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Supplement of

Spatiotemporal variability of Canadian High Arctic glacier surface albedo from MODIS data, 2001–2016

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Introduction

The following figures and table present data that support but are not essential. Table S1 presents the percentage of pixels having BSA observations according to the criteria outlined in Sect. 2.3. Figures S1–S3 present the mean June, July, and August BSA for the period 2001–2016. Figures S4–S6 present the mean June, July, and August BSA anomalies, with respect to the 2001–2016 mean, for the period 2001–2016. Figure S7 presents the mean summer (JJA) LST anomalies, relative to the 2001–2016, mean for the period 2001–2016.

Table S1: Percentage of QEI ice cover having mean summer and monthly BSA observations.

Year	JJA*	June^	July†	August†
2001	78.5	82.3	96.4	92.3
2002	80.0	93.3	94.1	87.0
2003	75.6	98.4	99.2	76.4
2004	78.3	96.0	93.1	85.1
2005	94.3	99.2	97.8	96.6
2006	78.8	86.2	95.3	91.2
2007	96.6	98.6	99.1	98.0
2008	90.1	98.4	97.8	92.6
2009	95.9	99.6	98.6	97.2
2010	93.4	99.6	98.1	95.0
2011	96.8	99.5	99.4	97.5
2012	93.6	99.5	99.4	94.6
2013	74.9	91.0	99.1	81.5
2014	89.4	99.4	99.5	90.2
2015	93.7	98.4	99.1	94.9
2016	84.4	97.9	99.2	85.9

*: for each year, % of pixels having at least 45 of a possible 92 observations during June–August and at least 10 observations in each month

^: for each year, % of pixels having at least 10 of a possible 30 observations.

†: for each year, % of pixels having at least 11 of a possible 31 observations.

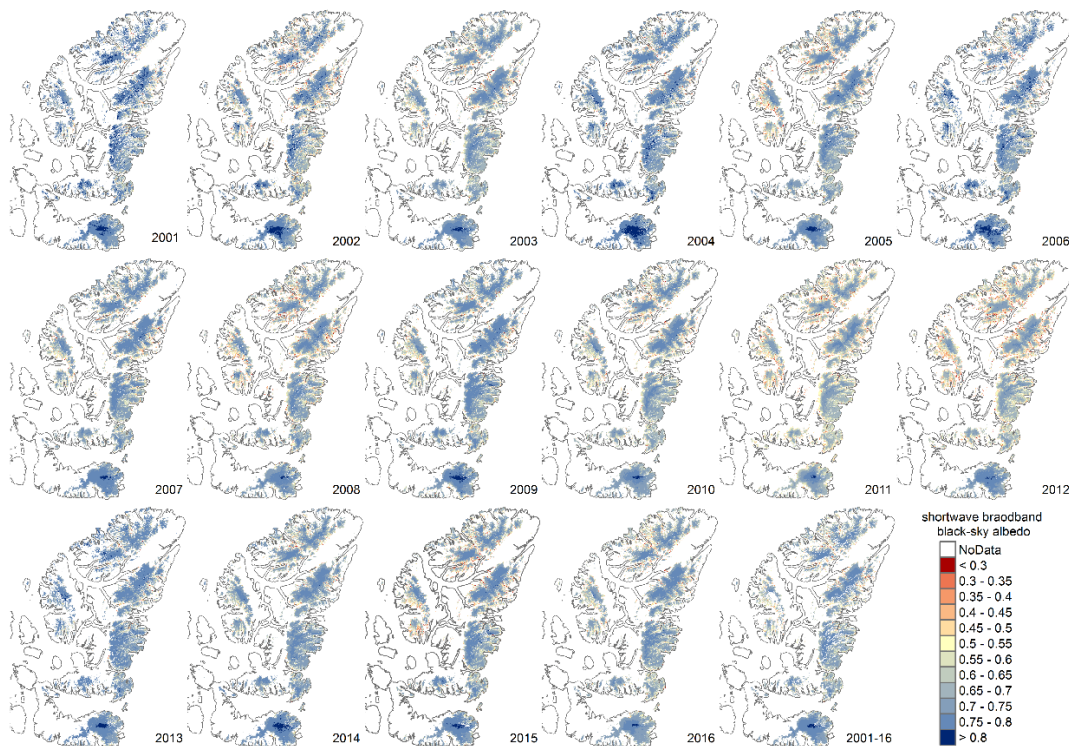


Figure S1: Mean June clear-sky shortwave broadband black-sky albedo for the QEI ice caps. White areas outside of the ice caps indicate non-glaciated ice cover.

