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Supplement of

Sensitivity of inverse glacial isostatic adjustment estimates over Antarctica

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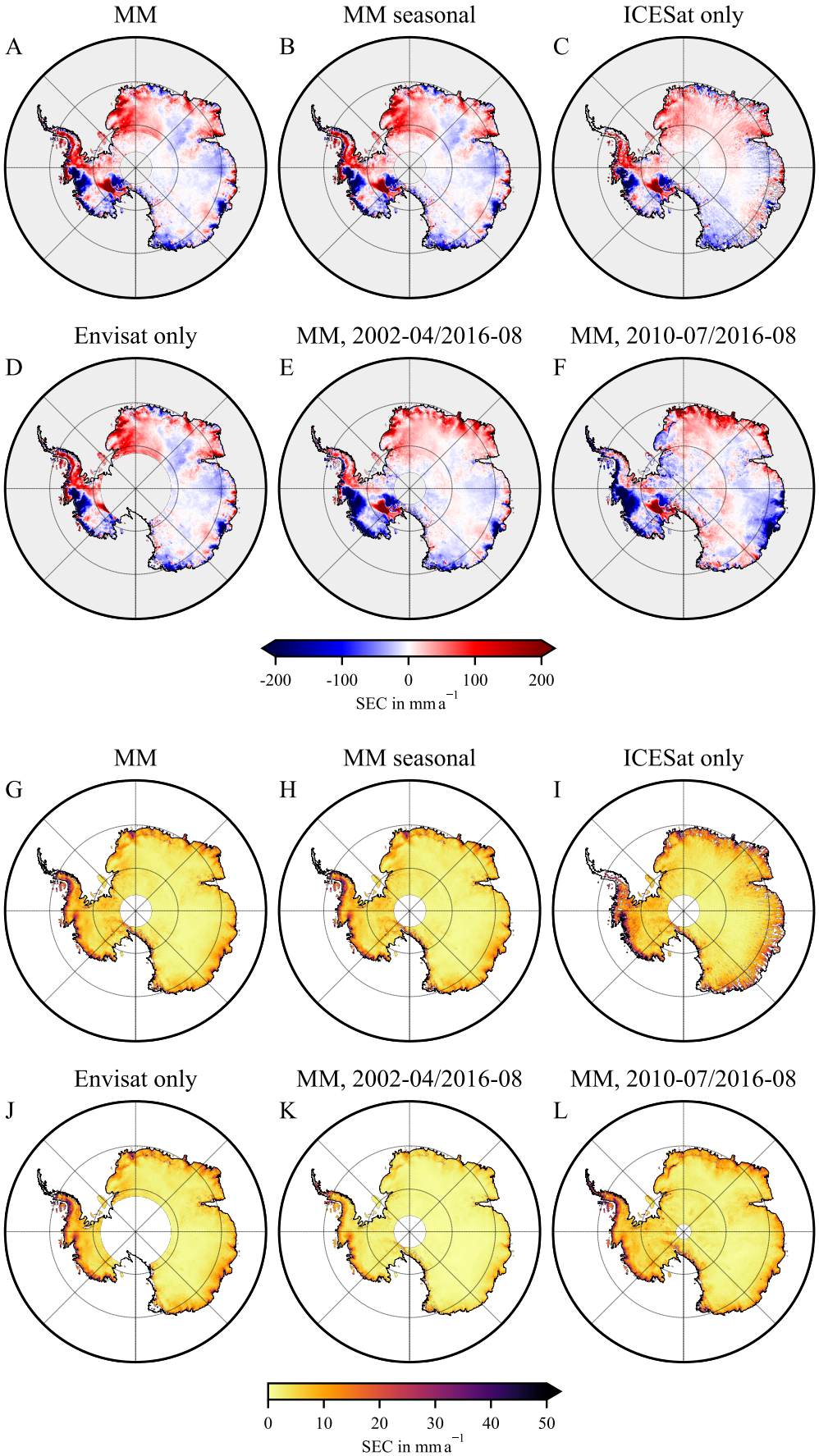

Figure S1: A–D: Estimated altimetry-derived surface elevation change (SEC) from Multi-Mission-Altimetry (MM) and analogous Single-Mission-Processing. Estimation period: 2003-03/2009-09. E, F: MM altimetry for periods specified in the title. G–L: Corresponding uncertainties to A–F from least-squares estimation.

