IANFA	33,	1340	B.G. Kiselev, V.R. Burmistrov
1969Ki16	YAFIA	10,	1105	B.G. Kiselev, V.R. Burmistrov
1969Ki.A	P-Yerevan		42	B.G. Kiselev, V.N. Lebkovskii

1969Ku03	ZEPYA	222,	144	E. Kuhlmann, K.E.G. Lobner
1969Ku07	NUPAB	133,	554	T. Kuroyanagi, T. Tamura
1969La11	PHRVA	178,	1919	R.G. Lanier, R.K. Sheline, H.F. Mahlein, T. von Egidy, W. Kaiser, H.R. Koch, U. Gruber, B.P.K. Maier, O.W.B. Schult, D.W. Hafemeister, E.B. Shera
1969La15	PHRVA	180,	1015	I.M. Ladenbauer-Bellis, H. Bakhru
1969La33	PHRVA	187,	1739	I.M. Ladenbauer-Bellis, H. Bakhru, A. Luzzati
1969Le05	NUPAB	135,	36	C.M. Lederer, J.M. Jaklevic, S.G. Prussin
1969Le.A	Th.-Paris			C.F. Leang
1969Lu09	APPOA	36,	939	J. Ludziejewski, J. Kownacki, W. Klamra, J. Chaszczewska, W. Przyborski
1969Ly06	NUPAB	135,	97	L.L. Lynn, W.E. Dorenbusch, T.A. Belote, J. Rapaport
1969Mc05	NUPAB	127,	531	M. McDonnell, M.K. Ramaswami
1969Mi10	PHRVA	177,	1455	R.C. Minehart, L. Coulson, W.F. Grubb,III, K. Zioc
1969Mo13	PHRVA	180,	1105	J.A. Moragues, M.A.J. Mariscotti, W. Gelletly, W.R. Kane
1969Mo16	NUPAB	134,	321	E. Monnard, J. Blachot, A. Moussa
1969Na03	PHRVA	178,	1968	T. Nagarajan, M. Ravindranath, K.V. Reddy, S. Janananda
1969Na05	NUPAB	134,	433	T. Nagarajan, M. Ravindranath, K.V. Reddy
1969Na11	NUPAB	137,	467	T. Nagarajan, M. Ravindranath, K.V. Reddy
1969Na21	SHIBA	17,	705	H. Nakabushi, I. Katakuse, K. Ogata
1969Oh01	PHRVA	177,	1695	H. Ohnuma, J.R. Erskine, J.A. Nolen, Jr., J.P. Schiffer, P.G. Roos
1969Ov01	NUIMA	68,	61	J.C. Overley, P.D. Parker, D.A. Bromley
1969Ph01	NUPAB	135,	116	M.E. Phelps, D.G. Sarantes
1969Ph03	RRALA	1,	351	A. Phillippe, C. Ballaux, R. Dams, F. Adams
1969Pi08	NUPAB	133,	124	J.A. Pinston, F. Schussler, A. Moussa
1969Pr04	NUPAB	131,	679	G. Presser, R. Bass, K. Kruger
1969Pr06	PHRVA	180,	945	W.V. Prestwich, G.E. Thomas
1969Pr11	PHRVA	188,	1930	V. Prodi, K.F. Flynn, L.E. Glendenin
1969Ra02	NUPAB	123,	627	J. Rapaport, T.A. Belote, W.E. Dorenbusch
1969Ra24	NUPAB	138,	49	S. Ray, J.N. Mo, S. Murzynski, S.K. Mark
1969Re04	PHYSA	40,	567	E.R. Reddingius, H. Postma
1969Sa08	NUPAB	130,	97	D.G. Sarantites, S. Gronemeyer
1969Sh04	NUPAB	128,	73	M.H. Shapiro, C. Moss, W.M. Denny
1969St02	PHRVA	178,	2024	R.H. Stokes, P.G. Young
1969St07	PHRVA	178,	1789	R.H. Stokes, P.G. Young
1969Te01	PHRVA	177,	1595	J. Tenenbaum, R. Moreh, Y. Wand, B. Arad, G. Ben-David
1969Tj01	KDVSA	37,	#7	P.O. Tjom, B. Elbek
1969To14	AFYSA	38,	261	S. Toernqvist, S. Stroem
1969Va06	NUPAB	130,	586	J.M. Vara, R. Gaeta
1969Va17	NUPAB	134,	215	S.Y. Van der Werf, H. De Waard, H. Beekhuis
1969Wa10	PHRVA	182,	1186	T.E. Ward, P.H. Riley, P.K. Kuroda
1969Wa15	JINCA	31,	2679	T.E. Ward, P.H. Pile, P.K. Kuroda
1969Wa19	PHRVA	185,	1439	J. Walinga, J.C. Manthuruthil, C.P. Poirier
1969Wa24	RAACA	12,	217	T.E. Ward, P.K. Kuroda
1969Wa.A	UCRL-18667		54	D. Ward, F.S. Stephens, R.M. Diamond
1969Ya02	NUPAB	130,	456	T. Yamazaki, J. Sato
1969Zo04	PHRVA	185,	1537	W.H. Zoller, W.B. Walters, C.D. Coryell

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1970Ab05	NUPAB	151,	187	C. Abulaffio, J. Felsteiner, R. Kalish, B. Rosner, G. Vourvopoulos
1970Ab15	NUCIA	70,	391	U. Abbondanno, R. Giacomich, L. Granata, M. Lagonegro, G. Poiani, P. Blasi, R.A. Ricci
1970Ad01	NUPAB	143,	97	E.G. Adelsberger, A.V. Nero, A.B. McDonald
1970Af.A	JINR-P6-4972			V.P. Afanasiev, M. Bocharova, N.A. Golovkov, I. Gromova, R.B. Ivanov, V.I. Kuzmin, Y.V. Narseev, V.G. Chumin
1970Ag01	IANFA	34,	397	V.A. Ageev, N.F. Mitrokhovich, A.I. Feoktistov
1970Ag02	IANFA	34,	435	V.A. Ageev, N.F. Mitrokhovich, A.I. Feoktistov
1970Ag03	IANFA	34,	201	V.A. Ageev, N.F. Mitrokhovich, A.I. Feoktistov
1970Ah01	NUPAB	140,	141	I. Ahmad, R.K. Sjoblom, R.F. Barnes, E.P. Horwitz, P.R. Fields
1970Aj01	NUPAB	142,	641	F. Ajzenberg-Selove, G. Igo
1970Ak02	IANFA	34,	777	A.I. Akhmadzhanov, R. Broda, V. Valys, I. Zvolzki, I. Molnar, Y. Stygen, V.I. Fominikh, A. Krynkevich, V.M. Tsupko-Sitnikov
1970An06	ZEPYA	234,	455	A. Antilla, M. Bister, E. Arminen

1970An14	NUPAB	153,	17	M.L. Andersen, S.A. Andersen, O. Nathan, K.M. Bisgard, K. Gregersen, O. Hansen, S. Hinds, R. Chapman
1970An25	NUPAB	157,	561	T.R. Anfinsen, K. Bjorndal, A. Graue, J.R. Lien, G.E. Sandvik, L.O. Tveita, K. Ytterstad, E.R. Cosman
1970Ar04	IANFA	34,	409	R. Arlt, G. Beyer, G. Musiol, L.K. Peker, G. Pfrepper, H. Strusny
1970As08	NUPAB	158,	146	J. Ashkenazi, E. Friedman, D. Nir, J. Zioni
1970Ba61	NUPAB	158,	337	R.K. Bardin, P.J. Gollon, J.D. Ullman, C.S. Wu
1970Be24	PRVCA	2,	297	R.W. Bercaw, R.E. Warner
1970Be48	NUPAB	157,	520	G.B. Beard, G.E. Thomas
1970Be.A	P-Leysin		353	E. Beck, ISOLDE
1970Bo13	PRVCA	2,	1841	J. Borggreen, K. Valli, E.K. Hyde
1970Bo19	JINCA	32,	2805	G.G.J. Boswell, T. McGee
1970Bo29	PRVCA	2,	1951	L.M. Bollinger, G.E. Thomas
1970Br01	PRVCA	1,	275	T.H. Braid, R.R. Chasman, J.R. Erskine, A.M. Friedman
1970Br23	NUPAB	153,	289	C.P. Browne, G. Maille, R. Tarara J.R. Duray
1970Br.A	JINR-E6-5197			R. Broda, S. Chojnacki, C. Droste, T. Morek, W. Walus
1970Bu19	PRVCA	2,	1513	D.J. Buss, R.K. Smither
1970Ca01	NUPAB	141,	97	P.E. Cavanagh, C.F. Coleman, A.G. Hardacre, G.A. Gard, J.F. Turner
1970Ce02	PRLTA	24,	1128	J. Cerny, C.U. Cardinal, H.C. Evans, K.P. Jackson, N.A. Jelley
1970Ce04	PYLBB	33,	284	J. Cerny, J.E. Esterl, R.A. Gough, R.G. Sextro
1970Ch02	NUPAB	142,	634	J.C. Chang, G. Schupp, R.R. Hurst
1970Ch28	NUPAB	156,	276	A. Charvet, R. Duffait, A. Emsallem, R. Chéry
1970Ch29	JOPQA	31,	737	A. Charvet, R. Duffait, A. Emsallem, R. Chéry
1970Ch.A	BAPSA	15,	87	R.E. Chrien, S. Bokharee, J.B. Garg
1970Cr04	NUPAB	153,	413	F.P. Cranston, R.E. Birkett, D.H. White, J.A. Hughes
1970De39	NUPAB	158,	166	F.W.N. De Boer, E.W.A. Lingeman, R. van Lieshout, R.A. Ricci
1970Do.A	COO-1779-49		47	R. Doebler (Also Thesis Michigan State University)
1970Dz04	PYLBB	33,	302	T.G. Dzubay, A.A. Jaffe, E.J. Ludwig, T.A. White, F. Everling, D.W. Miller, D.A. Outlaw
1970Ei02	NUPAB	141,	289	J. Eidens, E. Roeckl, P. Armbruster
1970EL.A	BAPSA	15,	1670	J.L. Ellis, H.E. Hall, Jr.
1970Er03	NUPAB	146,	43	B. Erlandson, A. Marcinkowski
1970Es02	PRVCA	2,	1058	P. Eskola, K. Eskola, M. Nurmi, A. Ghiorso
1970Es03	PYLBB	33,	287	J.E. Esterl, J.C. Hardy, R.G. Sextro, J. Cerny
1970Fa06	NUPAB	146,	549	U. Fanger, D. Heck, W. Michaelis, H. Ottmar, H. Schmidt, R. Gaeta
1970Fi03	NUPAB	144,	67	E. Fincke, U. Jahnke, B. Schreiber, A. Weidinger
1970Fi12	NUPAB	154,	407	P.R. Fields, I. Ahmad, R.F. Barnes, R.K. Sjoblom, E.P. Horwitz
1970Fi.A	CERN-70-29			M. Finger, R. Foucher, J.P. Husson, J. Jastrzebski, A. Johnson, C. Seville, R. Henck, J.M. Kuchly, R. Regal, P. Siffert, G. Astner, B.R. Erdal, E. Hagebo, A. Kjelberg, F. Munnich, P. Patzelt, E. Beck, H. Kugler
1970FI05	NUPAB	154,	225	E.R. Flynn, J.G. Beery, A.G. Blair
1970FI08	NUPAB	157,	1	D.G. Fleming, M. Blann, H.W. Fulbright, J.A. Robbins
1970Fo09	PYLBB	32,	689	I. Fodor, I. Szentpetery, J. Szucz
1970Ga32	IANFA	34,	2048	S. Gabrakov, Z. Zhelev, N.G. Zaitseva, I. Penev, S.S. Sabirov
1970Ge03	PRVCA	1,	1052	W. Gelletly, J.A. Moragues, M.A. Mariscotti, W.R. Kane
1970Gh01	PYLBB	32,	95	A. Ghiorso, M. Nurmi, K. Eskola, P. Eskola
1970Gh02	PRLTA	24,	1498	A. Ghiorso, M. Nurmi, K. Eskola, J. Harris, P. Eskola
1970Go04	PRVCA	1,	123	D.R. Goosman, E.G. Adelsberger, K.A. Snover
1970Go11	PRVCA	1,	1939	D.R. Goosman, R.W. Kavanagh
1970Go20	NUPAB	151,	513	P.F.A. Goudsmit, J. Konijn, F.W.N. De Boer
1970Go39	NUIMA	88,	197	W. Goedbloed, S.C. Goverse, C.P. Gerner, A. Brinkman, J. Blok
1970Go42	PRVCA	2,	2406	D.J. Gorman, F. Asaro
1970Go45	PRVCA	1,	1939	D.R. Goosman, R.W. Kavanagh
1970Gr46	KDVSA	37,	#12	T. Grottdal, K. Nybø, B. Elbek
1970Gu14	JINCA	32,	3425	M.C. Gupta, R.D. MacFarlane
1970Ha10	PRVCA	1,	561	J.C. Hardy, H. Brunnader, J. Cerny
1970Ha18	NUPAB	148,	249	P.G. Hansen, H.L. Nielsen, K. Wilsky, M. Alpsten, M. Finger, A. Lindahl, R.A. Naumann, O.B. Nielsen
1970Ha21	NUPAB	158,	625	T. Hattula, S. Andre, F. Schussler, A. Moussa
1970Ha56	PHSTB	1,	85	R. Hardell, C. Boer
1970Ha60	PHSTB	2,	23	A. Hasselgren
1970He14	CJPHA	48,	1040	A.W. Herman, E.A. Heighway, J.D. McArthur

1970He27	NUPAB	159,	49	D. Heck, N.M. Ahmed, U. Fanger, W. Michaelis, H. Ottmar, H. Schmidt
1970Hi06	PRLTA	25,	829	R.A. Hinrichs, R. Sherr, G.M. Crawley, I. Proctor
1970Ho01	NUPAB	140,	658	K.J. Hofstetter, T.T. Sugihara
1970Jo08	PRVCA	1,	2030	H.D. Jones, R.K. Sheline
1970Jo11	NUPAB	150,	497	H.D. Jones, R.K. Sheline
1970Jo22	PRVCA	2,	1747	H.D. Jones, R.K. Sheline
1970Ju04	PRVCA	2,	2323	E.T. Journey, R.K. Sheline, E.B. Shera, H.R. Koch, B.P.K. Maier, U. Gruber, H. Baader, D. Breitig, O.W.B. Schult
1970Ka04	NUPAB	147,	120	M. Karras, T.E. Ward, H. Schoche
1970Ka22	PRLTA	25,	953	W.R. Kane
1970Ke05	P-Kyoto			D.P. Kerr, K.T. Bainbridge
1970Ke08	PRVCA	2,	213	K.W. Kemper, C.M. McKenna, J.W. Nelson
1970Ki01	NUPAB	142,	35	H.J. Kim, R.L. Robinson, C.H. Jonnson, S. Raman
1970KI05	ZEPYA	238,	11	H.V. Klapdor, K. Buchholz, F. Kaestner
1970Kn03	PRLTA	25,	1210	D.W. Kneff, H.W. Lefevre, G.U. Din
1970Kn05	NUPAB	159,	642	K.T. Knoepfle, M. Rogge, C. Mayer-Boricke, J. Pedersen, D. Burch
1970Le05	YAFIA	11,	483	V.N. Levkovskii, I.V. Kazachevskii
1970Li04	AFYSA	40,	197	H. Linusson, R. Hardell, S. Arnell
1970Lo02	NUPAB	152,	463	W. Lourens, B.O. Ten Brink, A.H. Wapstra
1970Ma05	NUPAB	145,	223	J.D. Macdougall, W. McLatchie, S. Whineray, H.E. Duckworth
1970Ma11	CJPHA	48,	2056	J.F. Mason, M.W. Johns
1970Ma19	NUPAB	147,	513	E.S. Macias, J.P. Op den Beeck, W.B. Walters
1970Ma25	NUPAB	149,	593	S. Maripuu
1970Ma31	NUPAB	151,	465	S. Maripuu
1970Ma36	NUPAB	153,	183	S. Maripuu
1970Ma47	JUPSA	29,	1116	Z.-Imatumoto, T. Tamura
1970Ma.A	P-Leysin		321	M.I. Macias-Marques, R. Foucher, M. Caillau, J. Belhassen
1970Mc01	NUPAB	140,	529	D.K. McMillan, B.D. Pate
1970Mc03	NUPAB	145,	244	W. McLatchie, S. Whineray, J.D. Macdougall, H.E. Duckworth
1970Mc06	NUPAB	144,	593	A.B. McDonald, E.G. Adelsberger
1970Me11	PRLTA	25,	533	R. Mendelson, G.J. Wozniak, A.D. Bacher, J.M. Loiseaux, J. Cerny
1970Mi01	NUPAB	143,	225	W. Michaelis, F. Weller, U. Fanger, R. Gaeta, G. Markus, H. Ottmar, H. Schmidt
1970Mo08	NUPAB	145,	423	C.E. Moss
1970Mu02	NUPAB	142,	21	G. Murray, W.J.K. White, J.C. Wilmott, R.F. Entwistle
1970Mu15	PRVCA	2,	655	T.J. Mulligan, R.K. Sheline, M.E. Bunker, E.T. Journey
1970Mu17	NUPAB	158,	183	F. Münnich, A. Kjelberg, D.J. Hnатовich
1970Ob02	NUPAB	153,	593	B.J. O'Brien, G.E. Coote
1970Oh05	JUPSA	29,	1435	S. Ohya, T. Tamura, S. Kageyama
1970Or.A	DASA-2570			V.J. Orphan, N.C. Rasmussen, T.L. Harper
1970Pe04	ZEPYA	233,	260	H. Petterson, S. Antman, Y. Grunditz
1970Pi01	NUPAB	144,	42	J.A. Pinston, F. Schussler
1970Qa03	NUPAB	154,	145	S.M. Qaim
1970Ra14	APAHA	28,	263	K. Raichev, L. Tron
1970Re02	PRVCA	1,	721	P.L. Reeder
1970Re.A	PrvCom	NDG		A.C. Rester
1970Ro06	PRVCA	1,	1761	A.A. Rollefson, P.F. Jones, R.J. Shea
1970Ro07	NUPAB	147,	235	M.L. Roush, L.A. West, J.B. Marion
1970Ru.A	P-Leysin		341	G. Rudstam, E. Lund, L. Westgaard, B. Grapengieser, and PrvCom AHW
1970Sa19	NUPAB	157,	113	M. Sakai, R. Bertini, C. Gehringer
1970Sc06	ZEPYA	232,	398	W.D. Schmidt-Ott
1970Sc20	ZEPYA	236,	445	W.D. Schmidt-Ott
1970Sc22	NUPAB	153,	502	W. Schlegel, D. Schmitt, R. Santo, F. Puhlhofer
1970Se14	PHSTB	2,	169	E. Selin
1970Sh05	PRVCA	1,	1835	S. Shastri, H. Bakhru, I.M. Ladenbauer-Bellis
1970Si19	PRVCA	2,	1948	R.J. Silva
1970Sm.A	BAPSA	15,	549	R.K. Smither, D.J. Bush, D.L. Bushnell
1970Sp02	NUPAB	145,	449	A.M.J. Spits, A.M.F. Op den Kamp, H. Gruppelaar
1970St25	P-Kyoto		1296	C.M. Stevens, P.E. Moreland
1970Th.A	Th.-Paris			F. Thuriere
1970To07	NUPAB	149,	641	D.F. Torgerson, R.D. Macfarlane
1970To18	PRVCA	2,	2309	D.F. Torgerson, R.D. Macfarlane
1970Um01	PRVCA	2,	1378	C.J. Umbarger, K.W. Kemper, J.W. Nelson, H.S. Plendl

1970Va13	PRVCA	1,	2115	K. Valli, E.K. Hyde, J. Borggreen
1970Va31	NUPAB	157,	385	J. Van Klinken, L.M. Taff, H.T. Dijkstra, A.H. De Haan, H. Hanson, B.K.S. Koene, J.W. Maring, J.J. Schuurman, F.B. Yano
1970Va.A	PrvCom	AHW	Apr	B. Van Nooijen, N.R. Johnson
1970Vo04	PRVCA	1,	2066	D. Von Ehrenstein, G.C. Morrison, J.A. Nolen, Jr., N. Williams
1970Wa14	NUPAB	148,	225	T.E. Ward, P.H. Pile, P.K. Kuroda
1970Wa20	PRVCA	2,	675	O.A. Wasson, R.E. Chrien
1970Wa21	JINCA	32,	2483	T.E. Ward, D.L. Swindle, R.J. Wright, P.K. Kuroda
1970Wh01	NUPAB	151,	377	S. Whineray, J.D. Macdougall, W. McLatchie, H.E. Duckworth
1970Wh04	PRVCA	1,	1455	C.A. Whitten, Jr., M.C. Mermaz, D.A. Bromley
1970Wo05	NUPAB	146,	33	F.K. Wahn, W.L. Talbert
1970Wo08	NUPAB	152,	561	F.K. Wahn, W.L. Talbert, Jr., J.K. Halbig
1970Ya03	PRVCA	1,	290	T. Yamazaki
1970Ya05	NUPAB	149,	45	K. Yagi, Y. Aoki, K. Sato
1971				
1971Af05	IANFA	35,	1618	V.P. Afanasiev, V.S. Buttsev, I.I. Gromova, V.G. Kalinnikov, N.A. Tikhonov
1971Al01	NUPAB	161,	209	G. Alenius, S.E. Arnell, C. Schale, E. Wallander
1971Al14	PHSTB	3,	55	G. Alenius, S.E. Arnell, C. Schale, E. Wallander
1971Al19	NUPAB	174,	148	W.P. Alford, N. Schulz, J. Jamshidi
1971Al22	PHSTB	3,	105	G. Alenius, S.E. Arnell, C. Schale, E. Wallander
1971Ar12	NUPAB	166,	241	S.E. Arnell, H. Linusson, Z. Sawa
1971Ar23	NUPAB	169,	209	N.K. Aras, P. Fettweis, G. Chilosì, G.D. O'Kelley
1971Ar39	PHSTB	4,	89	S.E. Arnell, R. Hardell, A. Hasselgren, C.G. Mattson, O. Skeppstedt
1971Ba01	NUPAB	160,	225	J.B. Ball
1971Ba08	PRVCA	3,	937	H. Bakhru, I.M. Ladenbauer-Bellis, I. Rezanka
1971Ba18	NUPAB	164,	552	F. Bazan, R.A. Meyer
1971Ba43	PRVCA	4,	196	J.B. Ball, R.L. Auble, P.G. Roos
1971Bb10	YAFIA	14,	1101	S.A. Baranov, V.M. Shatinskii, V.M. Kulakov
1971Be10	PRVCA	3,	1294	F.M. Bernthal, J.O. Rasmussen, J.M. Hollander
1971Be29	NUPAB	168,	151	F.D. Becchetti, D. Dehnhard, T.G. Dzubay
1971Be41	NUPAB	171,	113	M.J. Bennet, R.K. Sheline, Y. Shida
1971Bi.A	UCRL-51060			R.E. Birkett
1971Bo01	NUPAB	160,	337	H.M.W. Booi, E.A. Van Hoek, H. Van der Molen, W.F. Slot, J. Blok
1971Bo06	NUPAB	162,	407	J. Borggreen, E.K. Hyde
1971Br13	JOPQA	32,	101	J.P. Briand, P. Chevallier, A. Touati
1971Ca19	PRVCA	4,	130	R.F. Casten, E.R. Flynn, O. Hansen, T.J. Mulligan
1971Ch26	JOPQA	32,	359	A. Charvet, D.H. Phuoc, R. Duffait, A. Emsallem, R. Chery
1971Da16	NUPAB	170,	253	W. Darcy, R. Chapman, S. Hinds
1971Da19	PRVCA	4,	919	W.R. Daniels, D.C. Hoffman
1971Da28	NUPAB	178,	172	J.M. D'Auria, D. Ostrom, S.C. Gujrahi
1971De52	RMXFA	20,	17	H. Del Castillo, R. Roos, A. Tejera, F. Alba
1971Di03	PRLTA	26,	1037	P.F. Dittner, C.E. Bemis, Jr., D.C. Henley, R.J. Silva, C.D. Goodman
1971Do18	PYLBB	37,	173	W.E. Dorenbusch, J.B. Ball, R.L. Auble, J. Rapaport, T.A. Belote
1971Du02	PRVCA	3,	1391	J.L. Dubbard, R.K. Sheline, J.B. Ball
1971Dy01	NUPAB	173,	393	N.C. Dyer, J.H. Hamilton
1971Dz08	IANFA	35,	2249	B.S. Dzelepov, A.G. Dmitriev, N.N. Zhukovskii
1971El05	NUPAB	170,	209	C. Ellegaard, P.D. Barnes, E.R. Flynn
1971En01	PRVCA	3,	180	G.A.P. Engelbertink, J.W. Olness
1971Es01	PRVCA	4,	632	K. Eskola, P. Eskola, M. Nurmi, A. Ghiorso
1971Ev01	CJPHA	49,	402	F. Everling, G.L. Morgan, D.W. Miller, L.W. Seagondollar, P.W. Tillman, Jr.
1971Fi01	NUPAB	160,	460	P.R. Fields, I. Ahmad, A.M. Friedman, J. Lerner, D.N. Metta
1971Fo01	PRVCA	3,	337	H.T. Fortune, G.C. Morrisson, J.A. Nolen, Jr., P. Kienle
1971Fo22	PYLBB	36,	334	B. Fogelberg, A. Backlin, T. Nagarajan
1971Fr03	NUPAB	165,	625	A. Frana, A. Spalek, M. Fiser, A. Kolec
1971Ge05	PRVCA	3,	1678	W. Gelletly, W.R. Kane, D.R. MacKenzie
1971Gh01	PRVCA	4,	1850	A. Ghiorso, M. Nurmi, K. Eskola, P. Eskola
1971Gh03	NATUA	229,	603	A. Ghiorso, M. Nurmi, J. Harris, K. Eskola, P. Eskola
1971Go01	PRVCA	3,	746	D.J. Gorman, F. Asaro
1971Go18	PRVCA	4,	1800	D.R. Goosman, K.W. Jones, E.K. Warburton, D.E. Alburger

1971Go21	YAFIA	14,	3	K.S. Goncharov, A.P. Klyucharev, S.A. Pismnetskii, Y.N. Rakivnenko, V.V. Remaev, I.A. Romanii, E.A. Skakun
1971Go35	IANFA	35,	2272	N.A. Golovkov, R.B. Ivanov, A. Kolaczowski, Y.V. Norseev, V.G. Chumin
1971Gr01	NUPAB	160,	497	A. Graue, J.R. Lien, H. Vinje, P.B. Vold, W.H. Moore
1971Gr04	NUPAB	162,	593	A. Graue, J.R. Lien, L. Rasmussen, G.E. Sandvik, E.R. Cosman
1971Gr17	MTRGA	7,	65	B. Grennberg, A. Rytz
1971Gr22	YAFIA	13,	681	L.V. Groshev, A.M. Demidov, V.F. Leonov, L.L. Sokolovskii
1971Gr28	YAFIA	13,	1129	L.V. Groshev, L.I. Govor, A.M. Demidov, A.S. Rachimov
1971Gr37	YAFIA	14,	473	L.V. Groshev, A.M. Demidov, V.F. Leonov, L.L. Sokolovskii
1971Gr42	IANFA	35,	1644	L.V. Groshev, A.M. Demidov, V.F. Leonov, L.L. Sokolovskii
1971Gr.A	P-Moscow		70	L.V. Groshev, V.N. Dvoretzkii, A.M. Demidov
1971Gu02	NUPAB	161,	410	S.C. Gujrathi, J.M. D'Auria
1971Gu18	NUPAB	172,	353	S.C. Gujrathi, J.M. D'Auria
1971Gu.A	Th.-Strasbourg			G. Guillaume
1971Ha01	NUPAB	175,	428	U. Hagemann, W. Neubert, W. Schulze
1971He10	NUPAB	165,	327	D. Heck, U. Fanger, W. Michaelis, H. Ottmar, J. Schmidt
1971He13	NUPAB	168,	449	R.G. Helmer, R.C. Greenwood, C.W. Reich
1971Ho01	NUPAB	163,	277	P. Hornshøj, K. Wilsky, P.G. Hansen, A. Lindahl, O.B. Nielsen
1971Ho07	PYLBB	34,	591	P. Hornshøj, K. Wilsky, P.G. Hansen, A. Lindahl, O.B. Nielsen
1971Ho16	NUPAB	169,	641	R.W. Hoff, E.K. Hulet, R.J. Dupzyk, R.W. Loughheed, J.E. Evans
1971Ho24	PRVCA	4,	1182	M. Honda, M. Imamura
1971Ho26	PRLTA	27,	1086	H.H. Howard, R.H. Stokes, B.H. Erkila
1971Hs03	NUPAB	174,	365	T.H. Hsu, J.L. Honsaker, W.J. McDonald, G.C. Nelson
1971Hu03	PRLTA	26,	523	E.K. Hulet, J.F. Wild, R.W. Loughheed, J.E. Evans, B.J. Qualheim, M. Nurmia, A. Ghiorso
1971Ib01	PHSTB	4,	161	N. Ibrahiem, H. Pettersson
1971Ja09	PRVCA	3,	2489	A.A. Jaffe, G.A. Bissinger, S.M. Shafroth, T.A. White, T.G. Dzubay, F. Everling, D.W. Miller, D.A. Outlaw
1971Ka22	ZEPYA	245,	451	N. Kaffrell
1971Ka42	APOBB	2,	423	R. Kaczarowski, W. Kurcewicz, A. Plochocki, J. Żylicz
1971Ke01	CJPHA	49,	756	D.P. Kerr, K.T. Bainbridge
1971Ke02	CJPHA	49,	1950	D.P. Kerr, K.T. Bainbridge
1971Ke07	PRVCA	4,	1431	B.H. Ketelle, A.R. Brosi, J.R. van Hise
1971Ke21	NUPAB	176,	449	R.L. Kernell, H.J. Kim, R.L. Robinson, C.H. Johnson
1971Ki01	NUPAB	170,	187	C.H. King, P.R. Maurenzig, N. Stein, T.P. Cleary
1971Ki15	YAFIA	14,	249	B.G. Kiselev, V.N. Levkovskii, O.I. Artem'ev
1971La02	PRVCA	3,	188	H. Lancman, J.M. Lebowitz
1971Le21	NUPAB	170,	115	J.R. Leslie, W. McLatchie, C.F. Monahan, J.K. Thrasher
1971Li02	NUPAB	160,	630	E.W.A. Lingeman, F.W.N. De Boer, P. Koldewijn, P.R. Maurenzig
1971Lo15	NUPAB	171,	337	W. Lourens, B.O. Ten Brink, A.H. Wapstra
1971Lu01	PRVCA	3,	1243	M.T. Lu, W.P. Alford
1971Ma11	PRVCA	3,	1162	J.V. Maher, J.R. Comfort, G.C. Morrisson
1971Ma24	NUPAB	166,	573	S.G. Malmkog, V. Berg, B. Fogelberg, A. Backlin
1971Ma45	NUPAB	172,	298	P. Manfrass, H. Prade, M.R. Beitins, W.A. Bondarenko, N.D. Kramer, P.T. Prokofjew
1971Ma47	NUPAB	174,	343	S. Matsuki, Y. Yoshida, M. Hyakutake, M. Matoba, S. Nakamura
1971Mi01	PRVCA	3,	766	M.M. Minor, R.K. Sheline, E.T. Journey
1971Mo01	PRVCA	3,	438	J.M. Mosher, R.W. Kavanagh, T.H. Tombrello
1971Mo02	NUPAB	161,	228	J.M. Morton, W.G. Davies, W. McLatchie, W. Darcey, J.E. Kitching
1971Mo03	PRLTA	26,	854	H.T. Motz, E.T. Journey, E.B. Shera, R.K. Sheline
1971Mo20	NUPAB	168,	561	N.A. Morcos, T.E. Ward, P.K. Kuroda
1971My01	APOBB	2,	441	B. Myslek, B. Pietrzek, Z. Sujkowski, J. Szcpankowski
1971Na01	PRVCA	3,	247	T. Nagarajan, M. Ravindranath, K.V. Reddy
1971Na02	PRVCA	3,	254	T. Nagarajan, M. Ravindranath, K.V. Reddy
1971Ne.A	BAPSA	16,	489	P.H. Nettles, C.A. Barbes, D.C. Hensley, C.D. Goodman, and Nettles Thesis
1971Oh01	PRVCA	3,	158	H. Ohnuma, A.M. Sourkes
1971Or04	PRVCA	3,	2402	C.J. Orth, B.J. Dropesky, N.J. Freeman
1971Ot01	NUPAB	164,	69	H. Ottmar, N.M. Ahmed, U. Fanger, D. Heck, W. Michaelis, H. Schmidt
1971Pe23	NUPAB	167,	387	B.I. Person, J.L. Plesser, J.W. Sunier
1971Pi08	ZEPYA	247,	400	M. Piiparinen, A. Anttila, M. Viitasalo
1971PI08	IANFA	35,	1569	Z. Plajner, M. Vejs, I. Prochazka, A. Mashtalka, O. Voitishok, M. Gonusek, A. Kokesh

1971Po.A	P-Legnaro		375	C.P. Poirier, J.C. Manthuruthil
1971Pr03	NUPAB	167,	667	R. Prieels, J.P. Deutsch
1971Pr13	NUPAB	176,	338	R.H. Price, D.G. Burke, M.W. Johns
1971Ra08	ZEPYA	243,	105	F. Rauch
1971Ra09	NUPAB	168,	177	J. Rapaport, T.A. Belote, D.E. Bainum, W.E. Dorenbusch
1971Ra17	NUPAB	170,	199	J. Rapaport, T.A. Belote, D.E. Bainum
1971Ra35	NUPAB	177,	307	J. Rapaport, W.E. Dorenbusch, T.A. Belote
1971Ro19	JINCA	33,	2684	G. Rossner, G. Herrmann
1971Sc07	NUPAB	165,	415	L.A. Schaller, J. Kern, B. Michaud
1971Sh04	ZEPYA	242,	368	W.N. Shelton, R.K. Sheline
1971Sm01	PRVCA	4,	22	L.G. Smith
1971Su14	YAFIA	14,	1297	G.Y. Sung-Ching-Yang, V.A. Druin, A.S. Trofimov
1971Sw01	PRVCA	3,	259	D.L. Swindle, T.E. Ward, P.K. Kuroda
1971Ta07	PRVCA	4,	517	K. Takehashi, D.L. Swindle, P.K. Kuroda
1971To01	PRVCA	3,	854	K.S. Toth, R.L. Hahn
1971To05	NUPAB	171,	305	R. Torti, R. Graetzer
1971To10	PRVCA	4,	2223	K.S. Toth, R.L. Hahn, M.A. Ijaz
1971Tr03	PRVCA	3,	2205	G.F. Trentelman, B.M. Freedom, E. Kashy
1971Um03	NUPAB	169,	109	C.J. Umbarger, J.A. Robinson, R.R. Reece, R.C. Bearce
1971Va18	NUPAB	170,	607	J.G. Vanderbaan, H.G. Leighton
1971Va21	NUPAB	173,	456	J.G. Vanderbaan, B.R. Sikura
1971Ve03	PRVCA	3,	1570	J. Vervier, H.H. Bolotin
1971Vi14	CPHMA	41,	319	M. Viitasalo
1971Wa21	NUPAB	173,	634	B.A. Watson, C.C. Chang, M. Hasinoff
1971We01	PRVCA	3,	1668	C.V. Weiffenbach, R. Tickle
1971Wi04	PRVCA	3,	1199	B.H. Wildenthal, E. Newman, R.L. Auble
1971Wi07	NUPAB	166,	661	D.H. Wilkinson, D.E. Alburger, D.R. Goosman, K.W. Jones, E.K. Warburton, G.T. Garvey, R.L. Williams
1971Ya10	PYLBB	37,	369	K. Yagi, K. Sato, Y. Aoki
1971Zi03	PRVCA	4,	1809	M.S. Zisman, B.G. Harvey
1972				
1972Ah04	NUPAB	186,	620	I. Ahmad, R.K. Sjoblom, R.F. Barnes, F. Wagner, Jr., P.R. Fields
1972Ah07	JINCA	34,	3335	I. Ahmad, R.F. Barnes, R.K. Sjoblom, P.R. Fields
1972Al19	NUPAB	186,	209	G. Alenius, S.E. Arnell, C. Schale, E. Wallander
1972Ba08	CJPHA	50,	34	R.C. Barber, R.L. Bishop, J.O. Meredith, F.C.G. Southon, P. Williams, H.E. Duckworth, P. van Rookhuyzen
1972Ba26	PRVCA	5,	1351	T.T. Bardin, J.A. Becker, T.R. Fisher
1972Ba31	NUPAB	184,	609	D. Bachner, H. Kelleter, B. Schmidt, W. Seliger
1972Ba35	PRLTA	28,	1069	G.C. Ball, W.G. Davies, J.S. Forster, J.C. Hardy
1972Ba37	NUPAB	186,	321	H. Bakhru, I.M. Ladenbauer-Bellis, B. Jones
1972Ba91	IANFA	36,	782	G.Y. Baier, V.S. Buttsev, K.Y. Gromov, V.G. Kalinnikov, K.O. Mortensen, G.L. Nilsson, N.A. Tikhonov
1972Bb24	ZETFa	63,	375	S.A. Baranov, V.M. Shatinskii, V.M. Kulakov, Y.F. Radionov
1972Be07	NUPAB	182,	69	R.R. Betts, O. Hansen, D.J. Pullen
1972Be11	NUPBB	39,	371	K.-E. Bergkvist
1972Be12	PRVCA	5,	1426	W. Benenson, J. Driesbach, I.D. Proctor, G.F. Trentelman, B.M. Freedom
1972Be44	ZEPYA	252,	349	H. Behrens, M. Kobelt, W.G. Thies, H. Appel
1972Be51	PRVCA	6,	957	R.R. Betts, H.T. Fortune, D.J. Pullen
1972B116	NUPAB	197,	620	J. Bleck, R. Butt, K.H. Lindenberger, W. Ribbe, W. Zeitz
1972Bo46	PRVCA	6,	1322	L.M. Bollinger, G.E. Thomas
1972Br13	NUPAB	185,	289	M. Brien, J.E. Kitching, J.K.P. Lee, P.F. Hinrichsen
1972Br31	APOBB	3,	263	R. Broda, M. Rybicka, J. Styczen, W. Walus, K. Krolas
1972Bu05	JINCA	34,	1087	F.T. Bunus
1972Ca01	KDVSA	38,	#13	R.F. Casten, P. Kleinheinz, P.J. Daly, B. Elbek
1972Ca07	NUIMA	98,	432	J.L. Campbell, L.A. McNellen
1972Ca10	NUPAB	184,	357	R.F. Casten, E.R. Flynn, O. Hansen, T.J. Mulligan
1972Ca33	NUPAB	198,	289	P.L. Carson, L.C. McIntyre
1972Ch11	NUPAB	186,	603	R. Chapman, W. McLatchie, J.E. Kitching
1972Ch33	NUPAB	193,	225	H.C. Cheung, J.K.P. Lee, J.E. Kitching, S.K. Mark, Tseh Y. Li
1972Ch44	NUPAB	197,	490	A. Charvet, R. Chery, D.H. Phuoc, R. Duffait, A. Emsallem, G. Marguier

1972Co13	NUPAB	185,	644	W.F. Coetzee, M.A. Meyer, D. Reitmann
1972Cu07	NUPAB	196,	593	J.C. Cunnane, R. Hochel, C.W. Yates, P.J. Daly
1972Da.A	BAPSA	17,	71	C.N. Davids, D.L. Matthews, D. Whitmire
1972De11	P-Teddington		210	R.A. Demirkhanov, V.V. Dorokhov, M.I. Dzkuya see also 72De39
1972De47	NUPAB	195,	385	P. Debenham, N.H. Hintz
1972Dz13	YAFIA	15,	1093	J.D. Dzafar, A.A. Abdullah, N.H. Al Quaraishi, M.S. Alwash, M.A. Khalil, A.M. Demidov
1972EI03	CJPHA	50,	674	S.A. Elbaker, C. Glavina, W.K. Dawson, V.K. Gupta, W.J. McDonald, G.C. Nelson
1972Em01	NSENA	48,	319	J.F. Emery, S.A. Reynolds, E.I. Wyatt, G.I. Gleason
1972Er05	NUPAB	194,	449	B.R. Erdal, L. Westgaard, J. Zylizc, E. Roeckl, ISOLDE
1972Es03	PRVCA	5,	942	K. Eskola
1972Fa08	NUPAB	186,	545	L.C. Farwell, J.J. Kraushaar, H.W. Baer
1972Fe06	NUPAB	187,	123	J.A. Fenton, T.H. Kruse, N. Williams, M.E. Williams, R.N. Boyd, W. Savin
1972Fi.A	AnRpt MSUCL		28	R.B. Firestone, K. Kosanke, W.C. McHarris, W.H. Kelly
1972F117	PYLBB	42,	49	E.R. Flynn, J.D. Garrett
1972Fo25	PHSTB	6,	309	I. Forsblom, T. Weckstrom, T. Sundius, G. Bergstrom, S. Forss, G. Wansen
1972Fu10	NCLTA	4,	430	A. Fubini
1972Ga27	PRLTA	29,	958	H. Gauvin, Y. Le Beyec, M. Lefort, N.T. Porile
1972Gi17	NUIMA	105,	179	H.J. Gils, R. Lohken, W. Wiesner
1972Go31	PRVCA	6,	820	D.R. Goosman, D.E. Alburger
1972Go33	CHDBA	275,	291	J. Gorman, A. Rytz, H.V. Michel
1972Go.A	PrvCom		91Ry01	J. Gorman, A. Rytz
1972Gr12	NUPAB	187,	141	A. Graue, L.H. Herland, K.J. Lervik, J.T. Nesse, E.R. Cosman
1972Gr19	NUPAB	189,	592	T. Grotdal, J. Limstrand, K. Nybø, K. Skar, T.F. Thorsteinsen
1972Gr23	YAFIA	15,	625	L.V. Groshev, L.I. Govor, A.M. Demidov
1972Gr34	IANFA	36,	833	L.V. Groshev, L.I. Govor, A.M. Demidov
1972Gr39	PRVCA	6,	1756	M.B. Greenfield, C.R. Bingham, E. Newman, M.J. Saltmars
1972Ha74	NUPAB	198,	353	A. Hasselgren
1972He23	NUPAB	193,	357	G. Heymann, P.M. Cronje
1972He36	ZEPYA	255,	385	A. Helppi, A. Pakkanen
1972He.A	AnRpt Grenoble			M. Hermen, A. Gizon also Thesis Grenoble 1971
1972Ho18	NUPAB	187,	599	P. Hornshøj, K. Wilsky, P.G. Hansen, B. Jonson, O.B. Nielsen
1972Ho19	NUPAB	187,	609	P. Hornshøj, K. Wilsky, P.G. Hansen, B. Jonson, O.B. Nielsen
1972Ho40	NUPAB	194,	481	G.A. Hokken, A.J.G. Hendricx, J. De Kogel
1972Hs01	NUPAB	179,	80	T.H. Hsu, R. Fournier, B. Hird, J. Kroon, G.C. Ball, F. Ingebretsen
1972Hu06	NUPAB	189,	264	F.R. Hudson, R.N. Glover
1972Hu10	NUPAB	195,	485	P. Hubert, M.M. Aleonard, D. Castera, F. Leccia, P. Mennrath
1972Ja28	APOBB	3,	643	M. Jaskola, K. Nybø, B. Elbek
1972Ja.A	P-Teddington		236	A.A. Jaffe, G.A. Bissinger, S.M. Shafroth, T.A. White, T.G. Dzubay, F. Everling, D.W. Miller, D.A. Outlaw
1972Je02	NUPAB	185,	209	H.B. Jensen, H.B. Mak, C.A. Barnes
1972Jo08	ZEPYA	251,	425	H.W. Jongsma, R. Kamermans, H. Verheul
1972Ka57	SHIBA	20,	255	I. Kakatuse
1972Ke21	NUPAB	195,	177	A. Kerek, G.B. Holm, S. Borg, L.-E. de Geer
1972Ke28	NUPAB	198,	466	A. Kerek, P. Carle, J. McDonald
1972Ki06	ZEPYA	251,	93	A. Kiuru
1972Ki15	CPHMA	42,	11	A. Kiuru, P. Holmberg, L. Vanhanen
1972Ko03	PRVCA	5,	568	J.J. Kolata, W.W. Daehnick
1972Ko47	PRVCA	6,	1713	S.E. Koonin, B.I. Persson
1972La20	ZEPYA	253,	16	R. Lasijo, R.K. Sheline, R.D. Griffioen, J.L. Dubbard
1972Le17	PRVCA	6,	517	L. Lessard, S. Gales, J.L. Foster, Jr.
1972Lo26	NUIMA	105,	453	G.D. Lopez, G.E. Thomas
1972Ly01	NUPAB	182,	272	L.L. Lynn, R.C. Schaller, D.A. Barbour, T.A. Belote, W.E. Dorenbusch
1972Ma15	PRVCA	5,	1380	J.V. Maher, J.R. Erskine, A.M. Friedman, R.H. Siemsen, J.P. Schiffer
1972Ma23	NUPAB	185,	465	P. Martin, M. Buenerd, Y. Dupont, M. Chabre
1972Ma42	PHSTB	5,	58	C.G. Mattsson, S.E. Arnell, L. Jonsson
1972Ma50	PRVCA	6,	851	J.C. Manthuruthil, F.W. Prosser, Jr.
1972Ma.A	P-Budapest		90	P. Matusek, H. Ottmar, C. Weitkamp, H. Woods
1972Mc08	PRVCA	5,	922	D.A. McClure, J.W. Lewis, III
1972Mc25	ZEPYA	255,	335	J.C. McGeorge, D.W. Nix, R.W. Fink, J.H. Landrum
1972Me09	NUPAB	185,	625	M.A. Meyer, J.P.L. Reinecke, D. Reitmann

1972Mi16	HPACA	45,	93	B. Michaud, J. Kern, L. Ribordy, L.A. Schaller
1972Mi26	JUPSA	33,	1505	K. Miyano, H. Nakharr, G. Gil
1972Mi27	JUPSA	33,	1509	K. Miyano, C. Gil
1972Mo12	PRVCA	5,	1678	R.A. Moyer
1972Mo33	NUPAB	195,	192	E. Monnard, R. Brissot, L.C. Carraz, J. Crançon, R. Ristori, F. Schussler, A. Moussa
1972Mu02	PRVCA	5,	95	T. Mukoyama, S. Shimizu
1972Mu09	PRVCA	6,	1802	T.J. Mulligan, E.R. Flynn, O. Hansen, R.F. Carsten, R.K. Sheline
1972Mu.A	BAPSA	17,	557	S.F. Mughabghab, G.W. Cole, R.E. Chrien, O.A. Wasson, M.R. Bhat
1972Na04	NCIAA	8,	305	T. Nagarajan, M. Ravindranath, K.V. Reddy
1972Ne05	NUPAB	185,	213	A.V. Nero
1972Ne10	PRVCA	6,	6793	A.V. Nero, R.E. Pixley, E.G. Adelsberger
1972Og03	IJMPD	8,	365	K. Ogata
1972Op01	NUPAB	180,	569	A.M.F. Op den Kamp, A.M.J. Spits
1972Pa02	PRVCA	5,	485	R.A. Paddock
1972Pa06	NUPAB	184,	157	A. Pakkanen, T. Komppa, H. Helppi
1972Pa24	ZEPYA	254,	98	A. Pakkanen, H. Helppi, T. Komppa, P. Puumalainen
1972Pe05	PRVCA	5,	1443	B.I. Persson, S.E. Koonin
1972Pi07	ZEPYA	252,	206	M. Piiparinen
1972Ra05	PRVCA	5,	453	J. Rapaport, J.B. Ball, R.L. Auble, T.A. Belote, W.E. Dorenbusch
1972Ra39	NUPAB	197,	129	D. Rabenstein, D. Harrach, H. Vonach, G.G. Dussel, R.P.I. Perazzo
1972Ri08	PRVCA	5,	2072	F.A. Rickey, E.T. Journey, H.C. Britt
1972Se06	NUPAB	185,	94	D.W. Seegmiller, M. Lindner, R.A. Meyer
1972Sc08	ZEPYA	249,	286	W.D. Schmidt-Ott, R.W. Fink
1972Sh08	NUPAB	189,	220	R.E. Shamu, E.M. Bernstein, D. Blondin, J.J. Ramirez
1972Sh13	PRVCA	6,	537	E.B. Shera, U. Gruber, B.P.K. Maier, H.R. Koch, O.W.B. Schult, R.G. Lanier, N. Onishi, R.K. Sheline
1972Sh27	NUPAB	197,	17	J.R. Sheppard, R. Graetzer, J.J. Kraushaar
1972Sh.A	PrvCom	NDG	Jan	E.B. Shera
1972Si25	PRVCA	6,	1001	W.L. Sievers, D.A. Close, C.J. Umbarger, R.C. Bearse, F.W. Prosser, Jr.
1972Si28	NUPAB	193,	449	M. Singh, J.W. Sunier, R.M. Devries, G.E. Johnson
1972SI03	NUPAB	186,	28	W.F. Slot, G.H. Dulfer, H. Van der Molen, H. Verheul
1972Sv02	PHSTB	5,	23	B. Svahn, C. Bergman, H. Petterson
1972Sw01	NUPAB	185,	561	D.L. Swindle, N.A. Morcos, T.E. Ward, J.L. Meason
1972Ta13	ZEPYA	251,	87	O. Tannila, J. Kantele
1972To05	NUPAB	185,	574	J.P. Torres, P. Paris
1972To06	PRVCA	5,	2060	K.S. Toth, R.L. Hahn, M.A. Ijaz, R.F. Walker, Jr.
1972To07	NUPAB	189,	609	J.P. Torres, P. Paris, D. Lecouturier, P. Kilcher
1972Vi11	RAACA	17,	213	J. Visser, L. Lindner
1972Vo08	PRVCA	6,	266	T. von Egidy, O.W.B. Schult, D. Rabenstein, J.R. Erskine, O.A. Wasson, R.E. Chrien, D. Breitig, R.P. Sharma, H.A. Baader, H.R. Koch
1972Wa04	JINCA	34,	13	T.E. Ward, N.A. Morcos, P.K. Kuroda
1972Wa06	NUPAB	184,	166	G. Wallace, G.J. McCallum, N.G. Chapman
1972Wa10	NUPAB	188,	129	E. Wallander, E. Selin
1972Wa11	JINCA	34,	1767	A.C. Wahl
1972We.A	P-Teddington		94	L. Westgaard, J. Żylicz, O.B. Nielsen, ISOLDE
1972Wh02	PRVCA	5,	513	D.H. White, R.E. Birkett
1972Wh05	NUPAB	187,	12	D.H. White, R.E. Howe
1972Wi07	NUPAB	183,	439	J.L. Wiza, J.D. Garrett, R. Middleton
1972Wi18	NUPAB	191,	166	W. Wiesner, D. Flothman, H.J. Gils, R. Lohken, H. Rebel
1972Za04	PRVCA	6,	506	J.I. Zaitz, R.K. Sheline
1972Zi02	NUPAB	181,	465	J. Zioni, A.A. Jaffe, E. Friedman, N. Haik, R. Schreckman, D. Nir
1973				
1973Ab10	IANFA	37,	1967	S.N. Abramovich, B. Ya. Guzhkovskii, A.G. Zvenigorodskii, S.V. Trusillo
1973Ad02	PRVCA	7,	889	E.G. Adelsberger, A.B. McDonald, C.L. Cocke, C.N. Davis, A.P. Shukla, H.B. Mak, D. Ashery
1973Ah02	PRVCA	8,	737	I. Ahmad, J. Milsted, R.K. Sjoblom, J. Lerner, P.R. Fields
1973Ah04	NUPAB	208,	287	I. Ahmad, H. Diamond, J.M. Isted, J. Lerner, R.K. Sjoblom
1973Al11	PRVCA	8,	657	D.E. Alburger, D.H. Wilkinson
1973Al13	PRVCA	8,	1011	D.E. Alburger, D.R. Goosman, C.N. Davids

1973Al20	IANFA	37,	1035	V.S. Aleksandrov, B.S. Dzelepov, A.I. Medvedev, V.E. Ter-Nersesyants, I.F. Uchevatkin, S.A. Shestopalova
1973Ba20	IANFA	37,	38	L.M. Bak, V.G. Nedovesov, Y.V. Kholnov, G.E. Shchukin
1973Ba22	IANFA	37,	73	K.A. Baskova, S.S. Vasilev, M.A. Mokhsen, T.V. Shugay, L.Y. Shavtalo
1973Ba34	PRLTA	31,	395	G.C. Ball, J.G. Costa, W.G. Davies, J.S. Forster, J.C. Hardy, A.B. McDonald
1973Ba35	JPAGB	6,	1011	D.G. Barnes, J.M. Calvert, T. Toy
1973Ba40	PRLTA	31,	728	R.C. Barber, J.O. Meredith, F.C.G. Southon, P. Williams, J.W. Barnard, K. Sharma, H.E. Duckworth
1973Ba56	PRVCA	8,	1438	J.B. Ball, J.J. Pinajian, J.S. Larsen, A.C. Rester
1973Ba72	NUPAB	217,	116	B.B. Back, E.R. Flynn, O. Hansen, R.F. Casten, J.D. Garrett
1973Be09	PYLBB	43,	117	W. Benenson, E. Kashy, I.D. Proctor, B.M. Freedom
1973Be14	PRVCA	7,	1143	W. Benenson, E. Kashy, I.D. Proctor
1973Be23	PRVCA	8,	210	W. Benenson, E. Kashy, I.D. Proctor
1973Be33	PRLTA	31,	647	C.E. Bemis, Jr., R.J. Silva, D.C. Hensley, O.L. Keller, Jr., J.R. Tarrant, L.D. Hunt, P.F. Dittner, R.L. Hahn, C.D. Goodman
1973Bo13	PRVCA	7,	1686	W.W. Bowman, D.R. Haenni, T.T. Sugihara
1973Bo20	YAFIA	17,	457	D.D. Bogdanov, V.A. Karnaukhov, L.A. Petrov
1973Br06	PRVCA	7,	1545	R.A. Britten, W.H. Johnson
1973Br12	PRVCA	7,	2545	E. Browne, F. Asaro
1973Br27	PRVCA	8,	1805	C.P. Browne, V.D. Coss, A.A. Rollefson
1973Br32	NUPAB	216,	493	R. Broda, A.Z. Hryniewicz, J. Styczen, W. Walus
1973Bu02	CJPHA	51,	455	D.G. Burke, J.C. Waddington, D.E. Nelson, J. Buckley
1973Bu17	IANFA	37,	938	V.S. Buttsev, K.Y. Gromov, V.G. Kalinnikov, V.A. Morozov, T.M. Muminov, A.B. Khalikulov
1973Bu18	IANFA	37,	953	V.S. Buttsev, Ts. Vylov, K.Y. Gromov, V.G. Kalinnikov, I.I. Gromova, V.A. Morozov, T.M. Muminov, H. Fuia, A.B. Khalikulov
1973Bu21	IANFA	37,	1024	V.S. Buttsev, K.Y. Gromov, V.G. Kalinnikov
1973Ca10	NUPAB	205,	121	M.H. Cardoso, P.F.A. Goudsmit, J. Konijn
1973Ch24	JINCA	35,	3061	K. Chayawattanangkur, G. Herrmann, N. Trautmann
1973Cl12	NUPAB	215,	429	G.J. Clark, J.M. Freeman, D.C. Robinson, J.S. Ryder, W.E. Burcham, G.T.A. Squier
1973Da01	PRVCA	7,	122	C.N. Davids, D.R. Goosman
1973Da05	CJPHA	51,	686	J.M. D'Auria, R.D. Guy, S.C. Gujrathi
1973Da22	PRVCA	8,	1029	C.N. Davids, D.R. Goosman
1973De16	PRVCA	7,	2131	J.H. Degnan, G.R. Rao
1973De22	ZEPYA	260,	75	F.W.N. De Boer, P.F.A. Goudsmit, B.J. Meyer, and PrvCom AHW
1973De39	IANFA	37,	998	A.M. Demidov, M.R. Akhmed, M.A. Khalil, C. Al-Nadzar
1973Dr10	AENGA	35,	279	V.B. Druin, Y.V. Lobanov, D.M. Nadkarni, Y.P. Kharitonov, Y.S. Korotkin, S.P. Tretyakova, V.I. Krashonkin
1973Ea01	NUPAB	208,	119	D.A. Eastham, I.S. Grant
1973Ed01	NUPAB	199,	463	F.M. Edwards, J.J. Kraushaar, B.W. Ridley
1973Es01	PRVCA	7,	280	P. Eskola
1973Es02	PHFEA	8,	357	P. Eskola, K. Eskola, M. Nurmia, A. Ghiorso
1973Fi06	NUPAB	208,	269	P.R. Fields, I. Ahmad, R.F. Barnes, R.K. Sjoblom, W.C. McHarris
1973Fr01	PRLTA	30,	102	A. Friedman, K. Katori
1973Ga01	NUPAB	202,	535	S. Gales, L. Lessard, J.L. Foster, Jr.
1973Ga04	CJPHA	51,	203	R.D. Gadsby, D.G. Burke, J.C. Waddington
1973Gh03	PRVCA	7,	2032	A. Ghiorso, K. Eskola, P. Eskola, M. Nurmia
1973Go05	NUPAB	201,	326	S.C. Goverse, J. Van Pelt, J. Vandenberg, J.C. Klein, J. Blok
1973Go11	PRVCA	7,	1133	D.R. Goosman, D.E. Alburger, J.C. Hardy
1973Go19	PRLTA	30,	1255	J.D. Goss, C.P. Browne, A.A. Rollefson
1973Go22	PRVCA	7,	2409	D.R. Goosman, C.N. Davids, D.E. Alburger
1973Go29	CHDBA	276,	669	D.J. Gorman, H.V. Michel, F. Asaro, A. Rytz
1973Go33	PRVCA	8,	1324	D.R. Goosman, C.N. Davids, D.E. Alburger
1973Go34	PRVCA	8,	1331	D.R. Goosman, C.N. Davids, D.E. Alburger
1973Go39	CHDBA	277,	29	D.J. Gorman, A. Rytz
1973Go40	NUPAB	217,	159	J. Godart, A. Gizon
1973Gr26	NUPAB	211,	541	T. Grotdal, L. Loset, K. Nybø, T.F. Thorsteinsen
1973Gu05	NUPAB	205,	574	H. Guratzsch, A.P. Kabachenko, I.V. Kuznetsov, K. Siewek-Wilczynska, N.I. Tarantin
1973Ha02	NUPAB	199,	560	S.I. Hayakawa, S.K. Mark, J.K.P. Lee, J.E. Kitching, G.C. Ball, W.G. Davies
1973Ha11	NUPAB	203,	532	J.K. Halbig, F.K. Wahn, W.L. Talbert, Jr., J.J. Eitter

1973Ha32	PRLTA	31,	323	O. Hausser, W. Witthuhn, T.K. Alexander, A.B. McDonald, J.C.D. Milton, A. Olin
1973Hi.A	HPACA	47,	93	T. Hinderling, H.H. Staub
1973Ho09	NUPAB	211,	165	R. Hochele, P.J. Daly, K.J. Hofstetter
1973Hu07	PYLBB	46,	361	E. Huenges, H. Rosler, H. Vonach
1973Ja06	ZEPYA	258,	337	U. Jäger, H. Münzel, G. Pfennig
1973Ja10	ZEPYA	261,	95	J.F.W. Jansen, A. Faas, W.J.B. Winter
1973Jo11	PHSTB	8,	99	A. Johansson, B. Nyman
1973Ka03	NUPAB	203,	97	N. Kato
1973Ka07	JUPSA	34,	857	K. Kawade, H. Yamamoto, K. Tsuchiya, T. Katoh
1973Ka23	PRVCA	8,	414	N. Kaffrell
1973Ki11	NUPAB	213,	61	K. Kimura
1973Ko03	PRVCA	7,	404	R.L. Kozub, D.H. Youngblood
1973Ko06	PRVCA	8,	285	J.J. Kolata, J.V. Maher
1973Ko10	NUPAB	204,	185	S. Kochan, B. Rosner, I. Tserruya, R. Kalish
1973Ko13	NUIMA	109,	83	J. Konijn, P.F.A. Goudsmit, E.W.A. Lingeman
1973Ku09	JOPQA	34,	159	W. Kurcewicz, K. Stryczniewicz, J. Żylicz, R. Broda, S. Chojnacki, W. Walus, I. Yutlandov
1973La17	PRVCA	7,	2600	H. Lancman, A. Bond
1973Lo08	CJPHA	51,	1369	G. Løvholden, D.G. Burke, J.C. Waddington
1973Mc04	PRVCA	7,	2097	J.R. McPherson, F. Gabbard
1973Me09	NUPAB	204,	636	B.J. Meyer, F.W.N. De Boer, P.F.A. Goudsmit
1973Me28	IJMPD	10,	359	J.O. Meredith, F.C.G. Southon, R.C. Barber, P. Williams, H.E. Duckworth
1973Mo03	NUPAB	202,	473	M.A. Moinester, G. Finkel, J. Alster, P. Martin
1973Mo18	JINCA	35,	3659	N.A. Morcos, W.D. James, D.E. Adams, P.K. Kuroda
1973Mo23	PRVCA	8,	1961	A. Moalem, B.H. Wildenthal
1973No09	NUPAB	217,	253	T. Nomura, K. Hiruta, T. Inamura, M. Odera
1973Oe02	ZEPYA	259,	263	W. Oelert
1973Ok.A	PrvCom	NDG	Aug	G.D. O'Kelley, C.F. Goeking, L.L. Collins, Sr.
1973Oo01	NUPAB	213,	221	M.A. Oothoudt, N.M. Hintz
1973Or03	PRVCA	8,	718	C.J. Orth, W.R. Daniels, D.C. Hoffman, F.O. Lawrence
1973Pi01	NUPAB	203,	369	W.F. Piel, Jr.
1973Pr05	JINCA	35,	1057	I.L. Preiss, J.J. Labrecque
1973Ra13	PYLBB	44,	255	S. Raman, H.J. Kim, T.A. Wakiewicz, M.J. Martin
1973Re03	PRVCA	7,	1663	I. Rezanka, I.M. Ladenbauer-Bellis, T. Tamura, W.B. Jones, F.M. Bernthal
1973Ry01	PYLBB	43,	30	J.S. Ryder, G.J. Clark, J.E. Draper, J.M. Freeman, W.E. Burcham, G.T.A. Squier
1973Sc17	PYLBB	44,	449	H. Schmeing, J.C. Hardy, R.L. Graham, J.S. Geiger, K.P. Jackson
1973Se03	NUPAB	199,	241	J.C. Sens, A. Pape, R. Armbruster
1973Se08	PRVCA	8,	258	R.G. Sextro, R.A. Gough, J. Cerny
1973Se12	JUPSA	34,	1443	T. Seo, T. Hayashi, T. Mitamura
1973Sh.A	PrvCom	NDG	Jan	E.B. Shera in NDS974
1973Si40	NUPAB	216,	97	R.J. Silva, P.F. Dittner, M.L. Mallory, O.L. Keller, K. Eskola, P. Eskola, M. Nurmi, A. Ghiorso
1973Sp06	NUPAB	215,	260	A.M.J. Spits, J.A. Akkermans
1973To08	PRVCA	8,	161	D.F. Torgerson, K. Wien, Y. Fares, N.S. Oakey, R.D. Macfarlane, W.A. Lanford
1973Va11	ZEPYA	259,	45	S.Y. Van der Werf
1973Ve06	PRVCA	8,	178	J. Vernotte, S. Galès, M. Langevin, J.M. Maison
1973Ve08	NUPAB	212,	493	J. Vernotte, S. Galès, M. Langevin, J.M. Maison
1973Vi10	NUPAB	217,	372	V.E. Viola, Jr., M.M. Minor, C.T. Roche
1973Wa17	PRVCA	8,	297	O.A. Wasson, G.G. Slaughter
1973Wa18	PRVCA	8,	340	T.E. Ward, Y.Y. Chu, J.B. Cunnig
1973Wi06	PRLTA	30,	866	K.H. Willcox, N.A. Jelley, G.J. Wozniak, R.B. Weisenmiller, H.L. Harney, J. Cerny
1973Wo01	PRVCA	7,	160	F.K. Wohn, J.K. Halbig, W.L. Talbert, Jr., J.R. McConnel
1973Ya02	NUPAB	204,	33	S.W. Yates, P.J. Daly, N.R. Johnson, N.K. Arras
1973Za08	ZEPYA	264,	227	J.I. Zaitz, R.K. Sheline, R.D. Griffieon
1974				
1974Aj01	NUPAB	227,	1	F. Ajzenberg-Selove, T. Lauritsen
1974Al03	PRVCA	9,	991	D.E. Alburger

1974An05	IANFA	38,	48	N.M. Antoneva, A.V. Barkov, A.V. Zolotavin, P.P. Dmitriev, S.V. Kamynov, G.S. Katykhin, E.T. Kondrat, N.I. Krasnov, Y.N. Podkopayen, V.A. Sergienko, V.I. Fominikh
1974An22	IANFA	38,	1741	N.M. Antoneva, A.V. Barkov, V.M. Vinogradov, A.V. Zolotavin, G.S. Katykhin, V.M. Makarov, A.G. Shablinskii
1974An23	IANFA	38,	1748	N.M. Antoneva, A.V. Barkov, V.M. Vinogradov, A.V. Zolotavin, G.S. Katykhin, V.M. Makarov, A.G. Shablinskii
1974An24	IANFA	38,	1757	N.M. Antoneva, A.V. Barkov, A.V. Zolotavin, P.P. Zarubin, V.M. Makarov, V.Y. Padalko, Y.N. Podkopaev, V.A. Sergienko
1974Ar27	IANFA	38,	1569	R. Arlt, K.Y. Gromov, A. Latuszynski, K.G. Ortlepp, A. Jasinski
1974Ba15	PYLBB	49,	33	G.C. Ball, J.G. Costa, W.G. Davies, J.S. Forster, J.C. Hardy, A.B. McDonald
1974Ba90	CJPHA	52,	2386	R.C. Barber, J.W. Barnard, D.A. Burrel, J.O. Meredith, F.C.G. Southon, P. Williams, H.E. Duckworth
1974Be07	PRVCA	9,	589	R.R. Betts, H.T. Fortune, D.J. Pullen
1974Be20	PRVCA	9,	2130	W. Benenson, E. Kashy, D.H. Kong, A. Siou, A. Moalem, H. Nann
1974Be.A	ORNL-4967		37	C.E. Bemis, R.J. Silva, D.C. Hensley, O.L. Keller, Jr., O.L. Keller, J.R. Tarrant, L.D. Hunt, P.F. Dittner, R.L. Hahn, C.D. Goodman
1974Bi08	PRVCA	10,	729	P.K. Bindal, D.H. Youngblood, L. Kozun
1974Bo05	PRVCA	9,	836	J.D. Bowman, A.M. Poskanzer, R.G. Korteling, G.W. Butler, J.D. Bowman, A.M. Poska, J.D. Bowman, A.M. Poskanzer, R.G. Korteling, G.W. Butler, R.G. Korteling, G.W. Butler
1974Bo26	NUIMA	117,	213	H.E. Bosch, J. Davidson, M.A. Fariolli, V. Silbergleit
1974Bu21	IANFA	38,	1566	V.P. Burminskii, B.G. Kiselev, O.D. Kovrigin
1974Bu22	PRVCA	10,	2483	D.L. Bushnell, D.J. Buss, R.K. Smither
1974By01	NUPAB	223,	125	T. Byrski, F.A. Beck, P. Engelstein
1974Ca.A	Th.-Amsterdam			M.H. Cardoso
1974Ce05	PRVCA	10,	2654	J. Cerny, N.A. Jelley, D.L. Hendrie, C.F. Maguire, J. Mahoney, D.K. Scott, R.B. Weisenmiller
1974Ch17	JPSLB	35,	41	A. Charvet, R. Chery, R. Duffait
1974Ch18	PRVCA	9,	1839	R.E. Chrien, D.I. Garber, J.L. Holm, K. Rimawi
1974Ch21	ZEPYA	267,	355	A. Charvet, R. Chery, D.P. Phuoc, R. Duffait
1974Co21	CJPHA	52,	1215	A.H. Colenbrander, T.J. Kennett
1974Co27	PRVCA	10,	1236	J.R. Comfort, R.W. Finlay, C.M. McKenna, P.T. Debevec
1974Co35	NUPAB	233,	185	F. Corvi, M. Stefanon
1974Da02	PRVCA	9,	216	C.N. Davids, D.R. Goosman, D.E. Alburger, A. Gallmann, G. Guillaume, D.H. Wilkinson, W.A. Lanford
1974De09	NUPAB	225,	317	F.W.N. De Boer, P.F.A. Goudsmit, P. Koldewijn, B.J. Meyer
1974De22	YAFIA	19,	1161	R.A. Demirkhanov, M.I. Dzkuya, V.V. Dorokhov, G.A. Dorokhova
1974De31	CJPHA	52,	1416	P. Debenham, W.R. Falk, M. Canty
1974De37	NUPAB	230,	490	E.O. Deneijs, M.A. Meyer, J.P.L. Reinecke, D. Reitman
1974De47	NUPAB	236,	349	F.W.N. De Boer, P.F.A. Goudsmit, B.J. Meijer, P. Koldewijn, J. Konijn, R. Beetz
1974Di03	PRVCA	10,	1172	M. Diksie, L. Yaffe, D.G. Sarantites
1974Di.A	P-Amsterdam		114	J.S. Dionisio, C. Vieu, V. Berg, C. Bourgeois
1974Do09	NUPAB	229,	47	G. Doukellis, C. McKenna, R. Finlay, J. Rappaport, H.J. Kim
1974Em01	NUPAB	231,	437	A. Ermsallem, D.P. Huoc, R. Chery, M. Ashgar
1974Er.A	AnRpt Julich			R. Erner, W. Delang, P. Gottel, H.H. Guven, B. Hrastnik, O.W.B. Schult, H. Seyfarth
1974Ev02	NUPAB	230,	109	D. Evers, W. Assmann, K. Rudolph, S.J. Skorka, P. Sperr
1974FI01	PRVCA	9,	210	E.R. Flynn, J.D. Garrett
1974Fr01	PRVCA	9,	760	A.M. Friedman, K. Katori, D. Albroght, J.P. Schiffer
1974Ge05	PRVCA	9,	2363	W. Gelletly, W.R. Kane, D.R. MacKenzie
1974Gh04	PRLTA	33,	1490	A. Ghiorso, J.M. Nitschke, J.R. Alonso, C.T. Alonso, M. Nurmia, G.T. Seaborg, E.K. Hulet, R.W. Lougheed
1974Gi09	NUPAB	233,	81	S. Gilad, S. Cochavi, M.A. Moinester, J. Alster, M. Buenard, P. Nartin
1974GI10	AENGA	37,	78	V.M. Glazov, R.I. Borisova, A.I. Shaviev
1974Go17	PRVCA	10,	756	D.R. Goosman, D.E. Alburger
1974Go20	ZEPYA	269,	111	S.C. Goverse, J. Kuiper, J. Blok
1974Gr11	NUPAB	223,	66	R.C. Greenwood, C.W. Reich
1974Gr22	PRVCA	10,	624	R.D. Griffioen, R.K. Sheline
1974Gr37	NUIMA	121,	385	R.C. Greenwood, R.G. Helmer
1974Gr41	IANFA	38,	2499	E.P. Grigorev, A.V. Zolotavin, S.V. Kaminov
1974Gu10	YAFIA	19,	1167	K. Gurach, A.P. Kabachenko, I.V. Kuznetsov, N.I. Tarantin

1974Ha02	PRVCA	9,	252	J.C. Hardy, H. Schmeing, W. Benenson, G.M. Crawley, E. Kashy, H. Nann
1974Ha35	PRLTA	33,	320	J.C. Hardy, G.C. Ball, J.S. Geiger, R.L. Graham, J.A. Macdonald, H. Schmeing
1974Ha55	PRVCA	10,	1829	G. Hardie, D. Gloeckner, L. Meyer-Schutzmeister, T.H. Braid
1974Ho21	PYLBB	51,	345	S.D. Hoath, R.J. Petty, J.M. Freeman, G.T.A. Squier, W.E. Burcham
1974Ho27	NUPAB	230,	380	P. Hornshøj, P.G. Hansen, B. Jonson
1974Hr01	NUPAB	219,	381	B. Hrastnik, H. Seyfarth, A.M. Hassan, W. Delang, P. Gottel
1974Hu15	NUIMA	121,	307	E. Huenges, H. Vonach, J. Labetzki
1974Ia01	CJPHA	52,	96	R. Iafigliola, S.C. Gujrathi, B.L. Tracy, J.K.P. Lee
1974Is01	PRVCA	9,	1662	H.A. Ismail, W.H. Moore, J.N. Hallock, H.A. Enge
1974Ja10	PYLBB	49,	341	K.P. Jackson, J.C. Hardy, H. Schmeing, R.L. Graham, J.S. Geiger, K.W. Allen
1974Je01	PRVCA	9,	2067	N.A. Jelley, K.H. Wilcox, R.B. Weisenmiller, G.J. Wozniak, J. Cerny
1974Jo14	PRVCA	10,	2449	P.L. Jolivet, J.D. Goss, G.L. Marolt, A.A. Rollefson, C.P. Browne
1974Ju.A	PrvCom		74AjLa	E.T. Journey
1974Ju.B	PrvCom	AHW		E.T. Journey
1974Ka05	ZEPYA	266,	21	N. Kaffrell, N. Trautmann, R. Denig
1974Ka15	PRVCA	9,	2102	E. Kashy, W. Benenson, J.A. Nolen, Jr.
1974Ke01	NUPAB	221,	333	J. Kern, G. Mauron, B. Michaud, K. Schreckenbach, T. von Egidy, W. Mampe, H.R. Koch, H.A. Baader, D. Breitig, U. Gruber
1974Ke13	PRVCA	10,	1554	J. Kern, D. Duc
1974Ke14	ZEPYA	270,	129	J. Keinonen, A. Anttila, M. Bister
1974Ki02	PRVCA	9,	767	J. Kim, R.L. Robinson
1974Kn02	PRVCA	9,	1467	J.D. Knight, C.J. Orth, W.T. Leland, A.B. Tucker
1974Ko08	NUPAB	221,	45	D.H. Kong-A-Siou, A.J. Cole, A. Giorni, J.P. Longequeue
1974Ko20	NUPAB	231,	266	D.G. Kovar, N. Stein, C.K. Bockelman
1974Ku01	NUPAB	218,	201	I. Kumabe, S. Matsuki, S. Nakamura, M. Hyakutake, M. Matoba, T. Sato
1974Le02	PRVCA	9,	1091	Y. Le Beyec, M. Lefort, J. Livet, N.T. Porile, A. Siivola
1974Ma09	PRVCA	9,	1633	R.G. Markham, H.W. Fulbright
1974Me15	YAFIA	19,	437	R.J. Metskvarishvili, Z.N. Miminoshvili, M.A. Elizbarashvili
1974Mu10	NUPAB	224,	437	F. Münnich, D. Lode, H. Schrader, A. Høglund, W. Pessara
1974Na07	PRVCA	9,	1848	H. Nann, W. Benenson, E. Kashy, P. Turek
1974Ne10	PRVCA	10,	320	K. Neubeck, H. Schober, H. Waffler
1974Ne14	ZEPYA	270,	121	W. Neumann, E. Huster
1974No02	PRVCA	9,	1168	T. Nomura, K. Hiruta, M. Yoshie, O. Hashimoto
1974No07	NUIMA	115,	189	J.A. Nolen, Jr., G. Hamilton, E. Kashy, D. Proctor
1974Oe03	NUPAB	230,	413	W. Oelert, G. Lindstrom, V. Riech
1974Pe15	NUPAB	235,	205	R.J. Peel, D.R. Dixon, M.W. Hill, G.L. Jensen, N.F. Mangelson, N. Nath, V.C. Rogers
1974Po08	PRVCA	10,	803	F.T. Porter, I. Ahmad, M.S. Freedman, J. Milsted, A.M. Friedman
1974Pr15	IANFA	38,	2135	P.T. Prokofev, L.I. Simonov
1974Ra31	PHFEA	9,	103	V. Rahkonen, J. Kantele
1974Ra.A	P-Bombay		10	C.N. Rao, B.M. Rao, P.M. Rao, K.V. Reddy
1974Ri03	PRVCA	9,	1978	K. Rimawi, J.B. Garg, R.E. Chrien, G.W. Cole, O.A. Wasson
1974Ri08	NUPAB	228,	461	A. Riccato, P. David
1974Ro11	ZEPYA	266,	65	E. Roeckl, D. Lode, K. Bächmann, B. Neidhart, G.K. Wolf, W. Lauppe, N. Kaffrell, P. Patzelt
1974Ro12	ZEPYA	266,	123	E. Roeckl, D. Lode, W. Pessar
1974Ro16	PRVCA	9,	1801	R.G.H. Robertson, S.M. Austin
1974Ro17	PRLTA	32,	1207	R.G.H. Robertson, S. Martin, W.R. Falk, D. Ingham, A. Djaloeis
1974Ro44	PRVCA	3,	186	A. Roy, K.V.K. Iyengar, M.L. Jhingan, S.K. Bhattacharjee
1974Ru08	NUIMA	120,	333	G. Rudstam, S. Shalev, O.C. Jonsson
1974Sc02	CJPHA	52,	131	R.L. Schulte, J.D. King, W. Taylor
1974Sc06	ZEPYA	266,	129	H.M. Schupferling, K.-W. Hoffmann
1974Sc19	PRVCA	10,	296	W.D. Schmidt-Ott, K.S. Toth, E. Newman, C.R. Bingham
1974Sc26	PRLTA	33,	1343	D.K. Scott, B.G. Harvey, D.L. Hendrie, L. Krauss, C.F. Maguire, J. Mahoney, Y. Terrien, K. Yagi
1974Se05	PRLTA	33,	233	K.K. Seth, A. Saha, W. Benenson, W.A. Langford, H. Nann, B.H. Wildenthal
1974Sp04	NUPAB	224,	517	A.M. Spits, J. de Boer
1974To04	ZEPYA	268,	289	F. Tolea, K.R. Baker, W.D. Schmidt-Ott, R.W. Fink
1974To07	PRVCA	10,	2550	K.S. Toth, C.R. Bingham, W.D. Schmidt-Ott
1974Vi02	ZEPYA	269,	173	M. Viitasalo, I. Forsblom
1974Vo08	IANFA	38,	672	I. Votsilka, K.U. Zibert, B. Kracik, J. Liptak, A.F. Novgorodov, K.G. Ortlepp, M. Toshev, V. Habenicht

1974Vy01	IANFA	38,	701	Ts. Vylov, N.A. Golovkov, K.Y. Gromov, I.I. Gromova, A. Kolachkovsky, M.Y. Kuznetsova, Y.V. Norseev, V.G. Chumin
1974Wa08	PRVCA	9,	1396	C.W. Wang, Y.C. Liu, E.K. Lin, C.C. Hsu, G.C. Kiang
1974Wa14	PRVCA	10,	1983	T.R. Ward, P.F. Haustein, J.B. Cumming, Y.Y. Chu
1974Wi17	PRVCA	10,	2184	B.H. Wildenthal, J.A. Rice, B.M. Freedom
1974Ya07	JUPSA	37,	10	H. Yamamoto, K. Kawade, H. Fukaya, T. Katoh
1975				
1975Ad08	IANFA	39,	1681	I. Adam, G. Baier, K.Y. Gromov, T.A. Islamov, K.G. Ortlepp, K. Tiroff, E. Herrmann, H. Strusnii
1975Ad09	NUPAB	254,	63	I. Adam, K.Y. Gromov
1975Ah01	NUPAB	239,	1	I. Ahmad, J. Milsted
1975Ah05	PRVCA	12,	541	I. Ahmad, F.T. Porter, M.S. Freedman, R.K. Sjoblom, J. Lerner, R.F. Barnes, J. Milsted, P.R. Fields
1975Aj03	PRVCA	12,	1868	F. Ajzenberg-Selove, R. Middleton, J.D. Garrett
1975AlA	P-Leningrad			A.A. Aleksandrov, et al
1975An07	NUPAB	242,	93	R.E. Anderson, R.L. Bunting, J.D. Burch, S.R. Chinn, J.J. Kraushaar, R.J. Peterson, D.E. Prull, B.W. Ridley, R.A. Ristinen
1975As04	NUPAB	247,	359	M. Asghar, J.P. Gautheron, G. Bailleul, J.P. Bocquet, J. Greif, H. Schrader, G. Siegert, C. Ristori, J. Crancon, G.I. Crawford
1975Ba25	YAFIA	21,	230	S.A. Baranov, V.M. Shatinskii, L.V. Chistyakov, V.M. Shubko
1975Ba27	ZETFa	68,	8	S.A. Baranov, V.M. Shatinskii
1975Ba65	YAFIA	22,	670	S.A. Baranov, V.M. Shatinskii
1975Ba.B	AnRpt CSNSM		35	G. Bastin, C.F. Liang
1975Be09	ZENAA	30,	356	M.J. Bechara, O. Dietsch
1975Be21	NUPAB	245,	515	H. Behrens, M. Kobelt, L. Szybisz, W.G. Thies
1975Be28	NUPAB	246,	317	H. Behrens, M. Kobelt, L. Szybisz, W.G. Thies
1975Be38	PYLBB	58,	46	W. Benenson, A. Guilchard, E. Kashy, D. Mueller, H. Nann, L.W. Robinson
1975Be.B	P-Paris		54	U. Bertsche, F. Rauch, K. Stelzer
1975Bh01	PRVCA	12,	1457	M.R. Bhat, R.E. Chrien, G.W. Cole, O.A. Wasson
1975Bi01	PRVCA	11,	939	J.N. Black, W.C. McHarris, W.H. Kelly, B.H. Wildenthal
1975Bo11	YAFIA	21,	233	D.D. Bogdanov, A.V. Demyanov, V.A. Karnaukhov, L.A. Petrov
1975Bo14	NUPAB	245,	107	W. Bohne, H. Fuchs, K. Grabisch, D. Hilscher, U. Jahnke, H. Kluge, T.G. Masterson, H. Morgenstern
1975Bo29	ZPAAD	273,	373	H.E. Bosch, J. Davidson, V. Silbergleit, C.A. Heras, S.M. Abecassis
1975Bo59	RBFSa	5,	215	L.C.S. Boueres, O. Dietsch, T. Polga
1975Br02	PRVCA	11,	546	D. Breitig, R.F. Casten, W.R. Kane, G.W. Cole, J.A. Cizewski
1975Br16	NUPAB	245,	243	A.R. Brosi, B.H. Ketelle
1975Br29	NCIAA	30,	483	A. Brondi, R. Moro, P. Pelter, F. Terassi
1975Br.A	Th.-Mainz			W. Brüche
1975Bu01	PRVCA	11,	1401	D.L. Bushnell, J. Hawkins, R. Goebbert, R.K. Smither
1975Bu02	CJPHA	53,	948	D.G. Burke, J.M. Balogh, and erratum CJPHA 63(1985)649
1975Bu.A	BAPSA	20,	625	M.E. Bunker, B.S. Nielsen, J.W. Starner, B.J. Dropesky, W.R. Daniels
1975Ca06	NUPAB	241,	341	C. Cabot, C. Deprun, H. Gauvin, B. Lagarde, Y. Le Beyec, M. Lefort
1975Ca07	NUPAB	242,	221	T. Caldwell, D.J. Pullen, O. Hansen
1975Ch05	NUPAB	238,	333	A. Charvet, R. Chery, R. Duffait, M. Morgue
1975Ch11	PRVCA	11,	1237	J. Chao, D.K. Olsen, C. Newson, P.J. Riley
1975Ch21	JPHGB	1,	657	R. Chapman, G.D. Dracoulis
1975Co.A	AnRpt CSNSM			Collaboration CSNSM-IPN-Marbourg-Stockholm-Varsovie
1975Da14	NUPAB	250,	221	J.M. Davidson, T. Taylor, D.A. Hutcheon, D.M. Sheppard, W.C. Olsen
1975De.A	P-Petten		609	J. de Boer
1975Em04	ZPAAD	275,	157	A. Emsallem, M. Ashgar
1975Em.A	P-Petten		395	A. Emsallem, M. Ashgar
1975Er.A	PrvCom	NDG	Jul	J.R. Erskine
1975FI07	ZPAAD	272,	219	D. Flothman, H.J. Gils, W. Wiesner, R. Loehken
1975Fr16	PRVCA	12,	616	E.M. Franz, S. Katcoff
1975Fr.A	P-Paris		126	J.M. Freeman, R.J. Petty, S.H. Hoath, J.S. Ryder, W.E. Burcham, G.T.A. Squier
1975Fr.B	AnRpt AFI		146	K. Fransson, M. af Ugglas, P. Carle
1975Gr32	NUPAB	252,	260	R.C. Greenwood, C.W. Reich, S.H. Vegors, Jr.
1975Gu01	JPHGB	1,	67	S.C. Gujrathi, C. Weiffenbach, J.K.P. Lee
1975Gu15	PRVCA	12,	1109	A. Guichard, H. Nann, B.H. Wildenthal

1975Ha43	ZPAAD	274,	335	H.H. Hansen, D. Mouchet
1975He.C	KFK-2223			D. Heck, J.A. Pinston, H. Börner, F. Braumandl, P. Jeuch, H.R. Koch, W. Mampe, R. Rousille, K. Schreckenbach
1975Ho09	PYLBB	57,	147	P. Hornshøj, P. Tidemand-Petersson, R. Bethoux, A.A. Caretto, J.W. Grüter, P.G. Hansen, B. Jonson, E. Hagberg, S. Mattsson
1975Ho14	NUPAB	248,	406	P. Hornshøj, P. Tidemand-Petersson, R. Kaczarowski, B. Kotlinska
1975Ij.A	BAPSA	20,	1154	M.A. Ijaz, Vpi e su, E.L. Robinson, K.S. Toth, C.R. Bingham
1975Is04	PRVCA	12,	708	H.A. Ismail, J.N. Hallock, W.H. Moore, H.A. Enge
1975Ja10	PRVCA	11,	2114	J. Jänecke, F.D. Becchetti, L.T. Chua, A.M. Vandermolen
1975Jo.A	BAPSA	20,	625	O.P. Jolly, D.G. Burke
1975Ka15	JUPSA	38,	314	K. Kawade, H. Yamamoto, Y. Ikeda, T. Katoh
1975Ka18	PRVCA	11,	1959	E. Kashy, W. Benenson, D. Mueller, R.G.H. Robertson, D.R. Goosman
1975Ka25	PRVCA	12,	1054	D. Kaiser, W.H. Johnson, Jr.
1975Ka.A	P-Petten		544	B. Kardon, H. Seyfarth, P. Gottel, H.H. Guven
1975Ke08	PRVCA	12,	553	G.G. Kennedy, S.C. Gujrathi, S.K. Mark
1975Ke09	ZPAAD	274,	233	G.G. Kennedy, S.C. Gujrathi, S.K. Mark
1975Ke12	NUPAB	255,	296	J.J. Kent, S.L. Blatt
1975KI06	NUPAB	245,	133	H.V. Klapdor, M. Schrader, G. Bergdolt, A.M. Bergdolt
1975Ko18	PRVCA	12,	1511	R. Kouzes, W.H. Moore, and erratum PRVCA 13,890
1975Ku14	NUPAB	247,	152	A.W. Kuhfeld, N.M. Hintz
1975La02	JINCA	37,	623	J.J. Labreque, I.L. Preiss, H. Bakhru, R.I. Morse
1975Li14	JUPSA	39,	1	C.Y. Liu, T.H. Hsue, K. Lin, P.K. Tseng, C.C. Hsu, C.W. Wang
1975Li22	NUPAB	253,	165	J.R. Lien, J.S. Vaagen, A. Graue
1975Lo03	NUPAB	243,	413	M.A. Lone, E.D. Earle, G.A. Bartholemew
1975Lu02	PRVCA	11,	1470	D.H. Lueders, J.M. Daley, S.G. Buccino, F.E. Durham, C.E. Hollandsworth, W.P. Bucher, H.D. Jones
1975Ma04	NUPAB	237,	285	M.R. MacPhail, R.G. Summers-Gill, see also thesis Winnipeg, and PrvCom AHW September 1980
1975Ma05	PRVCA	11,	587	G.J. Matthews, F.M. Bernthal, J.D. Immele
1975Ma.A	P-Petten		655	P. Matussek
1975Me10	PRVCA	12,	401	L.R. Medsker, H.T. Fortune, S.C. Headley
1975Me13	PYLBB	58,	297	L.R. Medsker, H.T. Fortune
1975Me20	ZPAAD	275,	67	B.J. Meijer, J. Konijn
1975Me23	PRVCA	12,	2010	R.A. Meyer, R.G. Lanier, J.T. Larsen
1975Mo26	PYLBB	58,	286	A. Moallem, M.A.M. Shahabuddin, R.G. Markham, H. Nann
1975Mo29	NUPAB	252,	477	P. Morgen, J.H. Onsgaard, B.S. Nielsen, C. Sondergaard
1975Mu08	PYLBB	57,	44	L.G. Multhauf, K.G. Tirsell, S. Raman, J.B. McGrory
1975Mu09	PRVCA	12,	51	D. Mueller, E. Kashy, W. Benenson, H. Nann
1975Na.A	P-Petten		566	M.R. Najam, A.F.M. Ishaq, M. Anwar, A.M. Khan, J.A. Mirza
1975No.A	P-Paris		140	J. Nolen
1975PI06	IJARA	26,	579	J. Pich, J. Zderadicka, O. Dragoun
1975Ra07	NUPAB	242,	189	D. Rabenstein, D. Harrach
1975Ra08	JPHGB	1,	461	C.N. Rao, B.M. Rao, P.M. Rao, K.V. Reddy see 75Ra09
1975Ra09	PRVCA	11,	1735	C.N. Rao, B.M. Rao, K.V. Reddy
1975Re09	NUPAB	249,	166	W. Reiter, W.H. Breunlich, P. Hille
1975Ro01	PRLTA	34,	33	R.G.H. Robertson, W.S. Chien, D.R. Goosman
1975Ro05	NUPAB	240,	221	C. Rolfs, W.S. Rodney, S. Durrance, H. Winkler
1975Ro16	NUPAB	246,	380	R. Rousille, J.A. Pinston, H. Börner, H.R. Koch, D. Heck
1975Sc07	NUPAB	242,	232	H. Schmeing, J.C. Hardy, R.L. Graham, J.S. Geiger
1975Se.A	BAPSA	20,	73	F.J.D. Serduke, W. Henning
1975Si03	CJPHA	53,	391	B. Singh, M.W. Johns
1975Sl.A	BAPSA	20,	560	G.G. Slaughter, S. Raman
1975Sm02	PRVCA	11,	1392	L.G. Smith, A.H. Wapstra
1975Sq01	NUPAB	242,	62	G.T.A. Squier, W.E. Burcham, J.M. Freedman, R.J. Petty, S.D. Hoath, J.S. Ryder
1975St07	NUPAB	242,	30	H. Strusny, H. Tyrroff, E. Herrmann, G. Musiol, M.I. Baznat, G. Beyer, K.Y. Gromov, M. Honusek, T.A. Islamov, V.V. Kuznetsov, H.-U. Siebert
1975St08	CJPHA	53,	922	W.R. Stott, J.C. Waddington, D.G. Burke, G. Løvthøiden
1975St12	CZYPA	25,	626	H. Strusny, H. Tyrroff, E. Herrmann, G. Musiol
1975Ta06	ZPAAD	272,	301	C.W. Tang, A. Pakkanen, Z.C. Mester, C.D. Coryell, G. Chilosi, A.H. Wapstra, K. Bos
1975Ta12	PRVCA	12,	108	H. Taketani, H.L. Sharma, N.M. Hintz
1975Th04	NUPAB	242,	1	R.C. Thompson, J.S. Boyno, J.R. Huizenga, D.G. Burke, T.W. Elze

1975Th06	NUPAB	245,	444	R. Thompson, A. Ikeda, R.K. Sheline
1975Th08	PRVCA	12,	644	C. Thibault, R. Klapisch, C. Rigaud, A.M. Poskanzer, R. Prieels, L. Lessard, W. Reisdorf
1975To05	PRVCA	12,	533	K.S. Toth, W.D. Schmidt-Ott, C.R. Bingham, M.A. Ijaz
1975Un.A	P-Paris		81	UNISOR consortium
1975Va24	PHFEA	10,	133	S. Vaisala, T. Raunemaa, A. Fontell, G. Graeffe, A. Siivola
1975Va.A	P-Leningrad		156	V.M. Vachte, N.A. Golovkov, B.S. Dzelepov, R.B. Ivanov, A. Lyushenski, M.A. Michailova, A.B. Mozhuchin, B.G. Shumin
1975Vi01	JINCA	37,	11	V.E. Viola, Jr., C.T. Roche, M.M. Minor
1975Vy02	IANFA	39,	1671	Ts. Vylov, I.I. Gromova, V.G. Kalinnikov, V. Kuznetsov, T.M. Muminov, V.A. Morozov, V.I. Fominikh, R.R. Uzmanov, E.R. Shavgulidze
1975We03	CJPHA	53,	101	C. Weiffenbach, S.C. Gujrathi, J.K.P. Lee
1975We10	PHSTB	11,	10	T. Westrom, B. Fant, I. Forsblom, M. Viitasalo
1975We23	ZPAAD	275,	127	L. Westgaard, K. Aleklett, G. Nyman, E. Roeckl
1975We24	PHFEA	10,	167	T. Weckstrom, I. Forsblom, P. Holmberg
1975We.A	P-Petten		749	C. Weitkamp, P. Matussek, H. Ottmar
1975Wi06	PRVCA	11,	1477	W.M. Wilson, G.E. Thomas, H.E. Jackson
1975Wi08	ZPAAD	272,	291	G. Wirth, N. Kaffrell, K. Chayawattanangkur, G. Herrmann, K.E. Seyb
1975Wi26	PYLBB	59,	142	K.H. Wilcox, R.B. Weisenmiller, G.J. Wozniak, N.A. Jelley, D. Ashery, J. Cerny
1975Ze.A	JINR-P6-8929			A. Zelinsky, K. Zuber, Y. Zuber, V.V. Kuznetsov, A. Kolachkovsky, A. Lyatshinsky, Y.V. Noursev, H.G. Ortlepp, I. Penev, A.V. Potempa
1976				
1976Aj03	PRVCA	14,	767	F. Ajzenberg-Selove, E.R. Flynn, O. Hansen, J.D. Sherman, N. Stern, J.W. Sunier
1976Al01	NUPAB	257,	490	M.M. Aleonard, P. Hubert, L. Sarger, P. Mennrath
1976Al16	NUIMA	136,	323	D.E. Alburger
1976An05	PYLBB	61,	234	G. Andersson, M. Ashgar, A. Emsallem, E. Hagberg, B. Jonson
1976Ba99	AENGA	41,	342	S.A. Baranov, et al
1976Ba.A	P-Cargese		106	T. Batsch, M. Nowicki, J. Żylicz
1976Be02	NUPAB	256,	87	D. Berenyi, G. Hock, A. Menes, G. Szekely, Cs. Ujhelyi, B.A. Zon
1976Be08	PRVCA	13,	1479	W. Benenson, A. Guichard, E. Kashy, D. Mueller, H. Nann
1976Be11	NUPAB	260,	269	G. Beyer, A. Jasinski, O. Knotek, H.G. Ortlepp, H.U. Siebert, R. Aelt, E. Herrmann, G. Musiol, H. Tyrroff
1976Be50	PRVCA	14,	2095	D. Benson, Jr., P. Kleinheinz, R.K. Sheline, R.B. Shera
1976Be.A	AnRpt OakRidge		73	C.E. Bemis, Jr., C.E. Bemis, D.C. Hensley, P.F. Dittner, R.L. Hahn, R.J. Silva, J.R. Tarrant, L.D. Hunt, and PrvCom AHW July 1981
1976Be.B	AnRpt MSUCL		11	F.M. Bernthal
1976Bi09	PRVCA	14,	1586	C.R. Bingham, L.L. Riedinger, F.E. Turner, B.D. Kern, J.L. Weil, K.J. Hofstetter, J. Lin, E.F. Zganjar, A.V. Ramayya, J.H. Hamilton, J.L. Wood, G.M. Gowdy, R.W. Fink, E.H. Spejewski, W.D. Schmidt-Ott, R.L. Mlekodaj, H.K. Carter, K.S.R. Sastry
1976Ca10	NUPAB	261,	445	R.F. Casten, D. Burke, O. Hansen
1976Ca24	PRVCA	14,	1439	R.F. Carlton, S. Raman, J.A. Harvey, G.G. Slaughter
1976Ca25	PRVCA	14,	912	R.F. Casten, W.R. Kane, J.R. Erskine, A.M. Friedman, D.S. Gale
1976Ch02	PRVCA	13,	578	R.E. Chrien, G.W. Cole, G.C. Slaughter, J.A. Harvey
1976Cr03	PYLBB	64,	143	G.M. Crawley, W.F. Steele, J.N. Bishop, P.A. Smith, S. Maripuu
1976Cr.B	JINR-P6-9711			T. Cretzu, V.V. Kuznetsov, G. Luzurej, G. Macarie, M. Finger
1976Da20	PRVCA	14,	2011	W.W. Daehnick, M.M. Spisak, R.M. Del Vecchio
1976Da.C	P-Cargese		100	J.M. D'Auria, J.W. Grüter, L. Westgaard, G. Nyman, P. Peuser, E. Roeckl, H. Otto, ISOLDE
1976Da.D	P-Cargese		262	J.M. D'Auria, L.C. Carraz, P.G. Hansen, B. Jonson, S. Mattsson, H.L. Ravn, M. Skarestad, L. Westgaard
1976Di15	NUIMA	139,	181	J.S. Dionisio, C. Vieu, C.M. Truong, G. Leur
1976Di.A	AnRpt OakRidge			P.F. Dittner, R.J. Silva, D.C. Hensley, R.L. Hahn, J.R. Tarrant, L.D. Hunt, and PrvCom AHW July 1981
1976Do05	NUPAB	263,	210	P. Doll, G.J. Wagner, K.T. Knopfle
1976Ed.A	P-Cargese		258	M.D. Edmiston, R.A. Warner, W.C. McHarris, W.H. Kelly
1976El11	PRVCA	14,	583	D. Elmore, W.P. Alford
1976El12	CJPHA	54,	1493	D. Elmore, W.P. Alford
1976Fl02	PRVCA	13,	568	E.R. Flynn, J.D. Sherman, N. Stein, D.K. Olsen, P.J. Riley

1976Fo01	PRVCA	13,	1049	S. Fortier, H. Laurent, J.P. Schapira, M.S. Antony, A. Knipper
1976Fr13	NUIMA	134,	153	J.M. Freeman
1976Fr.A	USIP-76-09			K. Fransson, M. af Ugglas, P. Carle, T. Erikson
1976Ga19	NUPAB	268,	257	S. Galès, S. Fortier, H. Laurent, J.M. Maison, J.P. Schapira
1976Ga.A	P-Baku			M. Gasiór, B.G. Kalinnikov, T. Kretsu
1976Ge02	PRVCA	13,	1434	W. Gelletly, W.R. Kane, R.F. Casten
1976Ge06	NUIMA	134,	309	H. Genz, J. Reisberg, A. Richter, B.M. Schmitz, G. Schrieder, K. Werner
1976Ge08	NUPAB	267,	13	H. Genz, A. Richter, B.M. Schmitz, H. Behrens
1976Ge14	PRVCA	14,	1896	R.J. Gehrke, R.G. Helmer, C.W. Reich, R.A. Anderl
1976Go02	PRVCA	13,	1601	G.M. Gowdy, A.C. Xenoulis, J.L. Wood, K.R. Baker, R.W. Fink, J.L. Weil, B.D. Kern, K.J. Hofstetter, E.H. Spejewski, R.L. Mlekodaj, H.K. Carter, W.D. Schmidt-Ott, J. Lin, C.B. Ringham, L.L. Riedinger, E.F. Zganjar, K.S. Sasstry, A.V. Ramayya, J.H. Hamilton
1976Gr09	NUPAB	270,	29	R.C. Greenwood, R.J. Gehrke, R.G. Helmer, C.W. Reich, J.D. Baker
1976Gr19	PHSTB	14,	263	T. Grottdal, L. Guldberg, K. Nybø, T.F. Thorsteinsen
1976Gr20	AOBBB	7,	507	K.Y. Gromov, D.T. Dzelev, K. Zuber, Y. Zuber, T.A. Islamov, V.V. Kuznetsov, H.G. Ortlepp, A.V. Potempa
1976Gr.A	P-Cargese		428	J.W. Grütter, B. Jonson, O.B. Nielsen
1976Ha29	PYLBB	63,	27	J.C. Hardy, J.A. Macdonald, H. Schmeing, T. Faestermann, H.R. Andrews, J.S. Geiger, R.L. Graham, K.P. Jackson
1976Ha36	ZPAAD	278,	183	W. Hartl, J.W. Hammer
1976Ha39	PRVCA	14,	645	P.E. Haustein, E.M. Franz, S. Katcoff, N.A. Morcos, H.A. Smith, Jr., T.E. Ward
1976He04	NUPAB	258,	83	R.G. Helmer, R.J. Gehrke, R.C. Greenwood, C.W. Reich, L.D. McIsaac
1976He10	ZPAAD	276,	393	W. Herzog, N. Trautmann, R. Denig, G. Herrmann
1976He.B	NDSBA	17,	287	E.A. Henry
1976Hi08	CJPHA	54,	1360	C.R. Hirling, D.G. Burke
1976Hi09	NUPAB	263,	460	F. Hintenberger, P. von Rossen, B. Schuller, J. Bisping, R. Jahn
1976Hi10	PRLTA	37,	130	G.T. Hickey, D.C. Weisser, J. Cerny, G.M. Crawley, A.F. Zeller, T.R. Ophel, D.F. Hebbard
1976Hi14	JPHGB	2,	L143	G.T. Hickey, G.M. Crawley, D.C. Weisser, N. Shikazono
1976Hu01	PRVCA	13,	1786	A. Huck, G.J. Costa, G. Walter, M.M. Aleonard, J. Dalmas, P. Hubert, F. Leccia, P. Mennrath, J. Vernotte, M. Langevin, J.M. Maison
1976In06	PRVCA	14,	254	P.D. Ingalls
1976Jo01	PRVCA	13,	439	P.L. Jolivet, J.D. Goss, J.A. Bieszk, R.D. Hichwa, C.P. Browne
1976Jo.A	P-Cargese		277	B. Jonson, E. Hagberg, P.G. Hansen, P. Hornshøj, P. Tidemand-Petersson, ISOLDE
1976Ka08	NUPAB	260,	141	E.J. Kaptein, H.P. Blok, L. Hulstman, J. Blok
1976Ka19	NUPAB	266,	346	R. Kamermaans, H.W. Jongsma, T.J. Ketel, R. van der Wey, H. Verheul
1976Ka24	PRVCA	14,	1773	E. Kashy, W. Benenson, D. Mueller, H. Nann, L. Robinson
1976Ka50	SHIBA	24,	247	I. Kakatuse, H. Nakabushi, K. Ogata
1976Ki12	NUPAB	272,	381	K. Kimura, N. Takagi, M. Tanaka
1976Lu02	PRVCA	13,	1544	E. Lund, G. Rudstam
1976Lu04	NUIMA	134,	173	E. Lund, G. Rudstam
1976Ma03	PRVCA	13,	118	J.F. Mateja, G.F. Neal, J.D. Goss, P.R. Chagnon, C.P. Browne
1976Ma16	PRVCA	13,	1117	D.J. Martin, M.R. MacPhail
1976Ma35	PRVCA	14,	1141	L.G. Mann, W.B. Walters, R.A. Meyer
1976Ma40	PRVCA	14,	1320	D.J. Martin, H.C. Evans, J.A. Szucs
1976Ma49	ZPAAD	278,	327	P. Maier-Komor, P. Glassel, E. Huengas, H. Rossler, H.K. Vonach, H. Baier
1976Me08	PRVCA	13,	1751	L.R. Medsker
1976Mi01	PRVCA	13,	879	G.F. Millington, R.M. Hutcheon, J.R. Leslie, W.M. McLatchie
1976Mo32	NUPAB	272,	82	S. Mordechai, E. Friedman, A.A. Jaffe, D. Nir, M. Paul
1976Na23	PRVCA	14,	2338	H. Nann, D. Mueller, A. Saha, E. Kashy
1976No07	PYLBB	65,	125	J.W. Noé, D.F. Geesaman, P. Paul, M. Suffert
1976Nu01	PRVCA	13,	2017	L.L. Nunnally, W. Loveland
1976Pa11	PRVCA	14,	1573	B.P. Pathak, L. Lesard, L. Nikkinen
1976Pi04	NUPAB	264,	1	J.A. Pinston, R. Rousille, H. Börner, H.R. Koch
1976Pi13	NUPAB	270,	61	J.A. Pinston, R. Rousille, H. Börner, W.F. Davidson, P. Jeuch, H.R. Koch, K. Schreckenbach
1976Ra16	JPGPE	2,	243	B.M. Rao, C.N. Rao, P.M. Rao, R. Mathews, K.V. Reddy
1976Ra33	CUSCA	45,	606	K.V. Ramaniam, G.K. Raju, K.V. Reddy
1976Ra37	ZPAAD	279,	301	D.G. Raich, H.R. Bowman, R.E. Eppley, J.O. Rasmussen, I. Rezanka
1976Ro04	PRVCA	13,	1018	R.G.H. Robertson, W. Benenson, E. Kashy, D. Mueller

