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EXTRAORDINARY ITER COUNCIL MEETING (EIC-1)
by Dr. H. Takatsu, ITER JA Contact Person

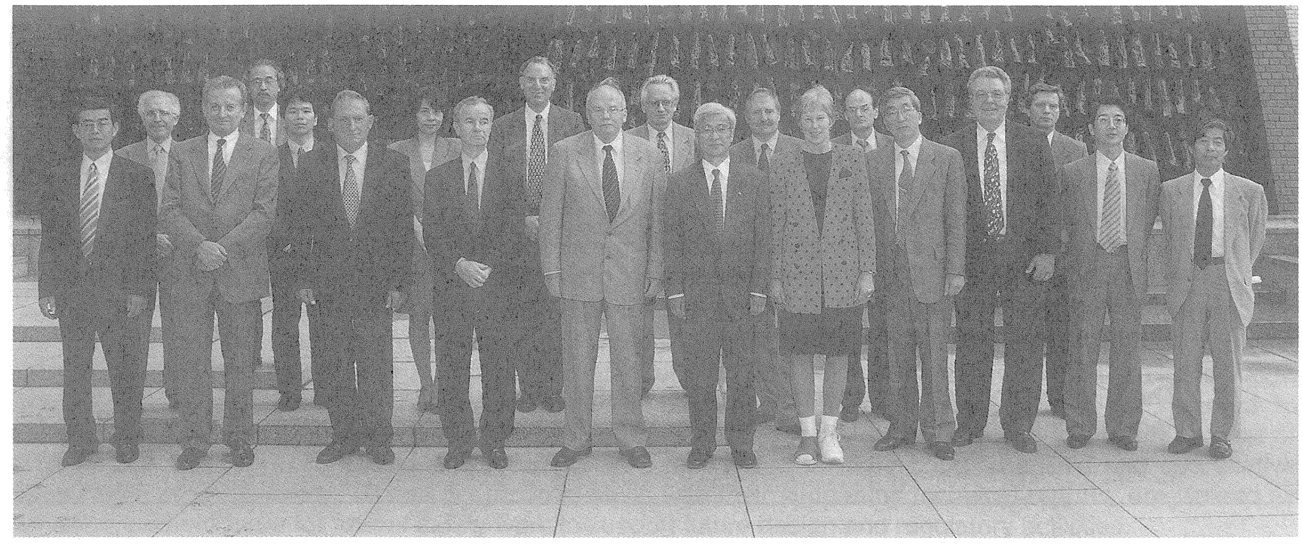
The Extraordinary Meeting of the ITER Council was held on June 25, 1998 in Tokyo, Japan. This special meeting was held, between IC-13 and IC-14, with an earlier agreed reduced attendance, mainly in order to:

- approve the Final Design Report Cost Review and Safety Analysis (FDR);
- accept the report of the Special Working Group (SWG) on its Task #1; and
- provide to the Director guidelines for the ITER Work Programme for the EDA extension period.

The Council noted with satisfaction:

- the favourable acknowledgement given to ITER in the final communiqué at the recent G-8 Summit Meeting at Birmingham and thanked the RF Party for its initiative in this matter;
- the progress made toward conclusion of the agreement extending the ITER EDA with the general intent to enable an efficient start of future possible construction of ITER; and
- statements from JA and EU that they are ready to provide available site characterisation data and to establish informal contact with regulatory authorities as a basis for site-specific joint technical work during the extension period.

Having heard the positive views of the Parties, based on their in-depth domestic assessments of the FDR and related technical documentation, the Council approved the FDR. The FDR provides the first comprehensive design of a fusion reactor based on well established physics and technology. The Council expressed its appreciation to the Director, the JCT and the Home Teams for fulfilling the task set for them and for the quality and depth of the work completed.



Participants in the Meeting

GUIDELINES FOR THE WORK PROGRAMME DURING THE ITER EDA EXTENSION PERIOD

Overall aim

The overall aim of the Joint Technical Activities to be undertaken during the ITER extension period is to provide the technical information needed to enable an efficient start of future possible construction of ITER.