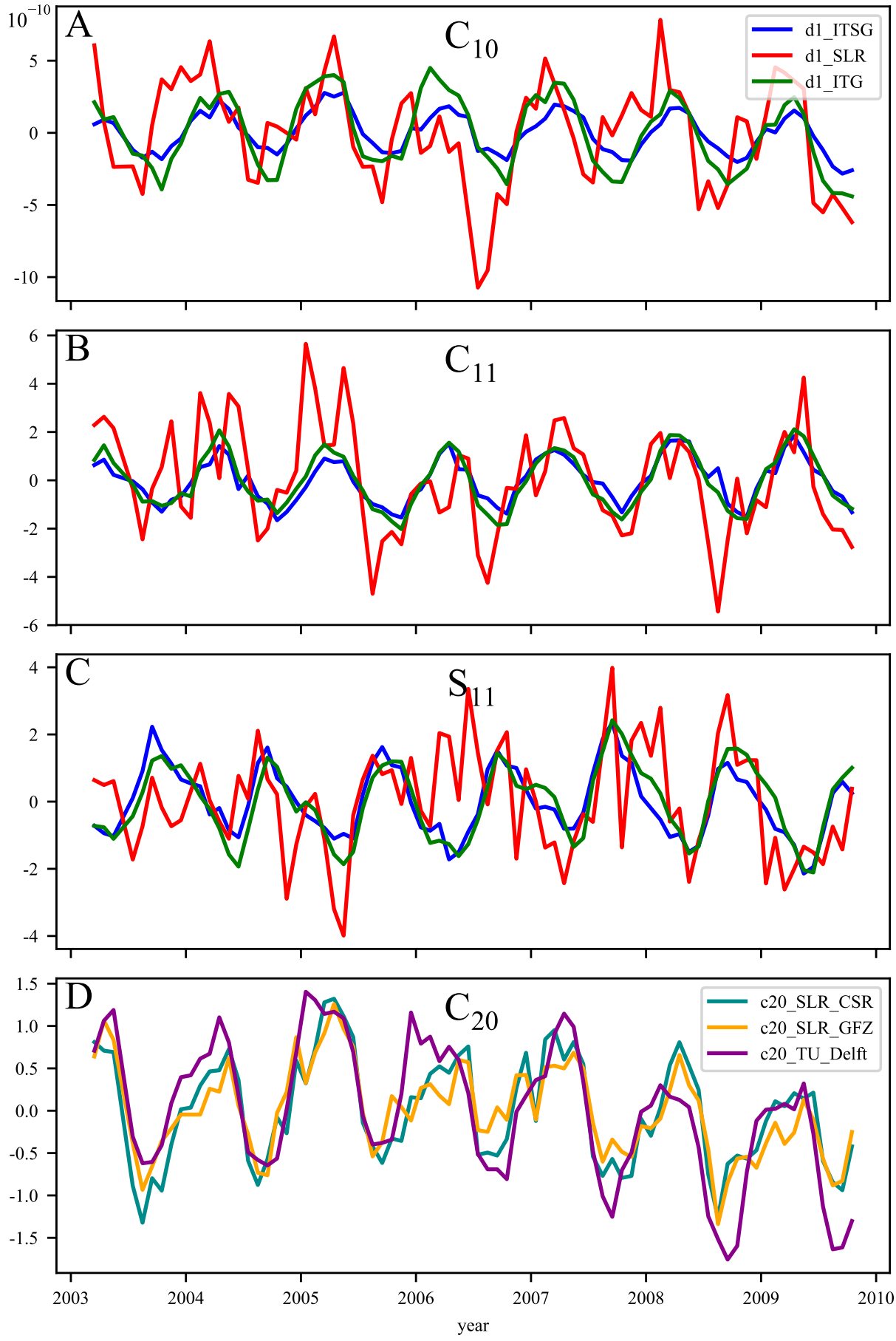

Figure S2: Degree-1 and C_{20} time series (2003-03/2009-09) of products used for replacement in GRACE gravity field solutions.