1976Sc13	NUPAB	263,	193	M. Schrader, H. Reiss, G. Rosner, H.V. Klapdor
1976Sh24	NUIMA	135,	583	J.F. Sharpey-Schafer, A.M. Al Naser, A.H. Behbehani, L.L. Green, A.N. James, C. Lister, P.J. Nolan
1976SI06	NUPAB	274,	93	D.N. Slater, W. Booth
1976Sp08	NUPAB	265,	416	R.J. Sparks
1976Sq01	PYLBB	65,	122	G.T.A. Squier, W.E. Burcham, S.D. Hoath, J.M. Freeman, P.H. Barker, R.J. Petty
1976St10	NUPAB	266,	390	O. Straume, G. Løvhøiden, D.G. Burke
1976St11	NUPAB	266,	424	W.F. Steele, P.A. Smith, J.E. Finck, G.M. Crawley
1976Su.A	BAPSA	21,	658	E. Sugarbaker, W.S. Gray
1976Su.B	BAPSA	21,	984	E. Sugarbaker, W.S. Gray
1976To06	PYLBB	63,	150	K.S. Toth, M.A. Ijaz, J. Lin, E.L. Robinson, B.O. Hannah, E.H. Spejewski, J.D. Cole, J.H. Hamilton, A.V. Ramayya
1976Tr01	PRVCA	13,	50	R.E. Tribble, R.A. Kenefick, R.L. Spross
1976Tr03	PYLBB	61,	353	R.E. Tribble, J.D. Cossairt, R.A. Kenefick
1976Tr07	IANFA	40,	2026	E.F. Tretyakov, N.F. Myasoedov, A.M. Apalikov, V.F. Konyaev, V.A. Lyubimov, E.G. Novikov
1976Tu.A	Th.-Berkeley			D.G. Tuggle
1976Vi02	PYLBB	60,	261	D.J. Vieira, D.F. Sherman, M.S. Zisman, R.A. Gough, J. Cerny
1976Vi.A	P-Cargese		462	C. Vieu, J.S. Dionisio, V. Berg, C. Bourgeois
1977				
1977Aj01	PRVCA	15,	1	F. Ajzenberg-Selove, E.R. Flynn, S. Orbesen, J.W. Sunier
1977Ai09	NUPAB	281,	213	K. Aleklett, E. Lund, G. Nyman, G. Rudstam
1977Ai17	NUPAB	285,	1	K. Aleklett, E. Lund, G. Nyman, G. Rudstam
1977Az01	PRVCA	15,	1847	G. Azuelos, J.E. Kitching, K. Ramavataram
1977Ba10	CJPHA	55,	200	J.W. Barnard, P. Williams, R.C. Barber, S.S. Hague, K.S. Koziar, K.K. Sharma, H.E. Duckworth
1977Ba16	NUPAB	279,	199	P.H. Barker, R.E. White, H. Naylor, N.S. Wyatt
1977Ba33	IANFA	41,	101	I.F. Barchuk, G.V. Belykh, V.I. Golyshkin, A.F. Ogorodnik, M.M. Tuschinski
1977Ba69	YAFIA	26,	461	S.A. Baranov, V.M. Shatinskii
1977Be03	PRVCA	15,	146	M.J. Bennet, R.K. Sheline
1977Be09	PRVCA	15,	705	C.E. Bemis, Jr., R.L. Ferguson, F. Plasil, R.J. Silva, F. Pleasanton, R.L. Hahn
1977Be13	PRVCA	15,	1187	W. Benenson, D. Mueller, E. Kashy, H. Nann, L.W. Robinson
1977Be15	ZPAAD	281,	145	D. Benson, Jr., P. Kleinheinz, R.K. Sheline
1977Be36	PRVCA	16,	1146	C.E. Bemis, Jr., P.F. Dittner, R.J. Silva, R.L. Hahn, J.R. Tarrant, L.D. Hunt, D.C. Hensley
1977Bh03	ZPAAD	281,	65	T.S. Bhatia, H. Hafner, R. Haupt, R. Maschuw, G.J. Wagner
1977Bo02	NUPAB	275,	229	D.D. Bogdanov, A.V. Demyanov, V.A. Karnaukhov, L.A. Petrov, A. Plochocki, V.G. Subbotin, J. Voboril
1977Bo28	PYLBB	71,	67	D.D. Bogdanov, J. Vobořil, A.V. Demyanov, L.A. Petrov
1977Bo31	IANFA	41,	1149	N.A. Bonch-Osmolovskaya, V.M. Gorodzankin, K.Y. Gromov, T. Kretsu, V.V. Kuznetsov, G. Makarie, A.S. Khamidov, M. Yatiski
1977Bo32	IANFA	41,	1189	B. Bogdan, M. Gasior, T. Kretsu, V.V. Kuznetsov, N.A. Lebedev, G.I. Lizurei, G. Makarie, D.G. Popescu, A.S. Khamidov
1977Bo.A	PrvCom	AHW	Oct	V.R. Bom, D. De Bruin
1977Ca09	PRVCA	15,	883	R.F. Carlton, S. Raman, G.G. Slaughter
1977Ca19	NUPAB	285,	235	R.F. Casten, R.C. Greenwood, M.R. MacPhail, R.E. Chrien, W.R. Kane, G.J. Smith, J.A. Cizewski BNL-22352
1977Ca23	ZPAAD	283,	221	C. Cabot, S. Della Negra, C. Deprun, H. Gauvin, Y. Le Beyec
1977Ch06	ZPAAD	280,	149	H.C. Cheung, S.I. Hayakawa, J.E. Kitching, J.K.P. Lee, S.K. Mark, J.C. Waddington
1977Co08	PRVCA	15,	1685	J.D. Cossairt, R.E. Tribble, R.A. Kenefick
1977Cr05	IANFA	41,	2032	T. Cretsu, G. Makarie, A.V. Potempa, E. Senyavski
1977Da22	GCACA	41,	1745	D.W. Davis, J. Gray, G.L. Cumming, H. Baadsgaard
1977De06	PRVCA	15,	800	J. Deslauriers, S.C. Gujrahi, S.K. Mark
1977De25	ZPAAD	283,	33	J. Deslauriers, S.C. Gujrahi, S.K. Mark
1977De32	JPSLB	38,	393	S. Della Negra, B. Lagarde, Y. Le Beyec
1977Dr07	AENGA	42,	314	A.A. Druzhinin, V.K. Grigorev, A.A. Lbov, S.P. Vesnovskii, N.G. Krylov, V.N. Polynov
1977Em02	NUPAB	293,	379	R.A. Emigh, R.E. Anderson
1977Er02	ZPAAD	280,	79	B. Erlandson, J. Lyttkens

1977Fi08	NUPAB	288,	57	L.K. Fifield, F.P. Calaprice, C.H. Zimmermann, M.J. Hurst, A. Pakkanen, T.J.M. Symons, F. Watt, K.W. Allen
1977Fi03	PRVCA	15,	879	E.R. Flynn, J.W. Sunier, F. Ajzenberg-Selove
1977Fo02	ZPAAD	281,	89	B. Fogelberg, W. Maup
1977Fo09	PYLBB	70,	408	H.T. Fortune, R. Middleton, M.E. Coburn, G.E. Moore, S. Mordechai, R.V. Kollarits, H. Nann, W. Chung, B.H. Wildenthal
1977Fr20	ZPAAD	281,	211	T. Freie, H. Lorenz-Wirba, B. Cleff, H.P. Trautvetter, C. Rolfs
1977Ge03	NUPAB	283,	45	J. Genevey-Rivier, A. Charvet, G. Marguier, C. Richard-Serre, J. D'Auria, A. Huck, G. Klotz, A. Knipper, G. Walter
1977Gu02	PRVCA	15,	894	P. Guilbault, D. Ardouin, R. Tamisier, P. Avignon, M. Vergnes, G. Rotbard, G. Berrier
1977Ha31	PRVCA	16,	1129	D.R. Haenni, T.T. Sugihara
1977Ha32	PRVCA	16,	1559	P.E. Haustein, E.M. Franz, R.F. Petry, J.C. Hill
1977Ha48	NUPAB	293,	1	E. Hagberg, P.G. Hansen, J.C. Hardy, P. Hornshøj, B. Jonson, S. Mattsson, P. Tidemand-Petersson
1977He26	NUIMA	147,	425	J.C.P. Heggie, Z.E. Zwitkowski
1977Ho02	NUPAB	276,	1	C.L. Hollas, K.A. Aniol, D.W. Gebbie, M. Borsaru, J. Nurzinski, L.O. Barbopoulos
1977Ho09	JUPSA	42,	1098	M. Hoshi, M. Fujiwara, Y. Yoshisama
1977Ho18	PRLTA	39,	537	P. Hornshøj, H.L. Nielsen, N. Rud
1977Ho25	NUPAB	288,	429	P. Hornshøj, L. Hojsholt-Poulsen, N. Rud
1977Ij01	PRVCA	15,	2251	M.A. Ijaz, C.R. Bingham, H.K. Carter, E.L. Robinson, K.S. Toth
1977Is01	ZPAAD	281,	365	A.F.M. Ishaq, S. Robertson, W.V. Prestwich, T.J. Kennett
1977Je03	PRVCA	15,	1972	C.M. Jensen, W.R.G. Lanier, G.L. Struble, L.G. Mann, S.G. Prussin
1977Jo03	PRVCA	15,	915	C.H. Johnson, J.K. Bair, C.M. Jones
1977Ka08	NUPAB	279,	269	K. Kawade, H. Yamamoto, Y. Ikeda, V.N. Bhoraskar, T. Katoh
1977Ke03	PRVCA	15,	792	G. Kennedy, J. Deslauriers, S.C. Gujrathi, S.K. Mark
1977Ko04	PRVCA	15,	1947	J.J. Kolata, M. Oothoudt
1977Ko10	PRVCA	16,	132	R.L. Kozub, B.E. Cooke, J.R. Leslie, B.C. Robertson
1977Ko15	PRVCA	16,	588	B.K.S. Koene, R.E. Chrien
1977Ko.A	PrvCom	AHW	Feb	B.K. Koene, R.E. Chrien, M. Yachim
1977Ko.B	P-Tashkent		65	T. Kozlowski, T. Kormitski, Y. Lushtshnski, A. Yasinski
1977Kr.A	JINR-P6-10748			T. Kretsu, V.V. Kuznetsov, G. Luzurej, Chan Chen Mo, V.M. Gorodzankin, G. Makarie
1977Li14	NUPAB	286,	263	J. Liptak, K. Kristiakova, J. Kristiak
1977Li16	PHSTB	15,	205	E. Lingeman
1977Lu06	NUPAB	286,	403	E. Lund, K. Aleklett, G. Rudstam
1977Ma12	PRVCA	15,	1708	J.F. Mateja, C.P. Browne
1977Ma24	NUPAB	288,	1	J.A. Macdonald, J.C. Hardy, H. Schmeing, T. Faestermann, H.R. Andrews, J.S. Geiger, R.L. Graham, K.P. Jackson
1977Mc05	NUPAB	281,	325	A.B. McDonald, E.D. Earle, M.A. Lone, F.C. Khanna, H.C. Lee
1977Mc09	PRVCA	16,	1278	D.A. McClure, S. Raman, G.C. Slaughter
1977Me04	PRVCA	15,	649	L.R. Medsker, L.H. Fry, Jr., J.L. Yntema
1977Mi10	PRVCA	16,	1605	R.J. Mitchell, T.V. Ragland, R.P. Scharenberg, R.E. Holland, F.J. Lynch
1977Mi.A	KFK-2438			M. Mirkiditsian
1977Mo13	NUPAB	289,	36	S. Mordechai, M.E. Coburn, G.E. Moore, H.T. Fortune
1977Mu03	PRVCA	15,	1282	D. Mueller, E. Kashy, W. Benenson
1977Na05	PRVCA	15,	1448	A.M. Nathan, D.E. Alburger
1977Na17	PRVCA	16,	1566	A.M. Nathan, D.E. Alburger, J.W. Olness, E.K. Warburton
1977Na24	NUIMA	144,	331	H. Naylor, R.E. White
1977No08	PYLBB	71,	314	J.A. Nolen, T.S. Bhatia, H. Hafner, P. Doll, C.A. Wiedner, G.J. Wagner
1977Nu01	PRVCA	15,	444	L.L. Nunnelley, W.D. Loveland
1977Pa01	PRVCA	15,	730	L.A. Parks, C.N. Davids, R.C. Pardo
1977Pa13	PRVCA	15,	1811	R.C. Pardo, C.N. Davids, M.J. Murphy, E.B. Norman, L.A. Parks
1977Pa18	PRVCA	16,	370	R.C. Pardo, C.N. Davids, M.J. Murphy, E.B. Norman, L.A. Parks
1977Pa24	NUPAB	289,	94	M. Paul, A. Murinov, J. Burde, C. Drory, J. Lichtenstadt, S. Mordechai, E. Navon
1977Pe17	PRVCA	16,	1878	F. Pellegrini, P. Guazzoni, D. Sinclair, E. Garman
1977Pr07	PRVCA	16,	1001	S.G. Prussin, R.G. Lanier, G.L. Struble, L.G. Mann, S.M. Schoenung
1977Ra08	IJOPA	15,	41	K.V. Ramaniah, G.R. Raju, K.V. Reddy
1977Ra17	JPHGB	3,	637	Venkata Ramaniahah, G. Kusa Raju, K. Venkata Reddy
1977Ra18	JPHGB	3,	633	Venkata Ramaniahah, K. Venkata Reddy
1977Re12	CUSCA	46,	95	T.S. Reddy, R. Matthews, K.V. Reddy

1977Re.A	Th.-Montreal			D.M. Rehfield DABBB 38,4874(1978)
1977Ri04	PRVCA	15,	1271	K. Rimawi, R.E. Chrien
1977Ro03	CJPHA	55,	206	D.W.O. Rogers, N. Anyas-Weiss, S.P. Dolan, N.A. Jelley, T.K. Alexander
1977Sc03	PYLBB	66,	133	A.G. Schmidt, R.L. Mlekodaj, E.L. Robinson, F.T. Avignone, J. Lin, G.M. Gowdy, J.L. Wood, R.W. Fink
1977Sc21	ZPAAD	283,	43	F. Schussler, J. Blachot, E. Monnard, J.A. Pinston, B. Pfeiffer, K. Hawerkamp, R. Stippler
1977Sh04	CJPHA	55,	506	S.H. Sharma, K.S. Kozier, J.W. Barnard, R.C. Barber, S.S. Haque, H.E. Duckworth
1977Sh06	PRVCA	15,	903	J.D. Sherman, D.L. Hendrie, M.S. Zisman
1977Sh08	PYLBB	67,	275	J.D. Sherman, E.R. Flynn, O. Hansen, N. Stein, J.W. Sunier
1977Sh12	CJPHA	55,	1360	K.S. Sharma, J.O. Meredith, R.C. Barber, K.S. Kozier, S.S. Hague, J.W. Barnard, F.C.G. Southon, P. Williams, H.E. Duckworth
1977So02	CJPHA	55,	383	F.C.G. Southon, J.O. Meredith, R.C. Barber, H.E. Duckworth
1977St10	NUPAB	281,	240	M. Stefanon, F. Corvi
1977St15	PRVCA	16,	574	M.L. Stelts, J.C. Browne
1977St22	CJPHA	55,	1687	O. Straume, D.G. Burke
1977Tr03	PRVCA	15,	2028	R.E. Tribble, J.D. Cossairt, R.A. Kenefick
1977Tr05	PRVCA	16,	917	R.E. Tribble, J.D. Cossairt, D.P. May, R.A. Kenefick
1977Tr07	PRVCA	16,	1835	R.E. Tribble, J.D. Cossairt, D.P. May, R.A. Kenefick
1977Tu01	ZPAAD	280,	309	T. Tuurnala, K. Katajanheimo, E. Hammaren
1977Vo02	NUPAB	278,	189	H. Vonach, P. Glass, E. Huenges, P. Maier-Komor, H. Reoser, H.J. Scheerer, H. Paul, D. Semrad
1977Vy02	IANFA	41,	1634	Ts. Vylov, N.A. Golovkov, B.S. Dzelepov, R.B. Ivanov, M.A. Mikhailova, Y.V. Norseev, V.G. Shumin
1977Wh01	NUPAB	276,	333	R.E. White, H. Naylor
1977Wh03	AUJPA	30,	365	R.E. White, H. Naylor
1977Ya07	JUPSA	43,	8	H. Yamamoto, K. Kawade, K. Ikeda, T. Katoh
1978				
1978Aj01	PRVCA	17,	960	F. Ajzenberg-Selove, E.R. Flynn, J.W. Sunier, D.L. Hanson
1978Al18	PRVCA	18,	462	K. Aleklett, E. Lund, G. Rudstam
1978Al29	PRVCA	18,	2727	D.E. Alburger, S. Mordechai, H.T. Fortune, R. Middleton
1978An10	NUPAB	303,	154	K.A. Aniol, D.W. Gebbie, C.L. Hollas, J. Nurzinski
1978An14	PHSTB	18,	165	G. Andersson, M. Ashgar, A. Emsallem, E. Hagberg, B. Jonson, P. Tidemand-Petersson
1978Ar12	PRVCA	18,	1201	D. Ardouin, C. Lebrun, F. Guilbault, B. Remand, E.R. Flynn, D.L. Hanson, S.D. Orbesen, M.N. Vergnes, G. Rotbard, K. Kumar
1978As06	ZPAAD	288,	45	M. Ashgar, A. Emsallem, E. Hagberg, B. Jonson, P. Tidemand-Petersson
1978Az01	PRVCA	17,	443	G. Azuelos, G.V. Rao, P. Taras
1978Ba30	IANFA	42,	205	Y.A. Badenko, K.I. Derebshova, V.N. Kushmin, Y.A. Nemilov, L.M. Solin, E.D. Teterin, V.S. Romanov
1978Ba44	PRLTA	41,	738	P.A. Baisden, R.E. Leber, M. Nurmia, J.M. Nitschke, M. Michel, A. Ghiorso
1978Ba.C	P-Alma Ata		123	S.A. Baranov, V.M. Shatinskii, L.V. Chistyakov, N.I. Aleshin
1978Be09	PRVCA	17,	529	G. Berrier-Ronsin, M. Vergnes, G. Rotbard, J. Vernotte, J. Kalifa, R. Seltz, H.L. Sharma
1978Be22	ZPAAD	285,	405	D. Benson, Jr., P. Kleinheinz, R.K. Sheline, E.B. Shera
1978Be26	PRVCA	17,	1939	W. Benenson, E. Kashy, A.G. Ledebuhr, R.C. Pardo, R.G.H. Robertson, L.W. Robinson
1978Bh02	PYLBB	76,	562	T.S. Bhatia, H. Hafner, J.A. Nolen, Jr., W. Saathoff, R. Schuhmacher, R.E. Tribble, G.J. Wagner, C.A. Wiedner
1978Bo20	NUPAB	303,	145	D.D. Bogdanov, A.V. Demyanov, V.A. Karnaukhov, L.A. Petrov, J. Voboril
1978Bo32	NUPAB	307,	421	D.D. Bogdanov, A.V. Demyanov, V.A. Karnaukhov, M. Nowicki, L.A. Petrov, J. Voboril, A. Plochocki
1978Bo.A	P-Alma Ata		54	D.D. Bogdanov, I. Bobordzil, A.V. Demianov, L.A. Petrov
1978Bu18	PRVCA	18,	693	D.G. Burke, G. Løvhøiden, E.R. Flynn, J.W. Sunier
1978Ca11	ZPAAD	287,	71	C. Cabot, S. Della Negra, C. Deprun, H. Gauvin, Y. Le Beyec
1978Ch22	MTRGA	14,	157	P. Christmas, P. Cross
1978Co.A	AnRpt Texas	AM		J.D. Cossairt, D.P. May
1978Cr02	IANFA	42,	56	T. Cretzu, V.V. Kuznetsov, G. Luzurej, V.M. Gorodzankin, G. Macarie
1978Cr03	ZPAAD	287,	45	J. Crançon, C. Ristori, H. Ohm, W. Rudolph, K.-L. Kratz, M. Asghar

1978Da04	PRVCA	17,	1815	C.N. Davids, D.F. Geesaman, S.L. Tabor, M.J. Murphy, E.B. Norman, R.C. Pardo
1978Da07	NUPAB	301,	397	J.M. D'Auria, J.W. Grüter, E. Hagberg, P.G. Hansen, J.C. Hardy, P. Hornshøj, B. Jonson, S. Mattsson, H.L. Ravn, P. Tidemand-Petersson
1978De18	NUPAB	302,	186	P. Decowski, W. Benenson, B.A. Brown, A.A. Rollefson
1978De.A	AnRpt Berkeley			R.J. De Meyer, D.P. Stahel, A.N. Bice, R. Jahn, J. Cerny
1978Di09	YAFIA	28,	273	R.A. Demirkhanov, V.V. Dorokhov, M.I. Dzkuya, G.A. Dorokhova, see also report SFTII Suchumi
1978Do06	ZPAAD	286,	107	P.H. Do, R. Chery, H.G. Börner, W.F. Davidson, J.A. Pinston, R. Rousille, K. Schreckenbach, H.R. Koch, H. Seyfarth, D. Heck
1978Du06	ZPAAD	287,	165	F. Dubbers, L. Funke, P. Kemnitz, G. Winter, S. Elfstrom, T. Lindblad, C.G. Linden
1978Ei11	PRVCA	18,	2713	Y.A. Ellis, K.S. Toth, H.K. Carter
1978Fi02	PRVCA	17,	718	R.B. Firestone, R.A. Warner, W.C. McHarris, W.H. Kelly
1978Ga07	YAFIA	27,	894	Yu. P. Gangrskii, G.M. Marinescu, M.B. Miller, V.N. Samosyuk, I.F. Kharisov
1978Ge01	NUPAB	295,	221	C.P. Gerner, J. Van Pelt, O.W. De Ridder, J. Blok
1978Go15	NUPAB	312,	56	G.M. Gowdy, J.L. Wood, R.C. Fink
1978Gr10	NUPAB	303,	265	H.C. Griffin, I. Ahmad, A.M. Friedman, L.E. Glendenin
1978Gr13	YAFIA	27,	1421	I.I. Gromova, T. Kretsu, V.V. Kuznetsov, G.I. Lizurei, N.A. Lebedev, V.M. Gorozhankin, G. Macarie
1978Gu14	ZPAAD	287,	271	H.H. Guven, B. Kardon, H. Seyfarth
1978Ha07	PYLBB	73,	127	O. Häusser, T.K. Alexander, T. Faestermann, D. Horn, D. Ward, H.R. Andrews, I.S. Towner
1978Ha11	NUPAB	296,	251	S.I. Hayakama, I.R. Hyman, J.K.P. Lee
1978Ha14	PRVCA	17,	1414	J.E. Halverson, W.H. Johnson, Jr.
1978Ha52	HYIND	4,	196	O. Häusser, T. Faestermann, I.S. Towner, T.K. Alexander, H.R. Andrews, J.R. Beene, D. Horn, D. Ward, C. Broude
1978Hi06	NUPAB	308,	61	F. Hintenberger, R. Schonhagen, P. von Rossesn, B. Schuller, F.E. Blumenberg, P.D. Eversheim, R. Gorgen
1978Hu06	CJPHA	56,	936	H. Huang, B.P. Pathek, J.K.P. Lee
1978Ik02	PYLBB	74,	326	H. Ikegami, T. Yamazaki, S. Morinobu, I. Katayama, M. Fujiwara, Y. Fujita, N. Koori
1978Ik03	JUPSA	45,	725	Y. Ikeda, H. Yamamoto, K. Kawade, T. Katoh, K. Nagahara
1978Ja06	JPHGB	4,	579	A.N. James, J.F. Sharpey-Schafer, A.M. Al Naser, A.H. Behbehani, C.J. Lister, P.J. Nolan, P.H. Barker, W.E. Burcham
1978Ka10	JUPSA	44,	25	M. Kanazawa, S. Ohya, T. Tamura, Z. Ishibashi, N. Mutsuro
1978Ka12	PRVCA	17,	1555	R. Kamermans, J. Van Driel, H.P. Blok, P.J. Blankhorst
1978Ke06	PRVCA	17,	1929	G.J. KeKelis, M.S. Zisman, D.K. Scott, R. Jahn, D.J. Vieira, J. Cerny, F. Ajzenberg-Selove
1978Ke10	PRVCA	18,	1938	B.D. Kern, F. Gabbard, R.G. Kruzek, M.R. McPherson, K.K. Sekharan, F.D. Snyder
1978Ko24	NUPAB	307,	71	R.T. Kouzes, D. Mueller
1978Ko27	NUPAB	309,	329	R.T. Kouzes, P. Kutt, D. Mueller, R. Sherr
1978Ko28	PRVCA	18,	1587	R.T. Kouzes, D. Mueller, C. Yu
1978Le.A	Table of Isotopes			C.M. Lederer, V.S. Shirley, E. Browne, J.M. Dairiki, R.E. Doebler, A.A. Shihab-Eldin, L.J. Jardine, J.K. Tuli, A.B. Buyrn
1978Lo07	NUPAB	302,	51	G. Løvhøiden, O. Straume, D.G. Burke
1978Lo13	JINCA	40,	1865	R.W. Lougheed, J.F. Wild, E.K. Hulet, R.W. Hoff, J.H. Landrum
1978Ma18	JUPSA	44,	1070	Z. Matumoto, T. Tamura
1978Ma23	NUPAB	301,	213	J.W. Maas, E. Somorjai, H.D. Graber, C.A. Vandenwijngaard, C. Van der Leun, P.M. Endt
1978Ma24	NUPAB	301,	237	J.W. Maas, A.J.C. Holvast, A. Baghus, H.J.M. Aarts, P.M. Endt
1978Me15	PRVCA	3,	1148	L. Meyer-Schützmeister, A.J. Elwyn, S.A. Gronemeyer, G. Hardie, R.E. Holland, K.E. Rehm
1978Mo12	NUPAB	305,	29	L.A. Montestruque, M.C. Cobian Rozak, G. Szaloky, J.D. Zumbro, S.E. Darden
1978Mu05	PRVCA	17,	1574	M.J. Murphy, C.N. Davids, E.B. Norman, R.C. Pardo
1978Na02	PRVCA	17,	830	F. Naulin, C. Détraz, M. Bernas, E. Kashy, M. Langevin, F. Pougheon, P. Roussel
1978Na11	PRVCA	18,	1619	H. Nann, A. Saha, S. Raman
1978No03	PRVCA	17,	2176	E.B. Norman, C.N. Davids, M.J. Murphy, R.C. Pardo
1978No05	PRVCA	18,	102	E.B. Norman, C.N. Davids
1978Pa11	PRVCA	18,	1249	R.C. Pardo, E. Kashy, W. Benenson, L.W. Robinson
1978Pa12	PRVCA	18,	1277	I. Paschopoulos, E. Müller, H.J. Körner, I.C. Oelrich, K.E. Rehm, H.J. Scheerer

1978Pe08	NUPAB	302,	1	J.G. Pengra, H. Genz, R.W. Fink
1978Pf01	PRLTA	41,	63	L.P. Pfeiffer, A.P. Mills, Jr., R.S. Raghavan, F. Achandros
1978Ra15	PRVCA	18,	1085	G.R. Rao, G. Azuelos, J.C. Kim, J.P. Martin, P. Taras
1978Ra16	PRVCA	18,	1158	S. Raman, R.F. Carlton, G.G. Slaughter, M.R. Meder
1978Re01	ZPAAD	284,	403	T.S. Reddy, R. Matthews, K.V. Reddy
1978Ro01	PRVCA	17,	4	R.G. Robertson, E. Kashy, W. Benenson, A. Ledebuhr
1978Ro03	ZPAAD	284,	407	A. Robertson, T.J. Kennett, W.V. Prestwich
1978Ro08	PRVCA	17,	1535	R.G.H. Robertson, T.L. Khoo, G.M. Crawley, A.B. McDonald, E.G. Adelberger, S.J. Freedman
1978Ro14	PRVCA	18,	86	G. Rotbard, L. Larana, M. Vergnes, G. Berrier, J. Kalifa, F. Guilbault, R. Tamisier
1978Ro19	PYLBB	78,	393	E. Roeckl, R. Kirchner, O. Klepper, G. Nyman, W. Reisdorf, D. Schardt, K. Wien, R. Fass, S. Mattsson
1978Sc26	ZPAAD	288,	189	U.J. Schrewe, W.D. Schmidt-Ott, R.-D. von Dincklage, E. Georg, P. Lemmert, H. Jungclas, D. Hirdes
1978Se04	PRVCA	17,	1919	R.R. Sercely, R.J. Peterson, E.R. Flynn
1978Se07	PRLTA	41,	1589	K. Seth, H. Nann, S. Iversen, M. Kaletka
1978Sh11	NUPAB	304,	40	S. Shastry, R.A. Emigh, R.J. Peterson, R.E. Anderson
1978St02	ZPAAD	284,	95	R. Stippler, F. Münnich, H. Schrader, J.P. Bocquet, M. Asghar, G. Siegert, R. Decker, B. Pfeiffer, H. Wollnik, E. Monnard, F. Schussler
1978St25	NUIMA	155,	253	H.L. Stelts, R.E. Chrien
1978Su03	ZPAAD	287,	287	K. Sümmerer, N. Kaffrell, H. Otto, P. Peuser, N. Trautmann
1978Sz04	PRVCA	17,	2253	A. Szanto De Toledo, H.V. Klapdor, H. Hafner, W. Saathoff, E.M. Szanto, M. Schrader
1978Sz09	JPHGB	4,	L187	A. Szanto De Toledo, H.V. Klapdor, H. Hafner, W. Saathoff, E.M. Szanto, M. Schrader, H. Dias
1978Ta10	PRVCA	18,	1064	R.W. Tarara, J.P. Zumbro, C.P. Browne
1978Tu04	PHSTB	18,	31	T. Tuurnala, R. Katajanheimo, O. Heinonen
1978Va04	NUPAB	295,	211	J. Van Pelt, C.P. Gerner, O.W. De Ridder, J. Blok
1978Ve10	JPSLB	39,	291	L. Vergnes, G. Rotbard, J. Kalifa, G. Berrier, J. Vernotte, Y. Deschamps, R. Selz
1978We12	PHSTB	18,	275	T. Weckstrom
1978We14	NUPAB	308,	222	D.C. Weissner, A.F. Zeller, T.R. Ophel, D.F. Hebbard
1978Wi04	PRVCA	18,	401	D.H. Wilkinson, A. Gallmann, D.E. Alburger
1978Wo01	PRVCA	17,	66	C. Woods
1978Wo15	PRVCA	18,	2328	F.K. Wahn, W.L. Talbert, Jr.
1978Ya07	PRVCA	17,	2061	Y. Yamazaki, R.K. Sheline, E.B. Shera corr PRVCA 18,2450
1978Ze04	PRVCA	18,	2122	B. Zeidman, J.A. Nolen, Jr.
1978Zg.A	PrvCom	AHW	Sep	E.F. Zganjar, W.R. Kane, G.J. Smith, J.A. Cizewski
1979				
1979Ad08	IANFA	43,	1089	I.A. Adam, A.V. Budzyak, M. Gonusek, V.M. Gorodzhankin, B.S. Dzelepov, V.G. Kalinnikov, A.V. Kudryavtseva, V.V. Kuznetsov, V.I. Stegaylov, A. Shshalek
1979Ah03	PRVCA	20,	290	I. Ahmad, S.W. Yates, R.K. Sjoblom, A.M. Friedman
1979Aj02	PRVCA	19,	1742	F. Ajzenberg-Selove, E.R. Flynn, D.L. Hanson, S. Orbesen
1979Aj03	PRVCA	19,	2068	F. Ajzenberg-Selove, E.R. Flynn, D.L. Hansen, S. Orbesen
1979A104	JPHGB	5,	423	A.M. Al Naser, A.H. Behbehani, P.A. Butler, L.L. Green, A.N. James, C.J. Lister, P.J. Nolan, N.R.F. Ramsmo, J.F. Sharpey-Schafer, H.M. Sheppard, L.H. Zyber, R. Zyber
1979A105	ZPAAD	290,	173	K. Aleklett, E. Lund, G. Rudstam
1979A107	NUPAB	321,	45	W.P. Alford, R.E. Anderson, P.A. Batay-Csorba, R.A. Emigh, D.A. Lind, P.A. Smith, C.D. Zafiratos
1979A116	ZPAAD	291,	397	G.D. Alkhazov, L.K. Batist, E.Y. Berlovich, Y.S. Blinnikov, Y.V. Yelkin, K.A. Mezilev, Y.N. Novikov, V.N. Pantelejev, A.G. Poljakov, N.D. Schigolev, V.N. Tatasov, V.P. Afanasjev, K.Y. Gromov, M. Jachim, M. Janicki, V.G. Kalinnikov, J. Kormicki, A. Potempa, E. Rurarz, F. Tarkanyi, Y.V. Yushkievich
1979A119	NUPAB	330,	77	W.P. Alford, R.E. Anderson, P.A. Batay-Csorba, R.A. Emigh, D.A. Lind, P.A. Smith, C.D. Zafiratos
1979An36	IANFA	43,	1076	N.M. Antoneva, V.M. Vinogradov, E.P. Grigorev, P.P. Dimitrev, A.V. Zolotavin, G.S. Katichin, N.N. Krasnov, V.M. Makarov

1979Ay01	PYLBB	82,	43	J. Aysto, D.M. Moltz, M.D. Cable, R.D. Von Dincklage, R.F. Parry, J.M. Wouters, J. Cerny
1979Ba06	ZPAAD	289,	325	J.N. Barkman, J.E. McFee, T.J. Kennett, W.V. Prestwich
1979Ba31	NUPAB	325,	305	G.C. Ball, W.G. Davies, J.S. Forster, H.R. Andrews, D. Horn, W. McLatchie
1979Ba67	AENGA	47,	404	S.A. Baranov, V.M. Shatinskii, L.V. Chistyakov
1979Be.A	P-Brookhaven		561	Z. Berant, Y. Birenbaum, R. Moreh, see NUIMA 166(1979)81, and PrvCom AHW February 1980
1979Bo37	ZENAA	34,	1536	T. Borello-Lewin, O. Dietsch
1979Br05	ZPAAD	289,	289	P. Brodeur, B.P. Pathek, S.K. Mark
1979Br19	PRVCA	20,	1301	R.E. Brown, J.A. Cizewski, E.R. Flynn, J.W. Sunier
1979Br25	NUIMA	166,	243	F. Braumandl, K. Schreckenbach, T. von Egidy
1979Br26	ZPAAD	292,	397	F. Braumandl, T. von Egidy, D.D. Warner
1979Br.A	Th.-McMaster			P.M. Brewste
1979Br.B	AnRpt NotreDame			C.P. Browne, et al
1979Bu05	NUPAB	318,	77	D.G. Burke, G. Løvholden, E.R. Flynn, J.W. Sunier
1979Ca02	NUPAB	316,	61	R.F. Casten, M.R. MacPhail, W.R. Kane, D. Breitig, K. Schreckenbach, J.A. Cizewski
1979Da04	PRVCA	19,	1463	C.N. Davids, C.A. Gagliardi, M.J. Murphy, E.B. Norman
1979Da.A	P-Lansing		419	C.N. Davids
1979De44	NUPAB	332,	382	K.R.S. Devan, C.E. Brient
1979Do09	PRVCA	20,	1112	R.E. Doebler, W.M. McHarris, W.H. Kelly
1979Du02	NUPAB	315,	317	F. Dubbers, L. Funke, P. Kemnitz, K.D. Schilling, H. Strusny, E. Will, G. Winter, M.K. Balodis
1979Ei11	ZPAAD	293,	261	K. Elix, H.W. Becker, L. Buchmann, J. Görres, K.U. Kettner, M. Wiescher, C. Rolfs
1979Fi07	PYLBB	89,	36	R.B. Firestone, R.C. Pardo, W.C. McHarris
1979Fi02	PRVCA	19,	355	E.R. Flynn, D.L. Hansen, R.A. Hardekopf
1979Fo09	NUPAB	321,	137	S. Fortier, S. Galès
1979Fo10	NUPAB	323,	205	B. Fogelberg, P. Carlé
1979Ge02	PRVCA	19,	1938	D.F. Geesaman, R.L. McGrath, J.W. Noé, R.E. Malmin
1979Ha09	ZPAAD	290,	113	H.H. Hansen, E. Cellen, G. Grosse, D. Mouchel, A. Larsen, R. Vaninbrouckx
1979Ha10	NUPAB	318,	29	E. Hagberg, P.G. Hansen, P. Hornshøj, B. Jonson, S. Mattsson, P. Tidemand-Petersson, ISOLDE
1979Ha26	PRVCA	19,	2332	P.E. Haustein, H.-C. Hseuh, R.L. Klobuchar, E.M. Franz, S. Katcoff, L.K. Peker
1979Ha32	PRVCA	20,	345	J.E. Halvarson, W.H. Johnson, Jr.
1979Ho10	ZPAAD	291,	53	S. Hofmann, W. Faust, G. Münzenberg, W. Reisdorf, P. Armbruster, K. Güttner, H. Ewald
1979Ho27	NUPAB	330,	429	J. Honkanen, M. Kortelahti, K. Valli, K. Eskola, A. Hautojärvi, K. Vierinen
1979Ik04	NUPAB	329,	84	H. Ikegami, T. Yamazaki, S. Morinobu, I. Katayama, M. Fujiwara, Y. Fujita, H. Taketani, M. Adachi, T. Matsuzaki, N. Koori, M. Matoba
1979Ik06	JUPSA	47,	1039	Y. Ikeda, H. Yamamoto, K. Kawade, T. Takeuchi, T. Katoh, T. Nagahara
1979Ik07	JUPSA	47,	1389	Y. Ikeda, H. Yamamoto, K. Kawade, T. Katoh, T. Nagahara
1979Io01	NUPAB	313,	283	V.A. Ionescu, J. Kern, R.F. Casten, W.R. Kane, I. Ahmad, J. Erskine, A.M. Friedman, K. Katori
1979Ja21	NUPAB	325,	337	J. Jänecke, F.D. Becchetti, C.E. Thorn
1979Ka.A	P-Lansing		39	E. Kashy, W. Benenson, J.A. Nolen, Jr., R.G.H. Robertson
1979Ka.B	PrvCom	NDG	Sep	N. Kaffrell
1979Ke02	ZPAAD	289,	407	U. Keyser, H. Berg, F. Münnich, K. Hawerkamp, H. Schrader, B. Pfeiffer, E. Monnard
1979Ke.D	P-Brookhaven		646	M.J. Kenny, M.L. Stelts, R.E. Chrien
1979Ko10	CJPHA	57,	266	K.S. Koziar, K.S. Sharma, R.C. Barber, J.W. Barnard, R.J. Ellis, V.P. Derenchuk
1979Ko.B	P-Lansing		45	R.T. Kouzes, R. Sherr
1979Lu01	NUPAB	313,	191	J. Lukasiak, R. Kaczarowski, J. Jastrzebski, S. André, J. Treherne
1979Me13	NUPAB	324,	335	T.C. Meyer
1979Mo02	PRLTA	42,	43	D.M. Moltz, J. Äystö, M.D. Cable, R.D. von Dincklage, R.F. Parry, J.M. Wouters, J. Cerny
1979Pa14	NUPAB	331,	16	V. Paar
1979Pe17	NUPAB	332,	95	P. Peuser, H. Otto, N. Kaffrell, G. Nyman, E. Roeckl
1979Pi08	NUPAB	321,	25	J.A. Pinston, W. Mampe, R. Rousille, K. Schreckenbach, D. Heck, H.G. Börner, H.R. Koch, S. Andre, D. Barnéoud

1979PI06	NUPAB	332,	29	A. Płochocki, G.M. Gowdy, R. Kirchner, O. Klepper, W. Reisdorf, E. Roeckl, P. Tidemand-Petersson, J. Zylicz, U.J. Schrewe, R. Kantus, R.-D. von Dincklage, W.D. Schmidt-Ott
1979Ry.A	P-Lansing		249	A. Rytz
1979Sa.A	AnRpt KVI			A. Saha, R.H. Siemsen, J.W. Smits, J. Van Popta, and PrvCom AHW
1979Sc09	NUPAB	318,	253	K.-H. Schmidt, W. Faust, G. Münzenberg, H.-G. Clerc, W. Lang, K. Pielenz, D. Vermeulen, H. Wohlfarth, H. Ewald, K. Güttner
1979Sc11	ZPAAD	290,	359	F. Schussler, J. Blachot, E. Monnard, B. Fogelberg, S.H. Feenstra, J. van Klinken, G. Jung, K.D. Wünsch
1979Sc22	NUPAB	326,	65	D. Schardt, R. Kirchner, O. Klepper, W. Reisdorf, E. Roeckl, P. Tidemand-Petersson, G.T. Ewan, E. Hagberg, B. Jonson, S. Mattsson, G. Nyman
1979Sc.A	NDSBA	26,	81	M.R. Schmorak
1979Sw01	NUIMA	159,	407	Z.E. Switkowski, R.J. Petty, J.C.P. Heggie, G.J. Clark
1979Ta22	JUPSA	47,	1735	Y. Tagishi, K. Katori, Y. Toba, M. Sasagase, M. Sato, T. Mikumo
1979Ta.B	BAPSA	24,	836	R.W. Tarara, J.D. Zumbro, C.P. Browne
1979To06	PRVCA	19,	2399	K.S. Toth, M.A. Ijaz, C.R. Bingham, L.L. Riedinger, H.K. Carter, D.C. Sousa
1979To18	PRVCA	20,	1902	K.S. Toth, Y.A. Ellis, D.C. Sousa, H.K. Carter, D. Sen, E.F. Zganjar
1979Ve.A	P-Lansing		431	J. Verplancke, D. Vandeplassche, M. Huyse, K. Cornelis, G. Lhersonneau
1979Vi01	PRVCA	19,	177	D.J. Vieira, R.A. Gough, J. Cerny
1979Vo05	PRVCA	20,	944	T. von Egidy, J.A. Cizewski, C.M. McCullagh, S.S. Malik, M.L. Stelts, R.E. Chrien, D. Breitig, R.F. Casten, W.R. Kane, G.J. Smith
1979Wa04	NUPAB	316,	13	D.D. Warner, W.F. Davidson, H.G. Börner, R.F. Casten, A.I. Namenson
1979Wa22	JPHGB	5,	1723	D.D. Warner, W.F. Davidson, W. Gelletly
1979We02	NUPAB	313,	385	D. Weber, G.M. Crawley, W. Benenson, E. Kashy, H. Nann
1979We07	PRVCA	20,	115	H. Weigmann, S. Raman, J.A. Harvey, R.L. Macklin, G.G. Slaughter
1980				
1980Ad04	ZPAAD	295,	251	M. Adachi, A. Muroi, T. Matsuzaki, H. Taketani
1980Al02	PRVCA	21,	705	D.E. Alburger, P. Richards, T.H. Ku
1980Al14	ZPAAD	295,	305	G.D. Alkhazov, E.Y. Berlovich, K.A. Mezilev, Y.N. Novikov, V.N. Pantelejev, A.G. Poljakov, K.Y. Gromov, V.G. Kalinnikov, J. Kormicki, A. Potempa, E. Rurarz, F. Tarkanyi
1980Al15	ZPAAD	295,	331	K. Aleklett, P. Hoff, E. Lund, G. Rudstam
1980An.A	P-Berkeley		134	M.S. Antony, A. Huck, G. Klotz, A. Knipper, C. Miehé, G. Walter
1980Ba.A	Th.-Utrecht			J.R. Balder
1980Bl.A	Th.-Giessen			A. Blönnigen Diplomarbeit
1980Br23	NUPAB	349,	61	R.A. Braga, W.R. Western, J.L. Wood, R.W. Fink, R. Stone, C.R. Bingham, L.L. Riedinger
1980Bu04	IANFA	44,	79	A.V. Budzyak, T. Kretsu, V.V. Kuznetsov, N.A. Lebedev, G.I. Lizurei, Y.V. Yushkvich, M. Yanitski
1980Bu15	PRVCA	22,	1180	G.R. Burleson, G.S. Blanpied, G.H. Daw, A.J. Viescas, C.L. Morris, H.A. Thiessen, S.J. Greene, W.J. Braithwaite, W.B. Cottingham, D.B. Holtkamp, I.B. Moore, C.F. Moore
1980Ca02	PRVCA	21,	65	R.F. Casten, G.J. Smith, M.R. MacPhail, D. Breitig, W.R. Kane, M.L. Stelts, S.F. Mughabghab, J.A. Cizewski, H.G. Börner, W.F. Davidson, K. Schreckenbach
1980De02	ZPAAD	294,	35	R. Decker, K.D. Wünsch, H. Wollnik, E. Koglin, G. Siegert, G. Jung
1980De35	PRVCA	22,	2163	E. De Geer, G.B. Holm
1980Di07	PRVCA	21,	2101	A.C. Di Rienzo, H.A. Enge, D.B. Gazes, M.K. Salomaa, A. Sperduto, W. Schier, H.E. Wegner
1980Du02	ZPAAD	294,	107	J.P. Dufour, A. Fleury, F. Hubert, Y. Llabador, M.B. Mahourat, R. Bimbert, D. Gardes
1980Ew03	ZPAAD	296,	223	G.T. Ewan, E. Hagberg, B. Jonson, S. Mattsson, P. Tidemand-Petersson
1980Ga07	YAFIA	31,	306	Yu. P. Gangrskii, M.B. Miller, L.V. Mikhailov, I.F. Kharisov
1980Ge04	IJARA	31,	37	R.J. Gehrke
1980Gi04	PRVCA	21,	2041	S. Katcoff, L.K. Peker
1980Go11	NUPAB	344,	1	H. Gokturk, N.K. Aras, P. Fettweis, P. Del Marmol, J. Vanhorenbeek, K. Cornelis
1980Gr02	PRVCA	21,	498	R.C. Greenwood, R.E. Chrien
1980Gr12	NUIMA	175,	515	R.C. Greenwood, R.E. Chrien
1980Gr.A	DABBB	40,	3235	S.A. Gronemeyer in Diss. Abst. Int. 40B, 3235 (1980)
1980Ha20	PRVCA	22,	247	H.I. Hayakawa, I. Hyman, J.K.P. Lee

1980Ha36	PHSTB	22,	439	R. Hanninen, G.U. Din
1980Ho29	CZYPA	30,	763	J. Hinzatko, K. Konesny, F. Becvar, E.A. Eissa
1980Is02	CJPHA	58,	168	M.A. Islam, T.J. Kennett, S.A. Kerr, W.V. Prestwich
1980Ja.A	AnRpt KVI		31	J. Jänecke, E.H.L. Aarts, A.G. Drentje, C. Gaarde, M.H. Harakeh
1980Ka19	PRVCA	22,	997	J. Kalifa, G. Berrier-Ronsin, M. Vergnes, G. Rotbard, J. Vernotte, Y. Deschamps, R. Seltz
1980Ko01	NUPAB	334,	35	J. Kopecky, R.E. Chrien, H. Liou
1980Ko25	CJPHA	58,	1311	K.S. Kozier, K.S. Sharma, R.C. Barber, J.W. Barnard, R.J. Ellis, V.P. Derenchuk, H.E. Duckworth
1980Kr07	ZPAAD	295,	199	K.L. Kratz, H. Ohm
1980Kr.A	P-Berkeley		135	L. Krauss, I. Linck, A. Poves, J.C. Sens
1980Le18	PRVCA	22,	1976	A.G. Ledebuhr, L.H. Harwood, R.G.H. Robertson, T.J. Bowles
1980Li07	NUPAB	337,	401	H.I. Liou, R.E. Chrien, J. Kopecky, J.A. Konter
1980Lo10	PHSTB	22,	203	G. Løvhøiden, D.G. Burke, E.R. Flynn, J.W. Sunier
1980Lu04	ZPAAD	294,	233	E. Lund, P. Hoff, K. Aleklett, O. Glomset, G. Rudstam
1980Ma40	PRVCA	22,	2449	W. Mayer, K.E. Rehm, H.J. Körner, W. Mayer, E. Müller, I. Oelrich, H.J. Scheerer, R.E. Segel, P. Sperr, W. Wagner
1980Mu10	NUPAB	344,	89	M. Muller-Veggian, H. Beuscher, D.R. Haenni, R.M. Lieder, A. Neskakis, C. Mayer-Boricke
1980Mu12	PRVCA	22,	2204	M.J. Murphy, C.N. Davids, E.B. Norman
1980Na12	PYLBB	96,	261	H. Nann, K.K. Seth, S.G. Iversen, M.O. Kaletka, D.B. Barlow, D. Smith
1980Na14	JPSLB	41,	79	F. Naulin, C. Détraz, M. Bernas, D. Guillemaud, E. Kashy, M. Langevin, F. Pougheon, P. Roussel, M. Roy-Stephan
1980Ox01	ZPAAD	294,	389	K. Oxorn, B. Singh, S.K. Mark
1980Pa02	PRVCA	21,	462	R.C. Pardo, L.W. Robinson, W. Benenson, E. Kashy, R.M. Ronnigen
1980Pa07	PYLBB	91,	41	R.C. Pardo, S. Gales, R.M. Ronningen, L.H. Harwood
1980Ro04	ZPAAD	294,	221	E. Roeckl, G.M. Gowdy, R. Kirchner, O. Klepper, A. Piotrowski, A. Płochocki, W. Reisdorf, P. Tidemand-Petersson, J. Żylicz, D. Schardt, G. Nyman, W. Lindenzweig
1980Sa11	JPHGB	6,	525	J. Sala-Lizarraga, J. Byrne
1980Sc09	PYLBB	91,	46	U.J. Schrewe, P. Tidemand-Petersson, G.M. Gowdy, R. Kirchner, O. Klepper, A. Płochocki, W. Reisdorf, E. Roeckl, J.L. Wood, J. Żylicz, R. Fass, D. Schardt
1980Sh06	PYLBB	91,	211	K.S. Sharma, R.J. Ellis, V.P. Derenchuk, R.C. Barber, H.E. Duckworth
1980Sh14	CJPHA	58,	837	M.A.M. Shababuddin, D.G. Burke
1980St10	ZPAAD	295,	259	O. Straume, G. Løvhøiden, D.G. Burke
1980Ta07	PRVCA	21,	1667	E.M. Takagui, O. Dietzsch
1980Tr04	PRVCA	22,	17	R.E. Tribble, D.M. Tanner, A.F. Zeller
1980Ve01	ZPAAD	294,	144	D. Vermeulen, H.-G. Clerc, W. Lang, K.H. Schmidt, G. Münzenberg
1980Ve05	NUPAB	344,	421	R. Vennink, J. Kopecky, P.M. Endt, P.W.W. Glaudemans
1980Vi.A	PrvCom	AHW		V.D. Vitman, F.V. Moroz, Yu. Ya. Sergeev, V.K. Tarasov
1980Vy01	IANFA	44,	67	Ts. Vylov, S. Omanov, V. Csaleksandrov, N.B. Badalov, A. Budzyak, V.V. Kuznetsov, A.I. Muminov, Han Ken Mo
1980Wa24	PRVCA	22,	2330	E.K. Warburton, D.E. Alburger, D.J. Millener
1980Ya07	JINCA	42,	1539	H. Yamamoto, Y. Ikeda, K. Kawade, T. Katoh, T. Nagahara
1980Ya.A	AnRpt Berkeley			S. Yashita, M. Leino, A. Ghiorso
1981				
1981Ad02	NUPAB	356,	129	I. Adam, M. Honusek, Z. Hons, V.V. Kuznetsov, T.M. Muminov, R.R. Usmanov, A. Budzyak
1981Aj02	PRVCA	24,	1762	F. Ajzenberg-Selove, R.E. Brown, E.R. Flynn, J.W. Sunier
1981Al03	PRVCA	23,	473	D.E. Alburger, D.J. Millener, D.H. Wilkinson
1981Al07	PRVCA	23,	2217	D.E. Alburger, C.J. Lister, J.W. Olness, D.J. Millener
1981Al20	ZPAAD	302,	241	K. Aleklett, P. Hoff, E. Lund, G. Rudstam
1981Ar13	PYLBB	104,	186	Y. Arai, M. Fujioka, E. Tanaka, J. Shinozuka, H. Miyatake, M. Yoshii, T. Ishimatsu, see also NUPAB 420(84)193
1981Ar.A	JINR-P6-81-524			K.P. Artamonova, A. Budzyak, E.P. Grigorev, A. Dzumamuratov, A.V. Zolotavin, A.I. Ivanov, V.G. Kalinnikov, V.V. Kuznetsov, V.O. Sergeev, R. Usmanov
1981Ay01	PRVCA	23,	879	J. Äystö, M.D. Cable, R.F. Parry, J.M. Wouters, D.M. Moltz, J. Cerny
1981Ba40	ZPAAD	302,	329	G.K. Bavaria, J.E. Crawford, S. Calamawy, J.E. Kitching
1981Ba53	IANFA	45,	727	I.F. Barchuck, V.I. Goyshkin, E.N. Gorban, A.F. Ogorodnik

1981Be03	PRVCA	23,	555	C.E. Bemis, Jr., P.F. Dittner, R.L. Ferguson, D.C. Hensley, F. Plasil, F. Pleasonton
1981Be40	PRVCA	24,	756	M. Bernas, J.C. Peng, H. Doubre, M. Langevin, M.J. Le Vine, F. Pougheon, P. Roussel
1981Bo30	ZPAAD	302,	121	J. Bonn, P. Hartmann, D. Weskott
1981Bo.B	AnRpt Julich		76	M. Bogdanovic, T.D. MacMahon, H. Seyfarth
1981Bu.A	P-Samarkand		621	M. Budzinski, K. Ya. Gromov, V.V. Kuznetsov, T.M. Muminov, P.R. Usmanov, T. Chazratov
1981Ci01	PRVCA	23,	1453	J.A. Cizewski, E.R. Flynn, R.E. Brown, D.L. Hanson, S.D. Orbesen, J.W. Sunier
1981Co17	PRVCA	24,	911	T. Cousins, T.J. Kennett, W.V. Prestwich
1981Da06	PRVCA	23,	1612	E. Dafni, H.E. Mahnke, J.W. Noe, M.H. Rafailovich, G.D. Sprouse
1981De22	ZPAAD	300,	251	S. Della Negra, C. Deprun, D. Jacquet, Y. Le Beyec
1981De25	ZPAAD	301,	165	R. Decker, K.D. Wunsch, H. Wollnik, G. Jung, J. Münzel, G. Siegert, E. Koglin
1981De38	ZPAAD	303,	151	J. Deslauriers, S.C. Gujrathi, S.K. Mark
1981Dr07	ZPAAD	302,	361	S. Drissi, S. Andre, J. Genevey, V. Barci, A. Gizon, J. Gizon, J.A. Pinston, J. Jastrzebski, R. Kossakowski, Z. Preibisz
1981Eb01	ZPAAD	299,	209	I.D.U. Ebong, R.R. Roy
1981El03	PRVCA	23,	480	Y.A. Ellis-Akovioli, K.S. Toth, C.R. Bingham, H.K. Carter, D.C. Sousa
1981En07	NUPAB	372,	125	G. Engler, R.E. Chrien, H.I. Liou
1981Fe05	NUPAB	369,	425	M. Fernandez, G. Murillo, J. Ramirez, O. Avila, S.E. Darden, M.C. Rozak, J.L. Foster, B.P. Hichwa, P.L. Jolivet
1981Fi02	NUPAB	363,	311	C.A. Fields, F.W.N. De Boer, J.J. Kraushaar, R.A. Ristinen, L.E. Samuelson, E. Sugarbaker
1981FI02	PRVCA	24,	902	E.R. Flynn, F. Ajzenberg-Selove, R.E. Brown, J.A. Cizewski, J.W. Sunier, and erratum PRVCA 25(1982)2851
1981FI05	PYLBB	105,	125	E.R. Flynn, R.E. Brown, J.W. Sunier, J.M. Gurski, J.A. Cizewski, D.G. Burke
1981Fl.A	P-Helsingor		107	E.R. Flynn, R.E. Brown, J.W. Sunier, D.G. Burke, F. Ajzenberg-Selove, J.A. Cizewski
1981Ga36	IANFA	45,	1861	N. Ganbaatar, J. Kormicki, K.A. Mezilev, Y.N. Novikov, Y.P. Prokofiev, A. Potempa, F. Tarkani
1981Gi01	PYLBB	98,	29	F. Girshik, K. Krien, R.A. Naumann, G.L. Struble, R.G. Lanier, L.G. Mann, J.A. Cizewski, E.R. Flynn, T. Nail, R.K. Sheline
1981Ha08	NUPAB	357,	356	J.C. Hardy, G.C. Ball, W.G. Davies, J.S. Forster, H. Schmeing, E.T.H. Clifford
1981Ha44	NUPAB	371,	349	J.C. Hardy, T. Faestermann, H. Schmeing, J.A. Macdonald, H.R. Andrews, J.S. Geiger, R.L. Graham, K.P. Jackson
1981Hi01	NUPAB	352,	93	F. Hintenberger, P. von Rossen, S. Cierjacks, G. Schmalz, D. Erbe, B. Leugers
1981Ho10	ZPAAD	299,	281	S. Hofmann, G. Münzenberg, F. Heßberger, W. Reisdorf, P. Armbruster, B. Thuma
1981Ho17	ZPAAD	300,	289	P. Hoff, K. Aleklett, E. Lund, G. Rudstam
1981Ho18	NUIMA	186,	257	P. Hornshøj, H.L. Nielsen, N. Rud, H.L. Ravn
1981Ho.A	P-Helsingor		190	S. Hofmann, G. Münzenberg, W. Faust, F. Heßberger, W. Reisdorf, J.R.H. Schneider, P. Armbruster, K. Güttner, B. Thuma
1981Ho.B	PrvCom	AHW	Oct	C. Hofmeyr, D. Warner, H.G. Börner, G. Barreau, R.F. Casten, M. Stelts, J.S. Dionisio
1981Hs02	PRVCA	23,	1217	H.-C. Hseuh, E.-M. Franz, P.E. Haustein, S. Katcoff, L.K. Peker
1981Hu03	NUPAB	352,	247	M. Huysse, K. Cornelis, G. Lhersonneau, J. Verplancke, W.B. Wolters, K. Heyde, P. Van Isacker, M. Warnquier, G. Wenes, H. Vincx
1981Jo.B	P-Helsingor		640	B. Jonson, O.B. Nielsen, L. Westgaard, J. Żylicz
1981Ka07	PRVCA	23,	1274	R. Kantus, U.J. Schrewe, W.D. Schmidt-Ott, R. Michaelsen
1981Ke02	CJPHA	59,	93	T.J. Kennett, M.A. Islam, W.V. Prestwich
1981Ke03	ZPAAD	299,	323	T.J. Kennett, W.V. Prestwich, M.A. Islam
1981Ke11	CJPHA	59,	1212	T.J. Kennett, W.V. Prestwich, M.A. Islam
1981Ko13	PRVCA	23,	2743	R.T. Kouzes, K. Krien
1981Ko.A	PrvCom	NDG	Oct	B.K. Koene, R.E. Chrien, M.L. Stets, L.K. Peker
1981Le23	PRVCA	24,	2370	M.E. Leino, S. Yashita, A. Ghiorso
1981Li12	PRVCA	24,	260	C.J. Lister, P.E. Haustein, D.E. Alburger, J.W. Olness
1981Lo.A	P-Grenoble		383	M.A. Lone
1981Lu07	ZETFPA	81,	1158	V.A. Lyubimov, E.G. Novikov, V.Z. Nozik, E.F. Tretyakov, V.S. Kozik, N.F. Myasoedov
1981Ma30	NUPAB	370,	1	S. Matsuki, N. Sakamoto, K. Ogino, Y. Kadota, T. Tanabe, Y. Okuma
1981Mi12	ZPAAD	301,	199	P. Misaelides, P. Tidemand-Petersson, U.J. Schrewe, I.S. Grant, R. Kirchner, O. Klepper, I.C. Malcolm, P.J. Nolan, E. Roeckl, W.-D. Schmidt-Ott, J.L. Wood

1981Mu06	ZPAAD	300,	107	G. Münzenberg, S. Hofmann, F.P. Heßberger, W. Reisdorf, K.H. Schmidt, J.R.H. Schneider, P. Armbruster, C.C. Sahn, B. Thuma
1981Mu12	ZPAAD	302,	7	G. Münzenberg, S. Hofmann, W. Faust, F.P. Heßberger, W. Reisdorf, K.-H. Schmidt, T. Kitahara, P. Armbruster, K. Güttner, B. Thuma, D. Vermeulen
1981Na.A	P-Helsingor		376	F. Naulin, C. Détraz, M. Roy-Stephan, M. Bernas, J. de Boer, D. Guillemaud, M. Langevin, F. Pougheon, P. Roussel
1981Ni08	RAACA	29,	113	K. Nishiizumi, R. Gensho, M. Honda
1981Ox01	ZPAAD	303,	63	K. Oxorn, S.K. Mark
1981Pa11	PYLBB	103,	297	A.D. Panagiotou, I. Paschopoulos, A. Huck, N. Schulz
1981Pa17	ZPAAD	302,	117	A.D. Panagiotou, P.K. Kananis, E.N. Gazis, M. Bernas, C. Détraz, M. Langevin, D. Guillemaud, E. Plagnol
1981Ra07	PRVCA	23,	1979	S. Raman, O. Shahal, A.Z. Hussein, G.C. Slaughter, J.A. Harvey
1981Ri04	PRVCA	23,	2342	B.G. Ritchie, K.S. Toth, H.K. Carter, R.L. Mlekodaj, E.H. Speje
1981Ro02	PRVCA	23,	973	R.G.H. Robertson, J.A. Nolen, Jr., T. Chapuran, R. Vodhanel
1981Sa09	PRVCA	23,	1713	T. Saito, T. Toriyama, M. Kanbe, K. Hisatake
1981Sc17	NUPAB	368,	153	D. Schardt, T. Batsch, R. Kirchner, O. Klepper, W. Kurcewicz, E. Roeckl, P. Tidemand-Petersson
1981Sc21	PRVCA	24,	2695	W.D. Schmidt-Ott, R. Kantus, E. Runte, U.J. Schrewe, R. Michaelsen
1981Se11	PYLBB	103,	409	U. Sennhauser, L. Felawka, T. Kozłowski, H.K. Walter, F.W. Schlepuetz, R. Engfer, E.A. Hermes, P. Heusi, H.P. Isaak, H.S. Pruys, A. Zglinski, W.H.A. Hesselting
1981Se.A	P-Helsingor		655	K.T. Seth
1981Sm02	PYLBB	102,	114	L.G. Smith, E. Koets, A.H. Wapstra
1981So06	PRVCA	24,	1615	K. Sofia, B.N. Subba Rao, J.E. Cramfort
1981Sp03	ZPAAD	299,	112	L. Spanier, S.Z. Gui, H. Hick, E. Nolte
1981St18	PRVCA	24,	1785	P. Stephans, E. Mordechai, H.T. Fortune
1981Su.A	Leninst-YF-644			L.A. Sushkov, V.L. Alekseev, L.D. Kabina, I.A. Kondurov, D.D. Uorner
1981Th04	PRVCA	23,	2720	C. Thibault, F. Touchard, S. Buttgenbach, R. Klapisch, M. de Saint Simon, H.T. Duong, P. Jacquinet, P. Juncar, S. Liberman, P. Pillet, J. Pinard, J.L. Vialle, A. Pesnelle, G. Huber
1981To02	NUPAB	356,	26	K.S. Toth, Y.A. Ellis-Akivali, D.M. Moltz, C.R. Bingham, H.K. Carter, D.C. Sousa
1981Va27	IANFA	45,	1861	V.M. Vakhel, N.A. Golovkov, R.B. Ivanov, M.I. Mikhailova, A.F. Novgorodov, Y.V. Norseev, V.G. Chumin, Y.V. Yushkevich
1981Va.B	P-Grenoble		548	C. Van der Leun, P. De Wit, C. Alderliesten, and PrvCom AHW
1981Vo03	NUPAB	365,	26	T. von Egidy, G. Barreau, H.G. Börner, W.F. Davidson, J. Larysz, D.D. Warner, P.H.M. Van Assche, K. Nybo, T.F. Thorsteinsen, G. Lovhoiden, E.R. Flynn, J.A. Cizewski, R.K. Sheline, D. Decman, D.G. Burke, G. Sletten, N. Kaffrell, W. Kurcewicz, T. Bjornstad, G. Nyman
1981Wa11	NUPAB	362,	1	C. Wagemans, E. Allaert, A. De Clerq, P. D'Hondt, A. De Ruytter, G. Barreau, A. Emsallem
1981Wa31	NUIMA	190,	167	C. Wagemans, E. Allaert, G. Barreau, A. Emsallem, P. D'Hondt
1981We12	NUPAB	368,	117	H. Weigmann, C. Wagemans, A. Emsallem, M. Ashgar
1981Wh03	PYLBB	105,	116	R.E. White, H. Naylor, P.H. Barker, D.M.J. Lovelock, R.M. Smythe
1981Ya06	JINCA	43,	855	H. Yamamoto, Y. Ikeda, K. Kawade, T. Katoh, T. Nagahara
1982				
1982Ah01	NUPAB	373,	434	I. Ahmad, E.P. Horwitz
1982Al19	NUIMA	197,	383	P.F. Aalkemade, C. Alderliesten, P. De Wit, C. Van der Leun
1982Al29	PRVCA	26,	1157	K. Aleklett, P. Hoff, E. Lund, G. Rudstam
1982Al.A	LNPI-820			G.D. Alkhazov, N. Ganbaatar, K.Y. Gromov, V.G. Kalinnikov, K.A. Mezilev, Y.N. Novikov, A.M. Nurmukhamedov, A. Potempa, F. Tarkanyi
1982Al.C	PrvCom	NDG	Dec	D.E. Alburger, J.W. Olness, T.W. Burrows
1982An12	JPHGB	8,	1659	M.S. Antony
1982An19	PYLBB	113,	72	J.U. Andersen, G.J. Beyer, G. Charpak, A. De Rújula, B. Elbek, H.A. Gustavson, P.G. Hansen, B. Jonson, P. Knudsen, E. Laegsgaard, J. Pedersen, H.L. Ravn
1982Au01	NUPAB	378,	443	G. Audi, M. Epherre, C. Thibault, A.H. Wapstra, K. Bos
1982Ba15	IANFA	46,	63	I.F. Barchuk, V.I. Golyshkin, E.N. Gorban
1982Ba28	NUPAB	380,	189	A. Backlin, G. Hedin, B. Fogelberg, M. Saraceno, R.C. Greenwood, C.W. Reich, H.R. Koch, H.A. Baader, H.D. Breitig, O.W.B. Schult, K. Schreckenbach, T. von Egidy, W. Mampe

1982Ba69	IANFA	46,	2077	I.F. Barchuk, V.I. Golyshkin, E.N. Gorbinj
1982Be20	NCIAA	33,	273	E. Bellotti, E. Fiorini, C. Liguori, A. Pullia, A. Sarracino, L. Zanotti
1982Be21	PRVCA	25,	2848	G. Berrier-Ronsin, M. Vergnes, G. Rotbard, J. Vernotte, S. Fortier, J.M. Maison, R. Tamisier
1982Be38	PRVCA	26,	914	J.A. Becker, J.B. Carlson, R.G. Lanier, L.G. Mann, G.L. Struble, K.H. Maier, L. Ussery, W. Stoffl, T. Nail, R.K. Sheline, J.A. Cizewski
1982Be.A	P-Kiev		127	R.B. Begdzanov, K. Sh. Azimov
1982Bo04	PRVCA	25,	941	J.D. Bowman, R.E. Eppley, E.K. Hyde
1982Br10	RAACA	30,	1	W. Brüchle, G. Herrmann
1982Br23	PRVCA	26,	2166	D.S. Brenner, M.K. Martel, A. Aprahamian, R.E. Chrien, R.L. Gill, H.I. Liou, M. Shmid, M.L. Stelts, A. Wolf, F.K. Wohn, D.M. Rehfield, H. Dejbakhsh, C. Chung
1982Ca04	PYLBB	109,	419	L.C. Carraz, P.G. Hansen, A. Huck, B. Jonson, G. Klotz, A. Knipper, K.L. Kratz, C. Miéché, S. Mattsson, G. Nyman, H. Ohm, A.M. Poskanzer, A. Poves, H.L. Ravn, C. Richard-Serre, A. Schröder, G. Walter, W. Ziegert
1982Ca16	PRVCA	26,	1778	M.D. Cable, J. Honkanen, R.F. Parry, H.M. Thierens, J.M. Wouters, Z.Y. Zhou, J. Cerny
1982Cr01	PYLBB	109,	8	G.M. Crawley, W. Benenson, G. Bertsch, S. Gales, D. Weber, B. Zwieglinsky
1982De03	PRVCA	25,	146	P. De Gelder, D. De Frenne, E. Jacobs, K. Heyde, S. Fortier, J.M. Maison, M.N. Rao, C.P. Massolo
1982De06	PRVCA	25,	504	J. Deslauriers, S.C. Gujrathi, S.K. Mark
1982De11	ANPHA	7,	149	S. Della Negra, C. Deprun, D. Jacquet, Y. Le Beyec
1982De36	ZPAAD	307,	305	S. Della Negra, H. Gauvin, D. Jacquet, Y. Le Beyec
1982De43	ZPAAD	308,	243	S. Della Negra, D. Jacquet, Y. Le Beyec
1982De.A	Th.-Orsay			Ph. Dessagne
1982Di01	PYLBB	108,	265	W.R. Dixon, W.F. Davidson, R.S. Storey, D.M. Rehfield
1982Di05	NUPAB	378,	273	W.R. Dixon, R.S. Storey, A.F. Bielajew
1982En03	PRVCA	25,	1830	H.A. Enge, M. Salomaa, A. Sperduto, J. Ball, W. Schier, A. Graue, A. Graue
1982Ew01	NUPAB	380,	423	G.T. Ewan, E. Hagberg, B. Jonson, S. Mattsson, P. Tidemand-Petersson
1982Fi10	NUPAB	385,	505	L.K. Fifield, J.L. Durell, M.A.C. Hotchkis, J.R. Leigh, T.R. Ophel, D.C. Weisser
1982FI09	PRVCA	25,	2851	E.R. Flynn, F. Ajzenberg-Selove, R.E. Brown, J.A. Cizewski, J.W. Sunier
1982Gi.A	Th.-Mainz			H. Gietz
1982Gr.A	P-Amsterdam			K.Y. Gromov, et al
1982Hi14	ZPAAD	309,	27	R. Hingmann, H.-G. Clerc, C.C. Sahn, D. Vermeulen, K.H. Schmidt, J.G. Keller
1982Ho04	ZPAAD	305,	111	S. Hofmann, W. Reisdorf, G. Münzenberg, F.P. Heßberger, J.R.H. Schneider, P. Armbruster
1982Ho07	PRVCA	25,	2232	R.W. Hoff, W.F. Davidson, D.D. Warner, H.G. Börner, T. von Egidy
1982Ho11	PYLBB	116,	4	P. Hornshoj, J. Kolind, N. Rud
1982Hu02	NUIMA	192,	609	P. Hungerford, H.H. Schmidt
1982Is05	PRVCA	25,	3184	M.A. Islam, T.J. Kennett, W.V. Prestwich
1982Jo03	JPHGB	8,	1405	M.G. Johnson, I.S. Grant, P. Misealides, P.J. Nolan, P. Peuser, R. Kirchner, O. Klepper, E. Roeckl, P. Tidemand-Petersson
1982Ka25	ZPAAD	308,	33	K. Kawade, K. Sistemich, G. Battistuzzi, H. Lawin, K. Shizuma, J. Blomqvist
1982Ka.A	PrvCom	AHW	Jul	W. Kane, et al
1982KI03	ZPAAD	305,	125	O. Klepper, T. Batsch, S. Hofmann, R. Kirchner, W. Kurcewicz, W. Reisdorf, E. Roeckl, D. Schardt, G. Nymann
1982Ko06	PRVCA	25,	1076	R.T. Kouzes, M.M. Lowry, C.L. Bennett, and PrvCom AHW May 1988
1982Kr05	ZPAAD	304,	307	H. Kräwinkel, H.W. Becker, L. Buchmann, J. Görres, K.U. Kettner, W.E. Kieser, R. Santo, P. Schmalbrock, H.P. Trautvetter, A. Vliks, C. Rolfs, J.W. Hammer, R.E. Azuma, W.S. Rodney
1982Kr12	NUPAB	386,	245	B. Krusche, K.P. Lieb, H. Daniel, T. von Egidy, G. Barreau, H.G. Börner, R. Brissot, C. Hofmeyr, R. Rascher
1982Ku15	ZPAAD	308,	21	W. Kurcewicz, E.F. Zganjar, R. Kirchner, O. Klepper, E. Roeckl, P. Komminos, E. Nolte, D. Schardt, P. Tidemand-Petersson
1982La22	NUIMA	196,	559	R.G. Lanier, L.G. Mann, G.L. Stuble
1982Mi14	NATUA	300,	414	J.-F. Minster, J.-L. Birck, C.J. Allègre
1982Mo04	PRVCA	25,	1276	S. Mordechai, S. Lafrance, H.T. Fortune
1982Mo10	PYLBB	113,	16	D.M. Moltz, K.S. Toth, F.T. Avignone III, H. Noma, B.G. Ritchie, B.D. Kern
1982Mo12	PRVCA	25,	3218	C.L. Morris, H.T. Fortune, L.C. Bland, R. Gilman, S.J. Greene, W.B. Cottingame, D.B. Holtkamp, G.R. Burleson, C.F. Moore
1982Mo23	PRVCA	26,	1914	D.M. Moltz, K.S. Toth, R.E. Tribble, R.E. Neese, J.P. Sullivan

1982Na04	PRVCA	25,	1074	F. Naulin, C. Détraz, M. Roy-Stéphan, M. Bernas, J. de Boer, D. Guillemaud, M. Langevin, F. Pougheon, P. Roussel
1982No06	ZPAAD	305,	289	E. Nolte, H. Hick
1982No08	ZPAAD	306,	223	E. Nolte, S.Z. Gui, G. Colombo, G. Korschinek, K. Eskola
1982Oh04	JUPSA	51,	43	M. Ohshima, Z. Matumoto, T. Tamura
1982OI01	NUPAB	373,	13	J.W. Olness, E.K. Warburton, D.E. Alburger, C.J. Lister, D.J. Millener
1982Pa24	ZPAAD	308,	345	B. Pahlmann, U. Keyser, F. Münnich, B. Pfeiffer, see also 87Gr. A
1982PI05	NUPAB	388,	93	A. Płochocki, J. Żylicz, R. Kirchner, O. Klepper, E. Roeckl, P. Tidemand-Petersson, I.S. Grant, P. Misealides
1982Ra13	ZPAAD	305,	359	M.S. Rapaport, G. Engler, A. Gayer, I. Yoresh
1982Ra.A	PrvCom	AHW	Nov	A. Raemy, J.C. Dousse, J. Kern, W. Schwitz
1982Re08	NUIMA	197,	427	K. Rengan, J. Lin, M. Zendel, R.A. Meyer
1982Sc03	NUPAB	376,	144	K. Schreckenbach, A.I. Namenson, W.F. Davidson, T. von Egidy, H.G. Börner, J.A. Pinston, R.K. Smither, D.D. Warner, R.F. Casten, M.L. White, W. Stoff
1982Sc14	PRVCA	25,	2888	H.H. Schmidt, P. Hungerford, H. Daniel, T. von Egidy, S.A. Kerr, R. Brissot, G. Barreau, H.G. Börner, C. Hofmeyr, K.P. Lieb
1982Sc15	PRVCA	25,	3091	U.J. Schrewe, E. Hagberg, H. Schmeing, J.C. Hardy, V.T. Koslowsky, K.S. Sharma, E.T.H. Clifford
1982Sc25	ZPAAD	308,	183	H.J. Scheerer, D. Pereira, A. Chalupka, R. Gyufko
1982So.A	P-Kiev		51	L.M. Solin, V.A. Yakovlev, V.N. Kushmin, Yu. A. Nemilov
1982So.B	AnRpt Julich		54	F. Soramel-Stanco, R. Julin, B. Rubio, A. Ercan, P. Kleinheinz, J. Tain, G.P.A. Berg, W. Huerliman, I. Katayama, S.A. Martin, J. Messburger, J.G.M. Roemer, B. Styczen, H.J. Scheerer
1982Ta18	NUPAB	388,	498	M. Tan, R.A. Braga, R.W. Fink, P.V. Rao
1982Th01	PRVCA	25,	331	C.E. Thorn, W.F. Piel, Jr., M.J. LeVine, P.D. Bond, A. Gallmann
1982Ti02	NUPAB	376,	421	T.A.A. Tielens, J. Kopecky, F. Stecher-Rasmussen, W. Ratinsky, K. Abrahams, P.M. Endt
1982To02	PYLBB	108,	169	F. Touchard, P. Guimbal, S. Buttgenbach, R. Klapisch, M. de Saint Simon, J.M. Serre, C. Thibault, H.T. Duong, P. Juncar, S. Liberman, J. Pinard, J.L. Vialle
1982To14	PYLBB	117,	11	K.S. Toth, Y.A. Ellis-Akovali, D.M. Moltz, R.L. Mlekodaj
1982Va13	NUPAB	380,	261	C. Van der Leun, C. Alderliesten
1982Ve.A	P-Kiev		91	G.V. Veselov, N. Ganbataar, K.A. Mezilev
1982Vy02	IANFA	46,	16	Ts. Vylov, V.M. Gorodzhankin, K. Ya. Gromov, V.G. Kalinnikov, T. Kretsu, V.V. Kuznetsov
1982Vy03	IANFA	46,	834	Ts. Vylov, V.M. Gorodzhankin, K. Ya. Gromov, V.V. Kuznetsov
1982Vy06	IANFA	46,	2066	Ts. Vylov, V.G. Kalinnikov, V.V. Kuznetsov, Z.N. Li, A.A. Solnyshkin, Y.U. Yuskevich
1982Vy07	IANFA	46,	2239	Ts. Vylov, V.M. Gorodzhankin, K.Y. Gromov, V.V. Kuznetsov, T. Kretsu, N.A. Lebedev, Yu. V. Yushkevich
1982Vy10	YAFIA	36,	812	Ts. Vylov, V.M. Gorodzhankin, K. Ya. Gromov, A.I. Ivanov, I.F. Uchevatkin, V.G. Chumin
1982Wi.A	Th.-Un.N.Caroln			J.F. Wilkerson
1982Zu02	PRVCA	26,	965	J.D. Zumbro, C.P. Browne, J.F. Mateja, H.T. Fortune, R. Middleton
1982Zu04	PRVCA	26,	2668	J.D. Zumbro, A.A. Rollefson, R.W. Tarara, C.P. Browne
1982Zw02	NUPAB	389,	301	B. Zwięgliński, W. Benenson, G.M. Crawley, S. Galès, D. Weber
1983				
1983Ad05	CZYPA	33,	465	J. Adam, V. Hnatowicz, A. Kugler
1983Al06	ZPAAD	310,	247	G.D. Alkhazov, K.A. Mezilev, Yu. N. Novikov, N. Ganbataar, K. Ya. Gromov, V.G. Kalinnikov, A. Potempa, E. Sieniawski, F. Tarkanyi
1983Al18	PZETA	38,	144	G.D. Alkhazov, A.A. Bykov, V.D. Vitman, Yu. V. Naukov, S. Yu. Orlov, V.K. Tarasov
1983Al20	YAFIA	37,	797	D.V. Aleksandrov, E.A. Ganza, Yu. A. Glukhov, V.I. Dukhanov, I.B. Mazurov
1983Al.A	PrvCom	AHW	Jan	G.D. Alkhazov
1983Al.B	P-Moscow		87	G.D. Alkhazov, A.A. Akhmonen, L. Kh. Batist, Yu. S. Blinnikov, N. Ganbataar, K. Ya. Gromov, Yu. V. Elkin, V.G. Kalinnikov, K.A. Mezilev, F.V. Moroz, Yu. N. Novikov, A.M. Nurmukhamedov, V.N. Pantelev, A.G. Polyakov, A. Potempa, E. Senyavski, V.K. Tarasov, F. Tarkani
1983An15	JPHGB	9,	L245	M.S. Antony, J. Britz, J.B. Buep, A. Papp
1983Ay01	NUPAB	404,	1	J. Äystö, J. Honkanen, W. Trzaska, K. Eskola, K. Vierinen, S. Messelt

1983Ba32	PRVCA	28,	337	P.A. Baisden, D.H. Sisson, S. Niemeyer, B. Hudson, C.L. Bennet, R.A. Naumann
1983Be18	NUPAB	399,	131	H. Behrens, P. Christmas
1983Be42	NUPAB	408,	87	G.J. Beyer, A. De Rújula, R.-D. von Dincklage, H. Å. Gustafsson, P.G. Hansen, P. Hoff, B. Jonson, H.L. Ravn, K. Riisager
1983Be.C	PrvCom	GAU	Sep	M. Bernas, et al
1983B116	ZPAAD	314,	199	J. Blomqvist, A. Kerek, B. Fogelberg
1983Bo29	PYLBB	130,	167	P.D. Bond, R.F. Casten, D.D. Warner, D. Horn
1983Bu03	CJPHA	61,	460	D.G. Burke, I. Nowikov, Y.K. Peng, J.C. Yanch
1983Ca04	PRVCA	27,	1310	R.F. Casten, D.D. Warner, G.M. Gowdy, N. Rofail, K.P. Lieb
1983Ca06	PYLBB	123,	25	M.D. Cable, J. Honkanen, R.F. Parry, S.H. Zhou, Z.Y. Zhou, J. Cerny for 26Sii
1983Ch08	ZPAAD	310,	135	A. Chalupka, H. Vonach, E. Hueges, H.J. Scheerer
1983Ch39	PRVCA	28,	2099	C. Chung, W.B. Walters, D.S. Brenner, A. Aprahamian, R.L. Gill, M. Shmid, R.E. Chrien, L.-J. Yuan, A. Wolf, Z. Berant
1983Ch47	NIMAE	215,	397	P. Christmas, S.M. Judge, T.B. Ryves, D. Smith, G. Winkler
1983Ci01	PRVCA	27,	1040	J.A. Cizewski, D.G. Burke, E.R. Flynn, R.E. Brown, J.W. Sunier
1983De03	PRVCA	27,	892	R.A. Dewberry, R.T. Kouzes, R.A. Neumann
1983De04	NUPAB	394,	378	C. Détraz, M. Langevin, M.C. Goffri-Kouassi, D. Guillemaud, M. Epherre, G. Audi, C. Thibault, F. Touchard
1983De17	ZPAAD	312,	209	D.J. Decman, R.K. Sheline, Y. Tanaka, E.T. Journey
1983De20	NUPAB	401,	397	P. De Gelder, D. De Frenne, K. Heyde, N. Kaffrell, A.M. VanDenBerg, N. Blasi, M.N. Harakah, W. Sterrenburg
1983De28	NUPAB	404,	225	M.G. Delfini, J. Kopecky, J.B.M. de Haas, H.I. Liou, R.E. Chrien, P.M. Endt
1983De29	NUPAB	404,	250	M.G. Delfini, J. Kopecky, R.E. Chrien, H.I. Liou, P.M. Endt
1983De47	YAFIA	38,	1105	A.V. Derbin, L.A. Popeko
1983De51	YAFIA	38,	1377	R.A. Demirkhanov, V.V. Dorokhov, M.I. Dzkuya, G.A. Dorokhova, see also report SFTII Suchumi
1983Do11	ZPAAD	313,	207	Zs. Dombrádi, A. Krasznahorkay, J. Gulyás
1983En03	NSENA	85,	139	T.R. England, W.B. Wilson, R.E. Schenter, F.M. Mann
1983Fe06	ZPAAD	314,	159	P. Fettweiss, J.C. Dehaes
1983F105	PRVCA	28,	97	E.R. Flynn, J. van der Plicht, J.B. Wilhelmy, L.G. Mann, G.L. Struble, R.G. Lanier
1983F106	PRVCA	28,	575	E.R. Flynn, R.E. Brown, F. Ajzenberg-Selove, J.A. Cizewski
1983Fo.B	PrvCom	AHW	Jun	I. Förster
1983Ga.A	P-Moscow		90	N. Ganbaatar, Ya. Korimitski, K.A. Mezilev, Yu. N. Novikov, A.M. Nurmukhamedov, A. Potempa, E. Senyavski, F. Tarkani
1983Ge08	NIMAE	211,	89	W. Gelletly
1983Gn01	NUPAB	406,	29	B.E. Gnade, R.E. Fink, J.L. Wood
1983Gr01	PYLBB	120,	63	H. Grawe, H. Haas
1983Ha06	NUPAB	395,	152	E. Hagberg, J.C. Hardy, H. Schmeing, E.T.H. Clifford, V.T. Koslowsky
1983Ha35	IJARA	34,	1241	H.H. Hansen
1983He08	PRVCA	27,	2248	R.G. Helmer, C.W. Reich
1983Hi08	NUPAB	404,	51	R. Hingmann, H.-G. Clerc, C.-C. Sahn, D. Vermeulen, K.-H. Schmidt, J.G. Kekeller
1983Ho08	NUPAB	398,	130	M.A.C. Hotchkis, L.K. Fifield, J.R. Leigh, T.R. Ophel, G.D. Putt, D.C. Weiser
1983Ho23	PYLBB	133,	146	J. Honkanen, M.D. Cable, R.F. Parry, S.H. Zhou, Z.Y. Zhou, J. Cerny
1983Hu11	ZPAAD	313,	325	P. Hungerford, T. von Egidy, H.H. Schmidt, S.A. Kerr, H.G. Börner, E. Monnard
1983Hu12	ZPAAD	313,	337	P. Hungerford, T. von Egidy, H.H. Schmidt, S.A. Kerr, H.G. Börner, E. Monnard
1983Hu13	ZPAAD	313,	349	P. Hungerford, T. von Egidy, H.H. Schmidt, S.A. Kerr, H.G. Börner, E. Monnard
1983Ia02	CJCHA	61,	694	R. Iafigliola, M. Chatterjee, H. Dautet, J.K.P. Lee
1983Jo04	NUPAB	396,	479c	B. Jonson, J.U. Andersen, G.J. Beyer, G. Charpak, A. De Rújula, B. Elbek, H.A. Gustavson, P.G. Hansen, P. Knudsen, E. Laegsgaard, J. Pedersen, H.L. Ravn
1983Ke.A	P-Florence		B118	S.A. Kerr, F. Hoyler, K. Schreckenbach, H.G. Börner, G.G. Colvin, see also P-Knoxville(1984)416
1983Ko22	NUPAB	405,	29	V.T. Koslowsky, E. Hagberg, J.C. Hardy, R.E. Azuma, E.T.H. Clifford, H.C. Evans, H. Schmeing, U.J. Schrewe, K.S. Sharma
1983La23	PYLBB	130,	251	M. Langevin, C. Détraz, D. Guillemaud-Mueller, A.C. Mueller, C. Thibault, F. Touchard, G. Klotz, C. Miehé, G. Walter, M. Epherre, C. Richard-Serre
1983La.A	VDPEA	18,	1138	P.O. Larsson, T. Batsch, R. Kirchner, O. Klepper, W. Kurcewicz, E. Roeckl, D. Schardt, G. Nymann, P. Tidemand-Petersson, and verbal report
1983Le.A	Th.-Helsinki			M. Leino (Report HU-P-D37)

1983Li11	PRVCA	28,	2127	C.J. Lister, B.J. Varley, D.E. Alburger, P.E. Haustein, S.K. Saha, J.W. Olness, H.G. Price, A.D. Irving
1983Mo09	PRVCA	28,	623	S. Mordechai, S. LaFrance, H.T. Fortune
1983Ni05	ZPAAD	312,	265	J.M. Nitschke, M.D. Cable, W.-D. Zeitz
1983Ny01	NUPAB	408,	127	K. Nybø, T.F. Thorsteinsen, G. Løvholden, E.R. Flynn, J.A. Cizewski, R.K. Shelton, D. Decman, D.G. Burke, G. Sletten, P. Hill, N. Kaffrell, W. Kurcewicz, G. Nymann
1983Og.A	JINR-D7-83-644			Yu. Ts. Oganessian
1983Pa.A	Th.-Berkeley			R.F. Parry DABBB 44,2472(1984)
1983Po10	NUPAB	411,	65	M.G. Porquet, C. Bourgeois, P. Kilcher, J. Sauvage-Letessier, ISOCELE
1983Pu01	NUPAB	399,	190	G.P. Putt, L.K. Field, M.A.C. Hotchkis, T.R. Ophel, D.C. Weisser
1983Ra04	PRVCA	27,	1188	S. Raman, E.T. Jurney, D.A. Outlaw, I.S. Towner
1983Ra25	PRLTA	51,	975	R.S. Raghavan
1983Ra.A	P-Florence		I-1	K.V. Ramaniah, S.B. Reddy, V.V. Rama Murti, K.L. Narasimham
1983Ro08	NUPAB	401,	41	M. Rotbard, M. Vergnes, J. Vernet, G. Berrier-Ronsin, J. Kalifa, R. Tamisier
1983Ru06	NUPAB	399,	163	E. Runte, W.-D. Schmidt-Ott, P. Tidemand-Petersson, R. Kirchner, O. Klepper, W. Kurcewicz, E. Roeckl, N. Kaffrell, P. Peuser, K. Rykaczewski, M. Bernas, P. Dessagne, M. Langevin
1983Ru08	NUPAB	407,	60	J.F.G.A. Ruyf, P.M. Endt
1983Sc18	ZPAAD	310,	295	U.J. Schrewe, E. Hagberg, H. Schmeing, J.C. Hardy, V.T. Koslowsky, K.S. Sharma
1983Sc24	ZPAAD	312,	21	J.R.H. Schneider, S. Hofmann, F.P. Heßberger, G. Münzenberg, W. Reisdorf, P. Armbruster
1983Sc28	ZPAAD	313,	137	U.J. Schrewe, W.D. Schmidt-Ott
1983Se17	IANFA	47,	885	V.A. Sergienko, A.V. Borontsovskii, M.A. Nain
1983Sh06	ZPAAD	311,	71	K. Shizuma, H. Lawin, K. Sistemich
1983Sh31	PRVCA	28,	1712	B. Sherrill, K. Beard, W. Benenson, B.A. Brown, E. Kashy, W.E. Ormand, H. Nann, J.J. Kehayias, A.D. Bacher, T.E. Ward
1983Ta.A	BAPSA	28,	658	R.W. Tarara, C.P. Browne, see BAPSA 28,968
1983Ti02	NUPAB	403,	13	T.A.A. Tielens, J. Kopecky, K. Abrahams, P.M. Endt
1983To01	PRVCA	27,	889	K.S. Toth
1983To20	NUPAB	411,	209	Y. Tokunaga, H. Seyfarth, O.W.B. Schult, H.G. Börner, Ch. Hofmeyr, G. Barreau, R. Brissot, Ch. Monkemeyer, U. Kaup
1983Ts01	PRVCA	27,	2397	J.S. Tsai, T.J. Kennett, W.V. Prestwich
1983Ve06	IANFA	47,	834	G.V. Veselov, N. Ganbaatar, Ya. Kormitski, Yu. N. Novikov, A. Potempa, E. Senyavski, V.A. Sergienko, F. Tarkani
1983Ve.A	P-Moscow		99	G.V. Veselov, N. Ganbaatar, K.A. Mezilev, Yu. N. Novikov, A. Potempa, V.A. Sergienko, F. Tarkanyi, A.G. Teterin
1983Vi.A	P-Moscow		575	V.D. Vitman, F.V. Moroz, S. Yu. Orlov, V.K. Tarasov
1983Vo10	ZPAAD	313,	167	E. Voth, W.D. Schmidt-Ott, H. Behrens
1983Vo.A	PrvCom	AHW	Jul	H. Vonach
1983Wa27	NUPAB	411,	81	F.B. Waanders, J.P.L. Reinecke, H.N. Jacobs, J.J.A. Smit, M.A. Meyer, P.M. Endt
1983We07	ZPAAD	313,	173	B. Weiss, C.F. Liang, P. Paris, A. Peghaire, A. Gizon, and Prv-Com GAu Oct 1983
1983Wi14	NUPAB	411,	151	C.A. Wiedner, R. Haupt, W. Saathoff, J. Haas, R. Gyufko, K.R. Cordell, S.T. Thornton, R.A. Cecil, R.L. Parks
1983Wi.A	PrvCom	AHW	Jan	C.A. Wiedner, et al
1983Wi.B	PrvCom	AHW	Jun	C.-A. Wiedner, et al
1983Wo01	PRVCA	27,	27	C.J. Woodward, R.E. Tribble, D.M. Tanner
1983Wo04	PRVCA	27,	1745	J.M. Wouters, H.M. Thierens, J. Åystö, M.D. Cable, P.E. Haustein, R.F. Parry, J. Cerny
1983Wo10	PRLTA	51,	873	F.K. Wohn, J.C. Hill, R.F. Petry, H. Dejbakhsh, Z. Berant, R.L. Gill
1983Zu01	NUPAB	393,	15	J.D. Zumbro, R.W. Tarara
			1984	
1984Ah02	NUPAB	413,	423	I. Ahmad, J.L. Lerner
1984AI08	YAFIA	39,	513	D.V. Aleksandrov, E.A. Ganza, Yu. A. Glukhov, B.G. Novatski, A.A. Ogloblin, D.N. Stepanov
1984AI36	IANFA	48,	834	G.D. Alkhazov, N. Ganbaatar, K. Ya. Gromov, V.K. Kalinnikov, K.A. Mezilev, Yu. N. Novikov, A.M. Nurmhukhamedov, A. Potempa, F. Tarkani

1984An03	NCIAA	79,	100	M.S. Antony, J. Britz, J.B. Bueb, A. Pape
1984An17	NCIAA	81,	414	M.S. Antony, J. Britz, J. Bueb, A. Pape
1984Ay01	PYLBB	138,	369	J. Äystö, J. Arje, V. Koponen, P. Taskinen, H. Hyvonen, A. Hautotarvi, K. Vierinen
1984Ba12	PRVCA	29,	1530	P.H. Barker, R.E. White
1984Ba.B	P-Darmstadt		55	P.H. Barker, R.E. White, D.M.J. Lovelock, R.M. Smythe
1984Be10	NUPAB	413,	363	M. Bernas, Ph. Dessagne, M. Langevin, J. Payet, F. Pougheon, P. Roussel, W.-D. Schmidt-Ott, P. Tidemand-Petersson, M. Girod
1984Be.A	PrvCom		84De33	M. Bernas, Ph. Dessagne, M. Langevin, J. Payet, F. Pougheon, P. Roussel, I. Turkevicz, M. Girod confirmed PrvCom GAU 1988
1984Bh02	NCIAA	79,	471	P. Bhattacharya
1984Bl.A	P-Darmstadt		134	F. Blönnigen, G. Bewersdorf, C. Geisse, W. Lippert, B. Pfeiffer, U. Stöhlker, H. Wollnik
1984Bo.C	P-Knoxville		382	M. Bogdanovic, H. Seyfarth, H.R. Börner, S. Kerr, F. Hoyler, K. Schreckenbach, G.G. Colvin
1984Br.A	AnRpt IPN		13	F. Bragança Gil, C. Bourgeois, P. Kilcher, M.G. Porquet, B. Roussi�re, J. Sauvage, ISOCELE
1984Bu09	NUPAB	415,	93	L. Buchmann, M. Hilgemeier, A. Krauss, A. Redder, C. Rolfs, H.P. Trautvetter, T.R. Donoghue
1984Bu14	PRVCA	29,	2339	D.G. Burke
1984Bu23	PRVCA	30,	742	B.L. Burks, R.E. Anderson, Y. Aoki, B.C. Karp, E.J. Ludwig, W.J. Thompson, R.L. Varner
1984Ca32	PRVCA	30,	1671	F. Calaprice, G.T. Ewan, R.-D. von Dincklage, B. Jonson, O.C. Jonsson, H.L. Ravn
1984Co19	ZPAAD	319,	107	M.D. Cohler, D.L. Watson, R. Wadsworth, S.M. Lane, M.J. Smithson, R.E. Brown, J.-C. Peng, N. Stein, J.W. Sunier, D.M. Drake
1984Co.A	P-Darmstadt		272	E. Coenen, K. Deneffe, M. Huyse, P. Van Duppen, and PrvCom AHW July 1984
1984Cr01	JPGPE	10,	1133	D.A. Craig, H.W. Taylor
1984Da.A	P-Darmstadt		257	H. Dautet, N. Campeau, J.K.P. Lee, C. Bourgeois, B. Roussi�re, A. Houdayer
1984De15	NUPAB	419,	101	J.B.M. De Hass, K. Abrahams, T.A.A. Tielens, H. Postma, W.J. Huiskamp
1984De16	NUPAB	419,	165	D.J. Decman, H. Grawe, H. Kluge, K.H. Maier, A. Maj, M. Menningen, N. Roy, W. Wiegner
1984De33	NUPAB	426,	399	Ph. Dessagne, M. Bernas, M. Langevin, G.C. Morrison, J. Payet, F. Pougheon, P. Roussel
1984El05	PYLBB	141,	306	R.J. Ellis, K.S. Sharma, R.C. Barber, S.R. Loewen, H.E. Duckworth
1984Fa04	PYLBB	137,	23	T. Faestermann, A. Gillitzer, K. Hartel, P. Kienle, E. Nolte, and AMCO-7,p.177,184
1984Fi02	NUPAB	417,	534	L.K. Fifield, M.A.C. Hotchkis, P.V. Drumm, T.R. Ophel, G.D. Putt, D.C. Weisser
1984Fi05	PRVCA	29,	2118	B.W. Filippone, C.N. Davids, R.C. Pardo, J. Äystö
1984Fi.A	BAPSA	29,	1056	S.A. Fisher, R.L. Hershberger, F. Gabbard
1984Fo19	NUPAB	429,	205	B. Fogelberg, J. Blomqvist
1984Fo.A	P-Knoxville		427	I. F�rster, H.G. B�rner, P. von Brentano, G.G. Colvin, A.M.I. Haque, S.A. Kerr, R. Rascher, R. Richter, K. Schreckenbach
1984Ga.B	BAPSA	29,	1041	Z. Gacsi, Ya. Guyash, T. Kibedi, E. Koltai, A. Krasnakhorkai, T. Fenesh
1984Gi09	PRVCA	30,	958	R. Gilman, H.T. Fortune, L.C. Bland, R.R. Kiziah, C.F. Moore, P.A. Seidl, C.L. Morris, W.B. Cottingham
1984Ha20	PYLBB	138,	260	B.J. Hall, R.J. Ellis, G.R. Dyck, C.A. Lander, R. Beach, K.S. Sharma, R.C. Barber, H.E. Duckworth
1984Ha27	NUPAB	420,	351	R. Hanninen
1984Ha31	ZPAAD	317,	193	R. Haupt, C.-A. Wiedner, G.J. Wagner, K. Wannebo, T.S. Bhatia, H. Hafner, R. Maschuw, W. Saathoff, S.T. Thornton
1984Ha.A	P-Darmstadt		89	W. Hampel, R. Schlotz
1984Ha.B	P-Darmstadt		244	W. Habenicht, L. Spanier, G. Korschinek, H. Ernst, E. Nolte
1984He.A	Th.-Montreal			D.W. Hetherington
1984Ho02	PRVCA	29,	618	R.W. Hoff, T. von Egidy, R.W. Loughheed, D.H. White, H.G. B�rner, K. Schreckenbach, G. Barreau, D.D. Warner
1984Ho.A	P-Darmstadt		184	S. Hofmann, Y.K. Agarwal, P. Armbruster, F.P. He�bberger, P.O. Larsson, G. M�nzenberg, K. Poppensieker, W. Reisdorf, J.R.H. Schneider, H.J. Sch�tt
1984Ho.B	Th.-Canberra			M.A.C. Hotchkis
1984Ia.A	P-Darmstadt		141	R. Iafigliola, H. Dautet, S.W. Xu, J.K.P. Lee, R. Chrien, R. Gill, M. Schmid
1984Is09	KURAA	17,	132	T. Ishii, H. Yamamoto, M. Yoshida, K. Kawade, H. Miyade, Y. Iwata, T. Katoh, J.-Z. Ruan, Y. Fumakoshi, Y. Kawase, K. Okano

1984Ka07	PYLBB	137,	150	I. Katayama, S. Morinobu, M. Fujiwara, Y. Fujita, T. Yamazaki, H. Ikegami
1984Ka.A	P-Alma Ata		128	V.G. Kalinnikov, V.V. Kuznetsov, V.I. Stegailov, see also P-Yurmala(1987)p119
1984Ke11	CJPHA	62,	861	T.J. Kennett, W.V. Prestwich, J.S. Tai
1984Ke15	PRVCA	30,	1840	T.J. Kennett, M.A. Islam, W.V. Prestwich
1984Ko10	PRVCA	29,	2343	R.T. Kouzes, M.M. Lowry, C.L. Bennett, and PrvCom AHW May 1988
1984Ko29	NUPAB	427,	413	J. Kopecky, M.G. Delfini, R.E. Chrien
1984Kr05	NUPAB	417,	231	B. Krusche, K.P. Lieb, L. Ziegler, H. Daniel, T. von Egidy, R. Rascher, H.G. Börner, G. Barreau, D.D. Warner
1984Kr.B	P-Darmstadt		127	K.-L. Kratz, A. Schröder, H. Ohm, H. Gabelmann, W. Ziegert, B. Steinmüller, B. Pfeiffer
1984La03	NUPAB	414,	151	M. Langevin, C. Détraz, D. Guillemaud-Mueller, A.C. Mueller, C. Thibault, F. Touchard, M. Epherre
1984La06	NUPAB	413,	236	R.G. Lanier, R.K. Sheline, G.L. Struble, L.G. Mann, J.A. Cizewski, and erratum NUPAB 427,650
1984La.A	P-Darmstadt		652	E. Laegsgaard, J.U. Andersen, G.J. Beyer, A. De Rújula, P.G. Hansen, B. Jonson, H.L. Ravn
1984Li05	NUPAB	417,	365	Y.-F. Liu, K.J. Moody, D. Lee, Y. Morita, G.T. Seaborg, H.R. von Gunten
1984Li24	PZETA	39,	529	É.T. Lippmaa, R. I. Pikver, É.R. Suurmaa, Ya. O. Past, Yu. Kh. Puskar, I.A. Koppel', A.A. Tammik
1984Li.A	AnRpt Berkeley			W.X. Li, K.E. Gregorich, R.B. Welch, W. Kot, D. Lee, G.T. Seaborg
1984Lu02	ZPAAD	315,	295	E. Lund, B. Fogelberg
1984Ma49	ZPAAD	319,	287	W.A. Mayer, W. Henning, R. Holzwarth, H.J. Körner, G. Korschinek, W.U. Mayer, G. Rosner, H.J. Scheerer
1984Mi.A	AnRpt Munich		40	C. Mittag, H. Puchta, F. Riess, M. Stallknecht
1984Mo22	NUPAB	427,	317	D.M. Moltz, K.S. Toth, F.T. Avignone III, H. Noma, B.D. Kern, R.E. Tribble, J.P. Sullivan
1984Mu07	ZPAAD	315,	145	G. Münzenberg, W. Reisdorf, S. Hofmann, Y.K. Agarwal, F.P. Heßberger, K. Poppensieker, J.R.H. Schneider, W.F.W. Schneider, K.-H. Schmidt, H.J. Schött, P. Armbruster, C.-C. Sahn, D. Vermeulen
1984Mu27	PRLTA	53,	2544	J.A. Musser, J.D. Stevenson
1984Ni03	ZPAAD	316,	249	J.M. Nitschke, P.A. Wilmarth, P.K. Lemmert, W.-D. Zeitz, J.A. Honkanen
1984Ni16	PZETA	39,	441	E.N. Nikolaev, Yu. I. Neronov, M.V. Gorshkov, V.L. Talroze
1984No05	NUPAB	423,	197	G.J.L. Nooren, C. van der Leun
1984Og02	ZPAAD	319,	215	Yu. Ts. Oganessian, A.G. Demin, M. Hussonnois, S.P. Tretyakova, Yu. P. Kharitonov, V.K. Utyonkov, I.V. Shirokovsky, O. Constantinescu, H. Bruchertseifer, Yu. S. Korotkin
1984Ox01	ZPAAD	316,	97	K. Oxorn, S.K. Mark
1984Pi03	NUPAB	414,	219	Š. Piskoř, P. Franc, J. Kremenek, W. Schäferlingová
1984Po09	RRALA	35,	23	P. Polak, L. Lindner
1984Ra09	PRVCA	30,	26	S. Raman, W. Ratynski, E.T. Journey, M.E. Bunker, J.W. Starner
1984Ro.A	BAPSA	29,	1041	G. Rotbard, M. Vergnes, J. Verlotte, G. Berrier Ronsin, S. Gales, G.M. Crawley
1984Ru06	NUPAB	419,	439	J.F.A.G. Ruyl, J.B.M. de Haas, P.M. Endt, L. Zybert
1984Ru.A	P-Darmstadt		196	B. Rubio, R. Julin, A. Ercan, K. Zuber, P. Kleinheinz, J.L. Tain, G.P.A. Berg, G. Hlawatsch, I. Katayama, J. Meissburger, D. Paul, J.G. Roemer, J. Blomqvist
1984Ry02	NIMAE	223,	325	A. Rytz, R.A.P. Wiltshire
1984Sc06	ZPAAD	315,	49	U.J. Schrewe, E. Hagberg, H. Schmeing, J.C. Hardy, V.T. Koslowsky, K.S. Sharma
1984Sc13	ZPAAD	316,	19	K.-H. Schmidt, C.-C. Sahn, K. Pielenz, H.-G. Clerc
1984Sc18	ZPAAD	317,	305	U.J. Schrewe, E. Voth, U. Bosch, W.-D. Schmidt-Ott, H. Behrens
1984Sc.A	GSI-84-3			J. Schneider Thesis
1984Sc.B	P-Darmstadt		203	U.J. Schrewe, P. Tidemand-Petersson, H. Behrens, H. Dornhöfer, R. Michaelsen, E. Runte, W.-D. Schmidt-Ott, E. Voth
1984Sc.C	P-Darmstadt		229	D. Schardt, P.O. Larsson, R. Kirchner, O. Klepper, V.T. Koslowsky, E. Roeckl, K. Rykaczewski, P. Kleinheinz, K. Zuber
1984Sh28	PRVCA	30,	2111	T. Shinozuka, M. Fujioka, H. Miyatake, M. Yoshii, H. Hama, T. Kamiya
1984Sh31	AENGA	56,	245	V.M. Shatinsky
1984Th08	PRVCA	30,	1442	C.E. Thorn, J.W. Olness, E.K. Warburton, S. Raman
1984To09	PRLTA	53,	1623	K.S. Toth, Y.A. Ellis-Akovali, C.R. Bingham, D.M. Moltz, D.C. Sousa, H.K. Carter, R.L. Mlekodaj, E.H. Spejewski
1984To11	NUPAB	430,	269	Y. Tokunaga, H. Seyfarth, O.W.B. Schult, S. Brant, V. Paar, D. Vretenar, H.G. Börner, G. Barreau, H. Faust, Ch. Hofmeyr, K. Schreckenbach, R.A. Meyer