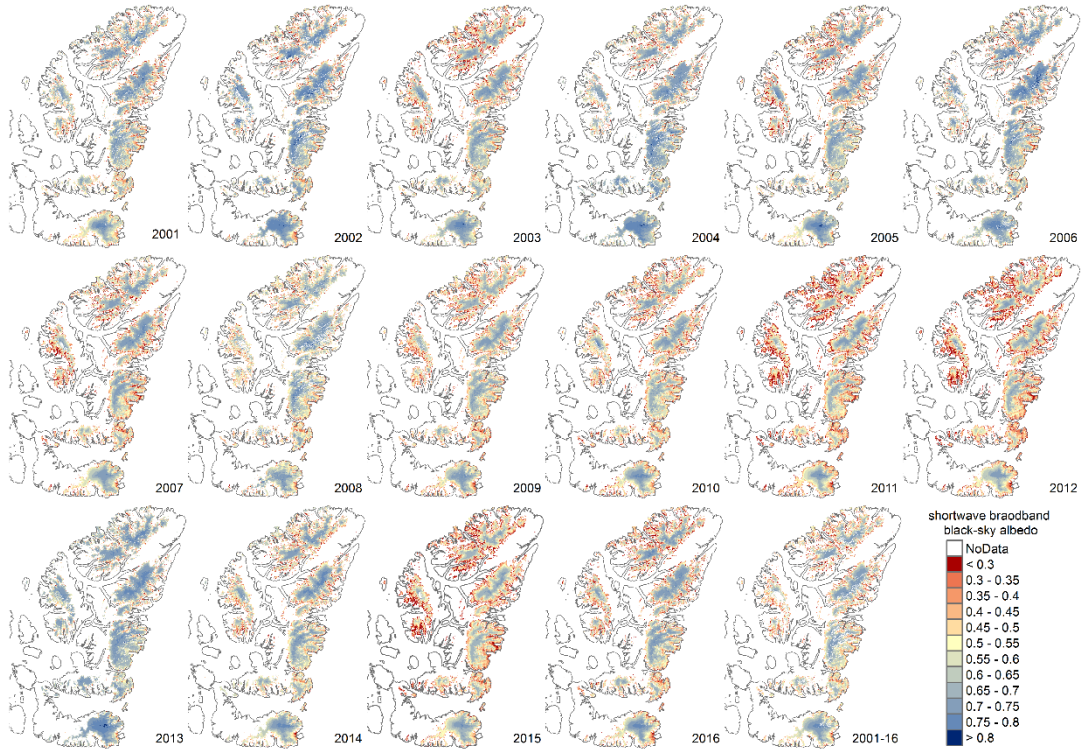


Figure S2: Mean July clear-sky shortwave broadband black-sky albedo for the QEI ice caps. White areas outside of the ice caps indicate non-glaciated ice cover.