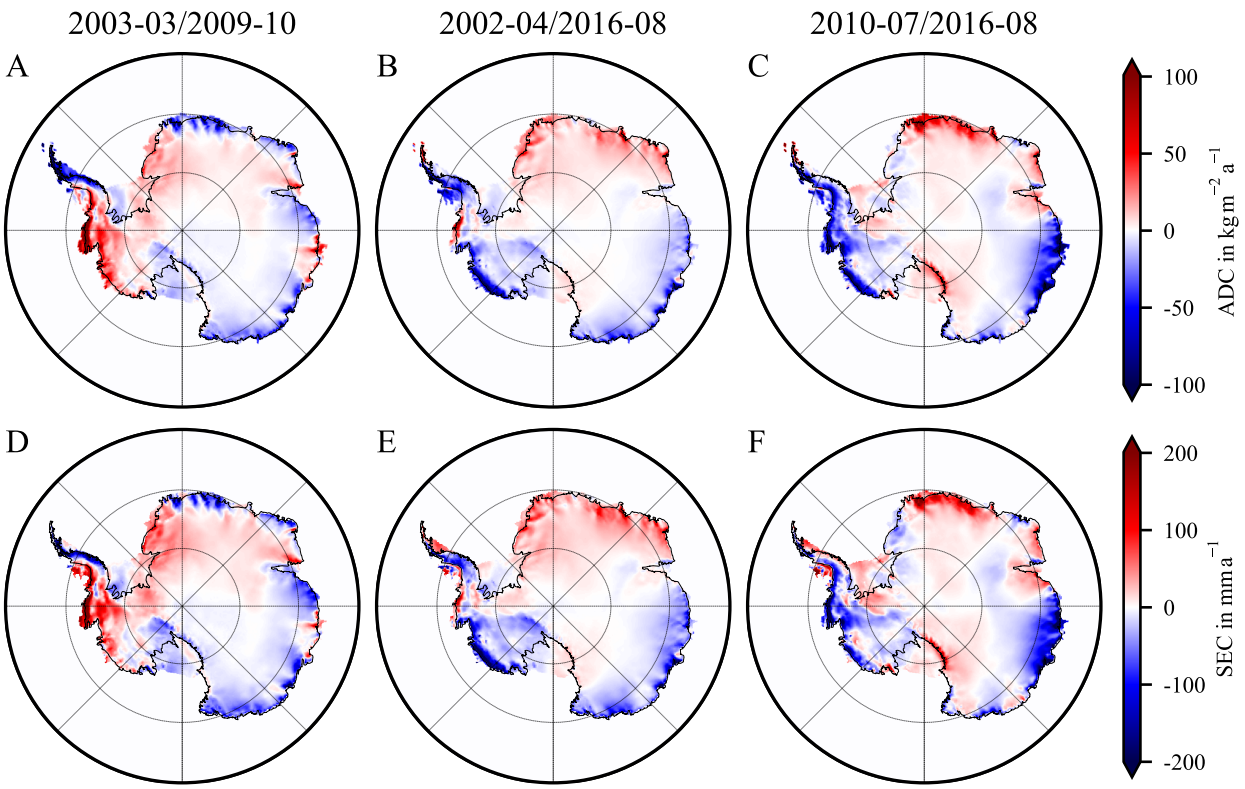

Figure S3: A–C: Estimated area-density change (ADC) of cumulated surface mass balance anomalies (cSMBA) and D–F: the firn densification model derived surface elevation change (SEC) for the used time periods.