1984Vo01	JPHGB	10,	221	T. von Egidy, H. Daniel, P. Hungerford, H.H. Schmidt, K.P. Lieb, B. Krusche, S.A. Kerr, G. Barreau, H.G. Börner, R. Brissot, C. Hofmeyr, R. Rascher
1984Vo07	PRVCA	29,	1243	T. von Egidy, R.W. Hoff, R.W. Loughheed, D.H. White, H.G. Börner, K. Schreckenbach, D.D. Warner, G. Barreau, E. Hungerford
1984Ya.A	Th.-Berkeley			S. Yashita LBL-15562 ; Diss. Abstr. 45B(1984)872
			1985	
1985Ad.A	P-Leningrad		93	Dz. Adam, T. Dzelev, D. Zakoutski, B. Kratsik, I. Penev
1985Af.A	P-Leningrad		1083	V.P. Afanasiev, Yu. S. Blinnikov, N. Ganbaatar, V. Dzeleznyakov, V.G. Kalinikov, Ya. Kormitski, K.A. Mezilev, Yu. N. Novikov, A.M. Nurmudzamedov, V.N. Pantelev, A.G. Polyakov, A. Potempa, F. Tarkani
1985Ah.A	P-Bombay			S.A. Ahmad, et al, and 89Ot.1
1985A102	PRVCA	31,	360	T. Altzitzoglou, R.T. Kouzes, F.W. Loeser, M.M. Lowry, R.A. Naumann, R.E. Chrien, and erratum PRVCA 32,665
1985A108	NUPAB	438,	482	G.D. Alkhazov, A.A. Bykov, V.D. Wittmann, V.E. Starodubsky, S.Y. Orlov, V.N. Panteleyev, A.G. Polyakov, V.K. Tarasov
1985A111	PRLTA	55,	799	T. Altzitzoglou, F. Calaprice, M. Dewey, M. Lowry, L. Piilonen, J. Brorson, S. Hagen, F. Loeser
1985A113	PYLBB	157,	350	G.D. Alkhazov, A.A. Bykov, V.D. Wittmann, S. Yu. Orlov, V.K. Tarasov
1985A117	PRVCA	32,	1358	D.E. Alburger, J.B. Cumming
1985An17	NCIAA	88,	265	M.S. Antony, J. Britz, J.B. Bueb, V.B. Ndocko-Ndongué
1985Ap01	PZETA	42,	233	A.M. Apalikov, S.D. Boris, A.I. Golutvin, L.P. Laptin, V.A. Lyubimov, N.F. Myasoedov, V.V. Nagovitsyn, E.G. Novikov, V.Z. Nozik, V.A. Soloshchenko, I.N. Tikhomirov, E.F. Tretyakov
1985Au07	ZPAAD	321,	533	G. Audi, R.L. Graham, J.S. Geiger
1985Ay01	PRLTA	55,	1384	J. Äystö, D.M. Moltz, X.J. Xu, J.E. Reiff, J. Cerny
1985Ay02	PRVCA	32,	1700	J. Äystö, X.J. Xu, D.M. Moltz, J.E. Reiff, J. Cerny, B.H. Wildenthal
1985Ba57	ZPAAD	322,	457	A. Baas-May, J.V. Kratz, N. Trautmann
1985Be17	ZPAAD	320,	693	F.J. Bergmeister, K.P. Lieb, K. Pampus, M. Uhrmacher
1985Be20	PYLBB	156,	159	Z. Berant, R.L. Gill, M.H. Rafailovich, R.E. Chrien, J.C. Hill, F.K. Wohn, R.F. Petry, C. Chung, G. Peaslee, M. Mohsen
1985Be24	ZPAAD	321,	435	M. Bernas, M. Langevin, G. Parrot, E. Pougheon, E. Quiniou, P. Roussel, Ph. Dessagne, W.D. Schmidt-Ott
1985Be50	PYLBB	162,	87	W. Benenson, K. Beard, C. Bloch, B. Sherrill, B.A. Brown, A.D. Panagiotou, J. van der Plicht, J.S. Winsfield, C.E. Thorn
1985Bj01	NUPAB	443,	283	T. Bjornstad, M.J.G. Borge, P. Dessagne, R.-D. von Dincklage, G.T. Ewan, P.G. Hansen, A. Huck, B. Jonson, G. Klotz, A. Knipper, P.O. Larsson, G. Nyman, H.L. Ravn, C. Richard-Serre, K. Riisager, D. Schardt, G. Walter
1985Bo34	PYLBB	159,	217	S. Boris, A. Golutvin, L. Laptin, V. Lubimov, V. Nagovizin, E. Novikov, V. Nozik, V. Soloshenko, I. Tihomirov, E. Tretjakov
1985Bo46	PRLTA	55,	2269	J.A. Bounds, C.R. Bingham, P. Juncar, H.K. Carter, G.A. Leander, R.L. Mleko-daj, E.H. Spejewski, W.M. Fairbank, Jr.
1985Bo49	PYLBB	164,	22	U. Bosch, W.-D. Schmidt-Ott, P. Tidemand-Petersson, E. Runte, W. Hillebrandt, M. Lechle, F.-K. Thielemann, R. Kirchner, O. Klepper, E. Roeckl, K. Rykaczewski, D. Schardt, N. Kaffrell, M. Bernas, Ph. Dessagne, W. Kurcewicz
1985Bo58	NIMAE	228,	387	V.R. Bom, P.C. Coops
1985Br03	PYLBB	150,	75	M. Brauner, D. Rychel, R. Gyufko, C.A. Wiedner, S.T. Thornton
1985Co06	PRLTA	54,	1783	E. Coenen, K. Deneffe, M. Huyse, P. Van Duppen, J.L. Wood
1985Co.B	PrvCom	AHW	Dec	G.G. Colvin
1985Da15	PRVCA	32,	713	N.J. Davis, J.A. Kuehner, A.A. Pilt, A.J. Trudel, M.C. Vetterli, C. Bamber, E.K. Warburton, J.W. Olness, S. Raman
1985De08	JPHGB	11,	L59	K. Deneffe, E. Coenen, M. Huyse, P. Van Duppen, J. Vanhorenbeeck, P. del Marmol, P. Fettweis
1985De14	NUPAB	436,	311	D.J. Decman, H. Grawe, H. Kluge, K.H. Maier, A. Maj, N. Roy, Y.K. Agarwal, K.P. Blume, M. Guttormsen, H. Hubel, J. Recht
1985De40	CJPHA	63,	966	V.P. Derenchuk, R.J. Ellis, K.S. Sharma, R.C. Barber, H.E. Duckworth
1985Dr06	NUPAB	441,	95	P.V. Drumm, L.K. Fifield, R.A. Bark, M.A.C. Hotchkis, C.L. Woods, P. Maier-Komor
1985Dy04	PYLBB	157,	139	G.R. Dyck, R.J. Ellis, K.S. Sharma, C.A. Lander, M.H. Sidky, R.C. Barber, H.E. Duckworth

1985El01	NUPAB	435,	34	R.J. Ellis, R.C. Barber, G.R. Dyck, B.J. Hall, K.S. Sharma, C.A. Lander, H.E. Duckworth, and PrvCom AHW October 1991
1985Fi03	NUPAB	440,	531	L.K. Fifield, C.L. Woods, R.A. Bark, P.V. Drumm, M.A.C. Hotchkis
1985Fi08	NUPAB	437,	141	L.K. Fifield, P.V. Drumm, M.A.C. Hotchkis, T.R. Ophel, C.L. Woods
1985Fr01	NUPAB	433,	351	R. Franke, H. Kockskamper, B. Steinheuer, K. Wingender, W. von Witsch
1985Fu03	NUPAB	435,	7	Y. Fujita, S. Morinobu, I. Katayama, M. Fujiwara, T. Yamazaki, H. Ikegami, H. Taketani, M. Adachi, T. Matsuzaki, M. Matoba, N. Koori
1985Ge02	JPHGB	11,	1055	W. Gelletly, J.R. Larysz, H.G. Börner, R.F. Casten, W.F. Davidson, W. Mampe, K. Schreckenbach, D.D. Warner
1985Gy01	PYLBB	150,	335	R. Gyufko, D. Rychel, M. Steck, C.-A. Wiedner, R.L. Parks, S.T. Thornton
1985Ha12	PRVCA	31,	1594	F.X. Hartmann, R.A. Naumann
1985He06	ZPAAD	321,	317	F.P. Heßberger, G. Münzenberg, S. Hofmann, W. Reisdorf, K.-H. Schmidt, H.J. Schött, P. Armbruster, R. Hingmann, B. Thuma, D. Vermeulen
1985He22	ZPAAD	322,	557	F.P. Heßberger, G. Münzenberg, S. Hofmann, Y.K. Agarwal, K. Poppensieker, W. Reisdorf, K.-H. Schmidt, J.R.H. Schneider, W.F.W. Schneider, H.J. Schött, P. Armbruster, B. Thuma, C.-C. Sahn, D. Vermeulen
1985He.A	GSI-85-11			F.P. Heßberger
1985Hi02	ZPAAD	320,	531	P. Hill, N. Kaffrell, W. Kurcewicz, G. Nyman
1985Hi.A	AnRpt GSI		88	R. Hingmann, W. Kuehn, V. Metag, R. Novotny, A. Ruckelshausen, H. Stroehrer, F.P. Heßberger, S. Hofmann, G. Münzenberg, W. Reisdorf
1985Ho21	PYLBB	160,	375	E. Hourani, M. Hussonnois, L. Stab, L. Brillard, S. Gales, J.P. Schapira
1985Ho.A	PrvCom	NDG	876	C. Hofmeyr, C. Franklyn, G. Barreau, H.G. Börner, R. Brissot, H. Faust, K. Schreckenbach
1985Hu03	PRVCA	31,	2226	A. Huck, G. Klotz, A. Knipper, C. Miehé, C. Richard-Serre, G. Walter, A. Poves, H.L. Ravn, G. Marguier
1985Ke08	ZPAAD	322,	121	T.J. Kennett, W.V. Prestwich, J.S. Tsai
1985Ke11	PRVCA	32,	2148	T.J. Kennett, W.V. Prestwich, J.S. Tsai
1985Ke.A	PrvCom	AHW	Jan	T.J. Kennett
1985Kh04	PYLBB	156,	155	S. Khan, Th. Kihm, K.T. Knöpfle, G. Mairle, V. Bechtold, L. Friedrich
1985Ko47	NIMBE	12,	325	P.J.J. Kok, K. Abrahams, H. Postma, W.J. Huiskamp
1985Kr06	NUPAB	439,	219	B. Krusche, Ch. Winter, K.P. Lieb, P. Hungerford, H.H. Schmidt, T. von Egidy, H.J. Scheerer, S.A. Kerr, H.G. Börner
1985La17	IJARA	36,	443	R.M. Lambrecht, S. Mirzadeh
1985Le10	PRVCA	32,	277	R.S. Lee, J.H. Hamilton, A.V. Ramayya, A.P. de Lima, D.L. Sastry, K.S.R. Sastry, E.H. Spejewski, R.L. Mlekodaj, H.K. Carter, W.-D. Schmidt-Ott, J. Lin, C.R. Bingham, L.L. Riedinger, E.F. Zganjar, J.L. Weil, B.D. Kern, A.C. Xenoulis, R.W. Fink, Sun Xi-jun, Guo Jun-sheng, Cho Chi-cheng, Pan Zong-you, Guo Ying-xian
1985Li02	PRLTA	54,	285	E. Lippmaa, R. Pikver, E. Suurmaa, J. Past, J. Puskar, I. Koppel, A. Tammik
1985Ma54	JPHGB	11,	1231	T.D. MacMahon, G.R. Massoumi, T. Mitsunari, M. Thein, O. Chalhoub, D. Breitig, H.A. Baader, U. Heim, H.R. Koch, L. Wimmwer, H. Seyfarth, K. Schreckenbach, G.B. Orr, G.J. Smith, W.R. Kane, I.A. Kondurov, P.A. Sushkov, Yu. E. Loginov, D. Rabenstein, M. Bogdanovic
1985Ma59	PRVCA	32,	2215	J. Markey, F. Boehm
1985Mu11	ZPAAD	322,	227	G. Münzenberg, S. Hofmann, H. Folger, F.P. Heßberger, J. Keller, K. Poppensieker, B. Quint, W. Reisdorf, K.-H. Schmidt, H.J. Schött, P. Armbruster, M.E. Leino, R. Hingmann
1985No03	PRVCA	31,	1937	E.B. Norman
1985Oh06	PYLBB	160,	322	T. Ohi, M. Nakajima, H. Tamura, T. Matsuzaki, T. Yamazaki, O. Hashimoto, R.S. Hayano
1985Pi03	PRVCA	31,	1032	A.A. Pilt, J.A. Cameron, R.B. Schubank, E.E. Habib
1985Re02	NUPAB	435,	333	J.P.L. Reinecke, F.B. Waanders, P. Oberholzer, P.J.C. Janse van Rensburg, J.A. Cilliers, J.J.A. Smit, M.A. Meyer, P.M. Endt
1985Ry02	ZPAAD	322,	263	K. Rykaczewski, I.S. Grant, R. Kirchner, O. Klepper, V.T. Koslowsky, P.O. Larson, E. Nolte, G. Nyman, E. Roeckl, D. Schardt, L. Spanier, P. Tidemand-Petersson, E.F. Zganjar, J. Żylicz
1985Sa15	ZPAAD	321,	255	M. Samri, J.G. Costa, G. Klotz, D. Magnac, R. Selz, J.P. Zirnfeld
1985Sc09	ZPAAD	320,	595	U.J. Schrewe, H. Dornhöfer, E. Runte, W.D. Schmidt-Ott, T. Tidemand-Petersson, R. Michaelsen
1985Sc16	NIMAE	236,	225	H. Schölermann, B.R.L. Siebert

1985Sh03	PRVCA	31,	875	B. Sherrill, K. Beard, W. Benenson, C. Bloch, B.A. Brown, E. Kashy, J.A. Nolen, Jr., A.D. Panagiotou, J. van der Plicht, J.S. Winfield, see P-Darmstadt p. 82
1985Si07	PRVCA	31,	1891	J.J. Simpson, W.R. Dixon, R.S. Storey
1985Si25	JPSLB	46,	L1095	C. Signarbieux, G. Simon, J. Trochon, F. Brisard and PrvCom GAU Jan 1988
1985So03	PRVCA	31,	1801	L.P. Somerville, M.J. Nurmia, J.M. Nitschke, A. Ghiorso, E.K. Hulet, R.W. Loughheed
1985St02	PRVCA	32,	582	R.E. Stone, C.E. Bingham, L.L. Riedinger, R.W. Lide, H.K. Carter, R.L. Mlekodaj, E.H. Spejewski
1985St16	ZPAAD	322,	83	[190Pb]C. Stenzel, H. Grawe, H. Haas, H.-E. Mahnke, K.H. Maier
1985Ta.A	P-Swansea		343	V.L. Talrose, E.N. Nikolaev
1985Ti01	ZPAAD	320,	405	P. Tidemand-Petersson, E. Runte, W.-D. Schmidt-Ott, U.J. Schrewe
1985Ti02	NUPAB	437,	342	P. Tidemand-Petersson, R. Kirchner, O. Klepper, E. Roeckl, D. Scharadt, A. Płochocki, J. Żylicz
1985To10	NUPAB	439,	427	Y. Tokunaga, H. Seyfarth, R.A. Meyer, O.W.B. Schult, H.G. Börner, G. Barreau, H.R. Faust, K. Schreckenbach, S. Brant, V. Paar, M. Vouk, D. Vretenar
1985Ts01	ZPAAD	322,	295	J.S. Tsai, T.J. Kennett, W.V. Prestwich
1985Ts02	ZPAAD	322,	597	J.S. Tsai, W.V. Prestwich, T.J. Kennett
1985Uh01	NIMBE	9,	234	M. Uhrmacher, K. Pampus, F.J. Bergmeister, D. Purschke, K.P. Lieb
1985Va03	PYLBB	154,	354	P. Van Duppen, E. Coenen, K. Deneffe, M. Huyse, J.L. Wood
1985Va.A	JINR-R6-85-22			E.V. Vasileva, et al
1985Vo03	PRVCA	31,	1510	R.-D. von Dincklage, J. Gerl, H.L. Ravn, G.J. Beyer
1985Vo09	ZPAAD	321,	375	R.-D. von Dincklage, H.J. Hay
1985Vo13	NUPAB	445,	113	R.-D. von Dincklage, H.J. Hay, H.L. Ravn
1985Vo15	ZPAAD	322,	669	T. von Egidy, H.G. Börner, F. Hoyler
1985Wh03	MTRGA	21,	193	R.E. White, P.H. Barker, D.M.J. Lovelock
1985Wi07	ZPAAD	321,	179	P.A. Wilmarth, J.M. Nitschke, P.K. Lemmertz, R.B. Firestone
1985Wi15	NUPAB	444,	49	K. Wick, U. Berghaus, H. Bruckmann, P. Lara, W. Schutte, B. Anders, Y. Koike
1985Wo01	PYLBB	150,	79	P.J. Woods, R. Chapman, J.L. Durell, J.N. Mo, N.E. Sanderson, R.A. Cunningham, B.R. Fulton
1985Wo04	NUPAB	437,	454	C.L. Woods, L.K. Fifield, R.A. Bark, P.V. Drumm, M.A.C. Hotchkis
1985Wo07	ZPAAD	321,	119	P.J. Woods, R. Chapman, J.L. Durell, J.N. Mo, R.J. Smith, N.E. Sanderson, B.R. Fulton, R.A. Cunningham
1985Wo.A	PrvCom	GAU	Feb	P.J. Woods
1986				
1986Ad07	IANFA	50,	855	J. Adam, V. Vagner, M. Gonusek, B. Kratick
1986Ag.A	P-Charkov		98	V.A. Ageev, V.S. Belyavenko, V.A. Dzeltonodzskii, A.A. Klyushnikov
1986Au02	NUPAB	449,	491	G. Audi, A. Coc, M. Epherre, G. Le Scornet, C. Thibault, F. Touchard, ISOLDE
1986Ba26	PRVCA	34,	362	S.W. Barwick, P.B. Price, H.L. Ravn, E. Hourani, M. Hussonnois
1986Ba72	IANFA	50,	1898	K.A. Baskova, G.I. Borisov, A.B. Vovk, T.M. Gerus, L.I. Go
1986Be35	NUPAB	460,	352	A.V. Belozorov, C. Borcea, Z. Dlouhy, A.M. Kalinin, R. Kalpakchieva, Nguyen Hoai Chau, Yu. Ts. Oganessian, Yu. E. Penionzhkevich
1986Be53	UFZHA	31,	1773	V.S. Belyavenko, G.P. Boroznets, I.N. Vishnevsky, V.A. Zheltonozhsky
1986Bj01	NUPAB	453,	463	T. Björnstad, M.J.G. Borge, J. Blomqvist, R.D. von Dincklage, G.T. Ewan, P. Hoff, B. Jonson, K. Kawade, A. Kerek, O. Klepper, G. Løvhøiden, S. Mattsson, G. Nyman, H.L. Ravn, G. Rudstam, K. Sistemich, O. Tengblad, ISOLDE
1986Bo28	ZPAAD	325,	149	V.R. Bom, P.C. Coops, R.W. Hollander, E. Coenen, K. Deneffe, P. Van Duppen, M. Huyse
1986Bo46	PHSTB	34,	591	M.J.G. Borge, A. De Rújula, P.G. Hansen, B. Jonson, G. Nyman, H.L. Ravn, K. Riisager, ISOLDE
1986Bu18	PRVCA	34,	2316	B.L. Burks, R.L. Varner, E.J. Ludwig
1986Ch01	PRVCA	33,	130	T. Chapuran, K. Dybdal, D.B. Fossan, T. Lönnroth, W.F. Piel, Jr., D. Horn, E.K. Warburton
1986Co12	ZPAAD	324,	485	E. Coenen, K. Deneffe, M. Huyse, P. Van Duppen, J.L. Wood
1986Cu01	PRLTA	56,	34	M.S. Curtin, L.H. Harwood, J.A. Nolen, B. Sherrill, Z.Q. Xie, B.A. Brown
1986Da.A	AnRpt McGill		29	H. Dautet, R. Turcotte, S.K. Mark
1986De13	NUPAB	454,	1	H.P.L. De Esch, C. van der Leun
1986De14	NUPAB	454,	48	H.P.L. De Esch, J.B.J.M. Lanen, C. van der Leun
1986Di01	PRVCA	33,	103	G.U. Din, A.M. Al Soraya, J.A. Cameron, V.P. Janzen, R.B. Schubank
1986Ek01	PHSTB	34,	614	B. Ekström, B. Fogelberg, P. Hoff, E. Lund, A. Sangiyavanish

1986Fi06	NUPAB	453,	497	L.K. Fifield, C.L. Woods, W.N. Catford, R.A. Bark, P.V. Drumm, K.T. Keoghan
1986Fr09	PYLBB	173,	485	M. Fritschi, E. Holzschuh, W. Kündig, J.W. Petersen, R.E. Pixley, H. Stüssi, and PrvCom AHW
1986Ga19	PRVCA	34,	1663	C.A. Gagliardi, D.R. Semon, R.E. Tribble, L.A. Van Ausdeln
1986Gi07	PRLTA	56,	1874	R.L. Gill, R.F. Casten, D.D. Warner, A. Piotrowski, H. Mach, J.C. Hill, K.K. Wohn, J.A. Winger, R. Moreh
1986Gi08	NUPAB	453,	1	K.-L. Gippert, E. Runte, W.-D. Schmidt-Ott, P. Tidemand-Petersson, N. Kaffrell, P. Peuser, R. Kirchner, O. Klepper, W. Kurcewicz, P.O. Larsson, E. Roeckl, D. Schardt, K. Rykaczewski
1986Gr01	PRLTA	56,	819	G.L. Greene, E.G. Kessler, Jr., R.D. Deslattes, H. Börner
1986Ha22	NUPAB	455,	231	A.M.I. Hague, R.F. Casten, I. Förster, A. Gelberg, R. Rascher, R. Richter, P. von Brentano, G. Barreau, H.G. Börner, S.A. Kerr, K. Schreckenbach, D.D. Warner
1986Hu01	PRLTA	56,	313	E.K. Hulet, J.F. Wild, R.J. Dougan, R.W. Lougheed, J.H. Landrum, A.D. Dougan, M. Schädel, R.L. Hahn, P.A. Baisden, C.M. Henderson, R.J. Dupzyk, K. Sümmerer, G.R. Bethune
1986Hu05	PRVCA	34,	1394	E.K. Hulet, R.W. Lougheed, J.F. Wild, R.J. Dougan, K.J. Moody, R.L. Hahn, C.M. Henderson, R.J. Dupzyk, G.R. Bethune
1986Ka38	JUPSA	55,	3014	H. Kawakami, S. Shibita, J. Tanaka, T. Toriyama, S. Noguchi, M. Mushano, K. Hisatake
1986Ka43	NUPAB	460,	437	N. Kaffrell, P. Hill, J. Rogowski, H. Tetzlaff, N. Trautmann, E. Jacobs, P. De Gelder, D. De Frenne, K. Heyde, G. Skarnemark, J. Alstad, N. Blasi, M.N. Harakeh, W.A. Sterrenburg, K. Wolfsberg
1986Ke03	NUPAB	452,	173	J.G. Keller, K.-H. Schmidt, F.P. Heßberger, G. Münzenberg, W. Reisdorf, H.-G. Clerc, C.-C. Sahm, and PrvCom K.-H. Schmidt to AHW November 1992
1986Ke14	NIMAE	249,	366	T.J. Kennett, W.V. Prestwich, J.S. Tsai
1986Ko01	PRVCA	33,	392	T. Kohno, M. Adachi, S. Fukuda, M. Taya, M. Fukuda, H. Taketani, Y. Gono, M. Sugawara, Y. Ishikawa
1986Ko19	ZPAAD	324,	271	P.J.J. Kok, J.B.M. de Haas, K. Abrahams, H. Postma, W.J. Huiskamp
1986Lo16	JCOMA	122,	461	R.W. Lougheed, E.K. Hulet, R.J. Dougan, J.F. Wild, R.J. Dupzyk, C.M. Henderson, K.J. Moody, R.L. Hahn, K. Summerer, G. Bethune
1986Ma40	PRVCA	34,	729	L.G. Mann, R.G. Lanier, G.L. Struble, R.A. Naumann, R.T. Kouzes
1986Mi08	PRVCA	33,	1736	C. Miehé, Ph. Dessagne, P. Baumann, A. Huck, G. Klotz, A. Knipper, G. Walter, C. Richard-Serre
1986Mi14	PRVCA	33,	2204	D. Miljanic, S. Blagus, M. Zadro
1986Pr03	NUPAB	455,	1	P.T. Prokofjev, V.A. Bondarenko, T.V. Guseva, N.D. Kramer, L.I. Simonova, J.J. Tambergs, K. Schreckenbach, W.F. Davidson, J.A. Pinston, D.D. Warner, P.H.M. van Assche, A.M.J. Spits
1986Pr05	ZPAAD	325,	321	W.V. Prestwich, T.J. Kennett, J.S. Tsai
1986Ru04	ZPAAD	324,	27	B. Rubio, A. Ercan, G. de Angelis, P. Kleinheinz, J.L. Tain, B. Brinkmoeller, D. Paul, J. Meissburger, L.G. Mann, D.J. Decman, T.N. Massey, G.L. Struble, H.J. Scheerer, J. Blomqvist
1986Ru05	ZPAAD	324,	119	E. Runte, T. Hild, W.-D. Schmidt-Ott, U.J. Schrewe, P. Tidemand-Petersson, R. Michaelsen
1986Ry04	NIMAE	253,	47	A. Rytz, R.A.P. Wiltshire, M. King
1986Sc16	NUPAB	454,	267	H.H. Schmidt, T. von Egidy, H.J. Scheerer, P. Hungerford, H.G. Börner, S.A. Kerr, K. Schreckenbach, R.F. Casten, W.R. Kane, D.D. Warner, A. Chalupka, M.K. Balodis, T.V. Guseva, P.T. Prokofjev, J.J. Tambergs
1986Sc21	NUPAB	457,	182	P. Schmalbrock, T.R. Donoghue, M. Wiescher, V. Wijekumar, C.P. Browne, A.A. Rollefson, C. Rolfs, A. Vlieks
1986Sc25	JPHGB	12,	411	H.H. Schmidt, W. Stöfl, T. von Egidy, P. Hungerford, H.J. Scheerer, K. Schreckenbach, H.G. Börner, D.D. Warner, R.E. Chrien, R.C. Greenwood, C.W. Reich
1986Se04	PYLBB	173,	397	K.K. Seth, S. Iversen, M. Kaletka, D. Barlow, A. Saha, R. Soundranayagam
1986Sm05	ZPAAD	324,	283	R.J. Smith, P.J. Woods, R. Chapman, J.L. Durell, J.N. Mo, B.R. Fulton, R.A. Cunningham
1986To12	PYLBB	178,	150	K.S. Toth, Y.A. Ellis-Akovi, J.M. Nitschke, P.A. Wilmarth, P.K. Lemmert, D.M. Moltz, F.T. Avignone III
1986Ts04	CJPHA	64,	1569	J.S. Tsai, W.V. Prestwich, T.J. Kennett
1986UI02	ZPAAD	325,	247	G. Ulm, S.K. Bhattacharjee, P. Dabkiewicz, G. Huber, H.-J. Kluge, T. Kuhl, H. Lochmann, E.-W. Otten, K. Wendt, S.A. Ahmad, W. Klempt, R. Neugart, ISOLDE

1986Va08	PRVCA	33,	1141	G. Vandenput, P.H.M. van Assche, L. Jacobs, J.M. van den Cruyce, R.K. Smither, K. Schreckenbach, T. von Egidy, D. Breitig, H.A. Baader, H.R. Koch
1986Ve.A	P-Charkov		107	G.V. Veselov, K.A. Mezilev, Yu. N. Novikov, A.V. Lopov, V.A. Sergienko
1986Ve.B	P-Charkov		138	G.V. Veselov, K.A. Mezilev, Yu. N. Novikov, A.V. Lopov, Yu. Ya. Sergeev, V.A. Sergienko, V.I. Tichonov
1986Vi09	PRLTA	57,	3253	D.J. Vieira, J.M. Wouters, K. Vaziri, R.H. Krauss,Jr., H. Wollnik, G.W. Butler, F.K. Wohn, A.H. Wapstra
1986Wa17	RAEFB	94,	27	R.A. Warner, P.L. Reeder
1986Wi15	ZPAAD	325,	485	P.A. Wilmarth, J.M. Nitschke, R.B. Firestone, J. Gilat
1986Wi16	NUPAB	460,	501	Ch. Winter, B. Krusche, K.P. Lieb, H.H. Schmidt, T. von Egidy, P. Hungerford, F. Hoyler, H.G. Börner
1986Wo07	PYLBB	182,	297	P.J. Woods, R. Chapman, J.L. Durell, J.N. Mo, R.J. Smith, B.R. Fulton, R.A. Cunningham, P.V. Drumm, L.K. Fifield
1986Ya17	PYLBB	181,	169	S. Yasumi, M. Ando, H. Maezawa, H. Kitamura, T. Ohta, F. Ochiai, A. Mikuni, M. Maruyama, M. Fujioka, K. Ishii, T. Shinozuka, K. Sera, T. Omori, G. Izawa, M. Yagi, K. Masumoto, K. Shima, T. Mukoyama, Y. Inagaki, I. Sugai, A. Masuda, O. Kawakami
			1987	
1987Aj.A	PrvCom	AHW	Jul	F. Ajzenberg-Selove
1987Ba52	NUPAB	472,	445	M.K. Balodis, P.T. Prokofjev, N.D. Kramer, L.I. Simonova, K. Schreckenbach, W.F. Davidson, J.A. Pinston, P. Hungerford, H.H. Schmidt, H.J. Scheerer, T. von Egidy, P.H.M. van Assche, A.M.J. Spits, R.F. Casten, W.R. Kane, D.D. Warner, J. Kern
1987Bo07	PRLTA	58,	2019	S. Boris, A. Golutvin, L. Laptin, V. Lubimov, V. Nagovizin, V. Nozik, E. Novikov, V. Soloshenko, I. Tihomirov, E. Tretjakov, N. Myasoedov
1987Bo24	NUPAB	470,	13	M. Bogdanović, R. Brissot, G. Barreau, K. Schreckenbach, S. Kerr, H.G. Börner, I.A. Kondurov, Yu. E. Loginov, V.V. Martynov, P.A. Sushkov, H. Seyfarth, T. von Egidy, P. Hungerford, H.H. Schmidt, H.J. Scheerer, A. Chalupka, W. Kane, G. Alaga
1987Bo29	HYIND	34,	25	W. Borchers, R. Neugart, E.W. Otten, H.T. Duong, G. Ulm, K. Wendt, ISOLDE, and 89Ot.1
1987Bo59	HYIND	38,	793	G. Bollen, P. Dabkiewicz, P. Egelhof, T. Hilberath, H. Kalinowsky, F. Kern, H. Schnatz, L. Schweikhard, H. Stolzenberg, R.B. Moore, H.J. Kluge, G.M. Temmer, G. Ulm
1987Br05	NUPAB	465,	221	A. Bruce, D. Hicks, D.D. Wagner
1987Br33	JPHGB	13,	1565	V.B. Brudanin, T. Vylov, Ch. Briançon, V.M. Gorojankin, K.Y. Gromov, A. Marinov, A.P. Novgorodov, V.N. Pokrovski, N.I. Rukhadze
1987Br.B	AnRpt Julich		9	B. Brinkmoeller, H.P. Morsch, R. Siebert, P. Decowski, M. Rogge, P. Turek
1987Bu.A	BAPSA	32,	1063	B. Budick, Hong Lin
1987Ch.A	AnRpt Daresb		7	R. Chapman, J.L. Durell, J.N. Mo, P.J. Woods, B.R. Fulton, R.A. Cunningham, P.V. Drumm, L.K. Fifield
1987Ci.A	P-Leuven		S103	J.A. Cizewski, G.G. Colvin, H.G. Börner, P. Geltenbort, F. Hoyler, S.A. Kerr, K. Schreckenbach, and PrvCom AHW
1987Co08	NUPAB	465,	240	G.G. Colvin, H.G. Börner, P. Geltenbort, F. Hoyler, S.A. Kerr, K. Schreckenbach, J.A. Cizewski, and PrvCom AHW December 1988
1987De04	ZPAAD	326,	155	J. Deslauriers, S.C. Gujrathi, S.K. Mark
1987De33	JPHGB	13,	1283	C.T.A.M. De Laat, P. Polak, A. Taal, J. Konijn, W. Lourens, A.H. Wapstra
1987De.A	AnRpt Leuven		47	P. Dendooven, M. Huysse, G. Reusen, J. Wouters, P. Van Duppen, I. Ahmad, R. Holzmann, R.V.F. Janssens
1987Eb02	NUPAB	464,	9	J. Eberz, U. Dinger, G. Huber, H. Lochmann, R. Menges, R. Neugart, R. Kirchner, O. Klepper, T. Kuhl, D. Marx, G. Ulm, K. Wendt, ISOLDE
1987EI02	JPHGB	13,	93	A.M.Y. El-Lawindy, J.D. Burrows, P.A. Butler, J.R. Cresswell, V. Holliday, G.D. Jones, R. Tanner, R. Wadsworth, D.L. Watson, K.A. Connell, J. Simpsons, C. Lauterbach, J.R. Mines
1987EI09	PRVCA	36,	1529	Y.A. Ellis-Akovioli, K.S. Toth, H.K. Carter, C.R. Bingham, I.C. Girit, M.O. Kortelahti
1987Fa.A	P-Rosseau		675	T. Faestermann, A. Gillitzer, K. Hartel, W. Henning, P. Kienle
1987Fo20	NUPAB	475,	301	B. Fogelberg, A.M. Bruce, D.D. Warner
1987Ga.A	P-Yurmala		86	N. Ganbaatar, G.V. Veselov, K.A. Mezilev, V.G. Kalinnikov

1987Ge01	JPHGB	13,	69	W. Gelletly, J.R. Larysz, H.G. Börner, R.F. Casten, W.F. Davidson, W. Mampe, K. Schreckenbach, D.D. Warner
1987Gi05	PYLBB	192,	39	A. Gillibert, W. Mittig, L. Bianchi, A. Cunsolo, B. Fernandez, A. Foti, J. Gastebois, C. Gregoire, Y. Schutz, C. Stephan
1987Go25	PZETA	45,	205	M.G. Gornov, Y.B. Gurov, V.P. Koptev, P.V. Morokhov, K.O. Oganessian, B.P. Osipenko, V.A. Pechkurov, V.I. Savel'ev, F.M. Sergeev, A.A. Khomutov, B.A. Chernyshev, R.R. Shafigullin, A.V. Shishkov
1987Gr12	PRVCA	35,	1965	R.C. Greenwood, R.A. Anderl, J.D. Cole, H. Willmes
1987Gr18	ZPAAD	327,	383	M. Graefenstedt, U. Keyser, F. Münnich, F. Schreiber, H.R. Faust, H. Weikard
1987Gr.A	P-Rosseau		30	M. Graefenstedt, U. Keyser, F. Münnich, F. Schreiber
1987Gr.B	VHDPG	PG,	81,89	M. Graefenstedt, et al
1987Ha.A	AnRpt Tohoku		43	H. Hama, et al
1987Ha.B	P-Rosseau		650	H. Hama, M. Yoshii, K. Taguchi, T. Ishimatsu, T. Shinozuka, M. Fujioka
1987He10	EULEE	3,	895	F.P. Heßberger, S. Hofmann, G. Münzenberg, A.B. Quint, K. Sümmerer, P. Armbruster
1987He14	PRVCA	36,	1504	D.W. Hetherington, R.L. Graham, M.A. Lone, J.S. Geiger, G.E. Lee-Whiting
1987He21	NUPAB	474,	484	K. Heiguchi, S. Mitarai, B.J. Min, T. Kuroyanagi
1987He28	NUPAB	474,	77	R.G. Helmer, M.A. Lee, C.W. Reich, I. Ahmad
1987Ho06	ARISE	38,	195	D.D. Hoppes, B.M. Coursey, F.J. Schima, D. Yang
1987Ho.A	AnRpt LBL		39	M.A.C. Hotchkis, J.E. Reiff, D.J. Vieira, F. Blönnigen, T.F. Lang, D.M. Moltz, X. Xu, J. Cerny
1987Ju02	ARISE	38,	193	S.M. Judge, A.M. Privitera, M.J. Woods
1987Ju04	ARISE	38,	839	S.M. Judge, P. Christmas, P. Cross, D. Smith, W.D. Hamilton, and PrvCom AHW February 1989
1987Ka29	NUPAB	470,	141	N. Kaffrell, P. Hill, J. Rogowski, H. Tetzlaff, N. Trautmann, E. Jacobs, P. De Gelder, D. De Frenne, K. Heyde, S. Borjesson, G. Skarnemark, J. Alstad, N. Blasi, M.N. Harakeh, W.A. Sterrenburg, K. Wolfsberg
1987Ka.A	AnRpt RCNP		86	K. Katori, H. Miyatake, A. Higashi, A. Shinohara, N. Ikeda, I. Katayama, S. Morinobu
1987Ke09	CJPHA	65,	1111	T.J. Kennett, W.V. Prestwich, J.S. Tsai
1987Ke.A	P-Leuven		S571	J. Kern, H.G. Börner, G.G. Colvin, S. Drissi, T. von Egidy, M. Kalanga, J.-L. Salici
1987Ki.A	P-Rosseau		517	P. Kilcher, J. Sauvage, C. Bourgeois, F. Le Blanc, J. Oms, B. Roussière, J. Munsch, J. Obert, A. Caruette, A. Ferro, G. Boissier, J. Fournet-Fayas, M. Ducourtioux, G. Landois, R. Sellem, D. Sznadjerman, ISOCELE, A. Wojtasiewicz, M.C. Abreu, A. Ben Braham, K. Fransson, M.G. Porquet
1987Ko34	NUPAB	472,	419	V.T. Koslowsky, J.C. Hardy, E. Hagberg, R.E. Azuma, G.C. Ball, E.T.H. Clifford, W.G. Davies, H. Schmeing, U.J. Schrewe, K.S. Sharma
1987Li.A	P-Rosseau		521	C.F. Liang, P. Paris, Ch. Briançon
1987Me08	ZPAAD	327,	171	F. Meissner, W.-D. Schmidt-ott, L. Ziegeler
1987Mh.A	P-Leuven		199	A.K. Mheemed, S.S. Kamoon, S.A. Abbas, T. Al-Janabi
1987Mi10	PRVCA	36,	420	G.J. Miller, J.C. McGeorge, I. Anthony, R.O. Owens
1987Mo06	PRVCA	35,	1275	D.M. Moltz, A.C. Betker, J.P. Sullivan, R.H. Burch, C.A. Gagliardi, R.E. Tribble, K.S. Toth, F.T. Avignone III
1987Mu15	ZPAAD	328,	49	G. Münzenberg, P. Armbruster, G. Berthes, H. Folger, F.P. Heßberger, S. Hofmann, J. Keller, K. Poppensieker, A.B. Quint, W. Reisdorf, K.-H. Schmidt, H.-J. Schött, K. Sümmerer, I. Zychor, M.E. Leino, R. Hingmann, U. Gollerthan, E. Hanelt
1987Ne.A	P-Rosseau		126	R. Neugart, E. Arnold, W. Borchers, W. Neu, G. Ulm, K. Wendt
1987Pe06	PRVCA	35,	1617	K.I. Pearce, N.M. Clarke, R.J. Griffiths, P.J. Simmonds, A.C. Dodd, D. Barker, J.B.A. England, M.C. Mannion, C.A. Ogilvie
1987Ra04	NUPAB	464,	349	V. Rahkonen, T. Lonnroth
1987Ra06	PRVCA	36,	303	M.S. Rapaport, C.F. Liang, P. Paris, and PrvCom GAU July 1988
1987Ra12	NIMBE	26,	72	H.L. Ravn
1987Ru05	ZPAAD	328,	373	E. Runte, F. Meissner, V. Freystein, T. Hild, H. Salewski, W.-D. Schmidt-Ott, R. Michaelsen
1987Sa53	JUPSA	56,	3881	H.S. Sahota, T. Iwashita, B.S. Grewal
1987Sc.A	P-Rosseau		477	D. Schardt, R. Barden, R. Kirchner, O. Klepper, A. Płochocki, E. Roeckl, P. Kleinheinz, M. Piiparinen, B. Rubio, K. Zuber, C.F. Liang, P. Paris, A. Huck, G. Walter, G. Marguier, H. Gabelmann, J. Blomqvist
1987Se04	NUPAB	464,	381	P.B. Semmes, R.A. Braga, R.W. Fink, J.L. Wood, J.D. Cole

1987Se05	PRLTA	58,	1930	K.K. Seth, M. Artuso, D. Barlow, S. Iversen, M. Kaletka, H. Nann, B. Parker, R. Soundranayagam
1987Se.A	P-Rosseau		324	K.K. Seth
1987Sp02	PRVAA	35,	679	P.T. Springer, C.L. Bennett, P.A. Baisden
1987Sp09	NUPAB	474,	359	L. Spanier, K. Aleklett, B. Ekström, B. Fogelberg
1987Sp.A	P-Leuven		S559	A.M.J. Spits, S.J. Robinson
1987St04	ZPAAD	326,	139	E. Stiliaris, H.G. Bohlen, X.S. Chen, B. Gebauer, A. Miczaika, W. von Oertzen, W. Weller, T. Wilpert
1987St11	PRVCA	35,	2033	G.S.F. Stephans, H.T. Fortune, L.C. Bland, M. Carchidi, R. Gilman, G.P. Gilfoyle, J.W. Sweet
1987St.A	P-Rosseau		489	J. Styczen, P. Kleinheinz, W. Starzecki, B. Rubio, G. de Angelis, H.J. Hahn, C.F. Liang, P. Paris, R. Reinhardt, P. von Brentano, J. Blomqvist
1987To02	PRVCA	35,	310	K.S. Toth, D.C. Sousa, J.M. Nitschke, P.A. Wilmarth
1987To05	PRVCA	35,	620	K.S. Toth, D.C. Sousa, J.M. Nitschke, P.A. Wilmarth
1987To09	PRVCA	35,	2330	K.S. Toth, D.M. Moltz, F. Blönnigen, F.T. Avignone,III
1987Va09	PRVCA	35,	1861	P. Van Duppen, E. Coenen, K. Deneffe, M. Huyse, J.L. Wood
1987Va20	NUPAB	469,	531	L. Van Elmbt, J. Deutsch, R. Prieels, and NUPAB 493(1989)611
1987Ve.A	P-Yurmala		146	G.V. Veselov, K.A. Mezilev, Yu. N. Novikov, A.V. Lopov, V.A. Sergienko
1987Vi01	NUPAB	463,	605	K. Vierinen
1987Wh01	PRVCA	35,	81	D.H. White, H.G. Börner, R.W. Hoff, K. Schreckenbach, W.F. Davidson, T. von Egidy, D.D. Warner, P. Jeuch, G. Barreau, W.R. Kane, M.L. Stelts, R.E. Chrien, R.F. Casten, R.G. Lanier, R.W. Loughheed, R.T. Kouzes, R.A. Naumann, R. Dewberry
1987Wi03	NUPAB	464,	315	A. Willis, M. Morlet, N. Marty, C. Djalali, G.M. Crawley, A. Galonsky, V. Rotberg, B.A. Brown
1987Wi15	NUPAB	473,	129	Ch. Winter, B. Krusche, K.P. Lieb, T. Weber, G. Hlawatsch, T. von Egidy, F. Hoyler
1987Zi02	NUPAB	466,	280	F. Zijderhand, R.C. Makkus, C. van der Leun
			1988	
1988Ah02	NUPAB	483,	244	S.A. Ahmad, W. Klempt, R. Neugart, E.W. Otten, P.-G. Reinhard, G. Ulm, K. Wendt, ISOLDE
1988Ax01	PYLBB	210,	249	H. Axelsson, M. Cronqvist, A. De Rújula, P.G. Hansen, L. Johannsen, B. Jonson, R.A. Naumann, G. Nyman, J.W. Petersen, H.L. Ravn, K. Riisager, J.A. Scircle, ISOLDE
1988Ay01	PYLBB	201,	211	J. Äystö, P. Taskinen, M. Yoshii, J. Honkanen, P. Jauho, H. Penttilä, C.N. Davids
1988Ay02	NUPAB	480,	104	J. Äystö, C.N. Davids, J. Hattula, J. Honkanen, P. Jauho, R. Julin, S. Juutinen, J. Kumpalainen, T. Loenroth, A. Pakkanen, A. Passoja, H. Penttilä, P. Taskinen, E. Verho, A. Virtanen, M. Yoshi
1988Ba10	ZPAAD	329,	319	R. Barden, R. Kirchner, O. Klepper, A. Plochocki, G.-E. Rathke, E. Roeckl, K. Rykaczewski, D. Schardt, J. Żylicz
1988Ba42	ZPAAD	330,	341	D. Barnéoud, J. Blachot, J. Genevey, A. Gizon, R. Béraud, R. Duffait, A. Emsallem, M. Meyer, N. Redon, D. Rolando-Eugio
1988Be.A	P-StMalo		A1	R. Béraud, R. Duffait, A. Emsallem, M. Meyer, N. Redon, D. Rolando-Eugio, D. Barnéoud, J. Blachot, J. Genevey, A. Gizon
1988Bo06	NUPAB	477,	89	U. Bosch, W.-D. Schmidt-Ott, E. Runte, P. Tidemand-Petersson, P. Koschel, F. Meissner, R. Kirchner, O. Klepper, E. Roeckl, K. Rykaczewski, D. Schardt
1988Bo20	ZPAAD	330,	227	H.G. Bohlen, B. Gebauer, D. Kolbert, W. von Oertzen, E. Stiliaris, M. Wilpert, T. Wilpert
1988Bo28	ZPAAD	331,	21	V.R. Bom, R.W. Hollander, E. Coenen, K. Deneffe, P. Van Duppen, M. Huyse
1988Bo39	NUPAB	490,	287	M.J.G. Borge, H. Cronberg, M. Cronqvist, H. Gabelmann, P.G. Hansen, L. Johannsen, B. Jonson, S. Mattsson, G. Nyman, A. Richter, K. Riisager, O. Tengblad, M. Tomaselli
1988Bu08	NUPAB	483,	221	D.G. Burke, G. Løvhøiden, T.F. Thorsteinsen
1988Ca21	NUPAB	489,	347	W.N. Catford, L.K. Fifield, T.R. Ophel, N.A. Orr, D.C. Weisser, C.L. Woods
1988CI04	JPHGB	14,	1399	N.M. Clarke, P.R. Hayes, M.B. Becha, K.I. Pearce, R.J. Griffiths, J.B.A. England, L. Zybert, C.N. Pinder, G.M. Field, R.S. Mackintosh
1988Co18	JPHGB	14,	1411	G.G. Colvin, S.J. Robinson, F. Hoyler
1988CoTa	CODBA	63,	1	E.R. Cohen, B.N. Taylor
1988De03	NUPAB	476,	316	H.P.L. De Esch, C. van der Leun

1988Du09	PYLBB	206,	195	J.P. Dufour, R. Del Moral, F. Hubert, D. Jean, M.S. Pravikoff, A. Fleury, A.C. Mueller, K.-H. Schmidt, K. Sümmerer, E. Hanelt, J. Frehaut, M. Beau, G. Giraudet
1988Fi04	NUPAB	484,	117	L.K. Fifield, R. Chapman, J.L. Durell, J.N. Mo, R.J. Smith, P.J. Woods, B.R. Fulton, R.A. Cunningham, P.V. Drumm
1988Fo05	PYLBB	209,	173	B. Fogelberg, Ye Zongyuan, L. Spanier
1988Fu10	JUPSA	57,	2976	Y. Fukuchi, T. Komatsubara, H. Sakamoto, T. Aoki, K. Furuno
1988Gi04	PRVCA	37,	2600	M. Girod, Ph. Dessagne, M. Bernas, M. Langevin, F. Pougheon, P. Roussel
1988Gr30	RAACA	43,	223	K.E. Gregorich, R.A. Henderson, D.M. Lee, M.J. Nurmia, R.M. Chasteler, H.L. Hall, D.A. Bennett, C.M. Gannett, R.B. Chadwick, J.D. Leyba, D.C. Hoffman, G. Herrmann
1988Ho.B	VHDPG	6,	67	S. Hofmann, P. Armbruster, G. Berthes, F. Heßberger, G. Münzenberg, K. Poppensieker, T. Faestermann, A. Gillitzer, W. Kurcewicz, I. Zychor
1988Hu07	ZPAAD	330,	121	M. Huyse, P. del Marmol, E. Coenen, K. Deneffe, P. Van Duppen, J. Vanhorenbeeck
1988Ka14	ZPAAD	330,	55	T. Karlewski, N. Hildebrand, M. Brügger, N. Kaffrell, N. Trautmann, G. Herrmann
1988Ka32	JUPSA	57,	2873	H. Kawakami, S. Kato, F. Naito, K. Nisimura, T. Ohshima, S. Shibata, T. Suzuki, K. Ukai, N. Morikawa, N. Nogawa, T. Nagafuchi, H. Taketani, M. Iwahashi, K. Hisatake, Y. Fukushima, T. Matsuda, T. Taniguchi
1988Ke09	CJPHA	66,	947	T.J. Kennett, W.V. Prestwich, J.S. Tsai
1988Ku14	NUPAB	484,	264	T. Kuroyanagi, S. Mitarai, B.J. Min, H. Tomura, Y. Haruta, K. Heiguchi, S. Sue-matsu, Y. Onizuka
1988Li11	NUPAB	481,	477	W.J. Lin, O.K. Manuel, G.L. Cumming, D. Krstic, R.I. Thorpe
1988Ma.A	P-BadHonnef		391	H. Mach, E.K. Warburton, R.L. Gill, R.F. Casten, A. Wolf, Z. Berant, J.A. Winger, K. Sistemich, G. Molnár, S.M. Yates
1988Me.A	Th.-Mainz			R. Menges, et al, and 89Ot.1
1988Mi13	PRVCA	38,	895	L.W. Mitchell, P.H. Fisher
1988Mo18	PRVCA	38,	737	M.F. Mohar, E. Adamides, W. Benenson, C. Bloch, B.A. Brown, J. Clayton, E. Kashy, M. Lowe, J.A. Nolen, Jr., W.E. Ormand, J. van der Plicht, B. Sherrill, J. Stevenson, J.S. Winfield
1988Ni02	PRVCA	37,	2694	J.M. Nitschke, P.A. Wilmarth, J. Gilat, K.S. Toth, F.T. Avignone III
1988No02	PRVCA	37,	860	E.B. Norman, K.T. Lesko, A.E. Champagne
1988Or01	NUPAB	477,	523	N.A. Orr, W.N. Catford, L.K. Fifield, T.R. Ophel, D.C. Weisser, C.L. Woods
1988Or.A	Th.-Canberra			N.A. Orr
1988Qu.A	AnRpt GSI		16	A.B. Quint, W. Morawek, K.-H. Schmidt, P. Armbruster, F.P. Heßberger, S. Hofmann, G. Münzenberg, W. Reisdorf, H. Stelzer, H.-G. Clerc, C.-C. Sahn
1988Sa06	ZPAAD	329,	169	H. Salewski, W.-D. Schmidt-Ott
1988Sa18	PRVCA	37,	2371	J.-L. Salicio, S. Drissi, M. Gasser, J. Kern, H.G. Börner, G.G. Colvin, K. Schreckenbach, R.W. Hoff, R.W. Loughheed
1988Sc.A	VHDPG	6,	113	D. Schardt, R. Barden, R. Kirchner, O. Klepper, E. Roeckl, P. Kleinheinz, B. Rubio, A. Huck, G. Walter
1988Si22	JUPSA	57,	3762	K. Singh, T.S. Gill, K. Singh
1988St.A	P-BadHonnef		239	M.L. Stolzenwald, S. Brant, H. Ohm, K. Sistemich, G. Lhersonneau
1988Vi02	PRVCA	38,	1509	K.S. Vierinen, A.A. Shihab-Eldin, J.M. Nitschke, P.A. Wilmarth, R.M. Chasteler, R.B. Firestone, K.S. Toth
1988Wi05	ZPAAD	329,	503	P.A. Wilmarth, J.M. Nitschke, K. Vierinen, K.S. Toth, M. Kortelahti
1988Wo02	NUPAB	476,	392	C.L. Woods, W.N. Catford, L.K. Fifield, N.A. Orr, R.J. Sadleir
1988Wo07	NUPAB	484,	145	C.L. Woods, W.N. Catford, L.K. Fifield, N.A. Orr
1988Wo09	ZPAAD	331,	229	J.M. Wouters, R.H. Kraus, Jr., D.J. Vieira, G.W. Butler, K.E.G. Lobner
1989				
1989Al33	IANFA	53,	2089	G.D. Alkhazov, B.N. Belyayev, V.D. Domkin, Yu. G. Korobulin, V.V. Lukashevich, V.S. Mukhin
1989An02	NUPAB	491,	290	E. Andersen, M.J.G. Borge, D.G. Burke, H. Gietz, P. Hill, N. Kaffrell, W. Kurcewicz, G. Løvghøiden, S. Mattsson, R.A. Naumann, K. Nybø, G. Nyman, T.F. Thorsteinsen, ISOLDE
1989An13	YAFIA	50,	619	A.N. Andreyev, D.D. Bogdanov, A.V. Yerimin, A.P. Kabachenko, O.A. Orlova, G.M. Ter-Akopian, V.I. Chepigin
1989An.A	P-Dubna		508	A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, A.P. Kabachenko, O.A. Orlova, S. Sharo, G.M. Ter-Akopian, A.V. Yeremin, and 89An13

1989Ay.A	P-Dubna		427	J. Äystö, P. Dendooven, P. Jauho, A. Jokinen, J. Parmonen, H. Penttilä, P. Taskinen, M. Leino, K. Eskola
1989Ba22	PYLBB	223,	273	A.S. Barabash, V.V. Kuzminov, V.M. Lobashev, V.M. Novikov, B.M. Ovchinnikov, A.A. Pomansky
1989Ba28	PRVCA	40,	940	S.C. Baker, M.J. Brown, P.H. Barker
1989Ba42	NUPAB	500,	1	E.L. Bakkum, C. van der Leun
1989Bo.A	PrvCom	GAu	Dec	H.G. Bohlen
1989Bu09	ZPAAD	333,	131	D.G. Burke, H. Folger, H. Gabelmann, E. Hagebø, P. Hill, P. Hoff, O. Jons-son, N. Kaffrell, W. Kurcewicz, G. Løvhøiden, K. Nybø, G. Nyman, H. Ravn, K. Riisager, J. Rogowski, K. Steffensen, T.F. Thorsteinsen, ISOLDE J. Busto PrvCom of F. Leccia 1988
1989Bu.A	Th.-Bordeaux			
1989Ca25	NUPAB	503,	263	W.N. Catford, L.K. Fifield, N.A. Orr, C.L. Woods
1989Ch01	PRVCA	39,	248	A.E. Champagne, R.T. Kouzes, A.B. McDonald, M.M. Lowry, D.R. Benton, K.P. Coulter, Z.Q. Mao
1989Cl02	NUPAB	493,	293	E.T.H. Clifford, E. Hagberg, J.C. Hardy, H. Schmeing, R.E. Azuma, H.C. Evans, V.T. Koslowsky, U.J. Schrewe, K.S. Sharma, I.S. Towner
1989Dr03	NUPAB	496,	530	P.V. Drumm, L.K. Fifield, R.A. Bark, M.A.C. Hotchkis, C.L. Woods
1989Fi01	PRVCA	39,	219	R.B. Firestone, J.M. Nitschke, P.A. Wilmarth, K. Vierinen, J. Gilat, K.S. Toth, Y.A. Akovali
1989Gr03	NUPAB	491,	373	M. Graefenstedt, U. Keyser, F. Münnich, F. Schreiber, ISOLDE
1989Gr23	ZPAAD	334,	239	M. Graefenstedt, P. Jürgens, U. Keyser, F. Münnich, F. Schreiber, K. Balog, T. Winkelmann, H.R. Faust
1989Gu03	ZPAAD	332,	189	D. Guillemaud-Mueller, Y.E. Penionzhkevich, R. Anne, A.G. Artukh, D. Bazin, V. Borrel, C. Détraz, D. Guerreau, B.A. Gvozdev, J.C. Jacmart, D.X. Jiang, A.M. Kalinin, V.V. Kamanin, V.B. Kutner, M. Lewitowicz, S.M. Lukyanov, A.C. Mueller, N. Hoai Chau, F. Pougheon, A. Richard, M.G. Saint-Laurent, W.D. Schmidt-Ott (see also 93Po.A)
1989Ha27	NUPAB	500,	90	Y. Hatsukawa, T. Ohtsuki, K. Sueki, H. Nakahara, I. Kohno, M. Magara, N. Shinohara, H.L. Hall, R.A. Henderson, C.M. Gannett, J.A. Leyba, R.B. Chadwick, K.E. Gregorich, D. Lee, M.J. Nurmia, D.C. Hoffman
1989Ha.A	PENUC	III,	99	J.C. Hardy, E. Hagberg
1989He03	NIMAE	274,	522	F.P. Heßberger, S. Hofmann, G. Münzenberg, K.-H. Schmidt, P. Armbruster, R. Hingmann
1989He11	NUPAB	494,	1	D.W. Hetherington, A. Alousi, R.B. Moore
1989He13	ZPAAD	333,	111	F.P. Heßberger, H. Gäggeler, P. Armbruster, W. Brüchle, H. Folger, S. Hofmann, D. Jost, J.V. Kratz, M.E. Leino, G. Münzenberg, V. Ninov, M. Schädel, U. Scherer, K. Sümmerer, A. Türler, D. Ackermann
1989Hi04	NUPAB	492,	237	T. Hild, W.-D. Schmidt-Ott, V. Freystein, F. Meissner, E. Runte, H. Salewski, R. Michaelsen
1989Ho08	ZPAAD	332,	407	P. Hoff, B. Ekström, B. Fogelberg PrvCom of L. Spanier et al to ref.
1989Ho12	ZPAAD	333,	107	S. Hofmann, P. Armbruster, G. Berthes, T. Faestermann, A. Gillitzer, F.P. Heßberger, W. Kurcewicz, G. Münzenberg, K. Poppensieker, H.J. Schött, I. Zychor
1989Ho13	NUPAB	496,	462	J. Honkanen, V. Koponen, P. Taskinen, J. Aysto, K. Eskola, S. Messelt, K. Ogawa
1989Ho15	NUPAB	500,	111	C. Hofmeyr
1989Hu03	PRVCA	39,	997	H. Huck, A. Jech, G. Marti, M.L. Perez, J.J. Rossi, H.M. Sofia
1989Je07	NUPAB	503,	77	C. Jeanperrin, L.H. Rosier, B. Ramstein, E.I. Obiajunwa
1989Jo.A	AnRpt JYFL		81	A. Jokinen, J. Äystö, C.N. Davids, K. Eskola, P. Jauho, M. Leino, J.M. Parmonen, H. Penttilä, P. Taskinen
1989Ka04	PRVCA	39,	818	S. Kato, S. Kubono, M.H. Tanaka, M. Yasue, T. Nomura, Y. Fuchi, S. Ohkawa, T. Miyachi, K. Iwata, T. Suehiro, Y. Yoshida
1989Ki11	NUPAB	496,	429	S.W. Kikstra, C. van der Leun, S. Raman, E.T. Jurney, I.S. Towner
1989Ko07	ZPAAD	332,	229	M.O. Kortelahti, H.K. Carter, R.A. Braga, R.W. Fink, B.D. Kern
1989Ko22	ZPAAD	333,	339	V. Koponen, J. Äystö, J. Honkanen, P. Jauho, H. Penttilä, J. Suhonen, P. Taskinen, K. Rykaczewski, J. Żylicz, C.N. Davids
1989Le16	NUPAB	496,	477	M. Lewitowicz, Yu. E. Penionzhkevich, A.G. Artukh, A.M. Kalinin, V.V. Kamanin, S.M. Lukyanov, Nguyen Hoai Chau, A.C. Mueller, D. Guillemaud-Mueller, R. Anne, D. Bazin, C. Détraz, D. Guerreau, M.G. Saint-Laurent, V. Borrel, J.C. Jacmart, F. Pougheon, A. Richard, W.D. Schmidt-Ott
1989Lo07	NUPAB	494,	157	G. Løvhøiden, T.F. Thorsteinsen, E. Andersen, M.F. Kiziltan, D.G. Burke
1989Ma05	JPGPE	15,	173	A.M. Mandal, S.K. Saha, S.M. Sahakundu, A.P. Patro

1989Me02	ZPAAD	332,	153	F. Meissner, W.-D. Schmidt-Ott, V. Freystein, T. Hild, E. Runte, H. Salewski, R. Michaelsen
1989Mi03	PRVCA	39,	992	Ch. Miehé, Ph. Dessagne, P. Baumann, A. Huck, G. Klotz, A. Knipper, G. Walter, G. Marguier
1989Mi16	NUPAB	501,	437	S. Michaelsen, Ch. Winter, K.P. Lieb, B. Krusche, S. Robinson, T. von Egidy
1989Mi17	NUPAB	501,	557	H. Miyatake, T. Nomura, S. Kubono, J. Tanaka, M. Oyaizu, H. Okawa, N. Ikeda, K. Sueki, H. Kudo, K. Morita, T. Shinozuka
1989Mi.A	P-Dubna		66	V.L. Mikheev, et al
1989Mu09	ZPAAD	333,	163	G. Münzenberg, P. Armbruster, S. Hofmann, F.P. Heßberger, H. Folger, J.G. Keller, V. Ninov, K. Poppensieker, A.B. Quint, W. Reisdorf, K.-H. Schmidt, J.R.H. Schneider, H.J. Schött, K. Sümmerer, I. Zychor, M.E. Leino, D. Ackermann, U. Gollerthan, E. Hanelt, W. Morawek, D. Vermeulen, Y. Fujita, T. Schwab
1989Mu16	NUPAB	502,	571	G. Münzenberg
1989Ok.A	NEANDC(J)-140/U			K. Okano, Y. Kawase
1989Or03	NUPAB	491,	443	N.A. Orr, W.N. Catford, L.K. Fifield, M.A.C. Hotchkis, T.R. Ophel, D.C. Weisser, C.L. Woods
1989Or04	NUPAB	491,	457	N.A. Orr, L.K. Fifield, W.N. Catford, C.L. Woods
1989Ot.A	THISc	8,	517	E.W. Otten
1989Po09	NUPAB	499,	495	M.G. Porquet, C. Bourgeois, P. Kilcher, B. Roussi�re, J. Sauvage, H. Dautet, J.K.P. Lee, ISOCELE
1989Po10	NUPAB	500,	287	F. Pougheon, V. Borrel, J.C. Jacmart, R. Anne, C. D�traz, D. Guillemaud-Mueller, A.C. Mueller, D. Bazin, R. Del Moral, J.P. Dufour, F. Hubert, M.S. Pravikoff, G. Audi, E. Roeckl, B.A. Brown
1989Pr.A	PENUC	II,	205	P.B. Price, S.W. Barwick
1989Re04	PRVCA	40,	368	A. Redondo, R.G.H. Robertson
1989Re.A	P-Miami			P.L. Reeder, et al
1989Ri03	NUPAB	499,	221	R. Richter, I. F�rster, A. Gelberg, A.M.I. Haque, P. von Brentano, R.F. Casten, H.G. B�rner, G.G. Colvin, K. Schreckenbach, G. Barreau, S.A. Kerr, H.H. Schmidt, P. Hungerford, H.J. Scheerer, T. von Egidy, R. Rascher
1989Ry02	ZPAAD	332,	275	K. Rykaczewski, A. Plochocki, I.S. Grant, H. Gabelmann, R. Barden, D. Schardt, J. Żylicz, G. Nyman, ISOLDE
1989Sa01	JPGPE	15,	73	S.K. Saha, S.M. Sahakundu
1989Sa11	NUPAB	494,	36	S.L. Sakharov, I.A. Kondurov, Yu. E. Loginov, V.V. Martynov, A.A. Radionov, P.A. Sushkov, Yu. L. Khazov, A.I. Egorov, V.K. Isupov, H.G. B�rner, F. Hoyler, S. Kerr, K. Schreckenbach, G. Hlawatsch, T. von Egidy, H. Lindner
1989Sc24	NUPAB	501,	86	H. Sch�lermann, R. B�ttger
1989Sc31	NUPAB	504,	1	H.H. Schmidt, P. Hungerford, T. von Egidy, H.J. Scheerer, H.G. B�rner, S.A. Kerr, K. Schreckenbach, F. Hoyler, G.G. Colvin, A.M. Bruce, R.F. Casten, D.D. Warner, I.L. Kugava, V.A. Bondarenko, N.D. Kramer, P.T. Prokofjef, A. Chalupka
1989Sc.A	NDSAA	57,	515	M.R. Schmorak
1989Sh10	NIMAE	275,	123	K.S. Sharma, H. Schmeing, H.C. Evans, E. Hagberg, J.C. Hardy, V.T. Koslowsky
1989Si04	PRVDA	39,	1825	J.J. Simpson, A. Hime
1989Sm06	SAPHD	12,	74	J.J.A. Smit, Z.H.J. Pretorius, F.B. Waanders, J.P.L. Reinecke, J. Keilonen
1989St05	PRVCA	39,	1503	S.T. Staggs, R.G.H. Robertson, D.L. Wark, P.P. Nguyen, J.F. Wilkerson, T.J. Bowles
1989St06	PRVCA	39,	1963	C.A. Stone, S.H. Faller, W.B. Walters
1989Su.A	BAPSA	34,	1819	B. Sur, E.B. Norman, K.T. Lesko, E. Browne, R.M. Larimer, H.L. Hall, J.D. Leyba, D.C. Hoffman
1989Ta11	ZPAAD	333,	29	J.L. Tain, B. Rubio, P. Kleinheinz, D. Schardt, R. Barden, J. Blomqvist
1989To01	PRVCA	39,	1150	K.S. Toth, D.M. Moltz, J.D. Robertson
1989Vi02	PRVCA	39,	1972	K.S. Vierinen, J.M. Nitschke, P.A. Wilmarth, R.M. Chasteler, A.A. Shihab-Eldin, R.B. Firestone, K.S. Toth, Y.A. Akovali
1989Vi04	NUPAB	499,	1	K.S. Vierinen, J.M. Nitschke, P.A. Wilmarth, R.B. Firestone, J. Gilat
1989Wa10	PRVCA	39,	1647	S. Wang, D. Snowden-Ifft, P.B. Price, K.J. Moody, E.K. Hulet
1989Wi01	ZPAAD	332,	33	G. Winter, J. D�ring, L. Funke, L. Kaubler, R. Schwengner, H. Prade
1989Wi05	NUPAB	491,	395	Ch. Winter, B. Krusche, K.P. Lieb, S. Michaelsen, G. Hlawatsch, H. Linder, T. von Egidy, F. Hoyler, R.F. Casten
1989Yu01	PRVCA	39,	256	S. Yuan, T. Zhang, S. Xu, W. Li, L. Zhang, M. Liu, X. Ou, W. Li
1989Zh04	PRVCA	39,	1985	Z. Zhao, M. Gai, B.J. Lund, S.L. Rugari, D. Mikolas, B.A. Brown, J.A. Nolen, Jr., M. Samuel

1989Zl.A	PrvCom	GAu	May	I. Žliven
				1990
1990Aj01	NUPAB	506,	1	F. Ajzenberg-Selove, and PrvCom AHW
1990Ak01	PRVCA	41,	1126	Y.A. Akovali, K.S. Toth, A.L. Goodman, J.M. Nitschke, P.A. Wilmarth, D.M. Moltz, M.N. Rao, D.C. Sousa
1990Ak04	PRVCA	42,	1130	Y.A. Akovali, K.S. Toth, C.R. Bingham, M.B. Kassim, M. Zhang, H.K. Carter, W.D. Hamilton, J. Kormicki
1990Am04	PZETA	51,	607	A.I. Amelin, M.G. Gornov, Yu. B. Gurov, A.I. Ilin, V.P. Koplev, P.V. Morokhov, K.O. Oganessian, V.A. Pechkurov, V.I. Saveliev, E.M. Sergeev, B.A. Chern'yshev, R.R. Shafigulin, A.V. Shishkov
1990Am05	YAFIA	52,	1231	A.I. Amelin, M.G. Gornov, Y.B. Gurov, A.L. Il'in, P.V. Morokhov, V.A. Pechkurov, V.I. Savelev, F.M. Sergeev, S.A. Smirnov, B.A. Chernyshev, R.R. Shafigullin, A.V. Shishkov
1990An19	ZPAAD	337,	229	A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, A.P. Kabachenko, S. Sharo, G.M. Ter-Akopian, A.V. Yeremin
1990An22	ZPAAD	337,	231	A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, A.P. Kabachenko, S. Sharo, G.M. Ter-Akopian, A.V. Yeremin, O.N. Malyshev
1990Ba02	PRVCA	41,	246	P.H. Barker, G.D. Leonard
1990Be.A	PrvCom	AHW	Jun	C.E. Bemis
1990Be.B	P-Leningrad		132	E.A. Belomytseva, G.V. Veselov, K.A. Mezilev, Yu. N. Novikov, A.G. Polyakov, A.V. Popov, Yu. Ya. Sergeev, V.A. Sergienko, V.I. Tichonov
1990Bo24	NUPAB	515,	21	M.J.G. Borge, H. Gabelmann, L. Johannsen, B. Jonson, G. Nyman, K. Riisager, O. Tengblad, ISOLDE
1990Bo39	YAFIA	52,	358	D.D. Bogdanov, V.P. Bugrov, S.G. Kadmenskiĭ
1990Bo52	IANFA	54,	1787	S.T. Boneva, E.V. Vasileva, V.D. Kulik, L.K. Khem, Yu. P. Popov, A.M. Sukhoviĭ, V.A. Khitrov, Yu. V. Kholnov
1990Bu17	PRVCA	42,	499	D.G. Burke, P.E. Garrett, Tao Qu, R.A. Naumann
1990Bu28	YAFIA	52,	305	E. Bukhner, I.N. Vishnevsky, F.A. Danevich, Yu. G. Zdesenko, H.V. Klapdor, B.N. Kropivnyansky, V.N. Kuts, A. Piepke, V.I. Tretyak, G. Heusser, J. Schneider, H. Strecker
1990Ch34	PRVCA	42,	1171	R.M. Chasteler, J.M. Nitschke, R.B. Firestone, K.S. Vierinen, P.A. Wilmarth
1990Ch37	PRVCA	42,	1796	R.M. Chasteler, J.M. Nitschke, R.B. Firestone, K.S. Vierinen, P.A. Wilmarth
1990De43	NUPAB	519,	529	C. Détraz, R. Anne, P. Bricault, D. Guillemaud-Mueller, M. Lewitowicz, A.C. Mueller, Yu Hu Zhang, V. Borrel, J.C. Jacmart, F. Pougheon, A. Richard, D. Bazin, J.P. Dufour, A. Fleury, F. Hubert, M.S. Pravikoff
1990Dy04	PYLBB	245,	343	G.R. Dyck, M.H. Sidky, J.G. Hykawy, C.A. Lander, K.S. Sharma, R.C. Barber, H.E. Duckworth
1990En02	NUPAB	510,	209	P.M. Endt, C. Alderliesten, F. Zijderhand, A.A. Wolters, A.G.M. van Hees
1990En08	NUPAB	521,	1	P.M. Endt
1990Fa03	PHSTB	41,	652	B. Fant, T. Weckstrom, A. Kallberg
1990Fo07	ZPAAD	337,	251	B. Fogelberg, Y. Zongyuan, B. Ekström, E. Lund, K. Aleklett, L. Sihver
1990Ge12	ZDACE	17,	119	Ch. Gerz, D. Wilsdorf, G. Werth
1990Gr10	ZPAAD	336,	247	M. Graefenstedt, P. Jürgens, U. Keyser, F. Münnich, F. Schreiber, K. Balog, T. Winkelmann, H.R. Faust, B. Pfeiffer
1990Ha02	PRVCA	41,	618	H.L. Hall, K.E. Gregorich, R.A. Henderson, C.M. Gannett, R.B. Chadwick, J.D. Leyba, K.R. Czerwinski, B. Kadkhodayan, S.A. Kreek, D.M. Lee, M.J. Nurmia, D.C. Hoffman, C.E.A. Palmer, P.A. Baisden
1990He11	PRVCA	41,	2325	M. Hellström, B. Fogelberg, L. Spanier, H. Mach
1990Ho02	PRVCA	41,	484	R.W. Hoff, S. Drissi, J. Kern, W. Strassmann, H.G. Börner, K. Schreckenbach, G. Barreau, W.D. Ruhter, L.G. Mann, D.H. White, J.H. Landrum, R.J. Dupzyk, R.F. Casten, W.R. Kane, D.D. Warner
1990Ho03	PRVCA	41,	631	D.C. Hoffman, D.M. Lee, K.E. Gregorich, M.J. Nurmia, R.B. Chadwick, K.B. Chen, K.R. Czerwinski, C.M. Gannett, H.L. Hall, R.A. Henderson, B. Kadkhodayan, S.A. Kreek, J.D. Leyba
1990Ho10	NUPAB	512,	189	F. Hoyler, J. Jolie, G.G. Colvin, H.G. Börner, K. Schreckenbach, P. Van Isacker, P. Fettweis, H. Göktürk, J.C. Dehaes, R.F. Casten, D.D. Warner, A.M. Bruce
1990Is02	PRVCA	41,	1272	M.A. Islam, T.J. Kennett, W.V. Prestwich
1990Is03	ZPAAD	335,	173	M.A. Islam, T.J. Kennett, W.V. Prestwich
1990Is06	ZPAAD	335,	243	M.C.P. Isaac, V.R. Vanin, O.A.M. Helene
1990Is07	PRVCA	42,	207	M.A. Islam, T.J. Kennett, W.V. Prestwich

1990Is09	CJPHA	68,	1237	M.A. Islam, T.J. Kennett, W.V. Prestwich
1990Ka01	PRVCA	41,	1276	S. Kato, S. Kubono, M.H. Tanaka, M. Yasue, T. Nomura, Y. Fuchi, Y. Funatsu, S. Ohkawa, T. Miyachi, K. Iwata, T. Suehiro, Y. Yoshida, O. Nitoh
1990Ka10	PRVCA	41,	2004	S. Kato, S. Kubono, T. Nomura, Y. Fuchi, Y. Funatsu, S. Ohkawa, T. Miyachi, T. Suehiro, Y. Yoshida
1990Ka19	PRVCA	42,	563	S. Kato, S. Kubono, M.H. Tanaka, T. Nomura, Y. Fuchi, Y. Funatsu, S. Ohkawa, T. Miyachi, T. Suehiro, Y. Yoshida
1990Ka21	NUPAB	514,	173	A. Kaerts, P.H.M. van Assche, S.A. Kerr, F. Hoyler, H.G. Börner, R.F. Casten, D.D. Warner
1990Ka27	PRVCA	42,	1918	S. Kato, S. Kubono, M.H. Tanaka, M. Yasue, Y. Fuchi, Y. Funatsu, S. Ohkawa, T. Miyachi, T. Suehiro, Y. Yoshida
1990Ki07	NUPAB	512,	425	S.W. Kikstra, C. van der Leun, P.M. Endt, J.G.L. Booten, A.G.M. van Hees, A.A. Wolters
1990Ko25	PRVCA	42,	1267	M.O. Kortelahti, B.D. Kern, R.A. Braga, R.W. Fink, I.C. Girit, R.L. Mlekodaj
1990Le03	ZPAAD	335,	117	M. Lewitowicz, R. Anne, A.G. Artukh, D. Bazin, A.V. Belozyorov, P. Bricault, C. Détraz, D. Guillemaud-Mueller, J.C. Jacmart, E. Kashy, A. Latimier, S.M. Lukyanov, A.C. Mueller, Yu. E. Penionzhkevich, F. Pougheon, A. Richard, W.D. Schmidt-Ott, Y. Zhang
1990Li14	NUCIA	103,	553	Sr. Little Flower, B.R.S. Babu, P. Venkataramaiah, H. Sanjeeviah
1990Li40	NIMAE	297,	217	H. Lindner, H. Trieb, T. von Egidy, H. Hiller, J. Klora, U. Mayerhofer, A. Walter, A.H. Wapstra
1990Ma03	PRVCA	41,	226	H. Mach, E.K. Warburton, R.L. Gill, R.F. Casten, J.A. Becker, B.A. Brown, J.A. Winger
1990Me08	PRVCA	41,	2921	J.T. Meek, W.G. Millen, G.W. Stockton, R.T. Kouzes
1990Mi23	PRLTA	25,	3092	H.S. Miley, F.T. Avignone III, R.L. Brodzinski, J.I. Collar, J.H. Reeves
1990Mu06	NUPAB	513,	1	A.C. Mueller, D. Guillemaud-Mueller, J.C. Jacmart, E. Kashy, F. Pougheon, A. Richard, A. Staudt, H.V. Klapdor-Kleingrothaus, M. Lewitowicz, R. Anne, P. Bricault, C. Détraz, Yu. E. Penionzhkevich, A.G. Artukh, A.V. Belozyorov, S.M. Lukyanov, D. Bazin, W.D. Schmidt-Ott
1990Ne.A	PrvCom		Gizon	R. Neugart
1990Ne.B	P-Monterey			Zs. Netmeth, Karlsruhe
1990Ni05	ZPAAD	336,	473	V. Ninov, F.P. Heßberger, P. Armbruster, S. Hofmann, G. Münzenberg, M. Leino, Y. Fujita, D. Ackermann, W. Morawek, A. Lüttgen
1990Og01	PYLBB	235,	35	A.A. Ogloblin, N.I. Venikov, S.K. Lisin, S.V. Pirozhkov, V.A. Pchelin, Yu. F. Rodionov, V.M. Semochkin, V.A. Shabrov, I.K. Shvetsov, V.M. Shubko, S.P. Tretyakova, V.L. Mikheev
1990Pi05	NUPAB	510,	301	Š. Piskoř, W. Schäferlingová
1990Po13	IANFA	54,	852	A.V. Potempa, V.P. Afanasjev, Ya. Vavryshchuk, K. Ya. Gromov, V.G. Kalin-nikov, N. Yu. Kovotskii, V.V. Kuznetsov, M. Lewandowski, Ya. A. Saidimov, M. Yakhim, Zh. Sereter, V.I. Fominykh, V. Charnadski, Yu. V. Yushkevich, M. Yanistki, A. Yasinski
1990Pr02	CJPHA	68,	261	W.V. Prestwich, T.J. Kennett, and erratum CJPHA 68,1352
1990Re08	ZPAAD	336,	381	G. Reusen, V.R. Bom, P. Decroock, P. Dendooven, M. Huyse, R.W. Hollander, P. Van Duppen, J. Vanhorenbeeck, J. Wauters
1990Sa32	ZPAAD	337,	161	H. Salewski, K. Becker, W.-D. Schmidt-Ott, T. Hild, F. Meissner, E. Runte, R. Michaelsen
1990Sa.A	Th.-Göttingen			H. Salewski
1990Se17	FZKAA	22,	183	H. Seyfarth, H.H. Guven, B. Kardon, G. Lhersonneau, K. Sistemich, S. Brant, N. Kaffrell, P. Maier-Komor, H.K. Vonach, V. Paar, D. Vorkapic, R.A. Meyer
1990Sh15	IMPAE	5,	2821	R.K. Sheline, C.F. Liang, P. Paris
1990Sh.A	AnRpt LBL		114	A.A. Shihab-Eldin, et al
1990So08	PRAMC	35,	329	P.C. Sood, R.K. Sheline
1990St13	ZPAAD	336,	369	U. Stöhlker, A. Blönnigen, W. Lippert, H. Wollnik
1990St25	PRLTA	65,	3104	H. Stolzenberg, St. Becker, G. Bollen, F. Kern, H.-J. Kluge, Th. Otto, G. Savard, L. Schweikhard, G. Audi, R.B. Moore
1990Ta07	ZPAAD	335,	477	I. Tago, Y. Kawase, K. Okano
1990Tu01	ZPAAD	337,	361	X.L. Tu, X.G. Zhou, D.J. Vieira, J.M. Wouters, Z.Y. Zhou, H.L. Seifert, V.G. Lind
1990Tu.A	Wallet Cards			J.K. Tuli
1990Va18	MPLAE	5,	1299	A.A. Vasenko, I.V. Kirpichnikov, V.A. Kuznetsov, A.S. Starostin, A.G. Djanyan, V.S. Pogosov, S.P. Shachyisyan, A.G. Tamanyan
1990Wa22	NIMAE	292,	671	A.H. Wapstra

1990We01	PRVCA	41,	778	D. Weselka, P. Hille, A. Chalupka
1990Wi12	PRVCA	42,	954	J.A. Winger, J.C. Hill, F.K. Wohn, E.K. Warburton, R.L. Gill, A. Piotrowski, R.B. Schuhmann, D.S. Brenner
1990Zh.A	GANIL-T-9002			Y.H. Zhang
1991				
1991Aj01	NUPAB	523,	1	F. Ajzenberg-Selove
1991An10	ZPAAD	338,	363	A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, A.P. Kabachenko, O.N. Malyshew, G.M. Ter-Akopian, A.V. Yeremin
1991Ay.A	P-Foros			J. Äystö, et al
1991Ba06	NUPAB	523,	261	M.K. Balodis, N.D. Kramer, P.T. Prokofjev, A.V. Afanasjev, T.V. Guseva, J.J. Tambergs, K. Schreckenbach, W.F. Davidson, D.D. Warner, J.A. Pinston, P.H.M. van Assche, A.M.J. Spits
1991Be25	NUPAB	533,	113	A. Ben Braham, C. Bourgeois, P. Kilcher, F. Le Blanc, B. Roussi�re, J. Sauvage, A.J. Kreiner, M.G. Porquet, ISOCELE
1991Bi04	PRVCA	44,	1208	C.R. Bingham, M.B. Kassim, M. Zhang, Y.A. Akovali, K.S. Toth, W.D. Hamilton, H.K. Carter, J. Kormicki, J. von Schwarzenberg, M.M. Jarrio
1991BI05	PRVCA	44,	325	S. Blagus, D. Miljanic, M. Zadro, G. Calvi, M. Lattuada, F. Riggi, C. Spitaleri, C. Blyth, O. Karban
1991Bo22	ZPAAD	339,	311	A. Bouldjedri, A. Astier, R. B�raud, R. Duffait, A. Emsallem, H. Haas, ISOLDE
1991Bo32	NUPAB	531,	353	V. Borrel, J.C. Jacmart, F. Pougheon, R. Anne, C. D�traz, D. Guillemaud-Mueller, A.C. Mueller, D. Bazin, R. Del Moral, J.P. Dufour, F. Hubert, M.S. Pravikoff, E. Roeckl
1991Bo35	NUPAB	534,	255	H.G. B�rner, R.F. Casten, I. F�rster, D. Lieberz, P. von Brentano, S.J. Robinson, T. von Egidy, G. Hlawatsch, H. Lindner, P. Geltenbort, F. Hoyler, H. Faust, G. Colvin, W.R. Kane, M. MacPhail
1991Bo.B	P-Niigata		83	H.G. Bohlen
1991Br17	ZPAAD	339,	495	T. Brohm, H.-G. Clerc, U. Gollerthan, W. Schwab, K.-H. Schmidt, R.S. Simon
1991Bu12	PRLTA	67,	2626	B. Budick, J. Chen, H. Lin
1991Du07	ZPAAD	341,	39	S.B. Dutta, R. Kirchner, O. Klepper, T.U. Kuhl, D. Marx, G.D. Sprouse, R. Menges, U. Dinger, G. Huber, S. Schroder
1991Fi03	PRVCA	43,	1066	R.B. Firestone, J. Gilat, J.M. Nitschke, P.A. Wilmarth, K.S. Vierinen
1991Go19	NUPAB	531,	613	M.G. Gornov, Yu. B. Gurov, P.V. Morokhov, V.A. Pechkurov, V.I. Savelyev, F.M. Sergeev, B.A. Chernyshev, R.R. Shafigullin, A.V. Shishkov, V.P. Koptev, K.O. Oganessian, B.P. Osipenco
1991Gr12	NUPAB	530,	401	J.C. Griffin, R.A. Braga, R.W. Fink, J.L. Wood, H.K. Carter, R.L. Mlekodaj, C.R. Bingham, E. Coenen, M. Huyse, P. Van Duppen
1991Gr13	PRVCA	44,	1728	V. Grafen, B. Ackermann, H. Baltzer, T. Bihn, C. G�nther, J. de Boer, N. Gollwitzer, G. Graw, R. Hertenberger, H. Kader, A. Levon, A. L�sch
1991Ha31	EULEE	15,	491	D. Hagen, G. Werth
1991He04	ZPAAD	338,	7	K. Heiguchi, T. Hosoda, T. Komatsubara, T. Nomura, K. Furuno, R. Nakatani, S. Mitarai, T. Kuroyanagi
1991He21	ZPAAD	340,	225	F. Heine, T. Faestermann, A. Gillitzer, J. Homolka, M. K�pf, W. Wagner, see also 92He. A
1991Hi02	PRVCA	43,	2591	J.C. Hill, D.D. Schwellenbach, F.K. Wohn, J.A. Winger, R.L. Gill, H. Ohm, K. Sistemich
1991Hi11	PRVCA	44,	1581	Y. Hirabayashi
1991Hi.A	AnRpt LBL		69	M.M. Hindi, K.L. Wedding, E.B. Norman, K.T. Lesko, B. Sur, R.-M. Larimer, M.T.F. da Cruz, K.R. Czerwinski
1991Ho05	JPGPE	17,	145	T.H. Hoare, P.A. Butler, G.D. Jones, M. Loiselet, O. Naviliat-Cuncic, J. Vervier, M. Dahlinger, A.M.Y. El-Lawindy, R. Wadsworth, D.L. Watson
1991Ho08	CZYPA	41,	525	J. Honzatko, K. Konecny, Z. Kosina
1991Hy01	PRLTA	67,	1708	J.G. Hykawy, J.N. Nxumalo, P.P. Unger, C.A. Lander, R.C. Barber, K.S. Sharma, R.D. Peters, H.E. Duckworth
1991Io02	NUPAB	531,	112	M. Ionescu-Bujor, A. Iordachescu, G. Pascovici
1991Is01	PRVCA	43,	1086	M.A. Islam, T.J. Kennett, W.V. Prestwich
1991Is02	CJPHA	69,	658	M.A. Islam, T.J. Kennett, W.V. Prestwich
1991Jo11	ZPAAD	340,	21	A. Jokinen, J. Äyst�, P. Dendooven, K. Eskola, Z. Janas, P.P. Jauho, M.E. Leino, J.M. Parmonen, H. Penttil�, K. Rykaczewski, P. Taskinen
1991Ka41	PYLBB	256,	105	H. Kawakami, S. Kato, T. Ohshima, S. Shibata, K. Ukai, N. Morikawa, N. Nogawa, K. Haga, T. Nagafuchi, M. Shigeta, Y. Fukushima, T. Taniguchi

1991Ke06	NIMAE	300,	67	H. Keller, R. Kirchner, O. Klepper, E. Roeckl, D. Schardt, R.S. Simon, P. Kleinheinz, C.F. Liang, P. Paris
1991Ke08	ZPAAD	339,	355	H. Keller, R. Barden, R. Kirchner, O. Klepper, E. Roeckl, D. Schardt, I.S. Grant, A. Płochocki, K. Rykaczewski, J. Szerypo, J. Żylicz, ISOLDE
1991Ke10	NUPAB	534,	77	J. Kern, A. Raemy, W. Beer, J.-Cl. Dousse, W. Schwitz, M.K. Balodis, P.T. Prokofjev, N.D. Kramer, L.I. Simonova, R.W. Hoff, D.G. Gardner, M.A. Gardner, R.F. Casten, R.L. Gill, R. Eder, T. von Egidy, E. Hagn, P. Hungerford, H.J. Scheerer, H.H. Schmidt, E. Zech, A. Chalupka, A.V. Murzin, V.A. Libman, I.V. Kononenko, C. Coceva, P. Giacobbe, I.A. Kondurov, Yu. E. Loginov, P.A. Sushkov, S. Brant, V. Paar
1991Ke11	ZPAAD	340,	363	H. Keller, R. Kirchner, O. Klepper, E. Roeckl, D. Schardt, R.S. Simon, P. Kleinheinz, R. Menegazzo, C.F. Liang, P. Paris, K. Rykaczewski, J. Żylicz, and Thesis H. Keller THD report GSI-91-6 February 1991
1991Ki04	NUPAB	529,	39	S.W. Kikstra, Z. Guo, C. van der Leun, P.M. Endt, S. Raman, T.A. Walkiewicz, J.W. Starner, E.T. Journey, I.S. Towner
1991KI02	PRVCA	44,	2801	N. Klay, F. Kaeppler, H. Beer, G. Schatz, H. Börner, F. Hoyler, S.J. Robinson, K. Schreckenbach, B. Krusche, U. Mayerhofer, G. Hlawatsch, H. Lindner, T. von Egidy, W. Andrejtscheff, P. Petkov
1991Ko.A	P-Minsk		117	I.A. Kondurov, Yu. E. Loginov, P.A. Sushkov
1991Ko.B	P-Niigata		187	T. Kobayashi
1991Kr15	ZPAAD	340,	419	K.-L. Kratz, H. Gabelmann, P. Möller, B. Pfeiffer, H.L. Ravn, A. Wöhr, ISOLDE
1991Kr.A	AnRpt LBL		57	S.A. Kreek, et al
1991La07	NUPAB	530,	437	J.M. Lagrange, M. Pautrat, J.S. Dionisio, Ch. Vieu, J. Vanhorenbeeck
1991Le09	PRVCA	44,	336	M. Leino, P.P. Jauho, J. Aysto, P. Decrock, P. Dendooven, K. Eskola, M. Huyse, A. Jokinen, J.M. Parmonen, H. Penttilä, G. Reusen, P. Taskinen, P. Van Duppen, J. Wauters
1991Le15	ZPAAD	340,	107	M. Lewandowski, A.W. Potempa, V.I. Fominikh, K.Y. Gromov, M. Janicki, J.V. Juschkevich, V.G. Kalinnikov, N.J. Kotovskij, V.V. Kuznetsov, N. Raschkova, J.A. Sajdimov, J. Wawryszczuk
1991Ly01	PRVCA	44,	764	J.E. Lynn, E.T. Journey, S. Raman
1991Ma65	ZPAAD	341,	1	U. Mayerhofer, T. von Egidy, J. Jolie, H.G. Börner, G. Colvin, S. Judge, B. Kruschke, S.J. Robinson, K. Schreckenbach, S. Brant, V. Paar
1991Me05	ZPAAD	339,	315	F. Meissner, W.-D. Schmidt-Ott, K. Becker, U. Bosch-Wicke, U. Ellmers, H. Salewski, R. Michaelsen
1991Mi08	ZPAAD	338,	371	S. Michaelsen, K.P. Lieb, S.J. Robinson
1991Mi15	NUPAB	530,	211	B.J. Min, S. Suematsu, S. Mitarai, T. Kuroyanagi, K. Heiguchi, M. Matsuzaki
1991No07	JPGPE	17,	s291	E.B. Norman, B. Sur, K.T. Lesko, M.M. Hindi, R.-M. Larimer, T.R. Ho, J.T. Witort, P.N. Luke, W.L. Hansen, E.E. Haller
1991Or01	PYLBB	258,	29	N.A. Orr, W. Mittig, L.K. Fifield, M. Lewitowicz, E. Plagnol, Y. Schutz, W.L. Zhan, L. Bianchi, A. Gillibert, A.V. Belozorov, S.M. Lukyanov, Yu. E. Penionzhkevich, A.C.C. Villari, A. Cunsolo, A. Foti, G. Audi, C. Stephan, L. Tassan-Got, and PrvCom GAu December 1990, and erratum PYLBB 271(1991)468
1991Pa05	ZPAAD	338,	295	R.D. Page, P.J. Woods, S.J. Bennett, M. Freer, B.R. Fulton, R.A. Cunningham, J. Groves, M.A.C. Hotchkis, A.N. James
1991Pe04	ZPAAD	338,	291	H. Penttilä, J. Äystö, K. Eskola, Z. Janas, P.P. Jauho, A. Jokinen, M.E. Leino, J.M. Parmonen, P. Taskinen
1991Pe10	PRVCA	44,	935	H. Penttilä, P.P. Jauho, J. Äystö, P. Decrock, P. Dendooven, M. Huyse, G. Reusen, P. Van Duppen, J. Wauters
1991Ra01	PRVCA	43,	521	S. Raman, T.A. Walkiewicz, S. Kahane, E.T. Journey, J. Sa, Z. Gacsi, J.L. Weil, K. Allaart, G. Bonsignori, J.F. Shriner, Jr.
1991Re02	PRVCA	44,	1435	P.L. Reeder, R.A. Warner, W.K. Hensley, D.J. Vieira, J.M. Wouters
1991Re.A	PrvCom	GAu	Sep	G. Reusen, M. Huyse
1991Ro07	PRLTA	67,	957	R.G.H. Robertson, T.J. Bowles, G.J. Stephenson, Jr., D.L. Wark, J.F. Wilkerson, D.A. Knapp
1991Ro.A	P-PacGrove		440	S.J. Robinson, H.G. Börner, S. Judge, J. Jolie, P. Schillebeeckx
1991Ry01	ADNDA	47,	205	A. Rytz
1991Se01	ZPAAD	338,	245	P.J. Sellin, P.J. Woods, R.D. Page, S.J. Bennett, R.A. Cunningham, M. Freer, B.R. Fulton, M.A.C. Hotchkis, A.N. James
1991Sh19	PRVCA	44,	2439	K.S. Sharma, E. Hagberg, G.R. Dyck, J.C. Hardy, V.T. Koslowsky, H. Schmeing, R.C. Barber, S. Yuan, W. Perry, M. Watson

1991Su09	PRLTA	66,	2444	B. Sur, E.B. Norman, K.T. Lesko, M.M. Hindi, R.-M. Larimer, P.N. Luke, W.L. Hansen, E.E. Haller
1991To08	PRVCA	44,	1868	K.S. Toth, K.S. Vierinen, M.O. Kortelahti, D.C. Sousa, J.M. Nitschke, P.A. Wilmarth
1991To09	ZPAAD	340,	343	K.S. Toth, K.S. Vierinen, J.M. Nitschke, P.A. Wilmarth, R.M. Chasteler
1991Tu02	PRLTA	67,	3211	A.L. Turkevich, T.E. Economou, G.A. Cowan
1991Va04	NUPAB	529,	268	P. Van Duppen, P. Decrock, P. Dendooven, M. Huyse, G. Reusen, J. Wauters
1991Wa21	ZPAAD	339,	533	J. Wauters, P. Decrock, P. Dendooven, M. Huyse, G. Reusen, P. Van Duppen
1991Wa.A	PrvCom	AHW		A.H. Wapstra
1991Zh24	PYLBB	260,	285	X.G. Zhou, X.L. Tu, J.M. Wouters, D.J. Vieira, K.E.G. Lobner, H.L. Seifert, Z.Y. Zhou, G.W. Butler
1991ZI01	PRLTA	67,	560	I. Žliven, A. Ljubičić, S. Kaučić, B.A. Logan
1992				
1992A1.A	B-Bernkastel		PC2	D.V. Aleksandrov, Yu. A. Glukhov, E. Yu. Nikolskii, B.G. Novatskii, A.A. Ogloblin, D.N. Stepanov
1992A1.B	B-Bernkastel		PA6	G.D. Alkhazov, B.N. Belyaev, V.D. Domkin, Yu. G. Korobulin, V.V. Lukashevich, V.S. Mukhin, Yu. A. Suchilin, V.G. Khlopov
1992An04	ZPAAD	342,	123	A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, A.P. Kabachenko, O.N. Malyshev, R.N. Sagajdak, G.M. Ter-Akopian, A.V. Yeremin
1992An13	JRNCD	164,	303	M.S. Antony, D. Oster, A. Hachem
1992An.A	P-Bernkastel		759	A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, M. Florek, A.P. Kabachenko, O.N. Malyshev, S. Saro, G.M. Ter-Akopian, M. Veselsky, A.V. Yeremin
1992Ay02	PRLTA	69,	1167	J. Äystö, A. Astier, T. Enqvist, K. Eskola, Z. Janas, A. Jokinen, K.-L. Kratz, M. Leino, H. Penttilä, B. Pfeiffer, J. Żylicz
1992Ba01	PRVCA	45,	69	D. Bazin, R. Del Moral, J.P. Dufour, A. Fleury, F. Hubert, M.S. Pravikoff, R. Anne, P. Bricault, C. Détraz, M. Lewitowicz, Y. Zheng, D. Guillemaud-Mueller, J.C. Jacmart, A.C. Mueller, F. Pougheon, A. Richard
1992Ba28	ZPAAD	342,	125	K. Balog, M. Graefenstedt, M. Groß, P. Jürgens, U. Keyser, F. Münnich, T. Otto, F. Schreiber, T. Winkelmann, J. Wulff, ISOLDE
1992Ba.A	P-Bernkastel		777	P.H. Barker, S.A. Brindhaban
1992Be17	ZPAAD	341,	155	M.R. Beitins, S.T. Boneva, V.A. Khitrov, L.A. Malov, Y.P. Popov, P.T. Prokofjev, G.L. Rezvaya, L.I. Simonova, A.M. Sukhovojev, E.V. Vasilieva
1992Be30	PRLTA	69,	2341	T. Bernatowicz, J. Brannon, R. Brazzle, R. Cowsik, C. Hohenberg, F. Podosek
1992Bo02	NUPAB	536,	260	R. Böttger, H. Schölermann
1992Bo05	NUPAB	539,	249	M.J.G. Borge, D.G. Burke, H. Gietz, P. Hill, N. Kaffrell, W. Kurcewicz, G. Løvholden, S. Mattsson, R.A. Naumann, K. Nybø, G. Nyman, T.F. Thorsteinsson, ISOLDE
1992Bo28	JMOPE	39,	257	G. Bollen, H.-J. Kluge, Th. Otto, G. Savard, L. Schweikhard, H. Stolzenberg, G. Audi, R.B. Moore, G. Rouleau, ISOLDE, and PrvCom GAu November 1991
1992Bo37	ZPAAD	344,	135	V. Borrel, R. Anne, D. Bazin, C. Borcea, G.G. Chubarian, R. Del Moral, C. Détraz, S. Dogny, J.P. Dufour, L. Faux, A. Fleury, L.K. Fifield, D. Guillemaud-Mueller, F. Hubert, E. Kashy, M. Lewitowicz, C. Marchand, A.C. Mueller, F. Pougheon, M.S. Pravikoff, M.G. Saint-Laurent, O. Sorlin
1992Bo.B	PrvCom	AHW	Apr	R. Böttger
1992Bo.D	P-Bernkastel		743	V.A. Bolshakov, A.G. Dernjatin, K.A. Mezilev, Yu. N. Novikov, A.V. Popov, Yu. Ya. Sergeev, V.I. Tikhonov, V.A. Sergienko, G.V. Veselov
1992Br17	NUPAB	542,	1	A.M. Bruce, W. Gelletly, G.G. Colvin, P. Van Isacker, D.D. Warner
1992Bu10	ZPAAD	342,	403	D. Bucurescu, M.S. Rapaport, C.F. Liang, P. Paris, G. Cata-Danil
1992Bu12	NUPAB	550,	179	D.G. Burke, P.E. Garrett
1992Bu13	PRVCA	46,	1267	B. Budick, J. Chen, H. Lin
1992Ch09	PRVCA	45,	1720	W.-T. Chou, E.K. Warburton
1992Ch27	PRLTA	69,	3151	M. Chen, D.A. Imel, T.J. Radcliffe, H. Henrikson, F. Boehm
1992Co23	PYLBB	295,	143	E. Cosulich, G. Gallinaro, F. Gatti, S. Vitale
1992Cz.A	LBL-32		233	K.R. Czerwinski (thesis)
1992Da14	ZPAAD	343,	161	B. Dasmahapatra, S. Bhattacharya
1992Do10	PRVCA	46,	2127	J. Döring, G. Winter, L. Funke, B. Cederwall, F. Lidén, A. Johnson, A. Atac, J. Nyberg, G. Sletten, M. Sugawara
1992EI07	PRVCA	46,	1535	S.R. Elliott, A.A. Hahn, M.K. Moe, M.A. Nelson, M.A. Vient
1992Ga15	NUPAB	550,	1	P.E. Garret, D.G. Burke