Project Milestones

(exact dates subject to ITER Council calendar)

~7/98 Approve the Work Programme based on the approved technical guidelines and ask the Director to continue to develop reduced cost options with high priority

~12/98 Following TAC review, accept the reduced cost option Outline Design Report and approve the set of major ITER parameters and design features.

~7/00 (Assuming acceptance of reduced cost option as a basis for site-specific activities) accept Detailed Design Report on reduced cost option for Parties' Joint Assessment

~7/01 Accept Final Design Report on reduced cost option

Working Assumptions

1. Estimated resources for Joint Technical Activities will be as set out in the Understandings for the extension of the duration of the ITER EDA Agreement.
2. Parties providing site characterisation data will participate with appropriate resources in certain country/site-specific activities such as preparing documentation for regulatory authorities in proper format/language, or adjusting the design for site-specific technical demands outside of the design basis.
3. Host Parties will continue to keep the Joint Work Sites fully operational in accordance with Article 14 of the ITER EDA Agreement.
4. Voluntary Physics activities should continue to develop as presently. Parties will take due consideration of the ITER Physics Committee's views on priorities.
5. The Director will continue efforts with high priority toward establishing, with the assistance of the JCT and Home Teams, option(s) of minimum cost aimed at a target of approximately 50% of the direct capital cost of the present design with reduced detailed technical objectives, which would still satisfy the overall programmatic objective of ITER. The work should follow the adopted technical guidelines and make the most cost-effective use of existing design solutions and their associated R&D.
6. Any significant change of design basis should be introduced before the end of 1998. Pending such decisions, the fully documented design presented in the FDR should serve as the reference design from which to initiate the site-specific joint technical activities and informal interactions with regulatory authorities.
7. The Director and JCT will continue to assist the SWG in its Task#2 activities and to assist the Parties in the other enabling activities foreseen for the extension period.

The Council invited the Director to present to IC-14 a report on the status of technical work in the EDA for the period to July 1998, including a compendium of the output documentation, to be published by IAEA.

The Council accepted the report of the SWG on its Task #1 and adopted the proposed technical guidelines for possible changes to the current detailed technical objectives and overall technical margins. Accordingly, the Council:

- requested the Director to continue efforts with high priority toward establishing option(s) of minimum cost aimed at a target of approximately 50 % of the direct capital cost of the present design with reduced detailed technical objectives, which would still satisfy the overall programmatic objective of ITER;
- underlined to the Home Teams the importance of completing the committed R&D programmes; and
- requested the Director to prepare an Outline Design Report of the low cost option for the design of ITER by the end of 1998 as proposed by the SWG.

The Council agreed that the SWG had completed its work on Task #1 in accordance with its charge and expressed its thanks to the Co-Chairs and members of the Group, and the Director for the constructive work done. All delegations reconfirmed the importance of the studies on broader concepts to be undertaken by the SWG under Task #2; the Council asked the Director to inform the SWG as the design work on lower cost options progresses.

The Council agreed to the guidelines for the ITER Work Programme (see box on page 2) for the EDA extension period, and invited the Director to prepare the ITER Work Programme and submit it to IC-14 through MAC-14.

The ITER Council requested the CP's to work together, in consultation with the Director, in developing tentative sequences of events reflecting each Party's perceptions of a plausible approach to a construction decision, and an indicative framework for the planned joint assessment of readiness for construction.