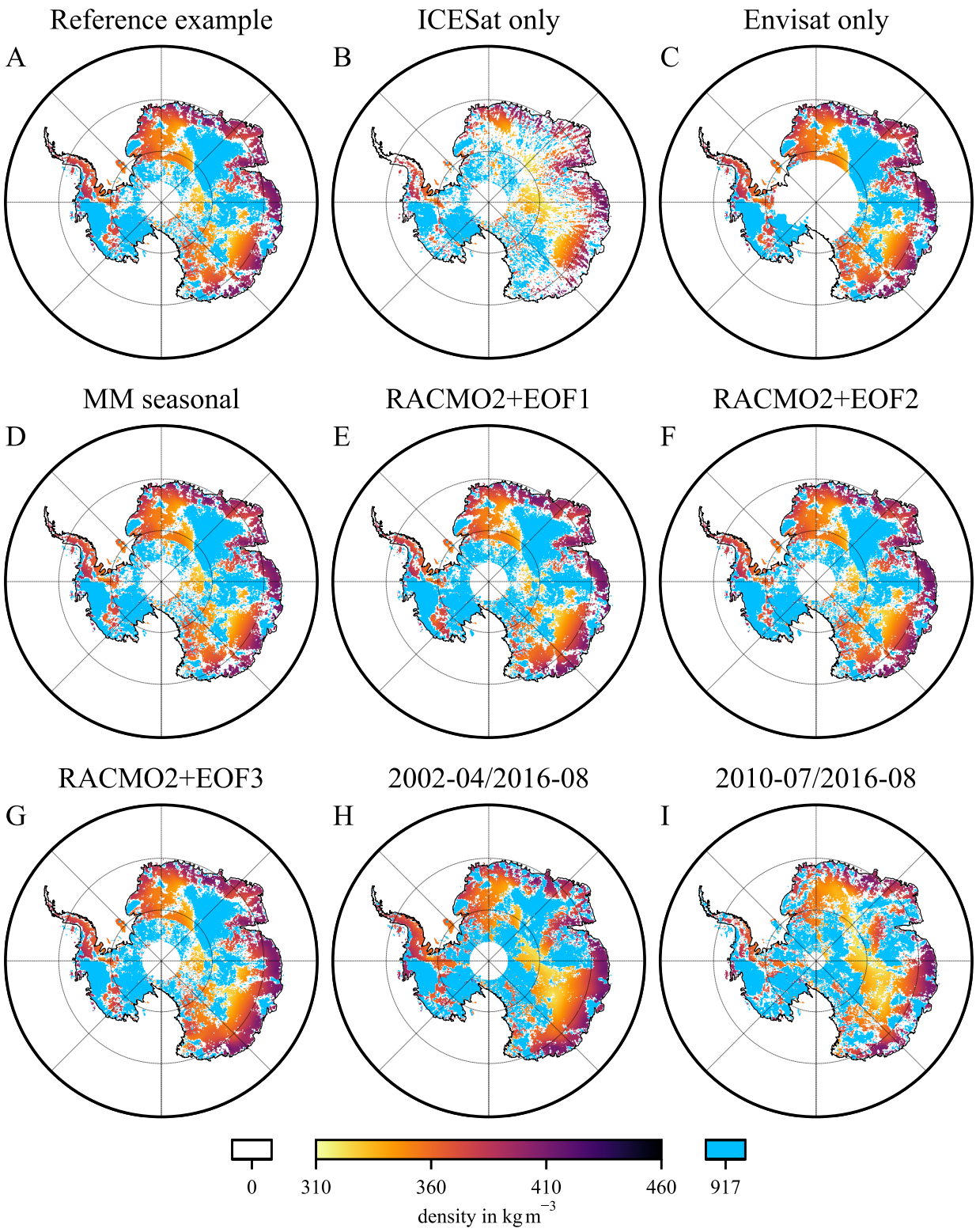

Figure S4: The density ρ_α as determined by Eq. 10 for the different sensitivity experiments (cf. subfigure captions and Table 1).