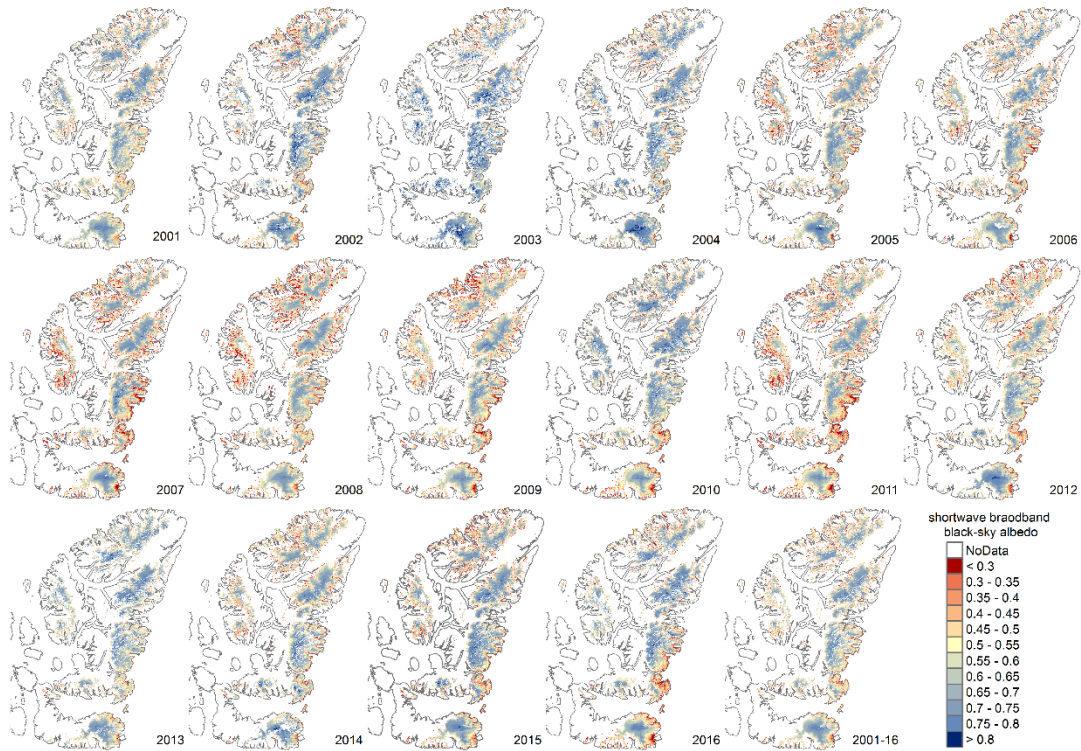


Figure S3: Mean August clear-sky shortwave broadband black-sky albedo for the QEI ice caps. White areas outside of the ice caps indicate non-glaciated ice cover.

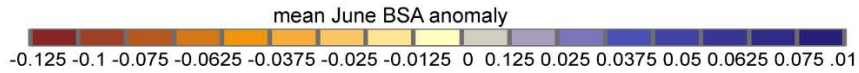
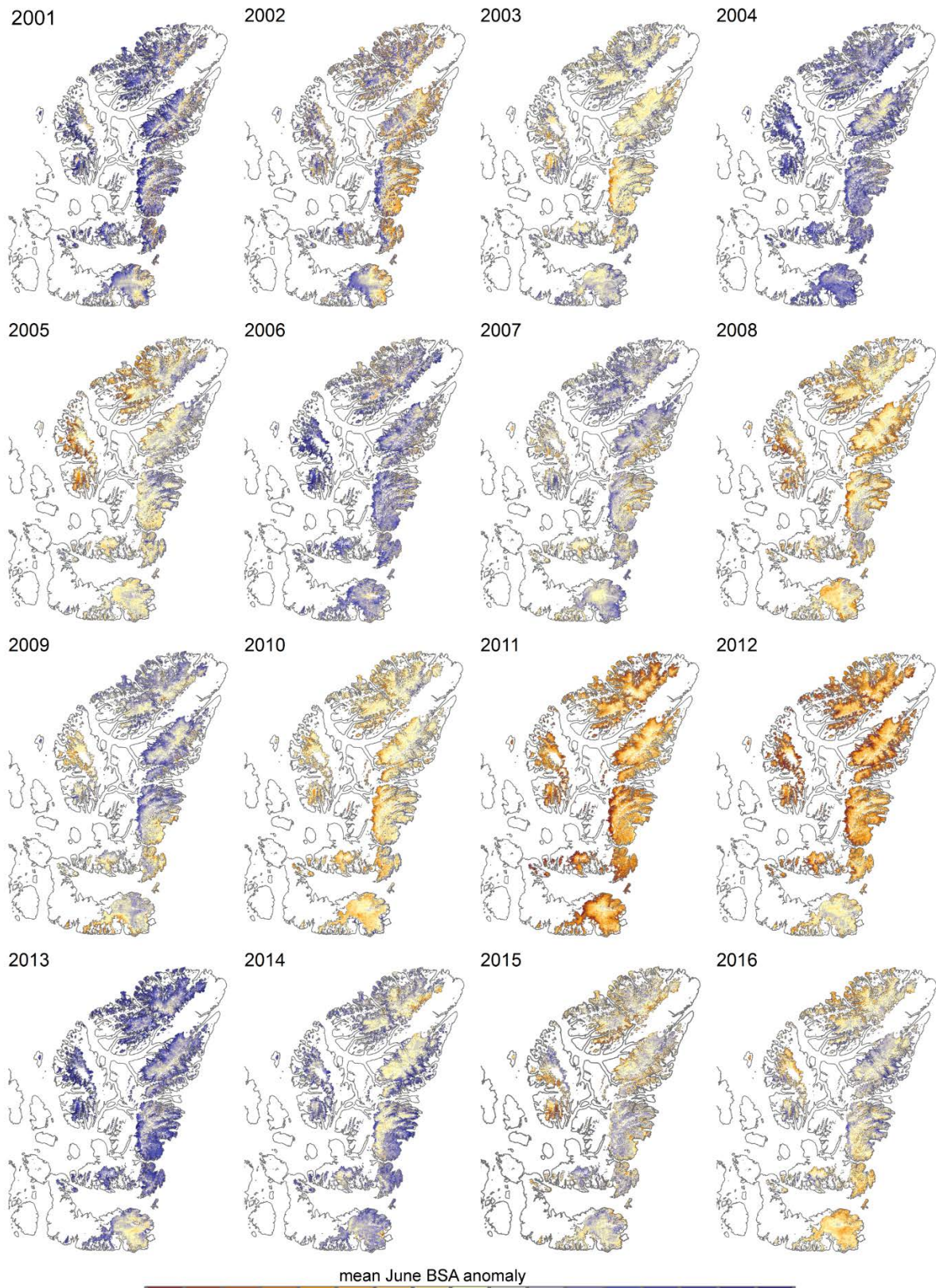