ITER EDA FINAL SAFETY MEETING
by G. Saji and D. Baker

The EDA Final Safety Meeting was held during July 6-July 9, 1998 at the ITER San Diego Joint Work Site to review the Non-Site Specific Safety Report (NSSR-2) Supplements, the EDA safety accomplishments, and the plans for future work. Specifically, the main objectives of the meeting were:

- To provide final comments on the NSSR-2 Supplements to be included in the FDR documentation final transmittal;
- To review the safety design and analysis approach used during the EDA, identify weaknesses, and determine how the safety design and analysis approach can be improved;
- To review what has been accomplished in R&D during the EDA and determine what needs to be done in any next phase; and
- To follow-up design progress on the Ingress of Coolant experiments and Loss of Vacuum experiments (ICE/LOVA) Combined Test Apparatus.

In preparation for the meeting, the draft NSSR-2 Supplements were distributed to the Home Teams beginning on June 12. The Director, Dr. Aymar, and Deputy Director, Dr. Shimomura, kicked off the meeting by chairing a video conference from Europe.

Overall Assessment. The overall assessments of the EDA safety activities by the Safety Task Area Leaders expressed a common theme: each home team acknowledged the achievements and the harmonious and productive international collaboration of the ITER Joint Central Team and the Home Team safety professionals, yet each also recognized the challenges ahead to provide the rigor required to successfully pass a regulatory review. In particular, the EDA final safety documentation, the safety chapter of Final Design Report (FDR-Safety) and NSSR-2 were recognized for their comprehensive and quantitative assessment of ITER safety. These documents, along with their supporting technical reports, are viewed as providing a sound basis for further safety work to support future design and regulatory activities.

It was noted that, although the EDA safety activities established a common basis for future work, the effort needed to meet the specific regulatory needs of any potential host country will be substantial. Considerable effort is anticipated in the following areas:

- Assessment of the deployment of the ITER safety approach into the ITER design progress;
- Comparison of the ITER safety approach with the potential host country approach and justification of differences;
- Continuing verification and validation of safety codes and methods;
- Additional work to quantify the source terms and their mobilization characteristics;
- Further improvement of occupational safety as-low-as-reasonably- achievable;
- Design optimization and further improvement in the plan for disposition of activated waste.

The following sections describe the EDA safety activities in more detail.

Safety Work and Documentation. The EDA safety work is the most detailed fusion safety and environmental assessment performed to date and is presented primarily in the following documents:

- General Safety and Environmental Design Criteria (GSEDC);
- General (safety) Design Requirement Document (GDRD-Safety);
- NSSR-2 and NSSR Supplement; and
- FDR-Safety

Numerous R&D and design task reports by the Home Teams provide the technical basis of the safety assessment.

Safety Criteria. An upper tier set of safety criteria and requirements was developed to guide ITER safety design and assessment in a consistent manner. The objective of the ITER GSEDC document was to present general top-level safety design objectives, principles and criteria to minimize hazards and risk, and thereby to protect the public, site personnel and environment. The requirements presented in the GDRD-Safety are those that are more detailed or intentionally more restrictive for design purposes than the GSEDC safety requirements. Internationally accepted standards and work carried out by Home Teams were used to determine the contents of safety criteria.

The GSEDC establish an internationally developed basis for assessing the ultimate safety and environmental impact of ITER and fusion.

Participants in the Meeting

Safety Analysis Reports
NSSR-2 shows that ITER can be designed, operated and decommissioned safely. The reference design meets the top level ITER safety requirements and is expected, with some site specific modification, to meet regulatory requirements of any potential host country. Home team reviews indicate that NSSR-2 responds to needs of the Home Teams and provides a basis for further safety research and analysis, as well as a basis to start discussion with regulatory authorities.

NSSR-2 demonstrates that, with appropriate design and operation, there is no significant safety issue with respect to public safety. It also indicates that continued design refinement is needed for occupational safety by application of the 'as-low-as-reasonably-achievable' (ALARA) process, proposed for the next phase.