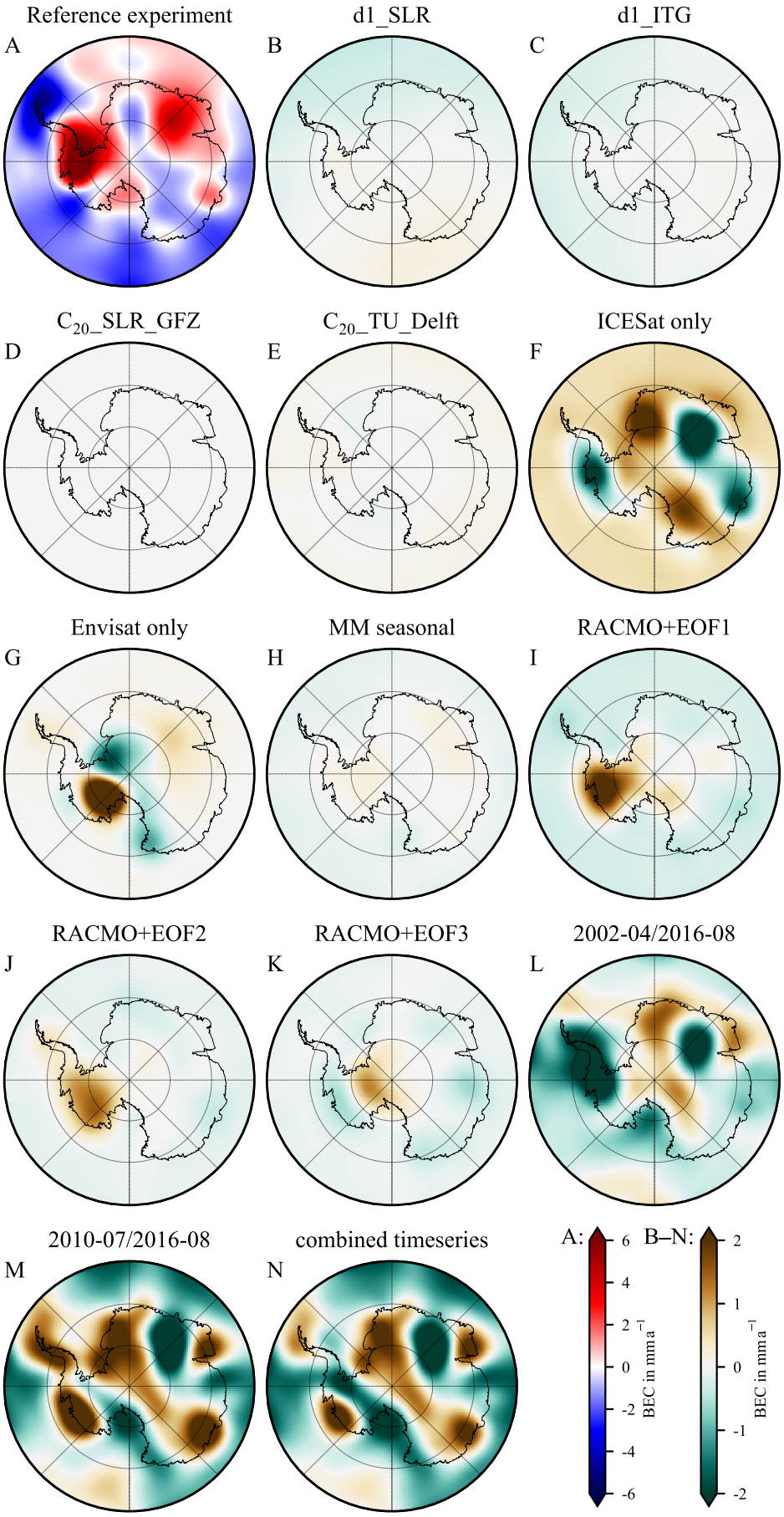

Figure S5: All GIA inverse estimates of bedrock elevation change (BEC) with LPZ-based bias correction obtained in the sensitivity analysis (Sect. 4.2). Subplots B–N show differences with regard to the reference experiment (A).