1992Ge08	PRLTA	68,	3412	H. Geissel, K. Beckert, F. Bosch, H. Eickhoff, B. Franczak, B. Franzke, M. Jung, O. Klepper, R. Moshhammer, G. Münzenberg, F. Nickel, F. Nolden, U. Schaaf, C. Scheidenberger, P. Spädtke, M. Steck, K. Sümmerer, A. Magel
1992Go10	PRVCA	46,	833	J. Görres, M. Wiescher, K. Scheller, D.J. Morrissey, B.M. Sherrill, D. Bazin, J.A. Winger
1992Gr02	PRVCA	45,	1058	K.E. Gregorich, H.L. Hall, R.A. Henderson, J.D. Leyba, K.R. Czerwinski, S.A. Kreek, B.A. Khadkodayan, M.J. Nurmia, D.M. Lee, D.C. Hoffman
1992Gr06	NIMAE	311,	512	M. Groß, P. Jürgens, U. Keyser, S. Kluge, M. Mehrstens, S. Müller, F. Münnich, J. Wulff
1992Gr09	ZPAAD	341,	247	H. Grawe, P. Hoff, J.P. Omtvedt, K. Steffensen, R. Eder, H. Haas, H. Ravn, ISOLDE
1992Gr.A	P-Bernkastel		77	M. Groß, P. Jürgens, S. Kluge, M. Mehrstens, S. Müller, F. Münnich, J. Wulff, see also 87Gr18
1992Gu03	NUPAB	540,	117	Z. Guo, C. Alderliesten, C. van der Leun, P.M. Endt
1992Ha03	PRVCA	45,	900	F.X. Hartmann
1992Ha10	PRVCA	45,	1609	E. Hagberg, X.J. Sun, V.T. Koslowsky, H. Schmeing, J.C. Hardy
1992Ha15	NIMAE	313,	237	F.X. Hartmann, R.A. Naumann
1992Ha21	ZPAAD	343,	7	A. Harder, S. Michaelsen, A. Jungclaus, K.P. Lieb, A.P. Williams, H.G. Börner, M. Trautmannsheimer
1992Ha22	PRVCA	46,	1873	T.M. Hamilton, K.E. Gregorich, D.M. Lee, K.R. Czerwinski, N.J. Hannink, C.D. Kacher, B. Kadkhodayan, S.A. Kreek, M.J. Nurmia, M.R. Lane, M.P. Neu, A. Türler, D.C. Hoffman
1992Ha.B	P-Bernkastel		783	E. Hagberg, V.T. Koslowsky, I.S. Towner, J.C. Hardy, J.G. Hykawy, G. Savard, T. Shinozuka, P.P. Unger, H. Schmeing
1992He.A	P-Bernkastel		331	F. Heine, T. Faestermann, A. Gillitzer, H.J. Körner
1992Ho09	PYLBB	287,	381	E. Holzschuh, M. Fritschi, W. Kündig
1992Hu04	PRVCA	46,	1209	M. Huyse, P. Decroock, P. Dendooven, G. Reusen. P. Van Duppen, J. Wauters
1992Id01	ZPAAD	341,	427	N. Idrissi, A. Gizon, J. Genevey, P. Paris, V. Barci, D. Barnéoud, J. Blachot, D. Bucurescu, R. Duffait, J. Gizon, C.F. Liang, B. Weiss
1992Jo05	NUPAB	549,	420	A. Jokinen, J. Äystö, P.P. Jauho, M. Leino, J.M. Parmonen, H. Penttilä, K. Eskola, Z. Janas
1992Ju01	PRLTA	69,	2164	M. Jung, F. Bosch, K. Beckert, H. Eickhoff, H. Folger, B. Franzke, A. Gruber, P. Kienle, O. Klepper, W. Koenig, C. Kozhuharov, R. Mann, R. Moshhammer, F. Nolden, U. Schaaf, G. Soff, P. Spädtke, M. Steck, T. Stöhlker, K. Sümmerer
1992Ka29	PYLBB	287,	45	H. Kawakami, S. Kato, T. Ohshima, C. Rosenfeld, H. Sakamoto, T. Sato, S. Shibata, J. Shirai, Y. Sugaya, T. Suzuki, K. Takahashi, T. Tsukamoto, K. Ueno, K. Ukai, S. Wilson, Y. Yonezawa
1992Ke06	PHSTB	46,	575	J. Kern, T. Engel, D. Hagen, G. Werth
1992Kr01	PRVCA	45,	1064	J.V. Kratz, M.K. Gober, H.P. Zimmermann, M. Schädel, W. Bröchle, E. Schimpf, K.E. Gregorich, A. Türler, N.J. Hannink, K.R. Czerwinski, B. Kadkhodayan, D.M. Lee, M.J. Nurmia, D.C. Hoffman, H. Gäggeler, D. Jost, J. Kovacs, U.W. Scherer, A. Weber
1992Kr.A	AnRpt LBL		58	S.A. Kreek, et al
1992Ku02	NUPAB	537,	153	S. Kubono, Y. Funatsu, N. Ikeda, M. Yasue, T. Nomura, Y. Fuchi, H. Kawashima, S. Kato, H. Miyatake, H. Orihara, T. Kajino
1992Li09	ZPAAD	341,	401	C.F. Liang, P. Paris, A. Gizon, V. Barci, D. Barneou, R. Béraud, J. Blachot, Ch. Briançon, J. Genevey, R.K. Sheline, and PrvCom GAu September 1992
1992Lo.B	UCRL-JC-109951			R.W. Lougheed, et al
1992Me10	ZPAAD	343,	283	F. Meissner, H. Salewski, W.-D. Schmidt-Ott, U. Bosch-Wicke, R. Michaelsen
1992Mo03	PRVCA	45,	1392	K.J. Moody, E.K. Hulet, P.B. Price
1992Mo15	ZPAAD	342,	273	D.M. Moltz, J.C. Batchelder, T.F. Lang, T.J. Ognibene, J. Cerny, P.E. Hausteijn, P.L. Reeder
1992Mo25	PRVCA	46,	2624	K.J. Moody, R.W. Lougheed, E.K. Hulet
1992Mu12	ZPAAD	342,	393	J. Mukai, A. Odahara, R. Nakatani, Y. Haruta, H. Tomura, B.J. Min, K. Heiguchi, S. Suematsu, S. Mitarai, T. Kuroyanagi
1992Os04	ZPAAD	343,	489	A.N. Ostrowski, H.G. Bohlen, A.S. Demyanova, B. Gebauer, R. Kalpakchieva, Ch. Langner, H. Lenske, M. von Lucke-Petsch, W. von Oertzen, A.A. Ogloblin, Y.E. Penionzhkevich, M. Wilpert, Th. Wilpert
1992Os07	NIMBE	70,	551	A. Osa, T. Ikuta, A. Taniguchi, H. Yamamoto, K. Kawade, S. Ichikawa, Y. Kawase
1992Ot.A	PrvCom	GAu	Mar	E.W. Otten

1992Pa05	PRLTA	68,	1287	R.D. Page, P.J. Woods, R.A. Cunningham, T. Davinson, N.J. Davis, S. Hofmann, A.N. James, K. Livingston, P.J. Sellin, A.C. Shotter
1992PI01	ZPAAD	342,	43	A. Płochocki, K. Rykaczewski, T. Batsch, J. Szerypo, J. Żylicz, R. Barden, O. Klepper, E. Roeckl, D. Schardt, H. Gabelmann, P. Hill, H. Ravn, T. Thorstein- sen, I.S. Grant, H. Grawe, P. Manakos, L.D. Skouras, ISOLDE
1992Po14	BRSPE	56,	666	A.V. Potempa, K. Ya. Gromov, J. Wawryszczuk, V.G. Kalinnikov, V.V. Kuznetsov, M. Levandovsky, J. Saraatar, Ya. Saidimov, V.I. Fominykh, Yu. V. Yushkevich, M.B. Yuldashev
1992Pr03	ZPAAD	342,	23	M. Przewloka, A. Przewloka, P. Wächter, H. Wollnik
1992Pr04	ZPAAD	342,	27	M. Przewloka, A. Przewloka, P. Wächter, H. Wollnik
1992Ra18	PRVCA	46,	2241	S. Raman, J.L. Campbell, A. Prindle, R. Gunnink, J.C. Palathingal
1992Ra19	PRVCA	46,	972	S. Raman, E.T. Journey, J.W. Starnner, J.E. Lynn
1992Sa03	NUPAB	540,	83	J. Sauvage, C. Bourgeois, P. Kilcher, F. Le Blanc, B. Roussière, M.I. Macias- Marques, F. Bragança Gil, M.G. Porquet, H. Dautet, ISOCELE
1992Sc16	NUPAB	545,	646	W.-D. Schmidt-Ott, H. Salewski, F. Meissner, U. Bosch-Wicke, P. Koschel, V. Kunze, R. Michaelson
1992Sh.A	P-Bernkastel		31	K.S. Sharma, P. Unger, G.R. Dyck, R.C. Barber, E. Hagberg, J.G. Hykawy, V.T. Koslowsky, J.C. Hardy, H. Schmeing, G. Savard, W. Perry, M. Watson, and PrvCom AHW October 1992
1992Sp.A	PrvCom		92Ch09	L. Spanier, B. Fogelberg, M. Hellström
1992Th06	NUPAB	548,	71	K. Theine, A.P. Byrne, H. Hubel, M. Murzel, R. Chapman, D. Clarke, F. Khaz- aie, J.C. Lisle, J.N. Mo, J.D. Garrett, H. Ryde, R. Wyss
1992To02	PRVCA	45,	856	K.S. Toth, H.J. Kim, J.W. McConnell, C.R. Bingham, D.C. Sousa
1992Ul.A	PrvCom	AHW	Mar	S. Ulbig
1992Va.A	P-Bernkastel		3	R.S. Van Dyck, Jr., D.L. Farnham, P.B. Schwinberg
1992Wa06	PRVCA	45,	1597	T.A. Walkiewicz, S. Raman, E.T. Journey, J.W. Starnner, J.E. Lynn
1992Wo03	ARISE	43,	551	D.H. Woods, S.A. Woods, M.J. Woods, J.L. Makepeace, C.W.A. Downey, D. Smith, A.S. Munster, S.E.M. Lucas, H. Sharma
1992Wu09	ZPAAD	344,	205	S. Wüstenbecker, H.W. Becker, H. Ebbing, W.H. Schulte, M. Berheide, M. Buschmann, C. Rolfs, G.E. Mitchell, J.S. Schweitzer
1992Xu04	PRVCA	46,	510	S.-W. Xu, J.-S. Guo, S.-G. Yuan, M.-Q. Liu, E. Hagberg, V.T. Koslowsky, J.C. Hardy, G. Dyck, H. Schmeing, and erratum PRVCA 46(1992)2644
1993				
1993Ab11	PYLBB	316,	26	H. Abele, G. Helm, U. Kania, C. Schmidt, J. Last, D. Dubbers
1993Al03	ZPAAD	344,	425	G.D. Alkhozov, L.H. Batist, A.A. Bykov, F.V. Moroz, S. Yu. Orlov, V.K. Tarasov, V.D. Wittmann
1993An07	ZPAAD	345,	247	A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, A.P. Kabachenko, O.N. Maly- shev, R.N. Sagaidak, G.M. Ter-Akopian, M. Veselsky, A.V. Yeremin
1993An19	NIMAE	330,	125	A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, V.A. Gorchkov, K.V. Mikhailov, A.P. Kabachenko, G.S. Popeko, S. Daro, G.M. Ter-Akopian, A.V. Yeremin
1993As02	PRVCA	47,	2954	K. Ashktorab, J.W. Jänecke, F.D. Becchetti, D.A. Roberts
1993Ba12	PRVCA	47,	2038	J.C. Batchelder, D.M. Moltz, T.J. Ognibene, M.W. Rowe, J. Cerny
1993Ba61	PRVCA	48,	2593	J.C. Batchelder, D.M. Moltz, T.J. Ognibene, M.W. Rowe, R.J. Tighe, J. Cerny
1993Be21	PRVCA	48,	R1	G.E. Berman, M.L. Pitt, F.P. Calaprice, M.M. Lowry
1993Be46	ZPAAD	346,	325	P. Bednarczyk, G. de Angelis, P. Spolaore, D. Ackermann, J. Rico, D. Bazzacco, S. Lunardi, L. Müller, C. Rossi Alvarez, F. Scarlassara, G.F. Segato, F. Soramel
1993Bl.A	AnRpt GSI		53	B. Blank, S. Andriamonje, R. Del Moral, J.P. Dufour, A. Fleury, T. Josso, M.S. Pravikoff, S. Czajkowski, Z. Janas, A. Piechaczek, E. Roeckl, K.- H. Schmidt, K. Sümmerer, W. Trinder, M. Weber, T. Brohm, A. Grewe, E. Hanelt, A. Heinz, A. Junghans, C. Rohl, S. Steinhäuser, B. Voss, M. Pfützner
1993Bo01	NUPAB	551,	54	V.A. Bondarenko, I.L. Kuvaga, P.T. Prokofjev, V.A. Khitrov, Yu. V. Kholnov, Le Hong Khiem, Yu. P. Popov, A.M. Sukhovej, S. Brant, V. Paar, V. Lopac
1993Bo03	ZPAAD	344,	381	H.G. Bohlen, B. Gebauer, M. von Lucke-Petsch, W. von Oertzen, A.N. Ost- rowski, M. Wilpert, Th. Wilpert, H. Lenske, D.V. Alexandrov, A.S. Demyanova, E. Nikolskii, A.A. Korshennikov, A.A. Ogloblin, R. Kalpakchieva, Y.E. Pe- nionzhkevich, Š. Piskoř
1993Bo.A	AnRpt GSI		65	F. Bosch, M. Jung

1993Br22	NUPBB	s31,	76	R.L. Brodzinski, F.T. Avignone, J.I. Collar, H. Courant, E. Garcia, C.K. Guerdard, W.K. Hensley, I.V. Kirpichnikov, H.S. Miley, A. Morales, J. Morales, R. Nunez-Lagos, S.B. Osetrov, V.S. Pogosov, A.A. Pomansky, J. Puimedon, J.H. Reeves, K. Ruddick, C. Saenz, A. Salinas, M.L. Sarsa, A.A. Smolnikov, A.S. Starostin, A.G. Tamanyan, S.I. Vasilev, J.A. Villar
1993Bu02	PRVCA	47,	131	D.G. Burke, P.C. Sood, P.E. Garrett, Tao Qu, R.K. Sheline, R.W. Hoff
1993Ch21	PRVCA	48,	109	R.E. Chrien, B.K.S. Koene, M.L. Stelts, R.A. Meyer, S. Brant, V. Paar, V. Lopac
1993Di03	PRVCA	47,	2916	D.E. DiGregorio, S. Gil, H. Huck, E.R. Batista, A.M.J. Ferrero, A.O. Gattone
1993Dm02	ARISE	44,	1097	S.N. Dmitriev, Yu. Ts. Oganessian, G.V. Buklabov, Yu. P. Kharitonov, A.F. Novgorodov, L.I. Salamatin, G. Ya. Starodub, S.V. Shishkin, Yu. V. Yushkevich, D. Newton
1993Do05	PRVCA	47,	2560	J. Döring, J.W. Holcomb, T.D. Johnson, M.A. Riley, S.L. Tabor, P.C. Womble, G. Winter
1993Dr.A	P-Fribourg		305	S. Drissi, M. Deleze, P.E. Garrett, J. Jolie, J. Kern, S.J. Mannanal, P.A. Tercier, J.P. Vorlet, N. Warr, G. Mouze, C. Ythier, H.G. Borner, F. Hoyler, S. Judge, K. Schreckenbach, A. Williams
1993Go37	PRVAA	47,	3433	M.V. Gorshkov, G.M. Alber, L. Schweikhard, A.G. Marshall
1993Go38	IJMPD	128,	47	M.V. Gorshkov, S. Guan, A.G. Marshall
1993Gr17	NIMAE	337,	106	R.C. Greenwood, M.H. Putnam
1993Gr.C	AnRpt Berkeley		76	K.E. Gregorich, C.D. Kacher, M.F. Mohar, D.M. Lee, M.R. Lane, E.R. Sylvester, D.C. Hoffman, M. Schädel, W. Brüche, J.V. Kratz, R. Günther and AnRpt GSI p.14
1993Ha05	ZPAAD	345,	143	A. Harder, S. Michaelsen, K.P. Lieb, A.P. Williams
1993Ho.A	AnRpt GSI		64	S. Hofmann, V. Ninov, F.P. Heßberger, H. Folger, G. Münzenberg, H.J. Schött, P. Armbruster, A.N. Andreyev, A.G. Popeko, A.V. Yeremin, M.E. Leino, R. Janik, S. Saro, M. Veselsky, and PrvCom AHW September 1995
1993Ja03	NUPAB	552,	340	Z. Janas, J. Äystö, K. Eskola, P.P. Jauho, A. Jokinen, J. Kownacki, M. Leino, J.M. Parmonen, H. Penttilä, J. Szerypo, J. Żylicz
1993Je06	PHSTB	48,	399	R. Jertz, D. Beck, G. Bollen, J. Emmes, H.-J. Kluge, E. Scharf, S. Schwarz, T. Schwarz, L. Schweikhard, P. Senne C. Carlberg, I. Bergström, H. Borgenstrand, G. Rouleau, R. Schuch, F. Söderberg
1993KI02	PRVCA	47,	2502	G. Klotz, P. Baumann, M. Bounajma, A. Huck, A. Knipper, G. Walter, G. Marguier, C. Richard-Serre, A. Poves, J. Retamosa
1993Li10	NUCIA	106,	163	Sr. Little Flower, B.R.S. Babu, K. Neelakandan, R.N. Mukherjee, B.B. Baliga
1993Li18	PYLBB	312,	46	K. Livingston, P.J. Woods, T. Davinson, N.J. Davis, S. Hofmann, A.N. James, R.D. Page, P.J. Sellin, A.C. Shotter
1993Li34	PRVCA	48,	2151	K. Livingston, P.J. Woods, T. Davinson, N.J. Davis, S. Hofmann, A.N. James, R.D. Page, P.J. Sellin, A.C. Shotter
1993Li40	PRVCA	48,	3113	K. Livingston, P.J. Woods, T. Davinson, N.J. Davis, A.N. James, R.D. Page, P.J. Sellin, A.C. Shotter
1993Ma50	NUPAB	565,	543	G. Mairle, M. Seeger, H. Reinhardt, T. Kihm, K.T. Knöpfle, Chen Lin Wen
1993Ma.A	PrvCom	GAu	Feb	A.G. Marshall
1993Mi04	NUPAB	552,	232	S. Michaelsen, A. Harder, K.P. Lieb, G. Graw, R. Hertenberger, D. Hofer, P. Schiemenz, E. Zanotti, H. Lenske, A. Weigel, H.H. Wolter, S.J. Robinson, A.P. Williams
1993Mo01	PRLTA	70,	394	J.L. Mortara, I. Ahmad, K.P. Coulter, S.J. Freedman, B.K. Fujikawa, J.P. Greene, J.P. Schiffer, W.H. Trzaska, A.R. Zeuli
1993Mo18	NUPAB	563,	21	K.J. Moody, R.W. Loughheed, J.F. Wild, R.J. Dougan, E.K. Hulet, R.W. Hoff, C.M. Henderson, R.J. Dupzyk, R.L. Hahn, K. Sümmerer, G.D. O'Kelley, G.R. Bethune
1993Nx01	PYLBB	302,	13	J.N. Nxumalo, J.G. Hykawy, P. P Unger, C.A. Lander, R.C. Barber, K.S. Sharma, H.E. Duckworth
1993Nx02	PYLBB	312,	388	J.N. Nxumalo, J.G. Hykawy, K.J. Aarts, R.C. Barber, K.S. Sharma, H.E. Duckworth
1993Oh02	PRVDA	47,	4840	T. Ohshima, H. Sakamoto, T. Sato, J. Shirai, T. Tsukamoto, Y. Sugaya, K. Takahashi, T. Suzuki, C. Rosenfeld, S. Wilson, K. Ueno, Y. Yonezawa, H. Kawakami, S. Kato, S. Shibata, K. Ukai
1993Os06	NIMAE	332,	169	A. Osa, T. Ikuta, M. Shibata, M. Miyachi, H. Yamamoto, K. Kawade, Y. Kawase, S. Ichikawa
1993Pe11	NUPAB	561,	416	H. Penttilä, T. Enqvist, P.P. Jauho, A. Jokinen, M. Leino, J.M. Parmonen, J. Äystö, K. Eskola
1993Po.A	PrvCom	GAu	Dec	F. Pougheon

1993Pr.A	P-Fribourg		441	P.T. Prokofjev, A.V. Afanasjev, M.R. Beitins, L.I. Simonova, M.K. Balodis, G.L. Rezvaja
1993Qu03	ZPAAD	346,	119	A.B. Quint, W. Reisdorf, K.-H. Schmidt, P. Armbruster, F.P. Heßberger, S. Hofmann, J. Keller, G. Münzenberg, H. Stelzer, H.-G. Clerc, W. Morawek, C.-C. Sahn
1993Ru01	ADNDA	53,	1	G. Rudstam, K. Aleklett, L. Sihver
1993Ru03	PRVCA	47,	2574	D. Rudolph, C.J. Gross, M.K. Kabadiyski, K.P. Lieb, M. Weiszflog, H. Grawe, J. Heese, K.-H. Maier, J. Eberth
1993Sc16	ZPAAD	345,	265	D. Schardt, K. Riisager
1993Se04	PRVCA	47,	1933	P.J. Sellin, P.J. Woods, T. Davinson, N.J. Davis, K. Livingston, R.D. Page, A.C. Shotter, S. Hofmann, A.N. James
1993Se09	ZPAAD	346,	323	P.J. Sellin, P.J. Woods, T. Davinson, N.J. Davis, A.N. James, K. Livingston, R.D. Page, A.C. Shotter
1993Sh07	JPGPE	19,	617	R.K. Sheline, J. Kvasil, C.F. Liang, P. Paris
1993Sh23	ARISE	44,	923	M. Shibata, M. Asai, T. Ikuta, H. Yamamoto, J. Ruan, K. Okano, K. Aoki, K. Kawade
1993Si05	NIMAE	330,	195	M.H. Sidky, J.G. Hycckawy, G.R. Dyck, R.C. Barber, K.S. Sharma, C.A. Lander, H.E. Duckworth
1993Sp.A	AnRpt JYFL		95	A.M. Spits, P.H.M. Van Assche, H.G. Borner, W.F. Davidson, D.D. Warner, K. Schreckenbach, G.G. Colvin, R.C. Greenwood, C.W. Reich, P.O. Lipas, J. Suhonen, P. Sinkko, A. Backlin
1993To04	PRVCA	48,	436	K.S. Toth, D.C. Sousa, J.M. Nitschke, K.S. Vierinen, P.A. Wilmarth
1993To05	PRVCA	48,	445	K.S. Toth, P.A. Wilmarth, J.M. Nitschke, D.C. Sousa
1993Va04	PRLTA	70,	2888	R.S. Van Dyck, Jr., D.L. Farnham, P.B. Schwinberg
1993Va.C	PrvCom	GAu	May	R.S. Van Dyck, Jr., D.L. Farnham, P.B. Schwinberg
1993Wa03	ZPAAD	345,	21	J. Wauters, P. Dendooven, M. Huyse, G. Reusen, P. Van Duppen, R. Kirchner, O. Klepper, E. Roeckl
1993Wa04	PRVCA	47,	1447	J. Wauters, P. Dendooven, M. Huyse, G. Reusen, P. Van Duppen, P. Lievens, ISOLDE
1993We03	PYLBB	300,	210	Ch. Weinheimer, M. Przyrembel, H. Backe, H. Barth, J. Bonn, B. Degen, Th. Edling, H. Fischer, L. Fleischmann, J.U. Groß, R. Haid, A. Hermanni, G. Kube, P. Leiderer, Th. Loeken, A. Moltz, R.B. Moore, A. Osipowicz, E.W. Otten, A. Picard, M. Schrader, M. Steininger
1993Wi03	PYLBB	299,	214	J.A. Winger, D. Bazin, W. Benenson, G.M. Crawley, D.J. Morrissey, N.A. Orr, R. Pfaff, B.M. Sherrill, M. Steiner, M. Thoennessen, S.J. Yennello, B.M. Young
1993Wi05	PRLTA	70,	1759	F.E. Wietfeldt, Y.D. Chan, M.T.F. da Cruz, A. García, R.-M. Larimer, K.T. Lesko, E.B. Norman, R.G. Stokstad, I. Žilimen
1993Wo04	PRVCA	47,	2546	P.C. Womble, J. Döring, T. Glasmacher, J.W. Holcomb, G.D. Johns, T.D. Johnson, T.J. Petters, M.A. Riley, V.A. Wood, S.L. Tabor, P. Semmes
1993Yo07	PRLTA	71,	4124	B.M. Young, W. Benenson, M. Fauerbach, J.H. Kelley, R. Pfaff, B.M. Sherrill, M. Steiner, J.S. Winfield, T. Kubo, M. Hellström, N.A. Orr, J. Stetson, J.A. Winger, S.J. Yennello
1994				
1994Ah03	NUPAB	576,	246	I. Ahmad, J.E. Gindler, M.P. Carpenter, D.J. Henderson, E.F. Moore, R.V.F. Janssens, I.G. Bearden, C.C. Foster
1994An01	NUPAB	568,	323	A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, A.P. Kabachenko, O.N. Malyshchev, Yu. A. Muzychka, B.I. Pustyl'nik, G.M. Ter-Akopian, A.V. Yeremin
1994An02	ZPAAD	347,	225	A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, A.P. Kabachenko, O.N. Malyshchev, A.G. Popeko, R.N. Sagaidak, G.M. Ter-Akopian, M. Veselsky, A.V. Yeremin
1994Ar23	NIMAE	339,	168	G. Ardisson, V. Barci, O. El Samad
1994Ba06	PRVCA	49,	1221	V. Banerjee, A. Banerjee, G.S.N. Murthy, R.P. Sharma, S.K. Pardha Saradhi, A. Chakrabarti
1994Ba15	PYLBB	322,	176	A. Balysh, M. Beck, S.T. Belyaev, F. Bensch, J. Bockholt, A. Demekhin, A. Gurov, G. Heusser, H.V. Klapdor-Kleingrothaus, I. Kondratenko, D. Kotelnikov, V.I. Lebedev, B. Maier, A. Muller, F. Petry, A. Piepke, A. Pronsky, H. Strecker, M. Vollinger, K. Zuber
1994Ba50	PRVCA	50,	1180	P. Baumann, M. Bounajma, A. Huck, G. Klotz, A. Knipper, G. Walter, G. Marguier, C. Richard-Serre, H. Ravn, E. Hagebø, P. Hoff, K. Steffensen

1994Be24	PYLBB	331,	19	M. Bernas, S. Czajkowski, P. Armbruster, H. Geissel, Ph. Dessagne, C. Donzau, H.-R. Faust, E. Hanelt, A. Heinz, M. Heese, C. Kozhuharov, Ch. Miehé, G. Münzenberg, M. Pfützner, C. Röhl, K.-H. Schmidt, W. Schwab, C. Stéphan, K. Sümmerer, L. Tassan-Got, B. Voss
1994B110	PRVCA	50,	2398	B. Blank, S. Andriamonje, R. Del Moral, J.P. Dufour, A. Fleury, T. Josso, M.S. Pravikoff, S. Czajkowski, Z. Janas, A. Piechaczek, E. Roeckl, K.-H. Schmidt, K. Sümmerer, W. Trinder, M. Weber, T. Brohm, A. Grewe, E. Hanelt, A. Heinz, A. Junghans, C. Rohl, S. Steinhauser, B. Voss, M. Pfützner
1994Bo28	NUPAB	576,	21	R. Bonetti, C. Chiesa, A. Guglielmetti, C. Migliorino, P. Monti, A.L. Pasinetti, H.L. Ravn
1994Br11	PRVCA	49,	2401	S.A. Brindhaban, P.H. Barker
1994Br37	NIMAE	340,	436	S.A. Brindhaban, P.H. Barker, M.J. Keeling, W.B. Wood
1994Bu18	ZPAAD	349,	3	D. Bucurescu, D. Barnéoud, R. Béraud, G. Cata-Danil, T. von Egidy, A. Emsallem, J. Genevey, A. Gizon, J. Gizon, C.F. Liang, P. Paris, C.A. Ur, B. Weiss
1994De04	NUPAB	568,	141	M.E. Debray, A.J. Kreiner, M. Davidson, J. Davidson, D. Hojman, D. Santos, V.R. Vanin, N. Schutz, M. Aiche, A. Chevallier, J. Chevallier, J.C. Sens
1994Do08	PRVCA	49,	1867	M. Dombisky, L. Buchmann, J.M. D'Auria, U. Giesen, K.P. Jackson, J.D. King, E. Korkmaz, R.G. Korteling, P. McNeely, J. Powell, G. Roy, M. Trinczek, J. Vincent
1994Fa06	PRVCA	49,	2440	L. Faux, M.S. Pravikoff, S. Andriamonje, B. Blank, R. Del Moral, J.-P. Dufour, A. Fleury, C. Marchand, K.-H. Schmidt, K. Sümmerer, T. Brohm, H.-G. Clerc, A. Grewe, E. Hanelt, B. Voss, C. Ziegler
1994Fo08	PRVCA	50,	1355	H.T. Fortune, G.-B. Liu, D.E. Alburger
1994Fo14	PRLTA	73,	2413	B. Fogelberg, M. Hellström, D. Jerrestam, H. Mach, J. Blomqvist, A. Kerek, L.O. Norlin, J.P. Omtvedt
1994Gi07	PRVCA	50,	2612	R.L. Gill
1994Go.A	PrvCom	AHW	Jul	M.V. Gorshkov
1994Gr07	PRVCA	49,	2971	P. Grabmayer, A. Mondry, G.J. Wagner, P. Woldt, G.P.A. Berg, J. Lisantti, D.W. Miller, H. Nann, E.J. Stephenson
1994Gr08	PRLTA	72,	1423	K.E. Gregorich, M.R. Lane, M.F. Mohar, D.M. Lee, C.D. Kacher, E.R. Sylwester, D.C. Hoffman
1994Ha.A	Th.-Mainz			H. Hartmann
1994He08	PRVCA	49,	1845	R.G. Helmer, C.W. Reich
1994He28	PRVCA	50,	2219	M. Hencheck, R.N. Boyd, M. Hellström, D.J. Morrissey, M.J. Balbes, F.R. Chloupek, M. Fauerbach, C.A. Mitchell, R. Pfaff, C.F. Powell, G. Raimann, B.M. Sherrill, M. Steiner, J. Vandegriff, S.J. Yennello
1994Hi04	PRVCA	49,	3289	M.M. Hindi, R.L. Kozub, S.J. Robinson
1994Hi05	PRVCA	50,	728	M.M. Hindi, A.E. Champagne, M.T.F. da Cruz, R.-M. Larimer, K.T. Lesko, E.B. Norman, B. Sur
1994Hy01	PRVCA	50,	1249	J.G. Hykawy, R.C. Barber, K.S. Sharma, K.J. Aarts, J.N. Nxumalo, H.E. Duckworth
1994Ib01	ZPAAD	350,	9	F. Ibrahim, P. Kilcher, B. Roussiére, J. Sauvage, J. Genevey, A. Gizon, A. Knipper, G. Marguier, D. Barnéoud, R. Béraud, G. Cata-Danil, J. Blachot, I. Deloncle, R. Duffait, A. Emsallem, D. Hojman, A.J. Kreiner, F. Le Blanc, J. Libert, J. Oms
1994It.A	P-Tokai		185	S. Itoh, M. Yasuda, H. Yamamoto, T. Iida, A. Takahashi, K. Kawade
1994Jo.A	Th.-Jyvaskyla			A. Jokinen
1994Ko16	PYLBB	326,	31	A.A. Korshennikov, K. Yoshida, D.V. Aleksandrov, N. Aoi, Y. Doki, N. Inabe, M. Fujimaki, T. Kobayashi, H. Kumagai, C.-B. Moon, E. Yu. Nikolskii, M.M. Obuti, A.A. Ogloblin, A. Ozawa, S. Shimoura, T. Suzuki, I. Tanihata, Y. Watanabe, M. Yanokura
1994Ko.A	AnRpt AECL		3-1	V.T. Koslowsky, E. Hagberg, G. Savard, M.J. Watson, J.C. Hardy
1994Kr03	PRVCA	49,	1859	S.A. Kreek, H.L. Hall, K.E. Gregorich, R.A. Henderson, J.D. Leyba, K.R. Czerwinski, B. Kadkhodayan, M.P. Neu, C.D. Kacher, T.M. Hamilton, M.R. Lane, E.R. Sylwester, A. Türler, D.M. Lee, M.J. Nurmia, D.C. Hoffman
1994Kr13	PRVCA	50,	2288	S.A. Kreek, H.L. Hall, K.E. Gregorich, R.A. Henderson, J.D. Leyba, K.R. Czerwinski, B. Kadkhodayan, M.P. Neu, C.D. Kacher, T.M. Hamilton, M.R. Lane, E.R. Sylwester, A. Türler, D.M. Lee, M.J. Nurmia, D.C. Hoffman
1994La22	PRLTA	73,	624	Yu. A. Lazarev, Yu. V. Lobanov, Yu. Ts. Oganessian, V.K. Utyonkov, F. Sh. Abdullin, G.V. Buklanov, B.N. Gikal, S. Iliev, A.N. Mezentsev, A.N. Polyakov, I.M. Sedykh, I.V. Shirokovsky, V.G. Subbotin, A.M. Sukhov, Yu. S. Tsyganov, V.E. Zhuchko, R.W. Lougheed, K.J. Moody, J.F. Wild, E.K. Hulet, J.H. McQuaid

1994Le05	ZPAAD	348,	151	M. Leino, J. Uusitalo, T. Enqvist, K. Eskola, A. Jokinen, K. Loberg, W.H. Trzaska, J. Äystö
1994Le22	NUPAB	576,	267	A.I. Levon, J. de Boer, G. Graw, R. Hertenberger, D. Hofer, J. Kvasil, A. Lösch, E. Müller-Zanotti, M. Würkner, H. Baltzer, V. Grafen, C. Günther
1994Li12	PRVCA	49,	2230	C.F. Liang, R.K. Sheline, P. Paris, M. Hussonois, J.F. Ledu, D.B. Isabelle
1994Li20	PRVCA	49,	3098	S. Lin, S.A. Brindhaban, P.H. Barker
1994Ma14	PRVCA	49,	1755	P.V. Magnus, E.G. Adelberger, A. García
1994Mu02	NUPAB	568,	202	J. Mukai, A. Odahara, H. Tomura, S. Suematsu, S. Mitarai, T. Kuroyanagi, D. Jerrestam, J. Nyberg, G. Sletten, A. Atac, S.E. Arnell, H.A. Roth, Ö. Skeppstedt
1994Os04	PYLBB	338,	13	A.N. Ostrowski, H.G. Bohlen, B. Gebauer, S.M. Grimes, R. Kalpakchieva, Th. Kirchner, T.N. Massey, W. von Oertzen, Th. Stolla, M. Wilpert, Th. Wilpert
1994Ot01	NUPAB	567,	281	T. Otto, G. Bollen, G. Savard, L. Schweikhard, H. Stolzenberg, G. Audi, R.B. Moore, G. Rouleau, J. Szerypo, Z. Patyk, ISOLDE
1994Pa11	PRVCA	49,	3312	R.D. Page, P.J. Woods, R.A. Cunningham, T. Davinson, N.J. Davis, A.N. James, K. Livingston, P.J. Sellin, A.C. Shotter
1994Pa12	PRLTA	72,	1798	R.D. Page, P.J. Woods, R.A. Cunningham, T. Davinson, N.J. Davis, A.N. James, K. Livingston, P.J. Sellin, A.C. Shotter
1994Pa37	NUPAB	580,	173	G. Passler, J. Rikowska, E. Arnold, H.-J. Kluge, L. Monz, R. Neugart, H. Ravn, K. Wendt, ISOLDE
1994Po26	IANFA	58,	41	A.V. Potempa, G.V. Veselov, V.A. Sergienko, K. Ya. Gromov, S.V. Evtisov, V.G. Kalinnikov, V.V. Kuznetsov, Zh. Sereeter, V.I. Fominykh, M.B. Yuldashev
1994Ru19	PLSSA	42,	227	W. Rühm, B. Schneck, K. Knie, G. Korschinek, L. Zerle, E. Nolte, D. Weselka, H. Vonach
1994Sa31	PRVCA	50,	1170	C. Sáenz, E. Cerezo, E. Garcia, A. Morales, J. Morales, R. Nunez-Lagos, A. Ortiz de Solorzano, J. Puimedon, A. Salinas, M.L. Sarsa, J.A. Villar, A. Klimenko, V. Kuzminov, N. Metlinsky, V. Novikov, A. Pomansky, B. Pritychenko
1994Sc01	PRVCA	49,	46	K.W. Scheller, J. Gorres, J.G. Ross, M. Wiescher, R. Harkewicz, D.J. Morrissey, B.M. Sherrill, M. Steiner, N.A. Orr, J.A. Winger
1994Se12	ZPAAD	349,	25	H.L. Seifert, J.M. Wouters, D.J. Vieira, H. Wollnik, X.G. Zhou, X.L. Tu, Z.Y. Zhou, G.W. Butler
1994Sh02	PRVCA	49,	725	R.K. Sheline, C.F. Liang, P. Paris, A. Gizon, V. Barci
1994Sh07	ZPAAD	348,	25	T. Shizuma, M. Kidera, E. Ideguchi, A. Odahara, H. Tomura, S. Suematsu, T. Kuroyanagi, Y. Gono, S. Mitarai, J. Mukai, T. Komatsubara, K. Furuno, K. Heiguchi
1994St31	ZPAAD	347,	287	M.-L. Stolzenwald, G. Lhersonneau, M. Liang, G. Molnar, H. Ohm, K. Sistemich
1994Ti03	PRVCA	49,	2871	R.J. Tighe, D.M. Moltz, J.C. Batchelder, T.J. Ognibene, M.W. Rowe, J. Cerny
1994To10	PRVCA	50,	518	K.S. Toth
1994Wa05	NUPAB	568,	397	P.M. Walker, G.D. Dracoulis, A.P. Byrne, B. Fabricius, T. Kibédi, A.E. Stuchbery, N. Rowley
1994Wa17	PRVCA	50,	487	C. Wagemans, S. Druyts, P. Geltenbort
1994Wa23	PRVCA	50,	2768	J. Wauters, N. Bijmens, H. Folger, M. Huysse, H.Y. Hwang, R. Kirchner, J. von Schwarzenberg, P. Van Duppen
1994We02	ZPAAD	347,	185	C. Wennemann, W.-D. Schmidt-Ott, T. Hild, K. Krumbholz, V. Kunze, F. Meissner, H. Keller, R. Kirchner, E. Roeckl
1994Ya07	PYLBB	334,	229	S. Yasumi, H. Maezawa, K. Shima, Y. Inagaki, T. Mukoyama, T. Mizogawa, K. Sera, S. Kishimoto, M. Fujioka, K. Ishii, T. Omori, G. Izawa, O. Kawakami
1994Ye08	NIMAE	350,	608	A.V. Yeremin, A.N. Andreyev, D.D. Bogdanov, G.M. Ter-Akopian, V.I. Chepigin, V.A. Gorshkov, A.P. Kabachenko, O.N. Malyshev, A.G. Popeko, R.N. Sagaidak, S. Sharo, E.N. Voronkov, A.V. Taranenko, A. Yu. Lavrentjev
1994Yo01	PRVCA	49,	279	B.M. Young, W. Benenson, J.H. Kelley, N.A. Orr, R. Pfaff, B.M. Sherrill, M. Steiner, M. Thoennesen, J.S. Winfield, J.A. Winger, S.J. Yennello, A. Zeller
1995				
1995Al31	PZETA	62,	18	D.V. Aleksandrov, E. Yu. Nikolsky, B.G. Novatsky, D.N. Stepanov, V. Buryan, V. Kroga, Ya. Novak
1995Ap.A	PrvCom	GAu	May	A. Aprahamian, D.S. Brenner, R. Gill, A. Piotrowski, R.F. Casten
1995Ba28	PRLTA	74,	3569	D. Bazin, B.A. Brown, J. Brown, M. Fauerbach, M. Hellström, S.E. Hirzebruch, J.H. Kelley, R.A. Kryger, D.J. Morrissey, R. Pfaff, C.F. Powell, B.M. Sherrill, M. Thoennesen

1995Ba75	PRVCA	52,	1807	J.C. Batchelder, K.S. Toth, D.M. Moltz, T.J. Ognibene, M.W. Rowe, C.R. Bingham, E.F. Zganjar, B.E. Zimmerman
1995Bi01	PRVCA	51,	125	C.R. Bingham, M.B. Kassim, M. Zhang, Y.A. Akovali, K.S. Toth, W.D. Hamilton, H.K. Carter, J. Kormicki, J. von Schwarzenberg, M.M. Jarrio
1995Bi17	PRLTA	75,	4571	N. Bijnens, P. Decrock, S. Franchoo, M. Gaelens, M. Huyse, H.-Y. Hwang, I. Reusen, J. Szerypo, J. von Schwarzenberg, J. Wauters, J.G. Correia, A. Jokinen, P. Van Duppen, ISOLDE
1995Bi.A	P-Arles		545	C.R. Bingham, J.D. Richards, B.E. Zimmerman, Y.A. Akovali, W.B. Walters, J. Rikovska, P. Joshi, E.F. Zganjar, M. Lindroos, O. Tengblad, P. Van Duppen, ISOLDE, and PrvCom GAU June 1995
1995BI05	NUPAB	588,	171c	B. Blank, S. Andriamonje, T. Brohm, S. Czajkowski, F. Davi, R. Del Moral, C. Donzaud, J.P. Dufour, A. Fleury, A. Grewe, R. Grzywacz, E. Hanelt, A. Heinz, Z. Janas, T. Josso, A. Junghans, M. Lewitowicz, A. Musquere, A. Piechaczek, M.S. Pravikoff, M. Pfützner, E. Roeckl, C. Rohl, J.E. Sauvestre, K.-H. Schmidt, S. Steinhauser, K. Summerer, W. Trinder, B. Voss, M. Weber
1995BI06	PRLTA	74,	4611	B. Blank, S. Andriamonje, S. Czajkowski, F. Davi, R. Del Moral, J.P. Dufour, A. Fleury, A. Musquere, M.S. Pravikoff, R. Grzywacz, Z. Janas, M. Pfützner, A. Grewe, A. Heinz, A. Junghans, M. Lewitowicz, J.-E. Sauvestre, C. Donzaud
1995BI23	PYLBB	364,	8	B. Blank, S. Andriamonje, S. Czajkowski, F. Davi, R. Del Moral, C. Donzaud, J.P. Dufour, A. Fleury, A. Grewe, R. Grzywacz, A. Heinz, Z. Janas, A. Junghans, M. Lewitowicz, A. Musquere, M.S. Pravikoff, M. Pfützner, J.-E. Sauvestre
1995Bo03	NUPAB	582,	1	V.A. Bondarenko, I.L. Kuvaga, P.T. Prokofjev, A.M. Sukhovoij, V.A. Khitrov, Yu. P. Popov, S. Brant, V. Paar
1995Bo05	NUPAB	584,	279	V.A. Bondarenko, I.L. Kuvaga, P.T. Prokofjev, A.M. Sukhovoij, V.A. Khitrov, Yu. P. Popov, S. Brant, V. Paar, Lj. Šimičić
1995Bo10	NUPAB	583,	775c	H.G. Bohlen, B. Gebauer, Th. Kirchner, M. von Lucke-Petsch, W. von Oertzen, A.N. Ostrowski, Ch. Seyfert, Th. Stolla, M. Wilpert, Th. Wilpert, S.M. Grimes, T.N. Massey, R. Kalpakchieva, Y.E. Penionzhkevich, D.V. Alexandrov, I. Mukha, A.A. Ogloblin, C. Détraz
1995Bo.B	P-StPetersbg			H.G. Bohlen, B. Gebauer, M. von Lucke-Petsch, W. von Oertzen, A.N. Ostrowski, Ch. Seyfert, Th. Stolla, M. Wilpert, Th. Wilpert, R. Kalpakchieva, Yu. E. Penionzhkevich, S.M. Grimes, T.N. Massey, I. Mukha, D.V. Alexandrov, A.A. Ogloblin, H. Lenske
1995Br24	NUPAB	595,	481	J.B. Breitenbach, J.L. Wood, M. Jarrio, R.A. Braga, H.K. Carter, J. Kormicki, P.B. Semmes
1995Bu11	NUPAB	587,	475	D. Bucurescu, D. Barnéoud, Gh. Cata-Danil, T. von Egidy, J. Genevey, A. Gizon, J. Gizon, C.F. Liang, P. Paris, B. Weiss, S. Brant, V. Paar, R. Pezer
1995Ca27	NUPAB	592,	89	H. Carlsson, R.A. Bark, L.P. Ekstrom, A. Nordlund, H. Ryde, G.B. Hagemann, S.J. Freeman, H.J. Jensen, T. Lonnroth, M.J. Piiparinen, H. Schnack-Petersen, F. Ingelbretsen, P.O. Tjom
1995Ch74	BRSPE	59,	1854	V.G. Chumin, S.S. Eliseev, K. Ya. Gromov, Yu. V. Norseev, V.I. Fominykh, V.V. Tsupko-Sitnikov
1995Cz.A	P-Arles		553	S. Czajkowski, F. Ameil, P. Armbruster, M. Bernas, P. Dessagne, C. Donzaud, C. Engelmann, H.-R. Faust, H. Geissel, E. Hanelt, A. Heinz, M. Hesse, C. Kozuharov, C. Miché, G. Müntenberg, M. Pfützner, C. Röhl, K.-H. Schmidt, W. Schwab, C. Stéphan, K. Summerer, L. Tassan-Got, B. Voss
1995Da14	ZPAAD	351,	225	M. Daszewski, Z. Janas, W. Kurcewicz, B. Szweryn
1995Da.A	P-Arles		263	C.N. Davids, P.J. Woods, J.C. Batchelder, C.R. Bingham, D.J. Blumenthal, L.T. Brown, B.C. Busse, L.F. Conticchio, T. Davinson, S.J. Freeman, M. Freer, D.J. Henderson, R.J. Irvine, R.D. Page, H.T. Penttilä, A.V. Ramayya, D. Seweryniak, K.S. Toth, W.B. Walters, A.H. Wuosmaa, B.E. Zimmerman, and PrvCom GAU June 1995
1995Di08	PHSTB	T59,	144	F. DiFilippo, V. Natarajan, M. Bradley, F. Palmer, D.E. Pritchard
1995Fa.A	AnRpt GSI		21	T. Faestermann, J. Friese, H. Geissel, R. Gernhauser, H. Gilg, F. Heine, J. Homolka, P. Kienle, H.-J. Korner, G. Munzenberg, J. Reinhold, R. Schneider, K. Summerer, K. Zeitelhack
1995Fe12	ZPAAD	353,	9	V.N. Fedoseyev, Y. Jading, O.C. Jonsson, R. Kirchner, K.-L. Kratz, M. Krieg, E. Kugler, J. Lettry, T. Mehren, V.I. Mishin, H.L. Ravn, T. Rauscher, H.L. Ravn, F. Scheerer, O. Tengblad, P. Van Duppen, A. Wöhr, ISOLDE
1995Ga04	NUPAB	581,	267	P.E. Garrett, D.G. Burke
1995Ga16	PRVCA	51,	3487	A. García, E.G. Adelberger, P.V. Magnus, H.E. Swanson, F.E. Wietfeldt, O. Tengblad, ISOLDE

1995Ga.A	P-Arles		595	A. Gadea, B. Rubio, J.L. Tain, J. Bea, L. Garcia-Raffi, J. Rico, L. Batist, V. Wittmann, A. Bykov, F. Moroz, H. Keller, R. Kirchner, E. Roeckl
1995Ge06	NUPAB	592,	307	R. Georgii, T. von Egidy, J. Klora, H. Lindner, U. Mayerhofer, J. Ott, W. Schauer, P. von Neumann-Cosel, A. Richter, C. Schlegel, R. Schulz, V.A. Khitrov, A.M. Sukhovej, A.V. Vojnov, J. Berzins, V. Bondarenko, P. Prokofjevs, L.J. Simonova, M. Grinberg, Ch. Stojanov
1995Ge14	YAFIA	58,	1170	A. Sh. Georgadze, F.A. Danevich, Yu. G. Zdesenko, V.V. Kobychiev, B.N. Kropivnyansky, V.N. Kuts, A.S. Nikolaiko, V.I. Tretyak and 02Tr04
1995Gh04	NUPAB	583,	861c	A. Ghiorso, D. Lee, L.P. Somerville, W. Loveland, J.M. Nitschke, W. Ghiorso, G.T. Seaborg, P. Wilmarth, R. Leres, A. Wydler, M. Nurmia, K. Gregorich, R. Gaylord, T. Hamilton, N.J. Hannink, D.C. Hoffman, C. Jarzynski, C. Kacher, B. Kadkhodayan, S. Kreek, M. Lane, A. Lyon, M.A. McMahan, M. Neu, T. Sikkeland, W.J. Swiatecki, A. Türler, J.T. Walton, S. Yashita
1995Gj01	NUPAB	582,	369	N.L. Gjorup, P.M. Walker, G. Sletten, M.A. Bentley, B. Fabricius, J.F. Sharpey-Schafer
1995Gu01	NUPAB	583,	867c	A. Guglielmetti, B. Blank, R. Bonetti, Z. Janas, H. Keller, R. Kirchner, O. Klepper, A. Piechaczek, A. Plochocki, G. Poli, P.B. Price, E. Roeckl, K. Schmidt, J. Szerypo, A.J. Westphal
1995Ha.B	P-Arles		487	J.H. Hamilton, Q.H. Lu, S.J. Zhu, K. Butler-Moore, A.V. Ramayya, B.R.S. Babu, L.K. Peker, W.C. Ma, T.N. Ginter, J. Kormicki, D. Shi, J.K. Deng, J.O. Rasmussen, M.A. Stoyer, S.Y. Chu, K.E. Gregorich, M.F. Mohar, S. Prussin, J.D. Cole, R. Aryaeinejad, N.R. Johnson, I.Y. Lee, F.K. McGowan, G.M. Ter-Akopian, Yu. Ts. Oganessian
1995Hi02	PRVCA	51,	1736	T. Hild, W.-D. Schmidt-Ott, V. Kunze, F. Meissner, C. Wennemann, H. Grawe
1995Hi12	PRVCA	52,	2236	T. Hild, W.-D. Schmidt-Ott, V. Kunze, F. Meissner, H. Salewski, K.S. Toth, R. Michaelsen
1995Hi14	JPGPE	21,	639	K.-H. Hiddemann, H. Daniel, O. Schwentker
1995Ho03	ZPAAD	350,	277	S. Hofmann, V. Ninov, F.P. Heßberger, P. Armbruster, H. Folger, G. Münzenberg, H.J. Schött, A.G. Popeko, A.V. Yeremin, A.N. Andreyev, S. Saro, R. Janik, M. Leino
1995Ho04	ZPAAD	350,	281	S. Hofmann, V. Ninov, F.P. Heßberger, P. Armbruster, H. Folger, G. Münzenberg, H.J. Schött, A.G. Popeko, A.V. Yeremin, A.N. Andreyev, S. Saro, R. Janik, M. Leino
1995Ho.B	PrvCom	GAu	Mar	S. Hofmann, V. Ninov, F.P. Heßberger, and GSI Annual report 1995
1995Ho.C	P-Arles		571	S. Hofmann, F.P. Heßberger, H. Folger, V. Ninov, A.N. Andreyev, D.D. Bogdanov, V.I. Chepigin, A.P. Kabachenko, O.N. Malyshev, A.G. Popeko, G.M. Ter-Akopian, A.V. Yeremin, S. Saro
1995Ik03	JUPSA	64,	3244	T. Ikuta, A. Taniguchi, H. Yamamoto, K. Kawade, Y. Kawase
1995Ir01	PRLTA	75,	4182	H. Irnich, H. Geissel, F. Nolden, K. Beckert, F. Bosch, H. Eickhoff, B. Franzke, Y. Fujita, M. Hausmann, H.C. Jung, O. Klepper, C. Kozhuharov, G. Kraus, A. Magel, G. Münzenberg, F. Nickel, T. Radon, H. Reich, B. Schlitt, W. Schwab, M. Steck, K. Sümmerer, T. Suzuki, H. Wollnik
1995Jo02	NUPAB	584,	489	A. Jokinen, T. Enqvist, P.P. Jauho, M. Leino, J.M. Parmonen, H. Penttilä, J. Äystö, K. Eskola
1995Jo.A	P-Arles		499	A. Jokinen, et al
1995Ka.A	B-Arles		PD22	V.G. Kalinnikov, B.P. Osipenko, F. Pražak, A.A. Solnyshkin, V.I. Stegailov, P. Čaloun, S.E. Zaporov
1995Ke04	NUPAB	586,	219	M. Keim, E. Arnold, W. Borchers, U. Georg, A. Klein, R. Neugart, L. Vermeeren, R.E. Silverans, P. Lievens
1995Ke05	ZPAAD	352,	1	H. Keller, R. Kirchner, B. Rubio, J.L. Tain, Th. Dörfler, W.-D. Schmidt-Ott, E. Roeckl
1995Ko54	RAACA	68,	155	A. Koua Aka, V. Barci, G. Ardisson, R. Righetti, J.F. Le Du, D. Trubert
1995Kr03	PRLTA	74,	860	R.A. Kryger, A. Azhari, M. Hellström, J.H. Kelley, T. Kubo, R. Pfaff, E. Ramakrishnan, B.M. Sherrill, M. Thoennessen, S. Yokoyama, R.J. Charity, J. Dempsey, A. Kirov, N. Robertson, D.G. Sarantites, L.G. Sobotka, J.A. Winger
1995Kr04	ZPAAD	351,	11	K. Krumbholz, W.-D. Schmidt-Ott, T. Hild, V. Kunze, F. Meissner, C. Wennemann, H. Keller, R. Kirchner, O. Klepper, E. Roeckl, D. Schardt, K. Rykaczewski
1995La09	NUPAB	588,	501	Yu. A. Lazarev, I.V. Shirokovsky, V.K. Utyonkov, S.P. Tretyakova, V.B. Kutner

1995La20	PRLTA	75,	1903	Yu. A. Lazarev, Yu. V. Lobanov, Yu. Ts. Oganessian, Yu. S. Tsyganov, V.K. Utyonkov, F. Sh. Abdullin, S. Iliev, A.N. Polyakov, J. Rigol, I.V. Shirokovsky, V.G. Subbotin, A.M. Sukhov, G.V. Buklanov, B.N. Gikal, V.B. Kutner, A.N. Mezentsev, I.M. Sedykh, D.V. Vakarov, R.W. Lougheed, J.F. Wild, K.J. Moody, E.K. Hulet
1995Le04	PRVCA	51,	1047	M.J. Leddy, S.J. Freeman, J.L. Durell, A.G. Smith, S.J. Warburton, D.J. Blumenthal, C.N. Davids, C.J. Lister, H.T. Penttilä
1995Le15	APOBB	26,	309	M. Leino, J. Äystö, T. Enqvist, A. Jokinen, M. Nurmi, A. Ostrowski, W.H. Trzaska, J. Uusitalo, K. Eskola, P. Armbruster, V. Ninov
1995Le19	PRVCA	51,	2770	Y.S. Lee, M. Kobayashi, T. Hukotome, T. Horiguchi, H. Inoue
1995Le.A	P-Arles		505	M. Leino, T. Enqvist, W.H. Trzaska, J. Uusitalo, K. Eskola, P. Armbruster, V. Ninov, and PrvCom GAU June 1995
1995Lh04	ZPAAD	352,	293	G. Lhersonneau, H. Gabelmann, B. Pfeiffer, K.-L. Kratz, ISOLDE
1995Me03	PRVCA	51,	1558	F. Meissner, T. Hild, V. Kunze, W.-D. Schmidt-Ott, C. Wennemann, P.C. Sood, R. Kirchner, E. Roeckl, K. Rykaczewski
1995Me16	PHSTB	T56,	272	K.A. Mezilev, Yu. N. Novikov, A.V. Popov, B. Fogelberg, L. Spanier
1995Mo14	ZPAAD	352,	7	K. Morita, Y.H. Pu, J. Feng, M.G. Hies, K.O. Lee, A. Yoshida, S.C. Jeong, S. Kubono, T. Nomura, Y. Tagaya, M. Wada, M. Kurokawa, T. Motobayashi, H. Ogawa, T. Uchibori, K. Sueki, T. Ishizuka, K. Uchiyama, Y. Fujita, H. Miyatake, T. Shimoda, T. Shinozuka, H. Kudo, Y. Nagai, S.A. Shin
1995Mo26	NUPAB	588,	203c	D.J. Morrissey, and the A1200 Group
1995Ni05	ZPAAD	351,	125	V. Ninov, F.P. Heßberger, S. Hofmann, H. Folger, A.V. Yeremin, A.G. Popeko, A.N. Andreyev, S. Saro
1995Ni.A	P-Arles		571	V. Ninov, F.P. Heßberger, H. Folger, S. Hofmann, A.G. Popeko, A.V. Yeremin, A.N. Andreyev, S. Šaro, and Abstracts PD19
1995No.A	P-Arles		363	T. Nomura
1995Ok02	ZPAAD	351,	243	K. Okano, A. Taniguchi, S. Yamada, T. Sharshar, M. Shibata, K. Yamauchi
1995Os03	NUPAB	588,	185	A. Osa, M. Asai, M. Koizumi, T. Sekine, S. Ichikawa, Y. Kojima, H. Yamamoto, K. Kawade
1995Oz02	NUPAB	592,	244	A. Ozawa, G. Raimann, R.N. Boyd, F.R. Chloupek, M. Fujimaki, K. Kimura, H. Kitagawa, T. Kobayashi, J.J. Kolata, S. Kubono, I. Tanihata, Y. Watanabe, K. Yoshida
1995Pe12	NUPAB	588,	259c	Yu. E. Penionzhkevich
1995Pf04	ZPAAD	353,	1	B. Pfeiffer, G. Lhersonneau, H. Gabelmann, K.-L. Kratz, ISOLDE
1995Pi03	NUPAB	584,	509	A. Piechaczek, M.F. Mohar, R. Anne, V. Borrel, B.A. Brown, J.M. Corre, D. Guillemaud-Mueller, R. Hue, H. Keller, S. Kubono, V. Kunze, M. Lewitowicz, P. Magnus, A.C. Mueller, T. Nakamura, M. Pfützner, E. Roeckl, K. Rykaczewski, M.G. Saint-Laurent, W.-D. Schmidt-Ott, O. Sorlin
1995Po01	PRVCA	51,	519	K.R. Pohl, D.F. Winchell, J.W. Arrison, D.P. Balamuth
1995Re.A	P-Arles		587	P.L. Reeder, Y. Kim, W.K. Hensley, H.S. Miley, R.A. Warner, Z.Y. Zhou, D.J. Vieira, J.M. Wouters, H.L. Seifert, and PrvCom GAU June 1995
1995Ry03	PRVCA	52,	2310	K. Rykaczewski, R. Anne, G. Auger, D. Bazin, C. Borcea, V. Borrel, J.M. Corre, T. Dörfler, A. Fomichov, R. Grzywacz, D. Guillemaud-Mueller, R. Hue, M. Huyse, Z. Janas, H. Keller, M. Lewitowicz, S. Lukyanov, A.C. Mueller, Yu. Penionzhkevich, M. Pfützner, F. Pougheon, M.G. Saint-Laurent, K. Schmidt, W.D. Schmidt-Ott, O. Sorlin, J. Szerypo, O. Tarasov, J. Wauters, J. Żylicz
1995Sa42	NUPAB	592,	221	J. Sauvage, D. Hojman, F. Ibrahim, B. Roussière, P. Kilcher, F. Le Blanc, J. Oms, J. Libert, ISOCELE
1995Sc03	NUPAB	582,	109	K. Scheller, J. Görres, S. Vouzoukas, M. Wiescher, B. Pfeiffer, K.-L. Kratz, D.J. Morrissey, B.M. Sherrill, M. Steiner, M. Hellström, J.A. Winger
1995Sc28	NUPAB	588,	191c	R. Schneider, T. Faestermann, J. Friese, R. Gernhäuser, H. Geissel, H. Gilg, F. Heine, J. Homolka, P. Kienle, H.-J. Korner, G. Müntenberg, J. Reinhold, K. Sümmerer, K. Zeitelhack
1995So03	NUPAB	583,	763c	O. Sorlin, D. Guillemaud-Mueller, R. Anne, L. Axelsson, D. Bazin, W. Böhmer, V. Borrel, Y. Jading, H. Keller, K.-L. Kratz, M. Lewitowicz, S.M. Lukyanov, T. Mehren, A.C. Mueller, Yu. E. Penionzhkevich, F. Pougheon, M.G. Saint-Laurent, V.S. Salamatina, S. Shoedder, A. Wöhr
1995So11	PRVCA	52,	88	P.C. Sood, A. Gizon, D.G. Burke, B. Singh, C.F. Liang, R.K. Sheline, M.J. Martin, R.W. Hoff
1995St26	PRLTA	75,	3237	W. Stoeffl, D.J. Decman
1995Sy01	PRVCA	51,	2765	I. Sykora, K. Janko, P.P. Povinec

- | | | | | |
|----------|---------|------|------|---|
| 1995Sz01 | NUPAB | 584, | 221 | J. Szerypo, M. Huyse, G. Reusen, P. Van Duppen, Z. Janas, H. Keller, R. Kirchner, O. Klepper, A. Piechaczek, E. Roeckl, D. Schardt, K. Schmidt, R. Grzywacz, M. Pfützner, A. Płochocki, K. Rykaczewski, J. Żylicz, G.D. Alkhazov, L. Batist, A. Bykov, V. Wittmann, B.A. Brown |
| 1995Tr02 | PYLBB | 348, | 331 | W. Trinder, E.G. Adelberger, B.A. Brown, Z. Janas, H. Keller, K. Krumbholz, V. Kunze, P. Magnus, F. Meissner, A. Piechaczek, M. Pfützner, E. Roeckl, K. Rykaczewski, W.-D. Schmidt-Ott, M. Weber |
| 1995Tr03 | PYLBB | 349, | 267 | W. Trinder, E.G. Adelberger, Z. Janas, H. Keller, K. Krumbholz, V. Kunze, P. Magnus, F. Meissner, A. Piechaczek, M. Pfützner, E. Roeckl, K. Rykaczewski, W.-D. Schmidt-Ott, M. Weber |
| 1995Tr07 | ADNDA | 61, | 43 | V.I. Tretyak, Yu. G. Zdesenko |
| 1995Uu01 | PRVCA | 52, | 113 | J. Uusitalo, T. Enqvist, M. Leino, W.H. Trzaska, K. Eskola, P. Armbruster, V. Niinov |
| 1995Va38 | PHSTB | T59, | 134 | R.S. Van Dyck, Jr., D.L. Farnham, P.B. Schwinberg |
| 1995Ve08 | BRSPE | 59, | 1851 | G.V. Veselov, V.A. Sergienko, A.V. Potempa, K. Ya. Gromov, V.G. Kalinnikov, N. Yu. Kotovsky, V.I. Fominykh, M.B. Yuldashev |
| 1995Wa.A | P-Arles | | 725 | G. Walter |
| 1995Wi20 | PRVCA | 52, | 1028 | F.E. Wietfeldt, E.B. Norman, Y.D. Chan, M.T.F. da Cruz, A. García, E.E. Haller, W.L. Hansen, M.M. Hindi, R.-M. Larimer, K.T. Lesko, P.N. Luke, R.G. Stockstad, B. Sur, I. Žlimer |
| 1995Zh10 | NUPAB | 586, | 483 | K. Zhao, J.S. Lilley, P.V. Drumm, D.D. Warner, R.A. Cunningham, J.N. Mo |
| 1995Zh36 | ZPAAD | 353, | 3 | X. Zhou, Y. Guo, X. Sun, X. Lei, X. Chen, Z. Liu, Y. Zhang, H. Jin, Y. Luo, S.X. Wen, G.J. Yuan, G.S. Li, C.X. Yang |
| 1995Zi03 | PRLTA | 75, | 1719 | M. Zinser, F. Humbert, T. Nilsson, W. Schwab, T. Blaich, M.J.G. Borge, L.V. Chulkov, H. Eickhoff, T.W. Elze, H. Emling, B. Franzke, H. Freiesleben, H. Geissel, K. Grimm, D. Guillemaud-Mueller, P.G. Hansen, R. Holzmann, H. Irnich, B. Jonson, J.G. Keller, O. Klepper, H. Klingler, J.V. Kratz, R. Kulesa, D. Lambrecht, Y. Leifels, A. Magel, M. Mohar, A.C. Mueller, G. Müntzenberg, F. Nickel, G. Nyman, A. Richter, K. Riisager, C. Scheidenberger, G. Schrieder, B.M. Sherrill, H. Simon, K. Stelzer, J. Stroth, O. Tengblad, W. Trautmann, E. Wajda, E. Zude, preprint GSI-95-03 |
| 1996 | | | | |
| 1996An21 | BRSPE | 60, | 119 | A.N. Andreyev, A.G. Popeko, A.V. Eremin, S. Hofmann, F. Heßberger, H. Folger, V. Niinov, S. Saro |
| 1996Ax01 | PRVCA | 54, | 1511 | L. Axelsson, M.J.G. Borge, S. Fayans, V.Z. Goldberg, S. Grévy, D. Guillemaud-Mueller, B. Jonson, K.-M. Källman, T. Lönnroth, M. Lewitowicz, P. Manngård, K. Markenroth, I. Martel, A.C. Mueller, I. Mukha, T. Nilsson, G. Nyman, N.A. Orr, K. Riisager, G.V. Rogatchev, M.-G. Saint-Laurent, I.N. Serikov, O. Sorlin, O. Tengblad, F. Wenander, J.S. Winfield, R. Wolski |
| 1996Ba24 | YAFIA | 59, | 197 | A.S. Barabash, R.R. Saakyan and 02Tr04 |
| 1996Ba35 | PRVCA | 54, | 949 | J.C. Batchelder, K.S. Toth, E.F. Zganjar, D.M. Moltz, C.R. Bingham, T.J. Ognibene, J. Powell, M.W. Rowe |
| 1996Ba80 | PRLTA | 77, | 5186 | A. Balysh, A. De Silva, V.I. Lebedev, K. Lou, M.K. Moe, M.A. Nelson, A. Piepke, A. Pronsky, M.A. Vient, P. Vogel |
| 1996Bi07 | PRVCA | 54, | R20 | C.R. Bingham, K.S. Toth, J.C. Batchelder, D.J. Blumenthal, L.T. Brown, B.C. Busse, L.F. Conticchio, C.N. Davids, T. Davinson, D.J. Henderson, R.J. Irvine, D. Seweryniak, W.B. Walters, P.J. Woods, B.E. Zimmerman |
| 1996Bi17 | ZPAAD | 356, | 3 | N. Bijnens, I. Ahmad, A.N. Andreyev, J.C. Batchelder, C.R. Bingham, D. Blumenthal, B.C. Busse, X.S. Chen, L.F. Conticchio, C.N. Davids, M. Huyse, R.V.F. Janssens, P. Mantica, H. Penttilä, W. Reviol, D. Seweryniak, P. Van Duppen, W.B. Walters, J. Wauters, B.E. Zimmerman |
| 1996B111 | PRVCA | 54, | 572 | B. Blank, S. Andriamonje, F. Boué, S. Czajkowski, R. Del Moral, J.P. Dufour, A. Fleury, P. Pourre, M.S. Pravikoff, K.-H. Schmidt, E. Hanelt, N.A. Orr |
| 1996B121 | PRLTA | 77, | 2893 | B. Blank, S. Czajkowski, F. Davi, R. Del Moral, J.P. Dufour, A. Fleury, C. Marchand, M.S. Pravikoff, J. Benlliure, F. Boue, R. Collatz, A. Heinz, M. Hellström, Z. Hu, E. Roeckl, M. Shibata, K. Sümmerer, Z. Janas, M. Karny, M. Pfützner, M. Lewitowicz |
| 1996Bo37 | PRLTA | 77, | 5190 | F. Bosch, T. Faestermann, J. Friese, F. Heine, P. Kienle, E. Wefers, K. Zeitelhack, K. Beckert, B. Franzke, O. Klepper, C. Kozhuharov, G. Menzel, R. Moshhammer, F. Nolden, H. Reich, B. Schlitt, M. Steck, T. Stöhlker, T. Winkler, K. Takahashi |

1996Ca02	NUPAB	598,	61	P. Campbell, J.A. Behr, J. Billowes, G. Gwinner, G.D. Sprouse, F. Xu
1996Ch32	PRLTA	77,	2400	M. Chartier, G. Auger, W. Mittig, A. Lepine-Szilgyi, L.K. Fifield, J.M. Casandjian, M. Chabert, J. Ferme, A. Gillibert, M. Lewitowicz, M. Mac Cormick, M.H. Moscatello, O.H. Odland, N.A. Orr, G. Politi, C. Spitaels, A.C.C. Villari
1996Da06	PRLTA	76,	592	C.N. Davids, P.J. Woods, H.T. Penttilä, J.C. Batchelder, C.R. Bingham, D.J. Blumenthal, L.T. Brown, B.C. Busse, L.F. Conticchio, T. Davinson, D.J. Henderson, R.J. Irvine, D. Seweryniak, K.S. Toth, W.B. Walters, B.E. Zimmerman
1996De60	YAFIA	59,	2117	A.V. Derbin, A.I. Egorov, V.N. Muratova, S.V. Baklanov and 02Tr04
1996Do23	PRVCA	54,	2894	T. Dörfler, W.-D. Schmidt-Ott, T. Hild, T. Mehren, W. Böhmer, P. Möller, B. Pfeiffer, T. Rauscher, K.-L. Kratz, O. Sorlin, V. Borrel, S. Grévy, D. Guillemaud-Mueller, A.C. Mueller, F. Pougheon, R. Anne, M. Lewitowicz, A. Ostrowsky, M. Robinson, M.G. Saint-Laurent
1996Dr07	NUPAB	601,	234	S. Drissi, S. Andre, D. Barnéoud, C. Foin, J. Genevey, J. Kern
1996Dr.A	PrvCom	JBI	Sep	S. Drissi
1996En01	ZPAAD	354,	1	T. Enqvist, K. Eskola, A. Jokinen, M. Leino, W.H. Trzaska, J. Uusitalo, V. Ninov, P. Armbruster
1996En02	ZPAAD	354,	9	T. Enqvist, P. Armbruster, K. Eskola, M. Leino, V. Ninov, W.H. Trzaska, J. Uusitalo
1996Fa09	NUPAB	602,	167	L. Faux, S. Andriamonje, B. Blank, S. Czajkowski, R. Del Moral, J.P. Dufour, A. Fleury, T. Josso, M.S. Pravikoff, A. Piechaczek, E. Roeckl, K.-H. Schmidt, K. Sümmerer, W. Trinder, M. Weber, T. Brohm, A. Grewe, E. Hanelt, A. Heinz, A. Junghans, C. Rohl, S. Steinhauser, B. Voss, Z. Janas, M. Pfützner
1996Ga24	ZPAAD	355,	253	A. Gadea, B. Rubio, J.L. Tain, J. Rico, J. Bea, L.M. Garcia-Raffi, P. Kleinheinz, D. Schardt, E. Roeckl, R. Kirchner, J. Blomqvist
1996Ga30	NUPAB	611,	68	P.E. Garrett, N. Warr, H. Baltzer, S. Boehmsdorff, D.G. Burke, M. Deleze, S. Drissi, J. Groger, C. Gunther, J. Kern, S.J. Mannanal, J. Manns, U. Muller, J.-P. Vorlet, T. Weber
1996Gi08	NUPAB	605,	301	A. Gizon, J. Genevey, D. Bucurescu, Gh. Cata-Danil, J. Gizon, J. Inchaouh, D. Barnéoud, T. von Egidy, C.F. Liang, B.M. Nyako, P. Paris, I. Penev, A. Plochocki, E. Ruchowska, C.A. Ur, B. Weiss, L. Zolnai
1996Go06	JPGPE	22,	377	V.M. Gorozhankin, V.G. Kalinnikov, A. Kovalik, A.A. Solnyshkin, A.F. Novgorodov, N.A. Lebedev, N. Yu. Kotovskij, E.A. Yakushev, M.A. Mahmoud, M. Rysavy
1996Ho12	PRVCA	54,	78	R.W. Hoff, H.G. Borner, K. Schreckenbach, G.G. Colvin, F. Hoyler, W. Schauer, T. von Egidy, R. Georgii, J. Ott, S. Schrunder, R.F. Casten, R.L. Gill, M. Balodis, P. Prokofjevs, L. Simonova, J. Kern, V.A. Khitrov, A.M. Sukhovoij, O. Bersillon, S. Joly, G. Graw, D. Hofer, B. Valnion
1996Ho13	ZPAAD	354,	229	S. Hofmann, V. Ninov, F.P. Heßberger, P. Armbruster, H. Folger, G. Müntenberg, H.J. Schött, A.G. Popeko, A.V. Yeremin, S. Saro, R. Janik, M. Leino
1996Ho16	PRLTA	77,	1020	P. Hoff, P. Baumann, A. Huck, A. Knipper, G. Walter, G. Marguier, B. Fogelberg, A. Lindroth, H. Mach, M. Sanchez-Vega, R.B.E. Taylor, P. Van Duppen, A. Jokinen, M. Lindroos, M. Ramdane, W. Kurcewicz, B. Jonson, G. Nyman, Y. Jading, K.-L. Kratz, A. Wöhr, G. Løvhøiden, T.F. Thorsteinsen, J. Blomqvist, ISOLDE
1996Ik01	PRVCA	54,	2043	H. Ikezoe, T. Ikuta, S. Hamada, Y. Nagame, I. Nishinaka, K. Tsukada, Y. Oura, T. Ohtsuki
1996Ki23	HYIND	103,	49	P. Kienle
1996Kl.A	AnRpt JYFL		30	I. Klöckl, K.-L. Kratz, G. Lhersonneau, P. Pfeiffer, S. Schoedder, P. Dendooven, A. Honkanen, M. Huhta, M. Oinonen, J. Persson, K. Peräjärvi, J.C. Wang, J. Äystö
1996Ko13	PRVCA	54,	R459	F.G. Kondev, G.D. Dracoulis, A.P. Byrne, T. Kibédi, S. Bayer, G.J. Lane
1996Ko17	NUPAB	601,	195	F.G. Kondev, G.D. Dracoulis, A.P. Byrne, M. Dasgupta, T. Kibédi, G.J. Lane
1996La11	PRVCA	53,	2893	M.R. Lane, K.E. Gregorich, D.M. Lee, M.F. Mohar, M. Hsu, C.D. Kacher, B. Kadkhodayan, M.P. Neu, N.J. Stoyer, E.R. Sylwester, J.C. Yang, D.C. Hoffman
1996La12	PRVCA	54,	620	Yu. A. Lazarev, Yu. V. Lobanov, Yu. Ts. Oganessian, V.K. Utyonkov, F. Sh. Abdullin, A.N. Polyakov, J. Rigol, I.V. Shirokovsky, Yu. S. Tsyganov, S. Iliiev, V.G. Subbotin, A.M. Sukhov, G.V. Buklanov, B.N. Gikal, V.B. Kutner, A.N. Mezentsev, K. Subotic, J.F. Wild, R.W. Loughheed, K.J. Moody
1996Le09	ZPAAD	355,	157	M. Leino, J. Uusitalo, R.G. Allatt, P. Armbruster, T. Enqvist, K. Eskola, S. Hofmann, S. Hurskanen, A. Jokinen, V. Ninov, R.D. Page, W.H. Trzaska

1996Lh03	PRVCA	54,	1117	G. Lhersonneau, P. Dendooven, S. Hankonen, A. Honkanen, M. Huhta, R. Julin, S. Juutinen, M. Oinonen, H. Penttilä, A. Savelius, S. Tormanen, J. Aysto, P.A. Butler, J.F.C. Cocks, P.M. Jones, J.F. Smith
1996Lh04	PRVCA	54,	1592	G. Lhersonneau, P. Dendooven, A. Honkanen, M. Huhta, M. Oinonen, H. Penttilä, J. Äystö, J. Kurpeta, J.R. Persson, A. Popov
1996Li05	ZPAAD	354,	153	C.F. Liang, P. Paris, A. Plochocki, E. Ruchowska, A. Gizon, D. Barnéoud, J. Genevey, G. Cata, R.K. Sheline
1996Li37	PRVCA	54,	2304	C.F. Liang, P. Paris, R.K. Sheline, P. Alexa, A. Gizon
1996Ma72	RAACA	72,	39	M. Magara, N. Shinohara, Y. Hatsukawa, K. Tsukada, H. Imura, S. Utsuda, S.-I. Ichikawa, T. Suzuki, Y. Nagame, Y. Kobayashi, M. Oshima, T. Horichuchi
1996Me09	PRLTA	77,	458	T. Mehren, B. Pfeiffer, S. Schoedder, K.-L. Kratz, M. Huhta, P. Dendooven, A. Honkanen, G. Lhersonneau, M. Oinonen, J.-M. Parmonen, H. Penttilä, A. Popov, V. Rubchenya, J. Äystö
1996Ni09	ZPAAD	356,	11	V. Ninov, F.P. Heßberger, S. Hofmann, H. Folger, G. Münzenberg, P. Armbruster, A.V. Yeremin, A.G. Popeko, M. Leino, S. Saro
1996Od01	ZPAAD	354,	231	A. Odahara, Y. Gono, S. Mitarai, T. Shizuma, E. Ideguchi, J. Mukai, H. Tomura, B.J. Min, S. Suematsu, T. Kuroyanagi, K. Heiguchi, T. Komatsubara, K. Furuno
1996Os04	JUPSA	65,	928	A. Osa, T. Ikuta, K. Kawade, H. Yamamoto, S. Ichikawa
1996Pa01	PRVCA	53,	660	R.D. Page, P.J. Woods, R.A. Cunningham, T. Davinson, N.J. Davis, A.N. James, K. Livingston, P.J. Sellin, A.C. Shotter, and PrvCom AHW August 1996
1996Pf01	PRVCA	53,	1753	R. Pfaff, D.J. Morrissey, W. Benenson, M. Fauerbach, M. Hellström, C.F. Powell, B.M. Sherrill, M. Steiner, J.A. Winger
1996Ra04	PRVCA	53,	616	S. Raman, E.K. Warburton, J.W. Starnner, E.T. Journey, J.E. Lynn, P. Tikkanen, J. Keinonen
1996Ra16	PRVCA	53,	2732	S. Raman, J.B. McGroory E.T. Journey, J.W. Starnner
1996Ri12	PRVCA	54,	2041	J.D. Richards, C.R. Bingham, Y.A. Akovali, J.A. Becker, E.A. Henry, P. Joshi, J. Kormicki, P.F. Mantica, K.S. Toth, J. Wauters, E.F. Zganjar
1996Ry.B	AnRpt JYFL		33	K. Rykaczewski
1996Sh27	JUPSA	65,	3172	M. Shibata, A. Odahara, S. Mitarai, Y. Gono, M. Kidera, K. Miyazaki, T. Kuroyanagi
1996Ta04	PRVCA	53,	1557	N. Takaoka, Y. Motomura, K. Nagao
1996Ta18	PRVCA	54,	2926	R.B.E. Taylor, S.J. Freeman, J.L. Durell, M.J. Leddy, A.G. Smith, D.J. Blumenthal, M.P. Carpenter, C.N. Davids, C.J. Lister, R.V.F. Janssens, D. Seweryniak
1996To01	PRVCA	53,	2513	K.S. Toth, J.C. Batchelder, C.R. Bingham, L.F. Conticchio, W.B. Walters, C.N. Davids, D.J. Henderson, R. Herman, H. Penttilä, J.D. Richards, A.H. Wuosmaa, B.E. Zimmerman
1996To08	ZPAAD	355,	225	K.S. Toth, J.C. Batchelder, D.M. Moltz, J.D. Robertson
1996Ur02	PRVCA	54,	945	W. Urban, W.R. Phillips, J.L. Durell, M.A. Jones, M. Leddy, C.J. Pearson, A.G. Smith, B.J. Varley, I. Ahmad, L.R. Morss, M. Bentaleb, E. Lubkiewicz, N. Schulz
1996Wa33	PRVCA	54,	2916	P.M. Wallace, E.G. Bilpuch, C.R. Bybee, G.E. Mitchell, E.F. Moore, J.D. Shriner, J.F. Shriner, Jr., G.A. Vavrina, C.R. Westerfeldt
1996WaZX	AnRpt Tohoku		25	A. Watanabe, T. Shinozuka, M. Fujita, Y. Kanai, T. Kohda, M. Fujioka
1996Wo.A	P-Amsterdam		D14	A. Wöhr, V. Fedoseyev, Y. Jading, A. Jokinen, T. Kautzsch, I. Klöckl, K.-L. Kratz, V.I. Mishin, H.-L. Ravn, P. Van Duppen, W.B. Walters, ISOLDE
1996Ya12	JUPSA	65,	3390	S. Yamada, A. Taniguchi, Y. Toh, K. Okano
1997				
1997An09	ZPAAD	358,	63	A.N. Andreyev, N. Bijnens, T. Enqvist, M. Huyse, P. Kuusiniemi, M. Leino, W.H. Trzaska, J. Uusitalo, P. Van Duppen
1997As05	PRVCA	56,	3045	M. Asai, T. Sekine, A. Osa, M. Koizumi, Y. Kojima, M. Shibata, H. Yamamoto, K. Kawade
1997Ba21	ZPAAD	357,	121	J.C. Batchelder, K.S. Toth, C.R. Bingham, L.T. Brown, L.F. Conticchio, C.N. Davids, T. Davinson, D.J. Henderson, R.J. Irvine, D. Seweryniak, W.B. Walters, P.J. Woods, J. Wauters, E.F. Zganjar
1997Ba25	PRVCA	55,	2142	J.C. Batchelder, K.S. Toth, C.R. Bingham, L.T. Brown, L.F. Conticchio, C.N. Davids, D. Seweryniak, J. Wauters, J.L. Wood, E.F. Zganjar
1997Ba35	ZPAAD	357,	351	A.S. Barabash, R. Gurriaran, F. Hubert, Ph. Hubert, V.I. Umatov

1997Be70	PYLBB	415,	111	M. Bernas, C. Engelmann, P. Armbruster, S. Czajkowski, F. Ameil, C. Bockstiegel, Ph. Dessagne, C. Donzaud, H. Geissel, A. Heinz, Z. Janas, C. Kozhuharov, Ch. Miehé, G. Münzenberg, M. Pfützner, W. Schwab, C. Stephan, K. Sümmerner, L. Tassan-Got, B. Voss
1997Bi03	NUPAB	615,	52	B. Blank, F. Boué, S. Andriamonje, S. Czajkowski, R. Del Moral, J.P. Dufour, A. Fleury, P. Pourre, M.S. Pravikoff, N.A. Orr, K.-H. Schmidt, E. Hanelt
1997Bi04	ZPAAD	357,	247	B. Blank, F. Boué, S. Andriamonje, S. Czajkowski, R. Del Moral, J.P. Dufour, A. Fleury, P. Pourre, M.S. Pravikoff, E. Hanelt, N.A. Orr, K.-H. Schmidt
1997Bo10	NUPAB	616,	254c	H.G. Bohlen, W. von Oertzen, Th. Stolla, R. Kalpakchieva, B. Gebauer, M. Wilpert, Th. Wilpert, A.N. Ostrowski, S.M. Grimes, T.N. Massey
1997Ch53	BRSPE	61,	1606	V.G. Chumin, J.K. Jabber, K.V. Kalyapkin, S.A. Kudrya, V.V. Tsupko-Sitnikov, K. Ya. Gromov, V.I. Fominykh, T.A. Furyaev
1997Da07	PRVCA	55,	2255	C.N. Davids, P.J. Woods, J.C. Batchelder, C.R. Bingham, D.J. Blumenthal, L.T. Brown, B.C. Busse, L.F. Conticchio, T. Davinson, S.J. Freeman, D.J. Henderson, R.J. Irvine, R.D. Page, H.T. Penttilä, D. Seweryniak, K.S. Toth, W.B. Walters, B.E. Zimmerman
1997De40	PRVCA	56,	2451	A. De Silva, M.K. Moe, M.A. Nelson, M.A. Vient
1997Ga12	PYLBB	398,	415	F. Gatti, P. Meunier, C. Salvo, S. Vitale
1997Ge15	BRSPE	61,	1719	A. Sh. Georgadze, F.A. Danevich, Yu. G. Zdesenko, V.V. Kobychiev, B.N. Kropivnyansky, V.N. Kuts, V.V. Muzalevsky, A.S. Nikolaiko, O.A. Ponkratenko, V.I. Tretiak
1997Gi07	ZPAAD	358,	369	A. Gizon, J. Genevey, Gh. Cata-Danil, D. Barnéoud, R. Béraud, A. Emsallem, C. Foin, J. Gizon, C.F. Liang, P. Paris, I. Penev, A. Plochocki, B. Weiss
1997Go18	PRLTA	79,	2415	M. Górńska, M. Lipoglavšek, H. Grawe, J. Nyberg, A. Atac, A. Axelsson, R. Bark, J. Blomqvist, J. Cederkäll, B. Cederwall, G. de Angelis, C. Fahlander, A. Johnson, S. Leoni, A. Likar, M. Matiuzzi, S. Mitarai, L.-O. Norlin, M. Palacz, J. Persson, H.A. Roth, R. Schubart, D. Seweryniak, T. Shizuma, Ö. Skeppstedt, G. Sletten, W.B. Walters, M. Weiszflog
1997Gr02	PRVCA	55,	1126	R. Grzywacz, R. Anne, G. Auger, C. Borcea, J.M. Corre, T. Dorfler, A. Fomichev, S. Grevy, H. Grawe, D. Guillemaud-Mueller, M. Huyse, Z. Janas, H. Keller, M. Lewitowicz, S. Lukyanov, A.C. Mueller, N. Orr, A. Ostrowski, Yu. Penionzhkevich, A. Piechaczek, F. Pougheon, K. Rykaczewski, M.G. Saint-Laurent, W.D. Schmidt-Ott, O. Sorlin, J. Szerypo, O. Tarasov, J. Wauters, J. Zylicz
1997Gu13	PRVDA	55,	54	M. Günther, J. Hellmig, G. Heusser, M. Hirsch, H.V. Klapdor-Kleingrothaus, B. Maier, H. Päs, F. Petry, Y. Ramachers, H. Strecker, M. Völlinger, A. Balysh, S.T. Belyaev, A. Demehin, A. Gurov, I. Kondratenko, D. Kotelnikov, V.I. Lebedev, A. Müller
1997Gu32	YTHLD	19,	180	J. Guo, K. Zhao, X. Lu, Y. Cheng, T. Li, C. Fu, S. Li
1997Ha04	NUPAB	613,	183	E. Hagberg, I.S. Towner, J.C. Hardy, V.T. Koslowsky, G. Savard, S. Sterbenz
1997He29	ZPAAD	359,	415	F.P. Heßberger, S. Hofmann, V. Ninov, P. Armbruster, H. Folger, G. Münzenberg, H.J. Schött, A.G. Popeko, A.V. Yeremin, A.N. Andreyev, S. Saro
1997Ho12	NUPAB	621,	689	A. Honkanen, P. Dendooven, M. Huhta, G. Lhersonneau, P.O. Lipas, M. Oinonen, J.-M. Parmonen, H. Penttilä, K. Peräjärvi, T. Siiskonen, J. Äystö
1997Ho14	ZPAAD	358,	377	S. Hofmann, F.P. Heßberger, V. Ninov, P. Armbruster, G. Münzenberg, C. Stodel, A.G. Popeko, A.V. Yeremin, S. Saro, M. Leino
1997Hu07	PRVCA	56,	1152	W.X. Huang, R.C. Ma, X.J. Xu, S.W. Xu, Y.X. Xie, Z.K. Li, Y.X. Ge, Y.Y. Wang, C.F. Wang, T.M. Zhang, X.F. Sun, G.M. Jin, Y.X. Luo
1997Hu15	ZPAAD	359,	349	W.X. Huang, R.C. Ma, X.J. Xu, S.W. Xu, Y.X. Xie, Z.K. Li, Y.X. Ge, Y.Y. Wang, C.F. Wang, T.M. Zhang, X.F. Sun, G.M. Jin, Y.X. Luo
1997Ir01	PRVCA	55,	1621	R.J. Irvine, C.N. Davids, P.J. Woods, D.J. Blumenthal, L.T. Brown, L.F. Conticchio, T. Davinson, D.J. Henderson, J.A. Mackenzie, H.T. Penttilä, D. Seweryniak, W.B. Walters
1997Is13	NIMAE	395,	210	T. Ishii, M. Itoh, M. Ishii, A. Makishima, M. Ogawa, I. Hossain, T. Hayakawa, T. Kohno
1997Ja12	NUPAB	627,	119	Z. Janas, A. Plochocki, J. Szerypo, R. Collatz, Z. Hu, H. Keller, R. Kirchner, O. Klepper, E. Roeckl, K. Schmidt, R. Bonetti, A. Guglielmetti, G. Poli, A. Piechaczek
1997Ju02	PRVCA	56,	118	E.T. Journey, J.W. Starner, J.E. Lynn, S. Raman
1997Ko13	NUPAB	617,	91	F.G. Kondev, G.D. Dracoulis, A.P. Byrne, T. Kibédi, S. Bayer
1997Ko46	NUPAB	624,	293	V.T. Koslowsky, E. Hagberg, J.C. Hardy, H. Schmeing, I.S. Towner

1997Ko65	NIMAE	401,	289	V.T. Koslowsky, E. Hagberg, J.C. Hardy, G. Savard, H. Schmeing, K.S. Sharma, X.J. Sun
1997Ku20	NUPAB	621,	827	W. Kurcewicz, I.S. Grant, K. Gulda, A.J. Aas, J. Billowes, M.J.G. Borge, D.G. Burke, P.A. Butler, J.F.C. Cocks, B. Fogelberg, S.J. Freeman, G.D. Jones, E. Hagebø, P. Hoff, J. Hønsi, A. Lindroth, G. Løvholden, H. Mach, T. Martinez, R.A. Naumann, K. Nybø, G. Nyman, H. Ravn, B. Rubio, J. Simpson, A.G. Smith, J.F. Smith, K. Steffensen, J.L. Tain, O. Tengblad, T.F. Thorsteinsen, ISOLDE
1997Li12	PRVCA	55,	2768	C.F. Liang, P. Paris, R.K. Sheline
1997Li23	PRVCA	56,	2324	C.F. Liang, P. Paris, R.K. Sheline
1997Li25	ZPAAD	359,	1	W. Liu, M. Hellström, R. Collatz, J. Benlliure, L. Chulkov, D. Cortina Gil, F. Farget, H. Grawe, Z. Hu, N. Iwasa, M. Pfützner, A. Piechaczek, R. Raabe, I. Reusen, E. Roeckl, G. Vancraeynest, A. Wöhr
1997Lo.A	PrvCom	GAu	May	R.W. Loughheed
1997Mi03	PRVCA	55,	1555	S. Mitsuoka, H. Ikezoe, T. Ikuta, Y. Nagame, K. Tsukada, I. Nishinaka, Y. Oura, Y.L. Zhao
1997Mu02	ZPAAD	356,	367	J. Mukai, N. Hashimoto, T. Saitoh, M. Matsuda, T. Hayakawa, J. Lu, T. Komatsubara, K. Furuno
1997Mu08	PRVCA	55,	2267	U. Müller, P. Sevenich, K. Freitag, C. Günther, P. Herzog, G.D. Jones, C. Kliem, J. Manns, T. Weber, B. Will, ISOLDE
1997No.A	AnRpt Riken		74	M. Notani, N. Aoi, N. Fukuda, E. Ideguchi, M. Ishihara, H. Iwasaki, H. Ogawa, T. Kubo, S.M. Lukyanov, T. Nakamura, Yu. E. Penionzhkevich, H. Sakurai, T. Teranishi, Y.X. Watanabe, K. Yoneda, A. Yoshida
1997Oi01	PRVCA	56,	745	M. Oinonen, A. Jokinen, J. Äystö, P. Baumann, F. Didierjean, A. Honkanen, A. Huck, M. Huyse, A. Knipper, G. Marguier, Yu. Novikov, A. Popov, M. Ramdhane, D.M. Seliverstov, P. Van Duppen, G. Walter, ISOLDE
1997Pu01	ZPAAD	357,	3	Y.H. Pu, K. Morita, M.G. Hies, K.O. Lee, A. Yoshida, T. Nomura, Y. Tagaya, T. Motobayashi, M. Kurokawa, H. Minemura, T. Uchibori, T. Ariga, K. Sueki, S.A. Shin
1997Ro26	IEIMA	46,	560	S. Röttger, A. Paul, U. Keyser
1997Sc30	NUPAB	624,	185	K. Schmidt, P.C. Divari, Th. W. Elze, R. Grzywacz, Z. Janas, I.P. Johnstone, M. Karny, H. Keller, R. Kirchner, O. Klepper, A. Płochocki, E. Roeckl, K. Rykaczewski, L.D. Skouras, J. Szerypo, J. Żylicz
1997Sh09	PRVCA	55,	1162	R.K. Sheline, C.F. Liang, P. Paris, A. Gizon
1997Su06	NUPAB	616,	341c	K. Sümmerer, R. Schneider, T. Faestermann, J. Friese, H. Geissel, R. Gernhauser, H. Gilg, F. Heine, J. Homolka, P. Kienle, H.-J. Korner, G. Münzenberg, J. Reinhold, K. Zeitelhack
1997Sz04	ZPAAD	359,	117	J. Szerypo, R. Grzywacz, Z. Janas, M. Karny, M. Pfützner, A. Płochocki, K. Rykaczewski, J. Żylicz, M. Huyse, G. Reusen, J. Schwarzenberg, P. Van Duppen, A. Woehr, H. Keller, R. Kirchner, O. Klepper, A. Piechaczek, E. Roeckl, K. Schmidt, L. Batist, A. Bykov, V. Wittman, B.A. Brown
1997Ta22	PYLBB	409,	64	O. Tarasov, R. Allatt, J.C. Angélique, R. Anne, C. Borcea, Z. Dlouhy, C. Donzaud, S. Grevy, D. Guillemaud-Mueller, M. Lewitowicz, S. Lukyanov, A.C. Mueller, F. Nowacki, Yu. Oganessian, N.A. Orr, A.N. Ostrowski, R.D. Page, Yu. Penionzhkevich, F. Pougheon, A. Reed, M.G. Saint-Laurent, W. Schwab, E. Sokol, O. Sorlin, W. Trinder, J.S. Winfield
1997Uu01	ZPAAD	358,	375	J. Uusitalo, M. Leino, R.G. Allatt, T. Enqvist, K. Eskola, P.T. Greenlees, S. Hurskanen, A. Keenan, H. Kettunen, P. Kuusiniemi, R.D. Page, W.H. Trzaska
1997Wa05	PRVCA	55,	1192	J. Wauters, J.C. Batchelder, C.R. Bingham, D.J. Blumenthal, L.T. Brown, L.F. Conticchio, C.N. Davids, T. Davinson, R.J. Irvine, D. Seweryniak, K.S. Toth, W.B. Walters, P.J. Woods, E.F. Zganjar
1997Wi15	PRVCA	56,	1626	P.A. Wilk, K.E. Gregorich, M.B. Hendricks, M.R. Lane, D.M. Lee, C.A. McGrath, D.A. Shaughnessy, D.A. Strells, E.R. Sylwester, D.C. Hoffman
1997Wo06	NUPAB	621,	289c	A. Wöhr, A. Andreev, N. Bijmens, J. Breitenbach, S. Franchoo, M. Huyse, Y.A. Kudryavtsev, A. Piechaczek, R.R. Raabe, G. Reusen, L. Vermeeren, P. Van Duppen
1997Xu01	PRVCA	55,	R553	X.J. Xu, W.X. Huang, R.C. Ma, Z.D. Gu, Y.F. Yang, Y.Y. Wang, C.F. Dong, L.L. Xu
1997Za07	PRLTA	79,	4306	K. Zaerpoor, Y.D. Chan, D.E. DiGregorio, M.R. Dragowsky, M.M. Hindi, M.C.P. Isaac, K.S. Krane, R.M. Larimer, A.O. Macchiavelli, R.W. Macleod, P. Mincinovic, E.B. Norman

1997Zi04	NUPAB	619,	151	M. Zinser, F. Humbert, T. Nilsson, W. Schwab, H. Simon, T. Aumann, M.J.G. Borge, L.V. Chulkov, J. Cub, Th. W. Elze, H. Emling, H. Geissel, D. Guillemaud-Mueller, P.G. Hansen, R. Holzmann, H. Irnich, B. Jonsson, J.V. Kratz, R. Kulesa, Y. Leifels, H. Lenske, A. Magel, A.C. Mueller, G. Münzenberg, F. Nickel, G. Nyman, A. Richter, K. Riisager, C. Scheidenberger, G. Schrieder, K. Stelzer, J. Stroth, A. Surowiec, O. Tengblad, E. Wajda, E. Zude
			1998	
1998Ag.A	P-Bellaire		809	J. Agramunt, A. Algora, L. Batist, R. Borcea, D. Cano-Ott, R. Collatz, A. Gadea, J. Gerl, M. Gierlik, M. Gorska, O. Guilbaud, H. Grawe, M. Hellström, Z. Hu, Z. Janas, M. Karny, R. Kirchner, P. Kleinheinz, W. Liu, T. Martinez, F. Moroz, A. Płochocki, M. Rejmund, E. Roeckl, B. Rubio, K. Ryckaczewski, M. Shibata, J. Szerypo, J.L. Tain, V. Wittmann, EUROBALL
1998Al27	PYLBB	437,	29	R.G. Allatt, R.D. Page, M. Leino, T. Enqvist, K. Eskola, P.T. Greenlees, P. Jones, R. Julin, P. Kuusiniemi, W.H. Trzaska, J. Uusitalo
1998Am04	EPJAA	1,	275	F. Ameil, M. Bernas, P. Armbruster, S. Czajkowski, P. Dessagne, H. Geissel, E. Hanelt, C. Kozhuharov, C. Miehé, C. Donzaud, A. Grewe, A. Heinz, Z. Janas, M. de Jong, W. Schwab, S. Steinhäuser
1998Ar10	NUPAB	636,	209	R. Arnold, C. Augier, J. Baker, A. Barabash, D. Blum, V. Brudanin, A.J. Caffrey, J.E. Campagne, E. Caurier, D. Dassié, V. Egorov, R. Eschbach, T. Filipova, R. Gurriaran, J.L. Guyonnet, F. Hubert, Ph. Hubert, S. Jullian, I. Kisel, O. Kochetov, V.N. Kornoukhov, V. Kovalenko, D. Lalanne, F. Laplanche, F. Leccia, I. Linck, C. Longuemare, Ch. Marquet, F. Mauger, P. Mennrath, H.W. Nicholson, I. Pilugin, F. Piquemal, O. Purtov, J.-L. Reyss, X. Sarazin, F. Scheibling, J. Suhonen, C.S. Sutton, G. Szklarz, V. Timkin, R. Torres, V.I. Tretyak, V. Umatorov, I. Vanyushin, A. Varella, Yu. Vasilyev, Ts. Vylov, V. Zerkov
1998Ax02	NUPAB	634,	475	L. Axelsson, J. Äystö, M.J.G. Borge, L.M. Fraile, H.O.U. Fynbo, A. Honkanen, P. Hornshøj, A. Jokinen, B. Jonson, P.O. Lipas, I. Martel, I. Mukha, T. Nilsson, G. Nyman, B. Petersen, K. Riisager, M.H. Smedberg, O. Tengblad, ISOLDE, and PrvCom GAu December 1997, and erratum NUPAB 641,529
1998Az01	PRVCA	57,	628	A. Azhari, T. Baumann, J.A. Brown, M. Hellström, J.H. Kelley, R.A. Kryger, D.J. Millener, H. Madani, E. Ramakrishnan, D.E. Russ, T. Suomijarvi, M. Thoennessen, S. Yokoyama
1998Ba13	PRVCA	57,	1042	J.C. Batchelder, C.R. Bingham, K. Rykaczewski, K.S. Toth, T. Davinson, J.A. McKenzie, P.J. Woods, T.N. Ginter, C.J. Gross, J.W. McConnell, E.F. Zganjar, J.H. Hamilton, W.B. Walters, C. Baktash, J. Greene, J.F. Mas, W.T. Milner, S.D. Paul, D. Shapira, X.J. Xu, C.H. Yu
1998Ba83	PRVCA	58,	2571	P.H. Barker, P.A. Amundsen
1998Ba85	NUPAB	641,	133	M. Balodis, P. Prokofjevs, N. Krāmere, L. Simonova, J. Bērziņš, T. Krasta, J. Kern, A. Raemy, J.C. Dousse, W. Schwitz, J.A. Cizewski, G.G. Colvin, H.G. Börner, P. Geltenbort, F. Hoyler, S.A. Kerr, K. Schreckenbach, R. Georgii, T. von Egidy, J. Klorá, H. Lindner, U. Mayerhofer, A. Walter, A.V. Murzin, V.A. Libman, I.A. Kondurov, Yu. E. Loginov, P.A. Sushkov, S. Brant, V. Paar, V. Lopac
1998Ba.A	P-Bellaire		90	Y. Bai, D.J. Vieira, H.L. Seifert, J.M. Wouters, and PrvCom AHW June 1998
1998Ba.B	P-Bellaire		264	J.C. Batchelder, C.R. Bingham, K. Rykaczewski, K.S. Toth, T. Davinson, T.N. Ginter, C.J. Gross, R. Grzywacz, Z. Janas, M. Karny, S.H. Kim, B.D. MacDonald, J.F. Mas, J.W. McConnell, A. Piechaczek, J.J. Ressler, R.C. Slinger, J. Szerypo, W.B. Walters, W. Weintraub, P.J. Woods, C.-H. Yu, E.F. Zganjar
1998Be19	PRVCA	57,	2740	T. Belgya, B. Fazekas, Zs. Kasztovszky, Zs. Revay, G. Molnar, M. Yeh, P.E. Garrett, S.W. Yates
1998Be28	NUPAB	636,	419	A.V. Belozorov, R. Kalpakchieva, Yu. E. Penionzhkevich, Z. Dlouhy, S. Piskor, J. Vincour, H.G. Bohlen, M. von Lucke-Petsch, A.N. Ostrowski, D.V. Alexandrov, E. Yu. Nikolsky, B.G. Novatsky, D.N. Stepanov
1998Bh04	PRVCA	58,	1247	M. Bhattacharya, A. García, M.M. Hindi, E.B. Norman, C.E. Ortiz, N.I. Kaloskamis, C.N. Davids, O. Civitarese, J. Suhonen
1998Bh12	PRVCA	58,	3677	M. Bhattacharya, A. García, N.I. Kaloskamis, E.G. Adelberger, H.E. Swanson, R. Anne, M. Lewitowicz, M.G. Saint-Laurent, W. Trindler, C. Donzaud, D. Guillemaud-Mueller, S. Leenhardt, A.C. Mueller, F. Pougheon, O. Sorlin

1998Bi.A	P-Bellaire		474	C.R. Bingham, J.C. Batchelder, J.A. Cizewski, C.N. Davids, R.J. Irvine, W. Reviol, D. Sewerniak, K.S. Toth, W.B. Walters, J. Wauters, J.L. Wood, X.J. Xu, J. Uusitalo, E.F. Zganjar
1998Bo30	NUPAB	642,	419	R. Böttger, H. Schölermann
1998Ch20	NUPAB	637,	3	M. Chartier, W. Mittig, N.A. Orr, J.-C. Angélique, G. Audi, J.-M. Casandjian, A. Cunsolo, C. Donzaud, A. Foti, A. Lépine-Szily, M. Lewitowicz, S. Lukyanov, M. Mac Cormick, D.J. Morrissey, A.N. Ostrowski, B.M. Sherril, C. Stéphan, T. Suomijärvi, L. Tassan-Got, D.J. Vieira, A.C.C. Villari, J.M. Wouters
1998Co27	EPJAA	3,	17	J.F.C. Cocks, M. Muikku, W. Korten, R. Wadsworth, S. Chmel, J. Domscheit, P.T. Greenlees, K. Helariutta, I. Hibbert, M. Houry, D. Jenkins, P. Jones, R. Julin, S. Juutinen, H. Kankaanpää, H. Kettunen, P. Kuusiniemi, M. Leino, Y. Le Coz, R. Lucas, E. Mergel, R.D. Page, A. Savelius, W. Trzaska
1998Cz01	NUPAB	628,	537	C. Czajkowski, S. Andriamonje, B. Blank, F. Boué, R. Del Moral, J.P. Dufour, A. Fleury, P. Pourre, M.S. Pravikoff, E. Hanelt, K.-H. Schmidt, N.A. Orr
1998Da03	PRLTA	80,	1849	C.N. Davids, P.J. Woods, D. Seweryniak, A.A. Sonzogni, J.C. Batchelder, C.R. Bingham, T. Davinson, D.J. Henderson, R.J. Irvine, G.L. Poli, J. Uusitalo, W.B. Walters
1998Dr09	PRVCA	58,	1837	G.D. Dracoulis, A.P. Byrne, S.M. Mullins, T. Kibédi, F.G. Kondev, P.M. Davidson
1998En.A	PrvCom	AHW	Aug	T. Enqvist, et al (PrvCom of H. Geissel)
1998Es02	PRVCA	57,	417	K. Eskola, P. Kuusiniemi, M. Leino, J.F.C. Cocks, T. Enqvist, S. Hurskanen, H. Kettunen, W.H. Trzaska, J. Uusitalo, R.G. Allat, P.T. Greenlees, R.D. Page
1998Fo06	PRVCA	58,	749	B.D. Foy, D.S. Brenner, C.N. Davids, D. Seweryniak, D. Blumenthal, R.L. Gill, N.V. Zamfir, D.D. Warner, C.J. Barton
1998Fr15	PRLTA	81,	3100	S. Franchoo, M. Huysse, K. Kruglov, Y. Kudryavtsev, W.F. Mueller, R. Raabe, I. Reusen, P. Van Duppen, J. Van Roosbroeck, L. Vermeeren, A. Wöhr, K.-L. Kratz, B. Pfeiffer, W.B. Walters
1998Ge13	EPJAA	3,	225	U. Georg, W. Borchers, M. Keim, A. Klein, P. Lievens, R. Neugart, M. Neuroth, P.M. Rao, Ch. Schulz, ISOLDE
1998Gr12	PYLBB	429,	247	R. Grzywacz, S. Andriamonje, B. Blank, F. Boué, S. Czajkowski, F. Davi, R. Del Moral, C. Donzaud, J.P. Dufour, A. Fleury, H. Grawe, A. Grewe, A. Heinz, Z. Janas, A.R. Junghans, M. Karny, M. Lewitowicz, A. Musquère, M. Pfützner, M.-G. Porquet, M.S. Pravikoff, J.-E. Sauvestre, K. Sümmerer
1998Gr14	PRLTA	81,	766	R. Grzywacz, R. Béraud, C. Borcea, A. Emsallem, M. Glogowski, H. Grawe, D. Guillemaud-Mueller, M. Hjorth-Jensen, M. Houry, M. Lewitowicz, A.C. Mueller, A. Nowak, A. Płochocki, M. Pfützner, K. Rykaczewski, M.G. Saint-Laurent, J.-E. Sauvestre, M. Schaefer, O. Sorlin, J. Szerypo, W. Trinder, S. Viteritti, J. Winfield
1998Gr.A	B-Bellaire		C7	R. Grzywacz (and oral presentation)
1998Gr.B	P-Bellaire		430	R. Grzywacz
1998Gu10	PRVCA	58,	116	V. Guimarães, S. Kubono, N. Ikeda, I. Katayama, T. Nomura, M.H. Tanaka, Y. Fuchi, H. Kawashima, S. Kato, H. Toyokawa, C.C. Yun, T. Niizeki, T. Kubo, M. Ohura, M. Hosaka
1998Ha36	PRVCA	58,	821	P.D. Harty, N.S. Bowden, P.H. Barker, P.A. Amundsen
1998He.B	Th.-Boulder			T.P. Heavner
1998Ho13	RPPHA	61,	639	S. Hofmann
1998Ho15	PRVCA	58,	1318	I. Hossain, T. Ishii, A. Makishima, M. Asai, S. Ichikawa, M. Itoh, M. Ishii, P. Kleinheinz, M. Ogawa
1998Ik01	PRVCA	57,	2804	T. Ikuta, H. Ikezoe, S. Mitsuoka, I. Nishinaka, K. Tsukuda, Y. Nagame, J. Lu, T. Kuzumaki
1998Ik02	EPJAA	2,	379	H. Ikezoe, T. Ikuta, S. Mitsuoka, Y. Nagame, I. Nishinaka, K. Tsukada, T. Ohtsuki, T. Kuzumaki, J. Lu
1998Is06	EPJAA	2,	173	S. Issmer, M. Fruneau, J.A. Pinston, M. Asghar, D. Barnéoud, J. Genevey, Th. Kerscher, K.E.G. Löbner
1998Is11	PRLTA	81,	4100	T. Ishii, M. Asai, I. Hossain, P. Kleinheinz, M. Ogawa, A. Makishima, S. Ichikawa, M. Itoh, M. Ishii, J. Blomqvist
1998Jo.A	PrvCom	AHW	Mar	T. Johansson, I. Bergström, et al
1998Ka42	NUPAB	640,	3	M. Karny, L. Batist, B.A. Brown, D. Cano-Ott, R. Collatz, A. Gadea, R. Grzywacz, A. Guglielmetti, M. Hellström, Z. Hu, Z. Janas, R. Kirchner, F. Moroz, A. Piechaczek, A. Płochocki, E. Roeckl, B. Rubio, K. Rykaczewski, M. Shibata, J. Szerypo, J.L. Tain, V. Wittmann, A. Wöhr