During the EDA, considerable progress has been made in the following areas:

- Development of fusion safety principles and requirements;
- Quantification of radioactive and energy inventories;
- Clearer presentation of methodology and results of effluent analyses;
- Characterization of radioactive waste streams;
- Clearance concept with IAEA values as a common denominator;
- Implementation of the ALARA process in assuring occupational safety;
- Comprehensive safety analyses of reference events starting from initiating events to the final consequences;
- Focus on the essentials of ultimate safety margins;
- Characterization of the reference computer codes;
- Development of the Radiation Protection Program;
- Combination of top down and bottom up approaches in event selection;
- Detailed seismic analysis of the tokamak.

The Safety Assessment in Final Design Report, Chapter IV (FDR-Safety), is a summary intended for a wider audience but one with a scientific and technical background.

Safety Implementation in the Design
The modest hazards, experimental nature and unique characteristics of ITER warrant an original approach. Safety implementation in the design was established in consideration of the project objectives, namely to:

- Operate safely and demonstrate the safety and environmental potential of fusion power;
- Tolerate uncertainties associated with entering a new plasma physics regime and integrating physics, technology and materials at a power plant scale;
- Allow maximum design and operational flexibility;
- Minimize the safety burden on plasma physics, and experimental or developmental in-vessel components such as divertor, first wall, shield blanket and diagnostics;
- Shift the safety burden to the more conventional vacuum vessel, cryostat, heat transport systems and tritium plant which makes safety cases more demonstrable because safety is implemented using proven technology;
- Confine the safety hazards as close to the source as possible;
- Recognize that ITER will not reach the most challenging conditions for many years, so there are opportunity and plans to learn and reduce uncertainties during the early stages of operation.

ITER has shown that development of the safety design criteria in parallel with the design process was important to the design integration of ITER and demonstrated how important design can be at addressing safety concerns. The safety team and designers worked together to solve safety issues. This teamwork resulted in low radioactive releases during postulated accidents and helped demonstrate the safety potential of fusion. Major safety features included in the design are:

- ITER Radiological Confinement Scheme;
- Vacuum Vessel Pressure Suppression System;
- Decay Heat Removal by the Vacuum Vessel Heat Transport System.

Safety R&D. Focused safety R&D was performed to provide experimental databases needed for safety analysis. The R&D increased the fundamental understanding of fusion phenomena and processes, and reduced uncertainties surrounding safety issues. Significant progress was made, particularly in the following areas:

- Tokamak operational data and malfunction reports for failure data base;
- Characterization of particulate and tritium inventories in existing tokamaks and plasma disruption simulators;
- Decay heat validation experiment, using a 14 MeV fusion neutron source facility (FNS);
- Steam and air chemical reactivity of Be;
- Oxidation-driven mobilization experiments and modeling for activated structures;
- Loss of vacuum and ingress of coolant experiments for thermal hydraulic code validation;
- Be and tritium behavior in simulated accidental conditions using irradiated samples;
- Integrated state of the art fusion safety analysis tools.

It is recognized that component and system R&D projects that contain safety-related investigations have yet to be completed. These R&D projects should be continued.

Accident Analysis. R&D resources were allocated to both probabilistic and deterministic approaches for safety analysis. Both a top down approach (a master logic diagram) and a bottom up approach (based upon failure modes and effects analyses) were used to assure comprehensive event selection. Event trees were used to identify reference events. The safety analysis code SAFALY was developed for plasma events. Existing fission state-of-the-art safety codes, such as MELCOR and INTRA, were upgraded to deal with fusion specific issues, such as cryogenic conditions and chemical reactivity of fusion specific materials. These tools provided a consistent analysis to understand the behavior of a tokamak under accident conditions and to demonstrate that ITER can meet the no-evacuation objective, that is to say, public safety will be assured without the need for evacuation even in the worst postulated accidents.

Occupational Safety. The neutron activation of ex-vessel components, gamma streaming through the numerous ports around the tokamak, and activated corrosion products transported by primary coolant influence the occupational radiation exposure to workers during maintenance activities.

