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*Geophysical Research Letters*

Supporting Information for

## **Constraining the mass balance of East Antarctica**

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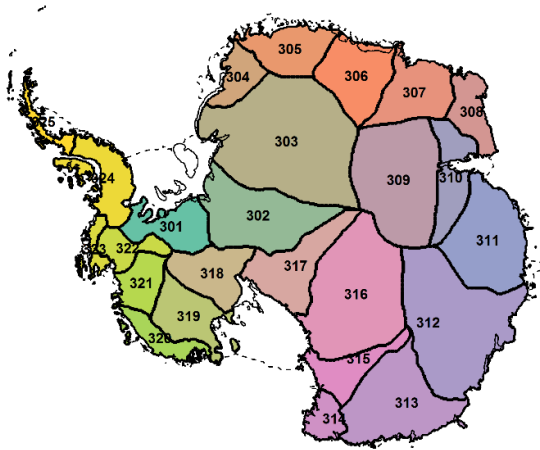
\* Correspondence to [alba.martin@bristol.ac.uk](mailto:alba.martin@bristol.ac.uk)

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Figures S1 to S5

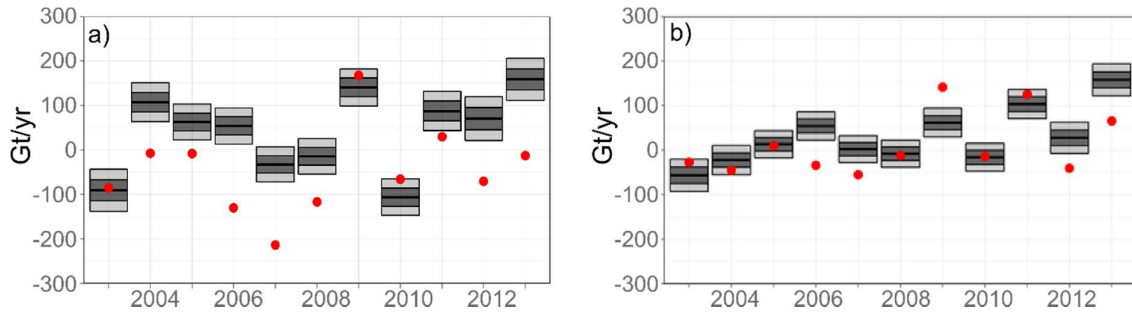
### **Introduction**

This supplementary material provides supporting figures (Figures S1 to S5) to the main text. Figure S1 shows the basin definitions for Antarctica. Figure S2 shows time series of SMB anomalies from E I compared to RACMO2.3 for East Antarctica and East Antarctica minus Victoria-Wilkes Land. Figure S3 shows the time series of SMB anomalies for Victoria-Wilkes Land (basins 11, 12, 13) compared to RACMO2.3 and RACMO2.4. Figure S4 shows the mean elevation and mass change for Antarctica measured from different satellite data sets a) ICESat, b) Envisat, c) GRACE and d) Cryosat-2. Figure S5 shows the mean GIA solution computed from different up-to-date available solutions for Antarctica and the required GIA to bring GRACE measurements to agree with the mass trends estimated in Zwally et al. (2015).



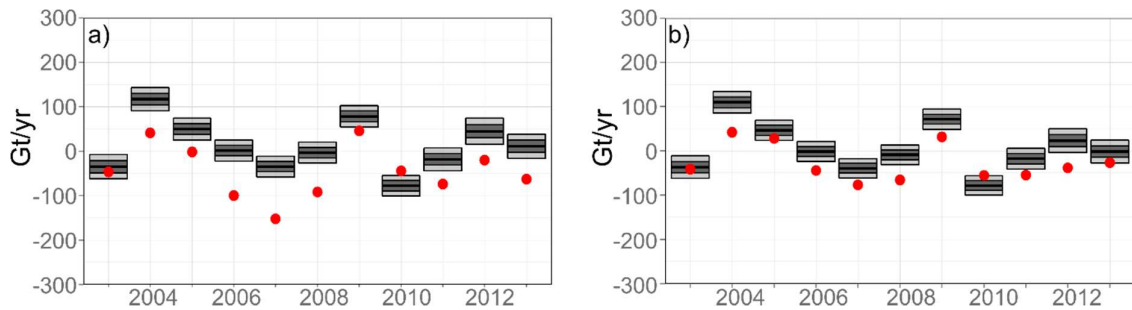
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28 *Fig S1. Basin definitions for Antarctica based on Sasgen et al. (2013)*