1998Ka.A	AnRpt GSI		22	M. Karny, L. Batist, D. Cano, R. Collatz, A. Gadea, M. Gierlik, R. Grzywacz, A. Guglielmetti, M. Hellström, Z. Hu, Z. Janas, R. Kirchner, F. Moroz, A. Piechaczek, A. Płochocki, E. Roeckl, B. Rubio, K. Rykaczewski, M. Shibata, J. Szerypo, J.L. Tain, V. Wittmann, A. Wöhr
1998Ki20	PYLBB	443,	82	S.L. King, J. Simpson, R.D. Page, N. Amzal, T. Bäck, B. Cederwall, J.F.C. Cocks, D.M. Cullen, P.T. Greenlees, M.K. Harder, K. Helariutta, P. Jones, R. Julin, S. Juutinen, H. Kankaanpää, A. Keenan, H. Kettunen, P. Kuusiniemi, M. Leino, R. Lemmon, M. Muikku, A. Savelius, J. Uusitalo, P. Van Isacker
1998Ko09	NUPAB	632,	473	F.G. Kondev, G.D. Dracoulis, A.P. Byrne, T. Kibédi
1998Ko66	JUPSA	67,	3405	Y. Kojima, M. Asai, A. Osa, M. Koizumi, T. Sekine, M. Shibata, H. Yamamoto, K. Kawade, T. Tachibana
1998Ku17	EPJAA	2,	241	J. Kurpeta, G. Lhersonneau, J.C. Wang, P. Dendooven, A. Honkanen, M. Huhta, M. Oinonen, H. Penttilä, K. Peräjärvi, J.R. Persson, A. Płochocki, J. Äystö
1998Le15	EPJAA	2,	9	A.I. Levon, J. de Boer, M. Loewe, M. Würkner, T. Czosnyka, J. Iwanicki, P.J. Napiorkowski
1998Li50	PYLBB	440,	246	M. Lipoglavšek, D. Seweryniak, C.N. Davids, C. Fahlander, M. Górška, R.V.F. Janssens, J. Nyberg, J. Uusitalo, W.B. Walters, I. Ahmad, J. Blomqvist, M.P. Carpenter, J.A. Cizewski, S.M. Fischer, H. Grawe, G. Hackman, M. Huhta, C.J. Lister, D. Nisius, G. Poli, P. Reiter, J. Ressler, J. Schwartz, A. Sonzogni
1998Lu08	EPJAA	2,	149	X. Lu, J. Guo, K. Zhao, Y. Cheng, Y. Ma, Z. Li, S. Li, M. Ruan
1998Mo30	EPJAA	3,	99	T. Morek, K. Starosta, Ch. Droste, D. Fossan, G. Lane, J. Sears, J. Smith, P. Vaska
1998No.A	P-Bellaire		359	M. Notani, N. Aoi, N. Fukuda, H. Iwasaki, K. Yoneda, H. Ogawa, T. Teranishi, S.M. Lukyanov, Yu. E. Penionzhkevich, T. Nakamura, H. Sakurai, E. Ideguchi, A. Yoshida, Y. Watanabe, T. Kubo, M. Ishihara
1998Oi02	NIMAE	416,	485	M. Oinonen, R. Béraud, G. Canchel, E. Chabanat, P. Dendooven, A. Emsallem, S. Hankonen, A. Honkanen, J. Huikari, A. Jokinen, G. Lhersonneau, Ch. Miehé, A. Nieminen, Yu. Novikov, H. Penttilä, K. Peräjärvi, A. Popov, D.M. Seliverstov, J.C. Wang, J. Äystö
1998Pf02	PYLBB	444,	32	M. Pfützner, P. Armbruster, T. Baumann, J. Benlliure, M. Bernas, W.N. Catford, D. Cortina-Gil, J.M. Daugas, H. Geissel, M. Górška, H. Grawe, R. Grzywacz, M. Hellström, N. Iwasa, Z. Janas, A.R. Junghans, M. Karny, S. Leenhardt, M. Lewitowicz, A.C. Mueller, F. de Oliveira, P.H. Regan, M. Rejmund, K. Rykaczewski, K. Sümmerner
1998Po.A	PrvCom	GAU	Mar	F. Pougheon
1998Ru04	PRVCA	58,	771	D. Rupnik, E.F. Zganjar, J.L. Wood, P.B. Semmes, P.F. Mantica
1998Sh21	ARISE	49,	1481	M. Shibata, Y. Satoh, S. Itoh, H. Yamamoto, K. Kawade, Y. Kasugai, Y. Ikeda
1998So03	NUPAB	632,	205	O. Sorlin, V. Borrel, S. Grévy, D. Guillemaud-Mueller, A.C. Mueller, F. Pougheon, W. Böhmer, K.-L. Kratz, T. Mehren, P. Möller, B. Pfeiffer, T. Rauscher, M.G. Saint-Laurent, R. Anne, M. Lewitowicz, A. Ostrowski, T. Dörfler, W.-D. Schmidt-Ott
1998St24	NUPAB	641,	401	A.E. Stuchbery, G.D. Dracoulis, T. Kibedi, A.P. Byrne, B. Fabricius, A.R. Poletti, G.J. Lane, A.M. Baxter
1998Su16	EPJAA	2,	237	M. Sugawara, H. Kusakari, T. Murakami, T. Kohno
1998Ti06	NUPAB	636,	249	D.R. Tilley, C.M. Cheves, J.H. Kelley, S. Raman, H.R. Weller
1998To14	PRVCA	58,	1310	K.S. Toth, X.-J. Xu, C.R. Bingham, J.C. Batchelder, L.F. Conticchio, W.B. Walters, L.T. Brown, C.N. Davids, R.J. Irvine, D. Seweryniak, J. Wauters, E.F. Zganjar
1998Tu01	PRVCA	57,	1648	A. Türler, R. Dressler, B. Eichler, H.W. Gäggeler, D.T. Jost, M. Schädel, W. Bröchle, K.E. Gregorich, N. Trautmann, S. Taut
1998Vi06	PYLBB	437,	264	S.M. Vincent, P.H. Regan, D.D. Warner, R.A. Bark, D. Blumenthal, M.P. Carpenter, C.N. Davids, W. Gelletly, R.V.F. Janssens, C.D. O'Leary, C.J. Lister, J. Simpson, D. Seweryniak, T. Saitoh, J. Schwartz, S. Törmänen, O. Juillet, F. Nowacki, P. Van Isacker
1998Wa.A	PrvCom	AHW	Feb	A.H. Wapstra
1998Wh01	PRVCA	57,	1112	D.H. White, R.W. Hoff, H.G. Börner, K. Schreckenbach, F. Hoyler, G. Colvin, I. Ahmad, A.M. Friedman, J.R. Erskine
1998Wh02	PYLBB	425,	239	C. Wheldon, R. D'Alarcao, P. Chowdhury, P.M. Walker, E. Seabury, I. Ahmad, M.P. Carpenter, D.M. Cullen, G. Hackman, R.V.F. Janssens, T.L. Khoo, D. Nisius, C.J. Pearson, P. Reiter
1998Wi.A	P-Bellaire		606	J.A. Winger, H.H. Yousif, W.C. Ma, V. Ravikumar, W. Lui, S.K. Phillips, R.B. Piercey, P.F. Mantica, B. Pritychenko, R.M. Ronningen, M. Steiner

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|----------|-------|------|------|---|
| 1998Wu01 | PRLTA | 80, | 2085 | A.H. Wuosmaa, I. Ahmad, S.M. Fischer, J.P. Greene, G. Hackman, V. Nanal, G. Savard, J.P. Schiffer, P. Wilt, S.M. Austin, B.A. Brown, S.J. Freedman, J.J. Connell |
| 1998Zh03 | EPJAA | 1, | 1 | Y.H. Zhang, Q.Z. Zhao, S.F. Zhu, H.S. Xu, X.H. Zhou, Y.X. Guo, X.G. Lei, J. Lu, Q.B. Gou, H.J. Jin, Z. Liu, Y.X. Luo, X.F. Sun, Y.T. Zhu |
| 1998Zh09 | NUPAB | 628, | 386 | C.T. Zhang, P. Bhattacharyya, P.J. Daly, Z.W. Grabowski, R.H. Mayer, M. Sferazza, R. Broda, B. Fornal, W. Królas, T. Pawlat, D. Bazzacco, S. Lunardi, C. Rossi Alvarez, G. de Angelis |
| 1998Zh22 | PRVCA | 58, | 156 | L. Zhang, J. Zhao, J. Zheng, J. Wang, Z. Qin, Y. Yang, C. Zhang, G. Jin, G. Guo, Y. Du, T. Guo, T. Wang, B. Guo, J. Tian, Y. Lou |
| 1999 | | | | |
| 1999A120 | PYLBB | 457, | 253 | A. Alessandrello, J.W. Beeman, C. Brofferio, O. Cremonesi, E. Fiorini, A. Giuliani, E.E. Haller, B. Margesin, A. Monfardini, A. Nucciotti, M. Pavan, G. Pessina, G. Pignatelli, E. Previtali, L. Zanotti, M. Zen |
| 1999Am05 | NUPAB | 651, | 3 | F. Ames, G. Audi, D. Beck, G. Bollen, M. de Saint Simon, R. Jertz, H.-J. Kluge, A. Kohl, M. König, D. Lunney, I. Martel, R.B. Moore, T. Otto, Z. Patyk, H. Raimbault-Hartmann, G. Rouleau, G. Savard, E. Schark, S. Schwarz, L. Schweikhard, H. Stolzenberg, J. Szerypo, ISOLDE |
| 1999An10 | PRLTA | 82, | 1819 | A.N. Andreyev, M. Huyse, P. Van Duppen, J.F.C. Cocks, K. Helariutta, H. Kettunen, P. Kuusiniemi, M. Leino, W.H. Trzaska, K. Eskola, R. Wyss |
| 1999An36 | APOBB | 30, | 1255 | A.N. Andreyev, N. Bijnens, J.F. Cocks, K. Eskola, K. Helariutta, M. Huyse, H. Kettunen, P. Kuusiniemi, M. Leino, W.H. Trzaska, P. Van Duppen, R. Wyss |
| 1999An52 | EPJAA | 6, | 381 | A.N. Andreyev, D. Ackermann, P. Cagarda, J. Gerl, F. Heßberger, S. Hofmann, M. Huyse, A. Keenan, H. Kettunen, A. Kleinbohl, A. Lavrentiev, M. Leino, B. Lommel, M. Matos, G. Münzenberg, C. Moore, C.D. O'Leary, R.D. Page, S. Reshitko, S. Saro, C. Schlegel, H. Schaffner, M. Taylor, P. Van Duppen, L. Weissman, R. Wyss |
| 1999Ar25 | NUPAB | 658, | 299 | R. Arnold, C. Augier, J. Baker, A. Barabash, D. Blum, V. Brudanin, A.J. Caffrey, J.E. Campagne, E. Caurier, D. Dassié, V. Egorov, T. Filipova, R. Gurriaran, J.L. Guyonnet, F. Hubert, Ph. Hubert, S. Jullian, I. Kisel, O. Kochetov, V.N. Kornoukhov, V. Kovalenko, D. Lalanne, F. Laplanche, F. Leccia, I. Linck, C. Longuemare, Ch. Marquet, F. Mauger, H.W. Nicholson, I. Pilugin, F. Piquemal, J.-L. Reyss, X. Sarazin, F. Scheibling, J. Suhonen, C.S. Sutton, G. Szklarz, V. Timkin, R. Torres, V.I. Tretyak, V. Umatov, I. Vanyushin, A. Varella, Yu. Vasilyev, Ts. Vylov |
| 1999As03 | PRVCA | 59, | 3060 | M. Asai, S. Ichikawa, K. Tsukada, M. Sakama, M. Shibata, Y. Kojima, A. Osa, I. Nishinaka, Y. Nagame, K. Kawade, T. Tachibana |
| 1999Ba45 | EPJAA | 5, | 49 | J.C. Batchelder, K.S. Toth, C.R. Bingham, L.T. Brown, L.F. Conticchio, C.N. Davids, R.J. Irvine, D. Sewerniak, W.B. Walters, J. Wauters, E.F. Zganjar, J.L. Wood, C. De Coster, B. Decroix, K. Heyde |
| 1999Be53 | NUPAB | 658, | 129 | U.C. Bergmann, L. Axelsson, M.J.G. Borge, V.N. Fedoseyev, C. Forssén, H.O.U. Fynbo, S. Grévy, P. Hornshøj, Y. Jading, B. Jonson, U. Köster, K. Markenroth, F.M. Marqués, V.I. Mishin, T. Nilsson, G. Nyman, A. Oberstedt, H.L. Ravn, K. Riisager, G. Schrieder, V. Sebastian, H. Simon, O. Tengblad, F. Wenander, K. Wilhelmsen Rolander, ISOLDE |
| 1999Be63 | NUPAB | 660, | 87 | J. Benlliure, K.-H. Schmidt, D. Cortina-Gil, T. Enqvist, F. Farget, A. Heinz, A.R. Junghans, J. Pereira, J. Taieb |
| 1999Be64 | NUPBB | 563, | 97 | P. Belli, R. Bernabei, C.J. Dai, F. Grianti, H.L. He, G. Ignesti, A. Incicchitti, H.H. Kuang, J.M. Ma, F. Montecchia, O.A. Ponkratenko, D. Prospero, V.I. Tretyak, Yu. G. Zdesenko |
| 1999Bi14 | PRVCA | 59, | 2984 | C.R. Bingham, J. Batchelder, K. Rykaczewski, K.S. Toth, C.-H. Yu, T.N. Ginter, C.J. Gross, R. Grzywacz, M. Karny, S.H. Kim, B.D. MacDonald, J.F. Mas, J.W. McConnell, P.B. Semmes, J. Szerypo, W. Weintraub, E.F. Zganjar |
| 1999Bo26 | PPNPD | 42, | 17 | H.G. Bohlen, A. Blazevic, B. Gebauer, W. von Oertzen, S. Thummerer, R. Kalpakchieva, S.M. Grimes, T.N. Massey |
| 1999Br47 | PRLTA | 83, | 4510 | M.P. Bradley, J.V. Porto, S. Rainville, J.K. Thompson, D.E. Pritchard, and Prv-Com GAu Nov 1999 |
| 1999Ca21 | EPJAA | 5, | 1 | G. Canchell, R. Béraud, E. Chabanat, E. Emsallem, N. Redon, P. Dendooven, J. Huikari, A. Jokinen, V. Kolhinen, G. Lhersonneau, M. Oinonen, A. Nieminen, H. Penttilä, K. Peräjärvi, J.C. Wang |

1999Ca46	PRLTA	83,	4506	C. Carlberg, T. Fritioff, I. Bergström
1999Co13	JPGPE	25,	839	J.F.C. Cocks, and the JUROSPHERE Collaboration
1999Da.A	GANIL-T9905			J.-M. Daugas Thesis
1999DI01	JPGPE	25,	859	Z. Dlouhý, Yu. Penionzhkevich, R. Anne, D. Baiborodin, C. Borcea, A. Fomichev, D. Guillemaud-Mueller, R. Kalpakchieva, M. Lewitowicz, S. Lukyanov, A.C. Mueller, Yu. Oganessian, R.D. Page, A. Reed, M.G. Saint-Laurent, E. Sokol, N. Skobelev, O. Sorlin, O. Tarasov, V. Toneev, W. Trinder
1999Dr09	PRVCA	59,	3433	R. Dressler, B. Eichler, D.T. Jost, D. Piguët, A. Tuerler, Ch. Duehlmann, R. Eichler, H.W. Gaeggeler, M. Gaertner, M. Schaedel, S. Taut, A.B. Yakushev
1999Dr13	JPGPE	25,	1839	O. Dragoun, A. Spalek, M. Rysavy, A. Kovalik, E.A. Yakushev, V. Brabec, A.F. Novgorodov, N. Dragounova, J. Rizek
1999Fe10	EPJAA	6,	235	X.C. Feng, Y.X. Guo, X.H. Zhou, X.F. Sun, X.G. Lei, W.X. Huang, J.J. He, Z. Liu, Y.H. Zhang, S.F. Zhu, Y.X. Luo, S.X. Wen, G.J. Yuan, X.G. Wu
1999Fo01	PRLTA	82,	1823	B. Fogelberg, K.A. Mezilev, H. Mach, V.I. Isakov, J. Slivova
1999Fo.A	PrvCom	GAu	Oct	K. Foehl
1999Ga41	EPJAA	6,	59	Z.G. Gan, Z. Qin, J.S. Guo, L.J. Shi, H.Y. Liu, T.R. Guo, X.G. Lei, R.C. Ma, W.X. Huang, S.G. Yuan, X.Q. Zhang, G.M. Jin
1999Ga.A	B-Seeheim		O34	H.W. Gäggeler, R. Dressler, A. Türler, D.T. Jost, B. Eichler, H.R. von Gunten
1999Ge01	PRVCA	59,	82	J. Genevey, F. Ibrahim, J.A. Pinston, H. Faust, T. Friedrichs, M. Gross, S. Oberstedt
1999Gi14	NUPAB	658,	97	J. Gizon, A. Gizon, J. Timár, Gh. Cata-Danil, B.M. Nyakó, L. Zolnai, A.J. Boston, D.T. Joss, E.S. Paul, A.T. Semple, N.J. O'Brien, C.M. Parry, D. Bucurescu, S. Brant, V. Paar
1999Gr28	EPJAA	6,	269	P.T. Greenlees, P. Kuusiniemi, N. Amzal, A. Andreyev, P.A. Butler, K.J. Cann, J.F.C. Cocks, O. Dorvaux, T. Enqvist, P. Fallon, B. Gall, M. Guttormsen, D. Hawcroft, K. Helariutta, F.P. Heßberger, F. Hoellinger, G.D. Jones, P. Jones, R. Julin, S. Juutinen, H. Kankaanpää, H. Kettunen, M. Leino, S. Messelt, M. Muikku, S. Ødegård, R.D. Page, A. Savelius, A. Schiller, S. Siem, W.H. Trzaska, T. Tveter, J. Uusitalo
1999Ha05	PRLTA	82,	1391	M. Hannawald, T. Kautsch, A. Wöhr, W.B. Walters, K.-L. Kratz, V.N. Fedoseyev, V.L. Mishin, W. Böhmer, B. Pfeiffer, V. Sebastian, Y. Jading, U. Köster, J. Lettry, H.L. Ravn, ISOLDE
1999He11	JPGPE	25,	877	F.P. Heßberger
1999He32	EPJAA	6,	289	K. Helariutta, J.F.C. Cocks, T. Enqvist, P.T. Greenlees, P. Jones, R. Julin, S. Juutinen, P. Jämsen, H. Kankaanpää, H. Kettunen, P. Kuusiniemi, M. Leino, M. Muikku, M. Piiparinen, P. Rahkila, A. Savelius, W.H. Trzaska, S. Törmänen, J. Uusitalo, R.G. Allatt, P.A. Butler, R.D. Page, M. Kapusta
1999Ho01	NUPAB	645,	331	J. Honzátko, I. Tomandl, V. Bondarenko, D. Bucurescu, T. von Egidy, J. Ott, W. Schauer, H.-F. Wirth, C. Doll, A. Gollwitzer, G. Graw, R. Hertenberger, B.D. Valnion see also 98Ho16
1999Ho09	PYLBB	451,	247	E. Holzschuh, W. Kündig, L. Palermo, H. Stüssi, P. Wenk
1999Ho28	PRVCA	60,	057301	F. Hoellinger, B.J.P. Gall, N. Schulz, N. Amzahl, P.A. Butler, P.T. Greenlees, D. Hawcroft, J.F.C. Cocks, K. Helariutta, P.M. Jones, R. Julin, S. Juutinen, H. Kankaanpää, H. Kettunen, P. Kuusiniemi, M. Leino, M. Muikku, D. Savelius
1999Hu05	PRVCA	59,	2402	W.X. Huang, R.C. Ma, S.W. Xu, X.J. Xu, J.S. Guo, X.F. Sun, Y.X. Xie, Z.K. Li, Y.X. Ge, Y.Y. Wang, C.F. Wang, T.M. Zhang, G.M. Jin, Y.X. Luo
1999Hu10	PRVCA	60,	024315	Z. Hu, L. Batist, J. Agramunt, A. Algora, B.A. Brown, D. Cano-Ott, R. Collatz, A. Gadea, M. Gierlik, M. Górska, H. Grawe, M. Hellström, Z. Janas, M. Karny, R. Kirchner, F. Moroz, A. Płochocki, M. Rejmund, E. Roeckl, B. Rubio, M. Shibata, T. Szerypo, J.L. Tain, V. Wittmann
1999Ja02	PRLTA	82,	295	Z. Janas, C. Chandler, B. Blank, P.H. Regan, A.M. Bruce, W.N. Catford, N. Curtis, S. Czajkowski, Ph. Dessagne, A. Fleury, W. Gelletly, J. Giovannazzo, R. Grzywacz, M. Lewitowicz, C. Longour, C. Marchand, C. Miehé, N.A. Orr, R.D. Page, C.J. Pearson, M.S. Pravikoff, A.T. Reed, M.G. Saint-Laurent, J.A. Sheikh, S.M. Vincent, R. Wadsworth, D.D. Warner, J.S. Winfield
1999Ke05	PYLAA	255,	221	E.G. Kessler, Jr., M.S. Dewey, R.D. Deslattes, A. Henins, H.G. Börner, M. Jentschel, C. Doll, H. Lehmann
1999La14	PRVCA	59,	3086	C.A. Laue, K.E. Gregorich, R. Sudowe, M.B. Hendricks, J.L. Adams, M.R. Lane, D.M. Lee, C.A. McGrath, D.A. Shaughnessy, D.A. Strellis, E.R. Sylwester, P.A. Wilk, D.C. Hoffman

- 1999Le68 NUPAB 654, 687c M. Lewitowicz, J.M. Daugas, R. Grzywacz, L. Achouri, J.C. Angélique, D. Baborodin, R. Bentida, R. Béraud, C. Bingham, C. Borcea, W. Catford, A. Em-sallem, G. de France, M. Glogowski, H. Grawe, D. Guillemaud-Mueller, M. Houry, S. Hurskanen, K.L. Jones, R.C. Lemmon, A.C. Mueller, A. Nowak, F. de Oliveira-Santos, A. Plochocki, M. Pfützner, P.H. Regan, K. Rykaczewski, M.G. Saint-Laurent, J.E. Sauvestre, M. Sawicka, M. Schaefer, G. Sletten, O. Sorlin, M. Stanoiu, J. Szerypo, W. Trinder, S. Viteritti, J. Winfield
- 1999Lh01 PRVCA 60, 014315 G. Lhersonneau, J.C. Wang, S. Hankonen, P. Dendooven, P. Jones, R. Julin, J. Äystö
- 1999Mo30 NUPAB 657, 251 C.-B. Moon, S.J. Chae, T. Komatsubara, T. Shizuma, Y. Sasaki, H. Ishiyama, T. Jumatsu, K. Furuno
- 1999Mo39 JPCRB 28, 1713 P.J. Mohr, B.N. Taylor
- 1999Mu17 PRLTA 83, 3613 W.F. Mueller, B. Bruyneel, S. Franchoo, H. Grawe, M. Huyse, U. Köster, K.-L. Kratz, K. Kruglov, Y. Kudryavtsev, B. Pfeiffer, R. Raabe, I. Reusen, P. Thirolf, P. Van Duppen, J. Van Roosbroeck, L. Vermeeren, W.B. Walters, L. Weissman
- 1999Na27 PRLTA 83, 1112 T. Nakamura, N. Fukuda, T. Kobayashi, N. Aoi, H. Iwasaki, T. Kubo, A. Mengoni, M. Notani, H. Otsu, H. Sakurai, S. Shimoura, T. Teranishi, Y.X. Watanabe, K. Yoneda, M. Ishihara
- 1999Ni03 PRLTA 83, 1104 V. Ninov, K.E. Gregorich, W. Loveland, A. Ghiorso, D.C. Hoffman, D.M. Lee, H. Nitsche, W.J. Swiatecki, U.W. Kirbach, C.A. Laue, J.L. Adams, J.B. Patin, D.A. Shaughnessy, D.A. Strellis, P.A. Wilk
- 1999Og03 PYLBB 451, 11 H. Ogawa, K. Asahi, K. Sakai, A. Yoshimi, M. Tsuda, Y. Uchiyama, T. Suzuki, K. Suzuki, N. Kurokawa, M. Adachi, H. Izumi, H. Ueno, T. Shimoda, S. Tanimoto, N. Takahashi, W.-D. Schmidt-Ott, M. Schäfer, S. Fukuda, A. Yoshida, M. Notani, T. Kubo, H. Okuno, H. Sato, N. Aoi, K. Yoneda, H. Iwasaki, N. Fukuda, N. Fukunishi, M. Ishihara, H. Miyatake
- 1999Og05 EPJAA 5, 63 Yu. Ts. Oganessian, A.V. Yeremin, G.G. Gulbekian, S.L. Bogomolov, V.I. Chepigin, B.N. Gikal, V.A. Gorshkov, M.G. Itkis, A.P. Kabachenko, V.B. Kutner, A. Yu. Lavrentev, O.N. Malyshev, A.G. Popeko, J. Roháč, R.N. Sagaidak, S. Hofmann, G. Münzenberg, M. Veselsky, S. Saro, N. Iwasa, K. Morita
- 1999Og07 NATUA 400, 242 Yu. Ts. Oganessian, A.V. Yeremin, A.G. Popeko, S. L. Bogomolov, G.V. Buklanov, M.L. Chelnokov, V.I. Chepigin, B.N. Gikal, V.A. Gorshkov, G.G. Gulbekian, M.G. Itkis, A.P. Kabachenko, A. Yu. Lavrentev, O.N. Malyshev, J. Rohac, R.N. Sagaidak, S. Hofmann, S. Saro, G. Giardina, K. Morita
- 1999Og10 PRLTA 83, 3154 Yu. Ts. Oganessian, V.K. Utyonkov, Yu. V. Lobanov, F. Sh. Abdullin, A.N. Polyakov, I.V. Shirokovsky, Yu. S. Tsyganov, G.G. Gulbekian, S.L. Bogomolov, B.N. Gikal, A.N. Mezentsev, S. Iliev, V.G. Subbotin, A.M. Sukhov, G.V. Buklanov, K. Subotic, M.G. Itkis, K.J. Moody, J.F. Wild, N.J. Stoyer, M.A. Stoyer, R.W. Loughheed
- 1999Og.B B-Seeheim 05 Yu. Ts. Oganessian, V.K. Utyonkov, Yu. V. Lobanov, F. Sh. Abdullin, A.N. Polyakov, I.V. Shirokovsky, Yu. S. Tsyganov, G.G. Gulbekian, S.L. Bogomolov, B.N. Gikal, A.N. Mezentsev, S. Iliev, V.G. Subbotin, A.M. Sukhov, G.V. Buklanov, K. Subotik, M.G. Itkis, K.J. Moody, J.F. Wild, N.J. Stoyer, R.W. Loughheed, and email
- 1999Pi08 NPBSE 77, 352 F. Piquemal, NEMO
- 1999Po09 PRVCA 59, 2979 G.L. Poli, C.N. Davids, P.J. Woods, D. Seweryniak, J.C. Batchelder, L.T. Brown, C.R. Bingham, M.P. Carpenter, L.F. Conticchio, T. Davinson, J. de Boer, S. Hamada, D.J. Henderson, R.J. Irvine, R.V.F. Janssens, H.J. Maier, L. Müller, F. Soramel, K.S. Toth, W.B. Walters, J. Wauters
- 1999Pr10 PRVCA 60, 054307 J.I. Prisciandaro, P.F. Mantica, A.M. Oros-Peusquens, D.W. Anthony, M. Huhta, P.A. Lofy, R.M. Ronningen
- 1999Re06 PRVCA 59, 2416 I. Reusen, I. Reusen, A. Andreyev, J. Andrzejewski, N. Bijmens, S. Franchoo, M. Huyse, Yu. Kudryavtsev, K. Kruglov, W.F. Mueller, A. Piechaczek, R. Raabe, K. Rykaczewski, J. Szerypo, P. Van Duppen, L. Vermeeren, J. Wauters, A. Wöhr
- 1999Re16 PRVCA 60, 024311 A.T. Reed, O. Tarasov, R.D. Page, D. Guillemaud-Mueller, Yu. E. Penionzhkevich, R.G. Allatt, J.C. Angélique, R. Anne, C. Borcea, V. Burjan, W.N. Catford, Z. Dlouhý, C. Donzaud, S. Grévy, M. Lewitowicz, S.M. Lukyanov, F.M. Marqués, G. Martinez, A.C. Mueller, P.J. Nolan, J. Novák, N.A. Orr, F. Pougheon, P.H. Regan, M.G. Saint-Laurent, T. Siiskonen, E. Sokol, O. Sorlin, J. Suhonen, W. Trinder, S.M. Vincent

1999Ry04	PRVCA	60,	011301	K. Rykaczewski, J.C. Batchelder, C.R. Bingham, T. Davinson, T.N. Ginter, C.J. Gross, R. Grzywacz, M. Karny, B.D. MacDonald, J.F. Mas, J.W. McConnell, A. Piechaczek, R.C. Slinger, K.S. Toth, W.B. Walters, P.J. Woods, E.F. Zganjar, B. Barmore, L. Gr. Ixaru, A.T. Kruppa, W. Nazarewicz, M. Rizea, T. Vertse
1999Sa06	PYLBB	448,	180	H. Sakurai, S.M. Lukyanov, M. Notani, N. Aoi, D. Beaumel, N. Fukuda, M. Hirai, E. Ideguchi, N. Imai, M. Ishihara, H. Iwasaki, T. Kubo, K. Kusaka, H. Kumagai, T. Nakamura, H. Ogawa, Yu. E. Penionzhkevich, T. Teranishi, Y.X. Watanabe, K. Yoneda, A. Yoshida
1999Sa.A	P-Bormio			F. Sarazin, et al, and PrvCom to D. Lunney March 1999
1999Sa.D	B-Seeheim		PW4	M. Sakama, K. Tsukuda, M. Asai, S. Ichikawa, Y. Oura, A. Osa, M. Shibata, I. Nishinaka, Y. Nagame, M. Ebihara, K. Kawade, H. Nakahara and poster
1999Se14	PRVCA	60,	031304	D. Seweryniak, J. Uusitalo, M.P. Carpenter, D. Nisius, C.N. Davids, C.R. Bingham, L.T. Brown, I. Conticchio, D.J. Henderson, R.V.F. Janssens, W.B. Walters, J. Wauters, P.J. Woods
1999Sh03	PRVCA	59,	101	R.K. Sheline, P. Alexa, C.F. Liang, P. Paris
1999Sm07	EPJAA	5,	43	M.B. Smith, R. Chapman, J.F.C. Cocks, O. Dorvaux, K. Helariutta, P.M. Jones, R. Julin, S. Juutinen, H. Kankaanpaa, H. Kettunen, P. Kuusiniemi, Y. Le Coz, M. Leino, D.J. Middleton, M. Muikku, P. Nieminen, P. Rakhila, A. Savelius, K.-M. Spohr
1999So08	PRVCA	59,	1324	D. Sohler, J. Cederkall, M. Lipoglavsek, Zs. Dombradi, M. Gorska, J. Persson, D. Seweryniak, I. Ahmad, A. Atac, R.A. Bark, J. Blomqvist, M.P. Carpenter, B. Cederwall, C.N. Davids, C. Fahlander, S.M. Fischer, H. Grawe, G. Hackman, R.V.F. Janssens, A. Johnson, A. Kerek, W. Klamra, J. Kownacki, C.J. Lister, S. Mitarai, D. Nisius, L.-O. Norlin, J. Nyberg, G. Poli, P. Reiter, J.J. Ressler, H.A. Roth, J. Schwartz, G. Sletten, J. Uusitalo, W.B. Walters, M. Weiszflog
1999So17	PRLTA	83,	1116	A.A. Sonzogni, C.N. Davids, P.J. Woods, D. Seweryniak, M.P. Carpenter, J.J. Ressler, J. Schwartz, J. Uusitalo, W.B. Walters
1999So20	NUPAB	660,	3	O. Sorlin, C. Donzaud, L. Axelsson, M. Belleguic, R. Béraud, C. Borcea, G. Cachel, E. Chabanat, J.M. Daugas, A. Emsallem, D. Guillemaud-Mueller, K.-L. Kratz, S. Leenhardt, M. Lewitowicz, C. Longour, M.J. Lopez, F. de Oliveira Santos, L. Petizon, B. Pfeiffer, F. Pougheon, M.G. Saint-Laurent, J.E. Sauvestre, and erratum Nucl. Phys. A669 (2000) 351
1999Ta20	EPJAA	5,	123	Y. Tagaya, S. Hashimoto, K. Morita, Y.H. Pu, T. Ariga, K. Ohta, T. Minemura, I. Hisinaga, T. Motobayashi, T. Nomura
1999To04	EPJAA	4,	233	Y. Toh, S. Yamada, A. Taniguchi, Y. Kawase
1999To11	PRVCA	60,	011302	K.S. Toth, C.R. Bingham, J.C. Batchelder, L.T. Brown, L.F. Contecchio, C.N. Davids, R.J. Irvine, D. Sewerniak, D.M. Moltz, W.B. Walters, J. Wauters, E.F. Zganjar
1999Uu01	PRVCA	59,	2975	J. Uusitalo, C.N. Davids, P.J. Woods, D. Sewerniak, A.A. Sonzogni, J.C. Batchelder, C.R. Bingham, T. Davinson, J. de Boer, D.J. Henderson, H.J. Maier, J. Ressler, R. Slinger, W.B. Walters
1999Wa09	PYLBB	454,	1	J.C. Wang, P. Dendooven, M. Hannawald, A. Honkanen, M. Huhta, A. Jokinen, K.-L. Kratz, G. Lhersonneau, M. Oinonen, H. Penttilä, K. Peräjärvi, B. Pfeiffer, J. Äystö
1999Xi03	EPJAA	5,	341	Y. Xie, S. Xu, Z. Li, Y. Yu, Q. Pan, C. Wang, T. Zhang, G. Long, Y. Li
1999Xi04	EPJAA	6,	239	Y. Xie, S. Xu, Z. Li, Y. Yu, Q. Pan, C. Wang, T. Zhang
1999Ya.A	P-Dubna		118	E.A. Yakushev, V.M. Gorozhankin, O. Dragoun, A. Kovalik, A.F. Novgorodov, M. Rysavy, A. Shpalek
				2000
2000Ah02	PRVCA	61,	044301	I. Ahmad, R.R. Chasman, P.R. Fields
2000An14	NATUA	405,	430	A.N. Andreyev, M. Huyse, P. Van Duppen, L. Weissman, D. Ackermann, J. Gerl, F.P. Heßberger, S. Hofmann, A. Kleinböhl, G. Münzenberg, S. Reshitko, C. Schlegel, H. Schaffner, P. Cagarda, M. Matos, S. Saro, A. Keenan, C. Moore, C.D. O'Leary, R.D. Page, M. Taylor, H. Kettunen, M. Leino, A. Lavrentiev, R. Wyss, K. Heyde
2000Be42	EPJAA	8,	307	D. Beck, F. Ames, G. Audi, G. Bollen, F. Herfurth, H.-J. Kluge, A. Kohl, M. König, D. Lunney, I. Martel, R.B. Moore, H. Raimbault-Hartmann, E. Scharf, S. Schwarz, M. de Saint Simon, J. Szerypo, ISOLDE

2000Bo24	NUPAB	673,	85	V. Bondarenko, T. von Egidy, J. Honzátko, I. Tomandl, D. Bucurescu, N. Mărginean, J. Ott, W. Schauer, H.-F. Wirth, C. Doll
2000Br63	PYLBB	495,	63	V.B. Brudanin, N.I. Rukhadze, Ch. Briançon, V.G. Egorov, V.E. Kovalenko, A. Kovalik, A.V. Salamatin, I. Štekl, V.V. Tsupko-Sitnikov, Ts. Vylov, P. Čermák
2000Ca.A	Th.-Valencia			Cano-Ott
2000Ch07	PRVCA	61,	044309	C. Chandler, P.H. Regan, B. Blank, C.J. Pearson, A.M. Bruce, W.N. Catford, N. Curtis, S. Czajkowski, Ph. Dessagne, A. Fleury, W. Gelletly, J. Giovinazzo, R. Grzywacz, Z. Janas, M. Lewitowicz, C. Marchand, Ch. Mische, N.A. Orr, R.D. Page, M.S. Pravikoff, A.T. Reed, M.G. Saint-Laurent, S.M. Vincent, R. Wadsworth, D.D. Warner, J.S. Winfield, F. Xu
2000Da07	PYLBB	476,	213	J.M. Daugas, R. Grzywacz, M. Lewitowicz, L. Achouri, J.C. Angélique, D. Baiborodin, K. Bennaceur, R. Bentida, R. Béraud, C. Borcea, C. Bingham, W.N. Catford, A. Emsallem, G. de France, H. Grawe, K.L. Jones, R.C. Lemmon, M.J. Lopez Jimenez, F. Nowacki, F. de Oliveira Santos, M. Pfützner, P.H. Regan, K. Rykaczewski, J.E. Sauvestre, M. Sawicka, G. Sletten, M. Stanoiu
2000Da27	PRVCA	62,	045501	F.A. Danevich, A. Sh. Georgadze, V.V. Kobychyev, B.N. Kropivyansky, A.S. Nikolaiko, O.A. Ponkratenko, V.I. Tretyak, S. Yu. Zdesenko, Yu. G. Zdesenko, P.G. Bizzeti, T.F. Fazzini, P.R. Maurenzi
2000Do10	JRNBA	105,	43	J. Döring, A. Aprahamian, M. Wiescher
2000Fy01	NUPAB	677,	38	H.O.U. Fynbo, M.J.G. Borge, L. Axelsson, J. Äystö, U.C. Bergmann, L.M. Fraile, A. Honkanen, P. Hornshøj, Y. Jading, A. Jokinen, B. Jonson, I. Martel, I. Mukha, T. Nilsson, G. Nyman, M. Oinonen, I. Piqueras, K. Riisager, T. Siskonen, M.H. Smedberg, O. Tengblad, J. Thaysen, F. Wenander, ISOLDE
2000Ge01	NUPAB	662,	3	L. Genilloud, H.G. Börner, F. Corminboeuf, Ch. Doll, S. Drissi, M. Jentschel, J. Jolie, J. Kern, H. Lehmann, N. Warr, and erratum NUPAB 669(2000)407
2000Ge07	PYLBB	480,	77	T. Gehrman
2000Gi01	PRVCA	61,	014308	T.N. Ginter, J.C. Batchelder, C.R. Bingham, C.J. Gross, R. Grzywacz, J.H. Hamilton, Z. Janas, M. Karny, S.H. Kim, J.F. Mas, J.W. McConnell, A. Piechaczek, A.V. Ramayya, K. Rykaczewski, P.B. Semmes, J. Szerypo, K.S. Toth, R. Wadsworth, C.-H. Yu, E.F. Zganjar
2000Ha55	PRVCA	62,	054301	M. Hannawald, K.-L. Kratz, B. Pfeiffer, W.B. Walters, V.N. Fedoseyev, V.I. Mishin, W.F. Mueller, H. Schatz, J. Van Roosbroeck, U. Köster, V. Sebastian, H.L. Ravn, ISOLDE
2000He17	EPJAA	8,	521	F.P. Heßberger, S. Hofmann, D. Ackermann, V. Ninov, M. Leino, S. Saro, A. Andreyev, A. Lavrentev, A.G. Popeko, A.V. Yeremin, and erratum EPJAA 9(2000)433
2000Hi08	PRVCA	61,	055501	M.M. Hindi, R.-M. Larimer, E.B. Norman, G.A. Rech
2000Ho13	PYLBB	482,	1	E. Holzschuh, L. Palermo, H. Stussi, P. Wenk
2000Ho19	RAACA	88,	139	A. Hohn, H.H. Coenen, S.M. Qaim
2000Hu17	PRVCA	62,	064315	Z. Hu, L. Batist, J. Agramunt, A. Algora, B.A. Brown, D. Cano-Ott, R. Collatz, A. Gadea, M. Gierlik, M. Górska, H. Grawe, M. Hellström, Z. Janas, M. Karny, R. Kirchner, F. Moroz, A. Płochocki, M. Rejmund, E. Roeckl, B. Rubio, M. Shibata, J. Szerypo, J.L. Tain, V. Wittmann
2000Je09	PRVCA	62,	021302	D.G. Jenkins, M. Muikku, P.T. Greenlees, K. Hauschild, K. Helariutta, P.M. Jones, R. Julin, S. Juutinen, H. Kankaanpää, N.S. Kelsall, H. Kettunen, P. Kuusiniemi, M. Leino, C.J. Moore, P. Nieminen, C.D. O'Leary, R.D. Page, P. Rakhila, W. Reviol, M.J. Taylor, J. Uusitalo, R. Wadsworth
2000Jo18	EPJAA	9,	9	A. Jokinen, J.C. Wang, J. Äystö, P. Dendooven, S. Nummela, J. Huikari, V. Kolhinen, A. Nieminen, K. Peräjärvi, S. Rinta-Antila
2000Ka21	EPJAA	7,	451	R. Kalpakchieva, H.G. Bohlen, W. von Oertzen, B. Gebauer, M. von Lucke-Petsch, T.N. Massey, A.N. Ostrowski, Th. Stolla, M. Wilpert, Th. Wilpert
2000Ko16	PRVCA	61,	044323	F.G. Kondev, M.P. Carpenter, R.V.F. Janssens, I. Wiedenhöver, M. Alcorta, L.T. Brown, C.N. Davids, T.L. Khoo, T. Lauritsen, C.J. Lister, D. Seweryniak, S. Siem, A.A. Sonzogni, J. Uusitalo, P. Bhattacharyya, S.M. Fischer, W. Reviol, L.L. Riedinger, R. Nouicer
2000Ko48	PRVCA	62,	044305	F.G. Kondev, R.V.F. Janssens, M.P. Carpenter, K. Abu Saleem, I. Ahmad, M. Alcorta, H. Amro, P. Bhattacharyya, L.T. Brown, J. Caggiano, C.N. Davids, S.M. Fischer, A. Heinz, B. Herskind, R.A. Kaye, T.L. Khoo, T. Lauritsen, C.J. Lister, W.C. Ma, R. Nouicer, J. Ressler, W. Reviol, L.L. Riedinger, D.G. Sarantites, D. Seweryniak, S. Siem, A. Sonzogni, J. Uusitalo, P.G. Varrette, I. Wiedenhöver
2000Kr18	HYIND	129,	185	K. Kratz, B. Pfeiffer, F. Thielemann, W.B. Walters

2000Kr.A	PrvCom	GAu	Jun	K.-L. Kratz, B. Pfeiffer
2000Ku25	YAFIA	63,	1365	V.V. Kuzminov, N. Ja. Osetrova
2000La25	PRVCA	61,	067603	C.A. Laue, K.E. Gregorich, R. Sudowe, J.L. Adams, M.R. Lane, D.M. Lee, C.A. McGrath, D.A. Shaughnessy, D.A. Strellis, E.R. Sylwester, P.A. Wilk, D.C. Hoffman
2000La34	PRVCA	62,	064307	Yu. A. Lazarev, Yu. V. Lobanov, Yu. Ts. Oganessian, V.K. Utyonkov, F. Sh. Abdullin, A.N. Polyakov, J. Rigol, I.V. Shirokovsky, Yu. S. Tsyganov, S. Iliev, V.G. Subbotin, A.M. Sukhov, G.V. Buklanov, A.N. Mezentsev, K. Subotic, K.J. Moody, N.J. Stoyer, J.F. Wild, R.W. Loughheed
2000Li37	PRVCA	62,	047303	C.F. Liang, P. Paris, R.K. Sheline
2000Ma62	PRVCA	62,	034308	K. Markenroth, L. Axelsson, S. Baxter, M.J.G. Borge, C. Donzau, S. Fayans, H.O.U. Fynbo, V.Z. Goldberg, S. Grévy, D. Guillemaud-Mueller, B. Jonson, K.-M. Källman, S. Leenhardt, M. Lewitowicz, T. Lönnroth, P. Manngård, I. Martel, A.C. Mueller, I. Mukha, T. Nilsson, G. Nyman, N.A. Orr, K. Riisager, G.V. Rogachev, M.-G. Saint-Laurent, I.N. Serikov, N.B. Shul'gina, O. Sorlin, M. Steiner, O. Tengblad, M. Thoennessen, E. Tryggestad, W.H. Trzaska, F. Wenander, J.S. Winfield, R. Wolski
2000Ma65	EPJAA	8,	295	O.N. Malyshev, A.V. Belozorov, M.L. Chelnokov, V.I. Chepigin, V.A. Gorskov, A.P. Kabachenko, A.G. Popeko, J. Rohach, R.N. Sagaidak, A.V. Yerebin, S.I. Mulgin, S.V. Zhdanov
2000Ma95	PRVCA	62,	057303	H. Mahmud, C.N. Davids, P.J. Woods, T. Davinson, D.J. Henderson, R.J. Irvine, D. Seweryniak, W.B. Walters
2000Me.A	PrvCom	AHW	Sep	K.A. Mezilev, B. Fogelberg, V.I. Isakov, H. Mach
2000Ni02	PRVCA	61,	034309	K. Nishio, H. Ikezoe, S. Mitsuoka, J. Lu
2000O101	PRLTA	84,	4056	J.M. Oliveira, Jr., A. Lépine-Szily, H.G. Bohlen, A.N. Ostrowski, R. Lichtenhäler, A. Di Pietro, A.M. Laird, G.F. Lima, L. Maunoury, F. de Oliveira Santos, P. Roussel-Chomaz, H. Savajols, W. Trinder, A.C.C. Villari, A. de Vismes
2000Pe28	PYLBB	492,	1	K. Peräjärvi, T. Siiskonen, A. Honkanen, P. Dendooven, A. Jokinen, P.O. Lipas, M. Oinonen, H. Penttilä, J. Äystö
2000Pi03	PRVCA	61,	024312	J.A. Pinston, C. Foin, J. Genevey, R. Béraud, E. Chabanut, H. Faust, S. Oberstedt, B. Weiss
2000Po26	PYLBB	491,	225	Zs. Podolyak, P.H. Regan, M. Pfutzner, J. Gerl, M. Hellström, M. Caamano, P. Mayet, Ch. Schlegel, A. Aprahamian, J. Benlliure, A.M. Bruce, P.A. Butler, D. Cortina Gil, D.M. Cullen, J. Doring, T. Enqvist, F. Rejmund, C. Fox, J. Garces Narro, H. Geissel, W. Gelletly, J. Giovinazzo, M. Gorska, H. Grawe, R. Grzywacz, A. Kleinbohl, W. Korten, M. Lewitowicz, R. Lucas, H. Mach, M. Mineva, C.D. O'Leary, F. De Oliveira, C.J. Pearson, M. Rejmund, M. Sawicka, H. Schaffner, K. Schmidt, Ch. Theisen, P.M. Walker, D.D. Warner, C. Wheldon, H.J. Wollersheim, S.C. Wooding, F.R. Xu
2000Ra23	NUPAB	677,	75	T. Radon, H. Geissel, G. Münzenberg, B. Franzke, Th. Kerscher, F. Nolden, Yu. N. Novikov, Z. Patyk, C. Scheidenberger, F. Attallah, K. Beckert, T. Beha, F. Bosch, H. Eickhoff, M. Falch, Y. Fujita, M. Hausmann, F. Herfurth, H. Irnich, H.C. Jung, O. Klepper, C. Kozhuharov, Yu. A. Litvinov, K.E.G. Löbner, F. Nickel, H. Reich, W. Schwab, B. Schlitt, M. Steck, K. Sümmerer, T. Winkler, H. Wollnik
2000Re03	PRLTA	84,	2104	J.J. Ressler, A. Piechaczek, W.B. Walters, A. Aprahamian, M. Wiescher, J.C. Batchelder, C.R. Bingham, D.S. Brenner, T.N. Ginter, C.J. Gross, R. Grzywacz, D. Kulp, B. MacDonald, W. Reviol, J. Rikovska, K. Rykaczewski, J.A. Winger, E.F. Zganjar
2000Ri14	PRLTA	85,	1392	J. Rikovska, T. Giles, N.J. Stone, K. van Esbroeck, G. White, A. Wöhr, M. Veskovic, I.S. Towner, P.F. Mantica, J.I. Prisciandaro, D.J. Morrissey, V.N. Fedoseyev, V.I. Mishin, U. Köster, W.B. Walters, NICOLE, ISOLDE
2000Sa21	PRLTA	84,	5062	F. Sarazin, H. Savajols, W. Mittig, F. Nowacki, N.A. Orr, Z. Ren, P. Roussel-Chomaz, G. Auger, D. Baiborodin, A.V. Belozyorov, C. Borcea, E. Caulier, Z. Dlouhý, A. Gillibert, A.S. Lalleman, M. Lewitowicz, S.M. Lukyanov, F. de Oliveira, Y.E. Penionzhkevich, D. Ridikas, H. Sakurai, O. Tarasov, A. de Vismes
2000Sa52	EPJAA	9,	303	M. Sakama, K. Tsukada, M. Asai, S. Ichikawa, H. Haba, S. Goto, Y. Oura, I. Nishinaka, Y. Nagame, M. Shibata, Y. Kojima, K. Kawade, M. Ebihara, H. Nakahara

2000Sh10	PRVCA	61,	044609	D.A. Shaughnessy, J.L. Adams, K.E. Gregorich, M.R. Lane, C.A. Laue, D.M. Lee, C.A. McGrath, J.B. Patin, D.A. Strellis, E.R. Sylwester, P.A. Wilk, D.C. Hoffman
2000Sm06	JPGPE	26,	787	M.B. Smith, R. Chapman, J.F.C. Cocks, K.-M. Spohr, O. Dorvaux, K. Helariutta, P.M. Jones, R. Julin, S. Juutinen, H. Kankaanpaa, H. Kettunen, P. Kuusiniemi, Y. Le Coz, M. Leino, D.J. Middleton, M. Muikku, P. Nieminen, P. Rakhila, A. Savelius
2000So11	PHSTB	T88,	153	G.A. Souliotis
2000We.A	AnRpt GSI		10	E. Wefers, T. Faestermann, R. Schneider, A. Stolz, K. Sümerrer, J. Friese, H. Geissel, M. Hellström, P. Kienle, H.-J. Körner, M. Münch, G. Müntenberg, P. Thirolf, H. Weick
2000Wh04	PRVCA	62,	057301	C. Wheldon, P.M. Walker, P. Chowdhury, I. Shestakova, R. D'Alarcao, I. Ahmad, M.P. Carpenter, D.M. Cullen, R.V.F. Janssens, T.L. Khoo, F.G. Kondev, C.J. Lister, C.J. Pearson, Zs. Podolyak, D. Seweryniak, I. Wiedenhoever
2000Wi15	PRLTA	85,	2697	P.A. Wilk, K.E. Gregorich, A. Türler, C.A. Laue, R. Eichler, V. Ninov, J.L. Adams, U.W. Kirbach, M.R. Lane, D.M. Lee, J.B. Patin, D.A. Shaughnessy, D.A. Strellis, H. Nitsche, D.C. Hoffman
2000Xu08	EPJAA	8,	435	S. Xu, Y. Xie, Y. Yu, Z. Li, Q. Pan, C. Wang, J. Xing, T. Zhang
2000Ye02	JPGPE	26,	839	G. Yeandle, J. Billowes, P. Campbell, E.C.A. Cochrane, P. Dendooven, D.E. Evans, D.H. Forest, J.A.R. Griffith, J. Huikari, A. Jokinen, I.D. Moore, A. Nieminen, K. Peräjärvi, G. Tungate, J. Äystö
2001				
2001Ba06	PRVCA	63,	024302	P.H. Barker
2001Ba79	NUPAB	694,	3	S. Bayer, A.P. Byrne, G.D. Dracoulis, A.M. Baxter, T. Kibédi, F.G. Kondev
2001Be53	EPJAA	11,	279	U.C. Bergmann, M.J.G. Borge, J. Cederkäll, C. Forssén, E. Fumero, H.O.U. Fynbo, H. Gausemel, H. Jeppesen, B. Jonson, K. Markenroth, T. Nilsson, G. Nyman, K. Riisager, H. Simon, O. Tengblad, L. Weissman, F. Wenander, K. Wilhelmsen Rolander, ISOLDE
2001Bo11	NUPAB	686,	64	R. Bonetti, C. Carbonini, A. Guglielmetti, M. Hussonnois, D. Trubert, C. Le Naour
2001Bo54	NUPAB	695,	69	R. Borcea, J. Äystö, E. Caurier, P. Dendooven, J. Döring, M. Gierlik, M. Górská, H. Grawe, M. Hellström, Z. Janas, A. Jokinen, M. Karny, R. Kirchner, M. La Commara, K. Langanke, G. Martínez-Pinedo, P. Mayet, A. Nieminen, F. Nowacki, H. Penttilä, A. Plochocki, M. Rejmund, E. Roeckl, C. Schlegel, K. Schmidt, R. Schwengner, M. Sawicka, and erratum NUPAB 703(2002)889
2001Bo59	HYIND	132,	215	G. Bollen, F. Ames, G. Audi, D. Beck, J. Dilling, O. Engels, S. Henry, F. Herfurth, A. Kellerbauer, H.-J. Kluge, A. Kohl, E. Lamour, D. Lunney, R.B. Moore, M. Oinonen, C. Scheidenberger, S. Schwarz, G. Sikler, J. Szerypo, C. Weber, ISOLDE
2001Br20	PRVCA	64,	014311	E. Browne, E.B. Norman, R.D. Canaan, D.C. Glasgow, J.M. Keller, J.P. Young
2001Br27	EPJDD	15,	181	S. Brunner, T. Engel, A. Schmitt, G. Werth
2001Ca37	PRVCA	64,	025802	J.A. Caggiano, D. Bazin, W. Benenson, B. Davids, R. Ibbotson, H. Scheit, B.M. Sherrill, M. Steiner, J. Yurkon, A.F. Zeller, B. Blank, M. Chartier, J. Greene, J.A. Nolen, Jr., A.H. Wuosmaa, M. Bhattacharya, A. García, M. Wiescher
2001Ca60	EPJAA	12,	377	G. Canchel, L. Achouri, J. Äystö, R. Béraud, B. Blank, E. Chabanat, S. Czajkowski, P. Dendooven, A. Emsallem, J. Giovinazzo, J. Honkanen, A. Jokinen, M. Lewitowicz, C. Longour, F. de Oliveira-Santos, K. Peräjärvi, M. Staniou, J.C. Thomas
2001Ca.B	AnRpt GSI		15	P. Cagarda, S. Antalic, D. Ackermann, F.P. Heßberger, S. Hofmann, B. Kindler, J. Kojouharova, B. Lommel, R. Mann, A.G. Popeko, Š. Šáro, J. Uusitalo, A.V. Yeremin
2001Ch31	PYLBB	505,	21	L. Chen, B. Blank, B.A. Brown, M. Chartier, A. Galonsky, P.G. Hansen, M. Thoennessen
2001Da22	NUPAB	694,	375	F.A. Danevich, V.V. Kobychev, O.A. Ponkratenko, V.I. Tretyak, Yu. G. Zdesenko
2001Do08	PRLTA	86,	4259	G. Douysset, T. Fritioff, C. Carlberg, I. Bergström, M. Björkhage
2001Dr05	PRVCA	63,	061302	G.D. Dracoulis, T. Kibédi, A.P. Byrne, A.M. Baxter, S.M. Mullins, R.A. Bark
2001Fo08	PRLTA	87,	212501	B. Fornal, R. Broda, K.H. Maier, J. Wrzesinski, G.J. Lane, M. Cromaz, A.O. Macchiavelli, R.M. Clark, K. Vetter, A.P. Byrne, G.D. Dracoulis, M.P. Carpenter, R.V.F. Janssens, I. Wiedenhoever, M. Rejmund, J. Blomqvist

2001Fr18	EPJDD	15,	141	T. Fritioff, C. Carlberg, G. Douysset, R. Schuch, I. Bergström
2001Ga01	PRVCA	63,	014302	M. Galeazzi, F. Fontanelli, F. Gatti, S. Vitale
2001Ga20	EPJAA	10,	21	Z.G. Gan, Z. Qin, H.M. Fan, X.G. Lei, Y.B. Xu, J.J. He, H.Y. Liu, X.L. Wu, J.S. Guo, X.H. Zhou, S.G. Yuan, G.M. Jin
2001Ga24	PRVCA	63,	044307	J. Garcés Narro, C. Longour, P.H. Regan, B. Blank, C.J. Pearson, M. Lewitowicz, C. Miehé, W. Gelletly, D. Appelbe, L. Axelsson, A.M. Bruce, W.N. Catford, C. Chandler, R.M. Clark, D.M. Cullen, S. Czajkowski, J.M. Dugas, P. Dessagne, A. Fleury, L. Frankland, J. Giovinazzo, B. Greenhalgh, R. Grzywacz, M. Harder, K.L. Jones, N. Kelsall, T. Kszczot, R.D. Page, A.T. Reed, O. Sorlin, R. Wadsworth
2001Ga59	EPJAA	11,	413	M. Gaelens, J. Andrzejewski, J. Camps, P. Decrock, M. Huyse, K. Kruglov, W.F. Mueller, A. Piechaczek, N. Severijns, J. Szerypo, G. Vancraeynest, P. Van Duppen, J. Wauters
2001Gi01	EPJAA	10,	73	J. Giovinazzo, B. Blank, C. Borcea, M. Chartier, S. Czajkowski, G. de France, R. Grzywacz, Z. Janas, M. Lewitowicz, F. de Oliveira Santos, M. Pfützner, M.S. Pravikoff, J.C. Thomas
2001Gi17	EPJAA	12,	309	A. Gizon, J. Genevey, C.F. Liang, P. Paris, D. Barnéoud, J. Inchaouh, I. Penev, A. Plochocki
2001Ha39	NUPAB	688,	578c	M. Hannawald, V.N. Fedoseyev, U. Koster, K.-L. Kratz, V.I. Mishin, W.F. Mueller, H.L. Ravn, J. Van Roosbroeck, H. Schatz, V. Sebastian, W.B. Walters, ISOLDE
2001Ha46	PRLTA	87,	072501	K. Hauschild, M. Rejmund, H. Grawe, E. Caurier, F. Nowacki, F. Becker, Y. Le Coz, W. Korten, J. Döring, M. Górska, K. Schmidt, O. Dorvaux, K. Helariutta, P. Jones, R. Julin, S. Juutinen, H. Kettunen, M. Leino, M. Muikku, P. Nieminen, P. Rakhila, J. Uusitalo, F. Azaiez, M. Belleguic
2001Ha66	HYIND	132,	291	M. Hausmann, J. Stadlmann, F. Attallah, K. Beckert, P. Beller, F. Bosch, H. Eickhoff, M. Falch, B. Franczak, B. Franzke, H. Geissel, Th. Kerscher, O. Klepper, H.-J. Kluge, C. Kozhuharov, Yu. A. Litvinov, K.E.G. Lobner, G. Munzenberg, N. Nankov, F. Nolden, Yu. N. Novikov, T. Ohtsubo, T. Radon, H. Schatz, C. Scheidenberger, M. Steck, Z. Sun, H. Weick, H. Wollnik
2001He29	PRLTA	87,	142501	F. Herfurth, J. Dilling, A. Kellerbauer, G. Audi, D. Beck, G. Bollen, H.-J. Kluge, D. Lunney, R.B. Moore, C. Scheidenberger, S. Schwarz, G. Sikler, J. Szerypo, ISOLDE
2001He35	EPJAA	12,	57	F.P. Heßberger, S. Hofmann, D. Ackermann, V. Ninov, M. Leino, G. Münzenberg, S. Saro, A. Lavrentev, A.G. Popeko, A.V. Yeremin, Ch. Stodel and PrvCom
2001He36	PRVAA	64,	062504	T.P. Heavner, S.R. Jefferts, G.H. Dunn
2001He.A	AnRpt GSI		3	F.P. Heßberger, S. Hofmann, D. Ackermann
2001Hi06	PRVCA	63,	065502	M.M. Hindi, B.O. Faircloth, R.L. Kozub, K.R. Czerwinski, R.-M. Larimer, E.B. Norman, B. Sur, I. Žilim
2001Ho06	EPJAA	10,	5	S. Hofmann, F.P. Heßberger, D. Ackermann, S. Antalic, P. Cagarda, S. Ćwiok, B. Kindler, J. Kojouharova, B. Lommel, R. Mann, G. Münzenberg, A.G. Popeko, S. Saro, H.J. Schött, A.V. Yeremin
2001Ke05	APOBB	32,	989	H. Kettunen, P.T. Greenlees, K. Helariutta, P. Jones, R. Julin, S. Juutinen, P. Kuusiniemi, M. Leino, M. Muikku, P. Nieminen, J. Uusitalo
2001Ke06	PRVCA	63,	044315	H. Kettunen, J. Uusitalo, M. Leino, P. Jones, K. Eskola, P.T. Greenlees, K. Helariutta, R. Julin, S. Juutinen, H. Kankaanpää, P. Kuusiniemi, M. Muikku, P. Nieminen, P. Rakhila
2001Ke14	PRAMC	56,	735	S.L. Keshava, K. Gopala, P. Venkataramaiah
2001Ki13	PPNPD	46,	73	P. Kienle, T. Faestermann, J. Friese, H.-J. Körner, M. Münch, R. Schneider, A. Stolz, E. Wefers, H. Geissel, G. Münzenberg, C. Schlegel, K. Sümmerner, H. Weick, M. Hellström, P. Thierolf
2001Kl11	EPJAA	12,	147	H.V. Klapdor-Kleingrothaus, A. Dietz, L. Baudis, G. Heusser, I.V. Krivosheina, B. Majorovits, H. Paes, H. Strecker, V. Alexeev, A. Balysh, A. Bakalyarov, S.T. Belyaev, V.I. Lebedev, S. Zhukov
2001Kl13	MPLAE	16,	2409	H.V. Klapdor-Kleingrothaus, A. Dietz, H.L. Harney, I.V. Krivosheina
2001Ko07	NIMAE	458,	656	Y. Kojima, M. Shibata, H. Uno, K. Kawade, A. Taniguchi, Y. Kawase, K. Shizuma

2001Ko44	PYLBB	512,	268	F.G. Kondev, M.P. Carpenter, R.V.F. Janssens, K. Abu Saleem, I. Ahmad, H. Amro, J.A. Cizewski, M. Danchev, C.N. Davids, D.J. Hartley, A. Heinz, T.L. Khoo, T. Lauritsen, C.J. Lister, W.C. Ma, G.L. Poli, J. Ressler, W. Reviol, L.L. Riedinger, D. Seweryniak, M.B. Smith, I. Wiedenhöver and PrvCom AHW August 2001
2001Ko52	PRLTA	87,	092501	A.A. Korshennikov, M.S. Golovkov, I. Tanihata, A.M. Rodin, A.S. Fomichev, S.I. Sidorchuk, S.V. Stepantsov, M.L. Chelnokov, V.A. Gorshkov, D.D. Bogdanov, R. Wolski, G.M. Ter-Akopian, Yu. Ts. Oganessian, W. Mittig, P. Roussel-Chomaz, H. Savajols, E.A. Kuzmin, E. Yu. Nikolsky, A.A. Ogloblin
2001Ko.B	PrvCom	AHW	Aug	F.G. Kondev
2001Ku07	APOBB	32,	1009	P. Kuusiniemi, J.F.C. Cocks, K. Eskola, P.T. Greenlees, K. Helariutta, P. Jones, R. Julin, S. Juutinen, H. Kankaanpää, A. Keenan, H. Kettunen, M. Leino, M. Muikku, P. Nieminen, P. Rauhila, J. Uusitalo
2001La09	NUPAB	682,	71c	G.J. Lane, R. Broda, B. Fornal, A.P. Byrne, G.D. Dracoulis, J. Blomqvist, R.M. Clark, M. Cromaz, M.A. Deleplanque, R.M. Diamond, P. Fallon, R.V.F. Janssens, I.Y. Lee, A.O. Macchiavelli, K.H. Maier, M. Rejmund, F.S. Stephens, C.E. Svensson, K. Vetter, D. Ward, I. Wiedenhover, J. Wrzesinski
2001La31	HYIND	132,	315	A.S. Lalleman, G. Auger, W. Mittig, M. Chabert, M. Chartier, J. Ferme, A. Gillibert, A. Lepine-Szily, M. Lewitowicz, M.H. Moscatello, N.A. Orr, G. Politi, F. Sarazin, H. Savajols, P. Van Isacker, A.C.C. Villari
2001Li17	PRVCA	63,	047307	K. Lindenberg, F. Neumann, D. Galaviz, T. Hartmann, P. Mohr, K. Vogt, S. Volz, A. Zilges
2001Li44	PRVCA	64,	034310	C.F. Liang, P. Paris, R.K. Sheline
2001Lu17	PRVCA	64,	054311	D. Lunney, G. Audi, H. Doubre, S. Henry, C. Monsanglant, M. de Saint Simon, C. Thibault, C. Toader, C. Borcea, G. Bollen, ISOLDE
2001Lu20	HYIND	132,	299	D. Lunney, C. Monsanglant, G. Audi, G. Bollen, C. Borcea, H. Doubre, C. Gaulard, S. Henry, M. de Saint Simon, C. Thibault, C. Toader, N. Vieira, ISOLDE
2001Ma08	PRVCA	63,	024613	V. Maddalena, T. Aumann, D. Bazin, B.A. Brown, J.A. Caggiano, B. Davids, T. Glasmacher, P.G. Hansen, R.W. Ibbotson, A. Navin, B.V. Pritychenko, H. Scheit, B.M. Sherrill, M. Steiner, J.A. Tostevin, J. Yurkon
2001Ma69	PRVCA	64,	031303	H. Mahmud, C.N. Davids, P.J. Woods, T. Davinson, A. Heinz, G.L. Poli, J.J. Ressler, K. Schmidt, D. Seweryniak, M.B. Smith, A.A. Sonzogni, J. Uusitalo, W.B. Walters
2001Ma96	EPJAA	12,	269	C. Mazzocchi, Z. Janas, J. Döring, M. Axiotis, L. Batist, R. Borcea, D. Cano-Ott, E. Caurier, G. de Angelis, E. Farnea, A. Faßbender, A. Gadea, H. Grawe, A. Jungclaus, M. Kapica, R. Kirchner, J. Kurcewicz, S.M. Lenzi, T. Martínez, I. Mukha, E. Náchter, D.R. Napoli, E. Roeckl, B. Rubio, R. Schwengner, J.L. Tain, C.A. Ur
2001Mi22	EPJAA	11,	9	M.N. Mineva, M. Hellström, M. Bernas, J. Gerl, H. Grawe, M. Pfützner, P.H. Regan, M. Rejmund, D. Rudolph, F. Becker, C.R. Bingham, T. Enqvist, B. Fogelberg, H. Gausemel, H. Geissel, J. Genevey, M. Górska, R. Grzywacz, K. Hauschild, Z. Janas, I. Kojouharov, Y. Kopatch, A. Korgul, W. Korten, J. Kurcewicz, M. Lewitowicz, R. Lucas, H. Mach, S. Mandal, P. Mayet, C. Mazzocchi, J.A. Pinston, Zs. Podolyák, H. Schaffner, Ch. Schlegel, K. Schmidt, K. Sümmerer, H.J. Wollersheim
2001Mu26	PRVCA	64,	044308	M. Muikku, P.T. Greenlees, K. Hauschild, K. Helariutta, D.G. Jenkins, P. Jones, R. Julin, S. Juutinen, H. Kankaanpää, N.S. Kelsall, H. Kettunen, P. Kuusiniemi, M. Leino, C.J. Moore, P. Nieminen, C.D. O'Leary, R.D. Page, P. Rauhila, W. Reviol, M.J. Taylor, J. Uusitalo, R. Wadsworth
2001No07	EPJAA	11,	257	Yu. N. Novikov, H. Schatz, P. Dendooven, R. Béraud, Ch. Miehé, A.V. Popov, D.M. Seliverstov, G.K. Vorobjev, P. Baumann, M.J.G. Borge, G. Canchel, Ph. Dessagne, A. Emsallem, W. Huang, J. Huikari, A. Jokinen, A. Knipper, V. Kolhinen, A. Nieminen, M. Oinonen, H. Penttilä, K. Peräjärvi, I. Piqueras, S. Rinta-Antila, J. Szerypo, Y. Wang, J. Äystö
2001Og01	PRVCA	63,	011301	Yu. Ts. Oganessian, V.K. Utyonkov, Yu. V. Lobanov, F. Sh. Abdullin, A.N. Polyakov, I.V. Shirokovsky, Yu. S. Tsyganov, G.G. Gulbekian, S.L. Bogomolov, B.N. Gikal, A.N. Mezentsev, S. Iliev, V.G. Subbotin, A.M. Sukhov, O.V. Ivanov, G.V. Buklanov, K. Subotic, M.G. Itkis, K.J. Moody, J.F. Wild, N.J. Stoyer, M.A. Stoyer, R.W. Loughheed, C.A. Laue, Ye. A. Karelin, A.N. Tatarinov

2001Og08	PRVCA	64,	054606	Yu. Ts. Oganessian, V.K. Utyonkov, Yu. V. Lobanov, F. Sh. Abdullin, A.N. Polyakov, I.V. Shirokovsky, Yu. S. Tsyganov, A.N. Mezentsev, S. Iliev, V.G. Subbotin, A.M. Sukhov, K. Subotic, O.V. Ivanov, A.N. Voinov, V.I. Zagrebaev, K.J. Moody, J.F. Wild, N.J. Stoyer, M.A. Stoyer, R.W. Lougheed
2001Pa52	HYIND	132,	189	A. Paul, S. Röttger, A. Zimbal, U. Keyser
2001Po05	PRVCA	63,	044304	G.L. Poli, C.N. Davids, P.J. Woods, D. Seweryniak, M.P. Carpenter, J.A. Cizewski, T. Davinson, A. Heinz, R.V.F. Janssens, C.J. Lister, J.J. Ressler, A.A. Sonzogni, J. Uusitalo, W.B. Walters
2001Ro35	HYIND	132,	153	E. Roeckl
2001Ro.B	B-Aulanko		PH23	M.W. Rowe, J.C. Batchelder, T.N. Ginter, K.E. Gregorich, F.Q. Guo, F.P. Heßberger, V. Ninov, J. Powell, K.S. Toth, X.J. Xu, J. Cerny
2001Ry01	NUPAB	682,	270c	K.P. Rykaczewski, R.K. Grzywacz, M. Karny, J.W. McConnell, M. Momayezi, J. Wahl, Z. Janas, J.C. Batchelder, C.R. Bingham, D. Hartley, M.N. Tantawy, C.J. Gross, T.N. Ginter, J.H. Hamilton, W.D. Kulp, M. Lipoglavsek, A. Piechaczek, E.F. Zganjar, W.B. Walters, J.A. Winger
2001Sc41	NUPAB	693,	533	S. Schwarz, F. Ames, G. Audi, D. Beck, G. Bollen, C. De Coster, J. Dilling, O. Engels, R. Fossion, J.-E. Garcia Ramos, S. Henry, F. Herfurth, K. Heyde, A. Kellerbauer, H.-J. Kluge, A. Kohl, E. Lamour, D. Lunney, I. Martel, R.B. Moore, M. Oinonen, H. Raimbault-Hartmann, C. Scheidenberger, G. Sikler, J. Szerypo, C. Weber, ISOLDE
2001Se03	PRLTA	86,	1458	D. Seweryniak, P.J. Woods, J.J. Ressler, C.N. Davids, A. Heinz, A.A. Sonzogni, J. Uusitalo, W.B. Walters, J.A. Caggiano, M.P. Carpenter, J.A. Cizewski, T. Davinson, K.Y. Ding, N. Fotiades, U. Garg, R.V.F. Janssens, T.L. Khoo, F.G. Kondev, T. Lauritsen, C.J. Lister, P. Reiter, J. Shergur, I. Wiedenhöver
2001Sh36	PRVCA	64,	054307	I. Shestakova, G. Mukherjee, P. Chowdhury, R. D'Alarcao, C.J. Pearson, Zs. Podolyak, P.M. Walker, C. Wheldon, D.M. Cullen, I. Ahmad, M.P. Carpenter, M.P. Carpenter, R.V.F. Janssens, T.L. Khoo, F.G. Kondev, C.J. Lister, D. Seweryniak, I. Wiedenhoever
2001So02	PRVCA	63,	031304	F. Soramel, A. Guglielmetti, L. Stroe, L. Müller, R. Bonetti, G.L. Poli, F. Malerba, E. Bianchi, A. Andrighetto, J.Y. Guo, Z.C. Li, E. Maglione, F. Scarlassara, C. Signorini, Z.H. Liu, M. Ruan, M. Ivascu, C. Broude, P. Bednarczyk, L.S. Ferreira
2001St.A	AnRpt GSI		7	A. Stolz, T. Faestermann, R. Schneider, K. Suemmerer, E. Wefers, J. Friese, H. Geissel, J. Gerl, M. Hellstroem, P. Kienle, H.-J. Koerner, M.N. Mineva, M. Muench, G. Muenzenberg, C. Schlegel, R.S. Simon, P. Thierolf, H. Weick, K. Zeitelhack
2001Th01	PRVCA	63,	014308	M. Thoennessen, S. Yokoyama, P.G. Hansen
2001To06	PRVCA	63,	034314	B.E. Tomlin, C.J. Barton, N.V. Zamfir, M.A. Caprio, R.L. Gill, R. Krücken, J.R. Novak, J.R. Cooper, K.E. Zyromski, G. Cata-Danil, C.W. Beausang, A. Wolf, N.A. Pietralla, H. Newman, J. Cederkall, B. Liu, Z. Wang, R.F. Casten, D.S. Brenner
2001Va33	HYIND	132,	163	R.S. Van Dyck, Jr., S.L. Zafonte, P.B. Schwinberg
2001Va.A	PrvCom	AHW	Oct	R.S. Van Dyck, Jr.
2001Va.B	AnRpt GSI		14	K. Van de Vel, A.N. Andreyev, D. Ackermann, S. Antalic, H.J. Boardman, P. Caggarda, J. Gerl, F.P. Heßberger, S. Hofmann, M. Huyse, D. Karlgren, B. Kindsler, I. Kozhoukharov, M. Leino, B. Lommel, G. Muenzenberg, C. Moore, R.D. Page, C. Schlegel, P. Van Duppen
2001Wa50	HYIND	132,	323	C. Wagemans, J. Wagemans, G. Goeminne
2001Wh02	JPGPE	27,	L13	C. Wheldon, P.M. Walker, P. Chowdhury, I. Shestakova, R. D'Alarcao, I. Ahmad, M.P. Carpenter, D.M. Cullen, R.V.F. Janssens, T.L. Khoo, F.G. Kondev, C.J. Lister, C.J. Pearson, Zs. Podolyák, D. Seweryniak, I. Wiedenhoever
2001Xu05	EPJAA	11,	375	S.W. Xu, Z.K. Li, Y.X. Xie, X.D. Wang, B. Guo, C.G. Leng, Y. Yu
2001Ze.A	Th.-Orsay			T. Zerguerras
			2002	
2002Aa.A	MPLAE to be pd			C.E. Aalseth, F.T. Avignone III, A. Barabash, F. Boehm, R.L. Brodzinski, J.I. Collar, P.J. Doe, H. Ejiri, S.R. Elliott, E. Fiorini, R.J. Gaitskell, G. Gratta, R. Hazama, K. Kazkaz, G.S. King III, R.T. Kouzes, H.S. Miley, M.K. Moe, A. Morales, J. Morales, A. Piepke, R.G.H. Robertson, W. Tornow, P. Vogel, R.A. Warner, J.F. Wilkerson arXiv:hep-ex/0202018 v1 7 Feb 2002

2002An15	EPJAA	14,	63	A.N. Andreyev, K. Van de Vel, A. Barzakh, A. De Smet, H. De Witte, D.V. Fedorov, V.N. Fedoseyev, S. Franchoo, M. Górska, M. Huyse, Z. Janas, U. Köster, W. Kurcewicz, J. Kurpeta, V.I. Mishin, K. Partes, A. Plochocki, P. Van Duppen, L. Weissman
2002An19	PRVCA	66,	014313	A.N. Andreyev, M. Huyse, K. Van de Vel, P. Van Duppen, O. Dorvaux, P. Greenlees, K. Helariutta, P. Jones, R. Julin, S. Juutinen, H. Kettunen, P. Kuusiniemi, M. Leino, M. Muikku, P. Nieminen, P. Rakhila, J. Uusitalo, R. Wyss, K. Hauschild, Y. Le Coz
2002As08	JNRSA	3,	187	M. Asai, M. Sakama, K. Tsukada, S. Ichikawa, H. Haba, I. Nishinaka, Y. Nagame, S. Goto, K. Akiyama, A. Toyoshima, Y. Kojima, Y. Oura, H. Nakahara, M. Shibata, K. Kawade
2002At01	NUPAB	701,	561c	F. Attallah, M. Hausmann, Y.A. Litvinov, T. Radon, J. Stadlmann, K. Beckert, F. Bosch, M. Falch, B. Franzke, H. Geissel, Th. Kerscher, O. Klepper, H.-J. Kluge, C. Kozhuharov, K.E.G. Löbner, G. Munzenberg, F. Nolden, Y.N. Novikov, Z. Patyk, W. Quint, H. Schatz, C. Scheidenberger, B. Schlitt, M. Steck, K. Sümmerer, H. Weick, H. Wollnik
2002Be64	PHSTB	66,	201	I. Bergström, T. Fritioff, R. Schuch, J. Schönfelder
2002Be74	PYLBB	546,	23	R. Bernabei, P. Belli, F. Cappella, R. Cerulli, F. Montecchia, A. Incicchitti, D. Prosperi, C.J. Dai
2002Bf02	NIMAE	487,	618	I. Bergström, C. Carlberg, T. Fritioff, G. Douysset, J. Schönfelder, R. Schuch
2002Bo11	NIMAE	480,	696	S.B. Borzakov, R.E. Chrien, H. Faikow-Stanczyk, Yu. V. Grigoriev, Ts. Ts. Panteleev, S. Pospisil, L.M. Smotrisky, S.A. Telezhnikov
2002Bo41	NUPAB	709,	3	V. Bondarenko, J. Berzins, P. Prokofjevs, L. Simonova, T. von Egidy, J. Honzátko, I. Tomandl, P. Alexa, H.-F. Wirth, U. Köster, Y. Eisermann, A. Metz, G. Graw, R. Hertenberger, L. Rubacek
2002Ca37	PRLTA	89,	082501	P. Campbell, H.L. Thayer, J. Billowes, P. Dendooven, K.T. Flanagan, D.H. Forrest, J.A.R. Griffith, J. Huikari, A. Jokinen, R. Moore, A. Nieminen, G. Tungate, S. Zemlyanoi, J. Äystö
2002Cl.A	P-Aulanko		39	J.A. Clark, R.C. Barber, C. Boudreau, F. Buchinger, J.A. Caggiano, J.E. Crawford, H. Fukutani, S. Gulick, J.C. Hardy, A. Heinz, J.K.P. Lee, M. Maier, R.B. Moore, G. Savard, J. Schwarz, D. Sewerniak, K.S. Sharma, G. Sprouse, J. Vaz, J.C. Wang
2002Di12	EPJAA	13,	281	I. Dillmann, M. Hannawald, U. Köster, V.N. Fedoseyev, A. Wöhr, B. Pfeiffer, D. Fedorov, J. Shergur, L. Weissman, W.B. Walters, K.-L. Kratz
2002Do19	PRVCA	66,	064321	D.J. Dobson, S.J. Freeman, P.T. Greenlees, A.N. Qadir, S. Juutinen, J.L. Durell, T. Enqvist, P. Jones, R. Julin, A. Keenan, H. Kettunen, P. Kuusiniemi, M. Leino, P. Nieminen, P. Rakhila, S.D. Robinson, J. Uusitalo, B.J. Varley
2002Fa13	EPJAA	15,	185	T. Faestermann, R. Schneider, A. Stolz, K. Sümmerer, E. Wefers, J. Friese, H. Geissel, M. Hellström, P. Kienle, H.-J. Körner, M. Mineva, M. Münch, G. Münzenberg, C. Schlegel, K. Schmidt, P. Thirolf, H. Weick, K. Zeitelhack
2002Fr.B	ISOLDE-News		Sep	S. Franchoo Isolde Newsletters at http://www.cern.ch/ISOLDE/
2002Ga12	NUPAB	700,	117	E. Garrido, D.V. Fedorov, A.S. Jensen
2002Ge07	PRVCA	65,	034322	J. Genevey, J.A. Pinston, C. Foin, M. Rejmund, H. Faust, B. Weiss
2002Gi09	PRLTA	89,	102501	J. Giovannozzo, B. Blank, M. Chartier, S. Czajkowski, A. Fleury, M.J. Lopez Jimenez, M.S. Pravikoff, J. C. Thomas, F. de Oliveira Santos, M. Lewitowicz, V. Maslov, M. Stanoiu, R. Grzywacz, M. Pfützner, C. Borcea, B.A. Brown
2002He23	EPJAA	15,	17	F. Herfurth, A. Kellerbauer, F. Ames, G. Audi, D. Beck, K. Blaum, G. Bollen, O. Engels, H.-J. Kluge, D. Lunney, R.B. Moore, M. Oinonen, E. Sauvan, C. Scheidenberger, S. Schwarz, G. Sikler, C. Weber, ISOLDE
2002He29	EPJAA	15,	335	F.P. Heßberger, S. Hofmann, I. Kojouharov, D. Ackermann, S. Antalic, P. Cagarda, B. Kindler, B. Lommel, R. Mann, A.G. Popeko, S. Saro, J. Uusitalo, A.V. Yeremin
2002He.A	P-Aulanko		337	F.P. Heßberger, S. Hofmann, D. Ackermann
2002Ho11	EPJAA	14,	147	S. Hofmann, F.P. Heßberger, D. Ackermann, G. Münzenberg, S. Antalic, P. Cagarda, B. Kindler, J. Kojouharova, M. Leino, B. Lommel, R. Mann, A.G. Popeko, S. Reshitko, S. Saro, J. Uusitalo, A.V. Yeremin
2002Hu14	EPJAA	15,	329	A. Hürstel, M. Rejmund, E. Bouchez, P.T. Greenlees, K. Hauschild, S. Juutinen, H. Kettunen, W. Korten, Y. Le Coz, P. Nieminen, Ch. Theisen, A.N. Andreyev, F. Becker, T. Enqvist, P.M. Jones, R. Julin, H. Kankaanpää, A. Keenan, P. Kuusiniemi, M. Leino, A-P. Leppänen, M. Muikku, J. Pakarinen, P. Rakhila, J. Uusitalo

2002Iz01	FECLA	111,	36	I.N. Izosimov, A.A. Kazimov, A.A. Solnyshkin
2002Je09	PRVCA	66,	011301	D.G. Jenkins, A.N. Andreyev, R.D. Page, M.P. Carpenter, R.V.F. Janssens, C.J. Lister, F.G. Kondev, T. Enqvist, P.T. Greenlees, P.M. Jones, R. Julin, S. Juutinen, H. Kettunen, P. Kuusiniemi, M. Leino, A.-P. Leppänen, P. Nieminen, J. Pakarinen, P. Rakhila, J. Uusitalo, C.D. O'Leary, P. Raddon, A. Simons, R. Wadsworth, D.T. Joss
2002Je11	NUPAB	709,	119	H. Jeppesen, U.C. Bergmann, M.J.G. Borge, J. Cederkäll, V.N. Fedoseyev, H.O.U. Fynbo, V.Y. Hansper, B. Jonson, K. Markenroth, V.I. Mishin, T. Nilsson, G. Nyman, K. Riisager, O. Tengblad, K. Wilhelmsen Rolander, ISOLDE
2002Jo09	EPJDR	4,	A3	A. Jokinen, A. Nieminen, J. Äystö, R. Borcea, E. Caurier, P. Dendooven, M. Gierlik, M. Górska, H. Grawe, M. Hellström, M. Karny, Z. Janas, R. Kirchner, M. La Commara, G. Martinez-Pinedo, P. Mayet, H. Penttilä, A. Plochocki, M. Rejmund, E. Roeckl, M. Sawicka, C. Schlegel, K. Schmidt, R. Schwengner
2002Ke.A	Th.-Heidelberg			A. Kellerbauer
2002Ke.C	PrvCom	NDG	May	H. Kettunen
2002Ko09	PYLBB	528,	221	F.G. Kondev, M.P. Carpenter, R.V.F. Janssens, C.J. Lister, K. Abu Saleem, I. Ahmad, H. Amro, J. Caggiano, C.N. Davids, A. Heinz, B. Herskind, T.L. Khoo, T. Lauritsen, W.C. Ma, J.J. Ressler, W. Reviol, L.L. Riedinger, D.G. Sarantites, D. Seweryniak, S. Siem, A.A. Sonzogni, P.G. Varmette, I. Wiedenhöver
2002La18	NUPAB	708,	167	M. La Commara, K. Schmidt, H. Grawe, J. Döring, R. Borcea, S. Galanopoulos, M. Górska, S. Harissopoulos, M. Hellström, Z. Janas, R. Kirchner, C. Mazzocchi, A.N. Ostrowski, C. Plettner, G. Rainovski, E. Roeckl
2002Le16	PRVCA	65,	054318	A. Lépine-Szily, J.M. Oliviera,Jr, V.R. Vanin, A.N. Ostrowski, R. Lichtenhäler, A. Di Pietro, V. Guimaraes, A.M. Laird, I. Mannoury, G.F. Lima, F. de Oliviera Santos, P. Roussel-Chomaz, H. Savajois, W. Trindler, A.C.C. Villari, A. de Vismes
2002Le.A	PrvCom	GAu	Jun	Lettre électronique de l'In2p3
2002Li24	PRVCA	65,	044618	G.F. Lima, A. Lépine-Szily, G. Audi, W. Mittig, M. Chartier, N.A. Orr, R. Lichtenhaler, J.-C. Angélique, J.-M. Casandjian, A. Cunsolo, C. Donzaud, A. Foti, A. Gillibert, M. Lewitowicz, S. Lukyanov, M. Mac Cormick, D.J. Morrissey, A.N. Ostrowski, B.M. Sherrill, C. Stéphan, T. Suomijärvi, L. Tassan-Got, D.J. Vieira, A.C.C. Villari, J.M. Wouters
2002Lo13	PRVCA	66,	025803	M.J. López Jiménez, B. Blank, M. Chartier, S. Czajkowski, P. Dessagne, G. de France, J. Giovinazzo, D. Karamanis, M. Lewitowicz, V. Maslov, C. Miehé, P.H. Regan, M. Stanoiu, M. Wiescher
2002Lu15	EPJAA	15,	315	R. Lucas, M.-G. Porquet, Ts. Venkova, I. Deloncle, M. Houry, Ch. Theisen, A. Astier, A. Bauchet, S. Lalkovski, G. Barreau, N. Buforn, T.P. Doan, L. Donadille, O. Dorvaux, J. Durell, Th. Ethvignot, B.P.J. Gall, D. Grimwood, W. Korten, Y. Le Coz, M. Meyer, A. Minkova, A. Prévost, N. Redon, A. Roach, N. Schulz, A.G. Smith, O. Stézowski, B.J. Varley
2002Ma19	PYLBB	532,	29	C. Mazzocchi, Z. Janas, L. Batist, V. Belleguic, J. Döring, M. Gierlik, M. Kapica, R. Kirchner, G.A. Lalazissis, H. Mahmud, E. Roeckl, P. Ring, K. Schmidt, P.J. Woods, J. Żylicz
2002Ma61	EPJAA	15,	85	H. Mahmud, C.N. Davids, P.J. Woods, T. Davinson, A. Heinz, J.J. Ressler, K. Schmidt, D. Seweryniak, J. Shergur, A.A. Sonzogni, W.B. Walters
2002Me07	PRLTA	88,	102501	M. Meister, K. Markenroth, D. Aleksandrov, T. Aumann, L. Axelsson, T. Baumann, M.J.G. Borge, L.V. Chulkov, W. Dostal, B. Eberlein, Th. W. Elze, H. Emiling, C. Forssén, H. Geissel, M. Hellström, R. Holzmann, B. Jonson, J.V. Kratz, R. Kulesa, Y. Leifels, A. Leistenschneider, I. Mukha, G. Münzenberg, F. Nickel, T. Nilsson, G. Nyman, A. Richter, K. Riisager, C. Scheidenberger, G. Schrieder, H. Simon, O. Tengblad, M.V. Zhukov
2002Mo31	PYLBB	547,	200	R. Moore, A.M. Bruce, P. Dendooven, J. Billowes, P. Campbell, A. Ezwam, K.T. Flanagan, D.H. Forest, J. Huikari, A. Jokinen, A. Nieminen, H.L. Thayer, G. Tungate, S. Zemlyanoi, J. Äystö
2002Mo.B	P-Aizu		140	Morimoto
2002Ni10	PRLTA	89,	039901	V. Ninov, K.E. Gregorich, W. Loveland, A. Ghiorso, D.C. Hoffman, D.M. Lee, H. Nitsche, W.J. Swiatecki, U.W. Kirbach, C.A. Laue, J.L. Adams, J.B. Patin, D.A. Shaughnessy, D.A. Strellis, P.A. Wilk

2002No11	PYLBB	542,	49	M. Notani, H. Sakurai, N. Aoi, Y. Yanagisawa, A. Saito, N. Imai, T. Gomi, M. Miura, S. Michimasa, H. Iwasaki, N. Fukuda, M. Ishihara, T. Kubo, S. Kubono, H. Kumagai, S.M. Lukyanov, T. Motobayashi, T.K. Onishi, Yu. E. Penionzhkevich, S. Shimoura, T. Teranishi, K. Ue, V. Ugryumov, A. Yoshida
2002Pe15	EPJAA	14,	439	C.M. Petrache, G. Lo Bianco, P.G. Bizzeti, A.M. Bizzeti-Sona, D. Bazzacco, S. Lunardi, M. Nespolo, G. de Angelis, P. Spolaore, N. Blasi, S. Brant, V. Krstić, D. Vretenar
2002Pf02	EPJAA	14,	279	M. Pfützner, E. Badura, C. Bingham, B. Blank, M. Chartier, H. Geissel, J. Giovinazzo, L.V. Grigorenko, R. Grzywacz, M. Hellström, Z. Janas, J. Kurcewicz, A.S. Lalleman, C. Mazzocchi, I. Mukha, G. Münzenberg, C. Plettner, E. Roeckl, K.P. Rykaczewski, K. Schmidt, R.S. Simon, M. Stanoiu, J.-C. Thomas
2002PI03	PRVCA	66,	044319	Plettner, C., L. Batisit, J. Doering, A. Blazhev, H. Grawe, V. Belleguic, C.R. Bingham, R. Borcea, M. Gierlik, M. Goerska, N. Harringyon, Z. Janas, M. Karny, R. Kirchner, C. Mazzocchi, P. Munro, E. Roeckl, K. Schmidt, R. Schwengner
2002Py01	PRLTA	88,	122501	M.C. Pyle, A. García, E. Tatar, J. Cox, B.K. Nayak, S. Triambak, B. Laughman, A. Komives, L.O. Lamm, J.E. Rolon, T. Finnessy, L.D. Knutson, P.A. Voytas
2002Py02	NIMAE	488,	381	Yu. V. Pyatkov, V.G. Tishchenko, V.V. Pashkevich, V.A. Maslov, D.V. Kamanin, I.V. Kljuev, W.H. Trzaska
2002Ra23	NUPAB	706,	3	H. Raimbault-Hartmann, G. Audi, D. Beck, G. Bollen, M. de Saint Simon, H.-J. Kluge, M. König, R.B. Moore, S. Schwarz, G. Savard, J. Szerypo, ISOLDE
2002Ro17	PRVCA	65,	054310	M.W. Rowe, J.C. Batchelder, T.N. Ginter, K.E. Gregorich, F.Q. Guo, F.P. Heßberger, V. Ninov, J. Powell, K.S. Toth, X.J. Xu, J. Cerny
2002Sc.A	PrvCom	AHW	Aug	Ch. Scheidenberger, Y. Litvinov
2002Sh08	PRVCA	65,	034313	J. Shergur, B.A. Brown, V. Fedoseyev, U. Köster, K.-L. Kratz, D. Seweryniak, W.B. Walters, A. Wöhr, D. Fedorov, M. Hannawald, M. Hjorth-Jensen, V. Mishin, B. Pfeiffer, J.J. Ressler, H.O.U. Fynbo, P. Hoff, H. Mach, T. Nilsson, K. Wilhelmssen-Rolander, H. Simon, A. Bickley, ISOLDE
2002Sh16	JUPSA	71,	1401	M. Shibata, T. Shindou, A. Taniguchi, Y. Kojima, K. Kawade, S.-I. Ichikawa, Y. Kawase
2002Sh43	PTPSA	146,	60	B.-M. Sherrill
2002Sh.A	AnRpt JAERI		26	M. Shibata, T. Shindou, Y. Kojima, M. Asai, K. Tsukada, S. Ichikawa, H. Haba, Y. Nagame, K. Kawade
2002Sh.B	P-Aulanko		479	M. Shibata, T. Shindou, K. Kawade, V. Kojima, A. Taniguchi, Y. Kawase, S. Ichikawa
2002Sh.C	AnRpt JAERI		45	N. Shinohara, Yu. N. Novikov, G. Münzenberg, H. Wollnik, Y. Hatsukawa, M. Asai, K. Tsukada, A. Osa, M. Oshima, H. Haba, S. Ichikawa, Y. Nagame, A.V. Popov, D.M. Seliverstov and PrvCom to 2008Qi03
2002So.A	PrvCom	GAu	Oct	O. Sorlin
2002Tr04	ADNDA	80,	83	V.I. Tretyak, Yu. G. Zdesenko
2002Tu05	EPJAA	15,	271	A. Türler "Heavy-element chemistry - Status and perspectives"
2002Un02	ARISE	56,	125	M.P. Unterweger
2002Va13	PRVCA	65,	064301	K. Van de Vel, A.N. Andreyev, M. Huyse, P. Van Duppen, J.F.C. Cocks, O. Dorvaux, P.T. Greenlees, K. Helariutta, P. Jones, R. Julin, S. Juutinen, H. Kettunen, P. Kuusiniemi, M. Leino, M. Muikku, P. Nieminen, K. Eskola, R. Wyss
2002We07	PRVCA	65,	044321	L. Weissman, J. Cederkall, J. Äystö, H. Fynbo, L. Fraile, V. Fedoseyev, S. Franchoo, A. Jokinen, U. Köster, G. Martinez-Pinedo, T. Nilsson, M. Oinonen, K. Peräjärvi, M.D. Seliverstov, ISOLDE
2002Xu11	PRVCA	66,	047302	S.W. Xu, Z.K. Li, F.R. Xu, Y.X. Xie, X.D. Wang
2002Zd02	PYLBB	546,	206	Yu. G. Zdesenko, F.A. Danevich, V.I. Tretyak
2003				
2003Ah07	PRVCA	68,	044306	I. Ahmad, R.R. Chasman, J.P. Greene, F.G. Kondev, E.F. Moore, E. Browne, C.E. Porter, L.K. Felker
2003Al02	PRVCA	67,	014323	A. Alessandrello, C. Arnaboldi, C. Brofferio, S. Capelli, O. Cremonesi, E. Fiorini, A. Nucciotti, M. Pavan, G. Pessina, S. Pirro, E. Previtali, M. Sisti, M. Vanzini, L. Zanotti, A. Giuliani, M. Pedretti, C. Bucci, C. Pobes

2003An26	EPJAA	18,	39	A.N. Andreyev, D. Ackermann, S. Antalic, H.J. Boardman, P. Cagarda, J. Gerl, F.P. Heßberger, S. Hofmann, M. Huyse, D. Karlgren, A. Keenan, H. Kettunen, A. Kleinböhl, B. Kindler, I. Kojouharov, A. Lavrentiev, C.D. O'Leary, M. Leino, B. Lommel, M. Matos, C.J. Moore, G. Münzenberg, R.D. Page, S. Reshitko, S. Saro, H. Schaffner, C. Schlegel, M.J. Taylor, K. Van de Vel, P. Van Duppen, L. Weissman, K. Heyde
2003An27	EPJAA	18,	55	A.N. Andreyev, D. Ackermann, F.P. Heßberger, S. Hofmann, M. Huyse, I. Kojouharov, B. Kindler, B. Lommel, G. Münzenberg, R.D. Page, K. Van de Vel, P. Van Duppen, K. Heyde
2003Ar36	PRLTA	91,	161802	C. Arnaboldi, C. Brofferio, O. Cremonesi, E. Fiorini, C. Lo Bianco, L. Martensson, A. Nucciotti, M. Pavan, G. Pessina, S. Pirro, E. Previtali, M. Sisti, A. Giuliani, B. Margesin, M. Zen
2003Ba18	PRVCA	67,	034310	C.J. Barton, D.S. Brenner, N.V. Zamfir, M.A. Caprio, A. Aprahamian, M.C. Wiescher, C.W. Beausang, Z. Berant, R.F. Casten, J.R. Cooper, R.L. Gill, R. Krücken, J.R. Novak, N. Pietralla, M. Shawcross, A. Teymurazyan, A. Wolf
2003Ba20	EPJAA	16,	489	T. Bäck, B. Cederwall, K. Lagergren, R. Wyss, A. Johnson, D. Karlgren, P. Greenlees, D. Jenkins, P. Jones, D.T. Joss, R. Julin, S. Juutinen, A. Keenan, H. Kettunen, P. Kuusiniemi, M. Leino, A.-P. Leppänen, M. Muikku, P. Nieminen, J. Pakarinen, P. Rauhala, J. Uusitalo
2003Ba39	NUPAB	720,	245	L. Batist, J. Döring, I. Mukha, C. Plettner, C.R. Bingham, R. Borcea, M. Gierlik, H. Grawe, K. Hauschild, Z. Janas, I.P. Johnstone, M. Karny, M. Kavatsyuk, R. Kirchner, M. La Commara, C. Mazzocchi, F. Moroz, J. Pavan, A. Płochocki, E. Roeckl, B. Salvachúa, K. Schmidt, R. Schwengner, L.D. Skouras, S.L. Tabor, M. Wiedeking
2003Ba47	PRVCA	67,	061303	T. Baumann, N. Frank, B.A. Luther, D.J. Morrissey, J.P. Seitz, B.M. Sherrill, M. Steiner, J. Stetson, A. Stolz, M. Thoennessen, I. Wiedenhöver
2003Ba49	PRVCA	67,	064316	D.K. Barillari, J.V. Vaz, R.C. Barber, K.S. Sharma
2003Ba.A	PrvCom	GAu	Apr	C. Bachelet
2003Be02	EPJDD	22,	41	I. Bergström, M. Björkhage, K. Blaum, H. Bluhme, T. Fritioff, Sz. Nagy, R. Schuch
2003Be05	NUPAB	714,	21	U.C. Bergmann, C.A. Diget, K. Riisager, L. Weissman, G. Auböck, J. Cederkäll, L.M. Fraile, H.O.U. Fynbo, H. Gausemel, H. Jeppesen, U. Köster, K.-L. Kratz, P. Möller, T. Nilsson, B. Pfeiffer, H. Simon, K. Van de Vel, J. Äystö, ISOLDE
2003Be18	EPJAA	16,	447	A.V. Belozero, M.L. Chelnokov, V.I. Chepigina, T.P. Drobina, V.A. Gorchakov, A.P. Kabachenko, O.N. Malyshev, I.M. Merkin, Yu. Ts. Oganessian, A.G. Popeko, R.N. Sagaidak, A.I. Svirikhin, A.V. Yeremin, G. Berek, I. Brida, Š. Šáro
2003Bi05	PRVCA	67,	065801	I. Bikit, N. Zikić-Todorović, J. Slivka, M. Vesković, M. Krmar, Lj. Čonkić, J. Puzović, I.V. Aničin
2003BI17	PRLTA	91,	260801	K. Blaum, G. Audi, D. Beck, G. Bollen, F. Herfurth, A. Kellerbauer, H.-J. Kluge, E. Sauvan, S. Schwarz
2003Bo25	NUPAB	726,	175	V. Bondarenko, A.V. Afanasjev, F. Bečvář, J. Honzátka, M.-E. Montero-Cabrera, I. Kuvaga, S.J. Robinson, A.M.J. Spits, S.A. Telezhnikov
2003Ce01	PYLBB	556,	14	S. Cebrián, N. Coron, G. Dambier, P. de Marcillac, E. García, I.G. Irastorza, J. Leblanc, A. Morales, J. Morales, A. Ortiz de Solórzano, J. Puimedón, M.L. Sarsa, J.A. Villar
2003Da05	PRVCA	67,	014310	F.A. Danevich, A. Sh. Georgadze, V.V. Kobychov, S.S. Nagorny, A.S. Nikolaiko, O.A. Ponkratenko, V.I. Tretyak, S. Yu. Zdesenko, Yu. G. Zdesenko, P.G. Bizzeti, T.F. Fazzini, P.R. Maurenzig
2003Da09	NUPAB	717,	129	F.A. Danevich, A.S. Georgadze, V.V. Kobychov, A.S. Nikolaiko, O.A. Ponkratenko, V.I. Tretyak, S.Y. Zdesenko, Y.G. Zdesenko, P.G. Bizzeti, T.F. Fazzini, P.R. Maurenzig
2003De11	NATUA	422,	876	P. de Marcillac, N. Coron, G. Dambier, J. Leblanc, J.-P. Moalic
2003Di06	PRLTA	91,	162503	I. Dillmann, K.-L. Kratz, A. Wöhr, O. Arndt, B.A. Brown, P. Hoff, M. Hjorth-Jensen, U. Köster, A.N. Ostrowski, B. Pfeiffer, D. Seweryniak, J. Shergur, W.B. Walters, ISOLDE
2003Do09	PRVCA	68,	034306	J. Döring, H. Grawe, K. Schmidt, R. Borcea, S. Galanopoulos, M. Górska, S. Harissopoulos, M. Hellström, Z. Janas, R. Kirchner, M. La Commara, C. Mazzocchi, E. Roeckl, R. Schwengner
2003Fr08	PHSTB	67,	276	T. Fritioff, G. Douysset
2003Fu10	NUPAB	718,	688c	Zs. Fülöp, L. Bartha, Gy. Gyürky, E. Somorjai, S. Kubono, H. Kudo, D. Kaji