An ITER Radiation Protection Program (RPP) was developed for integrating the ALARA process into a first-of-a-kind ITER design to improve occupational safety. The ALARA process continuously assesses the design to anticipate the occupational risk and to identify methods to reduce it. The radiation protection principles were considered early in the ITER design process so that design choices to enhance operational safety performance could be made without unnecessarily restricting the creative engineering solutions required in the design of a fusion facility. Early application of the RPP has been essential in reducing the potential for occupational exposure.

Waste Management and Decommissioning. The major objective in the area of waste management was to give the potential Host Countries sufficient information to determine how they could handle the waste. An in-depth feasibility study on decommissioning was performed. Activation analysis procedures were established for 14 MeV neutrons, including the validated nuclear data library FENDL-2 by IAEA. Methodologies were developed to provide the results of numerical analyses of waste stream dynamics versus level of contact dose ("hands-on" analysis) and versus several sets of exemption criteria ("clearance level" analysis). Detailed 3-D neutron transport and activation analyses were required to determine ex-vessel dose rates and activation levels because of the strong poloidal and toroidal variations in radiation fields and streaming effects.

Remaining Issues. In spite of the large body of work done during the ITER EDA, there remain some considerable challenges. NSSR-2 has shown that analysis tools and methodologies adequate for this stage of the project have now been developed. NSSR-2 has meanwhile been extensively reviewed by the ITER Parties and the Home Teams. Many of the comments have been incorporated into NSSR-2. However, there are some remaining issues on which progress has been made but which could not be resolved during the EDA so that they need to be covered by future work. Continued verification and validation of computer codes are still needed to demonstrate that the codes adequately simulate postulated accident situations. Also, further work will be needed in both running codes to meet existing experimental results and in developing new experiments to explore remaining questions.

Following is a list of major remaining issues:

<u>Project management:</u>

- A program of accident analysis code validation and implementation of verification and validation of codes and models for safety analyses;

- R&D planning to provide further justification and technical basis of key safety parameters;
- Configuration control of safety design parameters following further design progress.

Further progress and refinement:

- Demonstration of the safety and environmental attractiveness of ITER in balance of consideration of uncertainties for first-of-a-kind facility;
- Evaluation of uncertainties and justification vis-à-vis safety margins, by further performing verification and validation experiment;
- Deployment, justification and implementation of Safety Importance Class, Defense in Depth, rational allocation of safety design requirements, and justification of design;
- Operational restrictions and minimization of 'administration limits' in line with further progress in ITER operational planning;
- Safety protection system and instrumentation and control system design;
- Less conservative safety analysis of accidents in superconducting magnets, by performing further experiments; and
- Assessment of human and equipment performance/reliability in the prevention and mitigation of accident conditions.

Continued effort:

- Continued iteration of ALARA implementation and occupational safety measures;
- Minimization of wastes;
- Accountability, radiological consequences and verification of dust - steam reactions;
- Activated corrosion products quantification in the ITER chemical environment.

During the next phase of work, further progress in design of the reference tokamak is essential. Site-specific design should be implemented. In addition, a better demonstration of how the design meets safety requirements as specified in GSEDC and GDRD-Safety is needed.

Conclusions. The meeting ended with all participants agreeing that safety work during the EDA was a success and an excellent example of international collaboration. Similar cooperation between the Joint Central Team, Home Teams and potential regulators will be needed to harmonize the ITER safety approach with the regulations of potential host countries.