Figure S4: Mean June clear-sky BSA anomaly relative to the 2001–2016 mean for the QEI ice caps. White areas outside of the ice caps indicate non-glaciated ice cover.

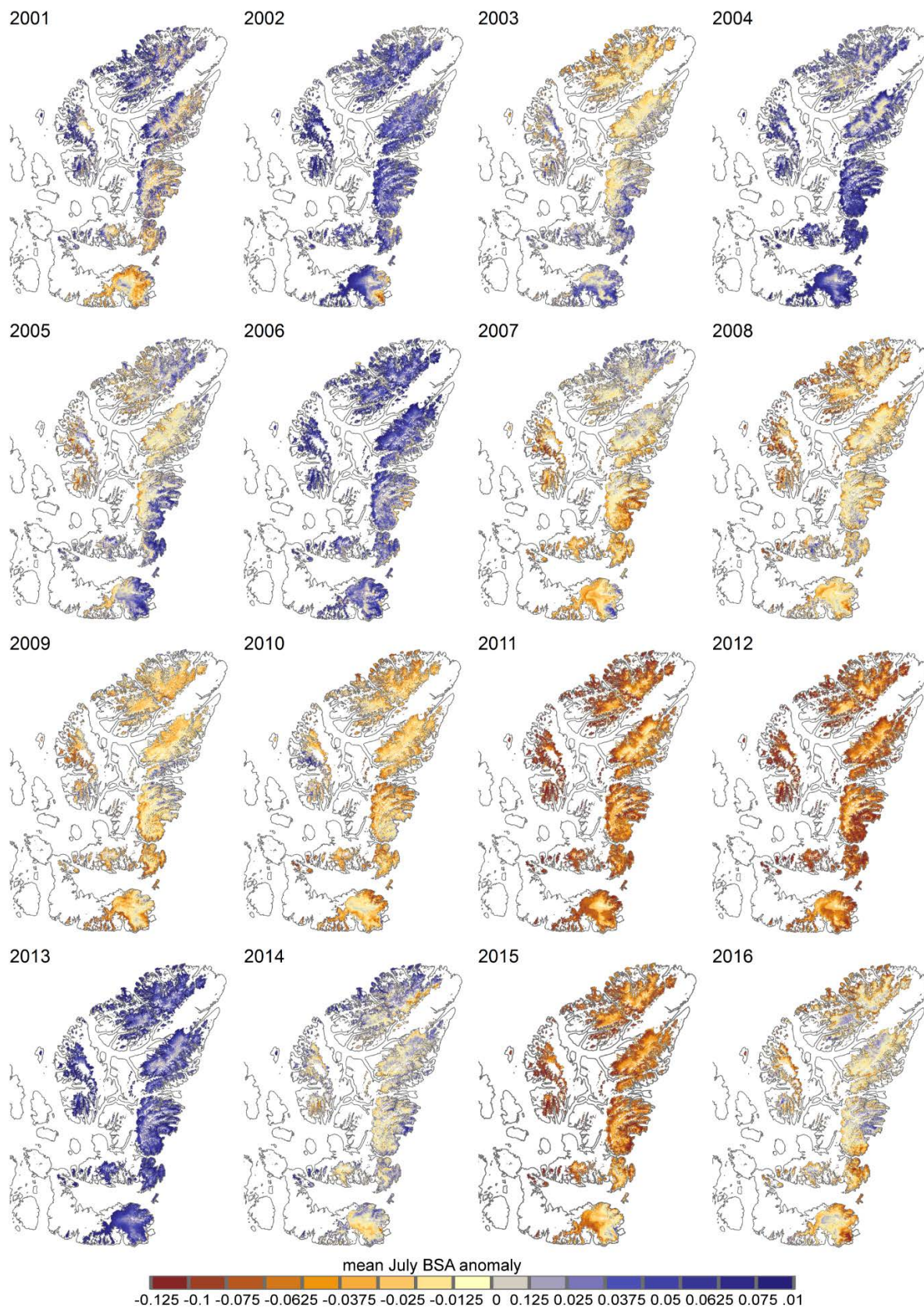


Figure S5: Mean July clear-sky BSA anomaly relative to the 2001–2016 mean for the QEI