2003Ge04	PRVCA	67,	054312	J. Genevey, J.A. Pinston, H.R. Faust, R. Orlandi, A. Scherillo, G.S. Simpson,, I.S. Tsekhanovich, A. Covello, A. Gargano, W. Urban
2003Gi05	PRVCA	67,	064609	T.N. Ginter, K.E. Gregorich, W. Loveland, D.M. Lee, U.W. Kirbach, R. Sudowe, C.M. Folden III, J.B. Patin, N. Seward, P.A. Wilk, P.M. Zielinski, K. Aleklett, R. Eichler, H. Nitsche, D.C. Hoffman
2003Gi06	NUPAB	724,	313	M. Gierlik, A. Plochocki, M. Karny, W. Urban, Z. Janas, L. Batist, F. Moroz, R. Collatz, M. Górska, H. Grawe, M. Hellström, Z. Hu, R. Kirchner, W. Liu, M. Rejmund, E. Roeckl, M. Shibata, J. Agramunt, A. Algora, A. Gadea, B. Rubio, J.L. Tain, D. Cano-Ott, S. Harissopulos
2003Gi10	PRVCA	68,	034330	T.N. Ginter, J.C. Batchelder, C.R. Bingham, C.J. Gross, R. Grzywacz, J.H. Hamilton, Z. Janas, M. Karny, A. Piechaczek, A.V. Ramayya, K.P. Rykaczewski, W.B. Walters, E.F. Zganjar
2003Go11	PYLBB	566,	70	M.S. Golovkov, Yu. Ts. Oganessian, D.D. Bogdanov, A.S. Fomichev, A.M. Rodin, S.I. Sidorchuk, R.S. Slepnev, S.V. Stepanov, G.M. Ter-Akopian, R. Wolski, V.A. Gorshkov, M.L. Chelnokov, M.G. Itkis, E.M. Kozulin, A.A. Bogatchev, N.A. Kondratiev, I.V. Korzyukov, A.A. Yukhimchuk, V.V. Perevozchikov, Yu. I. Vinogradov, S.K. Grishechkin, A.M. Demin, S.V. Zlatoustovsky, A.V. Kuryakin, S.V. Fil'chagin, R.I. Il'kayev, F. Hanappe, T. Materna, L. Stuttge, A.H. Ninane, A.A. Korshennikov, E. Yu. Nikolskii, I. Tanihata, P. Roussel-Chomaz, W. Mittig, N. Alamanos, V. Lapoux, E.C. Pollacco, L. Nalpas
2003Gr13	NUPAB	724,	14	C. Granja, S. Pospíšil, J. Kubašta, S.A. Telezhnikov
2003Gr27	NUPAB	729,	679	C. Granja, S. Pospíšil, S.A. Telezhnikov, R.E. Chrien
2003Gu06	PRVCA	67,	064601	V. Guimarães, S. Kubono, F.C. Barker, M. Hosaka, S.C. Jeong, I. Katayama, T. Miyachi, T. Nomura, M.H. Tanaka, Y. Fuchi, H. Kawashima, S. Kato, C.C. Yun, K. Ito, H. Orihara, T. Terakawa, T. Kishida, Y. Pu, S. Hamada, M. Hirai, H. Miyatake
2003He06	EPJAA	16,	365	F.P. Heßberger, S. Hofmann, D. Ackermann
2003Hu01	EPJAA	16,	359	J. Huikari, M. Oinonen, A. Algora, J. Cederkäll, S. Courtin, P. Dessagne, L. Fraile, S. Franchoo, H. Fynbo, W.X. Huang, A. Jokinen, A. Knipper, F. Marechal, C. Miehé, E. Nacher, K. Peräjärvi, E. Poirier, L. Weissman, J. Äystö, ISOLDE
2003Ke04	EPJAA	16,	457	H. Kettunen, T. Enqvist, M. Leino, K. Eskola, P.T. Greenlees, K. Helariutta, P. Jones, R. Julin, S. Juutinen, H. Kankaanpää, H. Koivisto, P. Kuusiniemi, M. Muikku, P. Nieminen, P. Rakhila, J. Uusitalo
2003Ke08	EPJAA	17,	537	H. Kettunen, T. Enqvist, T. Grahm, P.T. Greenlees, P. Jones, R. Julin, S. Juutinen, A. Keenan, P. Kuusiniemi, M. Leino, A.-P. Leppänen, P. Nieminen, J. Pakarinen, P. Rakhila, J. Uusitalo
2003Ko.A	Th.-Jyvaskyla			V. Kolhinen
2003Kr20	RAACA	91,	59	J.V. Kratz, A. Nähler, U. Rieth, A. Kronenberg, B. Kuczewski, E. Strub, W. Brühlle, M. Schädel, B. Schausten, A. Türler, H.W. Gäggeler, D.T. Jost, K.E. Gregorich, H. Nitsche, C. Laue, R. Sudowe, P.A. Wilk
2003Ku25	EPJAA	18,	5	J. Kurpeta, A. Plochocki, A.N. Andreyev, J. Äystö, A. De Smet, H. De Witte, A.-H. Evensen, V. Fedoseyev, S. Franchoo, M. Górska, M. Huhta, M. Huyse, Z. Janas, A. Jokinen, M. Karny, E. Kugler, W. Kurcewicz, U. Köster, J. Lettry, A. Nieminen, K. Partes, M. Ramdhane, H.L. Ravn, K. Rykaczewski, J. Szerypo, K. Van de Vel, P. Van Duppen, L. Weissman, G. Walter, A. Wöhr, ISOLDE
2003Ku26	EPJAA	18,	31	J. Kurpeta, A. Plochocki, A.N. Andreyev, J. Aysto, A. De Smet, H. De Witte, A.-H. Evensen, V. Fedoseyev, S. Franchoo, M. Gorska, H. Grawe, M. Huhta, M. Huyse, Z. Janas, A. Jokinen, M. Karny, E. Kugler, W. Kurcewicz, U. Koster, J. Lettry, A. Nieminen, K. Partes, M. Ramdhane, H.L. Ravn, K. Rykaczewski, J. Szerypo, K. Van de Vel, P. Van Duppen, L. Weissman, G. Walter, A. Wöhr, ISOLDE
2003Le26	NUPAB	722,	512	A. Lepine-Szily, J.M. Oliveira, D. Galante, G. Amadio, V. Vanin, R. Lichtenhaler, V. Guimaraes, G.F. Lima, H.G. Bohlen, A.N. Ostrowski, A. Di Pietro, A.M. Laird, L. Maunoury, F. de Oliveira Santos, P. Roussel-Chomaz, H. Savajols, W. Trinder, A.C.C. Villari, A. de Vismes
2003Li42	PYLBB	573,	80	Yu. A. Litvinov, F. Attallah, K. Beckert, F. Bosch, D. Boutin, M. Falch, B. Franzke, H. Geissel, M. Hausmann, Th. Kerscher, O. Klepper, H.-J. Kluge, C. Kozhuharov, K.E.G. Löbner, G. Münzenberg, F. Nolden, Yu. N. Novikov, Z. Patyk, T. Radon, C. Scheidenberger, J. Stadlmann, M. Steck, M.B. Trzhaskovskaya, H. Wollnik

2003Li.A	PrvCom	GAu	Jul	Y. Litvinov, Ch. Scheidenberger
2003Li.B	PrvCom	GAu	Aug	Y. Litvinov
2003Ma02	PRVCA	67,	014311	P.F. Mantica, A.C. Morton, B.A. Brown, A.D. Davies, T. Glasmacher, D.E. Groh, S.N. Liddick, D.J. Morrissey, W.F. Mueller, H. Schatz, A. Stolz, S.L. Tabor, M. Honma, M. Horoi, T. Otsuka
2003Ma34	EPJAA	17,	519	C. Mazzocchi, E. Badura, C. Bingham, B. Blank, M. Chartier, H. Geissel, J. Giovinazzo, E. Grodner, R. Grzywacz, M. Hellström, Z. Janas, J. Kurcewicz, A.S. Lalleman, I. Mukha, G. Münzenberg, M. Pfützner, C. Plettner, E. Roeckl, K.P. Rykaczewski, K. Schmidt, R.S. Simon, M. Stanoiu, J.-C. Thomas
2003Me11	NUPAB	723,	13	M. Meister, L.V. Chulkov, H. Simon, T. Aumann, M.J.G. Borge, Th. W. Elze, H. Emling, H. Geissel, M. Hellström, B. Jonson, J.V. Kratz, R. Kulesa, Y. Leifels, K. Markenroth, G. Münzenberg, F. Nickel, T. Nilsson, G. Nyman, V. Pribora, A. Richter, K. Riisager, C. Scheidenberger, G. Schrieder, O. Tengblad
2003Me20	PRVCA	68,	041301	A. Melerangi, D. Appelbe, R.D. Page, H.J. Boardman, P.T. Greenlees, P. Jones, D.T. Joss, R. Julin, S. Juutinen, H. Kettunen, P. Kuusiniemi, M. Leino, M.H. Muikku, P. Nieminen, J. Pakarinen, P. Rahkila, J. Simpson
2003Mi02	JRNCD	255,	63	T. Mitsugashira, M. Hara, T. Ohtsuki, H. Yuki, K. Takamiya, Y. Kasamatsu, A. Shinohara, H. Kikunaga, T. Nakanishi
2003Mo36	NUPAB	728,	350	C.-B. Moon, T. Komatsubara, T. Shizuma, Y. Sasaki, K. Furuno, C.S. Lee
2003Ni10	PRVCA	68,	064305	K. Nishio, H. Ikezoe, S. Mitsuoka, K. Satou, C.J. Lin
2003Oz01	PRVCA	67,	014610	A. Ozawa, Y. Yamaguchi, M. Chiba, R. Kanungo, K. Kimura, S. Momota, T. Suda, T. Suzuki, I. Tanihata, T. Zheng, S. Watanabe, T. Yamaguchi, K. Yoshida
2003Pe23	PRVCA	68,	034607	W.A. Peters, T. Baumann, D. Bazin, B.A. Brown, R.R.C. Clement, N. Frank, P. Heckman, B.A. Luther, F. Nunes, J. Seitz, A. Stolz, M. Thoennessen, E. Tryggestad
2003Pf.A	PrvCom	GAu	Jul	B. Pfeiffer, O. Arndt
2003Pi03	EPJAA	16,	313	I. Piqueras, M.J.G. Borge, Ph. Dessagne, J. Giovinazzo, A. Huck, A. Jokinen, A. Knipper, C. Longour, G. Marguier, M. Ramdhane, V. Rauch, O. Tengblad, G. Walter, Ch. Miehé, ISOLDE
2003Pi08	PRVCA	67,	051305	A. Piechaczek, E.F. Zganjar, G.C. Ball, P. Bricault, J.M. D'Auria, J.C. Hardy, D.F. Hodgson, V. Jacob, P. Klages, W.D. Kulp, J.R. Leslie, M. Lipoglavsek, J.A. Macdonald, H.-B. Mak, D.M. Moltz, G. Savard, J. von Schwarzenberg, C.E. Svensson, I.S. Towner, J.L. Wood
2003Ro21	PRVCA	68,	054301	A.P. Robinson, C.N. Davids, G. Mukherjee, D. Seweryniak, S. Sinha, P. Wilt, P.J. Woods
2003Sa02	EPJAA	16,	51	M. Sawicka, J.M. Daugas, H. Grawe, S. Ćwiok, D.L. Balabanski, R. Béraud, C. Bingham, C. Borcea, M. La Commara, G. de France, G. Georgiev, M. Górska, R. Grzywacz, M. Hass, M. Hellström, Z. Janas, M. Lewitowicz, H. Mach, I. Matea, G. Neyens, C. O'Leary, F. de Oliveira Santos, R.D. Page, M. Pfützner, Zs. Podolyák, K. Rykaczewski, M. Stanoiu, J. Żylicz
2003Sa40	PRVCA	68,	044304	M. Sawicka, R. Grzywacz, I. Matea, H. Grawe, M. Pfützner, J.M. Daugas, M. Lewitowicz, D.L. Balabanski, F. Becker, G. Belier, C. Bingham, C. Borcea, E. Bouchez, A. Buta, M. La Commara, E. Dragulescu, G. de France, G. Georgiev, J. Giovinazzo, M. Gorska, F. Hammache, M. Hass, M. Hellstrom, F. Ibrahim, Z. Janas, H. Mach, P. Mayet, V. Meot, F. Negoita, G. Neyens, F. de Oliveira Santos, R.D. Page, O. Perru, Zs. Podolyak, O. Roig, K.P. Rykaczewski, M.G. Saint-Laurent, J.E. Sauvestre, O. Sorlin, M. Stanoiu, I. Stefan, C. Stodel, Ch. Theisen, D. Verney, J. Zylicz
2003So02	EPJAA	16,	55	O. Sorlin, C. Donzaud, F. Nowacki, J.C. Angélique, F. Azaiez, C. Bourgeois, V. Chiste, Z. Dlouhy, S. Grévy, D. Guillemaud-Mueller, F. Ibrahim, K.-L. Kratz, M. Lewitowicz, S.M. Lukyanov, J. Mrazek, Yu.-E. Penionzhkevich, F. de Oliveira Santos, B. Pfeiffer, F. Pougheon, A. Poves, M.G. Saint-Laurent, M. Stanoiu
2003So21	NUPAB	719,	193c	O. Sorlin, C. Donzaud, F. Azaiez, C. Bourgeois, L. Gaudefroy, F. Ibrahim, D. Guillemaud-Mueller, F. Pougheon, M. Lewitowicz, F. de Oliveira Santos, M.G. Saint-Laurent, M. Stanoiu, S.M. Lukyanov, Yu. E. Penionzhkevich, J.C. Angélique, S. Grévy, K.-L. Kratz, B. Pfeiffer, F. Nowacki, Z. Dlouhy, J. Mrasek
2003To03	PRVCA	67,	035503	N.R. Tolich, P.H. Barker, P.D. Harty, P.A. Amundsen

2003To08	NUPAB	717,	149	I. Tomandl, T. von Egidy, J. Honzatko, V. Bondarenko, H.-F. Wirth, D. Bucurescu, V.Y. Ponomarev, G. Graw, R. Hertenberger, Y. Eisermann, S. Raman
2003Tu05	EPJAA	17,	505	A. Türler, Ch. E. Düllmann, H.W. Gäggeler, U.W. Kirbach, A.B. Yakushev, M. Schädel, W. Bruchle, R. Dressler, K. Eberhardt, B. Eichler, R. Eichler, T.N. Ginter, F. Glaus, K.E. Gregorich, D.C. Hoffman, E. Jäger, D.T. Jost, D.M. Lee, H. Nitsche, J.B. Patin, V. Pershina, D. Piguet, Z. Qin, B. Schausten, E. Schimpf, H.-J. Schött, S. Soverna, R. Sudowe, P. Thörle, S.N. Timokhin, N. Trautmann, A. Vahle, G. Wirth, P.M. Zielinski
2003Va16	PRVCA	68,	054311	K. Van de Vel, A.N. Andreyev, D. Ackermann, H.J. Boardman, P. Cagarda, J. Gerl, F.P. Heßberger, S. Hofmann, M. Huysse, D. Karlgren, I. Kojouharov, M. Leino, B. Lommel, G. Münzenberg, C. Moore, R.D. Page, S. Saro, P. Van Duppen, R. Wyss
2003Va.A	PrvCom	GAu	Aug	R.S. Van Dyck, Jr.
2003Vo03	NUPAB	714,	355	T. von Egidy, C. Doll, J. Jolie, N.V. Warr, J. Kern, M. Crittin, L. Genilloud
2003Wa13	PRVCA	67,	064303	Y. Wang, S. Rinta-Antila, P. Dendooven, J. Huikari, A. Jokinen, V.S. Kolhinen, G. Lhersonneau, A. Nieminen, S. Nummela, H. Penttilä, K. Peräjärvi, J. Szerypo, J.C. Wang, J. Äystö
2003Wi02	NUPAB	716,	3	H.-F. Wirth, T. von Egidy, I. Tomandl, J. Honzátko, D. Bucurescu, N. Mrginean, V. Yu. Ponomarev, R. Hertenberger, Y. Eisermann, G. Graw
2003Xu04	EPJAA	16,	347	S.W. Xu, Y.X. Xie, Z.K. Li, X.D. Wang, B. Guo, C.G. Leng, C.F. Wang, Y. Yu
2003Ye02	YAFIA	66,	1078	A.V. Yeremin, A.V. Belozarov, M.L. Chelnokov, V.I. Chepigin, V.A. Gorskov, A.P. Kabachenko, O.N. Malyshev, Yu. Ts. Oganessian, A.G. Popeko, R.N. Sagaidak, A.I. Svirikhin, S. Hofmann, G. Berek, I. Brida, S. Saro
2003Yo02	PRVCA	67,	014316	K. Yoneda, N. Aoi, H. Iwasaki, H. Sakurai, H. Ogawa, T. Nakamura, W.-D. Schmidt-Ott, M. Schäfer, M. Notani, N. Fukuda, E. Ideguchi, T. Kishida, S.S. Yamamoto, M. Ishihara
2004				
2004Al04	PRVCA	69,	024320	S.D. Al-Garni, P.H. Regan, P.M. Walker, E. Roeckl, R. Kirchner, F.R. Xu, L. Batist, A. Blazhev, R. Borcea, D.M. Cullen, J. Döring, H.M. El-Masri, J. Garces Narro, H. Grawe, M. La Commara, C. Mazzocchi, I. Mukha, C.J. Pearson, C. Plettner, K. Schmidt, W.D. Schmidt-Ott, Y. Shimbara, C. Wheldon, R. Wood, S.C. Wooding
2004An07	PRVCA	69,	054308	A.N. Andreyev, D. Ackermann, F.P. Heßberger, K. Heyde, S. Hofmann, M. Huysse, D. Karlgren, I. Kojouharov, B. Kindler, B. Lommel, G. Münzenberg, R.D. Page, K. Van de Vel, P. Van Duppen, W.B. Walters, R. Wyss
2004As12	EPJAA	22,	411	M. Asai, M. Sakama, K. Tsukada, S. Ichikawa, H. Haba, I. Nishinaka, Y. Nagame, S. Goto, Y. Kojima, Y. Oura, H. Nakahara, M. Shibata, K. Kawade
2004Ba78	PRVCA	70,	024302	P.H. Barker, I.C. Barnett, G.J. Baxter, A.P. Byrne
2004Ba.A	PrvCom	GAu	Jul	C. Bachelet
2004BI10	PRVCA	69,	064304	A. Blazhev, M. Górska, H. Grawe, J. Nyberg, M. Palacz, E. Caurier, O. Dorvaux, A. Gadea, F. Nowacki, C. Andreoiu, G. de Angelis, D. Balabanski, Ch. Beck, B. Cederwall, D. Curien, J. Döring, J. Ekman, C. Fahlander, K. Lagergren, J. Ljungvall, M. Moszyński, L.-O. Norlin, C. Plettner, D. Rudolph, D. Sohler, K.M. Spohr, O. Thelen, M. Weiszflog, M. Wisell, M. Wolińska, W. Wolski
2004BI16	EULEE	67,	586	K. Blaum, D. Beck, G. Bollen, P. Delahaye, C. Guenaut, F. Herfurth, A. Kellerbauer, H.-J. Kluge, D. Lunney, S. Schwarz, L. Schweikhard, C. Yazidjian
2004BI20	NUPAB	746,	305c	K. Blaum, G. Audi, D. Beck, G. Bollen, C. Guénaut, P. Delahaye, F. Herfurth, A. Kellerbauer, H.-J. Kluge, D. Lunney, D. Rodríguez, S. Schwarz, L. Schweikhard, C. Weber, C. Yazidjian
2004Br14	PRVCA	69,	034327	S. Brant, G. Lhersonneau, K. Sistemich
2004Br19	EPJAA	20,	145	R. Broda, B. Fornal, W. Krolas, T. Pawlat, J. Wrzesinski, D. Bazzacco, G. de Angelis, S. Lunardi, C. Rossi Alvarez
2004CI03	PRLTA	92,	192501	J.A. Clark, G. Savard, K.S. Sharma, J. Vaz, J.C. Wang, Z. Zhou, A. Heinz, B. Blank, F. Buchinger, J.E. Crawford, S. Gulick, J.K.P. Lee, A.F. Levand, D. Seweryniak, G.D. Sprouse, W. Trimble
2004Co26	PRVCA	70,	064606	C. Cozzini, G. Angloher, C. Bucci, F. von Feilitzsch, D. Hauff, S. Henry, Th. Jagemann, J. Jochum, H. Kraus, B. Majorovits, V. Mikhailik, J. Ninkovic, F. Petricca, W. Potzel, F. Pröbst, Y. Ramachers, W. Rau, M. Razeti, W. Seidel, M. Stark, L. Stodolsky, A.J.B. Tolhurst, W. Westphal, H. Wulandari

2004Da04	PRVCA	69,	011302	C.N. Davids, P.J. Woods, H. Mahmud, T. Davinson, A. Heinz, J.J. Ressler, K. Schmidt, D. Seweryniak, J. Shergur, A.A. Sonzogni, W.B. Walters
2004De16	PRVCA	69,	044305	H. De Witte, A.N. Andreyev, I.N. Borzov, E. Caurier, J. Cederkäll, A. De Smet, S. Eeckhauudt, D.V. Fedorov, V.N. Fedosseev, S. Franchoo, M. Górska, H. Grawe, G. Huber, M. Huyse, Z. Janas, U. Köster, W. Kurcewicz, J. Kurpeta, A. Płochocki, K. Van de Vel, P. Van Duppen, L. Weissman
2004De40	EPJAA	21,	243	S. Dean, M. Gorska, F. Aksouh, H. de Witte, M. Facina, M. Huyse, O. Ivanov, K. Krouglov, Yu. Kudryavtsev, I. Mukha, D. Smirnov, J.-C. Thomas, K. Van de Vel, J. Van de Walle, P. Van Duppen, J. Van Roosbroeck
2004Di18	EPJAA	22,	163	J. Dilling, F. Herfurth, A. Kellerbauer, G. Audi, G. Bollen, H.-J. Kluge, R.B. Moore, C. Scheidenberger, S. Schwarz, G. Sikler, ISOLDE
2004Dr04	PRVCA	69,	054318	G.D. Dracoulis, G.J. Lane, A.P. Byrne, T. Kibédi, A.M. Baxter, A.O. Macchiavèlli, P. Fallon, R.M. Clark
2004Dr06	PYLBB	584,	22	G.D. Dracoulis, F.G. Kondev, G.J. Lane, A.P. Byrne, T. Kibedi, I. Ahmad, M.P. Carpenter, S.J. Freeman, R.V.F. Janssens, N.J. Hammond, T. Lauritsen, C.J. Lister, G. Mukherjee, D. Seweryniak, P. Chowdhury, S.K. Tandel, R. Gramer
2004Fo06	PRVCA	70,	34312	B. Fogelberg, H. Gausemel, K.A. Mezilev, P. Hoff, H. Mach, M. Sanchez-Vega, A. Lindroth, E. Ramstrom, J. Genevey, J.A. Pinston, M. Rejmund
2004Fo08	PRLTA	93,	212702	C.M. Folden III, K.E. Gregorich, Ch. E. Düllmann, H. Mahmud, G.K. Pang, J.M. Schwantes, R. Sudowe, P.M. Zielinski, H. Nitsche, D.C. Hoffman
2004Fu.A	P-Santa Fe		1454	K. Furutaka, H. Harada, S. Raman, AIP Conf. Proc. 769, 1454 (2005)
2004Ga24	PRVCA	69,	054307	H. Gausemel, B. Fogelberg, T. Engeland, M. Hjorth-Jensen, P. Hoff, H. Mach, K.A. Mezilev, J.P. Omtvedt
2004Ga29	EPJAA	20,	385	Z.G. Gan, J.S. Guo, X.L. Wu, Z. Qin, H.M. Fan, X.G. Lei, H.Y. Liu, B. Guo, H.G. Xu, R.F. Chen, C.F. Dong, F.M. Zhang, H.L. Wang, C.Y. Xie, Z.Q. Feng, Y. Zhen, L.T. Song, P. Luo, H.S. Xu, X.H. Zhou, G.M. Jin, Z. Ren
2004Ga44	PRVCA	70,	037301	H. Gausemel, K.A. Mezilev, B. Fogelberg, P. Hoff, H. Mach, E. Ramstrom
2004GI04	PRVCA	69,	024617	K.A. Gladnishki, Zs. Podolyák, P.H. Regan, J. Gerl, M. Hellström, Y. Kopatch, S. Mandal, M. Górska, R.D. Page, H.J. Wollersheim, A. Banu, G. Benzoni, H. Boardman, M. La Commara, J. Ekman, C. Fahlander, H. Geissel, H. Grawe, E. Kaza, A. Korgul, M. Matos, M.N. Mineva, C.J. Pearson, C. Plettner, D. Rudolph, Ch. Scheidenberger, K.-H. Schmidt, V. Shishkin, D. Sohler, K. Sümmerner, J.J. Valiente-Dobón, P.M. Walker, H. Weick, M. Winkler, O. Yordanov
2004Go15	PRVCA	69,	031302	V.Z. Goldberg, G.G. Chubarian, G. Tabacaru, L. Trache, R.E. Tribble, A. Aprahamian, G.V. Rogachev, B.B. Skorodumov, X.D. Tang
2004Go38	PRVCA	70,	014309	J. TM. Goon, D.J. Hartley, L.L. Riedinger, M.P. Carpenter, F.G. Kondev, R.V.F. Janssens, K.H. Abu Saleem, I. Ahmad, H. Amro, J.A. Cizewski, C.N. Davids, M. Danchev, T.L. Khoo, A. Heinz, T. Lauritsen, W.C. Ma, G.L. Poli, J. Ressler, W. Reviol, D. Seweryniak, M.B. Smith, I. Wiedenhover, J. Zhang
2004Gr20	PYLBB	594,	252	S. Grévy, J.C. Angélique, P. Baumann, C. Borcea, A. Buta, G. Canchel, W.N. Catford, S. Courtin, J.M. Daugas, F. de Oliveira, P. Dessagne, Z. Dlouhy, A. Knipper, K.L. Kratz, F.R. Lecolley, J.L. Lecouey, G. Lhersonneau, M. Lewitowicz, E. Liénard, S. Lukyanov, F. Maréchal, C. Miehé, J. Mrazek, F. Negoita, N.A. Orr, D. Pantelica, Y. Penionzhkevich, J. Péter, B. Pfeiffer, S. Pietri, E. Poirier, O. Sorlin, M. Stanoiu, I. Stefan, C. Stodel, C. Timis
2004He25	EPJAA	22,	253	F.P. Heßberger, S. Hofmann, I. Kojouharov, D. Ackermann
2004He28	EPJAA	22,	417	F.P. Heßberger, S. Hofmann, D. Ackermann, P. Cagarda, R.-D. Herzberg, I. Kojouharov, P. Kuusiniemi, M. Leino, R. Mann
2004Io01	PRVCA	70,	034305	M. Ionescu-Bujor, A. Iordachescu, D.L. Balabanski, S. Chmel, G. Neyens, G. Baldsiefen, D. Bazzacco, F. Brandolini, D. Bucurescu, M. Danchev, M. De Poli, G. Georgiev, A. Górgen, H. Haas, H. Hubel, G. Ilie, N. Marginean, R. Menegazzo, P. Pavan, G. Rainovski, R.V. Ribas, C. Rossi Alvarez, C.A. Ur, K. Vyvey, S. Frauendorf
2004Iz02	YAFIA	67,	1901	N. Izosimov, A.A. Kazimov, V.G. Kalinnikov, A.A. Solnyshkin, J. Suhonen
2004Jo12	PRVCA	70,	017302	D.T. Joss, K. Lagergren, D.E. Appelbe, C.J. Barton, J. Simpson, B. Cedervall, B. Hadinia, R. Wyss, S. Eeckhauudt, T. Grahn, P.T. Greenlees, P.M. Jones, R. Julin, S. Juutinen, H. Kettunen, M. Leino, A.-P. Leppänen, P. Nieminen, J. Pakarinen, P. Rahkila, C. Scholey, J. Uusitalo, R.D. Page, E.S. Paul, D.R. Wiseman

2004Ka38	PRVCA	70,	014310	M. Karny, L. Batist, D. Jenkins, M. Kavatsyuk, O. Kavatsyuk, R. Kirchner, A. Korgul, E. Roeckl, J. Zylicz
2004Ke06	PRVCA	69,	054323	H. Kettunen, T. Enqvist, T. Grahn, P.T. Greenlees, P. Jones, R. Julin, S. Juutinen, A. Keenan, P. Kuusiniemi, M. Leino, A.-P. Leppanen, P. Nieminen, J. Pakarinen, P. Rahkila, J. Uusitalo
2004Ke10	PRLTA	93,	072502	A. Kellerbauer, G. Audi, D. Beck, K. Blaum, G. Bollen, B.A. Brown, P. Delahaye, C. Guénaut, F. Herfurth, H.-J. Kluge, D. Lunney, S. Schwarz, L. Schweikhard, C. Yazidjian and PrvCom GAU September 2003
2004KI03	PYLBB	578,	54	H.V. Klapdor-Kleingrothaus, I.V. Krivosheina, A. Dietz, O. Chkvorets
2004Ko.A	P-Santa Fe		225	F.G. Kondev
2004Ku24	EPJAA	22,	429	P. Kuusiniemi, F.P. Heßberger, D. Ackermann, S. Hofmann, I. Kojouharov
2004Le12	NUPAB	734,	331	A. Lépine-Szily, J.M. Oliveira, D. Galante, G. Amadio, R. Lichtenthäler, H.G. Bohlen, A.N. Ostrowski, A. Blazevic, C. Borcea, V. Guimarães, V. Lapoux, G. Lima, F. de Oliveira Santos, N.A. Orr, P. Roussel-Chomaz, Th. Stolla, J.S. Winfield
2004Li28	CZYPA	54,	189	C.F. Liang, P. Paris, R.K. Sheline, P. Alexa
2004Li75	PRVCA	70,	064303	S.N. Liddick, P.F. Mantica, R. Broda, B.A. Brown, M.P. Carpenter, A.D. Davies, B. Fornal, T. Glasmacher, D.E. Groh, M. Honma, M. Horoi, R.V.F. Janssens, T. Mizusaki, D.J. Morrissey, A.C. Morton, W.F. Mueller, T. Otsuka, J. Pavan, H. Schatz, A. Stolz, S.L. Tabor, B.E. Tomlin, M. Wiedeking
2004Ma80	PRLTA	93,	142503	I. Matea, G. Georgiev, J.M. Daugas, M. Hass, G. Neyens, R. Astabatyán, L.T. Baby, D.L. Balabanski, G. Bélier, D. Borremans, G. Goldring, H. Goutte, P. Himpe, M. Lewitowicz, S. Lukyanov, V. Méot, F. de Oliveira Santos, Yu. E. Penionzhkevich, O. Roig, M. Sawicka
2004Ma.A	Th.-Giessen			M. Matoš
2004Mo15	NUPAB	734,	188	K. Moody, for the Dubna-Livermore Collaboration
2004Mo26	JUPSA	73,	1738	K. Morita, K. Morimoto, D. Kaji, H. Haba, E. Ideguchi, J.C. Peter, R. Kanungo, K. Katori, H. Koura, H. Kudo, T. Ohnishi, A. Ozawa, T. Suda, K. Sueki, I. Tanihata, H. Xu, A.V. Yeremin, A. Yoneda, A. Yoshida, Y.L. Zhao, T. Zheng, S. Goto, F. Tokanai
2004Mo40	EPJAA	21,	257	K. Morita, K. Morimoto, D. Kaji, H. Haba, E. Ideguchi, R. Kanungo, K. Katori, H. Koura, H. Kudo, T. Ohnishi, A. Ozawa, T. Suda, K. Sueki, I. Tanihata, H. Xu, A.V. Yeremin, A. Yoneda, A. Yoshida, Y.-L. Zhao, T. Zheng
2004MoZU	PrvCom	NDG		K. Morita (to be published in Proc. EXON 2004)
2004Mu26	PRLTA	93,	150801	M. Mukherjee, A. Kellerbauer, D. Beck, K. Blaum, G. Bollen, F. Carrel, P. Delahaye, J. Dilling, S. George, C. Guénaut, F. Herfurth, A. Herlert, H.-J. Kluge, U. Köster, D. Lunney, S. Schwarz, L. Schweikhard, C. Yazidjian
2004Mu30	PRVCA	70,	044311	I. Mukha, L. Batist, E. Roeckl, H. Grawe, J. Doring, A. Blazhev, C.R. Hoffman, Z. Janas, R. Kirchner, M. La Commara, S. Dean, C. Mazzocchi, C. Plettner, S.L. Tabor, M. Wiedeking
2004Mu32	NUPAB	746,	66	I. Mukha, L. Batist, F. Becker, A. Blazhev, W. Bröchle, J. Döring, M. Gorska, H. Grawe, T. Faestermann, C. Hoffman, Z. Janas, A. Jungclaus, M. Karny, M. Kavatsyuk, O. Kavatsyuk, R. Kirchner, M. La Commara, C. Mazzocchi, C. Plettner, A. Plochocki, E. Roeckl, M. Romoli, M. Schädel, R. Schwengner, S.L. Tabor, M. Wiedeking, and the GSI ISOL Collaboration
2004Na.A	Th.-Valencia			E. Nácher
2004Ni06	PRVCA	69,	064326	P. Nieminen, S. Juutinen, A.N. Andreyev, J.F.C. Cocks, O. Dorvaux, K. Eskola, P.T. Greenlees, K. Hauschild, K. Helariutta, M. Huyse, P.M. Jones, R. Julin, H. Kankaanpää, H. Kettunen, P. Kuusiniemi, Y. Le Coz, M. Leino, T. Lönnroth, M. Muikku, P. Rahkila, A. Savelius, J. Uusitalo, N. Amzal, N.J. Hammond, C. Scholey, R. Wyss
2004Og03	PRVCA	69,	021601	Yu. Ts. Oganessian, V.K. Utyonkov, Yu. V. Lobanov, F. Sh. Abdullin, A.N. Polyakov, I.V. Shirokovsky, Yu. S. Tsyganov, G.G. Gulbekian, S.L. Bogomolov, A.N. Mezentsev, S. Iliev, V.G. Subbotin, A.M. Sukhov, A.A. Voinov, G.V. Buklanov, K. Subotic, V.I. Zagrebaev, M.G. Itkis, J.B. Patin, K.J. Moody, J.F. Wild, M.A. Stoyer, N.J. Stoyer, D.A. Shaughnessy, J.M. Kenneally, R.W. Loughheed

2004Og05	NUPAB	734,	109	Yu. Ts. Oganessian, V.K. Utyonkov, Yu. V. Lobanov, F. Sh. Abdullin, A.N. Polyakov, I.V. Shirokovsky, Yu. S. Tsyganov, G.G. Gulbekian, S.L. Bogomolov, B.N. Gikal, A.N. Mezentsev, S. Iliev, V.G. Subbotin, A.M. Sukhov, A.A. Voinov, G.V. Buklanov, K. Subotic, V.I. Zagrebaev, M.G. Itkis, J.B. Patin, K.J. Moody, J.F. Wild, M.A. Stoyer, N.J. Stoyer, D.A. Shaughnessy, J.M. Kennelly, R.W. Lougheed
2004Og07	PRVCA	69,	054607	Yu. Ts. Oganessian, V.K. Utyonkov, Yu. V. Lobanov, F. Sh. Abdullin, A.N. Polyakov, I.V. Shirokovsky, Yu. S. Tsyganov, G.G. Gulbekian, S.L. Bogomolov, B.N. Gikal, A.N. Mezentsev, S. Iliev, V.G. Subbotin, A.M. Sukhov, A.A. Voinov, G.V. Buklanov, K. Subotic, V.I. Zagrebaev, M.G. Itkis, J.B. Patin, K.J. Moody, J.F. Wild, M.A. Stoyer, N.J. Stoyer, D.A. Shaughnessy, J.M. Kennelly, R.W. Lougheed
2004Og12	PRVCA	70,	064609	Yu. Ts. Oganessian, V.K. Utyonkov, Yu. V. Lobanov, F. Sh. Abdullin, A.N. Polyakov, I.V. Shirokovsky, Yu. S. Tsyganov, G.G. Gulbekian, S.L. Bogomolov, B.N. Gikal, A.N. Mezentsev, S. Iliev, V.G. Subbotin, A.M. Sukhov, A.A. Voinov, G.V. Buklanov, K. Subotic, V.I. Zagrebaev, M.G. Itkis, J.B. Patin, K.J. Moody, J.F. Wild, M.A. Stoyer, N.J. Stoyer, D.A. Shaughnessy, J.M. Kennelly, P.A. Wilk, R.W. Lougheed, R.I. Ilkaev, S.P. Vesnovskii, and erratum PRVCA 71(2005)029902
2004Ra23	PRVCA	70,	044318	S. Raman, X. Ouyang, M.A. Islam, J.W. Starner, E.T. Journey, J.E. Lynn, G. Martínez-Pinedo
2004Ra28	PRVCA	70,	064308	P.M. Raddon, D.G. Jenkins, C.D. O'Leary, A.J. Simons, R. Wadsworth, A.N. Andreyev, R.D. Page, M.P. Carpenter, F.G. Kondev, T. Enqvist, P.T. Greenlees, P.M. Jones, R. Julin, S. Juutinen, H. Kettunen, M. Leino, A.-P. Leppänen, P. Nieminen, J. Pakarinen, P. Rakhila, J. Uusitalo, D.T. Joss
2004Ra33	SCIEA	303,	334	S. Rainville, J.K. Thompson, D.E. Pritchard
2004Re04	PRVCA	69,	034331	J.J. Ressler, C.W. Beausang, H. Ai, H. Amro, M.A. Caprio, R.F. Casten, A.A. Hecht, S.D. Langdown, E.A. McCutchan, D.A. Meyer, P.H. Regan, M.J.S. Sciachitano, A. Yamamoto, N.V. Zamfir
2004Ri12	PRVCA	70,	11301	S. Rinta-Antila, S. Kopecky, V.S. Kolhinen, J. Hakala, J. Huikari, A. Jokinen, A. Nieminen, J. Äystö, J. Szerypo
2004Ro32	PRLTA	93,	161104	D. Rodríguez, V.S. Kolhinen, G. Audi, J. Äystö, D. Beck, K. Blaum, G. Bollen, F. Herfurth, A. Jokinen, A. Kellerbauer, H.-J. Kluge, M. Oinonen, H. Schatz, E. Sauvan, S. Schwarz
2004Sa05	PRVCA	69,	014308	M. Sakama, M. Asai, K. Tsukada, S. Ichikawa, I. Nishinaka, Y. Nagame, H. Haba, S. Goto, M. Shibata, K. Kawade, Y. Kojima, Y. Oura, M. Ebihara, H. Nakahara
2004Sa53	PRVCA	70,	042501	G. Savard, J.A. Clark, F. Buchinger, J.E. Crawford, S. Gulick, J.C. Hardy, A.A. Hecht, V.E. Jacob, J.K.P. Lee, A.F. Levand, B.F. Lundgren, N.D. Scielzo, K.S. Sharma, I. Tanihata, I.S. Towner, W. Trimble, J.C. Wang, Y. Wang, Z. Zhou
2004Sa59	EPJAA	22,	455	M. Sawicka, I. Matea, H. Grawe, R. Grzywacz, M. Pfützner, M. Lewitowicz, J.M. Daugas, B.A. Brown, A. Lisetskiy, F. Becker, G. Bélier, C. Bingham, R. Borcea, E. Bouchez, A. Buta, E. Dragulescu, G. de France, G. Georgiev, J. Giovinazzo, F. Hammache, F. Ibrahim, P. Mayet, V. Méot, F. Negoita, F. De Oliveira-Santos, O. Perru, O. Roig, K. Rykaczewski, M.G. Saint-Laurent, J.E. Sauvestre, O. Sorlin, M. Stanoiu, I. Stefan, C. Stodel, Ch. Theisen, D. Verney, J. Zylicz
2004Sc42	PRVCA	70,	054318	A. Scherillo, J. Genevey, J.A. Pinston, A. Covello, H. Faust, A. Gargano, R. Orlandi, G.S. Simpson, I. Tsekhanovich, N. Warr
2004Sh15	EPJAA	20,	207	T. Shizuma, Z.G. Gan, K. Ogawa, H. Nakada, M. Oshima, Y. Toh, T. Hayakawa, Y. Hatsukawa, M. Sugawara, Y. Utsuno, Z. Liu
2004St05	PYLBB	586,	27	J. Stadlmann, M. Hausmann, F. Attallah, K. Beckert, P. Beller, F. Bosch, H. Eickhoff, M. Falch, B. Franczak, B. Franzke, H. Geissel, Th. Kerscher, O. Klepper, H.-J. Kluge, C. Kozhuharov, Yu. A. Litvinov, K.E.G. Löbner, M. Matoš, G. Münzenberg, N. Nankov, F. Nolden, Yu. N. Novikov, T. Ohtsubo, T. Radon, H. Schatz, C. Scheidenberger, M. Steck, H. Weick, H. Wollnik
2004St18	NUPAB	738,	43	S.V. Stepantsov, M.S. Golovkov, A.S. Fomichev, A.M. Rodin, S.I. Sidorchuk, R.S. Slepnev, G.M. Ter-Akopian, M.L. Chelnokov, V.A. Gorshkov, Yu. Ts. Oganessian, R. Wolski, A.A. Korshennikov, E. Yu. Nikolskii, I. Tanihata

2004Th09	EPJAA	21,	419	J.C. Thomas, L. Achouri, J. Äystö, R. Beraud, B. Blank, G. Canchel, S. Czajkowski, P. Dendooven, A. Ensalle, J. Giovinazzo, N. Guillet, J. Honkanen, A. Jokinen, A. Laird, M. Lewitowicz, C. Longour, F. de Oliveira Santos, K. Peräjärvi, M. Stanoiu
2004Th17	NATUA	430,	58	J.K. Thompson, S. Rainville, D.E. Pritchard
2004Ti06	NUPAB	745,	155	D.R. Tilley, J.H. Kelley, J.L. Godwin, D.J. Millener, J.E. Purcell, C.G. Sheu, H.R. Weller
2004To03	PRVCA	69,	014312	I. Tomandl, J. Novák, V. Burjan, S. Raman, T. von Egidy, H.-F. Wirth, U. Köster, W. Schauer, J.W. Starnner, E.T. Journey, G. Graw, R. Hertenberg, A. Gollwitzer, B. Valnion, A. Metz
2004Ur04	EPJAA	22,	157	W. Urban, A. Zlomaniec, G. Simpson, J.A. Pinston, J. Kurpeta, T. Rzaca-Urban, J.L. Durell, A.G. Smith, B.J. Varley, N. Schulz, I. Ahmad
2004Va03	PRVCA	69,	024316	J.J. Valiente-Dobón, P.H. Regan, C. Wheldon, C.Y. Wu, N. Yoshinaga, K. Higashiyama, J.F. Smith, D. Cline, R.S. Chakravarthy, R. Chapman, M. Cromaz, P. Fallon, S.J. Freeman, A. Görgen, W. Gelletly, A. Hayes, H. Hua, S.D. Langdown, I.Y. Lee, X. Liang, A.O. Macchiavelli, C.J. Pearson, Zs. Podolyák, G. Sletten, R. Teng, D. Ward, D.D. Warner, A.D. Yamamoto
2004Va07	PRLTA	92,	112501	J. Van Roosbroeck, C. Guénaut, G. Audi, D. Beck, K. Blaum, G. Bollen, J. Cederkall, P. Delahaye, A. De Maesschalck, H. De Witte, D. Fedorov, V.N. Fedoseyev, S. Franchoo, H.O.U. Fynbo, M. Górska, F. Herfurth, K. Heyde, M. Huyse, A. Kellerbauer, H.-J. Kluge, U. Köster, K. Kruglov, D. Lunney, V.I. Mishin, W.F. Mueller, Sz. Nagy, S. Schwarz, L. Schweikhard, N.A. Smirnova, K. Van de Vel, P. Van Duppen, A. Van Dyck, W.B. Walters, L. Weissman, C. Yazidjian
2004Va14	PRLTA	92,	220802	R.S. Van Dyck, Jr., S.L. Zafonte, S. Van Liew, D.B. Pinegar, P.B. Schwinber
2004Wa26	PRVCA	70,	034314	W.B. Walters, B.E. Tomlin, P.F. Mantica, B.A. Brown, J. Rikowska Stone, A.D. Davies, A. Estrade, P.T. Hosmer, N. Hoteling, S.N. Liddick, T.J. Mertzimekis, F. Montes, A.C. Morton, W.F. Mueller, M. Ouellette, E. Pellegrini, P. Santi, D. Seweryniak, H. Schatz, J. Shergur, A. Stolz
2004Wo07	PRVCA	69,	051302	P.J. Woods, P. Munro, D. Seweryniak, C.N. Davids, T. Davinson, A. Heinz, H. Mahmud, F. Sarazin, J. Shergur, W.B. Walters, A. Woehr
2004Wo16	NUPAB	742,	349	A. Wöhr, A. Aprahamian, P. Boutachkov, J.L. Galache, J. Gorres, M. Shawcross, A. Teymurazyan, M.C. Wiescher, D.S. Brenner, C.N. Davids, S.M. Fischer, A.M. Heinz, R.V.F. Janssens, D. Seweryniak
2004Xu08	JUPSA	73,	2588	Y. Xu, W. Yang, S. Yuan, Y. Niu, H. Ding, X. Wang, L. Zhao, P. Wang, H. Li
2004Ze05	EPJAA	20,	389	T. Zerguerras, B. Blank, Y. Blumenfeld, T. Suomijärvi, D. Beaumel, B.A. Brown, M. Chartier, M. Fallot, J. Giovinazzo, C. Jouanne, V. Lapoux, I. Lhenry-Yvon, W. Mittig, P. Roussel-Chomaz, H. Savajols, J.A. Scarpaci, A. Shrivastava, M. Thoennessen
2005				
2005Ah03	PRVCA	71,	054305	I. Ahmad, F.G. Kondev, E.F. Moore, M.P. Carpenter, R.R. Chasman, J.P. Greene, R.V.F. Janssens, T. Lauritsen, C.J. Lister, D. Seweryniak, R.W. Hoff, J.E. Evans, R.W. Lougheed, C.E. Porter, L.K. Felker
2005As05	PRLTA	95,	102502	M. Asai, K. Tsukada, M. Sakama, S. Ichikawa, T. Ishii, Y. Nagame, I. Nishinaka, K. Akiyama, A. Osa, Y. Oura, K. Sueki, M. Shibata
2005Ba51	PRVCA	71,	054302	A.M. Baxter, A.P. Byrne, G.D. Dracoulis, P.M. Davidson, T. Kibédi, R.V.F. Janssens, M.P. Carpenter, C.N. Davids, T.L. Khoo, T. Lauritsen
2005Ba64	PRVCA	72,	017301	A.E. Barzakh, D.V. Fedorov, A.M. Ionan, V.S. Ivanov, F.V. Moroz, K.A. Mezilev, S. Yu. Orlov, V.N. Panteleev, Yu. M. Volkov
2005Bb02	EPJAA	25,	s149	J.C. Batchelder, M. Tantawy, C.R. Bingham, M. Danchev, D.J. Fong, T.N. Ginter, C.J. Gross, R. Grzywacz, K. Hagino, J.H. Hamilton, M. Karny, W. Krolas, C. Mazzocchi, A. Piechaczek, A.V. Ramayya, K.P. Rykaczewski, A. Stolz, J.A. Winger, C.-H. Yu, E.F. Zganjar
2005Bh06	NUPAB	750,	199	T. Bhattacharjee, S. Chanda, S. Bhattacharyya, S.K. Basu, R.K. Bhowmik, S. Muralithar, R.P. Singh, N.S. Pattabiraman, S.S. Ghugre, U. Datta Pramanik, S. Bhattacharya
2005BI15	PRLTA	94,	232501	B. Blank, A. Bey, G. Canchel, C. Dossat, A. Fleury, J. Giovinazzo, I. Matea, N. Adimi, F. De Oliveira, I. Stefan, G. Georgiev, S. Grévy, J.C. Thomas, C. Borcea, D. Cortina, M. Caamano, M. Stanoiu, F. Aksouh, B.A. Brown, F.C. Barker, W.A. Richter

2005Ca02	EPJAA	23,	201	M. Caamano, P.M. Walker, P.H. Regan, M. Pfutzner, Zs. Podolyak, J. Gerl, M. Hellstrom, P. Mayet, M.N. Mineva, A. Aprahamian, J. Benlliure, A.M. Bruce, P.A. Butler, D. Cortina Gil, D.M. Cullen, J. Doring, T. Enqvist, C. Fox, J. Garces Narro, H. Geissel, W. Gelletly, J. Giovinazzo, M. Gorska, H. Grawe, R. Grzywacz, A. Kleinbohl, W. Korten, M. Lewitowicz, R. Lucas, H. Mach, C.D. O'Leary, F. De Oliveira, C.J. Pearson, F. Rejmund, M. Rejmund, M. Sawicka, H. Schaffner, C. Schlegel, K. Schmidt, K.-H. Schmidt, P.D. Stevenson, Ch. Theisen, F. Vives, D.D. Warner, C. Wheldon, H.J. Wollersheim, S. Wooding, F. Xu, O. Yordanov
2005Ca03	NUPAB	748,	333	C.M. Cattadori, M. De Deo, M. Laubenstein, L. Pandola, V.I. Tretyak
2005Ca43	JPGPE	31,	s1599	M.P. Carpenter, F.G. Kondev, R.V.F. Janssens
2005Ca.A	AnRpt ANL,		51	M.P. Carpenter et al.
2005Ch65	PRVCA	72,	054309	A. Chakraborty, Krishichayan, S.S. Ghugre, R. Goswami, S. Mukhopadhyay, N.S. Pattabiraman, S. Ray, A.K. Sinha, S. Sarkar, P.V. Madhusudhana Rao, U. Garg, S.K. Basu, M.B. Chatterjee, M.S. Sarkar, L. Chaturvedi, A. Dhal, R.K. Sinha, I.M. Govil, R.K. Bhowmik, A. Jhingan, N. Madhavan, S. Muralithar, S. Nath, R.P. Singh, P. Sugathan
2005De01	EPJAA	23,	243	H. De Witte, A.N. Andreyev, S. Dean, S. Franchoo, M. Huyse, O. Ivanov, U. Köster, W. Kurcewicz, J. Kurpeta, A. Plochocki, K. Van de Vel, J. Van de Walle, P. Van Duppen
2005Do20	PRVCA	72,	054315	C. Dossat, A. Bey, B. Blank, G. Canchel, A. Fleury, J. Giovinazzo, I. Matea, F. de Oliveira Santos, G. Georgiev, S. Grévy, I. Stefan, J.C. Thomas, N. Adimi, C. Borcea, D. Cortina Gil, M. Caamano, M. Stanoiu, F. Aksouh, B.A. Brown, L.V. Grigorenko
2005Dr05	PRVCA	71,	044326	G.D. Dracoulis, G.J. Lane, F.G. Kondev, A.P. Byrne, T. Kibédi, H. Watanabe, I. Ahmad, M.P. Carpenter, S.J. Freeman, R.V.F. Janssens, N.J. Hammond, T. Lauritsen, C.J. Lister, G. Mukherjee, D. Seweryniak, P. Chowdhury, S.K. Tandel
2005Ei10	PRVCA	72,	054306	H.M. El-Masri, P.M. Walker, G.D. Dracoulis, T. Kibédi, A.P. Byrne, A.M. Bruce, J.N. Orce, A. Emmanouilidis, D.M. Cullen, C. Wheldon, F.R. Xu
2005Fr.A	IPNO-DRE-NS		5	S. Franchoo, N. Barre, B. Roussiere, J. Sauvage
2005Ga01	EPJAA	23,	41	L. Gaudefroy, O. Sorlin, C. Donzaud, J.C. Angélique, F. Azaiez, C. Bourgeois, V. Chisté, Z. Dlouhy, S. Grevy, D. Guillemaud-Mueller, F. Ibrahim, K.-L. Kratz, M. Lewitowicz, S.M. Lukyanov, I. Matea, J. Mrazek, F. Nowacki, F. de Oliveira Santos, Yu.-E. Penionzhkevich, B. Pfeiffer, F. Pougheon, M.G. Saint-Laurent, M. Stanoiu
2005Ga20	PYLBB	619,	88	A. Gadea, S.M. Lenzi, D.R. Napoli, M. Axiotis, C.A. Ur, G. Martínez-Pinedo, M. Górska, E. Roeckl, E. Caurier, F. Nowacki, G. de Angelis, L. Batist, R. Borcea, F. Brandolini, D. Cano-Ott, J. Döring, C. Fahlander, E. Farnea, H. Grawe, M. Hellström, Z. Janas, R. Kirchner, M. La Commara, C. Mazzocchi, E. Nacher, C. Plettner, A. Plochocki, B. Rubio, K. Schmidt, R. Schwengner, J.L. Tain, J. Żylicz
2005Ga.B	Th.-Orsay Sept			L. Gaudefroy
2005Gi15	JPGPE	31,	s1509	J. Giovinazzo
2005Gr07	PRVCA	71,	044309	G.F. Grinyer, C.E. Svensson, C. Andreoiu, A.N. Andreyev, R.A.E. Austin, G.C. Ball, R.S. Chakrawarthy, P. Finlay, P.E. Garrett, G. Hackman, J.C. Hardy, B. Hyland, V.E. Jacob, K.A. Koopmans, W.D. Kulp, J.R. Leslie, J.A. Macdonald, A.C. Morton, W.E. Ormand, C.J. Osborne, C.J. Pearson, A.A. Phillips, F. Sarazin, M.A. Schumaker, H.C. Scraggs, J. Schwarzenberg, M.B. Smith, J.J. Valiente-Dobón, J.C. Waddington, J.L. Wood, E.F. Zganjar
2005Gr32	EPJAA	25,	s145	R. Grzywacz, M. Karny, K.P. Rykaczewski, J.C. Batchelder, C.R. Bingham, D. Fong, C.J. Gross, W. Krolas, C. Mazzocchi, A. Piechaczek, M.N. Tantawy, J.A. Winger, E.F. Zganjar
2005Gu25	PRVCA	72,	034312	F.Q. Guo, J. Powell, D.W. Lee, D. Leitner, M.A. McMahan, D.M. Moltz, J.P. O'Neil, K. Perajarvi, L. Phair, C.A. Ramsey, X.J. Xu, J. Cerny
2005Gu27	JPGPE	31,	s1765	C. Guénaut, G. Audi, D. Beck, K. Blaum, G. Bollen, P. Delahaye, F. Herfurth, A. Kellerbauer, H.-J. Kluge, D. Lunney, S. Schwarz, L. Schweikhard, C. Yazidjian
2005Gu37	EPJAA	25,	s35	C. Guénaut, G. Audi, D. Beck, K. Blaum, G. Bollen, P. Delahaye, F. Herfurth, A. Kellerbauer, H.-J. Kluge, D. Lunney, S. Schwarz, L. Schweikhard, C. Yazidjian

2005Ha45	PRVCA	72,	024303	S. Harissopoulos, J. Döring, M. La Commara, K. Schmidt, C. Mazzocchi, R. Borcea, S. Galanopoulos, M. Górská, H. Grawe, M. Hellström, Z. Janas, R. Kirchner, E. Roeckl, I.P. Johnstone, R. Schwengner, L.D. Skouras
2005He26	EPJAA	25,	s17	F. Herfurth, G. Audi, D. Beck, K. Blaum, G. Bollen, P. Delahaye, S. George, C. Guénaut, A. Herlert, A. Kellerbauer, H.-J. Kluge, D. Lunney, M. Mukherjee, S. Rahaman, S. Schwarz, L. Schweikhard, C. Weber, C. Yazidjian
2005He27	EPJAA	26,	233	F.P. Heßberger, S. Antalic, B. Streicher, S. Hofmann, D. Ackermann, B. Kindler, I. Kojouharov, P. Kuusiniemi, M. Leino, B. Lommel, R. Mann, K. Nishio, S. Saro, B. Sulignano
2005He.A	PrvCom	GAu	Aug	A. Herlert
2005Ho08	PRLTA	94,	112501	P.T. Hosmer, H. Schatz, A. Aprahamian, O. Arndt, R.R.C. Clement, A. Estrade, K.-L. Kratz, S.N. Liddick, P.F. Mantica, W.F. Mueller, F. Montes, A.C. Morton, M. Ouellette, E. Pellegrini, B. Pfeiffer, P. Reeder, P. Santi, M. Steiner, A. Stolz, B.E. Tomlin, W.B. Walters, A. Wöhr
2005Ho15	NUPAB	756,	249	J. Honzátko, V. Bondarenko, I. Tomandl, T. von Egidy, H.-F. Wirth, D. Bucurescu, V. Yu. Ponomarev, N. Mărginean, R. Hertenberger, Y. Eisermann, G. Graw, L. Rubáček
2005Hu.A	PrvCom	GAu	Jul	M. Huysse
2005Ic02	PRVCA	71,	067302	S. Ichikawa, M. Asai, K. Tsukada, H. Haba, Y. Nagame, M. Shibata, M. Sakama, Y. Kojima
2005Ja03	EPJAA	23,	197	Z. Janas, C. Mazzocchi, L. Batist, A. Blazhev, M. Górská, M. Kavatsyuk, O. Kavatsyuk, R. Kirchner, A. Korgul, M. La Commara, K. Miernik, I. Mukha, A. Plochocki, E. Roeckl, K. Schmid
2005Ja06	EPJAA	23,	401	Z. Janas, L. Batist, J. Doring, M. Gierlik, R. Kirchner, J. Kurcewicz, H. Mahmud, C. Mazzocchi, A. Plochocki, E. Roeckl, K. Schmidt, P.J. Woods, J. Żylicz
2005Ja10	EPJAA	24,	205	Z. Janas, L. Batist, R. Borcea, J. Doring, M. Gierlik, M. Karny, R. Kirchner, M. La Commara, S. Mandal, C. Mazzocchi, F. Moroz, S. Orlov, A. Plochocki, E. Roeckl, J. Żylicz
2005Ka34	EPJAA	25,	211	O. Kavatsyuk, M. Kavatsyuk, L. Batist, A. Banu, F. Becker, A. Blazhev, W. Brüche, J. Döring, T. Faestermann, M. Górská, H. Grawe, Z. Janas, A. Jungclaus, M. Karny, R. Kirchner, M. La Commara, S. Mandal, C. Mazzocchi, I. Mukha, S. Muralithar, C. Plettner, A. Plochocki, E. Roeckl, M. Romoli, M. Schädel, R. Schwengner, J. Żylicz
2005Ka39	EPJAA	25,	355	A. Kankainen, G.K. Vorobjev, S.A. Eliseev, W. Huang, J. Huikari, A. Jokinen, A. Nieminen, Yu. N. Novikov, H. Penttilä, A.V. Popov, S. Rinta-Antila, H. Schatz, D.M. Seliverstov, Yu. P. Suslov, J. Äystö
2005Kr20	EPJAA	25,	s633	K.-L. Kratz, B. Pfeiffer, O. Arndt, S. Hennrich, A. Wöhr, ISOLDE
2005Ku06	EPJAA	23,	417	P. Kuusiniemi, F.P. Heßberger, D. Ackermann, S. Hofmann, I. Kojouharov
2005Ku31	EPJAA	25,	397	P. Kuusiniemi, F.P. Heßberger, D. Ackermann, S. Hofmann, B. Sulignano, I. Kojouharov, R. Mann
2005Ku.A	P-Debrecen		73	T. Kurtukian Nieto, J. Benlliure, K.-H. Schmidt, E. Casarejos, D. Cortina-Gil, M. Fernandez-Ordóñez, J. Pereira, L. Audouin, B. Blank, F. Becker, J. Giovannazzo, D. Henzlova, B. Jurado, F. Rejmund, O. Yordanov
2005La01	PYLBB	606,	34	G.J. Lane, K.H. Maier, A.P. Byrne, G.D. Dracoulis, R. Broda, B. Fornal, M.P. Carpenter, R.M. Clark, M. Cromaz, R.V.F. Janssens, A.O. Macchiavelli, I. Wiedenhover, K. Vetter
2005Le34	PRVCA	72,	034305	F. Le Blanc, L. Cabaret, E. Cottureau, J.E. Crawford, S. Essabaa, J. Genevey, R. Horn, G. Huber, J. Lassen, J.K.P. Lee, G. Le Scornet, J. Lettry, J. Obert, J. Oms, A. Ouchrif, J. Pinard, H. Ravn, B. Roussière, J. Sauvage, D. Verney
2005Le42	EPJAA	25,	s183	A.-P. Leppänen, J. Uusitalo, S. Eeckhauudt, T. Enqvist, K. Eskola, T. Grahn, F.P. Heßberger, P.T. Greenlees, P. Jones, R. Julin, S. Juutinen, H. Kettunen, P. Kuusiniemi, M. Leino, P. Nieminen, J. Pakarinen, J. Perkowski, P. Rakhila, C. Scholey, G. Sletten
2005Li17	NIMAE	543,	591	Z. Liu, J. Kurcewicz, P.J. Woods, C. Mazzocchi, F. Attallah, E. Badura, C.N. Davids, T. Davinson, J. Döring, H. Geissel, M. Górská, R. Grzywacz, M. Hellström, Z. Janas, M. Karny, A. Korgul, I. Mukha, M. Pfützner, C. Plettner, A. Robinson, E. Roeckl, K. Rykaczewski, K. Schmidt, D. Seweryniak, H. Weick
2005Li24	NUPAB	756,	3	Yu. A. Litvinov, H. Geissel, T. Radon, F. Attallah, G. Audi, K. Beckert, F. Bosch, M. Falch, B. Franzke, M. Hausmann, M. Hellström, Th. Kerscher, O. Klepper, H.-J. Kluge, C. Kozuharov, K.E.G. Löbner, G. Münzenberg, F. Nolden, Yu. N. Novikov, W. Quint, Z. Patyk, H. Reich, C. Scheidenberger, B. Schlitt, M. Steck, K. Sümmerer, L. Vermeeren, M. Winkler, Th. Winkler, H. Wollnik

2005Li47	PRVCA	72,	047301	Z. Liu, P.J. Woods, K. Schmidt, H. Mahmud, P.S.L. Munro, A. Blazhev, J. Döring, H. Grawe, M. Hellstrom, R. Kirchner, Z.K. Li, C. Mazzocchi, I. Mukha, C. Plettner, E. Roeckl, M. La Commara
2005Li53	PRVCA	72,	054321	S.N. Liddick, P.F. Mantica, R. Broda, B.A. Brown, M.P. Carpenter, A.D. Davies, B. Fornal, M. Horoi, R.V.F. Janssens, A.C. Morton, W.F. Mueller, J. Pavan, H. Schatz, A. Stolz, S.L. Tabor, B.E. Tomlin, M. Wiedeking
2005Li60	PRVCA	72,	064327	Z.H. Li, Y.L. Ye, H. Hua, D.X. Jiang, Y.M. Zhang, F.R. Xu, Q.Y. Hu, G.L. Zhang, Z.Q. Chen, T. Zheng, C.E. Wu, J.L. Lou, X.Q. Li, D.Y. Pang, S. Wang, C. Li, H.S. Xu, Z.Y. Sun, L.M. Duan, Z.G. Hu, R.J. Hu, H.G. Xu, R.S. Mao, Y. Wang, X.H. Yuan, H. Gao, L.J. Wu, H.R. Qi, T.H. Huang, F. Fu, F. Jia, Q. Gao, X.L. Ding, J.L. Han, X.Y. Zhang
2005Ma95	EPJAA	25,	s93	C. Mazzocchi, R. Grzywacz, J.C. Batchelder, C.R. Bingham, D. Fong, J.H. Hamilton, J.K. Hwang, M. Karny, W. Krolas, S.N. Liddick, A.C. Morton, P.F. Mantica, W.F. Mueller, K.P. Rykaczewski, M. Steiner, A. Stolz, J.A. Winger
2005Ma.A	PrvCom	GAu	Oct	M. Martin
2005Mu15	PRLTA	95,	022501	I. Mukha, E. Roeckl, J. Döring, L. Batist, A. Blazhev, H. Grawe, C.R. Hoffman, M. Huyse, Z. Janas, R. Kirchner, M. La Commara, C. Mazzocchi, C. Plettner, S.L. Tabor, P. Van Duppen, M. Wiedeking
2005Og02	PRVCA	72,	034611	Yu. Ts. Oganessian, V.K. Utyonkov, S.N. Dmitriev, Yu. V. Lobanov, M.G. Itkis, A.N. Polyakov, Yu. S. Tsyganov, A.N. Mezentsev, A.V. Yeremin, A.A. Voinov, E.A. Sokol, G.G. Gulbekian, S.L. Bogomolov, S. Iliev, V.G. Subbotin, A.M. Sukhov, G.V. Buklanov, S.V. Shishkin, V.I. Chepygin, G.K. Vostokin, N.V. Aksenov, M. Hussonnois, K. Subotic, V.I. Zagrebaev, K.J. Moody, J.B. Patin, J.F. Wild, M.A. Stoyer, N.J. Stoyer, D.A. Shaughnessy, J.M. Kennelly, P.A. Wilk, R.W. Lougheed, H.W. Gäggeler, D. Schumann, H. Bruchertseifer, R. Eichler
2005Oh08	PRLTA	95,	052501	T. Ohtsubo, F. Bosch, H. Geissel, L. Maier, C. Scheidenberger, F. Attallah, K. Beckert, P. Beller, D. Boutin, T. Faestermann, B. Franczak, B. Franzke, M. Hausmann, M. Hellstrom, E. Kaza, P. Kienle, O. Klepper, H.-J. Kluge, C. Kozhuharov, Yu. A. Litvinov, M. Matos, G. Munzenberg, F. Nolden, Yu. N. Novikov, M. Portillo, T. Radon, J. Stadlmann, M. Steck, T. Stohler, K. Summerer, K. Takahashi, H. Weick, M. Winkler, T. Yamaguchi
2005On03	PRVCA	72,	024308	T.K. Onishi, A. Gelberg, H. Sakurai, K. Yoneda, N. Aoi, N. Imai, H. Baba, P. von Brentano, N. Fukuda, Y. Ichikawa, M. Ishihara, H. Iwasaki, D. Kameda, T. Kishida, A.F. Lisetskiy, H.J. Ong, M. Osada, T. Otsuka, M.K. Suzuki, K. Ue, Y. Utsuno, H. Watanabe
2005Pa31	PRVCA	71,	055804	A. Parikh, J.A. Caggiano, C. Deibel, J.P. Greene, R. Lewis, P.D. Parker, C. Wrede
2005Pi13	PRVCA	71,	064327	J.A. Pinston, J. Genevey, R. Orlandi, A. Scherillo, G.S. Simpson, I. Tsekhanovich, W. Urban, H. Faust, N. Warr
2005Po03	EPJAA	24,	39	M.-G. Porquet, Ts. Venkova, R. Lucas, A. Astier, A. Bauchet, I. Deloncle, A. Prevost, F. Azaiez, G. Barreau, A. Bogachev, N. Buforn, A. Buta, D. Curien, T.P. Doan, L. Donadille, O. Dorvaux, G. Duchene, J. Durell, Th. Ethvignot, B.P.J. Gall, D. Grimwood, M. Houry, F. Khalfallah, W. Kortzen, S. Lalkovski, Y. Le Coz, M. Meyer, A. Minkova, I. Piqueras, N. Redon, A. Roach, M. Rousseau, N. Schulz, A.G. Smith, O. Stezowski, Ch. Theisen, B.J. Varley
2005Ra34	NATUA	438,	1096	S. Rainville, J.K. Thompson, E.G. Myers, J.M. Brown, M.S. Dewey, E.G. Kessler, Jr., R.D. Deslattes, H.G. Börner, M. Jentschel, P. Mutti, D.E. Pritchard
2005Re02	PRVCA	71,	014302	J.J. Ressler, C.W. Beausang, H. Ai, H. Amro, M. Babilon, J.A. Caggiano, R.F. Casten, G. Gurdal, A. Heinz, R.O. Hughes, E.A. McCutchan, D.A. Meyer, C. Plettner, J. Qian, M.J.S. Sciaccitano, N.J. Thomas, E. Williams, N.V. Zamfir
2005Ri17	JPHGB	31,	s1949	S. Rigby, D.M. Cullen, D.T. Scholes, C. Scholey, P. Rakhila, S. Eeckhaudt, T. Grahn, P. Greenlees, P.M. Jones, R. Julin, S. Juutinen, H. Kettunen, M. Leino, A. Leppänen, P. Nieminen, M. Nyman, J. Pakarinen, J. Uusitalo
2005Ro19	PRLTA	95,	032502	A.P. Robinson, P.J. Woods, D. Seweryniak, C.N. Davids, M.P. Carpenter, A.A. Hecht, D. Peterson, S. Sinha, W.B. Walters, S. Zhu
2005Ro40	EPJAA	25,	s155	A.P. Robinson, C.N. Davids, D. Seweryniak, P.J. Woods, B. Blank, M.P. Carpenter, T. Davinson, S.J. Freeman, N. Hammond, N. Hoteling, R.V.F. Janssens, T.L. Khoo, Z. Liu, G. Mukherjee, C. Scholey, J. Shergur, S. Sinha, A.A. Sonzogni, W.B. Walters, A. Woehr

2005Sa44	PRLTA	95,	102501	G. Savard, F. Buchinger, J.A. Clark, J.E. Crawford, S. Gulick, J.C. Hardy, A.A. Hecht, J.K.P. Lee, A.F. Levand, N.D. Scielzo, H. Sharma, K.S. Sharma, I. Tanihata, A.C.C. Villari, Y. Wang
2005Sc22	JPGPE	31,	s1719	C. Scholey, M. Sandzelius, S. Eeckhaudt, T. Grahn, P.T. Greenlees, P. Jones, R. Julin, S. Juutinen, M. Leino, A.-P. Leppanen, P. Nieminen, M. Nyman, J. Perkowski, J. Pakarinen, P. Rahkila, P.M. Rahkila, J. Uusitalo, K. Van de Vel, B. Cederwall, B. Hadinia, K. Lagergren, D.T. Joss, D.E. Appelbe, C.J. Barton, J. Simpson, D.D. Warner, I.G. Darby, R.D. Page, E.S. Paul, D. Wiseman
2005Sh24	PRVCA	71,	064323	J. Shergur, D.J. Dean, D. Seweryniak, W.B. Walters, A. Wöhr, P. Boutachkov, C.N. Davids, I. Dillmann, A. Juodagalvis, G. Mukherjee, S. Sinha, A. Teymurazyan, I. Zartova
2005Sh38	PRVAA	72,	022510	W. Shi, M. Redshaw, E.G. Myers, and PrvCom GAU February 2006
2005Sh52	EPJAA	25,	s45	K.S. Sharma, J. Vaz, R.C. Barber, F. Buchinger, J.A. Clark, J.E. Crawford, H. Fukutani, J.P. Greene, S. Gulick, A. Heinz, J.K.P. Lee, G. Savard, Z. Zhou, J.C. Wang
2005Si34	NUPAB	763,	45	G. Sikler, G. Audi, D. Beck, K. Blaum, G. Bollen, F. Herfurth, A. Kellerbauer, H.-J. Kluge, D. Lunney, M. Oinonen, C. Scheidenberger, S. Schwarz, J. Szerypo, C. Weber, and erratum NUPAB 768(2006)160
2005St29	PYLBB	627,	32	A. Stolz, T. Baumann, N.H. Frank, T.N. Ginter, G.W. Hitt, E. Kwan, M. Mocko, W. Peters, A. Schiller, C.S. Sumithrarachchi, M. Thoennessen
2005Th03	PRVCA	71,	021302	J.S. Thomas, D.W. Bardayan, J.C. Blackmon, J.A. Cizewski, U. Greife, C.J. Gross, M.S. Johnson, K.L. Jones, R.L. Kozub, J.F. Liang, R.J. Livesay, Z. Ma, B.H. Moazen, C.D. Nesaraja, D. Shapira, M.S. Smith
2005Th.A	P-Cadarache		131	J.-C. Thomas, et al
2005Tr13	EPJAA	25,	s101	V. Tripathi, S.L. Tabor, P.F. Mantica, C.R. Hoffman, M. Wiedeking, A.D. Davies, S.N. Liddick, W.F. Mueller, A. Stolz, B.E. Tomlin, A. Volya
2005Uu02	PRVCA	71,	024306	J. Uusitalo, M. Leino, T. Enqvist, K. Eskola, T. Grahn, P.T. Greenlees, P. Jones, R. Julin, S. Juutinen, A. Keenan, H. Kettunen, H. Koivisto, P. Kuusiniemi, A.-P. Leppänen, P. Nieminen, J. Pakarinen, P. Rahkila, C. Scholey
2005Va04	EPJAA	24,	57	K. Van de Vel, A.N. Andreyev, D. Ackermann, H.J. Boardman, P. Cagarda, J. Gerl, F.P. Heßberger, S. Hofmann, M. Huyse, D. Karlgren, I. Kojouharov, M. Leino, B. Lommel, G. Münzenberg, C. Moore, R.D. Page, S. Saro, P. Van Duppen, R. Wyss
2005Va19	PRVCA	71,	054307	J. Van Roosbroeck, H. De Witte, M. Gorska, M. Huyse, K. Kruglov, D. Pauwels, J.-Ch. Thomas, K. Van de Vel, P. Van Duppen, S. Franchoo, J. Cederkall, V.N. Fedoseyev, H. Fynbo, U. Georg, O. Jonsson, U. Koster, L. Weissman, W.F. Mueller, V.I. Mishin, D. Fedorov, A. De Maesschalck, N.A. Smirnova, K. Heyde
2005We11	PYLAA	347,	81	C. Weber, G. Audi, D. Beck, K. Blaum, G. Bollen, F. Herfurth, A. Kellerbauer, H.-J. Kluge, D. Lunney, S. Schwarz
2005Xu04	PRVCA	71,	054318	S.W. Xu, Z.K. Li, Y.X. Xie, Q.Y. Pan, W.X. Huang, X.D. Wang, Y. Yu, Y.B. Xing, N.C. Shu, Y.S. Chen, F.R. Xu, K. Wang
				2006
2006Ac04	EPJAA	27,	287	N.L. Achouri, F. de Oliveira Santos, M. Lewitowicz, B. Blank, J. Aystö, G. Canchel, S. Czajkowski, P. Dendooven, A. Emsallem, J. Giovinozzo, N. Guillet, A. Jokinen, A.M. Laird, C. Longour, K. Peräjärvi, N. Smirnova, M. Stanoiu, J.-C. Thomas
2006An04	PRVCA	73,	024317	A.N. Andreyev, S. Antalic, D. Ackermann, S. Franchoo, F.P. Heßberger, S. Hofmann, M. Huyse, I. Kojouharov, B. Kindler, P. Kuusiniemi, S.R. Leshner, B. Lommel, R. Mann, G. Münzenberg, K. Nishio, R.D. Page, J.J. Ressler, B. Streicher, S. Saro, B. Sulignano, P. Van Duppen, D.R. Wiseman
2006An11	PRVCA	73,	044324	A.N. Andreyev, S. Antalic, D. Ackermann, S. Franchoo, F.P. Heßberger, S. Hofmann, M. Huyse, I. Kojouharov, B. Kindler, P. Kuusiniemi, S.R. Leshner, B. Lommel, R. Mann, G. Münzenberg, K. Nishio, R.D. Page, J.J. Ressler, B. Streicher, S. Saro, B. Sulignano, P. Van Duppen, D. Wiseman, R. Wyss
2006An36	PRVCA	74,	064303	A.N. Andreyev, S. Antalic, M. Huyse, P. Van Duppen, D. Ackermann, L. Bianco, D.M. Cullen, I.G. Darby, S. Franchoo, S. Heinz, F.P. Heßberger, S. Hofmann, I. Kojouharov, B. Kindler, A.-P. Leppänen, B. Lommel, R. Mann, G. Münzenberg, J. Pakarinen, R.D. Page, J.J. Ressler, S. Saro, B. Streicher, B. Sulignano, J. Thomson, R. Wyss

2006As03	PRVCA	73,	067301	M. Asai, K. Tsukada, S. Ichikawa, M. Sakama, H. Haba, I. Nishinaka, Y. Nagame, S. Goto, Y. Kojima, Y. Oura, M. Shibata
2006Ba09	PRVCA	73,	024308	J.E. Bastin, R.-D. Herzberg, P.A. Butler, G.D. Jones, R.D. Page, D.G. Jenkins, N. Amzal, P.M.T. Brew, N.J. Hammond, R.D. Humphreys, P.J.C. Ikin, T. Page, P.T. Greenlees, P.M. Jones, R. Julin, S. Juutinen, H. Kankaanpää, A. Keenan, H. Kettunen, P. Kuusiniemi, M. Leino, A.P. Leppänen, M. Muikku, P. Nieminen, P. Rauhila, C. Scholey, J. Uusitalo, E. Bouchez, A. Chatillon, A. Hürstel, W. Korten, Y. Le Coz, Ch. Theisen, D. Ackermann, J. Gerl, K. Helariutta, F.P. Hessberger, Ch. Schlegel, H.J. Wollersheim, M. Lach, A. Maj, W. Meczynski, J. Styczen, T.L. Khoo, C.J. Lister, A.V. Afanasjev, H.J. Maier, P. Reiter, P. Bednarczyk, K. Eskola, K. Hauschild
2006Ba55	EPJAA	29,	175	L. Batist, A. Blazhev, J. Doring, H. Grawe, M. Kavatsyuk, O. Kavatsyuk, R. Kirchner, M. La Commara, C. Mazzocchi, I. Mukha, C. Plettner, E. Roeckl, M. Romoli
2006Be33	PRVCA	74,	024603	T. Belgya
2006Bo11	PRLTA	96,	152501	G. Bollen, D. Davies, M. Facina, J. Huikari, E. Kwan, P.A. Lofy, D.J. Morrissey, A. Prinke, R. Ringle, J. Savory, P. Schury, S. Schwarz, C. Sumithrarachchi, T. Sun, L. Weissman
2006Bo33	PHSTBT	125,	180	M.J.T. Borge, R. Boutami, L.M. Fraile, K. Gulda, W. Kurcewicz, H. Mach, T. Martinez, B. Rubio, O. Tengblad
2006Bu12	PRVCA	74,	025501	J.T. Burke, P.A. Vetter, S.J. Freedman, B.K. Fujikawa, W.T. Winter
2006Ca05	PRVCA	73,	014319	E. Casarejos, C. Angulo, P.J. Woods, F.C. Barker, P. Descouvemont, M. Aliotta, T. Davinson, P. Demaret, M. Gaelens, P. Leleux, Z. Liu, M. Loiselet, A.S. Murphy, A. Ninane, I.A. Roberts, G. Ryckewaert, J.S. Schweitzer, F. Vanderbist
2006Ch10	PRVCA	73,	024306	R.S. Chakrawarthy, P.M. Walker, J.J. Ressler, E.F. Zganjar, G.C. Ball, M.B. Smith, A.N. Andreyev, S.F. Ashley, R.A.E. Austin, D. Bandyopadhyay, J.A. Becker, J.J. Carroll, D.S. Cross, D. Gohlke, J.J. Daoud, P.E. Garrett, G.F. Grinyer, G. Hackman, G.A. Jones, R. Kanungo, W.D. Kulp, Y. Litvinov, A.C. Morton, W.J. Mills, C.J. Pearson, R. Propri, C.E. Svensson, R. Wheeler, S.J. Williams
2006Ch52	EPJAA	30,	397	A. Chatillon, Ch. Theisen, P.T. Greenlees, G. Auger, J.E. Bastin, E. Bouchez, B. Bouriquet, J.M. Casandjian, R. Cee, E. Clément, R. Dayras, G. de France, R. de Tournel, S. Eeckhaudt, A. Görge, T. Grahn, S. Grévy, K. Hauschild, R.-D. Herzberg, P.J.C. Ikin, G.D. Jones, P. Jones, R. Julin, S. Juutinen, H. Kettunen, A. Korichi, W. Korten, Y. Le Coz, M. Leino, A. Lopez-Martens, S.M. Lukyanov, Yu. E. Penionzhkevich, J. Perkowski, A. Pritchard, P. Rauhila, M. Rejmund, J. Saren, C. Scholey, S. Siem, M.G. Saint-Laurent, C. Simenel, Yu. G. Sobolev, Ch. Stodel, J. Uusitalo, A. Villari, M. Bender, P. Bonche, P.-H. Heenen
2006De21	PRVCA	73,	044303	M.S. Dewey, E.G. Kessler Jr., R.D. Deslattes, H.G. Börner, M. Jentschel, C. Doll, P. Mutti
2006De36	PRVCA	74,	034331	P. Delahaye, G. Audi, K. Blaum, F. Carrel, S. George, F. Herfurth, A. Herlert, A. Kellerbauer, H.-J. Kluge, D. Lunney, L. Schweikhard, C. Yazidjian
2006Dr04	PYLBB	635,	200	G.D. Dracoulis, G.J. Lane, F.G. Kondev, A.P. Byrne, R.O. Hughes, P. Nieminen, H. Watanabe, M.P. Carpenter, R.V.F. Janssens, T. Lauritsen, D. Seweryniak, S. Zhu, P. Chowdhury, F.R. Xu
2006Dv01	PRLTA	97,	242501	J. Dvorak, W. Brühle, M. Chelnokov, R. Dressler, Ch. E. Düllmann, K. Eberhardt, V. Gorshkov, E. Jäger, R. Krücken, A. Kuznetsov, Y. Nagame, F. Nebel, Z. Novackova, Z. Qin, M. Schädel, B. Schausten, E. Schimpf, A. Semchenkov, P. Thörle, A. Türler, M. Wegrzecki, B. Wierczinski, A. Yakushev, A. Yeremin
2006Er03	PYLBB	636,	191	T. Eronen, V. Elomaa, U. Hager, J. Hakala, A. Jokinen, A. Kankainen, I. Moore, H. Penttilä, S. Rahaman, S. Rinta-Antila, A. Saastamoinen, T. Sonoda, J. Äystö, A. Bey, B. Blank, G. Canchel, C. Dossat, J. Giovinazzo, I. Matea, N. Adimi
2006Er08	PRLTA	97,	232501	T. Eronen, V. Elomaa, U. Hager, J. Hakala, A. Jokinen, A. Kankainen, I. Moore, H. Penttilä, S. Rahaman, J. Rissanen, A. Saastamoinen, T. Sonoda, J. Äystö, J.C. Hardy, V.S. Kolhinen
2006Fi.A	IAEA-Library		45	R.B. Firestone, S.M. Mughabghab, G.L. Molnar in Database of prompt gamma rays from slow neutron capture for elemental analysis - Vienna : International Atomic Energy Agency, 2006.
2006Fo02	PRVCA	73,	014611	C.M. Folden III, S.L. Nelson, Ch. E. Düllmann, J.M. Schwantes, R. Sudowe, P.M. Zielinski, K.E. Gregorich, H. Nitsche, D.C. Hoffman

2006Fu06	PRVCA	73,	067303	T. Fukuchi, S. Tanaka, T. Sasaki, Y. Gono, A. Odahara, T. Morikawa, M. Shibata, H. Watanabe, S. Motomura, T. Tsutsumi, O. Kashiyama, K. Saitoh, Y. Wakabayashi, T. Kishida, S. Kubono, M. Ishihara
2006Ga04	NUPAB	766,	52	C. Gaulard, G. Audi, C. Bachelet, D. Lunney, M. de Saint Simon, C. Thibault, N. Vieira
2006Ga28	PRLTA	97,	092501	L. Gaudefroy, O. Sorlin, D. Beaumel, Y. Blumenfeld, Z. Dombrádi, S. Fortier, S. Franchoo, M. Gélín, J. Gibelin, S. Grévy, F. Hammache, F. Ibrahim, K.W. Kemper, K.-L. Kratz, S.M. Lukyanov, C. Monrozeau, L. Nalpas, F. Nowacki, A.N. Ostrowski, T. Otsuka, Yu.-E. Penionzhkevich, J. Piekarewicz, E.C. Pollacco, P. Roussel-Chomaz, E. Rich, J.A. Scarpaci, M.G. Saint-Laurent, D. Sohler, M. Stanoiu, T. Suzuki, E. Tryggestad, D. Verney
2006Ge05	PRVCA	73,	037308	J. Genevey, R. Guglielmini, R. Orlandi, J.A. Pinston, A. Scherillo, G. Simpson, I. Tsekhanovich, N. Warr, J. Jolie
2006Gr24	PRVCA	74,	044611	K.E. Gregorich, J.M. Gates, Ch. E. Düllmann, R. Sudowe, S.L. Nelson, M.A. Garcia, I. Dragojević, C.M. Folden III, S.H. Neumann, D.C. Hoffman, H. Nitsche
2006Ha03	PRLTA	96,	042504	U. Hager, T. Eronen, J. Hakala, A. Jokinen, V.S. Kolhinen, S. Kopecky, I. Moore, A. Nieminen, M. Oinonen, S. Rinta-Antila, J. Szerypo, J. Äystö
2006Ha17	NUIMA	560,	388	K. Hauschild, A.V. Yeremin, O. Dorvaux, A. Lopez-Martens A.V. Belozerov, Ch. Briançon, M.L. Chelnokov, V.I. Chepigin, S.A. Garcia-Santamaria, V.A. Gorshkov, F. Hanappe, A.P. Kabachenko, A. Korichi, O.N. Malyshev, Yu. Ts. Oganessian, A.G. Popeko, N. Rowley, A.V. Shutov, L. Stuttgé, A.I. Svirikhin
2006Ha62	IJMPD	251,	119	P.A. Hausladen, J.R. Beene, A. Galindo-Uribarri, Y. Larochele, J.F. Liang, P.E. Mueller, D. Shapira, D.W. Stracener, J. Thomas, R.L. Varner, H. Wollnik
2006He19	NATUA	442,	896	R.D. Herzberg, P.T. Greenlees, P.A. Butler, G.D. Jones, M. Venhart, I.G. Darby, S. Eeckhaudt, K. Eskola, T. Grahn, C. Gray-Jones, F.P. Heßberger, P. Jones, R. Julin, S. Juutinen, S. Ketelhut, W. Korten, M. Leino, A.-P. Leppänen, S. Moon, M. Nyman, R.D. Page, J. Pakarinen, A. Pritchard, P. Rahkila, J. Sarén, C. Scholey, A. Steer, Y. Sun, Ch. Theisen, J. Uusitalo
2006He20	EPJAA	29,	165	F.P. Heßberger, S. Hofmann, D. Ackermann, S. Antalic, B. Kindler, I. Kojouharov, P. Kuusiniemi, M. Leino, B. Lommel, R. Mann, K. Nishio, A.G. Popeko, B. Sulignano, S. Saro, B. Streicher, M. Venhart, A.V. Yeremin
2006He27	EPJAA	30,	561	F.P. Heßberger, S. Hofmann, D. Ackermann, S. Antalic, B. Kindler, I. Kojouharov, P. Kuusiniemi, M. Leino, B. Lommel, R. Mann, K. Nishio, A.G. Popeko, B. Sulignano, S. Saro, B. Streicher, M. Venhart, A.V. Yeremin
2006He29	IJMPD	251,	131	A. Herlert, S. Baruah, K. Blaum, P. Delahaye, M. Dworschak, S. George, C. Guenaut, U. Hager, F. Herfurth, A. Kellerbauer, M. Marie-Jeanne, S. Schwarz, L. Schweikhard, C. Yazidjian
2006Hi18	PYLBB	643,	257	P. Himpe, G. Neyens, D.L. Balabanski, G. Belier, D. Borremans, J.M. Daugas, F. de Oliveira Santos, M. De Rydt, K. Flanagan, G. Georgiev, M. Kowalska, S. Mallion, I. Matea, P. Morel, Yu. E. Penionzhkevich, N.A. Smirnova, C. Stodel, K. Turzó, N. Vermeulen, D. Yordanov
2006Hw01	PRVCA	73,	044316	J.K. Hwang, A.V. Ramayya, J.H. Hamilton, Y.X. Luo, A.V. Daniel, G.M. Ter-Akopian, J.D. Cole, S.J. Zhu
2006Jo10	PYLBB	641,	34	D.T. Joss, I.G. Darby, R.D. Page, J. Uusitalo, S. Eeckhaudt, T. Grahn, P.T. Greenlees, P.M. Jones, R. Julin, S. Juutinen, S. Ketelhut, M. Leino, A.-P. Leppänen, M. Nyman, J. Pakarinen, P. Rahkila, J. Sarén, C. Scholey, A. Steer, A.J. Cannon, P.D. Stevenson, J.S. Al-Khalili, S. Ertürk, M. Venhart, B. Gall, B. Hadinia, J. Simpson
2006Ka48	EPJAA	29,	271	A. Kankainen, L. Batist, S.A. Eliseev, V.-V. Elomaa, T. Eronen, U. Hager, J. Hakala, A. Jokinen, I. Moore, Yu. N. Novikov, H. Penttilä, K. Peräjärvi, A.V. Popov, S. Rahaman, S. Rinta-Antila, P. Ronkanen, A. Saastamoinen, D.M. Seliverstov, T. Sonoda, G.K. Vorobjev, J. Äystö
2006Ka74	IJMPD	251,	138	M. Kavatsyuk, L. Batist, M. Karny, E. Roeckl
2006Ku26	EPJAA	30,	551	P. Kuusiniemi, F.P. Heßberger, D. Ackermann, S. Antalic, S. Hofmann, K. Nishio, B. Sulignano, I. Kojouharov, R. Mann
2006La16	PRVCA	74,	024316	K. Lagergren, D.T. Joss, R. Wyss, B. Cederwall, C.J. Barton, S. Eeckhaudt, T. Grahn, P.T. Greenlees, B. Hadinia, P.M. Jones, R. Julin, S. Juutinen, D. Karlgren, H. Kettunen, M. Leino, A.-P. Leppänen, P. Nieminen, M. Nyman, R.D. Page, J. Pakarinen, E.S. Paul, P. Rahkila, C. Scholey, J. Simpson, J. Uusitalo, D.R. Wiseman

2006Li41	PRLTA	97,	082501	S.N. Liddick, R. Grzywacz, C. Mazzocchi, R.D. Page, K.P. Rykaczewski, J.C. Batchelder, C.R. Bingham, I.G. Darby, G. Drafta, C. Goodin, C.J. Gross, J.H. Hamilton, A.A. Hecht, J.K. Hwang, S. Ilyushkin, D.T. Joss, A. Korgul, W. Królas, K. Lagergren, K. Li, M.N. Tantawy, J. Thomson, J.A. Winger
2006Lo12	PRVCA	74,	044303	A. Lopez-Martens, K. Hauschild, A.V. Yeremin, A.V. Belozherov, Ch. Briançon, M.L. Chelnokov, V.I. Chepigin, D. Curien, O. Dorvaux, B. Gall, V.A. Gorskov, M. Guttormsen, F. Hanappe, A.P. Kabachenko, F. Khalfallah, A. Korichi, A.C. Larsen, O.N. Malyshev, A. Minkova, Yu. Ts. Oganessian, A.G. Popeko, M. Rousseau, N. Rowley, R.N. Sagaidak, S. Sharo, A.V. Shutov, S. Siem, A.I. Svirikhin, N.U.H. Syed, Ch. Theisen
2006Lu19	IJMPD	251,	286	D. Lunney, N. Vieira, G. Audi, C. Gaulard, M. de Saint Simon, C. Thibault
2006Ma.A	PrvCom	GAu	Jul	M. Martin
2006Me03	PRVCA	73,	024307	D.A. Meyer, C.W. Beausang, J.J. Ressler, H. Ai, H. Amro, M. Babilon, R.F. Casten, C.R. Fitzpatrick, G. Gurdal, A. Heinz, E.A. McCutchan, C. Plettner, J. Qian, N.J. Thomas, V. Werner, E. Williams, N.V. Zamfir, J. Zhang
2006Me04	PRVCA	73,	024318	T.J. Mertzimekis, P.F. Mantica, A.D. Davies, S.N. Liddick, B.E. Tomlin
2006Mo07	PRVCA	73,	035801	F. Montes, A. Estrade, P.T. Hosmer, S.N. Liddick, P.F. Mantica, A.C. Morton, W.F. Mueller, M. Ouellette, E. Pellegrini, P. Santi, H. Schatz, A. Stolz, B.E. Tomlin, O. Arndt, K.-L. Kratz, B. Pfeiffer, P. Reeder, W.B. Walters, A. Aprahamian, A. Wohr
2006Mu03	NATUA	439,	298	I. Mukha, E. Roeckl, L. Batist, A. Blazhev, J. Döring, H. Grawe, L. Grigorenko, M. Huyse, Z. Janas, R. Kirchner, M. La Commara, C. Mazzocchi, S.L. Tabor, P. Van Duppen
2006Na13	PRLTA	96,	163004	Sz. Nagy, T. Fritioff, M. Suhonen, R. Schuch, K. Blaum, M. Björkhage, I. Bergström also arXiv:1209.5281v1 24 Sep 2012
2006Na18	EPJDD	39,	1	Sz. Nagy, T. Fritioff, A. Solders, R. Schuch, M. Björkhage, I. Bergström
2006Na49	EULEE	74,	404	Sz. Nagy, T. Fritioff, M. Björkhage, I. Bergström, R. Schuch
2006Og05	PRVCA	74,	044602	Yu. Ts. Oganessian, V.K. Utyonkov, Yu. V. Lobanov, F. Sh. Abdullin, A.N. Polyakov, R.N. Sagaidak, I.V. Shirokovsky, Yu. S. Tsyganov, A.A. Voinov, G.G. Gulbekian, S.L. Bogomolov, B.N. Gikal, A.N. Mezentsev, S. Iliev, V.G. Subbotin, A.M. Sukhov, K. Subotic, V.I. Zagrebaev, G.K. Vostokin, M.G. Itkis, K.J. Moody, J.B. Patin, D.A. Shaughnessy, M.A. Stoyer, N.J. Stoyer, P.A. Wilk, J.M. Kenneally, J.H. Landrum, J.F. Wild, R.W. Lougheed
2006PaDG	JPGPE	33,	1	Particle Data Group
2006Pe16	PRVCA	74,	014313	F. Perrot, F. Maréchal, C. Jollet, Ph. Dessagne, J.-C. Angélique, G. Ban, P. Baumann, F. Benrachi, U. Bergmann, C. Borcea, A. Buta, J. Cederkall, S. Courtin, J.-M. Daugas, L.M. Fraile, S. Grévy, A. Jokinen, F.R. Lecolley, E. Liénard, G. Le Scornet, V. Méot, Ch. Miehé, F. Negoita, N.A. Orr, S. Pietri, E. Poirier, M. Ramdhane, O. Roig, I. Stefan, W. Wang
2006Pe17	PRVCA	74,	014316	D. Peterson, B.B. Back, R.V.F. Janssens, T.L. Khoo, C.J. Lister, D. Seweryniak, I. Ahmad, M.P. Carpenter, C.N. Davids, A.A. Hecht, C.L. Jiang, T. Lauritsen, X. Wang, S. Zhu, F.G. Kondev, A. Heinz, J. Qian, R. Winkler, P. Chowdhury, S.K. Tandel, U.S. Tandel
2006Ph01	PRVCA	74,	027302	A.A. Phillips, C. Andreoiu, G.C. Ball, D. Bandyopadhyay, J.A. Behr, T.E. Chupp, P. Finlay, P.E. Garrett, G.F. Grinyer, G. Hackman, M.E. Hayden, B. Hyland, S.R. Nuss-Warren, M.R. Pearson, M.A. Schumaker, M.B. Smith, C.E. Svensson, E.R. Tardiff, J.J. Valiente-Dobón, T. Warner
2006Po09	EPJAA	28,	153	M.-G. Porquet, Ts. Venkova, A. Astier, I. Deloncle, A. Prévost, F. Azaiez, A. Buta, D. Curien, O. Dorvaux, G. Duchêne, B.J.P. Gall, F. Khalfallah, I. Piqueras, M. Rousseau, M. Meyer, N. Redon, O. Stézowski, R. Lucas, A. Bogachev
2006Qi03	YWPIF	23,	400	Z. Qin, X.L. Wu, H.J. Ding, W. Wu, W.X. Huang, X.G. Lei, Y.B. Xu, X.H. Yuan, B. Guo, W.F. Yang, Z.G. Gan, H.M. Fan, J.S. Guo, H.S. Xu, G.Q. Xiao
2006Re19	IJMPD	251,	125	M. Redshaw, J. McDaniel, W. Shi, E.G. Myers, and PrvCom GAu February 2006
2006Ri15	IJMPD	251,	300	R. Ringle, P. Schury, T. Sun, G. Bollen, D. Davies, J. Huikari, E. Kwan, D.J. Morrissey, A. Prinke, J. Savory, S. Schwarz, C. Sumthrarachchi
2006Ro11	NUPAB	769,	1	D. Rodríguez, G. Audi, J. Äystö, D. Beck, K. Blaum, G. Bollen, F. Herfurth, A. Jokinen, A. Kellerbauer, H.-J. Kluge, V.S. Kolhinen, M. Oinonen, E. Sauvan, S. Schwarz

2006Sa56	IJMPD	251,	252	G. Savard, J.C. Wang, K.S. Sharma, H. Sharma, J.A. Clark, C. Boudreau, F. Buchinger, J.E. Crawford, J.P. Greene, S. Gulick, A.A. Hecht, J.K.P. Lee, A.F. Levand, N.D. Scielzo, W. Trimble, J. Vaz, B.J. Zabransky
2006Se08	PRVCA	73,	061301	D. Seweryniak, K. Starosta, C.N. Davids, S. Gros, A.A. Hecht, N. Hoteling, T.L. Khoo, K. Lagergren, G. Lotay, D. Peterson, A. Robinson, C. Vaman, W.B. Walters, P.J. Woods, S. Zhu
2006Si36	PRVCA	74,	064308	G.S. Simpson, J.A. Pinston, D. Balabanski, J. Genevey, G. Georgiev, J. Jolie, D.S. Judson, R. Orlandi, A. Scherillo, I. Tsekhanovich, W. Urban, N. Warr
2006Sk03	PRVCA	73,	044301	F. Skaza, V. Lapoux, N. Keeley, N. Alamanos, E.C. Pollacco, F. Auger, A. Drouart, A. Gillibert, D. Beaumel, E. Becheva, Y. Blumenfeld, F. Delaunay, L. Giot, K.W. Kemper, L. Nalpas, A. Obertelli, A. Pakou, R. Raabe, P. Roussel-Chomaz, J.-L. Sida, J.-A. Scarpaci, S. Stepantsov, R. Wolski
2006Su12	PRVCA	74,	024322	C.S. Sumithrarachchi, D.W. Anthony, P.A. Lofy, D.J. Morrissey
2006Ta08	PRVCA	73,	024316	M.N. Tantawy, C.R. Bingham, K.P. Rykaczewski, J.C. Batchelder, W. Królas, M. Danchev, D. Fong, T.N. Ginter, C.J. Gross, R. Grzywacz, K. Hagino, J.H. Hamilton, D.J. Hartley, M. Karny, K. Li, C. Mazzocchi, A. Piechaczek, A.V. Ramayya, K. Rykaczewski, D. Shapira, A. Stolz, J.A. Winger, C.-H. Yu, E.F. Zganjar
2006Ta13	PRVCA	73,	044306	S.K. Tandel, P. Chowdhury, E.H. Seabury, I. Ahmad, M.P. Carpenter, S.M. Fischer, R.V.F. Janssens, T.L. Khoo, T. Lauritsen, C.J. Lister, D. Seweryniak, Y.R. Shimizu
2006Ta19	PRLTA	97,	082502	S.K. Tandel, T.L. Khoo, D. Seweryniak, G. Mukherjee, I. Ahmad, B. Back, R. Blinstrup, M.P. Carpenter, J. Chapman, P. Chowdhury, C.N. Davids, A.A. Hecht, A. Heinz, P. Ikin, R.V.F. Janssens, F.G. Kondev, T. Lauritsen, C.J. Lister, E.F. Moore, D. Peterson, P. Reiter, U.S. Tandel, X. Wang, S. Zhu
2006Th07	PRVCA	74,	034329	P. Thakur, V. Kumar, A.K. Bhati, S.C. Bedi, R.P. Singh, R.K. Bhowmik, A.E. Stuchbery
2006Tr02	PRVCA	73,	054303	V. Tripathi, S.L. Tabor, C.R. Hoffman, M. Wiedeking, A. Volya, P.F. Mantica, A.D. Davies, S.N. Liddick, W.F. Mueller, A. Stolz, B.E. Tomlin, T. Otsuka, Y. Utsuno
2006Tr10	PRVCA	74,	054306	S. Triambak, A. Garcia, D. Melconian, M. Mella, O. Biesel
2006Va22	IJMPD	251,	231	R.S. Van Dyck, Jr., D.B. Pinegar, S. Van Liew, S.L. Zafonte
2006Vo09	PRVCA	74,	034319	T. von Egidy, H.-F. Wirth, I. Tomandl, J. Honzátko
2006Vo12	PRVCA	74,	057303	C. Vockenhuber, M. Bichler, W. Kutschera, A. Wallner, I. Dillmann, F. Käppeler
2006Wh02	PRVCA	74,	027303	C. Wheldon, J.J. Valiente-Dobón, P.H. Regan, C.J. Pearson, C.Y. Wu, J.F. Smith, A.O. Macchiavelli, D. Cline, R.S. Chakrawarthy, R. Chapman, M. Cromaz, P. Fallon, S.J. Freeman, W. Gelletly, A. Görgen, A.B. Hayes, H. Hua, S.D. Langdown, I.Y. Lee, X. Liang, Zs. Podolyák, G. Sletten, R. Teng, D. Ward, D.D. Warner, A.D. Yamamoto
2006Wi10	PRVCA	73,	044318	J.A. Winger, P.F. Mantica, R.M. Ronningen
2006Xu03	EPJAA	28,	37	S.-W. Xu, Y.-X. Xie, F.-R. Xu, H.-L. Liu, Z.-K. Li
2006Xu07	EPJAA	29,	161	S.W. Xu, Y.X. Xie, Z.K. Li, F.R. Xu, H.L. Liu, Y.B. Xing, B. Guo, J.P. Xing, C.F. Wang
2007				
2007Be48	NUPAB	789,	15	P. Belli, R. Bernabei, F. Cappella, R. Cerulli, C.J. Dai, F.A. Danevich, A. d'Angelo, A. Incicchitti, V.V. Kobychev, S.S. Nagorny, S. Nisi, F. Nozzoli, D. Prosperi, V.I. Tretyak, S.S. Yurchenko
2007Be61	PRVCA	76,	064603	P. Belli, R. Bernabei, N. Bukilic, F. Cappella, R. Cerulli, C.J. Dai, F.A. Danevich, J.R. de Laeter, A. Incicchitti, V.V. Kobychev, S.S. Nagorny, S. Nisi, F. Nozzoli, D.V. Poda, D. Prosperi, V.I. Tretyak, S.S. Yurchenko
2007Bi01	ARISE	65,	355	P. Bienvenu, P. Cassette, G. Andreoletti, M.-M. Bé, J. Comte, M.-C. Lépy
2007Bo50	EPJST	150,	337	G. Bollen, C. Bachelet, M. Block, D.A. Davies, M. Facina, C.M. Folden III, C. Guénaut, J. Huikari, E. Kwan, A. Kwiatowski, D.J. Morrissey, G. Pang, A. Prinke, R. Ringle, J. Savory, P. Schury, S. Schwarz, C. Sumithrarachchi, T. Sun
2007Ch07	PYLBB	645,	133	B. Cheal, M.D. Gardner, M. Avgoulea, J. Billowes, M.L. Bissell, P. Campbell, T. Eronen, K.T. Flanagan, D.H. Forest, J. Huikari, A. Jokinen, B.A. Marsh, I.D. Moore, A. Nieminen, H. Penttilä, S. Rinta-Antila, B. Tordoff, G. Tungate, J. Äystö

2007Cl01	PRVCA	75,	032801	J.A. Clark, K.S. Sharma, G. Savard, A.F. Levand, J.C. Wang, Z. Zhou, B. Blank, F. Buchinger, J.E. Crawford, S. Gulick, J.K.P. Lee, D. Seweryniak, W. Trimble
2007DaZU	P-Lisbon		3	C.N. Davids
2007Do17	NUPAB	792,	18	C. Dossat, N. Adimi, F. Aksouh, F. Becker, A. Bey, B. Blank, C. Borcea, R. Borcea, A. Boston, M. Caamano, G. Canchel, M. Chartier, D. Cortina, S. Czajkowski, G. de France, F. de Oliveira Santos, A. Fleury, G. Georgiev, J. Giovino, S. Grévy, R. Grzywacz, M. Hellström, M. Honma, Z. Janas, D. Karamanis, J. Kurcewicz, M. Lewitowicz, M.J. López Jiménez, C. Mazzocchi, I. Matea, V. Maslov, P. Mayet, C. Moore, M. Pfützner, M.S. Pravikoff, M. Stanoiu, I. Stefan, J.C. Thomas
2007Ei02	NUPAB	787,	373c	R. Eichler, N.V. Aksenov, A.V. Belozarov, G.A. Bozhikov, V.I. Chepigin, R. Dressler, S.N. Dmitriev, H.W. Gäggeler, V.A. Gorshkov, F. Haenssler, M.G. Itkis, V. Ya. Lebedev, A. Laube, O.N. Malyshev, Yu. Ts. Oganessian, O.V. Petruschkin, D. Piguët, P. Rasmussen, S.V. Shishkin, A.V. Shutov, A.I. Svirikhin, E.E. Tereshatov, G.K. Vostokin, M. Wegrzecki, A.V. Yerebin
2007Fo02	PRVCA	75,	054308	B. Fogelberg, K.A. Mezilev, V.I. Isakov, K.I. Erokhina, H. Mach, E. Ramström, H. Gausemel
2007Ge07	PRLTA	98,	162501	S. George, S. Baruah, B. Blank, K. Blaum, M. Breitenfeldt, U. Hager, F. Herfurth, A. Herlert, A. Kellerbauer, H.-J. Kluge, M. Kretschmar, D. Lunney, R. Savreux, S. Schwarz, L. Schweikhard, C. Yazidjian
2007Go24	PRVCA	76,	021605	M.S. Golovkov, L.V. Grigorenko, A.S. Fomichev, A.V. Gorshkov, V.A. Gorshkov, S.A. Krupko, Yu. Ts. Oganessian, A.M. Rodin, S.I. Sidorchuk, R.S. Slepnev, S.V. Stepantsov, G.M. Ter-Akopian, R. Wolski, A.A. Korshennikov, E. Yu. Nikolskii, V.A. Kuzmin, B.G. Novatskii, D.N. Stepanov, P. Roussel-Chomaz, W. Mittig
2007Gr18	PRVCA	76,	025503	G.F. Grinyer, M.B. Smith, C. Andreoiu, A.N. Andreyev, G.C. Ball, P. Bricault, R.S. Chakrawarthy, J.J. Daoud, P. Finlay, P.E. Garrett, G. Hackman, B. Hyland, J.R. Leslie, A.C. Morton, C.J. Pearson, A.A. Phillips, M.A. Schumaker, C.E. Svensson, J.J. Valiente-Dobon, S.J. Williams, E.F. Zganjar
2007Gu09	PRVCA	75,	044303	C. Guénaut, G. Audi, D. Beck, K. Blaum, G. Bollen, P. Delahaye, F. Herfurth, A. Kellerbauer, H.-J. Kluge, J. Libert, D. Lunney, S. Schwarz, L. Schweikhard, C. Yazidjian
2007Ha20	PRVCA	75,	064302	U. Hager, V.-V. Elomaa, T. Eronen, J. Hakala, A. Jokinen, A. Kankainen, S. Rahaman, S. Rinta-Antila, A. Saastamoinen, T. Sonoda, J. Äystö
2007Ha32	NUPAB	793,	20	U. Hager, A. Jokinen, V.-V. Elomaa, T. Eronen, J. Hakala, A. Kankainen, S. Rahaman, J. Rissanen, I.D. Moore, S. Rinta-Antila, A. Saastamoinen, T. Sonoda, J. Äystö
2007Ha45	PRVCA	76,	044312	B. Hadinia, B. Cederwall, D.T. Joss, R. Wyss, R.D. Page, C. Scholey, A. Johnson, K. Lagergren, E. Ganioglu, K. Andgren, T. Bäck, D.E. Appelbe, C.J. Barton, S. Eeckhaudt, T. Grahn, P. Greenlees, P. Jones, R. Julin, S. Juutinen, H. Kettunen, M. Leino, A.-P. Lepänen, R.J. Liotta, P. Nieminen, J. Pakarinen, J. Perkowski, P. Rakhila, M. Sandzelius, J. Simpson, J. Uusitalo, K. Van de Vel, D.D. Warner, D.R. Wiseman
2007Ha57	EPJAA	34,	363	H. Hayashi, Y. Akita, O. Suematsu, M. Shibata, M. Asai, T.K. Sato, S. Ichikawa, I. Nishinaka, Y. Nagame, A. Osa, K. Tsukada, T. Ishii, Y. Kojima, A. Taniguchi
2007Ho18	EPJAA	32,	251	S. Hofmann, D. Ackermann, S. Antalic, H.G. Burkhard, V.F. Comas, R. Dressler, Z. Gan, S. Heinz, J.A. Heredia, F.P. Heßberger, J. Khuyagbaatar, B. Kindler, I. Kojouharov, P. Kuusiniemi, M. Leino, B. Lommel, R. Mann, G. Münzenberg, K. Nishio, A.G. Popeko, S. Saro, H.J. Schott, B. Streicher, B. Sulignano, J. Uusitalo, M. Venhart, A.V. Yerebin
2007Io03	PYLBB	650,	141	M. Ionescu-Bujor, A. Iordachescu, N. Marginean, C.A. Ur, D. Bucurescu, G. Suliman, D.L. Balabanski, F. Brandolini, S. Chmel, P. Detistov, K.A. Gladniskhi, H. Hubel, S. Mallion, R. Marginean, N.H. Medina, D.R. Napoli, G. Neyens, P. Pavan, R.V. Ribas, C. Rusu, K. Turzo, N. Vermeulen
2007Je07	EPJAA	32,	31	H.B. Jeppesen, J. Byskov-Nielsen, P. Wright, J.G. Correia, L.M. Fraile, H.O.U. Fynbo, K. Johnston, K. Riisager
2007Ju03	PYLBB	649,	43	B. Jurado, H. Savajols, W. Mittig, N.A. Orr, P. Roussel-Chomaz, D. Baiborodin, W.N. Catford, M. Chartier, C.E. Demonchy, Z. Dlouhý, A. Gillibert, L. Giot, A. Khouaja, A. Lépine-Szily, S. Lukyanov, J. Mrazek, Y.E. Penionzhkevich, S. Pita, M. Rousseau, A.C. Villari