List of Participants

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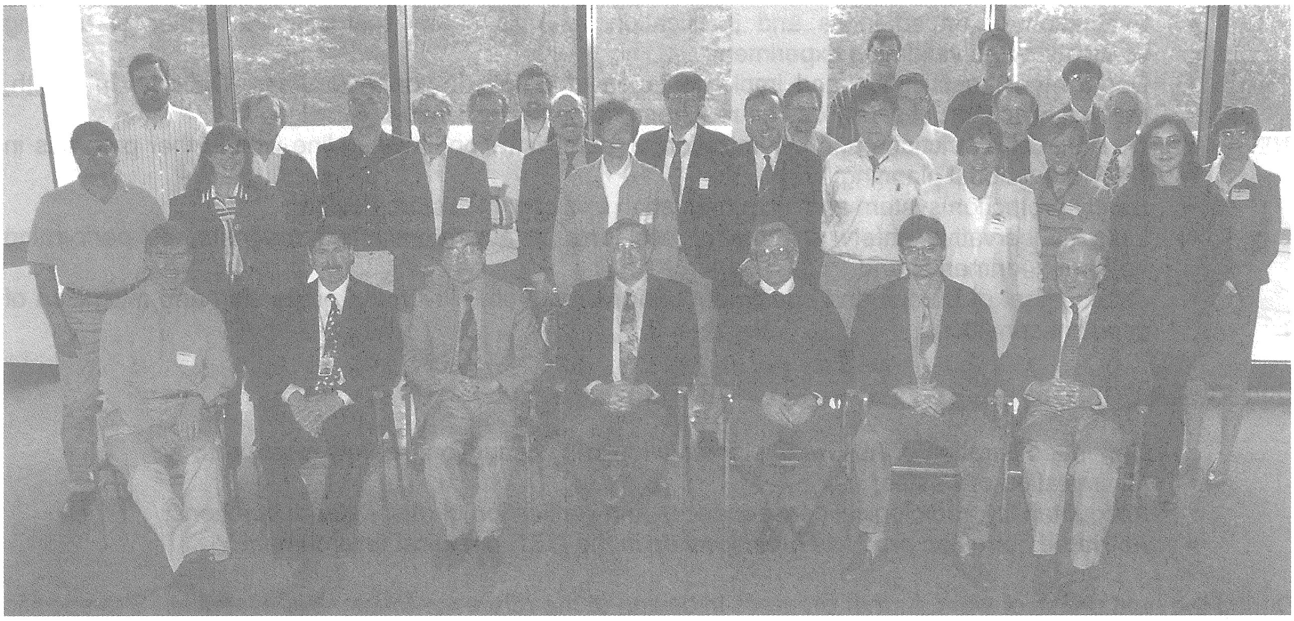
US: D. A. Petti (US Safety TAL, INEEL), K. A. McCarthy (INEEL)
JCT: R. Aymar, ITER Director, and Y. Shimomura, Deputy Director (via telecon), D. J. Baker, H. W. Bartels, Y. Hoshi, S. I. Morozov, G. Saji, L. N. Topilski (all from San Diego JWS), M. Iseli (Naka JWS), J. Raeder (Garching JWS)

SUMMARY REPORT OF THE THIRD COMBINED WORKSHOP OF THE ITER CONFINEMENT AND TRANSPORT AND ITER CONFINEMENT DATABASE AND MODELING EXPERT GROUPS

by Dr. V. Mukhovatov, ITER JCT; Prof. Wakatani, Kyoto University; Dr. D. Boucher, ITER JCT and Dr. J.G. Cordey, JET - Joint Undertaking

The 3rd Combined Workshop of the ITER Confinement Database and Modeling Expert Group and ITER Confinement and Transport Expert Group was held in Princeton Plasma Physics Laboratory (USA) from April 20-25, 1998. The Workshop followed a new format endorsed by the ITER Physics Committee in November 1997: the Confinement Database and Modeling Expert Group met during the first three days. A day of joint meeting with the Confinement and Transport Expert Group followed to co-ordinate the activities between the two expert groups. The Confinement and Transport Expert Group then met for the remaining day and a half.

In this last workshop of the current EDA phase, attention was paid to discussion of outstanding problems, completion of the ITER Physics Basis Document, release of the latest version of the databases and the contents of forthcoming papers: two for the next EPS conference in Prague, and two for the next IAEA conference in Yokohama. A separate publication in Nuclear Fusion is planned for the Profile Database.