ice caps. White areas outside of the ice caps indicate non-glaciated ice cover.

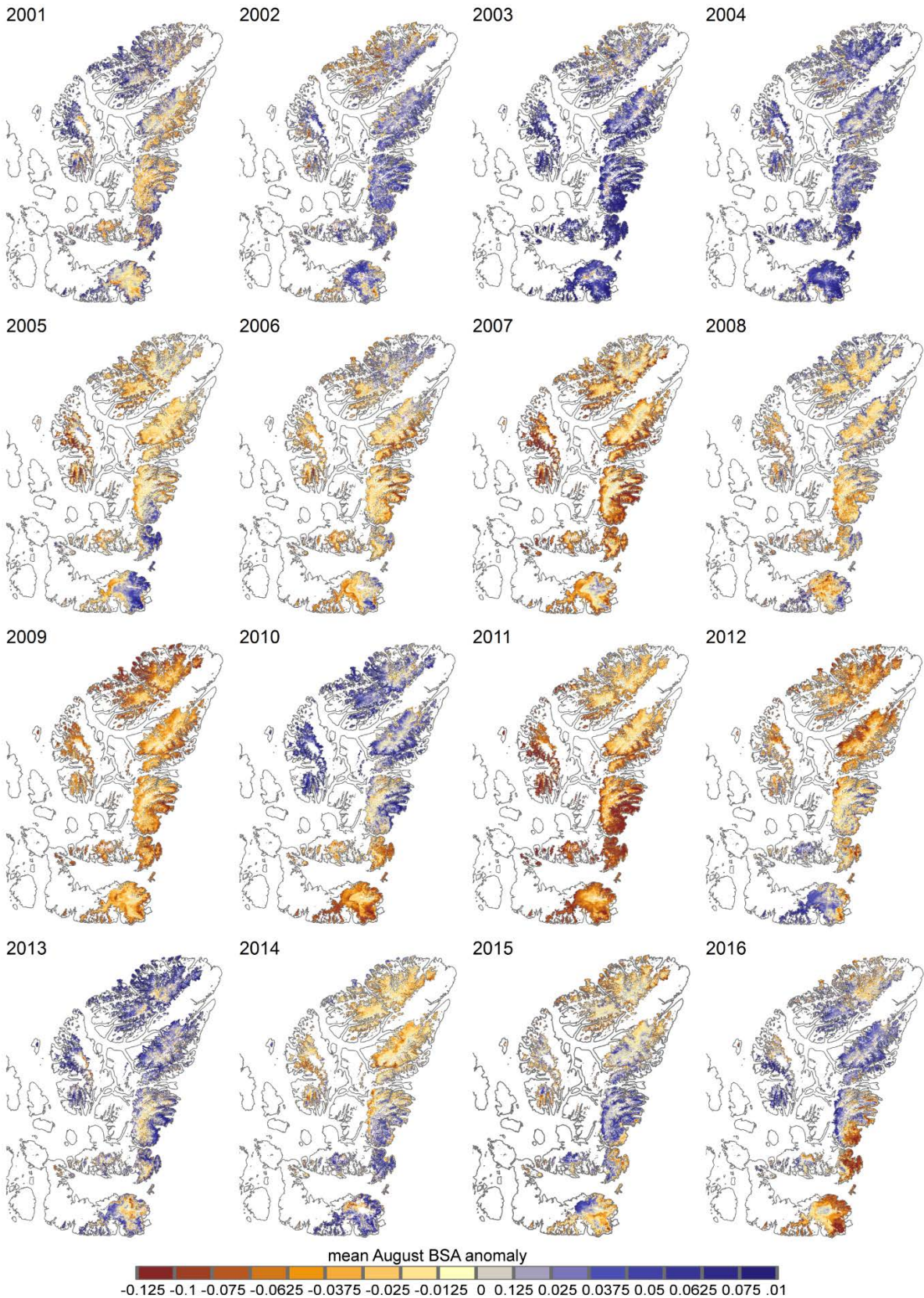


Figure S6: Mean August clear-sky BSA anomaly relative to the 2001–2016 mean for the QEI ice caps. White areas outside of the ice caps indicate non-glaciated ice cover.