- 2007Ju05 PRLTA 99, 132501 A. Jungclaus, L. Cáceres, M. Górská, M. Pfützner, S. Pietri, E. Werner-Malento, H. Grawe, K. Langanke, G. Martinez-Pinedo, F. Nowacki, A. Poves, J.J. Cuenca-Garcia, D. Rudolph, Z. Podolyak, P.H. Regan, P. Detistov, S. Lalkovski, V. Modamio, J. Walker, P. Bednarczyk, P. Doornenbal, H. Geissel, J. Gerl, J. Grebosz, I. Kojouharov, N. Kurz, W. Prokopowicz, H. Schaffner, H.J. Wollersheim, K. Andgren, J. Benlliure, G. Benzoni, A.M. Bruce, E. Casarejos, B. Cederwall, F.C.L. Crespi, B. Hadinia, M. Hellström, R. Hoischen, G. Ilie, J. Jolie, A. Khablanov, M. Kmiecik, R. Kumar, A. Maj, S. Mandal, F. Montes, S. Myalski, G.S. Simpson, S.J. Steer, S. Tashenov, O. Wieland
- 2007Ju06 PRVCA 76, 054306 D.S. Judson, A.M. Bruce, T. Kibedi, G.D. Dracoulis, A.P. Byrne, G.J. Lane, K.H. Maier, C.-B. Moon, P. Nieminen, J.N. Orce, M.J. Taylor
- 2007Ka15 EPJAA 31, 319 O. Kavatsyuk, C. Mazzocchi, Z. Janas, A. Banu, L. Batist, F. Becker, A. Blazhev, W. Brühle, J. Döring, T. Faestermann, M. Górská, H. Grawe, A. Jungclaus, M. Karny, M. Kavatsyuk, O. Klepper, R. Kirchner, M. La Commara, K. Miernik, I. Mukha, C. Plettner, A. Plochocki, E. Roeckl, M. Romoli, K. Rykaczewski, M. Schadel, K. Schmidt, R. Schwengner, J. Zylicz
- 2007Ke09 PRVCA 76, 045504 A. Kellerbauer, G. Audi, D. Beck, K. Blaum, G. Bollen, C. Guénaut, F. Herfurth, A. Herlert, H.-J. Kluge, D. Lunney, S. Schwarz, L. Schweikhard, C. Weber, C. Yazidjian
- 2007Kh22 EPJAA 34, 355 J. Khuyagbaatar, S. Hofmann, F.P. Heßberger, D. Ackermann, S. Antalic, H.G. Burkhard, S. Heinz, B. Kindler, A.F. Lisetskiy, B. Lommel, R. Mann, K. Nishio, H.J. Schött, B. Sulignano
- 2007Ku23 EPJAA 33, 307 J. Kurpeta, W. Urban, Ch. Droste, A. Plochocki, S.G. Rohozinski, T. Rzaca-Urban, T. Morek, L. Prochniak, K. Starosta, J. Aysto, H. Penttilä, J.L. Durell, A.G. Smith, G. Lhersonneau, I. Ahmad
- 2007Ku30 PRVCA 76, 054320 J. Kurcewicz, W. Czarnacki, M. Karny, M. Kasztelan, M. Kisielinski, A. Korgul, W. Kurcewicz, J. Kurpeta, S. Lewandowski, P. Majorzewicz, H. Penttilä, A. Plochocki, B. Roussiére, O. Steczkiewicz, A. Wojtasiewicz
- 2007Le14 PRVCA 75, 054307 A.-P. Leppänen, J. Uusitalo, M. Leino, S. Eeckhaudt, T. Grahn, P.T. Greenlees, P. Jones, R. Julin, S. Jutinen, H. Kettunen, P. Kuusiniemi, P. Nieminen, J. Pakarinen, P. Rakhila, C. Scholey, G. Sletten
- 2007Li71 PRLTA 99, 262501 Yu. A. Litvinov, F. Bosch, H. Geissel, J. Kurcewicz, Z. Patyk, N. Winkler, L. Batist, K. Beckert, D. Boutin, C. Brandau, L. Chen, C. Dimopoulou, B. Fabian, T. Faestermann, A. Fagner, L. Grigorenko, E. Haettner, S. Hess, P. Kienle, R. Knöbel, C. Kozuharov, S.A. Litvinov, L. Maier, M. Mazzocco, F. Montes, G. Münzenberg, A. Musumarra, C. Nociforo, F. Nolden, M. Pfützner, W.R. Plass, A. Prochazka, R. Reda, R. Reuschl, C. Scheidenberger, M. Steck, T. Stohlker, S. Torilov, M. Trassinelli, B. Sun, H. Weick, M. Winkler
- 2007Lo11 EPJAA 32, 245 A. Lopez-Martens, K. Hauschild, A.V. Yeremin, O. Dorvaux, A.V. Belozerov, Ch. Briancon, M.L. Chelnokov, V.I. Chepigin, D. Curien, P. Desesquelles, B. Gall, V.A. Gorshkov, M. Guttormsen, F. Hanappe, A.P. Kabachenko, F. Khal-fallah, A. Korichi, A.C. Larsen, O.N. Malyshev, A. Minkova, Yu. Ts. Oganessian, A.G. Popeko, M. Rousseau, N. Rowley, R.N. Sagaidak, S. Sharo, A.V. Shutov, S. Siem, L. Stuttge, A.I. Svirikhin, N.U.H. Syed, Ch. Theisen
- 2007Ma35 PRLTA 98, 212501 C. Mazzocchi, R. Grzywacz, S.N. Liddick, K.P. Rykaczewski, H. Schatz, J.C. Batchelder, C.R. Bingham, C.J. Gross, J.H. Hamilton, J.K. Hwang, S. Ilyushkin, A. Korgul, W. Krolas, K. Li, R.D. Page, D. Simpson, J.A. Winger
- 2007Ma92 EPJAA 34, 341 A. Martín, D. Ackermann, G. Audi, K. Blaum, M. Block, A. Chaudhuri, Z. Di, S. Eliseev, R. Ferrer, D. Habs, F. Herfurth, F.P. Heßberger, S. Hofmann, H.-J. Kluge, M. Mazzocco, M. Mukherjee, J.B. Neumayr, Yu. Novikov, W. Plaß, S. Rahaman, C. Rauth, D. Rodríguez, C. Scheidenberger, L. Schweikhard, P.G. Thirolf, G. Vorobjev, C. Weber
- 2007Mu15 PRLTA 99, 182501 I. Mukha, K. Sümmerer, L. Acosta, M.A.G. Alvarez, E. Casarejos, A. Chatillon, D. Cortina-Gil, J. Espino, A. Fomichev, J.E. García-Ramos, H. Geissel, J. Gómez-Camacho, L. Grigorenko, J. Hoffmann, O. Kiselev, A. Korshenin-nikov, N. Kurz, Yu. Litvinov, I. Martel, C. Nociforo, W. Ott, M. Pfützner, C. Rodríguez-Tajes, E. Roeckl, M. Stanoiu, H. Weick, P.J. Woods

2007My02	APOBB	38,	1277	S. Myalski, M. Kmiecik, A. Maj, P.H. Regan, A.B. Garnsworthy, S. Pietri, D. Rudolph, Zs. Podolyak, S.J. Steer, F. Becker, P. Bednarczyk, J. Gerl, M. Gorska, H. Grawe, I. Kojouharov, H. Schaffner, H.J. Wollersheim, W. Prokopowicz, J. Grebosz, G. Benzoni, B. Blank, C. Brandau, A.M. Bruce, L. Caceres, F. Camera, W.N. Catford, I.J. Cullen, Zs. Dombradi, P. Doornenbal, E. Estevez, H. Geissel, W. Gelletly, A. Heinz, R. Hoischen, G. Ilie, G.A. Jones, A. Jungclaus, A. Kelic, F.G. Kondev, T. Kurtukian-Nieto, N. Kurz, S. Lalkovski, Z. Liu, F. Montes, M. Pfutzner, T. Saito, T. Shizuma, A.J. Simons, S. Schwertel, S. Tachenov, P.M. Walker, E. Werner-Malento, O. Wieland
2007Og01	JPHGB	34,	R165	Y. Oganessian
2007Og02	PRVCA	76,	011601	Yu. Ts. Oganessian, V.K. Utyonkov, Yu. V. Lobanov, F. Sh. Abdullin, A.N. Polyakov, R.N. Sagaidak, I.V. Shirokovsky, Yu. S. Tsyganov, A.A. Voinov, G.G. Gulbekian, S.L. Bogomolov, B.N. Gikal, A.N. Mezentsev, V.G. Subbotin, A.M. Sukhov, K. Subotic, V.I. Zagrebaev, G.K. Vostokin, M.G. Itkis, R.A. Henderson, J.M. Kenneally, J.H. Landrum, K.J. Moody, D.A. Shaughnessy, M.A. Stoyer, N.J. Stoyer, P.A. Wilk
2007Ok05	PRVCA	76,	044315	Y. Oktem, D.L. Balabanski, B. Akkus, C.W. Beausang, M. Bostan, R.B. Cakirli, R.F. Casten, M. Danchev, M. Djongolov, M.N. Erduran, S. Erturk, K.A. Gladniski, G. Gurdal, J. Tm. Goon, D.J. Hartley, A.A. Hecht, R. Krucken, N. Nikolov, J.R. Novak, G. Rainovski, L.L. Riedinger, I. Yigitoglu, N.V. Zamfir, O. Zeidan
2007Pa27	PRVCA	75,	061302	R.D. Page, L. Bianco, I.G. Darby, J. Uusitalo, D.T. Joss, T. Grahn, R.-D. Herzberg, J. Pakarinen, J. Thomson, S. Eeckhaudt, P.T. Greenlees, P.M. Jones, R. Julin, S. Juutinen, S. Ketelhut, M. Leino, A.-P. Leppänen, M. Nyman, P. Rahkila, J. Sarén, C. Scholey, A. Steer, M.B. Gómez Hornillos, J.S. Al-Khalili, A.J. Cannon, P.D. Stevenson, S. Ertürk, B. Gall, B. Hadinia, M. Venhart, J. Simpson
2007Ra23	EPJAA	32,	87	S. Rahaman, U. Hager, V.-V. Elomaa, T. Eronen, J. Hakala, A. Jokinen, A. Kankainen, P. Karvonen, I.D. Moore, H. Penttilä, S. Rinta-Antila, J. Rissanen, A. Saastamoinen, T. Sonoda, J. Äystö
2007Ra27	EPJAA	34,	5	S. Rahaman, J. Hakala, V.-V. Elomaa, T. Eronen, U. Hager, A. Jokinen, A. Kankainen, I.D. Moore, H. Penttilä, S. Rinta-Antila, J. Rissanen, A. Saastamoinen, C. Weber, J. Äystö
2007Ra37	EPJST	150,	329	C. Rauth, D. Ackermann, G. Audi, M. Block, A. Chaudhuri, S. Eliseev, F. Herfurth, F.P. Heßberger, S. Hofmann, H.-J. Kluge, A. Martín, G. Marx, M. Mukherjee, J.B. Neumayr, W.R. Plaß, S. Rahaman, D. Rodríguez, L. Schweikhard, P.G. Thirolf, G. Vorobjev, C. Weber, and the SHIPTRAP Collaboration
2007Re03	PRLTA	98,	053003	M. Redshaw, E. Wingfield, J. McDaniel, E.G. Myers
2007Ri01	EPJAA	31,	1	S. Rinta-Antila, T. Eronen, V.-V. Elomaa, U. Hager, J. Hakala, A. Jokinen, P. Karvonen, H. Penttilä, J. Rissanen, T. Sonoda, A. Saastamoinen, J. Äystö
2007Ri08	PRVCA	75,	055503	R. Ringle, T. Sun, G. Bollen, D. Davies, M. Facina, J. Huikari, E. Kwan, D.J. Morrissey, A. Prinke, J. Savory, P. Schury, S. Schwarz, C.S. Sumithrarachchi and Prvcom GAu nov. 2009
2007Rz01	PRVCA	75,	054319	T. Rzaca-Urban, K. Pagowska, W. Urban, A. Zlomaniec, J. Genevey, J.A. Pinston, G.S. Simpson, M.S. Sarkar, S. Sarkar, H. Faust, A. Scherillo, I. Tsekhanovich, R. Orlandi, J.L. Durell, A.G. Smith, I. Ahmad
2007Sa36	PRLTA	99,	022501	M. Sandzelius, B. Hadinia, B. Cederwall, K. Andgren, E. Ganioglu, I.G. Darby, M.R. Dimmock, S. Eeckhaudt, T. Grahn, P.T. Greenlees, E. Ideguchi, P.M. Jones, D.T. Joss, R. Julin, S. Juutinen, A. Khaplanov, M. Leino, L. Nelson, M. Niikura, M. Nyman, R.D. Page, J. Pakarinen, E.S. Paul, M. Petri, P. Rahkila, J. Saren, C. Scholey, J. Sorri, J. Uusitalo, R. Wadsworth, R. Wyss
2007Sc24	PRVCA	75,	055801	P. Schury, C. Bachelet, M. Block, G. Bollen, D.A. Davies, M. Facina, C.M. Folden III, C. Guénaut, J. Huikari, E. Kwan, A. Kwiatkowski, D.J. Morrissey, R. Ringle, G.K. Pang, A. Prinke, J. Savory, H. Schatz, S. Schwarz, C.S. Sumithrarachchi, T. Sun, and erratum PRVCA 80(2009)029905
2007Se04	PRLTA	99,	022504	D. Seweryniak, M.P. Carpenter, S. Gros, A.A. Hecht, N. Hoteling, R.V.F. Janssens, T.L. Khoo, T. Lauritsen, C.J. Lister, G. Lotay, D. Peterson, A.P. Robinson, W.B. Walters, X. Wang, P.J. Woods, S. Zhu
2007Se06	PRLTA	99,	082502	D. Seweryniak, B. Blank, M.P. Carpenter, C.N. Davids, T. Davinson, S.J. Freeman, N. Hammond, N. Hoteling, R.V.F. Janssens, T.L. Khoo, Z. Liu, G. Mukherjee, A. Robinson, C. Scholey, S. Sinha, J. Shergur, K. Starosta, W.B. Walters, A. Woehr, P.J. Woods
2007Sh05	EPJAA	31,	171	M. Shibata, O. Suematsu, Y. Kojima, K. Kawade, A. Taniguchi, Y. Kawase

2007Sh37	CPLEE	24,	2800	G. Sher, M.I. Shahzad, M. Hussain
2007Sh42	EPJAA	34,	1	T. Shizuma, T. Ishii, H. Makii, T. Hayakawa, S. Shigematsu, M. Matsuda, E. Ideguchi, Y. Zheng, M. Liu, T. Morikawa
2007Si24	NUPAB	791,	267	H. Simon, M. Meister, T. Aumann, M.J.G. Borge, L.V. Chulkov, U. Datta Pramanik, Th. W. Elze, H. Emling, C. Forssen, H. Geissel, M. Hellstrom, B. Jonson, J.V. Kratz, R. Kulesa, Y. Leifels, K. Markenroth, G. Munzenberg, F. Nickel, T. Nilsson, G. Nyman, A. Richter, K. Riisager, C. Scheidenberger, G. Schrieder, O. Tengblad, M.V. Zhukov
2007Si27	PRVCA	76,	041303	G.S. Simpson, J.C. Angelique, J. Genevey, J.A. Pinston, A. Covello, A. Gargano, U. Köster, R. Orlandi, A. Scherillo
2007St12	APOBB	38,	1561	B. Streicher, S. Antalic, S. Saro, M. Venhart, F.P. Heßberger, S. Hofmann, D. Ackermann, B. Kindler, I. Kojouharov, B. Lommel, R. Mann, B. Sulignano, P. Kuusiniemi
2007St18	NUPAB	787,	388c	N.J. Stoyer, J.H. Landrum, P.A. Wilk, K.J. Moody, J.M. Kenneally, D.A. Shaughnessy, M.A. Stoyer, J.F. Wild, R.W. Loughheed, S.N. Dmitriev, Yu. Ts. Oganessian, S.V. Shishkin, N.V. Aksenov, E.E. Tereshatov, G.A. Bozhikov, G.K. Vostokin, V.K. Utyonkov, A.A. Yeremin
2007Su05	PRVCA	75,	024305	C.S. Sumithrarachchi, D.J. Morrissey, B.A. Brown, A.D. Davies, D.A. Davies, M. Fancina, E. Kwan, P.F. Mantica, M. Portillo, Y. Shimbara, J. Stoker, R.R. Weerasiri
2007Su07	EPJAA	31,	393	B. Sun, Yu. A. Litvinov, P.M. Walker, K. Beckert, P. Beller, F. Bosch, D. Boutin, C. Brandau, L. Chen, C. Dimopoulou, H. Geissel, R. Knöbel, C. Kozhuharov, J. Kurcewicz, S.A. Litvinov, M. Mazzocco, J. Meng, C. Nociforo, F. Nolden, W.R. Plass, C. Scheidenberger, M. Steck, H. Weick, M. Winkler
2007Su19	EPJAA	33,	327	B. Sulignano, S. Heinz, F.P. Heßberger, S. Hofmann, D. Ackermann, S. Antalic, B. Kindler, I. Kojouharov, P. Kuusiniemi, B. Lommel, R. Mann, K. Nishio, A.G. Popeko, S. Saro, B. Streicher, M. Venhart, A.V. Yeremin
2007To23	EPJST	150,	183	B.E. Tomlin, P.F. Mantica, W.B. Walters
2007Ve08	PRVCA	76,	054312	D. Verney, F. Ibrahim, C. Bourgeois, S. Essabaa, S. Gales, L. Gaudefroy, D. Guillemaud-Mueller, F. Hammache, C. Lau, F. Le Blanc, A.C. Mueller, O. Perru, F. Pougheon, B. Roussiere, J. Sauvage, O. Sorlin, for the PARRNe Collaboration
2007Ya08	PRVCA	76,	024308	C. Yazidjian, G. Audi, D. Beck, K. Blaum, S. George, C. Guénaut, F. Herfurth, A. Herlert, A. Kellerbauer, H.-J. Kluge, D. Lunney, L. Schweikhard
2008				
2008Ah02	PRVCA	77,	054302	I. Ahmad, F.G. Kondev, Z.M. Koenig, Wm. C. McHarris, S.W. Yates
2008Ak03	PYLBB	666,	430	Yu. Aksyutina, H.T. Johansson, P. Adrich, F. Aksouh, T. Aumann, K. Boretzky, M.J.G. Borge, A. Chatillon, L.V. Chulkov, D. Cortina-Gil, U. Datta Pramanik, H. Emling, C. Forssén, H.O.U. Fynbo, H. Geissel, M. Hellström, G. Ickert, K.L. Jones, B. Jonson, A. Kliemkiewicz, J.V. Kratz, R. Kulesa, M. Lantz, T. LeBlais, A.O. Lindahl, K. Mahata, M. Matos, M. Meister, G. Münzenberg, T. Nilsson, G. Nyman, R. Palit, M. Pantea, S. Paschalis, W. Prokopowicz, R. Reifarh, A. Richter, K. Riisager, G. Schrieder, H. Simon, K. Sümmerer, O. Tengblad, W. Walus, H. Weick, M.V. Zhukov
2008An05	PRVCA	77,	054303	K. Andgren, B. Cederwall, J. Uusitalo, A.N. Andreyev, S.J. Freeman, P.T. Greenlees, B. Hadinia, U. Jakobsson, A. Johnson, P.M. Jones, D.T. Joss, S. Juutinen, R. Julin, S. Ketelhut, A. Khaplanov, M. Leino, M. Nyman, R.D. Page, P. Rahkila, M. Sandzelius, P. Sapple, J. Sarén, C. Scholey, J. Simpson, J. Sorri, J. Thomson, R. Wyss
2008An11	PRVCA	78,	044328	K. Andgren, U. Jakobsson, B. Cederwall, J. Uusitalo, T. Bäck, S.J. Freeman, P.T. Greenlees, B. Hadinia, A. Hugues, A. Johnson, P.M. Jones, D.T. Joss, S. Juutinen, R. Julin, S. Ketelhut, A. Khaplanov, M. Leino, M. Nyman, R.D. Page, P. Rahkila, M. Sandzelius, P. Sapple, J. Sarén, C. Scholey, J. Simpson, J. Sorri, J. Thomson, R. Wyss
2008An16	EPJAA	38,	219	S. Antalic, F.P. Heßberger, S. Hofmann, D. Ackermann, S. Heinz, B. Kindler, I. Kojouharov, P. Kuusiniemi, M. Leino, B. Lommel, R. Mann, K. Nishio, Š. Šáro, B. Streicher, B. Sulignano, M. Venhart

2008Ba53	PRLTA	101,	252501	D. Bazin, F. Montes, A. Becerril, G. Lorusso, A. Amthor, T. Baumann, H. Crawford, A. Estrade, A. Gade, T. Ginter, C.J. Guess, M. Hausmann, G.W. Hitt, P. Mantica, M. Matos, R. Meharchand, K. Minamisono, G. Perdikakis, J. Pereira, J. Pinter, M. Portillo, H. Schatz, K. Smith, J. Stoker, A. Stolz, R.G.T. Zegers
2008Ba54	PRLTA	101,	262501	S. Baruah, G. Audi, K. Blaum, M. Dworschak, S. George, C. Guénaut, U. Hager, F. Herfurth, A. Herlert, A. Kellerbauer, H.-J. Kluge, D. Lunney, H. Schatz, L. Schweikhard, C. Yazidjian
2008Be33	PRVCA	78,	054605	J. Benlliure, M. Fernandez-Ordonez, L. Audouin, A. Boudard, E. Casarejos, J.E. Ducret, T. Enqvist, A. Heinz, D. Henzlova, V. Henzl, A. Kelic, S. Leray, P. Napolitani, J. Pereira, F. Rejmund, M.V. Ricciardi, K.-H. Schmidt, C. Schmitt, C. Stephan, L. Tassan-Got, C. Volant, C. Villagrasa, O. Yordanov
2008Bh08	PRVCA	77,	065503	M. Bhattacharya, D. Melconian, A. Komives, S. Triambak, A. García, E.G. Adelberger, B.A. Brown, M.W. Cooper, T. Glasmacher, V. Guimaraes, P.F. Mantica, A.M. Oros-Peusquens, J.I. Prisciandaro, M. Steiner, H.E. Swanson, S.L. Tabor, M. Wiedeking
2008BI05	PRLTA	100,	132501	M. Block, C. Bachelet, G. Bollen, M. Facina, C.M. Folden III, C. Guénaut, A.A. Kwiatkowski, D.J. Morrissey, G.K. Pang, A. Prinke, R. Ringle, J. Savory, P. Schury, S. Schwarz
2008Bo26	NUPAB	811,	28	V. Bondarenko, I. Tomandl, H.-F. Wirth, J. Honzatko, A.M. Sukhovoj, L.A. Malov, L.I. Simonova, R. Hertenberg, T. von Egidy, J. Berzins
2008Br.A	PrvCom	GAu	Dec	M. Breitenfeldt
2008Br.C	PrvCom	GAu	Mar	M. Brodeur
2008Br.D	PrvCom	GAu	Aug	M. Brodeur
2008Ca22	PRVCA	78,	044001	M. Caamano, D. Cortina-Gil, W. Mittig, H. Savajols, M. Chartier, C.E. Demonchy, B. Fernandez, M.B. Gomez Hornillos, A. Gillibert, B. Jurado, O. Kiselev, R. Lemmon, A. Obertelli, F. Rejmund, M. Rejmund, P. Roussel-Chomaz, R. Wolski
2008Ch07	NUPAB	801,	101	G. Christian, W.A. Peters, D. Absalon, D. Albertson, T. Baumann, D. Bazin, E. Breitbach, J. Brown, P.L. Cole, D. Denby, P.A. DeYoung, J.E. Finck, N. Frank, A. Fritsch, C. Hall, A.M. Hayes, J. Hinnefeld, C.R. Hoffman, R. Howes, B. Luther, E. Mosby, S. Mosby, D. Padilla, P.V. Pancella, G. Peaslee, W.F. Rogers, A. Schiller, M.J. Strongman, M. Thoennessen, L.O. Wagner
2008Ch28	PRVCA	78,	054307	R.J. Charity, S.A. Komarov, L.G. Sobotka, J. Clifford, D. Bazin, A. Gade, J. Lee, S.M. Lukyanov, W.G. Lynch, M. Mocko, S.P. Lobastov, A.M. Rogers, A. Sane-tullaev, M.B. Tsang, M.S. Wallace, R.G.T. Zegers, S. Hudan, C. Metelko, M.A. Famiano, A.H. Wuosmaa, M.J. van Goethem
2008Ch.A	Th.-Giessen			Lixin Chen
2008De29	PRVCA	78,	044303	D.H. Denby, P.A. DeYoung, T. Baumann, D. Bazin, E. Breitbach, J. Brown, N. Frank, A. Gade, C.C. Hall, J. Hinnefeld, C.R. Hoffman, R. Howes, R.A. Jensen, B. Luther, S.M. Mosby, C.W. Olson, W.A. Peters, A. Schiller, A. Spyrou, M. Thoennessen
2008Dr05	PRVCA	78,	024605	I. Dragojevic, K.E. Gregorich, Ch. E. Düllmann, M.A. Garcia, J.M. Gates, S.L. Nelson, L. Stavsetra, R. Sudowe, H. Nitsche
2008Du09	PRVCA	77,	064320	Ch. E. Düllmann, A. Türler and erratum PRVCA 78(2008)029901
2008Dv02	PRLTA	100,	132503	J. Dvorak, W. Brühl, M. Chelnokov, Ch. E. Düllmann, Z. Dvorakova, K. Eberhardt, E. Jäger, R. Krücken, A. Kuznetsov, Y. Nagame, F. Nebel, K. Nishio, R. Perego, Z. Qin, M. Schädel, B. Schausten, E. Schimpf, R. Schuber, A. Semchenkov, P. Thörle, A. Türler, M. Wegrzecki, B. Wierczinski, A. Yakushev, A. Yeremin
2008Dw01	PRLTA	100,	072501	M. Dworschak, G. Audi, K. Blaum, P. Delahaye, S. George, U. Hager, F. Herfurth, A. Herlert, A. Kellerbauer, H.-J. Kluge, D. Lunney, L. Schweikhard, C. Yazidjian and prvcom to G. Audi may 2007
2008Ea01	PRVCA	77,	024303	M.C. Eastman, K.S. Krane
2008Er04	PRLTA	100,	132502	T. Eronen, V.-V. Elomaa, U. Hager, J. Hakala, J.C. Hardy, A. Jokinen, A. Kankainen, I.D. Moore, H. Penttilä, S. Rahaman, S. Rinta-Antila, J. Rissanen, A. Saastamoinen, T. Sonoda, C. Weber, J. Äystö
2008Fa11	PRVCA	78,	022801	J. Fallis, J.A. Clark, K.S. Sharma, G. Savard, F. Buchinger, S. Caldwell, J.E. Crawford, C.M. Deibel, J.L. Fisker, S. Gulick, A.A. Hecht, D. Lascar, J.K.P. Lee, A.F. Levand, G. Li, B.F. Lundgren, A. Parikh, S. Russell, M. Scholte-van de Vorst, N.D. Scielzo, R.E. Segel, H. Sharma, S. Sinha, M. Sternberg, T. Sun, I. Tanihata, J. Van Schelt, J.C. Wang, Y. Wang, C. Wrede, Z. Zhou

2008Fe02	EPJAA	35,	167	M. Ferraton, R. Bourgain, C.M. Petrache, D. Verney, F. Ibrahim, N. de Séréville, S. Franchoo, M. Lebois, C. Phan Viet, L. Sagui, I. Stefan, J.F. Clavelin, M. Vilmay
2008Fi.A	PrvCom	BPf	Oct	R.B. Firestone
2008Ga04	PYLBB	660,	326	A.B. Garnsworthy, P.H. Regan, L. Cáceres, S. Pietri, Y. Sun, D. Rudolph, M. Górska, Zs. Podolyák, S.J. Steer, R. Hoischen, A. Heinz, F. Becker, P. Bednarczyk, P. Doornenbal, H. Geissel, J. Gerl, H. Grawe, J. Grebosz, A. Kelic, I. Kojouharov, N. Kurz, F. Montes, W. Prokopowicz, T. Saito, H. Schaffner, S. Tachenov, E. Werner-Malento, H.J. Wollersheim, G. Benzoni, B.B. Blank, C. Brandau, A.M. Bruce, F. Camera, W.N. Catford, I.J. Cullen, Zs. Dombrádi, E. Estevez, W. Gelletly, G. Ilie, J. Jolie, G.A. Jones, A. Jungclaus, M. Kmiecik, F.G. Kondev, T. Kurtukian-Nieto, S. Lalkovski, Z. Liu, A. Maj, S. Myalski, M. Pfützner, S. Schwertel, T. Shizuma, A.J. Simons, P.M. Walker, O. Wieland, F.R. Xu
2008Ga08	PRVCA	77,	034603	J.M. Gates, M.A. Garcia, K.E. Gregorich, Ch. E. Düllmann, I. Dragojević, J. Dvorak, R. Eichler, C.M. Folden III, W. Loveland, S.L. Nelson, G.K. Pang, L. Stavsetra, R. Sudowe, A. Türler, H. Nitsche
2008Ga.A	PrvCom		08Bh08	A. Garcia et al at ISOLDE
2008Ge07	PRLTA	101,	252502	W. Geithner, T. Neff, G. Audi, K. Blaum, P. Delahaye, H. Feldmeier, S. George, C. Guenaut, F. Herfurth, A. Herlert, S. Kappertz, M. Keim, A. Kellerbauer, H.-J. Kluge, M. Kowalska, P. Lievens, D. Lunney, K. Marinova, R. Neugart, L. Schweikhard, S. Wilbert, C. Yazidjian and prvcom from A. Herlert February 2005
2008Ge08	EULEE	82,	50005	S. George, G. Audi, B. Blank, K. Blaum, M. Breitenfeldt, U. Hager, F. Herfurth, A. Herlert, A. Kellerbauer, H.-J. Kluge, M. Kretzschmar, D. Lunney, R. Savreux, S. Schwarz, L. Schweikhard, C. Yazidjian
2008Go23	PRVCA	78,	014311	M.B. Gómez Hornillos, M. Chartier, W. Mittig, A. Lépine-Szily, L. Caballero, C.E. Demonchy, G. Georgiev, N.A. Orr, G. Politi, M. Rousseau, P. Roussel-Chomaz, A.C.C. Villari
2008Go.A	AnRpt GSI		140	A. Gorshkov et al
2008Gr17	PRVCA	78,	021303	P.T. Greenlees, R.-D. Herzberg, S. Ketelhut, P.A. Butler, P. Chowdhury, T. Grahn, C. Gray-Jones, G.D. Jones, P. Jones, R. Julin, S. Juutinen, T.-L. Khoo, M. Leino, S. Moon, M. Nyman, J. Pakarinen, P. Rakhila, D. Rostron, J. Sarén, C. Scholey, J. Sorri, S.K. Tandel, J. Uusitalo, M. Venhart
2008Ha12	PRVCA	77,	047305	K. Hauschild, A. Lopez-Martens, A.V. Yeremin, O. Dorvaux, A.V. Belozero, M.L. Chelnokov, V.I. Chepigin, B. Gall, V.A. Gorshkov, M. Guttormsen, P. Jones, A.P. Kabachenko, A. Khouaja, A.C. Larsen, O.N. Malyshev, A. Minkova, H.T. Nyhus, Yu. Ts. Oganessian, D. Pantelica, A.G. Popeko, F. Rotaru, S. Saro, A.V. Shutov, S. Siem, A.I. Svirikhin, N.U.H. Syed
2008Ha21	PRVCA	77,	068801	T. Hayakawa, T. Shizuma, S. Miyamoto, S. Amano, K. Horikawa, K. Ishihara, M. Mori, K. Kawase, M. Kando, N. Kikuzawa, S. Chiba, T. Mochizuki, T. Kajino, M. Fujiwara
2008Ha23	PRLTA	101,	052502	J. Hakala, S. Rahaman, V.-V. Elomaa, T. Eronen, U. Hager, A. Jokinen, A. Kankainen, I.D. Moore, H. Penttilä, S. Rinta-Antila, J. Rissanen, A. Saastamoinen, T. Sonoda, C. Weber, J. Äystö
2008Ha31	PRVCA	78,	021302	K. Hauschild, A. Lopez-Martens, A.V. Yeremin, O. Dorvaux, S. Antalic, A.V. Belozero, Ch. Briançon, M.L. Chelnokov, V.I. Chepigin, D. Curien, B. Gall, A. Görgen, V.A. Gorshkov, M. Guttormsen, F. Hanappe, A.P. Kabachenko, F. Khalfallah, A.C. Larsen, O.N. Malyshev, A. Minkova, A.G. Popeko, M. Rousseau, N. Rowley, S. Saro, A.V. Shutov, S. Siem, L. Stuttgè, A.I. Svirikhin, N.U.H. Syed, Ch. Theisen, M. Venhart
2008Ha.A	PrvCom	BPf	Sep	P.A. Hausladen
2008Hi05	PRVCA	77,	034305	T.A. Hinnners, V. Tripathi, S.L. Tabor, A. Volya, P.C. Bender, C.R. Hoffman, S. Lee, M. Perry, P.F. Mantica, A.D. Davies, S.N. Liddick, W.F. Mueller, A. Stolz, B.E. Tomlin
2008Ho03	PRLTA	100,	152502	C.R. Hoffman, T. Baumann, D. Bazin, J. Brown, G. Christian, P.A. DeYoung, J.E. Finck, N. Frank, J. Hinnefeld, R. Howes, P. Mears, E. Mosby, S. Mosby, J. Reith, B. Rizzo, W.F. Rogers, G. Peaslee, W.A. Peters, A. Schiller, M.J. Scott, S.L. Tabor, M. Thoennessen, P.J. Voss, T. Williams
2008Ho05	PRVCA	77,	044314	N. Hoteling, W.B. Walters, R.V.F. Janssens, R. Broda, M.P. Carpenter, B. Fornal, A.A. Hecht, M. Hjorth-Jensen, W. Królas, T. Lauritsen, T. Pawlat, D. Seweryniak, J.R. Stone, X. Wang, A. Wöhr, J. Wrzesiński, S. Zhu

2008Hu05	PRVCA	77,	044309	R.O. Hughes, G.J. Lane, G.D. Dracoulis, T. Kibédi, P. Nieminen, H. Watanabe
2008Ia01	PRVCA	77,	045501	V.E. Iacob, J.C. Hardy, V. Golovko, J. Goodwin, N. Nica, H.I. Park, L. Trache, R.E. Tribble
2008Jo03	PRVCA	77,	034311	G.A. Jones, S.J. Williams, P.M. Walker, Zs. Podolyák, S. Zhu, M.P. Carpenter, J.J. Carroll, R.S. Chakrawarthy, P. Chowdhury, I.J. Cullen, G.D. Dracoulis, A.B. Garnsworthy, G. Hackman, R.V.F. Janssens, T.L. Khoo, F.G. Kondev, G.J. Lane, Z. Liu, D. Seweryniak, N.J. Thompson
2008Jo04	PRVCA	77,	064316	E.K. Johansson, D. Rudolph, L.-L. Andersson, D.A. Torres, I. Ragnarsson, C. Andreoiu, C. Baktash, M.P. Carpenter, R.J. Charity, C.J. Chiara, J. Ekman, C. Fahlander, C. Hoel, O.L. Pechenaya, W. Reviol, R. du Rietz, D.G. Sarantites, D. Seweryniak, L.G. Sobotka, C.H. Yu, S. Zhu
2008Ka16	PYLBB	664,	52	M. Karny, K.P. Rykaczewski, R.K. Grzywacz, J.C. Batchelder, C.R. Bingham, C. Goodin, C.J. Gross, J.H. Hamilton, A. Korgul, W. Krolas, S.N. Liddick, K. Li, K.H. Maier, C. Mazzocchi, A. Piechaczek, K. Rykaczewski, D. Schapira, D. Simpson, M.N. Tantawy, J.A. Winger, C.H. Yu, E.F. Zganjar, N. Nikolov, J. Dobaczewski, A.T. Kruppa, W. Nazarewicz, M.V. Stoitsov
2008Kh10	EPJAA	37,	177	J. Khuyagbaatar, S. Hofmann, F.P. Heßberger, D. Ackermann, H.G. Burkhard, S. Heinz, B. Kindler, I. Kojouharov, B. Lommel, R. Mann, J. Maurer, K. Nishio, Yu. Novikov
2008Kn.A	Th.-GSI			Knöbel
2008Ko05	PRVCA	77,	034307	M. Kowalska, D.T. Yordanov, K. Blaum, P. Himpe, P. Lievens, S. Mallion, R. Neugart, G. Neyens, N. Vermeulen
2008Lo07	PRVCA	77,	064313	R.L. Lozeva, G.S. Simpson, H. Grawe, G. Neyens, L.A. Atanasova, D.L. Balabanski, D. Bazzacco, F. Becker, P. Bednarczyk, G. Benzoni, N. Blasi, A. Blazhev, A. Bracco, C. Brandau, L. Cáceres, F. Camera, S.K. Chamoli, F.C.L. Crespi, J.-M. Daugas, P. Detistov, M. De Rydt, P. Doornenbal, C. Fahlander, E. Farnea, G. Georgiev, J. Gerl, K.A. Gladnishki, M. Górská, J. Grebosz, M. Hass, R. Hoischen, G. Ilie, M. Ionescu-Bujor, A. Iordachescu, J. Jolie, A. Jungclaus, M. Kmiecik, I. Kojouharov, N. Kurz, S.P. Lakshmi, G. Lo Bianco, S. Mallion, A. Maj, D. Montanari, O. Perru, M. Pfützner, S. Pietri, J.A. Pinston, Zs. Podolyák, W. Prokopowicz, D. Rudolph, G. Rusev, T.R. Saitoh, A. Saltarelli, H. Schaffner, R. Schwengner, S. Tashenov, K. Turzó, J.J. Valiente-Dobón, N. Vermeulen, J. Walker, E. Werner-Malento, O. Wieland, H.-J. Wollersheim
2008Ma01	PRVCA	77,	014313	P.F. Mantica, R. Broda, H.L. Crawford, A. Damaske, B. Fornal, A.A. Hecht, C. Hoffman, M. Horoi, N. Hoteling, R.V.F. Janssens, J. Pereira, J.S. Pinter, J.B. Stoker, S.L. Tabor, T. Sumikama, W.B. Walters, X. Wang, S. Zhu
2008Ma39	EPJAA	37,	151	I. Matea, J. Souin, J. Äystö, B. Blank, P. Delahaye, V.-V. Elomaa, T. Eronen, J. Giovinazzo, U. Hager, J. Hakala, J. Huikari, A. Jokinen, A. Kankainen, I.D. Moore, J.-L. Pedroza, S. Rahaman, J. Rissanen, J. Ronkainen, A. Saastamoinen, T. Sonoda, C. Weber
2008Mo09	NUPAB	805	172c	K. Morita
2008Mu05	EPJAA	35,	31	M. Mukherjee, D. Beck, K. Blaum, G. Bollen, P. Delahaye, J. Dilling, S. George, C. Guénaut, F. Herfurth, A. Herlert, A. Kellerbauer, H.-J. Kluge, U. Köster, D. Lunney, S. Schwarz, L. Schweikhard, C. Yazidjian
2008Mu13	PRVCA	77,	061303	I. Mukha, L. Grigorenko, K. Sümmerer, L. Acosta, M.A.G. Alvarez, E. Casarejos, A. Chatillon, D. Cortina-Gil, J.M. Espino, A. Fomichev, J.E. García-Ramos, H. Geissel, J. Gómez-Camacho, J. Hofmann, O. Kiselev, A. Korshennikov, N. Kurz, Yu. Litvinov, I. Martel, C. Nociforo, W. Ott, M. Pfützner, C. Rodríguez-Tajes, E. Roeckl, M. Stanoiu, H. Weick, P.J. Woods
2008Ne01	PRLTA	100,	022501	S.L. Nelson, K.E. Gregorich, I. Dragojević, M.A. Garcia, J.M. Gates, R. Sudowe, H. Nitsche
2008Ne08	PRVCA	78,	024606	S.L. Nelson, C.M. Folden III, K.E. Gregorich, I. Dragojević, Ch. E. Düllmann, R. Eichler, M.A. Garcia, J.M. Gates, R. Sudowe, H. Nitsche
2008Oh06	JUPSA	77,	83201	T. Ohnishi, T. Kubo, K. Kusaka, A. Yoshida, K. Yoshida, N. Fukuda, M. Ohtake, Y. Yanagisawa, H. Takeda, D. Kameda, Y. Yamaguchi, N. Aoi, K.-i. Yoneda, H. Otsu, S. Takeuchi, T. Sugimoto, Y. Kondo, H. Scheit, Y. Gono, H. Sakurai, T. Motobayashi, H. Suzuki, T. Nakao, H. Kimura, Y. Mizoi, M. Matsushita, K. Ieki, T. Kuboki, T. Yamaguchi, T. Suzuki, A. Ozawa, T. Moriguchi, Y. Yasuda, T. Nakamura, T. Nannichi, T. Shimamura, Y. Nakayama, H. Geissel, H. Weick, J.A. Nolen, O.B. Tarasov, A.S. Nettleton, D.P. Bazin, B.M. Sherrill, D.J. Morrissey, W. Mittig

2008Os02	NIMBE	266,	4394	A. Osa, S.-i. Ichikawa, M. Matsuda, T.K. Sato, S.-C. Jeong
2008Pa33	PRVCA	78,	041307	D. Pauwels, O. Ivanov, N. Bree, J. Büscher, T.E. Cocolios, J. Gentens, M. Huyse, A. Korgul, Yu. Kudryavtsev, R. Raabe, M. Sawicka, I. Stefanescu, J. Van de Walle, P. Van den Bergh, P. Van Duppen, W.B. Walters
2008Qi03	RAACA	96,	455	Z. Qin, W. Brüchle, D. Ackermann, K. Eberhardt, F.P. Heßberger, E. Jäger, J.V. Kratz, P. Kuusiniemi, D. Liebe, G. Münzenberg, D. Nayak, Yu. N. Novikov, M. Schädel, B. Schausten, E. Schimpf, A. Semchenkov, B. Sulignano, P. Thörle, X.L. Wu and PrvCom from 2002Sh. C
2008Ra09	PYLBB	662,	111	S. Rahaman, V.-V. Elomaa, T. Eronen, J. Hakala, A. Jokinen, J. Julin, A. Kankainen, A. Saastamoinen, J. Suhonen, C. Weber, J. Äystö
2008Re16	PRLTA	100,	093002	M. Redshaw, J. McDaniel, E.G. Myers
2008Ri05	PRVCA	78,	034304	S.V. Rigby, D.M. Cullen, P.J.R. Mason, D.T. Scholes, C. Scholey, P. Rakhila, S. Eeckhaudt, T. Grahn, P. Greenlees, P.M. Jones, R. Julin, S. Juutinen, H. Ket-tunen, M. Leino, A.-P. Leppänen, P. Nieminen, M. Nyman, J. Pakarinen, J. Uusi-talo
2008Ro21	PRVCA	78,	034308	A.P. Robinson, T.L. Khoo, I. Ahmad, S.K. Tandel, F.G. Kondev, T. Nakat-sukasa, D. Seweryniak, M. Asai, B.B. Back, M.P. Carpenter, P. Chowdhury, C.N. Davids, S. Eeckhaudt, J.P. Greene, P.T. Greenlees, S. Gros, A. Heinz, R.-D. Herzberg, R.V.F. Janssens, G.D. Jones, T. Lauritsen, C.J. Lister, D. Peterson, J. Qian, U.S. Tandel, X. Wang, S. Zhu
2008Ru09	PRVCA	78,	021301	D. Rudolph, R. Hoischen, M. Hellström, S. Pietri, Zs. Podolyák, P.H. Regan, A.B. Garnsworthy, S.J. Steer, F. Becker, P. Bednarczyk, L. Cáceres, P. Doornen-bal, J. Gerl, M. Górska, J. Grebosz, I. Kojouharov, N. Kurz, W. Prokopowicz, H. Schaffner, H.J. Wollersheim, L.-L. Andersson, L. Atanasova, D.L. Balaban-ski, M.A. Bentley, A. Blazhev, C. Brandau, J.R. Brown, C. Fahlander, E.K. Jo-hansson, A. Jungclaus, S.M. Lenzi
2008Ry03	PRLTA	101,	012501	V.L. Ryjkov, M. Brodeur, T. Brunner, M. Smith, R. Ringle, A. Lapierre, F. Ames, P. Bricault, M. Dombisky, P. Delheij, D. Lunney, M.R. Pearson, J. Dilling
2008Sm03	PRLTA	101,	202501	M. Smith, M. Brodeur, T. Brunner, S. Eettenauer, A. Lapierre, R. Ringle, V.L. Ryjkov, F. Ames, P. Bricault, G.W.F. Drake, P. Delheij, D. Lunney, F. Sarazin, J. Dilling
2008Sm.A	Th.-Vancouver			M.J. Smith
2008So20	PRVAA	78,	012514	A. Solders, I. Bergström, Sz. Nagy, M. Suhonen, R. Schuch
2008Su14	EPJAA	36,	243	G. Suliman, D. Bucurescu, R. Hertenberger, H.-F. Wirth, T. Faestermann, R. Krücken, T. Behrens, V. Bildstein, K. Eppinger, C. Hinke, M. Mahgoub, P. Meierbeck, M. Reithner, S. Schwertel, N. Chauvin
2008Su19	NUPAB	812,	1	B. Sun, R. Knöbel, Yu. A. Litvinov, H. Geissel, J. Meng, K. Beckert, F. Bosch, D. Boutin, C. Brandau, L. Chen, I.J. Cullen, C. Dimopoulou, B. Fabian, M. Hausmann, C. Kozhuharov, S.A. Litvinov, M. Mazzocco, F. Montes, G. Münzenberg, A. Musumarra, S. Nakajima, C. Nociforo, F. Nolden, T. Oht-subo, A. Ozawa, Z. Patyk, W.R. Plaß, C. Scheidenberger, M. Steck, T. Suzuki, P.M. Walker, H. Weick, N. Winckler, M. Winkler, T. Yamaguchi
2008Tr04	PRVCA	77,	034310	V. Tripathi, S.L. Tabor, P. Bender, C.R. Hoffman, S. Lee, K. Pepper, M. Perry, P.F. Mantica, J.M. Cook, J. Pereira, J.S. Pinter, J.B. Stoker, D. Weisshaar, Y. Ut-suno, T. Otsuka
2008We02	NUPAB	803,	1	C. Weber, G. Audi, D. Beck, K. Blaum, G. Bollen, F. Herfurth, A. Kellerbauer, H.-J. Kluge, D. Lunney, S. Schwarz
2008We10	PRVCA	78,	054310	C. Weber, V.-V. Elomaa, R. Ferrer, C. Fröhlich, D. Ackermann, J. Äystö, G. Audi, L. Batist, K. Blaum, M. Block, A. Chaudhuri, M. Dworschak, S. Eliseev, T. Eronen, U. Hager, J. Hakala, F. Herfurth, F.P. Heßberger, S. Hof-mann, A. Jokinen, A. Kankainen, H.-J. Kluge, K. Langanke, A. Martín, G. Martínez-Pinedo, M. Mazzocco, I.D. Moore, J.B. Neumayr, Yu. N. Novikov, H. Penttilä, W.R. Plaß, A.V. Popov, S. Rahaman, T. Rauscher, C. Rauth, J. Ris-sanen, D. Rodríguez, A. Saastamoinen, C. Scheidenberger, L. Schweikhard, D.M. Seliverstov, T. Sonoda, F.-K. Thielemann, P.G. Thirolf, G.K. Vorobjev

2009Ak03	PYLBB	679,	191	Yu. Aksyutina, H.T. Johansson, T. Aumann, K. Boretzky, M.J.G. Borge, A. Chatillon, L.V. Chulkov, D. Cortina-Gil, U. Datta Pramanik, H. Emling, C. Forssén, H.O.U. Fynbo, H. Geissel, G. Ickert, B. Jonson, R. Kulesha, C. Langer, M. Lantz, T. LeBlais, A.O. Lindahl, K. Mahata, M. Meister, G. Münzenberg, T. Nilsson, G. Nyman, R. Palit, S. Paschalis, W. Prokopowicz, R. Reifarh, A. Richter, K. Riisager, G. Schrieder, H. Simon, K. Summerer, O. Tengblad, H. Weick, M.V. Zhukov
2009Al29	PRVCA	80,	061302	N. Al-Dahan, Zs. Podolyák, P.H. Regan, M. Górska, H. Grawe, K.H. Maier, J. Gerl, S.B. Pietri, H.J. Wollersheim, N. Alkhomashi, A.Y. Deo, A.M.D. Bacelar, G. Farrelly, S.J. Steer, A.M. Bruce, P. Boutachkov, C. Domingo-Pardo, A. Algora, J. Benlliure, A. Bracco, E. Calore, E. Casarejos, I.J. Cullen, P. Detistov, Zs. Dombrádi, M. Doncel, F. Farinon, W. Gelletly, H. Geissel, N. Goel, J. Grebosz, R. Hoischen, I. Kojouharov, N. Kurz, S. Lalkovski, S. Leoni, F. Molina, D. Montanari, A.I. Morales, A. Musumarra, D.R. Napoli, R. Nicolini, C. Nociforo, A. Prochazka, W. Prokopowicz, B. Rubio, D. Rudolph, H. Schaffner, P. Strmen, I. Szarka, T. Swan, J.S. Thomas, J.J. Valiente-Dobón, S. Verma, P.M. Walker, H. Weick
2009Al30	PRVCA	80,	064308	N. Alkhomashi, P.H. Regan, Zs. Podolyák, S. Pietri, A.B. Garnsworthy, S.J. Steer, J. Benlliure, E. Casarejos, R.F. Casten, J. Gerl, H.J. Wollersheim, J. Grebosz, G. Farrelly, M. Górska, I. Kojouharov, H. Schaffner, A. Algora, G. Benzoni, A. Blazhev, P. Boutachkov, A.M. Bruce, A.M. Denis Bacelar, I.J. Cullen, L. Cáceres, P. Doornenbal, M.E. Estevez, Y. Fujita, W. Gelletly, R. Hoischen, R. Kumar, N. Kurz, S. Lalkovski, Z. Liu, C. Mihai, F. Molina, A.I. Morales, D. Múcher, W. Prokopowicz, B. Rubio, Y. Shi, A. Tamii, S. Tashenov, J.J. Valiente-Dobón, P.M. Walker, P.J. Woods, F.R. Xu
2009An11	PRVCA	79,	064320	A.N. Andreyev, S. Antalic, D. Ackermann, L. Bianco, S. Franchoo, S. Heinz, F.P. Heßberger, S. Hofmann, M. Huyse, I. Kojouharov, B. Kindler, B. Lommel, R. Mann, K. Nishio, R.D. Page, J.J. Ressler, P. Sapple, B. Streicher, S. Saro, B. Sulignano, J. Thomson, P. Van Duppen, M. Venhart
2009An14	PRVCA	80,	024302	A.N. Andreyev, S. Antalic, D. Ackermann, T.E. Cocolios, V.F. Comas, J. Elseviers, S. Franchoo, S. Heinz, J.A. Heredia, F.P. Heßberger, S. Hofmann, M. Huyse, J. Khuyagbaatar, I. Kojouharov, B. Kindler, B. Lommel, R. Mann, R.D. Page, S. Rinta-Antila, P.J. Sapple, Š. Šáro, P. Van Duppen, M. Venhart, H.V. Watkins
2009An17	PRVCA	80,	044334	A.N. Andreyev, S. Antalic, D. Ackermann, T.E. Cocolios, V.F. Comas, J. Elseviers, S. Franchoo, S. Heinz, J.A. Heredia, F.P. Hessberger, S. Hofmann, M. Huyse, J. Khuyagbaatar, I. Kojouharov, B. Kindler, B. Lommel, R. Mann, R.D. Page, S. Rinta-Antila, P.J. Sapple, S. Saro, P. Van Duppen, M. Venhart, H.V. Watkins
2009An20	PRVCA	80,	054322	A.N. Andreyev, S. Antalic, D. Ackermann, T.E. Cocolios, V.F. Comas, J. Elseviers, S. Franchoo, S. Heinz, J.A. Heredia, F.P. Heßberger, S. Hofmann, M. Huyse, J. Khuyagbaatar, I. Kojouharov, B. Kindler, B. Lommel, R. Mann, R.D. Page, S. Rinta-Antilla, P.J. Sapple, S. Saro, P. Van Duppen, M. Venhart, H.V. Watkins
2009Ba04	PRVCA	79,	017302	F.C. Barker
2009Ba52	PRVCA	80,	054318	J.C. Batchelder, J.L. Wood, P.E. Garrett, K.L. Green, K.P. Rykaczewski, J.-C. Bilheux, C.R. Bingham, H.K. Carter, D. Fong, R. Grzywacz, J.H. Hamilton, D.J. Hartley, J.K. Hwang, W. Krolas, W.D. Kulp, Y. Larochele, A. Piechaczek, A.V. Ramayya, E.H. Spejewski, D.W. Stracener, M.N. Tantawy, J.A. Winger, E.F. Zganjar
2009Bo.A	PrvCom	GAu	Aug	C. Borgmann
2009Br09	PRVCA	80,	035805	M. Breitenfeldt, G. Audi, D. Beck, K. Blaum, S. George, F. Herfurth, A. Herlert, A. Kellerbauer, H.-J. Kluge, M. Kowalska, D. Lunney, S. Naimi, D. Neidherr, H. Schatz, S. Schwarz, L. Schweikhard
2009Br10	PRVCA	80,	044318	M. Brodeur, T. Brunner, C. Champagne, S. Etternauer, M. Smith, A. Lapierre, R. Ringle, V.L. Ryjkov, G. Audi, P. Delheij, D. Lunney, J. Dilling
2009Br.A	PrvCom	GAu	Jun	M. Brodeur
2009Bu.A	PrvCom	GAu	Mar	D. Bucurescu

2009Ca02	PRVCA	79,	011301	L. Cáceres, M. Górška, A. Jungclaus, M. Pfützner, H. Grawe, F. Nowacki, K. Sieja, S. Pietri, D. Rudolph, Zs. Podolyák, P.H. Regan, E. Werner-Malento, P. Detistov, S. Lalkovski, V. Modamio, J. Walker, K. Andgren, P. Bednarczyk, J. Benlliure, G. Benzoni, A.M. Bruce, E. Casarejos, B. Cederwall, F.C.L. Crespi, P. Doornenbal, H. Geissel, J. Gerl, J. Grebosz, B. Hadinia, M. Hellström, R. Hoischen, G. Ilie, A. Khaplanov, M. Kmiecik, I. Kojouharov, R. Kumar, N. Kurz, A. Maj, S. Mandal, F. Montes, G. Martinez-Pinedo, S. Myalski, W. Prokopowicz, H. Schaffner, G.S. Simpson, S.J. Steer, S. Tashenov, O. Wieland, H.J. Wollersheim
2009Ce04	PRLTA	103,	152502	J. Cerny, D.M. Moltz, D.W. Lee, K. Peräjärvi, B.R. Barquest, L.E. Grossman, W. Jeong, C.C. Jewett
2009Ch08	PRLTA	102,	122503	L. Chen, Yu. A. Litvinov, W.R. Plaß, K. Beckert, P. Beller, F. Bosch, D. Boutin, L. Caceres, R.B. Cakirli, J.J. Carroll, R.F. Casten, R.S. Chakrawarthy, D.M. Cullen, I.J. Cullen, B. Franzke, H. Geissel, J. Gerl, M. Górška, G.A. Jones, A. Kishada, R. Knöbel, C. Kozuharov, S.A. Litvinov, Z. Liu, S. Mandal, F. Montes, G. Münzenberg, F. Nolden, T. Ohtsubo, Z. Patyk, Zs. Podolyák, R. Propri, S. Rigby, N. Saito, T. Saito, C. Scheidenberger, M. Shindo, M. Steck, P. Ugorowski, P.M. Walker, S. Williams, H. Weick, M. Winkler, H.-J. Wollersheim, T. Yamaguchi
2009Ch09	PYLBB	674,	23	F.C. Charlwood, K. Baczynska, J. Billowes, P. Campbell, B. Cheal, T. Eronen, D.H. Forest, A. Jokinen, T. Kessler, I.D. Moore, H. Penttilä, R. Powis, M. Ruffer, A. Saastamoinen, G. Tungate, J. Äystö
2009Cr02	PRVCA	79,	054320	H.L. Crawford, P.F. Mantica, J.S. Berryman, R. Broda, B. Fornal, C.R. Hoffman, N. Hoteling, R.V.F. Janssens, S.M. Lenzi, J. Pereira, J.B. Stoker, S.L. Tabor, W.B. Walters, X. Wang, S. Zhu
2009Cr03	APOBB	40,	481	H.L. Crawford, R.V.F. Janssens, P.F. Mantica, J.S. Berryman, R. Broda, M.P. Carpenter, B. Fornal, G.F. Grinyer, N. Hoteling, B. Kay, T. Lauritsen, K. Minamisono, I. Stefanescu, J.B. Stoker, W.B. Walters, S. Zhu
2009Cu02	PRVCA	80,	024303	D.M. Cullen, P.J.R. Mason, S.V. Rigby, C. Scholey, S. Eeckhaudt, T. Grahn, P.T. Greenlees, U. Jakobsson, P.M. Jones, R. Julin, S. Juutinen, S. Ketelhut, A.M. Kishada, M. Leino, A.-P. Leppanen, K. Mäntyniemi, P. Nieminen, M. Nyman, J. Pakarinen, P. Peura, P. Rakhila, J. Sarén, J. Sorri, J. Uusitalo, B.J. Varley, M. Venhart
2009Da03	NUPAB	818,	264	J.V. Dawson, C. Reeve, J.R. Wilson, K. Zuber, M. Junker, C. Gössling, T. Köttig, D. Münstermann, S. Rajek, O. Schulz
2009Dr02	PRVCA	79,	011602	I. Dragojević, K.E. Gregorich, Ch. E. Düllmann, J. Dvorak, P.A. Ellison, J.M. Gates, S.L. Nelson, L. Stavsetra, H. Nitsche
2009Dr04	PRVCA	79,	054313	G.D. Dracoulis, P.M. Davidson, G.J. Lane, A.P. Byrne, T. Kibédi, P. Nieminen, H. Watanabe, A.N. Wilson
2009Dr06	PRVCA	79,	061303	G.D. Dracoulis, G.J. Lane, F.G. Kondev, H. Watanabe, D. Seweryniak, S. Zhu, M.P. Carpenter, C.J. Chiara, R.V.F. Janssens, T. Lauritsen, C.J. Lister, E.A. McCutchan, I. Stefanescu
2009Dr08	EPJAA	40,	127	G.D. Dracoulis, P.M. Davidson, G.J. Lane, A.P. Byrne, T. Kibédi, P. Nieminen, A.N. Wilson, H. Watanabe
2009Dr12	PRVCA	80,	054320	G.D. Dracoulis, G.J. Lane, A.P. Byrne, P.M. Davidson, T. Kibédi, P.H. Nieminen, H. Watanabe, A.N. Wilson, H.L. Liu, F.R. Xu
2009EI07	PRLTA	102,	252501	V.-V. Elomaa, G.K. Vorobjev, A. Kankainen, L. Batist, S. Eliseev, T. Eronen, J. Hakala, A. Jokinen, I.D. Moore, Yu. N. Novikov, H. Penttilä, A. Popov, S. Rahaman, J. Rissanen, A. Saastamoinen, H. Schatz, D.M. Seliverstov, C. Weber, J. Äystö
2009EI08	EPJAA	40,	1	V.-V. Elomaa, T. Eronen, U. Hager, J. Hakala, A. Jokinen, A. Kankainen, I.D. Moore, S. Rahaman, J. Rissanen, V. Rubchenya, C. Weber, J. Äystö
2009Er02	PRVCA	79,	032802	T. Eronen, V.-V. Elomaa, U. Hager, J. Hakala, A. Jokinen, A. Kankainen, T. Kessler, I.D. Moore, S. Rahaman, J. Rissanen, C. Weber, J. Äystö
2009Er07	PRLTA	103,	252501	T. Eronen, V.-V. Elomaa, J. Hakala, J.C. Hardy, A. Jokinen, I.D. Moore, M. Reponen, J. Rissanen, A. Saastamoinen, C. Weber, J. Äystö
2009Fa15	EPJAA	42,	339	T. Faestermann, R. Hertenberger, H.-F. Wirth, R. Krücken, M. Mahgoub, P. Maier-Komor
2009Fa.A	PrvCom	GAu	Mar	T. Faestermann

2009Fi03	PRLTA	103,	142501	K.T. Flanagan, P. Vingerhoets, M. Avgoulea, J. Billowes, M.L. Bissell, K. Blaum, B. Cheal, M. De Rydt, V.N. Fedosseev, D.H. Forest, Ch. Geppert, U. Köster, M. Kowalska, J. Krämer, K.L. Kratz, A. Krieger, E. Mané, B.A. Marsh, T. Materna, L. Mathieu, P.L. Molkanov, R. Neugart, G. Neyens, W. Nörtershäuser, M.D. Seliverstov, O. Serot, M. Schug, M.A. Sjoedin, J.R. Stone, N.J. Stone, H.H. Stroke, G. Tungate, D.T. Yordanov, Yu. M. Volkov
2009Fo02	PRVCA	79,	027602	C.M. Folden III, I. Dragojevic, Ch. E. Düllmann, R. Eichler, M.A. Garcia, J.M. Gates, S.L. Nelson, R. Sudowe, K.E. Gregorich, D.C. Hoffman, H. Nitsche
2009Fo05	PRVCA	79,	064318	C.M. Folden III, A.S. Nettleton, A.M. Amthor, T.N. Ginter, M. Hausmann, T. Kubo, W. Loveland, S.L. Manikonda, D.J. Morrissey, T. Nakao, M. Portillo, B.M. Sherrill, G.A. Souliotis, B.F. Strong, H. Takeda, O.B. Tarasov
2009Fu05	EPJAA	39,	49	T. Fukuchi, T. Hori, T. Masue, K. Tajiri, A. Sato, T. Furukawa, A. Odahara, T. Shimoda, Y. Wakabayashi, Y. Gono, T. Suzuki, M. Ukai, T. Wakui, A. Yamazaki, Y. Miyashita, N. Sato, M. Tateoka, M. Ohguma, T. Shinozuka, T. Koike, K. Shirotori, Y. Miura, S. Kinoshita, Y. Ma, Y.Y. Fu, H. Tamura
2009Ga05	PRLTA	102,	092501	L. Gaudefroy, J.M. Daugas, M. Hass, S. Grevy, Ch. Stodel, J.C. Thomas, L. Perrot, M. Girod, B. Rosse, J.C. Angelique, D.L. Balabanski, E. Fiori, C. Force, G. Georgiev, D. Kameda, V. Kumar, R.L. Lozeva, I. Matea, V. Meot, P. Morel, B.S. Nara Singh, F. Nowacki, G. Simpson
2009Ga24	NUPAB	826,	1	C. Gaulard, C. Bachelet, G. Audi, C. Guénaut, D. Lunney, M. de Saint Simon, M. Sewtz, C. Thibault
2009Ga40	PRVCA	80,	064303	A.B. Garnsworthy, P.H. Regan, S. Pietri, Y. Sun, F.R. Xu, D. Rudolph, M. Górská, L. Cáceres, Zs. Podolyák, S.J. Steer, R. Hoischen, A. Heinz, F. Becker, P. Bednarczyk, P. Doornenbal, H. Geissel, J. Gerl, H. Grawe, J. Grebosz, A. Kelic, I. Kojouharov, N. Kurz, F. Montes, W. Prokopowicz, T. Saito, H. Schaffner, S. Tachenov, E. Werner-Malento, H.J. Wollersheim, G. Benzoni, B. Blank, C. Brandau, A.M. Bruce, F. Camera, W.N. Catford, I.J. Cullen, Zs. Dombrádi, E. Estevez, W. Gelletly, G. Ilie, J. Jolie, G.A. Jones, A. Jungclaus, M. Kmiecik, F.G. Kondev, T. Kurtukian-Nieto, S. Lalkovski, Z. Liu, A. Maj, S. Myalski, M. Pfützner, S. Schwertel, T. Shizuma, A.J. Simons, P.M. Walker, O. Wieland
2009Go16	PRVCA	79,	064314	M.B. Gomez Hornillos, D. O'Donnell, J. Simpson, D.T. Joss, L. Bianco, B. Cederwall, T. Grahn, P.T. Greenlees, B. Hadinia, P. Jones, R. Julin, S. Juutinen, S. Ketelhut, M. Labiche, M. Leino, M. Nyman, R.D. Page, E.S. Paul, M. Petri, P. Peura, P. Rahkila, P. Ruotsalainen, M. Sandzelius, P.J. Sappale, J. Saren, C. Scholey, J. Sorri, J. Thomson, J. Uusitalo
2009Go29	PRVCA	80,	045501	J.R. Goodwin, V.V. Golovko, V.E. Iacob, J.C. Hardy
2009Go40	PYLBB	672,	313	M. Górská, L. Cáceres, H. Grawe, M. Pfützner, A. Jungclaus, S. Pietri, E. Werner-Malento, Z. Podolyák, P.H. Regan, D. Rudolph, P. Detistov, S. Lalkovski, V. Modamio, J. Walker, T. Beck, P. Bednarczyk, P. Doornenbal, H. Geissel, J. Gerl, J. Grebosz, R. Hoischen, I. Kojouharov, N. Kurz, W. Prokopowicz, H. Schaffner, H. Weick, H.-J. Wollersheim, K. Andgren, J. Benlliure, G. Benzoni, A.M. Bruce, E. Casarejos, B. Cederwall, F.C.L. Crespi, B. Hadinia, M. Hellstrom, G. Ilie, A. Khaplanov, M. Kmiecik, R. Kumar, A. Maj, S. Mandal, F. Montes, S. Myalski, G.S. Simpson, S.J. Steer, S. Tashenov, O. Wieland, Zs. Dombrádi, P. Reiter, D. Sohler
2009Gu17	PPNUE	40,	558	Yu. B. Gurov, S.V. Lapushkin, B.A. Chernyshev, V.G. Sandukovsky
2009Gy01	NUPAB	828,	1	Gy. Gyürky, G. Rastrepina, Z. Elekes, J. Farkas, Zs. Fülöp, G.G. Kiss, E. Somorjai, T. Szücs
2009Ha42	PRVCA	80,	064310	B. Hadinia, B. Cederwall, R.D. Page, M. Sandzelius, C. Scholey, K. Andgren, T. Bäck, E. Ganioglu, M.B. Gómez Hornillos, T. Grahn, P.T. Greenlees, E. Ideguchi, U. Jakobsson, A. Johnson, P.M. Jones, R. Julin, J. Juutinen, S. Ketelhut, A. Khaplanov, M. Leino, M. Niikura, M. Nyman, I. Özgür, E.S. Paul, P. Peura, P. Rahkila, J. Sarén, J. Sorri, J. Uusitalo, R. Wyss
2009Ha.B	NIMAE	606,	484	H. Hayashi, M. Shibata, I. Miyazaki, O. Suematsu, Y. Kojima, K. Kawade, A. Taniguchi
2009He20	EPJAA	41,	145	F.P. Heßberger, S. Hofmann, B. Streicher, B. Sulignano, S. Antalic, D. Ackermann, S. Heinz, B. Kindler, I. Kojouharov, P. Kuusiniemi, M. Leino, B. Lommel, R. Mann, A.G. Popeko, Š. Šáro, J. Uusitalo, A.V. Yeremin

2009He23	EPJAA	42,	333	R.-D. Herzberg, S. Moon, S. Eeckhauudt, P.T. Greenlees, P.A. Butler, T. Page, A.V. Afanasjev, N. Amzal, J.E. Bastin, F. Becker, M. Bender, B. Bruyneel, J.F.C. Cocks, I.G. Darby, O. Dorvaux, K. Eskola, J. Gerl, T. Grahn, C. Gray-Jones, N.J. Hammond, K. Hauschild, P.-H. Heenen, K. Helariutta, A. Herzberg, F. Hessberger, M. Houry, A. Hurstel, R.D. Humphreys, G.D. Jones, P.M. Jones, R. Julin, S. Juutinen, H. Kankaanpää, H. Kettunen, T.L. Khoo, W. Kortens, P. Kuusiniemi, Y. LeCoz, M. Leino, A.-P. Leppänen, C.J. Lister, R. Lucas, M. Muikku, P. Nieminen, M. Nyman, R.D. Page, T. Page, J. Pakarinen, A. Pritchard, P. Rahkila, P. Reiter, M. Sandzelius, J. Saren, Ch. Schlegel, C. Scholey, Ch. Theisen, W.H. Trzaska, J. Uusitalo, A. Wiens, H.J. Wollersheim
2009In01	PRVCA	79,	034313	T.T. Inamura, H. Haba
2009Je01	PRVCA	79,	031303	H.B. Jeppesen, I. Dragojević, R.M. Clark, K.E. Gregorich, M.N. Ali, J.M. Allmond, C.W. Beausang, D.L. Bleuel, M. Cromaz, M.A. Deleplanque, P.A. Ellison, P. Fallon, M.A. Garcia, J.M. Gates, J.P. Greene, S. Gros, I.Y. Lee, H.L. Liu, A.O. Macchiavelli, S.L. Nelson, H. Nitsche, J.R. Pavan, L. Stavsetra, F.S. Stephens, M. Wiedeking, R. Wyss, F.R. Xu
2009Je02	PRVCA	80,	034324	H.B. Jeppesen, R.M. Clark, K.E. Gregorich, A.V. Afanasjev, M.N. Ali, J.M. Allmond, C.W. Beausang, M. Cromaz, M.A. Deleplanque, I. Dragojevic, J. Dvorak, P.A. Ellison, P. Fallon, M.A. Garcia, J.M. Gates, S. Gros, I.Y. Lee, A.O. Macchiavelli, S.L. Nelson, H. Nitsche, L. Stavsetra, F.S. Stephens, M. Wiedeking
2009Je05	PRVCA	80,	054303	D.G. Jenkins
2009Ka30	PRVCA	80,	045809	L.W. Kastens, S.B. Cahn, A. Manzur, D.N. McKinsey
2009Ke.A	PrvCom	GAu	Nov	J. Ketelaer
2009Ki14	PRVCA	80,	034315	H. Kikunaga, Y. Kasamatsu, H. Haba, T. Mitsugashira, M. Hara, K. Takamiya, T. Ohtsuki, A. Yokoyama, T. Nakanishi, A. Shinohara
2009Ko15	ARISE	67,	1702	K. Kossert, G. Jörg, O. Nähle, C. Lierse v Gostomski
2009Ko19	PRVCA	80,	014304	F.G. Kondev, G.D. Dracoulis, G.J. Lane, I. Ahmad, A.P. Byrne, M.P. Carpenter, P. Chowdhury, R.V.F. Janssens, T. Kibédi, T. Lauritsen, C.J. Lister, D. Seweryniak, S.K. Tandel, S. Zhu
2009Ko35	EPJAA	42,	351	M. Kowalska, S. Naimi, J. Agramunt, A. Algora, G. Audi, D. Beck, B. Blank, K. Blaum, Ch. Böhm, M. Breitenfeldt, E. Estevez, L.M. Fraile, S. George, F. Herfurth, A. Herlert, A. Kellerbauer, D. Lunney, E. Minaya-Ramirez, D. Neidherr, B. Olaizola, K. Riisager, M. Rosenbusch, B. Rubio, S. Schwarz, L. Schweikhard, U. Warring
2009Ku19	PRVCA	80,	035502	T. Kurtukian Nieto, J. Souin, T. Eronen, L. Audirac, J. Äystö, B. Blank, V.-V. Elomaa, J. Giovinazzo, U. Hager, J. Hakala, A. Jokinen, A. Kankainen, P. Karvonen, T. Kessler, I.D. Moore, H. Penttilä, S. Rahaman, M. Reponen, S. Rintantila, J. Rissanen, A. Saastamoinen, T. Sonoda, C. Weber
2009Kw02	PRVCA	80,	051302	A.A. Kwiatkowski, B.R. Barquest, G. Bollen, C.M. Campbell, D.L. Lincoln, D.J. Morrissey, G.K. Pang, A.M. Prinke, J. Savory, S. Schwarz, C.M. Folden III, D. Melconian, S.K.L. Sjuue, M. Block
2009La17	PRVCA	80,	024321	G.J. Lane, G.D. Dracoulis, A.P. Byrne, R.O. Hughes, H. Watanabe, F.G. Kondev, C.J. Chiara, M.P. Carpenter, R.V.F. Janssens, T. Lauritsen, C.J. Lister, E.A. McCutchan, D. Seweryniak, S. Zhu, P. Chowdhury, I. Stefanescu
2009Le02	PYLBB	672,	6	J.-L. Lecouey, N.A. Orr, F.M. Marqués, N.L. Achouri, J.-C. Angélique, B.A. Brown, F. Carstou, W.N. Catford, N.M. Clarke, M. Freer, B.R. Fulton, S. Grévy, F. Hanappe, K.L. Jones, M. Labiche, R.C. Lemmon, A. Ninane, E. Sauvan, K.M. Spohr, L. Stuttgé
2009Le03	PRVCA	79,	014318	A.I. Levon, G. Graw, Y. Eisermann, R. Hertenberger, J. Jolie, N. Yu. Shirikova, A.E. Stuchbery, A.V. Sushkov, P.G. Thirolf, H.-F. Wirth, N.V. Zamfir
2009Le26	PRVCA	80,	044308	M. Lebois, D. Verney, F. Ibrahim, S. Essabaa, F. Azaiez, M.C. Mhamed, E. Cottereau, P.V. Cuong, M. Ferraton, K. Flanagan, S. Franchoo, D. Guillemaud-Mueller, F. Hammache, C. Lau, F. Le Blanc, J.-F. Le Du, J. Libert, B. Mougnot, C. Petrache, B. Roussiere, L. Sagui, N. de Sereville, I. Stefan, B. Tastet
2009Le.A	PrvCom	GAu	May	A.I. Levon
2009Mo12	JUPSA	78,	064201	K. Morita, K. Morimoto, D. Kaji, H. Haba, K. Ozeki, Y. Kudou, N. Sato, T. Sumita, A. Yoneda, T. Ichikawa, Y. Fujimori, S. Goto, E. Ideguchi, Y. Kasamatsu, K. Katori, Y. Komori, H. Koura, H. Kudo, K. Ooe, A. Ozawa, F. Tokanai, K. Tsukada, T. Yamaguchi, A. Yoshida
2009Mo23	PRLTA	103,	122502	B.J. Mount, M. Redshaw, E.G. Myers
2009Mu15	NIMAE	610,	654	A. Murataka, Y. Kojima, S. Endo, K. Shizuma
2009Mu17	EPJAA	42,	421	I. Mukha, For the S271 Collaboration

2009Na.A	PrvCom	GAu	Nov	S. Naimi
2009Ne03	PRLTA	102,	112501	D. Neidherr, G. Audi, D. Beck, K. Blaum, Ch. Böhm, M. Breitenfeldt, R.B. Cakirli, R.F. Casten, S. George, F. Herfurth, A. Herlert, A. Kellerbauer, M. Kowalska, D. Lunney, E. Minaya-Ramirez, S. Naimi, E. Noah, L. Penescu, M. Rosenbusch, S. Schwarz, L. Schweikhard, T. Stora
2009Ne11	PRVCA	80,	044323	D. Neidherr, R.B. Cakirli, G. Audi, D. Beck, K. Blaum, Ch. Böhm, M. Breitenfeldt, R.F. Casten, S. George, F. Herfurth, A. Herlert, A. Kellerbauer, M. Kowalska, D. Lunney, E. Minaya-Ramirez, S. Naimi, M. Rosenbusch, S. Schwarz, L. Schweikhard
2009Od01	PRVCA	79,	051304	D. O'Donnell, J. Simpson, C. Scholey, T. Back, P.T. Greenlees, U. Jakobsson, P. Jones, D.T. Joss, D.S. Judson, R. Julin, S. Juutinen, S. Ketelhut, M. Labiche, M. Leino, M. Nyman, R.D. Page, P. Peura, P. Rakhila, P. Ruotsalainen, M. Sandzelius, P.J. Sapple, J. Saren, J. Thomson, J. Uusitalo, H.V. Watkins
2009Pa16	PRVCA	79,	044309	D. Pauwels, O. Ivanov, N. Bree, J. Buscher, T.E. Cocolios, M. Huyse, Yu. Kudryavtsev, R. Raabe, M. Sawicka, J. Van de Walle, P. Van Duppen, A. Korgul, I. Stefanescu, A.A. Hecht, N. Hoteling, A. Woehr, W.B. Walters, R. Broda, B. Fornal, W. Krolas, T. Pawlat, J. Wrzesinski, M.P. Carpenter, R.V.F. Janssens, T. Lauritsen, D. Seweryniak, S. Zhu, J.R. Stone, X. Wang
2009Pa25	PRVCA	79,	064323	S. Pascu, Gh. Cata-Danil, D. Bucurescu, N. Marginean, N.V. Zamfir, G. Graw, A. Gollwitzer, D. Hofer, B.D. Valnion
2009Pa35	PRVCA	80,	034307	N. Patronis, H. De Witte, M. Gorska, M. Huyse, K. Kruglov, D. Pauwels, K. Van de Vel, P. Van Duppen, J. Van Roosbroeck, J.-C. Thomas, S. Franchoo, J. Cederkall, V.N. Fedoseyev, H. Fynbo, U. Georg, O. Jonsson, U. Köster, T. Materna, L. Mathieu, O. Serot, L. Weissman, W.F. Mueller, V.I. Mishin, D. Fedorov
2009Pe06	PRVCA	79,	035806	J. Pereira, S. Hennrich, A. Aprahamian, O. Arndt, A. Becerril, T. Elliot, A. Estrade, D. Galaviz, R. Kessler, K.-L. Kratz, G. Lorusso, P.F. Mantica, M. Matos, P. Möller, F. Montes, B. Pfeiffer, H. Schatz, F. Schertz, L. Schnorrenberger, E. Smith, A. Stolz, M. Quinn, W.B. Walters, A. Wöhr
2009Pe31	EPJAA	42,	379	J. Perkowski, J. Andrzejewski, J. Srebrny, A.M. Bruce, Ch. Droste, E. Grodner, M. Kisielinski, A. Korman, M. Kowalczyk, J. Kownacki, A. Król, J. Marganec, J. Mierzejewski, T. Morek, K. Sobczak, W.H. Trzaska, M. Zielinska
2009Po01	PYLBB	672,	116	Zs. Podolyak, G.F. Farrelly, P.H. Regan, A.B. Garnsworthy, S.J. Steer, M. Gorska, J. Benlliure, E. Casarejos, S. Pietri, J. Gerl, H.J. Wollersheim, R. Kumar, F. Molina, A. Algora, N. Alkhomashi, G. Benzoni, A. Blazhev, P. Boutachkov, A.M. Bruce, L. Caceres, I.J. Cullen, A.M.D. Bacelar, P. Doornenbal, M.E. Estevez, Y. Fujita, W. Gelletly, H. Geissel, H. Grawe, J. Grebosz, R. Hoischen, I. Kojouharov, S. Lalkovski, Z. Liu, K.H. Maier, C. Mihai, D. Mucher, B. Rubio, H. Schaffner, A. Tamii, S. Tashenov, J.J. Valiente-Dobon, P.M. Walker, P.J. Woods
2009Po02	PRVCA	79,	031305	Zs. Podolyak, S.J. Steer, S. Pietri, F.R. Xu, H.L. Liu, P.H. Regan, D. Rudolph, A.B. Garnsworthy, R. Hoischen, M. Gorska, J. Gerl, H.J. Wollersheim, T. Kurtukian-Nieto, G. Benzoni, T. Shizuma, F. Becker, P. Bednarczyk, L. Caceres, P. Doornenbal, H. Geissel, J. Grebosz, A. Kelic, I. Kojouharov, N. Kurz, F. Montes, W. Prokopowicz, T. Saito, H. Schaffner, S. Tashenov, A. Heinz, M. Pfitzner, A. Jungclaus, D.L. Balabanski, C. Brandau, A.M. Bruce, W.N. Catford, I.J. Cullen, Zs. Dombradi, E. Estevez, W. Gelletly, G. Ilie, J. Jolie, G.A. Jones, M. Kmiecik, F.G. Kondev, R. Krucken, S. Lalkovski, Z. Liu, A. Maj, S. Myalski, S. Schwertel, P.M. Walker, E. Werner-Malento, O. Wieland
2009Po10	EPJAA	40,	131	M.-G. Porquet, A. Astier, Ts. Venkova, I. Deloncle, F. Azaiez, A. Buta, D. Curien, O. Dorvaux, G. Duchene, B.J.P. Gall, F. Khalfallah, I. Piqueras, M. Rousseau, M. Meyer, N. Redon, O. Stezowski, R. Lucas, A. Bogachev
2009Qi04	PRVCA	79,	064319	J. Qian, A. Heinz, T.L. Khoo, R.V.F. Janssens, D. Peterson, D. Seweryniak, I. Ahmad, M. Asai, B.B. Back, M.P. Carpenter, A.B. Garnsworthy, J.P. Greene, A.A. Hecht, C.L. Jiang, F.G. Kondev, T. Lauritsen, C.J. Lister, A. Robinson, G. Savard, R. Scott, R. Vondrasek, X. Wang, R. Winkler, S. Zhu
2009Ra11	PRLTA	103,	042501	S. Rahaman, V.-V. Elomaa, T. Eronen, J. Hakala, A. Jokinen, A. Kankainen, J. Rissanen, J. Suhonen, C. Weber, J. Äystö
2009Ra33	PRVCA	80,	054307	R. Raabe, J. Buscher, J. Ponsaers, F. Aksouh, M. Huyse, O. Ivanov, S.R. Leshner, I. Mukha, D. Pauwels, M. Sawicka, D. Smirnov, I. Stefanescu, J. Van de Walle, P. Van Duppen, C. Angulo, J. Cabrera, N. de Sereville, I. Martel, A.M. Sanchez-Benitez, C. Aa. Diget
2009Re03	PRVAA	79,	012506	M. Redshaw, B.J. Mount, E.G. Myers

2009Re07	PRLTA	102,	212502	M. Redshaw, B.J. Mount, E.G. Myers, F.T. Avignone III
2009Re15	PRVAA	79,	012507	M. Redshaw, B.J. Mount, E.G. Myers
2009Ri03	PYLBB	675,	170	R. Ringle, M. Brodeur, T. Brunner, S. Ettenauer, M. Smith, A. Lapierre, V.L. Ryjkov, P. Delheij, G.W.F. Drake, J. Lassen, D. Lunney, J. Dilling
2009Ri12	PRVCA	80,	064321	R. Ringle, C. Bachelet, M. Block, G. Bollen, M. Facina, C.M. Folden III, C. Guénaut, A.A. Kwiatkowski, D.J. Morrissey, G.K. Pang, A.M. Prinke, J. Savory, P. Schury, S. Schwarz, C.S. Sumithrarachchi
2009Ru08	PRLTA	103,	072502	G. Rugel, T. Faestermann, K. Knie, G. Korschinek, M. Poutivtsev, D. Schumann, N. Kivel, I. Günther-Leopold, R. Weinreich, M. Wohlmuther
2009Sa09	EPJAA	39,	33	J. Sauvage, J. Genevey, B. Roussière, S. Franchoo, A.N. Andreyev, N. Barré, J.-F. Clavelin, H. De Witte, D.V. Fedorov, V.N. Fedoseyev, L.M. Fraile, X. Grave, G. Huber, M. Huyse, H.B. Jeppesen, U. Köster, P. Kunz, S.R. Leshar, B.A. Marsh, I. Mukha, J. Oms, M. Seliverstov, I. Stefanescu, K. Van de Vel, J. Van de Walle, P. Van Duppen, Yu. M. Volkov
2009Sa12	PRLTA	102,	132501	J. Savory, P. Schury, C. Bachelet, M. Block, G. Bollen, M. Facina, C.M. Folden III, C. Guénaut, E. Kwan, A.A. Kwiatkowski, D.J. Morrissey, G.K. Pang, A. Prinke, R. Ringle, H. Schatz, S. Schwarz, C.S. Sumithrarachchi
2009Sa27	PRVCA	79,	064315	M. Sandzelius, E. Ganioglu, B. Cederwall, B. Hadinia, K. Andgren, T. Back, T. Grahn, P. Greenlees, U. Jakobsson, A. Johnson, P.M. Jones, R. Julin, S. Juutinen, S. Ketelhut, A. Khaplanov, M. Leino, M. Nyman, P. Peura, P. Rakhila, J. Saren, C. Scholey, J. Uusitalo, R. Wyss
2009Sa38	PRVCA	80,	044330	A. Saastamoinen, T. Eronen, A. Jokinen, V.-V. Elomaa, J. Hakala, A. Kankainen, I.D. Moore, S. Rahaman, J. Rissanen, C. Weber, J. Äystö, L. Trache
2009Sc19	PRVCA	80,	025501	N.D. Scielzo, S. Caldwell, G. Savard, J.A. Clark, C.M. Deibel, J. Fallis, S. Gulick, D. Lascar, A.F. Levand, G. Li, J. Mintz, E.B. Norman, K.S. Sharma, M. Sternberg, T. Sun, J. Van Schelt
2009Se13	EPJAA	41,	315	M.D. Seliverstov, A.N. Andreyev, N. Barre, A.E. Barzakh, S. Dean, H. De Witte, D.V. Fedorov, V.N. Fedoseyev, L.M. Fraile, S. Franchoo, J. Genevey, G. Huber, M. Huyse, U. Koster, P. Kunz, S.R. Leshar, B.A. Marsh, I. Mukha, B. Roussiere, J. Sauvage, I. Stefanescu, K. Van de Vel, P. Van Duppen, Yu. M. Volkov
2009Sh17	EPJAA	39,	263	T. Shizuma, T. Ishii, H. Makii, T. Hayakawa, M. Matsuda
2009Si21	PRVCA	80,	024304	G.S. Simpson, W. Urban, J. Genevey, R. Orlandi, J.A. Pinston, A. Scherillo, A.G. Smith, J.F. Smith, I. Ahmad, J.P. Greene
2009Si35	PRVCA	80,	064608	E.C. Simpson, J.A. Tostevin, Zs. Podolyák, P.H. Regan, S.J. Steer
2009St04	PRVCA	79,	015803	J.B. Stoker, P.F. Mantica, D. Bazin, A. Becerril, J.S. Berryman, H.L. Crawford, A. Estrade, C.J. Guess, G.W. Hitt, G. Lorusso, M. Matos, K. Minamisono, F. Montes, J. Pereira, G. Perdikakis, H. Schatz, K. Smith, R.G.T. Zegers
2009St16	IMPEE	18,	1002	S.J. Steer, Zs. Podolyák, S. Pietri, M. Górská, G.F. Farrelly, P.H. Regan, D. Rudolph, A.B. Garnsworthy, R. Hoischen, J. Gerl, H.J. Wollersheim, H. Grawe, K.H. Maier, F. Becker, P. Bednarczyk, L. Cáceres, P. Doornenbal, H. Geissel, J. Grebosz, A. Kelic, I. Kojouharov, N. Kurz, F. Montes, W. Prokopowicz, T. Saito, H. Schaffner, S. Tashenov, A. Heinz, T. Kurtukianieto, G. Benzoni, M. Pfützner, A. Jungclaus, D.L. Balabanski, C. Brandau, A. Brown, A.M. Bruce, W.N. Catford, I.J. Cullen, Zs. Dombrádi, M.E. Estevez, W. Gelletly, G. Ilie, J. Jolie, G.A. Jones, M. Kmiecik, F.G. Kondev, R. Krücken, S. Lalkovski, Z. Liu, A. Maj, S. Myalski, S. Schwertel, T. Shizuma, P.M. Walker, E. Werner-Malento, O. Wieland
2009St21	PRLTA	103,	132502	L. Stavsetra, K.E. Gregorich, J. Dvorak, P.A. Ellison, I. Dragojević, M.A. Garcia, H. Nitsche
2009St28	EPJAA	42,	407	I. Stefanescu, W.B. Walters, P.F. Mantica, B.A. Brown, A.D. Davies, A. Estrade, P.T. Hosmer, N. Hoteling, S.N. Liddick, W.D.M. Rae, T.J. Mertzimekis, F. Montes, A.C. Morton, W.F. Mueller, M. Ouellette, E. Pellegrini, P. Santi, D. Seweryniak, H. Schatz, J. Shergur, A. Stolz, J.R. Stone, B.E. Tomlin
2009Su14	PRLTA	103,	152503	D. Suzuki, H. Iwasaki, D. Beaumel, L. Nalpas, E. Pollacco, M. Assie, H. Baba, Y. Blumenfeld, N. De Sereville, A. Drouart, S. Franchoo, A. Gillibert, J. Guillot, F. Hammache, N. Keeley, V. Lapoux, F. Marechal, S. Michimasa, X. Mougeot, I. Mukha, H. Okamura, H. Otsu, A. Ramus, P. Roussel-Chomaz, H. Sakurai, J.-A. Scarpaci, O. Sorlin, I. Stefan, M. Takechi
2009Ta24	PRVCA	80,	034609	O.B. Tarasov, M. Portillo, A.M. Amthor, T. Baumann, D. Bazin, A. Gade, T.N. Ginter, M. Hausmann, N. Inabe, T. Kubo, D.J. Morrissey, A. Nettleton, J. Pereira, B.M. Sherrill, A. Stolz, M. Thoennessen

2009Ur04	PRVCA	80,	037301	W. Urban, J.A. Pinston, G.S. Simpson, A.G. Smith, J.F. Smith, T. Rząca-Urban, I. Ahmad
2009Wa02	PRVCA	79,	024306	H. Watanabe, G.J. Lane, G.D. Dracoulis, T. Kibédi, A.P. Byrne, P. Nieminen, R.O. Hughes, F.G. Kondev, M.P. Carpenter, R.V.F. Janssens, T. Lauritsen, D. Seweryniak, S. Zhu, P. Chowdhury, C.-B. Moon
2009Wa06	PRVCA	79,	044321	P.M. Walker, R.J. Wood, G.D. Dracoulis, T. Kibédi, R.A. Bark, A.M. Bruce, A.P. Byrne, P.M. Davidson, H.M. El-Masri, G.J. Lane, C. Moon, J.N. Orce, F.M. Prados Estevez, C. Wheldon, A.N. Wilson
2009Wa11	PRVCA	79,	064311	H. Watanabe, G.J. Lane, G.D. Dracoulis, A.P. Byrne, P. Nieminen, F.G. Kondev, K. Ogawa, M.P. Carpenter, R.V.F. Janssens, T. Lauritsen, D. Seweryniak, S. Zhu, P. Chowdhury
2009Wa24	EPJAA	42,	163	H. Watanabe, G.J. Lane, G.D. Dracoulis, A.P. Byrne, P. Nieminen, F.G. Kondev, K. Ogawa, M.P. Carpenter, R.V.F. Janssens, T. Lauritsen, D. Seweryniak, S. Zhu, P. Chowdhury
2009Wi03	PRLTA	102,	142502	J.A. Winger, S.V. Ilyushkin, K.P. Rykaczewski, C.J. Gross, J.C. Batchelder, C. Goodin, R. Grzywacz, J.H. Hamilton, A. Korgul, W. Krolas, S.N. Liddick, C. Mazzocchi, S. Padgett, A. Piechaczek, M.M. Rajabali, D. Shapira, E.F. Zganjar, I.N. Borzov
2009Wi09	PYLBB	679,	36	N. Winckler, H. Geissel, Yu. A. Litvinov, K. Beckert, F. Bosch, D. Boutin, C. Brandau, L. Chen, C. Dimopoulou, H.G. Essel, B. Fabian, T. Faestermann, A. Fagner, E. Haettner, S. Hess, P. Kienle, R. Knöbel, C. Kozhuharov, S.A. Litvinov, M. Mazzocco, F. Montes, G. Münzenberg, C. Nociforo, F. Nolden, Z. Patyk, W.R. Plass, A. Prochazka, R. Reda, R. Reuschl, C. Scheidenberger, M. Steck, T. Stohlker, S. Yu. Torilov, M. Trassinelli, B. Sun, H. Weick, M. Winkler
2009Wi10	PRLTA	103,	122501	J.S.E. Wieslander, J. Suhonen, T. Eronen, M. Hult, V.-V. Elomaa, A. Jokinen, G. Marissens, M. Misiaszek, M.T. Mustonen, S. Rahaman, C. Weber, J. Äystö
			2010	
2010Ac.A	AnRpt GSI			D. Ackermann et al
2010Al24	PRVCA	82,	041602	H. Alvarez-Pol, J. Benlliure, E. Casarejos, L. Audouin, D. Cortina-Gil, T. Enqvist, B. Fernandez-Dominguez, A.R. Junghans, B. Jurado, P. Napolitani, J. Pereira, F. Rejmund, K.-H. Schmidt, O. Yordanov
2010An01	JPGPE	37,	035102	A.N. Andreyev, S. Antalic, D. Ackermann, T.E. Cocolios, V.F. Comas, J. Elseviers, S. Franchoo, S. Heinz, J.A. Heredia, F.P. Heßberger, S. Hofmann, M. Huyse, J. Khuyagbaatar, I. Kojouharov, B. Kindler, B. Lommel, R. Mann, R.D. Page, S. Rinta-Antila, P.J. Sapple, Š. Šáro, P. Van Duppen, M. Venhart, H.V. Watkins
2010An02	PRVCA	81,	011901	N.G. Antoniou, F.K. Diakonou, A.S. Kapoyannis
2010An08	EPJAA	43,	35	S. Antalic, F.P. Heßberger, S. Hofmann, D. Ackermann, S. Heinz, B. Kindler, I. Kojouharov, P. Kuusiniemi, M. Leino, B. Lommel, R. Mann, Š. Šáro
2010An13	PRLTA	105,	252502	A.N. Andreyev, J. Elseviers, M. Huyse, P. Van Duppen, S. Antalic, A. Barzakh, N. Bree, T.E. Cocolios, V.F. Comas, J. Diriken, D. Fedorov, V. Fedosseev, S. Franchoo, J.A. Heredia, O. Ivanov, U. Köster, B.A. Marsh, P. Van den Bergh, J. Van De Walle, K. Nishio, R.D. Page, N. Patronis, M. Seliverstov, I. Tsekhanovich, M. Venhart, S. Vermote, M. Veselsky, C. Wagemans, T. Ichikawa, A. Iwamoto, P. Möller, A.J. Sierk
2010As.A	AnRpt JAEA		21	M. Asai, K. Tsukada, N. Sato, T.K. Sato, A. Toyoshima, T. Ishii, Y. Nagame (JAEA-Review 2010-056)
2010Ba31	JPGPE	37,	105103	K. Baczyńska, J. Billowes, P. Campbell, F.C. Charlwood, B. Cheal, T. Eronen, D.H. Forest, A. Jokinen, T. Kessler, I.D. Moore, M. Ruffer, G. Tungate, J. Äystö
2010Ba43	PRVCA	82,	045501	G.C. Ball, G. Boisvert, P. Bricault, R. Churchman, M. Dombosky, T. Lindner, J.A. Macdonald, E. Vandervoort, S. Bishop, J.M. D'Auria, J.C. Hardy, V.E. Jacob, J.R. Leslie, H.-B. Mak
2010Ba48	NUPAB	847,	121	M. Balodis, I. Tomandl, V. Bondarenko, L. Simonova, T. Krasta, J. Bērziņš
2010Be16	PRVCA	81,	064325	J.S. Berryman, R.M. Clark, K.E. Gregorich, J.M. Allmond, D.L. Bleuel, M. Cromaz, I. Dragojević, J. Dvorak, P.A. Ellison, P. Fallon, M.A. Garcia, S. Gros, I.Y. Lee, A.O. Macchiavelli, H. Nitsche, S. Paschalis, M. Petri, J. Qian, M.A. Stoyer, M. Wiedeking

2010Bi03	PYLBB	690,	15	L. Bianco, R.D. Page, I.G. Darby, D.T. Joss, J. Simpson, J.S. Al-Khalili, A.J. Cannon, B. Cederwall, S. Eeckhaudt, S. Ertürk, B. Gall, M.B. Gómez Hornillos, T. Grahn, P.T. Greenlees, B. Hadinia, K. Heyde, U. Jakobsson, P.M. Jones, R. Julin, S. Juutinen, S. Ketelhut, M. Labiche, M. Leino, A.-P. Leppänen, M. Nyman, D. O'Donnell, E.S. Paul, M. Petri, P. Peura, A. Puurunen, P. Rahkila, P. Ruotsalainen, M. Sandzelius, P.J. Sapple, J. Sarén, C. Scholey, N.A. Smirnova, A.N. Steer, P.D. Stevenson, E.B. Suckling, J. Thomson, J. Uusitalo, M. Venhart
2010BI09	EPJAA	44,	363	B. Blank, C. Borcea, G. Canchel, C.-E. Demonchy, F. de Oliveira Santos, C. Dossat, J. Giovinazzo, S. Grevy, L. Hay, P. Hellmuth, S. Leblanc, I. Matea, J.-L. Pedroza, L. Perrot, J. Pibernat, A. Rebi, L. Serani, J.C. Thomas
2010Bo.A	PrvCom	WgM	Sep	C. Boehm
2010Br02	PRVCA	81,	034313	M. Breitenfeldt, Ch. Borgmann, G. Audi, S. Baruah, D. Beck, K. Blaum, Ch. Böhm, R.B. Cakirli, R.F. Casten, P. Delahaye, M. Dworschak, S. George, F. Herfurth, A. Herlert, A. Kellerbauer, M. Kowalska, D. Lunney, E. Minaya-Ramirez, S. Naimi, D. Neidherr, M. Rosenbusch, R. Savreux, S. Schwarz, L. Schweikhard, C. Yazidjian
2010Br15	PRVCA	82,	044312	A.M. Bruce, S. Lalkovski, A.M.D. Bacelar, M. Górska, S. Pietri, Zs. Podolyák, Y. Shi, P.M. Walker, F.R. Xu, P. Bednarczyk, L. Cáceres, E. Casarejos, I.J. Cullen, P. Doornenbal, G.F. Farrelly, A.B. Garnsworthy, H. Geissel, W. Gelletly, J. Gerl, J. Grebosz, C. Hinke, G. Ilie, G. Jaworski, I. Kojouharov, N. Kurz, S. Myalski, M. Palacz, W. Prokopowicz, P.H. Regan, H. Schaffner, S. Steer, S. Tashenov, H.J. Wollersheim
2010Ch19	PYLBB	691,	234	L. Chen, W.R. Plaß, H. Geissel, R. Knöbel, C. Kozuharov, Yu. A. Litvinov, Z. Patyk, C. Scheidenberger, K. Siegień-Iwaniuk, B. Sun, H. Weick, K. Beckert, P. Beller, F. Bosch, D. Boutin, L. Caceres, J.J. Carroll, D.M. Cullen, I.J. Cullen, B. Franzke, J. Gerl, M. Górska, G.A. Jones, A. Kishada, J. Kurcewicz, S.A. Litvinov, Z. Liu, S. Mandal, F. Montes, G. Münzenberg, F. Nolden, T. Ohtsubo, Zs. Podolyák, R. Propri, S. Rigby, N. Saito, T. Saito, M. Shindo, M. Steck, P. Ugorowski, P.M. Walker, S. Williams, M. Winkler, H.-J. Wollersheim, T. Yamaguchi
2010CI01	PYLBB	690,	19	R.M. Clark, K.E. Gregorich, J.S. Berryman, M.N. Ali, J.M. Allmond, C.W. Beausang, M. Cromaz, M.A. Deleplanque, I. Dragojevic, J. Dvorak, P.A. Ellison, P. Fallon, M.A. Garcia, J.M. Gates, S. Gros, H.B. Jeppesen, D. Kaji, I.Y. Lee, A.O. Macchiavelli, K. Morimoto, H. Nitsche, S. Paschalis, M. Petri, L. Stavsetra, F.S. Stephens, H. Watanabe, M. Wiedeking
2010Co13	JPGPE	37,	125130	T.E. Cocolios, A.N. Andreyev, S. Antalic, A. Barzakh, B. Bastin, J. Büscher, I.G. Darby, W. Dexters, D.V. Fedorov, V.N. Fedosseev, K.T. Flanagan, S. Franchoo, G. Huber, M. Huyse, M. Keupers, U. Köster, Yu. Kudryavtsev, E. Mane, B.A. Marsh, P. Molkanov, R.D. Page, M.D. Seliverstov, A.M. Sjoedin, I. Stefan, J. Van de Walle, P. Van Duppen, M. Venhart, S. Zemlyanoy
2010Cr02	PRVCA	82,	014311	H.L. Crawford, R.V.F. Janssens, P.F. Mantica, J.S. Berryman, R. Broda, M.P. Carpenter, N. Cieplicka, B. Fornal, G.F. Grinyer, N. Hoteling, B.P. Kay, T. Lauritsen, K. Minamisono, I. Stefanescu, J.B. Stoker, W.B. Walters, S. Zhu
2010Da06	PRVCA	81,	034304	J.M. Daugas, T. Faul, H. Grawe, M. Pfützner, R. Grzywacz, M. Lewitowicz, N.L. Achouri, J.C. Angélique, D. Baiborodin, R. Béntida, R. Béraud, C. Borcea, C.R. Bingham, W.N. Catford, A. Emsallem, G. de France, K.L. Grzywacz, R.C. Lemmon, M.J. Lopez Jimenez, F. de Oliveira Santos, P.H. Regan, K. Rykaczewski, J.E. Sauvestre, M. Sawicka, M. Stanoiu
2010Da17	PRLTA	105,	162502	I.G. Darby, R.K. Grzywacz, J.C. Batchelder, C.R. Bingham, L. Cartegni, C.J. Gross, M. Hjorth-Jensen, D.T. Joss, S.N. Liddick, W. Nazarewicz, S. Padgett, R.D. Page, T. Papenbrock, M.M. Rajabali, J. Rotureau, K.P. Rykaczewski
2010De04	PRVCA	81,	024322	A.Y. Deo, Zs. Podolyák, P.M. Walker, A. Algora, B. Rubio, J. Agramunt, L.M. Fraile, N. Al-Dahan, N. Alkhomashi, J.A. Briz, E. Estevez, G. Farrelly, W. Gelletly, A. Herlert, U. Köster, A. Maira, S. Singla
2010Dr02	PRVCA	81,	054313	G.D. Dracoulis, G.J. Lane, F.G. Kondev, H. Watanabe, D. Seweryniak, S. Zhu, M.P. Carpenter, C.J. Chiara, R.V.F. Janssens, T. Lauritsen, C.J. Lister, E.A. McCutchan, I. Stefanescu
2010Dr05	PRVCA	82,	034317	G.D. Dracoulis, G.J. Lane, R.O. Hughes, F.G. Kondev, H. Watanabe, D. Seweryniak, S. Zhu, M.P. Carpenter, C.J. Chiara, R.V.F. Janssens, T. Lauritsen, C.J. Lister, E.A. McCutchan, I. Stefanescu, P. Chowdhury