Participants in the Meeting

The main results and agreed working plans of the Workshop were:

- H-mode Power Threshold Database: JET data from D-T experiments confirmed that the L-H threshold power is inversely proportional to mass thereby lowering the projected threshold power for ITER. Interesting results from discriminant analysis of the H-mode power threshold database were presented. They provide a probability curve for the LH transition for the different tokamaks and for ITER. This work will be presented by Y. Martin at the next EPS conference. Several phenomenological causes of data scatter, which depend on the device, have been identified. However, most of them cannot be taken into account quantitatively in the power threshold prediction. Complementary to the analysis with global data, efforts to provide and analyze local edge data are being performed. Models to take into account the influence of sawteeth or drift effects were proposed and are being tested using the database. A new version of the database will be released with the IAEA paper on global databases.

- H-mode Confinement Database: Analysis of the global database using a new definition of κ (area divided by πa^2) solved the difference in aspect ratio dependence when including or excluding PBX-M in the analysis. An inverse aspect ratio to the ~2/3 power is found as opposed to the 1/4 power found previously. Sensitivity studies of the ELMy H-mode confinement scaling using various subsets of the standard ELMy dataset and this new definition of κ have been documented in an updated section of ITER Physics Basis. The (point) predictions for ITER from these simple power scalings remain similar: 5.0 to 6.0 seconds. The full standard dataset of the global database DB3v5 has now been publicly released[1]. An EPS paper to be presented by M. Valovic is being prepared and will concentrate on estimation of the uncertainties on the exponents of the ELMy H-mode power law scalings. An IAEA paper by K. Thomsen will describe new features of the global H-mode database, which will be extended in the coming months, and provide details on the confinement and threshold analysis.

- Profile Database and 1D Model Testing: A public release of the ITER Profile Database is planned for July 1998, with an accompanying publication submitted to Nuclear Fusion. Plans were drawn up to prepare

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[1] Contact Knud Thomsen (kt@jet.uk) or Dominique Boucher (bouched@iterus.org) for further information.

the IAEA paper on 1D model testing presented by D. Mikkelsen that will include a study of ExB flow shear stabilization. Reversed shear experiments from all major tokamaks will be progressively added to the Profile Database.

- Transport Model Development: Findings reported at the last workshop that gyrokinetic simulations produced several times lower transport level than gyrofluid simulations under otherwise similar conditions were confirmed. The origin of the discrepancy is not yet fully understood, but the explanation appears to lie in the different treatments of poloidal flow damping and equilibrium radial profiles. Improvement to the Multi-Mode model, which predicts ignition for ITER, now provides a first principle basis for the strong beneficial κ dependence previously found empirically.

- ITER Demonstration Discharges: Isotopic scans (D, T, and DT mix) done on JET's ITER Demonstration Discharges confirm the weak mass dependence of the global confinement scaling used to extrapolate to ITER. Data analysis revealed that the confinement in the core region actually degrades with mass ($\tau_E \propto A^{-0.16}$), which is in agreement with gyro-Bohm scaling, and this was counterbalanced by the confinement in the edge region which improved with mass. Extrapolating the JET D-T discharges at constant β and $\nu*$ to ITER gives ignition when the normalized β_N is in excess of 1.7. Of special interest was the highest fusion performance discharge, which had a low q_{95} (~2.7), where a $Q_{th} > 13$ would have been achieved in ITER even with Bohm transport. Preliminary results from a series of non-dimensional identity discharges between JET and each of three other tokamaks: ASDEX Upgrade, Alcator C-Mod and DIII-D, demonstrated the validity of this projection method by showing that the same discharge (in non-dimensional units) produced, well within experimental accuracy, the same normalized confinement time when obtained on tokamaks of different sizes.