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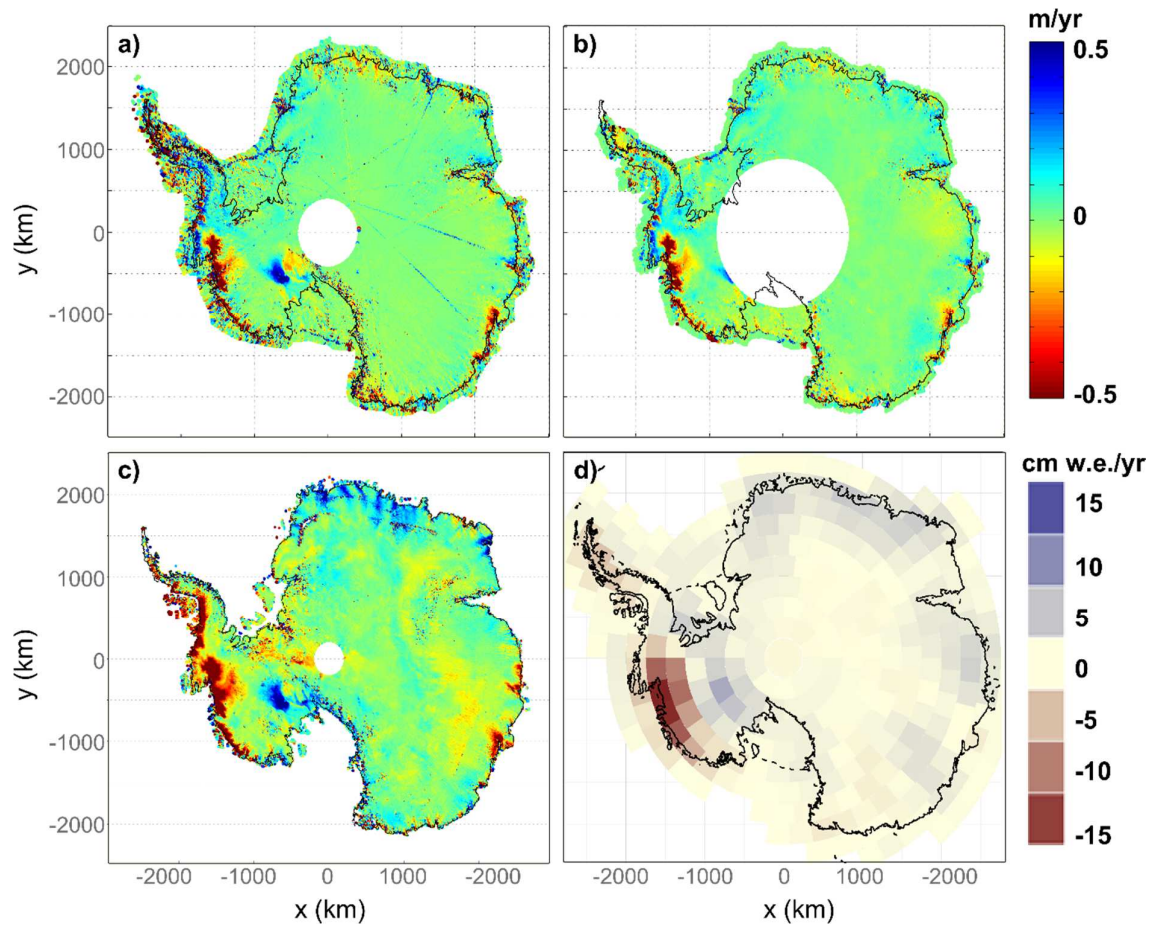
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34 *Antarctica and b) East Antarctica excluding basins in Victoria-Wilkes Land (11, 12 and 13).*

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37 *Figure S3 Time series of SMB anomalies for Victoria-Wilkes Land (basins 11, 12, 13) from E I (black bars) compared to the*  
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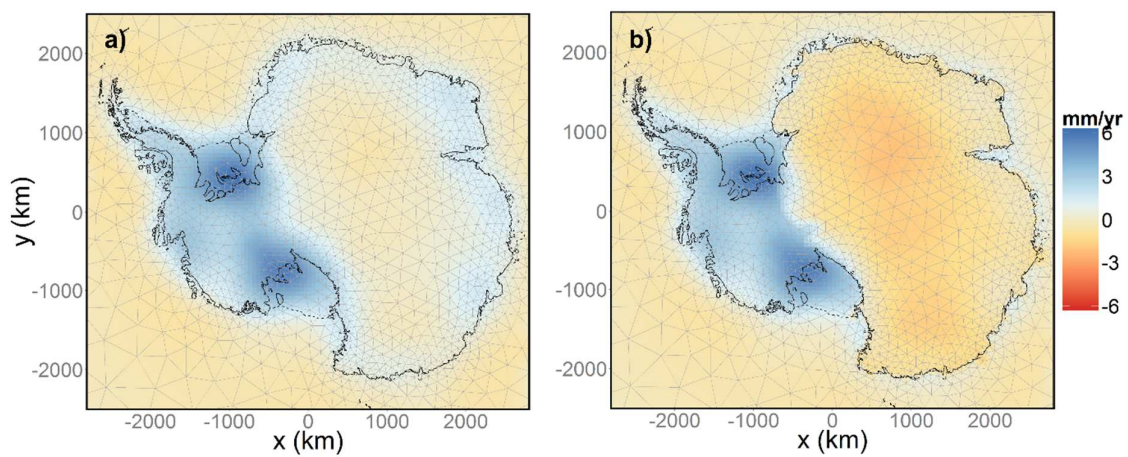


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41 *Figure S4. Mean elevation change and mass change measured by a) ICESat, b) Envisat (referred to the period 2003–2009),*  
 42 *c) Cryosat-2 (for the period 2010–2013) and d) GRACE (for the period 2003–2013).*

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46 *Figure S5. a) GIA solution for Antarctica computed as the mean of the most up to date GIA models available in the literature*  
 47 *(I105R2, W12, ICE6G, A13, G14, R09, Rates). b) GIA solution after subtracting 1.6 mm/yr in EAIS as proposed by Zwally et al.*  
 48 *(2015) to reconcile their mass trends with GRACE measurements.*