2010Du06	PRLTA	104,	252701	Ch. E. Düllmann, M. Schädel, A. Yakushev, A. Türler, K. Eberhardt, J.V. Kratz, D. Ackermann, L.-L. Andersson, M. Block, W. Brüche, J. Dvorak, H.G. Essel, P.A. Ellison, J. Even, J.M. Gates, A. Gorshkov, R. Graeger, K.E. Gregorich, W. Hartmann, R.-D. Herzberg, F.P. Heßberger, D. Hild, A. Hübner, E. Jäger, J. Khuyagbaatar, B. Kindler, J. Krier, N. Kurz, S. Lahiri, D. Liebe, B. Lommel, M. Maiti, H. Nitsche, J.P. Omtvedt, E. Parr, D. Rudolph, J. Runke, B. Schausten, E. Schimpf, A. Semchenkov, J. Steiner, P. Thörle-Pospiech, J. Uusitalo, M. Wegrzecki, N. Wiehl
2010Dw01	PRVCA	81,	064312	M. Dworschak, M. Block, D. Ackermann, G. Audi, K. Blaum, C. Droese, S. Eliseev, T. Fleckenstein, E. Haettner, F. Herfurth, F.P. Heßberger, S. Hofmann, J. Ketelaer, J. Ketter, H.-J. Kluge, G. Marx, M. Mazzocco, Yu. N. Novikov, W.R. Plaß, A. Popeko, S. Rahaman, D. Rodríguez, C. Scheidenberger, L. Schweikhard, P.G. Thirolf, G.K. Vorobyev, M. Wang, C. Weber
2010EI06	PRLTA	105,	182701	P.A. Ellison, K.E. Gregorich, J.S. Berryman, D.L. Bleuel, R.M. Clark, I. Dragojević, J. Dvorak, P. Fallon, C. Fineman-Sotomayor, J.M. Gates, O.R. Gothe, I.Y. Lee, W.D. Loveland, J.P. McLaughlin, S. Paschalis, M. Petri, J. Qian, L. Stavsetra, M. Wiedeking, H. Nitsche
2010EI11	PYLBB	693,	426	S. Eliseev, Ch. Böhm, D. Beck, K. Blaum, M. Breitenfeldt, V.N. Fedosseev, S. George, F. Herfurth, A. Herlert, H.-J. Kluge, M. Kowalska, D. Lunney, S. Naimi, D. Neidherr, Yu. N. Novikov, M. Rosenbusch, L. Schweikhard, S. Schwarz, M. Seliverstov, K. Zuber
2010Et01	PRVCA	81,	024314	S. Ettenauer, M. Brodeur, T. Brunner, A.T. Gallant, A. Lapierre, R. Ringle, M.R. Pearson, P. Delheij, J. Lassen, D. Lunney, J. Dilling
2010Fe01	PRVCA	81,	044318	R. Ferrer, M. Block, C. Bachelet, B.R. Barquest, G. Bollen, C.M. Campbell, M. Facina, C.M. Folden III, C.M. Folden, C. Guénaut, A.A. Kwiatkowski, D.L. Lincoln, D.J. Morrissey, G.K. Pang, A.M. Prinke, R. Ringle, J. Savory, P. Schury, S. Schwarz
2010FI01	PRVCA	82,	027309	X. Flechard, E. Lienard, O. Naviliat-Cuncic, D. Rodriguez, M.A.G. Alvarez, G. Ban, B. Carniol, D. Etasse, J.M. Fontbonne, A.M. Lallena, J. Praena
2010FI02	PRVCA	82,	041302	K.T. Flanagan, P. Vingerhoets, M.L. Bissell, K. Blaum, B.A. Brown, B. Cheal, M. De Rydt, D.H. Forest, Ch. Geppert, M. Honma, M. Kowalska, J. Kramer, A. Krieger, E. Mane, R. Neugart, G. Neyens, W. Nortershauser, M. Schug, H.H. Stroke, D.T. Yordanov
2010Go16	PYLBB	692,	307	V.Z. Goldberg, B.T. Roeder, G.V. Rogachev, G.G. Chubarian, E.D. Johnson, C. Fu, A.A. Alharbi, M.L. Avila, A. Banu, M. McCleskey, J.P. Mitchell, E. Simmons, G. Tabacaru, L. Trache, R.E. Tribble
2010Gr04	PRVCA	81,	061601	R. Graeger, D. Ackermann, M. Chelnokov, V. Chepigin, Ch. E. Düllmann, J. Dvorak, J. Even, A. Gorshkov, F.P. Heßberger, D. Hild, A. Hübner, E. Jäger, J. Khuyagbaatar, B. Kindler, J.V. Kratz, J. Krier, A. Kuznetsov, B. Lommel, K. Nishio, H. Nitsche, J.P. Omtvedt, O. Petrushkin, D. Rudolph, J. Runke, F. Samadani, M. Schädel, B. Schausten, A. Türler, A. Yakushev, Q. Zhi
2010Ha04	PRVCA	81,	021302	C.C. Hall, E.M. Lunderberg, P.A. DeYoung, T. Baumann, D. Bazin, G. Blanchon, A. Bonaccorso, B.A. Brown, J. Brown, G. Christian, D.H. Denby, J. Finck, N. Frank, A. Gade, J. Hinnefeld, C.R. Hoffman, B. Luther, S. Mosby, W.A. Peters, A. Spyrou, M. Thoennessen
2010Ha.A	NIMAE	613,	79	H. Hayashi et al
2010He10	EPJAA	43,	55	F.P. Heßberger, S. Antalic, B. Sulignano, D. Ackermann, S. Heinz, S. Hofmann, B. Kindler, J. Khuyagbaatar, I. Kojouharov, P. Kuusiniemi, M. Leino, B. Lommel, R. Mann, K. Nishio, A.G. Popeko, Š. Šáro, B. Streicher, J. Uusitalo, M. Venhart, A.V. Yeremin
2010He11	EPJAA	43,	175	F.P. Heßberger, S. Antalic, D. Ackermann, S. Heinz, S. Hofmann, J. Khuyagbaatar, B. Kindler, I. Kojouharov, B. Lommel, R. Mann
2010He25	EPJAA	46,	337	J.A. Heredia, A.N. Andreyev, S. Antalic, S. Hofmann, D. Ackermann, V.F. Comas, S. Heinz, F.P. Heßberger, B. Kindler, J. Khuyagbaatar, B. Lommel, R. Mann
2010Ho12	PRVCA	82,	025806	P. Hosmer, H. Schatz, A. Aprahamian, O. Arndt, R.R.C. Clement, A. Estrade, K. Farouqi, K.-L. Kratz, S.N. Liddick, A.F. Lisetskiy, P.F. Mantica, P. Möller, W.F. Mueller, F. Montes, A.C. Morton, M. Ouellette, E. Pellegrini, J. Pereira, B. Pfeiffer, P. Reeder, P. Santi, M. Steiner, A. Stolz, B.E. Tomlin, W.B. Walters, A. Wohr

2010II01	PYLBB	687,	305	G. Ilie, G. Neyens, G.S. Simpson, J. Jolie, A. Blazhev, H. Grawe, R.L. Lozeva, N. Vermeulen, L. Atanasova, D.L. Balabanski, F. Becker, P. Bednarczyk, C. Brandau, L. Caceres, S.K. Chamoli, J.M. Daugas, P. Doornenbal, J. Gerl, M. Górska, J. Grebosz, M. Hass, M. Ionescu-Bujor, A. Jungclaus, M. Kmiecik, I. Kojouharov, N. Kurz, A. Maj, S. Mallion, O. Perru, M. Pfützner, Zs. Podolyák, W. Prokopowicz, M. De Rydt, T.R. Saito, H. Schaffner, K. Turzók, J. Walker, E. Werner-Malento, H.J. Wollersheim
2010Ja05	PRVCA	82,	044302	U. Jakobsson, J. Uusitalo, S. Juutinen, M. Leino, P. Nieminen, K. Andgren, B. Cederwall, P.T. Greenlees, B. Hadinia, P. Jones, R. Julin, S. Ketelhut, A. Kaplanov, M. Nyman, P. Peura, P. Rahkila, P. Ruotsalainen, M. Sandzelius, J. Sarén, C. Scholey, J. Sorri
2010Jo06	NUPAB	842,	15	H.T. Johansson, Yu. Aksyutina, T. Aumann, K. Boretzky, M.J.G. Borge, A. Chatillon, L.V. Chulkov, D. Cortina-Gil, U. Datta Pramanik, H. Emling, C. Forssén, H.O.U. Fynbo, H. Geissel, G. Ickert, B. Jonson, R. Kulesa, C. Langer, M. Lantz, T. LeBleis, K. Mahata, M. Meister, G. Münzenberg, T. Nilsson, G. Nyman, R. Palit, S. Paschalis, W. Prokopowicz, R. Reifarth, A. Richter, K. Riisager, G. Schrieder, H. Simon, K. Sümmerer, O. Tengblad, H. Weick, M.V. Zhukov
2010Jo07	NUPAB	847,	66	H.T. Johansson, Yu. Aksyutina, T. Aumann, K. Boretzky, M.J.G. Borge, A. Chatillon, L.V. Chulkov, D. Cortina-Gil, U. Datta Pramanik, H. Emling, C. Forssén, H.O.U. Fynbo, H. Geissel, G. Ickert, B. Jonson, R. Kulesa, C. Langer, M. Lantz, T. LeBleis, K. Mahata, M. Meister, G. Münzenberg, T. Nilsson, G. Nyman, R. Palit, S. Paschalis, W. Prokopowicz, R. Reifarth, A. Richter, K. Riisager, G. Schrieder, N.B. Shulgina, H. Simon, K. Sümmerer, O. Tengblad, H. Weick, M.V. Zhukov
2010Jo09	ARISE	68,	2339	G. Jörg, R. Bühnemann, S. Hollas, N. Kivel, K. Kossert, S. Van Winckel, C.L. v. Gostomski
2010Ka26	PRVCA	82,	034311	A. Kankainen, V.-V. Elomaa, T. Eronen, D. Gorelov, J. Hakala, A. Jokinen, T. Kessler, V.S. Kolhinen, I.D. Moore, S. Rahaman, M. Reponen, J. Rissanen, A. Saastamoinen, C. Weber, J. Äystö
2010Ka29	NUPAB	842,	1	D. Kanjilal, S. Bhattacharya, A. Goswami, R. Kshetri, R. Raut, S. Saha, R.K. Bhowmik, J. Gehlot, S. Muralithar, R.P. Singh, G. Jnaneswari, G. Mukherjee, B. Mukherjee
2010Ka30	PRVCA	82,	052501	A. Kankainen, T. Eronen, D. Gorelov, J. Hakala, A. Jokinen, V.S. Kolhinen, M. Reponen, J. Rissanen, A. Saastamoinen, V. Sonnenschein, J. Äystö
2010Ke09	EPJDD	58,	47	J. Ketelaer, T. Beyer, K. Blaum, M. Block, K. Eberhardt, F. Herfurth, C. Smorra, Sz. Nagy
2010Kh06	EPJAA	46,	59	J. Khuyagbaatar, F.P. Heßberger, S. Hofmann, D. Ackermann, V.S. Comas, S. Heinz, J.A. Heredia, B. Kindler, I. Kojouharov, B. Lommel, R. Mann, K. Nishio, A. Yakushev
2010Ko15	PYLBB	684,	17	V.S. Kolhinen, V.-V. Elomaa, T. Eronen, J. Hakala, A. Jokinen, M. Kortelainen, J. Suhonen, J. Äystö
2010Ko17	PYLBB	690,	245	Y. Kondo, T. Nakamura, Y. Satou, T. Matsumoto, N. Aoi, N. Endo, N. Fukuda, T. Gomi, Y. Hashimoto, M. Ishihara, S. Kawai, M. Kitayama, T. Kobayashi, Y. Matsuda, N. Matsui, T. Motobayashi, T. Nakabayashi, T. Okumura, H.J. Ong, T.K. Onishi, K. Ogata, H. Otsu, H. Sakurai, S. Shimoura, M. Shinohara, T. Sugimoto, S. Takeuchi, M. Tamaki, Y. Togano, Y. Yanagisawa
2010Ko28	PRVCA	82,	022501	V.S. Kolhinen, T. Eronen, D. Gorelov, J. Hakala, A. Jokinen, A. Kankainen, I.D. Moore, J. Rissanen, A. Saastamoinen, J. Suhonen, J. Äystö
2010Ku02	APOBB	41,	525	J. Kurcewicz, F. Bosch, H. Geissel, Yu. A. Litvinov, N. Winckler, K. Beckert, P. Beller, D. Boutin, C. Brandau, L. Chen, C. Dimopoulou, H.G. Essel, B. Fabian, T. Faestermann, A. Fragner, B. Franzke, E. Haettner, M. Hausmann, S. Hess, P. Kienle, R. Knöbel, C. Kozhuharov, S.A. Litvinov, L. Maier, M. Mazzocco, F. Montes, A. Musumarra, C. Nociforo, F. Nolden, Z. Patyk, W.R. Plass, A. Prochazka, R. Reda, R. Reuschl, C. Scheidenberger, M. Steck, T. Stohlker, B. Sun, K. Takahashi, S. Torilov, M. Trassinelli, H. Weick, M. Winkler
2010Ku19	PRVCA	82,	027306	J. Kurpeta, W. Urban, A. Plochocki, J. Rissanen, V.-V. Elomaa, T. Eronen, J. Hakala, A. Jokinen, A. Kankainen, P. Karvonen, I.D. Moore, H. Penttila, S. Rahaman, A. Saastamoinen, T. Sonoda, J. Szerypo, C. Weber, J. Aysto

2010Ku25	PRVCA	82,	064318	J. Kurpeta, J. Rissanen, V.-V. Elomaa, T. Eronen, J. Hakala, A. Jokinen, P. Karvonen, I.D. Moore, H. Penttilä, A. Plochocki, S. Rahaman, S. Rinta-Antila, J. Ronkainen, A. Saastamoinen, T. Sonoda, J. Szerypo, W. Urban, Ch. Weber, J. Äystö
2010Kw02	PRVCA	81,	058501	A.A. Kwiatkowski, B.R. Barquest, G. Bollen, C.M. Campbell, R. Ferrer, A.E. Gehring, D.L. Lincoln, D.J. Morrissey, G.K. Pang, J. Savory, S. Schwarz
2010La16	PRVCA	82,	051304	G.J. Lane, G.D. Dracoulis, F.G. Kondev, R.O. Hughes, H. Watanabe, A.P. Byrne, M.P. Carpenter, C.J. Chiara, P. Chowdhury, R.V.F. Janssens, T. Lauritsen, C.J. Lister, E.A. McCutchan, D. Seweryniak, I. Stefanescu, S. Zhu
2010La.A	PrvCom	GAu	Mar	Alain Lapierre
2010Li13	PRVCA	81,	045803	W.H. Lippincott, S.B. Cahn, D. Gastler, L.W. Kastens, E. Kearns, D.N. McKinsey, J.A. Nikkel
2010Lo14	ARISE	68,	1454	M. Loidl, M. Rodrigues, B. Censier, S. Kowalski, X. Mougeot, P. Cassette, T. Branger, D. Lacour
2010Ma08	PRVCA	81,	024302	P.J.R. Mason, D.M. Cullen, C. Scholey, P.T. Greenlees, U. Jakobsson, P.M. Jones, R. Julin, S. Juutinen, S. Ketelhut, M. Leino, M. Nyman, P. Peura, A. Puurunen, P. Rakkila, P. Ruotsalainen, J. Sorri, J. Saren, J. Uusitalo, F.R. Xu
2010Ma20	PRVCA	81,	047301	F. Ma, X.H. Zhou, Y. Zheng, S.W. Xu, Y.X. Xie, L. Chen, X.G. Lei, Y.X. Guo, Y.H. Zhang, Z.K. Li, Y.H. Qiang, S. Guo, H.X. Wang, H.B. Zhou, B. Ding, G.S. Li, N.T. Zhang
2010Ma27	CPLEE	27,	062104	F. Ma, X.H. Zhou, Y. Zheng, S.W. Xu, Y.X. Xie, L. Chen, Y.H. Zhang, Z.K. Li, Y.H. Qiang, X.G. Lei, Y.X. Guo, S. Guo, B. Ding, H.X. Wang, G.S. Li, H.B. Zhou
2010Ma37	CPCHC	34,	1082	F. Ma, X.H. Zhou, Y. Zheng, S.W. Xu, Y.X. Xie, L. Chen, X.G. Lei, Y.X. Guo, Y.H. Zhang, Z.K. Li, S. Guo, B. Ding, H.B. Zhou, G.S. Li, H.X. Wang
2010Mc04	PRVCA	82,	024603	P.M. McCowan, R.C. Barber
2010Mi.A	PrvCom	WgM	Sep	E. Minaya
2010Mo03	PRVCA	81,	032501	B.J. Mount, M. Redshaw, E.G. Myers
2010Mo09	PRVCA	81,	054304	V. Modamio, A. Jungclaus, A. Algora, D. Bazzacco, D. Escrig, L.M. Fraile, S. Lenzi, N. Marginean, T. Martinez, D.R. Napoli, R. Schwengner, C.A. Ur
2010Mo29	PRVAA	81,	064501	B.J. Mount, H.S.P. Müller, M. Redshaw, E.G. Myers
2010Mo30	PRVAA	82,	042513	B.J. Mount, M. Redshaw, E.G. Myers
2010Mu12	PRVCA	82,	054315	I. Mukha, K. Sümmerer, L. Acosta, M.A.G. Alvarez, E. Casarejos, A. Chatillon, D. Cortina-Gil, I.A. Egorova, J.M. Espino, A. Fomichev, J.E. García-Ramos, H. Geissel, J. Gómez-Camacho, L. Grigorenko, J. Hofmann, O. Kiselev, A. Korshennikov, N. Kurz, Yu. A. Litvinov, E. Litvinova, I. Martel, C. Nociforo, W. Ott, M. Pfützner, C. Rodríguez-Tajes, E. Roeckl, M. Stanoiu, N.K. Timofeyuk, H. Weick, P.J. Woods
2010Mu13	PRVCA	82,	054316	G. Mukherjee, P. Chowdhury, F.G. Kondev, P.M. Walker, G.D. Dracoulis, R. D'Alarcao, I. Shestakova, K. Abu Saleem, I. Ahmad, M.P. Carpenter, A. Heinz, R.V.F. Janssens, T.L. Khoo, T. Lauritsen, C.J. Lister, D. Seweryniak, I. Wiedenhofer, D.M. Cullen, C. Wheldon, D.L. Balabanski, M. Danchev, T.M. Goon, D.J. Hartley, L.L. Riedinger, O. Zeidan, M.A. Riley, R.A. Kaye, G. Sletten
2010Na13	PRLTA	105,	032502	S. Naimi, G. Audi, D. Beck, K. Blaum, Ch. Böhm, Ch. Borgmann, M. Breitenfeldt, S. George, F. Herfurth, A. Herlert, M. Kowalska, S. Kreim, D. Lunney, D. Neidherr, M. Rosenbusch, S. Schwarz, L. Schweikhard, K. Zuber
2010Na17	PRVCA	82,	034323	F. Naqvi, M. Górska, L. Cáceres, A. Jungclaus, M. Pfützner, H. Grawe, F. Nowacki, K. Sieja, S. Pietri, E. Werner-Malento, P.H. Regan, D. Rudolf, Z. Podolyák, J. Jolie, K. Andgren, T. Beck, P. Bednarczyk, J. Benlliure, G. Benzoni, A.M. Bruce, E. Casarejos, B. Cederwall, F.C.L. Crespi, P. Detistov, Zs. Dombrádi, P. Doornenbal, H. Geissel, J. Gerl, J. Grebosz, B. Hadinia, M. Hellström, R. Hoischen, G. Ilie, A. Khaplanov, I. Kojouharov, M. Kmiecik, N. Kurz, S. Lalkovski, A. Maj, S. Mandal, V. Modamio, F. Montes, S. Myalski, W. Prokopowicz, P. Reiter, H. Schaffner, G. Simpson, D. Sohler, S.J. Steer, S. Tashenov, J. Walker, O. Wieland, H.J. Wollersheim
2010Ni10	PRVCA	81,	064606	E. Yu. Nikolskii, A.A. Korshennikov, H. Otsu, H. Suzuki, K. Yoneda, H. Baba, K. Yamada, Y. Kondo, N. Aoi, A.S. Denikin, M.S. Golovkov, A.S. Fomichev, S.A. Krupko, M. Kurokawa, E.A. Kuzmin, I. Martel, W. Mittig, T. Motobayashi, T. Nakamura, M. Niikura, S. Nishimura, A.A. Ogloblin, P. Roussel-Chomaz, A. Sanchez-Benitez, Y. Satou, S.I. Sidorchuk, T. Suda, S. Takeuchi, K. Tanaka, G.M. Ter-Akopian, Y. Togano, M. Yamaguchi

2010Ni14	PRVCA	82,	024611	K. Nishio, S. Hofmann, F.P. Heßberger, D. Ackermann, S. Antalic, Y. Aritomo, V.F. Comas, Ch. E. Düllmann, A. Gorshkov, R. Graeger, K. Hagino, S. Heinz, J.A. Heredia, K. Hirose, H. Ikezoe, J. Khuyagbaatar, B. Kindler, I. Kojouharov, B. Lommel, R. Mann, S. Mitsuoka, Y. Nagame, I. Nishinaka, T. Ohtsuki, A.G. Popeko, S. Saro, M. Schädel, A. Türler, Y. Watanabe, A. Yakushev, A.V. Yeremin
2010Og01	PRLTA	104,	142502	Yu. Ts. Oganessian, F. Sh. Abdullin, P.D. Bailey, D.E. Benker, M.E. Bennett, S.N. Dmitriev, J.G. Ezold, J.H. Hamilton, R.A. Henderson, M.G. Itkis, Yu. V. Lobanov, A.N. Mezentsev, K.J. Moody, S.L. Nelson, A.N. Polyakov, C.E. Porter, A.V. Ramayya, F.D. Riley, J.B. Roberto, M.A. Ryabinin, K.P. Rykaczewski, R.N. Sagaidak, D.A. Shaughnessy, I.V. Shirokovsky, M.A. Stoyer, V.G. Subbotin, R. Sudowe, A.M. Sukhov, Yu. S. Tsyganov, V.K. Utyonkov, A.A. Voinov, G.K. Vostokin, P.A. Wilk
2010Oh02	JUPSA	79,	073201	T. Ohnishi, T. Kubo, K. Kusaka, A. Yoshida, K. Yoshida, M. Ohtake, N. Fukuda, H. Takeda, D. Kameda, K. Tanaka, N. Inabe, Y. Yanagisawa, Y. Gono, H. Watanabe, H. Otsu, H. Baba, T. Ichihara, Y. Yamaguchi, M. Takechi, S. Nishimura, H. Ueno, A. Yoshimi, H. Sakurai, T. Motobayashi, T. Nakao, Y. Mizoi, M. Matsushita, K. Ieki, N. Kobayashi, K. Tanaka, Y. Kawada, N. Tanaka, S. Deguchi, Y. Satou, Y. Kondo, T. Nakamura, K. Yoshinaga, C. Ishii, H. Yoshii, Y. Miyashita, N. Uematsu, Y. Shiraki, T. Sumikama, J. Chiba, E. Ideguchi, A. Saito, T. Yamaguchi, I. Hachiuma, T. Suzuki, T. Moriguchi, A. Ozawa, T. Ohtsubo, M.A. Famiano, H. Geissel, A.S. Nettleton, O.B. Tarasov, D.P. Bazin, B.M. Sherrill, S.L. Manikonda, J.A. Nolen
2010Pa33	PRVCA	82,	064314	S. Padgett, M. Madurga, R. Grzywacz, I.G. Darby, S.N. Liddick, S.V. Paulauskas, L. Cartegni, C.R. Bingham, C.J. Gross, K. Rykaczewski, D. Shapira, D.W. Stracener, A.J. Mendez, II, J.A. Winger, S.V. Ilyushkin, A. Korgul, W. Królas, E. Zganjar, C. Mazzocchi, S. Liu, J.H. Hamilton, J.C. Batchelder, M.M. Rajabali
2010Ra12	PRVCA	82,	011303	P. Rahkila, D.G. Jenkins, J. Pakarinen, C. Gray-Jones, P.T. Greenlees, U. Jakobsson, P. Jones, R. Julin, S. Juutinen, S. Ketelhut, H. Koivisto, M. Leino, P. Nieminen, M. Nyman, P. Papadakis, S. Paschalis, M. Petri, P. Peura, O.J. Roberts, T. Ropponen, P. Ruotsalainen, J. Saren, C. Scholey, J. Sorri, A.G. Tuff, J. Uusitalo, R. Wadsworth, M. Bender, P.-H. Heenen
2010Re01	PRVCA	81,	014301	J.J. Ressler, J.A. Caggiano, C.J. Francy, P.N. Peplowski, J.M. Allmond, C.W. Beausang, L.A. Bernstein, D.L. Bleuel, J.T. Burke, P. Fallon, A.A. Hecht, D.V. Jordan, S.R. Leshner, M.A. McMahan, T.S. Palmer, L. Phair, N.D. Scielzo, P.G. Swearingen, G.A. Warren, M. Wiedeking
2010Re07	PRLTA	105,	172501	M.W. Reed, I.J. Cullen, P.M. Walker, Yu. A. Litvinov, K. Blaum, F. Bosch, C. Brandau, J.J. Carroll, D.M. Cullen, A.Y. Deo, B. Detwiller, C. Dimopoulou, G.D. Dracoulis, F. Farinon, H. Geissel, E. Haettner, M. Heil, R.S. Kempsey, R. Knöbel, C. Kozhuharov, J. Kurcewicz, N. Kuzminchuk, S. Litvinov, Z. Liu, R. Mao, C. Nociforo, F. Nolden, W.R. Plass, A. Prochazka, C. Scheidenberger, M. Steck, Th. Stöhlker, B. Sun, T.P.D. Swan, G. Trees, H. Weick, N. Winckler, M. Winkler, P.J. Woods, T. Yamaguchi
2010Ru07	EPJAA	44,	31	C. Rusu, D. Bucurescu, N. Marginean, M. Ionescu-Bujor, A. Iordachescu, G. Cata-Danil, I. Cata-Danil, D. Deleanu, D. Filipescu, D. Ghita, T. Glodariu, M. Ivascu, C. Mihai, R. Marginean, S. Pascu, T. Sava, L. Stroe, G. Suliman, N.V. Zamfir
2010Sc02	PRVCA	81,	014306	C. Scholey, K. Andgren, L. Bianco, B. Cederwall, I.G. Darby, S. Eeckhaudt, S. Ertürk, M.B. Gomez Hornillos, T. Grahn, P.T. Greenlees, B. Hadinia, E. Ideguchi, P. Jones, D.T. Joss, R. Julin, S. Juutinen, S. Ketelhut, M. Leino, A.-P. Leppänen, P. Nieminen, M. Niikura, M. Nyman, D. O'Donnell, R.D. Page, J. Pakarinen, P. Rahkila, J. Sarén, M. Sandzelius, J. Simpson, J. Sorri, J. Thomson, J. Uusitalo, M. Venhart
2010Se16	PRVCA	82,	067301	G.W. Severin, L.D. Knutson, P.A. Voytas, E.A. George
2010Si03	PRVCA	81,	024313	G.S. Simpson, W. Urban, J.A. Pinston, J.C. Angelique, I. Deloncle, H.R. Faust, J. Genevey, U. Köster, T. Materna, R. Orlandi, A. Scherillo, A.G. Smith, J.F. Smith, T. Rzaca-Urban, I. Ahmad, J.P. Greene

2010So03	PRVCA	81,	034310	P.-A. Soderstrom, J. Nyberg, P.H. Regan, A. Algora, G. de Angelis, S.F. Ashley, S. Aydin, D. Bazzacco, R.J. Casperson, W.N. Catford, J. Cederkall, R. Chapman, L. Corradi, C. Fahlander, E. Farnea, E. Fioretto, S.J. Freeman, A. Gadea, W. Gelletly, A. Gottardo, E. Grodner, C.Y. He, G.A. Jones, K. Keyes, M. Labiche, X. Liang, Z. Liu, S. Lunardi, N. Marginean, P. Mason, R. Menegazzo, D. Mengoni, G. Montagnoli, D. Napoli, J. Ollier, S. Pietri, Zs. Podolyak, G. Pollarolo, F. Recchia, E. Sahin, F. Scarlassara, R. Silvestri, J.F. Smith, K.-M. Spohr, S.J. Steer, A.M. Stefanini, S. Szilner, N.J. Thompson, G.M. Tveten, C.A. Ur, J.J. Valiente-Dobon, V. Werner, S.J. Williams, F.R. Xu, J.Y. Zhu
2010Sp02	PYLBB	683,	129	A. Spyrou, T. Baumann, D. Bazin, G. Blanchon, A. Bonaccorso, E. Breitenbach, J. Brown, G. Christian, A. DeLine, P.A. DeYoung, J.E. Finck, N. Frank, S. Mosby, W.A. Peters, A. Russel, A. Schiller, M.J. Strongman, M. Thoennessen
2010St14	EPJAA	45,	275	B. Streicher, F.P. Heßberger, S. Antalic, S. Hofmann, D. Ackermann, S. Heinz, B. Kindler, J. Khuyagbaatar, I. Kojouharov, P. Kuusiniemi, M. Leino, B. Lommel, R. Mann, Š. Šáro, B. Sulignano, J. Uusitalo, M. Venhart
2010St.A	AnRpt GSI		151	K. Straub et al
2010Ta04	PRLTA	104,	062701	K. Tanaka, T. Yamaguchi, T. Suzuki, T. Ohtsubo, M. Fukuda, D. Nishimura, M. Takechi, K. Ogata, A. Ozawa, T. Izumikawa, T. Aiba, N. Aoi, H. Baba, Y. Hashizume, K. Inafuku, N. Iwasa, K. Kobayashi, M. Komuro, Y. Kondo, T. Kubo, M. Kurokawa, T. Matsuyama, S. Michimasa, T. Motobayashi, T. Nakabayashi, S. Nakajima, T. Nakamura, H. Sakurai, R. Shinoda, M. Shinohara, H. Suzuki, E. Takeshita, S. Takeuchi, Y. Togano, K. Yamada, T. Yasuno, M. Yoshitake
2010Vi07	PRVCA	82,	064311	P. Vingerhoets, K.T. Flanagan, M. Avgoulea, J. Billowes, M.L. Bissell, K. Blaum, B.A. Brown, B. Cheal, M. De Rydt, D.H. Forest, Ch. Geppert, M. Honma, M. Kowalska, J. Krämer, A. Krieger, E. Mané, R. Neugart, G. Neyens, W. Nörtershäuser, T. Otsuka, M. Schug, H.H. Stroke, G. Tungate, D.T. Yordanov
2010Wa42	PRVCA	82,	064317	F. Wauters, B. Verstichel, M. Breitenfeldt, V. De Leebeeck, V. Yu. Kozlov, I. Kraev, S. Rocchia, G. Soti, M. Tandecki, E. Traykov, S. Van Gorp, D. Zakoucky, N. Severijns
2010Wi03	PRVCA	81,	044303	J.A. Winger, K.P. Rykaczewski, C.J. Gross, R. Grzywacz, J.C. Batchelder, C. Goodin, J.H. Hamilton, S.V. Ilyushkin, A. Korgul, W. Królas, S.N. Liddick, C. Mazzocchi, S. Padgett, A. Piechaczek, M.M. Rajabali, D. Shapira, E.F. Zganjar, J. Dobaczewski
2010Wr01	PRVCA	81,	055503	C. Wrede, J.A. Clark, C.M. Deibel, T. Faestermann, R. Hertenberger, A. Parikh, H.-F. Wirth, S. Bishop, A.A. Chen, K. Eppinger, A. García, R. Krücken, O. Lepyoshkina, G. Rugel, K. Setoodehnia and PrvCom WgM April 2011
2010Xu12	EPJAA	46,	55	S.W. Xu, Y.X. Xie, F. Ma, X.H. Zhou, Z.K. Li, Y. Zheng, L. Chen, X.G. Lei, Y.H. Zhang, H.L. Lui, F.R. Xu
				2011
2011Ac.A	AnRpt GSI		208	D. Ackermann, F.P. Heßberger, S. Antalic, M. Block, H.-G. Burkhard, V.F. Comas, P. Greenlees, S. Heinz, S. Hofmann, S. Ketelhut, J. Khuyagbaatar, B. Kindler, I. Kojouharov, M. Mazzocco, M. Leino, B. Lommel, R. Mann, J. Maurer, A.G. Popeko, J. Sorri, J. Uusitalo, A.V. Yeremin
2011An13	EPJAA	47,	62	S. Antalic, F.P. Heßberger, D. Ackermann, S. Heinz, S. Hofmann, Z. Kalaninova, B. Kindler, J. Khuyagbaatar, I. Kojouharov, P. Kuusiniemi, M. Leino, B. Lommel, R. Mann, K. Nishio, Š. Šáro, B. Streicher, B. Sulignano, M. Venhart
2011Ar18	PRVCA	84,	061307	O. Arndt, K.-L. Kratz, W.B. Walters, K. Farouqi, U. Köster, V. Fedosseev, S. Hennrich, C.J. Jost, A. Wöhr, A.A. Hecht, B. Pfeiffer, J. Shergur, N. Hoteling
2011As03	PRVCA	83,	014315	M. Asai, K. Tsukada, H. Haba, Y. Ishii, T. Ichikawa, A. Toyoshima, T. Ishii, Y. Nagame, I. Nishinaka, Y. Kojima, K. Sueki
2011As08	PRLTA	107,	102502	P. Ascher, L. Audirac, N. Adimi, B. Blank, C. Borcea, B.A. Brown, I. Compagnis, F. Delaee, C.E. Demonchy, F. de Oliveira Santos, J. Giovinazzo, S. Grevy, L.V. Grigorenko, T. Kurtukian-Nieto, S. Leblanc, J.-L. Pedroza, L. Perrot, J. Pibernat, L. Serani, P.C. Srivastava, J.-C. Thomas
2011Ba14	PRVCA	83,	045503	A.S. Barabash, Ph. Hubert, Ch. Marquet, A. Nachab, S.I. Konovalov, F. Perrot, F. Piquemal, V. Umatov

2011Ba.A	P-Leuven		207	J.C. Batchelder, N.T. Brewer, C.J. Gross, R. Grzywacz, J.H. Hamilton, M. Karny, A. Kuzniak, M.F. Madurga, A.J. Mendez, S.H. Liu, K. Miernik, S.W. Padgett, S.V. Paulaskas, K.P. Rykacewski, A.V. Ramayya, D.W. Stracener, M. Wolinska-Cichocka
2011Be02	JPGPE	38,	015103	P. Belli, R. Bernabei, F. Cappella, R. Cerulli, F.A. Danevich, A. d'Angelo, A. Di Marco, A. Incicchitti, F. Nozzoli, V.I. Tretyak
2011Be34	PRVCA	84,	041303	A.D. Becerril, G. Lorusso, A.M. Amthor, T. Baumann, D. Bazin, J.S. Berryman, B.A. Brown, H.L. Crawford, A. Estrade, A. Gade, T. Ginter, C.J. Guess, M. Hausmann, G.W. Hitt, P.F. Mantica, M. Matos, R. Meharchand, K. Minamisono, F. Montes, G. Perdikakis, J. Pereira, M. Portillo, H. Schatz, K. Smith, J. Stoker, A. Stolz, R.G.T. Zegers
2011Be53	PACHA	83,	397	M. Berglund, M.E. Wieser
2011Be.A	P-Leuven		195	José Benlliure
2011Bi.A	P-Leuven		465	M.L. Bissell, K. Blaum, M. de Rydt, M. Kowalska, K. Kreim, R. Neugart, G. Neyens, W. Nortershauser, J. Papuga, M. Rajabali, D.T. Yordanov
2011Bo09	NUPAB	856,	1	V. Bondarenko, I. Tomandl, J. Honzatko, H.-F. Wirth, T. von Egidy
2011Bo23	PRVCA	84,	044311	P. Boutachkov, M. Górska, H. Grawe, A. Blazhev, N. Braun, T.S. Brock, Z. Liu, B.S. Nara Singh, R. Wadsworth, S. Pietri, C. Domingo-Pardo, I. Kojouharov, L. Cáceres, T. Engert, F. Farinon, J. Gerl, N. Goel, J. Grbosz, R. Hoischen, N. Kurz, C. Nociforo, A. Prochazka, H. Schaffner, S.J. Steer, H. Weick, H.-J. Wollersheim, T. Faestermann, Zs. Podolyák, D. Rudolph, A. Atac, L. Bettermann, K. Eppinger, F. Finke, K. Geibel, A. Gottardo, C. Hinke, G. Ilie, H. Iwasaki, J. Jolie, R. Krücken, E. Merchán, J. Nyberg, M. Pfützner, P.H. Regan, P. Reiter, S. Rinta-Antila, C. Scholl, P.-A. Söderström, N. Warr, P.J. Woods, F. Nowacki, K. Sieja
2011Br01	PRVCA	82,	061309	T.S. Brock et al.
2011Br12	PRVCA	84,	014330	R. Broda, K.H. Maier, B. Fornal, J. Wrzesiński, B. Szpak, M.P. Carpenter, R.V.F. Janssens, W. Królas, T. Pawlat, S. Zhu
2011Ch16	CPLEE	28,	042101	F-Q. Chen, X.-R. Zhou
2011Ch22	ARISE	69,	1064	J. Chen, S.D. Geraedts, C. Ouellet, B. Singh
2011Ch32	PRVCA	84,	014320	R.J. Charity, J.M. Elson, J. Manfredi, R. Shane, L.G. Sobotka, B.A. Brown, Z. Chajecski, D. Coupland, H. Iwasaki, M. Kilburn, J. Lee, W.G. Lynch, A. Sane-tullaev, M.B. Tsang, J. Winkelbauer, M. Youngs, S.T. Marley, D.V. Shetty, A.H. Wuosmaa, T.K. Ghosh, M.E. Howard
2011Ch.A	PrvCom	FGK		P. Chowdhury
2011Cu01	PRVCA	83,	014316	D.M. Cullen, P.J.R. Mason, C. Scholey, S. Eeckhaudt, T. Grahn, P.T. Greenlees, U. Jakobsson, P.M. Jones, R. Julin, S. Juutinen, S. Ketelhut, A.M. Kishada, M. Leino, A.-P. Leppänen, K. Mäntyniemi, P. Nieminen, M. Nyman, J. Pakarinen, P. Peura, M.G. Procter, P. Rakhila, S.V. Rigby, J. Sarén, J. Sorri, J. Uusitalo, B.J. Varley, M. Venhart
2011Da01	PYLBB	695,	78	I.G. Darby, R.D. Page, D.T. Joss, J. Simpson, L. Bianco, R.J. Cooper, S. Eeckhaudt, S. Ertürk, B. Gall, T. Grahn, P.T. Greenlees, B. Hadinia, P.M. Jones, D.S. Judson, R. Julin, S. Juutinen, S. Ketelhut, M. Leino, A.-P. Leppanen, M. Nyman, P. Rakhila, J. Saren, C. Scholey, A.N. Steer, J. Uusitalo, M. Venhart
2011Da08	PRVCA	83,	054312	J.M. Daugas, I. Matea, J.-P. Delaroche, M. Pfützner, M. Sawicka, F. Becker, G. Belier, C.R. Bingham, R. Borcea, E. Bouchez, A. Buta, E. Dragulescu, G. Georgiev, J. Giovinazzo, M. Girod, H. Grawe, R. Grzywacz, F. Hammache, F. Ibrahim, M. Lewitowicz, J. Libert, P. Mayet, V. Meot, F. Negoita, F. de Oliveira Santos, O. Perru, O. Roig, K. Rykaczewski, M.G. Saint-Laurent, J.E. Sauvestre, O. Sorlin, M. Stanoiu, I. Stefan, Ch. Stodel, Ch. Theisen, D. Verney, J. Zylicz
2011Da12	PRVCA	83,	064320	I.G. Darby, R.D. Page, D.T. Joss, L. Bianco, T. Grahn, D.S. Judson, J. Simpson, S. Eeckhaudt, P.T. Greenlees, P.M. Jones, R. Julin, S. Juutinen, S. Ketelhut, M. Leino, A.-P. Leppänen, M. Nyman, P. Rakhila, J. Sarén, C. Scholey, A.N. Steer, J. Uusitalo, M. Venhart, S. Ertürk, B. Gall, B. Hadinia
2011EI02	PRLTA	106,	052504	S. Eliseev, C. Roux, K. Blaum, M. Block, C. Droese, F. Herfurth, H.-J. Kluge, M.I. Krivoruchenko, Yu. N. Novikov, E. Minaya-Ramirez, L. Schweikhard, V.M. Shabaev, F. Simkovic, I.I. Tupitsyn, K. Zuber, N.A. Zubova
2011EI04	PRVCA	83,	038501	S. Eliseev, D. Nesterenko, K. Blaum, M. Block, C. Droese, F. Herfurth, E. Minaya-Ramirez, Yu. N. Novikov, L. Schweikhard, K. Zuber

2011EI05	PRVCA	84,	012501	S. Eliseev, M. Goncharov, K. Blaum, M. Block, C. Droese, F. Herfurth, E. Minaya-Ramirez, Yu. N. Novikov, L. Schweikhard, V.M. Shabaev, I.I. Tupitsyn, K. Zuber, N.A. Zubova
2011EI07	PRVCA	84,	034307	J. Elseviers, A.N. Andreyev, S. Antalic, A. Barzakh, N. Bree, T.E. Cocolios, V.F. Comas, J. Diriken, D. Fedorov, V.N. Fedosseyev, S. Franchoo, J.A. Heredia, M. Huyse, O. Ivanov, U. Koster, B.A. Marsh, R.D. Page, N. Patronis, M. Seliverstov, I. Tsekhanovich, P. Van den Bergh, J. Van De Walle, P. Van Duppen, M. Venhart, S. Vermote, M. Veselsky, C. Wagemans
2011EI08	PRLTA	107,	152501	S. Eliseev, C. Roux, K. Blaum, M. Block, C. Droese, F. Herfurth, M. Kretschmar, M.I. Krivoruchenko, E. Minaya-Ramirez, Yu. N. Novikov, L. Schweikhard, V.M. Shabaev, F. Simkovic, I.I. Tupitsyn, K. Zuber, N.A. Zubova
2011Er02	PRVCA	83,	055501	T. Eronen, D. Gorelov, J. Hakala, J.C. Hardy, A. Jokinen, A. Kankainen, V.S. Kolhinen, I.D. Moore, H. Penttilä, M. Reponen, J. Rissanen, A. Saastamoinen, J. Äystö
2011Es03	PRVCA	84,	034304	M.E. Estevez Aguado, A. Algora, B. Rubio, J. Bernabeu, E. Nacher, J.L. Tain, A. Gadea, J. Agramunt, K. Burkard, W. Huller, J. Doring, R. Kirchner, I. Mukha, C. Plettner, E. Roeckl, H. Grawe, R. Collatz, M. Hellstrom, D. Cano-Ott, M. Karny, Z. Janas, M. Gierlik, A. Płochocki, K. Rykaczewski, L. Batist, F. Moroz, V. Wittman, A. Blazhev, J.J. Valiente, C. Espinoza
2011Es06	PRLTA	107,	172503	A. Estradé, M. Matoš, H. Schatz, A.M. Amthor, D. Bazin, M. Beard, A. Becerril, E.F. Brown, R. Cyburt, T. Elliot, A. Gade, D. Galaviz, S. George, S.S. Gupta, W.R. Hix, R. Lau, G. Lorusso, P. Möller, J. Pereira, M. Portillo, A.M. Rogers, D. Shapira, E. Smith, A. Stolz, M. Wallace, M. Wiescher
2011Et.A	PrvCom	GAu	Jun	Stephan Ettenauer
2011Fa10	PRVCA	84,	045807	J. Fallis, J.A. Clark, K.S. Sharma, G. Savard, F. Buchinger, S. Caldwell, A. Chaudhuri, J.E. Crawford, C.M. Deibel, S. Gulick, A.A. Hecht, D. Lascar, J.K.P. Lee, A.F. Levand, G. Li, B.F. Lundgren, A. Parikh, S. Russell, M. Scholtevan de Vorst, N.D. Scielzo, R.E. Segel, H. Sharma, S. Sinha, M.G. Sternberg, T. Sun, I. Tanihata, J. Van Schelt, J.C. Wang, Y. Wang, C. Wrede, Z. Zhou
2011Fi01	PRLTA	106,	032501	P. Finlay, S. Ettenauer, G.C. Ball, J.R. Leslie, C.E. Svensson, C. Andreoiu, R.A.E. Austin, D. Bandyopadhyay, D.S. Cross, G. Demand, M. Djongolov, P.E. Garrett, K.L. Green, G.F. Grinyer, G. Hackman, K.G. Leach, C.J. Pearson, A.A. Phillips, C.S. Sumithrarachchi, S. Triambak, S.J. Williams
2011Fo15	PRVCA	84,	054310	N. Fotiades, M. Devlin, R.O. Nelson, J.A. Cizewski, R. Krucken, R.M. Clark, P. Fallon, I.Y. Lee, A.O. Macchiavelli, W. Younes
2011Fo.A	P-Leuven		411	Andrey Fomichev
2011Ga19	PRVCA	83,	054618	J.M. Gates, Ch. E. Düllmann, M. Schädel, A. Yakushev, A. Türler, K. Eberhardt, J.V. Kratz, D. Ackermann, L.-L. Andersson, M. Block, W. Brühle, J. Dvorak, H.G. Essel, P.A. Ellison, J. Even, U. Forsberg, J. Gellanki, A. Gorshkov, R. Graeger, K.E. Gregorich, W. Hartmann, R.-D. Herzberg, F.P. Heßberger, D. Hild, A. Hübner, E. Jäger, J. Khuyagbaatar, B. Kindler, J. Krier, N. Kurz, S. Lahiri, D. Liebe, B. Lommel, M. Maiti, H. Nitsche, J.P. Omtvedt, E. Parr, D. Rudolph, J. Runke, H. Schaffner, B. Schausten, E. Schimpf, A. Semchenkov, J. Steiner, P. Thörle-Pospiech, J. Uusitalo, M. Wegrzecki, N. Wiehl
2011Go23	PRVCA	84,	028501	M. Goncharov, K. Blaum, M. Block, C. Droese, S. Eliseev, F. Herfurth, E. Minaya Ramirez, Yu. N. Novikov, L. Schweikhard, K. Zuber
2011Gr01	JPGPE	38,	015101	P. Granholm, T. Lönnroth, J. Suhonen, J. Bergman, K.-M. Källman, J.-O. Lill, M. Norrby, E. Ydrefors, P. Tikkanen
2011Ha08	PRLTA	106,	122501	E. Haettner, D. Ackermann, G. Audi, K. Blaum, M. Block, S. Eliseev, T. Fleckenstein, F. Herfurth, F.P. Heßberger, S. Hofmann, J. Ketelaer, J. Ketter, H.-J. Kluge, G. Marx, M. Mazzocco, Yu. N. Novikov, W.R. Plaß, S. Rahaman, T. Rauscher, D. Rodríguez, H. Schatz, C. Scheidenberger, L. Schweikhard, B. Sun, P.G. Thirolf, G. Vorobjev, M. Wang, C. Weber
2011Ha13	PRVCA	83,	034602	H. Haba, D. Kaji, H. Kikunaga, Y. Kudou, K. Morimoto, K. Morita, K. Ozeki, T. Sumita, A. Yoneda, Y. Kasamatsu, Y. Komori, K. Ooe, A. Shinohara
2011Ha48	EPJAA	47,	129	J. Hakala, R. Rodríguez-Guzmán, V.-V. Elomaa, T. Eronen, A. Jokinen, V.S. Kolhinen, I.D. Moore, H. Penttilä, M. Reponen, J. Rissanen, A. Saastamoinen, J. Äystö
2011He10	EPJAA	47,	75	F. Herfurth, G. Audi, D. Beck, K. Blaum, G. Bollen, P. Delahaye, M. Dworschak, S. George, C. Guénaut, A. Kellerbauer, D. Lunney, M. Mukherjee, S. Rahaman, S. Schwarz, L. Schweikhard, C. Weber, C. Yazidjian

2011Hi.A	P-Leuven		200	C. Hinke
2011Ho02	JPGPE	38,	035104	R. Hoischen, D. Rudolph, H.L. Ma, P. Montuenga, M. Hellström, S. Pietri, Zs. Podolyák, P.H. Regan, A.B. Garnsworthy, S.J. Steer, F. Becker, P. Bednarczyk, L. Cáceres, P. Doornenbal, J. Gerl, M. Górska, J. Grebosz, I. Kojouharov, N. Kurz, W. Prokopowicz, H. Schaffner, H.J. Wollersheim, L.-L. Andersson, L. Atanasova, D.L. Balabanski, M.A. Bentley, A. Blazhev, C. Brandau, J.R. Brown, C. Fahlander, E.K. Johansson, A. Jungclaus
2011Ho21	PRVCA	84,	064903	H. Holopainen, S.S. Rasanen, K.J. Eskola
2011Ii01	PRVCA	83,	014322	S.V. Ilyushkin, J.A. Winger, K.P. Rykaczewski, C.J. Gross, J.C. Batchelder, L. Cartegni, I.G. Darby, R. Grzywacz, J.H. Hamilton, A. Korgul, W. Krolas, S.N. Liddick, C. Mazzocchi, T. Mendez, S. Padgett, M.M. Rajabali, D. Shapira, D.W. Stracener, E.F. Zganjar
2011Ke03	PRVCA	84,	014311	J. Ketelaer, G. Audi, T. Beyer, K. Blaum, M. Block, R.B. Cakirli, R.F. Casten, C. Droese, M. Dworschak, K. Eberhardt, M. Eibach, F. Herfurth, E. Minaya-Ramirez, Sz. Nagy, D. Neidherr, W. Nörtershäuser, C. Smorra, M. Wang
2011Ki16	PRVCA	84,	014316	H. Kikunaga, T. Suzuki, M. Nomura, T. Mitsugashira, A. Shinohara
2011Ko01	ARISE	69,	500	K. Kossert, O. Nahle, P.E. Warwick, H. Wershofen, I.W. Croudace
2011Ko03	PYLBB	697,	116	V.S. Kolhinen, T. Eronen, D. Gorelov, J. Hakala, A. Jokinen, A. Kankainen, J. Rissanen, J. Suhonen, J. Äystö
2011Ko36	PRVCA	84,	034320	U. Köster, N.J. Stone, K.T. Flanagan, J. Rikovska Stone, V.N. Fedosseev, K.L. Kratz, B.A. Marsh, T. Materna, L. Mathieu, P.L. Molkanov, M.D. Seliverstov, O. Serot, A.M. Sjödin, Yu. M. Volkov
2011Ko.A	PrvCom	GAu	May	F.G. Kondev
2011Ko.B	PrvCom	GAu	Nov	F.G. Kondev
2011Kr.A	PrvCom	GAu	May	S. Kreim preliminary
2011Ku16	PRVCA	84,	044304	J. Kurpeta, W. Urban, A. Plochocki, J. Rissanen, J.A. Pinston, V.-V. Elomaa, T. Eronen, J. Hakala, A. Jokinen, A. Kankainen, P. Karvonen, I.D. Moore, H. Penttilä, A. Saastamoinen, C. Weber, J. Äystö
2011Li28	PYLBB	702,	24	Z. Liu, D. Seweryniak, P.J. Woods, C.N. Davids, M.P. Carpenter, T. Davinson, R.V.F. Janssens, R.D. Page, A.P. Robinson, J. Shergur, S. Sinha, X.D. Tang, F.R. Xu, S. Zhu
2011Li50	PRVCA	84,	061305	S.N. Liddick, S. Suchyta, B. Abromeit, A. Ayres, A. Bey, C.R. Bingham, M. Bolla, M.P. Carpenter, L. Cartegni, C.J. Chiara, H.L. Crawford, I.G. Darby, R. Grzywacz, G. Gurdal, S. Ilyushkin, N. Larson, M. Madurga, E.A. McCutchan, D. Miller, S. Padgett, S.V. Paulauskas, J. Pereira, M.M. Rajabali, K. Rykaczewski, S. Vinnikova, W.B. Walters, S. Zhu
2011Lo01	PYLBB	694,	316	R.L. Lozeva, D.L. Balabanski, G. Georgiev, J.-M. Daugas, S. Péru, G. Audi, S. Cabaret, T. Faul, M. Ferraton, E. Fiori, C. Gaulard, F. Ibrahim, P. Morel, L. Risehari, D. Verney, D.T. Yordanov
2011Lo06	NUPAB	852,	15	A. Lopez-Martens, T. Wiborg-Hagen, K. Hauschild, M.L. Chelnokov, V.I. Chepigin, D. Curien, O. Dorvaux, G. Drafta, B. Gall, A. Görgen, M. Guttormsen, A.V. Isaev, I.N. Izosimov, A.P. Kabachenko, D.E. Katrsev, T. Kutsarova, A.N. Kuznetsov, A.C. Larsen, O.N. Malyshev, A. Minkova, S. Mullins, H.T. Nyhus, D. Pantelica, J. Piot, A.G. Popeko, S. Saro, N. Scintee, S. Siem, N.U.H. Syed, E.A. Sokol, A.I. Svirikhin, A.V. Yeremin
2011Lo09	PYLBB	699,	141	G. Lorusso, A. Becerril, A. Amthor, T. Baumann, D. Bazin, J.S. Berryman, B.A. Brown, R.H. Cyburt, H.L. Crawford, A. Estrade, A. Gade, T. Ginter, C.J. Guess, M. Hausmann, G.W. Hitt, P.F. Mantica, M. Matos, R. Meharchand, K. Minamisono, F. Montes, G. Perdikakis, J. Pereira, M. Portillo, H. Schatz, K. Smith, J. Stoker, A. Stolz, R.G.T. Zegers
2011Lo.A	PrvCom	GAu	dec	A. Lopez-Martens
2011Ma45	PRVCA	84,	024303	E. Mané, B. Cheal, J. Billowes, M.L. Bissell, K. Blaum, F.C. Charlwood, K.T. Flanagan, D.H. Forest, Ch. Geppert, M. Kowalska, A. Krieger, J. Krämer, I.D. Moore, R. Neugart, G. Neyens, W. Nörtershäuser, M.M. Rajabali, R. Sánchez, M. Schug, H.H. Stroke, P. Vingerhoets, D.T. Yordanov, M. Žáková
2011Mo27	KPSJA	59,	1525	C.-B. Moon, G.D. Dracoulis, R.A. Bark, A.P. Byrne, P.A. Davidson, T. Kibédi, G.J. Lane, A.N. Wilson

2011Na34	PRLTA	107,	172502	B.S. Nara Singh, Z. Liu, R. Wadsworth, H. Grawe, T.S. Brock, P. Boutachkov, N. Braun, A. Blazhev, M. Górska, S. Pietri, D. Rudolph, C. Domingo-Pardo, S.J. Steer, A. Atac, L. Bettermann, L. Cáceres, K. Eppinger, T. Engert, T. Faestermann, F. Farinon, F. Finke, K. Geibel, J. Gerl, R. Gernhäuser, N. Goel, A. Gottardo, J. Grebosz, C. Hinke, R. Hoischen, G. Ilie, H. Iwasaki, J. Jolie, A. Kaskas, I. Kojouharov, R. Krücken, N. Kurz, E. Mércan, C. Nociforo, J. Nyberg, M. Pfützner, A. Prochazka, Zs. Podolyák, P.H. Regan, P. Reiter, S. Rinta-Antila, C. Scholl, H. Schaffner, P.-A. Söderström, N. Warr, H. Weick, H.-J. Wollersheim, P.J. Woods, F. Nowacki, K. Sieja
2011Ni01	PRLTA	106,	052502	S. Nishimura, Z. Li, H. Watanabe, K. Yoshinaga, T. Sumikama, T. Tachibana, K. Yamaguchi, M. Kurata-Nishimura, G. Lorusso, Y. Miyashita, A. Odahara, H. Baba, J.S. Berryman, N. Blasi, A. Bracco, F. Camera, J. Chiba, P. Doornenbal, S. Go, T. Hashimoto, S. Hayakawa, C. Hinke, E. Ideguchi, T. Isobe, Y. Ito, D.G. Jenkins, Y. Kawada, N. Kobayashi, Y. Kondo, R. Krücken, S. Kubono, T. Nakano, H.J. Ong, S. Ota, Zs. Podolyák, H. Sakurai, H. Scheit, K. Steiger, D. Steppenbeck, K. Sugimoto, S. Takano, A. Takashima, K. Tajiri, T. Teranishi, Y. Wakabayashi, P.M. Walker, O. Wieland, H. Yamaguchi
2011Og04	PRVCA	83,	054315	Yu. Ts. Oganessian, F. Sh. Abdullin, P.D. Bailey, D.E. Benker, M.E. Bennett, S.N. Dmitriev, J.G. Ezold, J.H. Hamilton, R.A. Henderson, M.G. Itkis, Yu. V. Lobanov, A.N. Mezentsev, K.J. Moody, S.L. Nelson, A.N. Polyakov, C.E. Porter, A.V. Ramayya, F.D. Riley, J.B. Roberto, M.A. Ryabinin, K.P. Rykaczewski, R.N. Sagaidak, D.A. Shaughnessy, I.V. Shirokovsky, M.A. Stoyer, V.G. Subbotin, R. Sudowe, A.M. Sukhov, R. Taylor, Yu. S. Tsyganov, V.K. Utyonkov, A.A. Voinov, G.K. Vostokin, P.A. Wilk
2011Pa38	PRVCA	84,	065502	H.I. Park, J.C. Hardy, V.E. Jacob, A. Banu, L. Chen, V.V. Golovko, J. Goodwin, V. Horvat, N. Nica, E. Simmons, L. Trache, R.E. Tribble
2011Pa.A	P-Leuven		158	D. Pauwels, D. Radulov, I.G. Darby, H. De Witte, J. Diriken, D.V. Fedorov, V.N. Fedosseev, L.M. Fraile, M. Huyse, U. Köster, B.A. Marsh, L.-A. Popescu, M.D. Seliverstov, A.M. Sjoedin, P. Van den Bergh, J. Van de Walle, P. Van Duppen, M. Venhart, W.B. Walters, K. Wimmer
2011Pe29	PRVCA	84,	054311	A.B. Pérez-Cerdán, B. Rubio, W. Gelletly, A. Algora, J. Agramunt, K. Burkard, W. Hüller, E. Nácher, P. Sarriguren, L. Caballero, F. Molina, L.M. Fraile, E. Reillo, M.J.G. Borge, Ph. Dessagne, A. Jungclaus, M.-D. Salsac
2011Pi05	PRVCA	83,	044328	S. Pietri, A. Jungclaus, M. Górska, H. Grawe, M. Pfützner, L. Cáceres, P. Detistov, S. Lalkovski, V. Modamio, Z. Podolyák, P.H. Regan, D. Rudolph, J. Walker, E. Werner-Malento, P. Bednarczyk, P. Doornenbal, H. Geissel, J. Gerl, J. Grebosz, I. Kojouharov, N. Kurz, W. Prokopowicz, H. Schaffner, H.J. Wollersheim, K. Andgren, J. Benlliure, G. Benzoni, A.M. Bruce, E. Casarejos, B. Cederwall, F.C.L. Crespi, B. Hadinia, M. Hellström, R. Hoischen, G. Ilie, A. Khaplanov, M. Kmiecik, R. Kumar, A. Maj, S. Mandal, F. Montes, S. Myalski, G. Simpson, S.J. Steer, S. Tashenov, O. Wieland
2011Po01	PRVCA	83,	014306	M. Pomorski, K. Miernik, W. Dominik, Z. Janas, M. Pfützner, C.R. Bingham, H. Czyrkowski, M. Cwiok, I.G. Darby, R. Dabrowski, T. Ginter, R. Grzywacz, M. Karny, A. Korgul, W. Kuśmierz, S.N. Liddick, M. Rajabali, K. Rykaczewski, A. Stolz
2011Po09	PRVCA	83,	061306	M. Pomorski, M. Pfützner, W. Dominik, R. Grzywacz, T. Baumann, J.S. Berryman, H. Czyrkowski, R. Dabrowski, T. Ginter, J. Johnson, G. Kamiński, A. Kuźniak, N. Larson, S.N. Liddick, M. Madurga, C. Mazzocchi, S. Mianowski, K. Miernik, D. Miller, S. Paulauskas, J. Pereira, K.P. Rykaczewski, A. Stolz, S. Suchyta
2011Pr02	PRVCA	83,	034311	M.G. Procter, D.M. Cullen, C. Scholey, P.T. Greenlees, J. Hirvonen, U. Jakobsson, P. Jones, R. Julin, S. Juutinen, S. Ketelhut, M. Leino, N.M. Lumley, P.J.R. Mason, P. Nieminen, M. Nyman, P. Peura, P. Rakhila, J.-M. Regis, P. Ruot-salainen, J. Sarén, Y. Shi, J. Sorri, S. Stolze, J. Uusitalo, F.R. Xu
2011Ra24	PYLBB	703,	412	S. Rahaman, V.-V. Elomaa, T. Eronen, J. Hakala, A. Jokinen, A. Kankainen, J. Rissanen, J. Suhonen, C. Weber, J. Äystö
2011Ri01	PRVCA	83,	011301	J. Rissanen, J. Kurpeta, V.-V. Elomaa, T. Eronen, J. Hakala, A. Jokinen, I.D. Moore, P. Karvonen, A. Plochocki, L. Próchniak, H. Penttilä, S. Rahaman, M. Reponen, A. Saastamoinen, J. Szerypo, W. Urban, C. Weber, J. Äystö
2011Ri07	EPJAA	47,	97	J. Rissanen, J. Kurpeta, A. Plochocki, V.-V. Elomaa, T. Eronen, J. Hakala, A. Jokinen, A. Kankainen, P. Karvonen, I.D. Moore, H. Penttilä, S. Rahaman, A. Saastamoinen, W. Urban, C. Weber, J. Aysto

2011Ro18	PRLTA	106,	252503	A.M. Rogers, M.A. Famiano, W.G. Lynch, M.S. Wallace, F. Amorini, D. Bazin, R.J. Charity, F. Delaunay, R.T. de Souza, J. Elson, A. Gade, D. Galaviz, M.-J. van Goethem, S. Hudan, J. Lee, S. Lobastov, S. Lukyanov, M. Matoš, M. Mocko, H. Schatz, D. Shapira, L.G. Sobotka, M.B. Tsang, G. Verde
2011Ro20	PRVCA	83,	064311	A.P. Robinson, T.L. Khoo, D. Seweryniak, I. Ahmad, M. Asai, B.B. Back, M.P. Carpenter, P. Chowdhury, C.N. Davids, J. Greene, P.T. Greenlees, K. Hauschild, A. Heinz, R.-D. Herzberg, R.V.F. Janssens, D.G. Jenkins, G.D. Jones, S. Ketelhut, F.G. Kondev, T. Lauritsen, C.J. Lister, A. Lopez-Martens, P. Marley, E. McCutchan, P. Papadakis, D. Peterson, J. Qian, D. Rostron, U. Shirwadkar, I. Stefanescu, S.K. Tandel, X. Wang, S. Zhu
2011Ro47	PRVCA	84,	051306	A.M. Rogers, J. Giovinazzo, C.J. Lister, B. Blank, G. Canchel, J.A. Clark, G. de France, S. Grevy, S. Gros, E.A. McCutchan, F. de Oliveira Santos, G. Savard, D. Seweryniak, I. Stefan, J.-C. Thomas
2011Ru.A	P-Leuven		367	M. Rudigier, A. Blazhev, J. Jolie, J.M. Regis, N. Warr, C. Fransen, T. Materna, U. Köster, G. Simpson, M. Hackstein, M. Pfeiffer, T. Thomas
2011Sa41	JUPSA	80,	094201	N. Sato, H. Haba, T. Ichikawa, D. Kaji, Y. Kudou, K. Morimoto, K. Morita, K. Ozeki, T. Sumita, A. Yoneda, E. Ideguchi, H. Koura, A. Ozawa, T. Shinozuka, T. Yamaguchi, A. Yoshida
2011Sa59	PRVCA	84,	054303	P.J. Sapple, R.D. Page, D.T. Joss, L. Bianco, T. Grahn, J. Pakarinen, J. Thomson, J. Simpson, D. O'Donnell, S. Ertürk, P.T. Greenlees, U. Jakobsson, P.M. Jones, R. Julin, S. Juutinen, S. Ketelhut, M. Leino, M. Nyman, P. Peura, A. Puurunen, P. Rähkila, P. Ruotsalainen, J. Saren, C. Scholey, J. Uusitalo
2011Sc22	PRVCA	84,	024611	R.J. Scott, G.J. O'Keefe, M.N. Thompson, R.P. Rassool
2011Si32	JPCSD	267,	012031	G.S. Simpson, A. Scherillo, J. Genevey, R. Orlandi, J.A. Pinston, I.S. Tsekhanovich, N. Warr, A. Covello, A. Gargano
2011So05	PRVCA	83,	027303	P.C. Sood, M. Sainath, R. Gowrishankar, K. Vijay Sai
2011So11	EPJAA	47,	40	J. Souin, T. Eronen, P. Ascher, L. Audirac, J. Äystö, B. Blank, V.-V. Elomaa, J. Giovinazzo, J. Hakala, A. Jokinen, V.S. Kolhinen, P. Karvonen, I.D. Moore, S. Rahaman, J. Rissanen, A. Saastamoinen, J.C. Thomas
2011St21	PRVCA	84,	044313	S.J. Steer, Zs. Podolyák, S. Pietri, M. Górska, H. Grawe, K.H. Maier, P.H. Regan, D. Rudolph, A.B. Garnsworthy, R. Hoischen, J. Gerl, H.J. Wollersheim, F. Becker, P. Bednarczyk, L. Cáceres, P. Doornenbal, H. Geissel, J. Gregosz, A. Kelic, I. Kojouharov, N. Kurz, F. Montes, W. Prokopwicz, T. Saito, H. Schaffner, S. Tashenov, A. Heinz, M. Pfützner, T. Kurtukian-Nieto, G. Benzoni, A. Jungclaus, D.L. Balabanski, M. Bowry, C. Brandau, A. Brown, A.M. Bruce, W.N. Catford, I.J. Cullen, Zs. Dombrádi, M.E. Estevez, W. Gellately, G. Ilie, J. Jolie, G.A. Jones, M. Kmiecik, F.G. Kondev, R. Krücken, S. Lalkovski, Z. Liu, A. Maj, S. Myalski, S. Schwertel, T. Shizuma, P.M. Walker, E. Werner-Malento, O. Wieland
2011Su11	PRLTA	106,	202501	T. Sumikama, K. Yoshinaga, H. Watanabe, S. Nishimura, Y. Miyashita, K. Yamaguchi, K. Sugimoto, J. Chiba, Z. Li, H. Baba, J.S. Berryman, N. Blasi, A. Bracco, F. Camera, P. Doornenbal, S. Go, T. Hashimoto, S. Hayakawa, C. Hinke, E. Ideguchi, T. Isobe, Y. Ito, D.G. Jenkins, Y. Kawada, N. Kobayashi, Y. Kondo, R. Krucken, S. Kubono, G. Lorusso, T. Nakano, M. Kurata-Nishimura, A. Odahara, H.J. Ong, S. Ota, Zs. Podolyak, H. Sakurai, H. Scheit, K. Steiger, D. Steppenbeck, S. Takano, A. Takashima, K. Tajiri, T. Teranishi, Y. Wakabayashi, P.M. Walker, O. Wieland, H. Yamaguchi
2011Sw02	PRVCA	83,	034322	T.P.D. Swan, P.M. Walker, Zs. Podolyák, M.W. Reed, G.D. Dracoulis, G.J. Lane, T. Kibédi, M.L. Smith
2011Sz01	PRVCA	83,	064315	B. Szpak, K.H. Maier, A.S. Smolkowska, B. Fornal, R. Broda, M.P. Carpenter, N. Cieplicka, R.V.F. Janssens, W. Królas, T. Pawlat, J. Wrzesinski, S. Zhu
2011Ti10	PRVCA	84,	044302	J. Timar, K. Starosta, I. Kuti, D. Sohler, D.B. Fossan, T. Koike, E.S. Paul, A.J. Boston, H.J. Chantler, M. Descovich, R.M. Clark, M. Cromaz, P. Fallon, I.Y. Lee, A.O. Macchiavelli, C.J. Chiara, R. Wadsworth, A.A. Hecht, D. Almedhed, S. Frauendorf
2011To04	PRVCA	83,	044326	I. Tomandl, J. Honzatko, T. von Egidy, H.-F. Wirth, T. Faestermann, V. Yu. Ponomarev, S. Pasic, R. Hertenberger, Y. Eisermann, G. Graw
2011To.A	PrvCom	GAu	Aug	I. Towner, S. Etnauer

2011Tu02	PRLTA	106,	112501	X.L. Tu, H.S. Xu, M. Wang, Y.H. Zhang, Yu. A. Litvinov, Y. Sun, H. Schatz, X.H. Zhou, Y.J. Yuan, J.W. Xia, G. Audi, K. Blaum, C.M. Du, P. Geng, Z.G. Hu, W.X. Huang, S.L. Jin, L.X. Liu, Y. Liu, X. Ma, R.S. Mao, B. Mei, P. Shuai, Z.Y. Sun, H. Suzuki, S.W. Tang, J.S. Wang, S.T. Wang, G.Q. Xiao, X. Xu, T. Yamaguchi, Y. Yamaguchi, X.L. Yan, J.C. Yang, R.P. Ye, Y.D. Zang, H.W. Zhao, T.C. Zhao, X.Y. Zhang, W.L. Zhan
2011Tu09	NIMAE	654,	213	X.L. Tu, M. Wang, Yu. A. Litvinov, Y.H. Zhang, H.S. Xu, Z.Y. Sun, G. Audi, K. Blaum, C.M. Du, W.X. Huang, Z.G. Hu, P. Geng, S.L. Jin, L.X. Liu, Y. Liu, B. Mei, R.S. Mao, X.W. Ma, H. Suzuki, P. Shuai, Y. Sun, S.W. Tang, J.S. Wang, S.T. Wang, G.Q. Xiao, X. Xu, J.W. Xia, J.C. Yang, R.P. Ye, T. Yamaguchi, X.L. Yan, Y.J. Yuan, Y. Yamaguchi, Y.D. Zang, H.W. Zhao, T.C. Zhao, X.Y. Zhang, X.H. Zhou, W.L. Zhan
2011Ve01	PYLBB	695,	82	M. Venhart, A.N. Andreyev, J.L. Wood, S. Antalic, L. Bianco, P.T. Greenlees, U. Jakobsson, P. Jones, R. Julin, S. Juutinen, S. Ketelhut, M. Leino, M. Nymman, R.D. Page, P. Peura, P. Rakhila, J. Sarén, C. Scholey, J. Sorri, J. Thomson, J. Uusitalo
2011Ve.A	PrvCom	FGK	Jan	Martin Venhart
2011Ve.B	P-Leuven		206	D. Verney
2011Wa03	PYLBB	696,	186	H. Watanabe, T. Sumikama, S. Nishimura, K. Yoshinaga, Z. Li, Y. Miyashita, K. Yamaguchi, H. Baba, J.S. Berryman, N. Blasi, A. Bracco, F. Camera, J. Chiba, P. Doornenbal, S. Go, T. Hashimoto, S. Hayakawa, C. Hinke, E. Ideguchi, T. Isobe, Y. Ito, D.G. Jenkins, Y. Kawada, N. Kobayashi, Y. Kondo, R. Krucken, S. Kubono, G. Lorusso, T. Nakano, M. Kurata-Nishimura, A. Odahara, H.J. Ong, S. Ota, Zs. Podolyak, H. Sakurai, H. Scheit, Y. Shi, K. Steiger, D. Steppenbeck, K. Sugimoto, K. Tajiri, S. Takano, A. Takashima, T. Teranishi, Y. Wakabayashi, P.M. Walker, O. Wieland, F.R. Xu, H. Yamaguchi
2011Wi09	PRVCA	84,	014329	K. Wimmer, U. Köster, P. Hoff, Th. Kröll, R. Krücken, R. Lutter, H. Mach, Th. Morgan, S. Sarkar, M. Saha Sarkar, W. Schwerdtfeger, P.C. Srivastava, P.G. Thirolf, P. Van Isacker
2011Ya25	PYLBB	697,	90	M.T. Yamashita, R.S. Marques de Carvalho, T. Frederico, L. Tomio
				2012
2012Al05	PRVCA	85,	034301	N. Al-Dahan, P.H. Regan, Zs. Podolyák, P.M. Walker, N. Alkhomashi, G.D. Dracoulis, G. Farrelly, J. Benlliure, S.B. Pietri, R.F. Casten, P.D. Stevenson, W. Gelletly, S.J. Steer, A.B. Garnsworthy, E. Casarejos, J. Gerl, H.J. Wollersheim, J. Grebosz, M. Gorska, I. Kojouharov, H. Schaffner, A. Algora, G. Benzoni, A. Blazhev, P. Boutachkov, A.M. Bruce, I.J. Cullen, A.M.D. Bacelar, A.Y. Deo, M.E. Estevez, Y. Fujita, R. Hoischen, R. Kumar, S. Lalkovski, Z. Liu, P.J. Mason, C. Mihai, F. Molina, D. Mücher, B. Rubio, A. Tamii, S. Tashenov, J.J. Valiente-Dobón, P.J. Woods and Pub. Note PRVCA 85, 039904
2012Ar05	ZETFa	95,	224	S.S. Arzumanov, L.N. Bondarenko, V.I. Morozov, Yu. N. Panin and S.M. Chernyavsky
2012As05	PRVCA	85,	054316	A. Astier, M.-G. Porquet, Ch. Theisen, D. Verney, I. Deloncle, M. Houry, R. Lucas, F. Azaiez, G. Barreau, D. Curien, O. Dorvaux, G. Duchene, B.J.P. Gall, N. Redon, M. Rousseau, O. Stezowski
2012As06	PRVCA	85,	064316	A. Astier, M.-G. Porquet, Ts. Venkova, D. Verney, Ch. Theisen, G. Duchene, F. Azaiez, G. Barreau, D. Curien, I. Deloncle, O. Dorvaux, B.J.P. Gall, M. Houry, R. Lucas, N. Redon, M. Rousseau, O. Stezowski
2012Be06	PRLTA	108,	032501	J.W. Beeman, M. Biassoni, C. Brofferio, C. Bucci, S. Capelli, L. Cardani, M. Carrettoni, M. Clemenza, O. Cremonesi, E. Ferri, A. Giachero, L. Gironi, P. Gorla, C. Gotti, A. Nucciotti, C. Maiano, L. Pattavina, M. Pavan, G. Pessina, S. Pirro, E. Previtali, M. Sisti, L. Zanotti

2012Be28	PYLBB	715,	293	G. Benzoni, A.I. Morales, J.J. Valiente-Dobón, A. Gottardo, A. Bracco, F. Camera, F.C.L. Crespi, A.M. Corsi, S. Leoni, B. Million, R. Nicolini, O. Wieland, A. Gadea, S. Lunardi, P. Boutachkov, A.M. Bruce, M. Górska, J. Grebosz, S. Pietri, Zs. Podolyak, M. Pfützner, P.H. Regan, H. Weick, J. Alcántara Núñez, A. Algora, N. Al-Dahan, G. de Angelis, Y. Ayyad, N. Alkhomashi, P.R.P. Allegro, D. Bazzacco, J. Benlliure, M. Bowry, M. Bunce, E. Casarejos, M.L. Cortes, A.M.D. Bacelar, A.Y. Deo, C. Domingo-Pardo, M. Doncel, Zs. Dombradi, T. Engert, K. Eppinger, G.F. Farrelly, F. Farinon, E. Farnea, H. Geissel, J. Gerl, N. Goel, E. Gregor, T. Habermann, R. Hoischen, R. Janik, S. Klupp, I. Kojouharov, N. Kurz, S. Mandal, R. Menegazzo, D. Mengoni, D.R. Napoli, F. Naqvi, C. Nociforo, A. Prochazka, W. Prokopowicz, F. Recchia, R.V. Ribas, M.W. Reed, D. Rudolph, E. Sahin, H. Schaffner, A. Sharma, B. Sitar, D. Siwal, K. Steiger, P. Strmen, T.P.D. Swan, I. Szarka, C.A. Ur, P.M. Walker, H.-J. Wollersheim
2012Bi.A	P-Argonne			J. Billowes
2012Bo.A	PrvCom	May	Lunney	Ch. Borgmann
2012Br03	PRLTA	108,	052504	M. Brodeur, T. Brunner, C. Champagne, S. Ettenauer, M.J. Smith, A. Lapierre, R. Ringle, V.L. Ryjkov, S. Bacca, P. Delheij, G.W.F. Drake, D. Lunney, A. Schwenk, J. Dilling
2012Ca03	PRVCA	85,	014312	L. Cartegni, C. Mazzocchi, R. Grzywacz, I.G. Darby, S.N. Liddick, K.P. Rykaczewski, J.C. Batchelder, L. Bianco, C.R. Bingham, E. Freeman, C. Goodin, C.J. Gross, A. Guglielmetti, D.T. Joss, S.H. Liu, M. Mazzocco, S. Padgett, R.D. Page, M.M. Rajabali, M. Romoli, P.J. Sapple, J. Thomson, H.V. Watkins
2012Ch02	PRLTA	108,	032501	G. Christian, N. Frank, S. Ash, T. Baumann, D. Bazin, J. Brown, P.A. DeYoung, J.E. Finck, A. Gade, G.F. Grinyer, A. Grovom, J.D. Hinnefeld, E.M. Lunderberg, B. Luther, M. Mosby, S. Mosby, T. Nagi, G.F. Peaslee, W.F. Rogers, J.K. Smith, J. Snyder, A. Spyrou, M.J. Strongman, M. Thoennessen, M. Warren, D. Weishaar, A. Wersal
2012Ch19	NUPAB	882,	71	L. Chen, W.R. Plass, H. Geissel, R. Knobel, C. Kozuharov, Yu. A. Litvinov, Z. Patyk, C. Scheidenberger, K. Siegien-Iwaniuk, B. Sun, H. Weick, K. Beckert, P. Beller, F. Bosch, D. Boutin, L. Caceres, J.J. Carroll, D.M. Cullen, I.J. Cullen, B. Franzke, J. Gerl, M. Gorska, G.A. Jones, A. Kishada, J. Kurcewicz, S.A. Litvinov, Z. Liu, S. Mandal, F. Montes, G. Munzenberg, F. Nolden, T. Ohtsubo, Zs. Podolyak, R. Propri, S. Rigby, N. Saito, T. Saito, M. Shindo, M. Steck, P.M. Walker, S. Williams, M. Winkler, H.-J. Wollersheim, T. Yamaguchi
2012Ch.A	PrvCom	May	Lunney	Ankur Chaudhuri
2012Ch.B	P-Argonne			C. Chiara
2012Da04	PRVCA	85,	064301	A.Y. Dauenhauer, K.S. Krane
2012Di03	PRVCA	85,	031301	A. Dijon, E. Clément, G. de France, G. de Angelis, G. Duchêne, J. Dudouet, S. Franchoo, A. Gadea, A. Gottardo, T. Hüyük, B. Jacquot, A. Kusoglu, D. Lebhertz, G. Lehaut, M. Martini, D.R. Napoli, F. Nowacki, S. Péru, A. Poves, F. Recchia, N. Redon, E. Sahin, C. Schmitt, M. Sferrazza, K. Sieja, O. Stezowski, J.J. Valiente-Dobón, A. Vancraeynest, Y. Zheng
2012Dr01	NUPAB	875,	1	C. Droese, K. Blaum, M. Block, S. Eliseev, F. Herfurth, E. Minaya-Ramirez, Yu. N. Novikov, L. Schweikhard, V.M. Shabaev, I.I. Tupitsyn, S. Wycech, K. Zuber, N.A. Zubova
2012Dr02	PYLBB	709,	59	G.D. Dracoulis, G.J. Lane, A.P. Byrne, H. Watanabe, R.O. Hughes, N. Palalani, F.G. Kondev, M. Carpenter, R.V.F. Janssens, T. Lauritsen, C.J. Lister, D. Seweryniak, S. Zhu, P. Chowdhury, Y. Shi, F.R. Xu
2012Dr.1	JPCSD	381,	012060	G.D. Dracoulis, G.J. Lane, A.P. Byrne, H. Watanabe, R.O. Hughes, N. Palalani, F.G. Kondev, M.P. Carpenter, D. Seweryniak, S. Zhu, R.V.F. Janssens, C.J. Lister, T. Lauritsen, P. Chowdhury, Y. Shi, F.R. Xu
2012Dr.A	PrvCom	FGK		G.D. Dracoulis
2012Fi01	PRLTA	108,	062502	D. Fink, J. Barea, D. Beck, K. Blaum, Ch. Bohm, Ch. Borgmann, M. Breitenfeldt, F. Herfurth, A. Herlert, J. Kotila, M. Kowalska, S. Kreim, D. Lunney, S. Naimi, M. Rosenbusch, S. Schwarz, L. Schweikhard, F. Simkovic, J. Stanja, K. Zuber and PrvCom WgM March 2012
2012Fo04	PRVCA	85,	027303	H.T. Fortune, R. Sherr
2012Fo09	NIMAE	687,	1	C.M. Folden III, M.C. Alfonso, D.A. Mayorov, K.R. Lawrence, A.A. Alharbi, E. Berdugo, P.J. Cammarata, A.C. Raphelt, B.T. Roeder, T.A. Werke

2012Ga15	PRVCA	85,	044311	A.T. Gallant, M. Brodeur, T. Brunner, U. Chowdhury, S. Etenauer, V.V. Simon, E. Mané, M.C. Simon, C. Andreoiu, P. Delheij, G. Gwinner, M.R. Pearson, R. Ringle, J. Dilling
2012Ga29	PRLTA	109,	032506	A.T. Gallant, J.C. Bale, T. Brunner, U. Chowdhury, S. Etenauer, A. Lennarz, D. Robertson, V.V. Simon, A. Chaudhuri, J.D. Holt, A.A. Kwiatkowski, E. Mané, J. Menéndez, B.E. Schultz, M.C. Simon, C. Andreoiu, P. Delheij, M.R. Pearson, H. Savajols, A. Schwenk, J. Dilling
2012Go.A	P-Argonne			A. Gottardo
2012Gr12	PRLTA	109,	012501	P.T. Greenlees, J. Rubert, J. Piot, B.J.P. Gall, L.L. Andersson, M. Asai, Z. Asfari, D.M. Cox, F. Dechery, O. Dorvaux, T. Grahn, K. Hauschild, G. Henning, A. Herzan, R.-D. Herzberg, F.P. Hessberger, U. Jakobsson, P. Jones, R. Julin, S. Juutinen, S. Ketelhut, T.-L. Khoo, M. Leino, J. Ljungvall, A. Lopez-Martens, R. Lozeva, P. Nieminen, J. Pakarinen, P. Papadakis, E. Parr, P. Peura, P. Rahkila, S. Rinta-Antila, P. Ruotsalainen, M. Sandzelius, J. Sarén, C. Scholey, D. Seweryniak, J. Sorri, B. Sulignano, Ch. Theisen, J. Uusitalo, M. Venhart
2012Gu14	PRVCA	86,	014323	S. Guo, Y.H. Zhang, X.H. Zhou, M.L. Liu, Y.X. Guo, Y.H. Qiang, Y.D. Fang, X.G. Lei, F. Ma, M. Oshima, Y. Toh, M. Koizumi, A. Osa, A. Kimura, Y. Hattusukawa, M. Sugawara, H. Kusakari
2012Gy01	ARISE	70,	278	Gy. Gyurky, J. Farkas, Z. Halasz, T. Szucs
2012Ha05	PRVCA	85,	024611	H. Haba, D. Kaji, Y. Kudou, K. Morimoto, K. Morita, K. Ozeki, R. Sakai, T. Sumita, A. Yoneda, Y. Kasamatsu, Y. Komori, A. Shinohara, H. Kikunaga, H. Kudo, K. Nishio, K. Ooe, N. Sato, K. Tsukada
2012Ha25	PRLTA	109,	032501	J. Hakala, J. Dobaczewski, D. Gorelov, T. Eronen, A. Jokinen, A. Kankainen, V.S. Kolhinen, M. Kortelainen, I.D. Moore, H. Penttilä, S. Rinta-Antila, J. Rissanen, A. Saastamoinen, V. Sonnenschein, J. Äystö
2012He09	EPJAA	48,	75	F.P. Heßberger, S. Antalic, D. Ackermann, Z. Kalaninova, S. Heinz, S. Hofmann, B. Streicher, B. Kindler, I. Kojouharov, P. Kuusiniemi, M. Leino, B. Lommel, R. Mann, K. Nishio, S. Saro, B. Sulignano, M. Venhart
2012Hi07	NATUA	486,	342	C.B. Hinke, M. Böhmer, P. Boutachkov, T. Faestermann, H. Geissel, J. Gerl, R. Gernhäuser, M. Górska, A. Gottardo, H. Grawe, J.L. Grębosz, R. Krücken, N. Kurz, Z. Liu, L. Maier, F. Nowacki, S. Pietri, Zs. Podolyák, K. Sieja, K. Steiger, K. Straub, H. Weick, H.-J. Wollersheim, P.J. Woods, N. Al-Dahan, N. Alkhomashi, A. Ataç, A. Blazhev, N.F. Braun, I.T. Çeliković, T. Davinson, I. Dillmann, C. Domingo-Pardo, P.C. Doornenbal, G. de France, G.F. Farrelly, F. Farinon, N. Goel, T.C. Habermann, R. Hoischen, R. Janik, M. Karny, A. Kaşkaş, I.M. Kojouharov, Th. Kröll, Y. Litvinov, S. Myalski, F. Nebel, S. Nishimura, C. Nociforo, J. Nyberg, A.R. Parikh, A. Procházka, P.H. Regan, C. Rigollet, H. Schaffner, C. Scheidenberger, S. Schwertel, P.-A. Söderström, S.J. Steer, A. Stolz, P. Strmeň
2012Ho12	EPJAA	48,	62	S. Hofmann, S. Heinz, R. Mann, J. Maurer, J. Khuyagbaatar, D. Ackermann, S. Antalic, W. Barth, M. Block, H.G. Burkhard, V.F. Comas, L. Dahl, K. Eberhardt, J. Gostic, R.A. Henderson, J.A. Heredia, F.P. Heßberger, J.M. Kennelly, B. Kindler, I. Kojouharov, J.V. Kratz, R. Lang, M. Leino, B. Lommel, K.J. Moody, G. Münzenberg, S.L. Nelson, K. Nishio, A.G. Popeko, J. Runke, S. Saro, D.A. Shaughnessy, M.A. Stoyer, P. Thörle-Pospiech, K. Tinschert, N. Trautmann, J. Uusitalo, P.A. Wilk, A.V. Yeremin
2012Ja01	PRVCA	85,	014309	U. Jakobsson, J. Uusitalo, S. Juutinen, M. Leino, T. Enqvist, P.T. Greenlees, K. Hauschild, P. Jones, R. Julin, S. Ketelhut, P. Kuusiniemi, M. Nyman, P. Peura, P. Rahkila, P. Ruotsalainen, J. Sarén, C. Scholey, J. Sorri
2012Ja11	PRVCA	86,	011304	M.F. Jager, R.J. Charity, J.M. Elson, J. Manfredi, H. Mohammad, L.G. Sobotka, M. McCleskey, R.G. Pizzone, B.T. Roeder, A. Spiridon, E. Simmons, L. Trache, M. Kurokawa
2012Jo04	GCACA	88,	51	G. Jörg, Y. Amelin, K. Kossert, C.L. v. Gostomski
2012Ka12	EPJAA	48,	49	A. Kankainen, Yu. N. Novikov, M. Oinonen, L. Batist, V.-V. Elomaa, T. Eronen, J. Hakala, A. Jokinen, P. Karvonen, M. Reponen, J. Rissanen, A. Saastamoinen, G. Vorobjev, C. Weber, J. Äystö
2012Ka13	EPJAA	48,	47	A. Kankainen, V.S. Kolhinen, V.-V. Elomaa, T. Eronen, J. Hakala, A. Jokinen, A. Saastamoinen, J. Äystö
2012Ka.B	P-Argonne			D. Kameda et al.
2012Ka.C	PRVCA to be pd			A. Kankainen, J. Hakala, T. Eronen, D. Gorelov, A. Jokinen, V.S. Kolhinen, I.D. Moore, H. Penttilä, S. Rinta-Antila, J. Rissanen, A. Saastamoinen, V. Sonnenschein, and J. Äystö arXiv:1206. 6236v1

2012Ke01	NUPAB	880,	88	J.H. Kelley, E. Kwan, J.E. Purcell, C.G. Sheu, H.R. Weller
2012Ki16	SCIEA	335,	1614	N. Kinoshita, M. Paul, Y. Kashiv, P. Collon, C.M. Deibel, B. DiGiovine, J.P. Greene, D.J. Henderson, C.L. Jiang, S.T. Marley, T. Nakanishi, R.C. Pardo, K.E. Rehm, D. Robertson, R. Scott, C. Schmitt, X.D. Tang, R. Vondrasek, A. Yokoyama
2012Kn01	PRLTA	108,	122502	A. Knecht, R. Hong, D.W. Zumwalt, B.G. Delbridge, A. Garcia, P. Muller, H.E. Swanson, I.S. Towner, S. Utsuno, W. Williams, C. Wrede
2012Kr05	PRVCA	85,	044319	K.S. Krane
2012Ku26	PYLBB	717,	371	J. Kurcewicz, F. Farinon, H. Geissel, S. Pietri, C. Nociforo, A. Prochazka, H. Weick, J.S. Winfield, A. Estradé, P.R.P. Allegro, A. Bail, G. Béliet, J. Benlliere, G. Benzoni, M. Bunce, M. Bowry, R. Caballero-Folch, I. Dillmann, A. Evdokimov, J. Gerl, A. Gottardo, E. Gregor, R. Janik, A. Kelić-Heil, R. Knöbel, T. Kubo, Yu. A. Litvinov, E. Merchan, I. Mukha, F. Naqvi, M. Pfützner, M. Pomorski, Zs. Podolyák, P.H. Regan, B. Riese, M.V. Ricciardi, C. Scheidenberger, B. Sitar, P. Spiller, J. Stadlmann, P. Strmen, B. Sun, I. Szarka, J. Taieb, S. Terashima, J.J. Valiente-Dobon, M. Winkler, Ph. Woods
2012La05	PRVCA	85,	024317	A. Lapiere, M. Brodeur, T. Brunner, S. Eettenauer, P. Finlay, A.T. Gallant, V.V. Simon, P. Delheij, D. Lunney, R. Ringle, H. Savajols, J. Dilling
2012Li02	PRVCA	85,	014328	S.N. Liddick, B. Abromeit, A. Ayres, A. Bey, C.R. Bingham, M. Bolla, L. Cartegni, H.L. Crawford, I.G. Darby, R. Grzywacz, S. Ilyushkin, N. Larson, M. Madurga, D. Miller, S. Padgett, S. Paulauskas, M.M. Rajabali, K. Rykaczewski, S. Suchyta
2012Lo08	PRVCA	86,	014313	G. Lorusso, A. Becerril, A. Amthor, T. Baumann, D. Bazin, J.S. Berryman, B.A. Brown, R.H. Cyburt, H.L. Crawford, A. Estrade, A. Gade, T. Ginter, C.J. Guess, M. Hausmann, G.W. Hitt, P.F. Mantica, M. Matos, R. Meharchand, K. Minamisono, F. Montes, G. Perdikakis, J. Pereira, M. Portillo, H. Schatz, K. Smith, J. Stoker, A. Stolz, R.G.T. Zegers
2012Lu07	PRLTA	108,	142503	E. Lunderberg, P.A. DeYoung, Z. Kohley, H. Attanayake, T. Baumann, D. Bazin, G. Christian, D. Divaratne, S.M. Grimes, A. Haagsma, J.E. Finck, N. Frank, B. Luther, S. Mosby, T. Nagi, G.F. Peaslee, A. Schiller, J. Snyder, A. Spyrou, M.J. Strongman, M. Thoennessen
2012Ma03	APOBB	43,	247	T. Malkiewicz, G.S. Simpson, W. Urban, J. Genevey, J.A. Pinston, I. Ahmad, J.P. Greene, U. Koster, T. Materna, M. Ramdhane, T. Rzaca-Urban, A.G. Smith, G. Thiamova
2012Ma37	PRLTA	109,	112501	M. Madurga, R. Surman, I.N. Borzov, R. Grzywacz, K.P. Rykaczewski, C.J. Gross, D. Miller, D.W. Stracener, J.C. Batchelder, N.T. Brewer, L. Cartegni, J.H. Hamilton, J.K. Hwang, S.H. Liu, S.V. Ilyushkin, C. Jost, M. Karny, A. Kor gul, W. Królas, A. Kuźniak, C. Mazzocchi, A.J. Mendez, K. Miernik, W. Padgett, S.V. Paulauskas, A.V. Ramayya, J.A. Winger, M. Wolinska-Cichocka, E.F. Zganjar
2012Ma.A	P-Argonne			M. Madurga et al
2012Me04	EPJAA	48,	20	G. Meierhofer, P. Grabmayr, L. Canella, P. Kudejova, J. Jolie, N. Warr
2012Mo25	JUPSA	81,	103201	K. Morita et al.
2012Mo.A	PrvCom		Moon	C.B. Moon, G.D. Dracoulis, R.A. Bark, A.P. Byrne, P.A. Davidson, T. Kibédi, G.J. Lane, A.N. Wilson
2012Mu05	PRVCA	85,	044325	I. Mukha, L. Grigorenko, L. Acosta, M.A.G. Alvarez, E. Casarejos, A. Chatillon, D. Cortina-Gil, J.M. Espino, A. Fomichev, J.E. García-Ramos, H. Geissel, J. Gómez-Camacho, J. Hofmann, O. Kiselev, A. Korshennikov, N. Kurz, Yu. A. Litvinov, I. Martel, C. Nociforo, W. Ott, M. Pfützner, C. Rodríguez-Tajes, E. Roeckl, C. Scheidenberger, M. Stanoiu, K. Sümmerer, H. Weick, P.J. Woods
2012Na15	PRVCA	86,	014325	S. Naimi, G. Audi, D. Beck, K. Blaum, Ch. Böhm, Ch. Borgmann, M. Breitenfeldt, S. George, F. Herfurth, A. Herlert, A. Kellerbauer, M. Kowalska, D. Lunney, E. Minaya Ramirez, D. Neidherr, M. Rosenbusch, L. Schweikhard, R.N. Wolf, K. Zuber
2012Ne05	ARISE	70,	1990	Y. Nedjadi, C. Bailat, Y. Caffari, P. Froidevaux, C. Wastiel, N. Kivel, I. Guenther-Leopold, G. Triscone, F. Jaquenod, F. Bochud
2012Od01	PRVCA	85,	054315	D. O'Donnell, R.D. Page, C. Scholey, L. Bianco, L. Capponi, R.J. Carroll, I.G. Darby, L. Donosa, M. Drummond, F. Ertugral, T. Grah, P.T. Greenlees, K. Hauschild, A. Herzan, U. Jakobsson, P. Jones, D.T. Joss, R. Julin, S. Juutinen, S. Ketelhut, M. Labiche, M. Leino, A. Lopez-Martens, K. Mulholland, P. Nieminen, P. Peura, P. Rahkila, S. Rinta-Antila, P. Ruotsalainen, M. Sandzelius, J. Saren, B. Saygi, J. Simpson, J. Sorri, A. Thornthwaite, J. Uusitalo

2012Og02	PRLTA	108,	022502	Yu. Ts. Oganessian, F. Sh. Abdullin, S.N. Dmitriev, J.M. Gostic, J.H. Hamilton, R.A. Henderson, M.G. Itkis, K.J. Moody, A.N. Polyakov, A.V. Ramayya, J.B. Roberto, K.P. Rykaczewski, R.N. Sagaidak, D.A. Shaughnessy, I.V. Shirokovsky, M.A. Stoyer, V.G. Subbotin, A.M. Sukhov, Yu. S. Tsyganov, V.K. Utyonkov, A.A. Voinov, G.K. Vostokin
2012Pa07	PRVCA	85,	035501	H.I. Park, J.C. Hardy, V.E. Jacob, L. Chen, J. Goodwin, N. Nica, E. Simmons, L. Trache, R.E. Tribble
2012Po03	APOBB	43,	267	M. Pomorski, M. Pfützner, W. Dominik, R. Grzywacz, T. Baumann, J. Berryman, H. Czyrkowski, R. Dabrowski, T. Ginter, L. Grigorenko, J. Johnson, G. Kamiński, A. Kuźniak, N. Larson, S.N. Liddick, M. Madurga, C. Mazzocchi, S. Mianowski, K. Miernik, D. Miller, S. Palauskas, J. Pereira, K.P. Rykaczewski, A. Stolz, S. Suchyta
2012Po12	ARISE	70,	1900	S. Pommé, T. Altzitzoglou, R. Van Ammel, G. Suliman, M. Marouli, V. Jobbagy, J. Paepen, H. Stroh, C. Apostolidis, K. Abbas, A. Morgenstern
2012Po13	ARISE	70,	1913	S. Pommé, G. Suliman, M. Marouli, R. Van Ammel, V. Jobbagy, J. Paepen, H. Stroh, C. Apostolidis, K. Abbas, A. Morgenstern
2012Po14	ARISE	70,	2608	S. Pomme, M. Marouli, G. Suliman, H. Dikmen, R. Van Ammel, V. Jobbagy, A. Dirican, H. Stroh, J. Paepen, F. Bruchertseifer, C. Apostolidis, A. Morgenstern
2012Qu01	PRVCA	85,	035807	M. Quinn, A. Aprahamian, J. Pereira, R. Surman, O. Arndt, T. Baumann, A. Becerril, T. Elliot, A. Estrade, D. Galaviz, T. Ginter, M. Hausmann, S. Hennrich, R. Kessler, K.-L. Kratz, G. Lorusso, P.F. Mantica, M. Matos, F. Montes, B. Pfeiffer, M. Portillo, H. Schatz, F. Schertz, L. Schnorrenberger, E. Smith, A. Stolz, W.B. Walters, A. Wöhr
2012Re05	PRVCA	85,	035802	R. Reifarh, S. Dababneh, M. Heil, F. Kappeler, R. Plag, K. Sonnabend, E. Uberseder
2012Re17	PRVCA	86,	041306	M. Redshaw, G. Bollen, M. Brodeur, S. Bustabad, D.L. Lincoln, S.J. Novario, R. Ringle, S. Schwarz
2012Re.A	PrvCom	GAu	May	M. Reed
2012Re.B	PrvCom	FGK	Jun	P.H. Regan
2012Ro25	PRLTA	109,	092503	F. Rotaru, F. Negoita, S. Grévy, J. Mrazek, S. Lukyanov, F. Nowacki, A. Poves, O. Sorlin, C. Borcea, R. Borcea, A. Buta, L. Cáceres, S. Calinescu, R. Chevrier, Zs. Dombrádi, J.M. Daugas, D. Lebhertz, Y. Penionzhkevich, C. Petrone, D. Sohler, M. Stanoiu, J.C. Thomas
2012Sc.A	PrvCom	GAu	May	S. Schwarz
2012Sh.1	PRVCA to be pd			D. Shubina, R.B. Cakirli, K. Blaum, F. Bosch, R.F. Casten, I.J. Cullen, C. Kozhuharov, Yu. A. Litvinov, M.W. Reed, P.M. Walker, N. Winckler, C. Brandau, J.J. Carroll, D.M. Cullen, A.Y. Deo, B. Detwiler, C. Dimopoulou, F. Farinon, H. Geisse, E. Haettner, M. Heil, R.S. Kempsey, R. Knöbel, J. Kurcewicz, N. Kuzminchuk, S.A. Litvinov, Z. Liu, R. Mao, C. Nociforo, F. Nolden, Z. Patyk, W.R. Plass, A. Prochazka, M.S. Sanjari, C. Scheidenberger, M. Steck, Th. Stöhlker, B. Sun, T.P.D. Swan, G. Trees, H. Weick, M. Winkler, P.J. Woods, T. Yamaguchi
2012Si07	PRLTA	108,	202502	S.I. Sidorchuk, A.A. Bezbakh, V. Chudoba, I.A. Egorova, A.S. Fomichev, M.S. Golovkov, A.V. Gorshkov, V.A. Gorshkov, L.V. Grigorenko, P. Jaløuvková, G. Kaminski, S.A. Krupko, E.A. Kuzmin, E. Yu. Nikolskii, Yu. Ts. Oganessian, Yu. L. Parfenova, P.G. Sharov, R.S. Slepnev, S.V. Stepanov, G.M. Ter-Akopian, R. Wolski, A.A. Yukhimchuk, S.V. Filchagin, A.A. Kirdyashkin, I.P. Maksimkin, O.P. Vikhlyantsev
2012Si10	PRVCA	85,	064308	V.V. Simon, T. Brunner, U. Chowdhury, B. Eberhardt, S. Ettenauer, A.T. Gallant, E. Mane, M.C. Simon, P. Delheij, M.R. Pearson, G. Audi, G. Gwinner, D. Lunney, H. Schatz, J. Dilling
2012Sm01	PRVCA	85,	027601	C. Smorra, T. Beyer, K. Blaum, M. Block, Ch. E. Düllmann, K. Eberhardt, M. Eibach, S. Eliseev, Sz. Nagy, W. Nortershauser, D. Renisch
2012Sp02	PRLTA	108,	102501	A. Spyrou, Z. Kohley, T. Baumann, D. Bazin, B.A. Brown, G. Christian, P.A. DeYoung, J.E. Finck, N. Frank, E. Lunderberg, S. Mosby, W.A. Peters, A. Schiller, J.K. Smith, J. Snyder, M.J. Strongman, M. Thoennessen, A. Volya
2012St.A	P-Argonne			M.A. Stoyer
2012Sw01	PRVCA	85,	024313	T.P.D. Swan, P.M. Walker, Zs. Podolyak, M.W. Reed, G.D. Dracoulis, G.J. Lane, T. Kibedi, M.L. Smith

2012Tr06	PRLTA	109,	042301	S. Triambak, P. Finlay, C.S. Sumithrarachchi, G. Hackman, G.C. Ball, P.E. Garrett, C.E. Svensson, D.S. Cross, A.B. Garnsworthy, R. Kshetri, J.N. Orce, M.R. Pearson, E.R. Tardiff, H. Al Falou, R.A.E. Austin, R. Churchman, M.K. Djongolov, R. D'Entremont, C. Kierans, L. Milovanovic, S. O'Hagan, S. Reeve, S.K.L. Sjue, S.J. Williams
2012Va02	PRVCA	85,	045805	J. Van Schelt, D. Lascar, G. Savard, J.A. Clark, S. Caldwell, A. Chaudhuri, J. Fallis, J.P. Greene, A.F. Levand, G. Li, K.S. Sharma, M.G. Sternberg, T. Sun, B.J. Zabransky
2012Vi.1	NATUA	488,	357	R. Vincent, S. Klyatskaya, M. Ruben, W. Wernsdorfer, F. Balestro
2012Wa10	PRVCA	85,	034329	P.T. Wady, J.F. Smith, E.S. Paul, B. Hadinia, C.J. Chiara, M.P. Carpenter, C.N. Davids, A.N. Deacon, S.J. Freeman, A.N. Grint, R.V.F. Janssens, B.P. Kay, T. Lauritsen, C.J. Lister, B.M. McGuirk, M. Petri, A.P. Robinson, D. Seweryniak, D. Steppenbeck, S. Zhu
2012Ya.A	PrvCom	WgM	Aug	X.L. Yan
2012Yo.A	P-Argonne			D. Yordanov
2012Zh04	CPLEE	29,	012502	Z.Y. Zhang, Z.G. Gan, L. Ma, M.H. Huang, T.H. Huang, X.L. Wu, G.B. Jia, G.S. Li, L. Yu, Z.Z. Ren, S.G. Zhou, Y.H. Zhang, X.H. Zhou, H.S. Xu, H.Q. Zhang, G.Q. Xiao, W.L. Zhang
2012Zh34	PRLTA	109,	102501	Y.H. Zhang, H.S. Xu, Yu. A. Litvinov, X.L. Tu, X.L. Yan, S. Typel, K. Blaum, M. Wang, X.H. Zhou, Y. Sun, B.A. Brown, Y.J. Yuan, J.W. Xia, J.C. Yang, G. Audi, X.C. Chen, G.B. Jia, Z.G. Hu, X.W. Ma, R.S. Mao, B. Mei, P. Shuai, Z.Y. Sun, S.T. Wang, G.Q. Xiao, X. Xu, T. Yamaguchi, Y. Yamaguchi, Y.D. Zang, H.W. Zhao, T.C. Zhao, W. Zhang, W.L. Zhan