- H-mode Confinement near Greenwald Limit: Gas puffing alone does not allow the Greenwald density in H-mode in current experiments to be exceeded. Pellet fueling - or a combination of pellet and gas fueling - did allow operation from 1.2 (ASDEX Upgrade) to 1.5 (DIII-D) times above the Greenwald density while preserving good H-mode confinement, thereby more than satisfying the requirements for the reference ITER ignited scenario. However, these favorable results have been obtained so far in a rather limited parameter range. Further experiments are needed to characterize in greater detail the confinement behavior near the Greenwald density. Pellet injection from the high-field side with relative pellet penetration depth close to that in ITER is of major interest. Note that the RI-Mode of TEXTOR-94 also allows, in nearly steady state, H-Mode confinement quality at the Greenwald density to be obtained.

- Theories and Experiments on L-H Transition and Edge Pedestal: Significant progress has been made to produce a theory of L-H transition able to explain experimental observations. J. Drake presented the results of 3D non-linear simulations of a Braginskii fluid model for the plasma edge region which lead to a "phase space diagram" for tokamak edge turbulence with regions corresponding to L-mode, H-mode, and a sub-L mode region, the latter possibly relating to the density limit. Suppression of turbulent transport leading to the formation of an edge transport barrier has been obtained also in transport simulations using the CDBM model and SOL model together with equations for plasma flow and radial electric field. More detailed validation against experiments using local edge parameters is still required. A set of dedicated experiments on ASDEX Upgrade, JET, Alcator C-Mod, COMPASS-D and DIII-D provided a wide range of additional observations for the L-H transition which will guide further theory development and improve coordination across the various tokamaks. New experiments provided information on the dependence of the H-mode pedestal width on edge plasma parameters but more analysis is required to produce a definitive scaling.

- Regimes with Internal Transport Barriers (ITBs): New results on operation with ITBs were presented from DIII-D, ASDEX Upgrade and JT-60U. Results from DIII-D showed that (i) the ITB is difficult to sustain in ELMy H-mode plasmas due to the effect of the type I ELMs; (ii) reduction in χ_e in the negative central shear (NCS) discharges is correlated temporally and spatially with χ_i, but the transport improvement in the electron channel is not as good as the improvement in the ion channel and the electron transport is still anomalous; (iii) plasmas with ITBs and L-mode edges were sustained for about 4 s in duration although at relatively modest parameters. In ASDEX Upgrade, transient (~300ms) ITBs were observed in ion and electron temperatures, electron density and toroidal plasma rotation. In JT-60U, broadening the ion temperature profile by acquiring the H-mode plasma edge resulted in improved MHD stability at low q_{min}. Key issues that need to be resolved in future experiments are: (i) threshold requirements for formation of the ITBs; (ii) reasons for anomalous electron transport in plasmas with ITBs; and (iii) ways to control and sustain ITBs.

- Radiatively Improved Confinement Mode (RI-mode): Long (~7s), quasi-stationary plasmas up to 160 times τ_E, i.e. on the order of the skin resistive time and very close to the ratio of burning time to projected confinement time of ITER were produced in TEXTOR RI-mode at $n_e \approx n_{GR}$ and $P_{rad}/P_{tot} \sim 60\%$ with confinement close to the ELM-free H-mode. "Super RI-mode" or high-density VH-mode was observed transiently in DIII-D diverted discharges with $\tau_E=(3\text{-}4)\tau_{E,ITER\text{-}89P}$ and $\beta_N \sim 4$ at $n_e \approx 0.6 n_{GR}$ and $P_{rad}/P_{tot} \sim 50\%$. Confinement close to ELMy H-mode with trends similar to the RI-mode was observed in recent experiments on Tore Supra.

- For a better understanding of ITB and RI-mode regimes, plans were drawn up to perform additional experiments with more systematic inter-machine comparisons and to document them in the Profile Database for further analysis by the modeling community.

The following arrangements are proposed for the next meeting of the Expert Groups:
A one-day Joint Workshop of two Confinement Expert Groups would take place after the 17th IAEA Fusion Energy Conference in Japan. The Confinement Modeling and Database Expert Group would continue meeting for an additional three days.

List of Participants:

JA: Fukuda T., Miura Y., Takizuka T., Wakatani M.
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