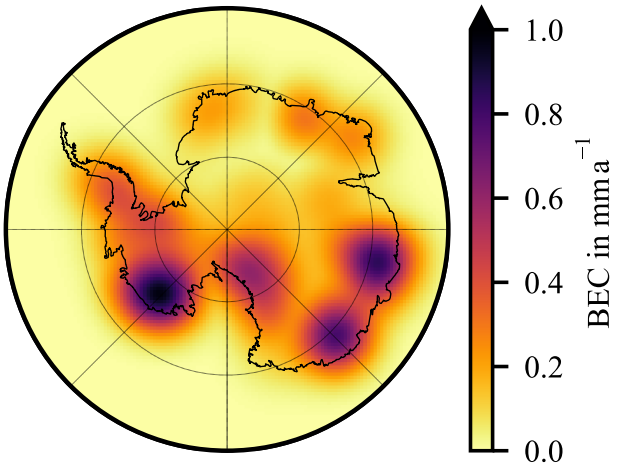

Figure S6: The single standard deviation of the 32 biased estimates of GIA-induced bedrock elevation change (BEC) from propagating the trend differences between RACMO2.3p2 and MAR. The mass change integrated for AIS is 19 Gt a^{-1}.

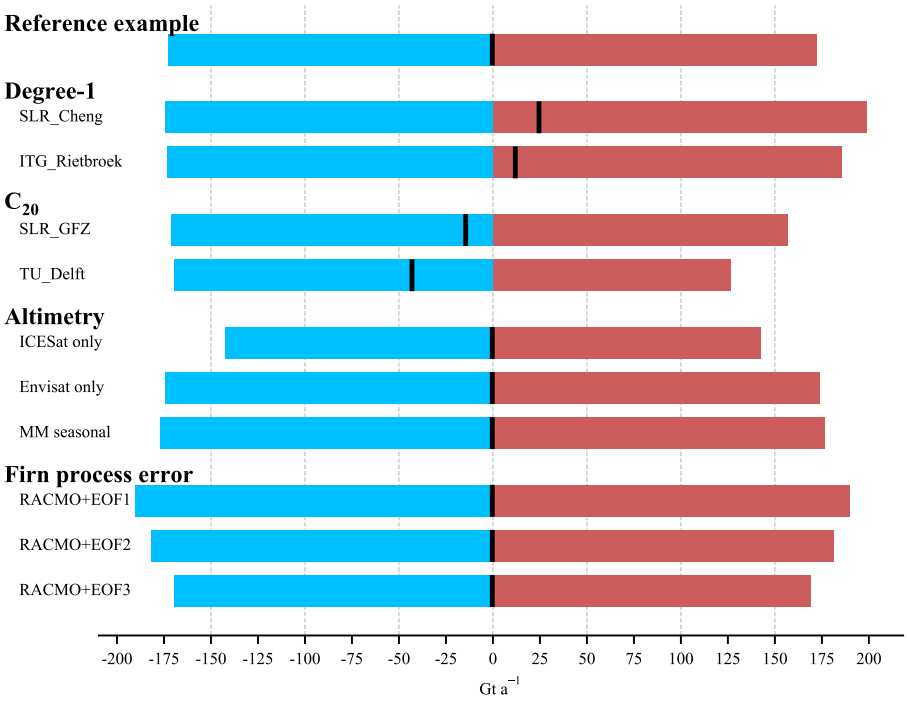

Figure S7: Biased mass change results of the sensitivity study (cf. Fig. 6). Biased total-mass change (solid black lines) is separated into biased GIA-related mass change (red) and ice-mass change (blue). Note that total-mass change of 0 Gt a^{-1} arises coincidentally by used input data.