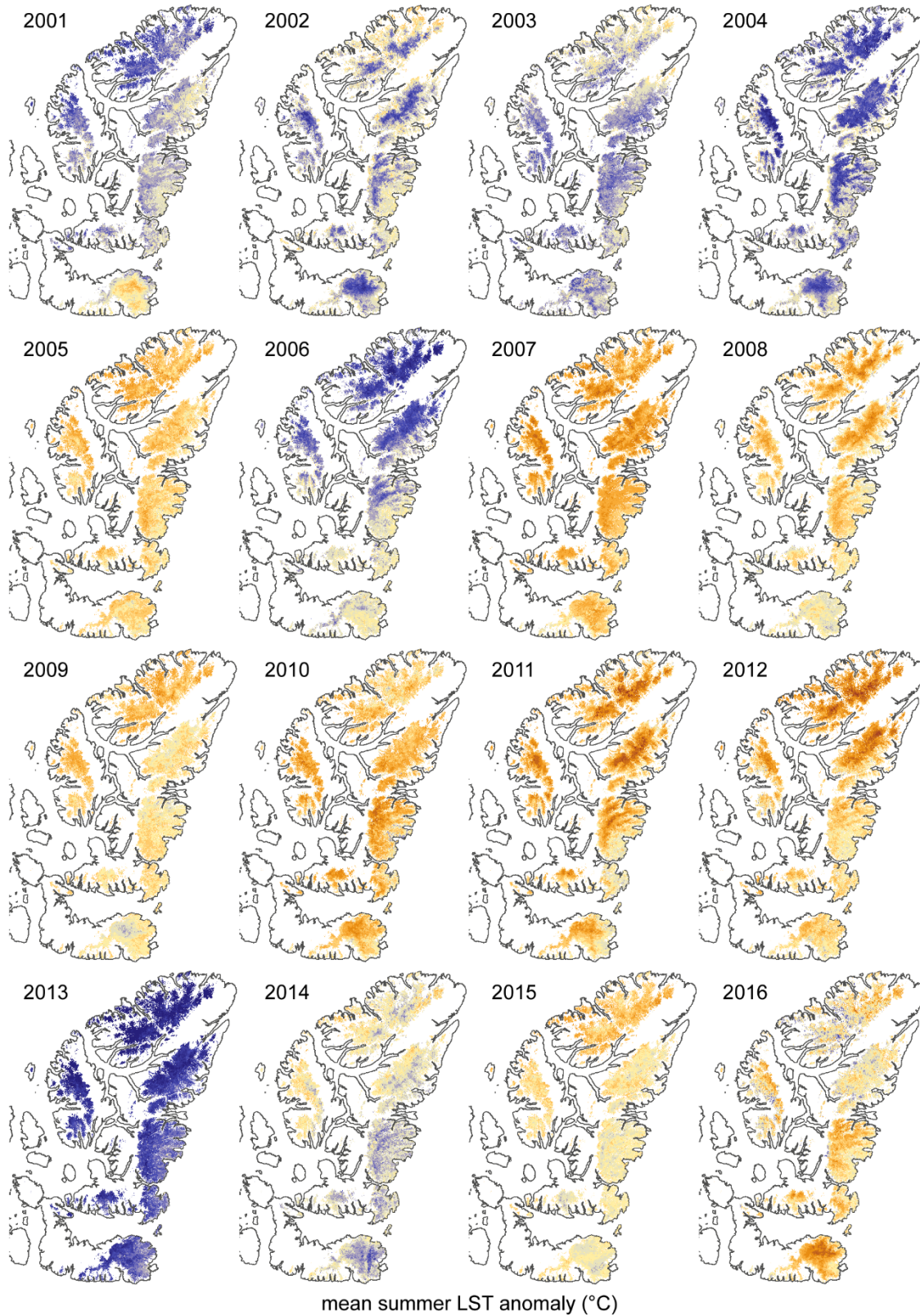


Figure S7: Mean summer (JJA) LST anomaly relative to the 2001–16 mean for the QEI ice caps. White areas outside of the ice caps indicate non-glaciated ice cover.