



Supplement of

Satellite-derived steric height in the Southern Ocean: trends, variability, and climate drivers

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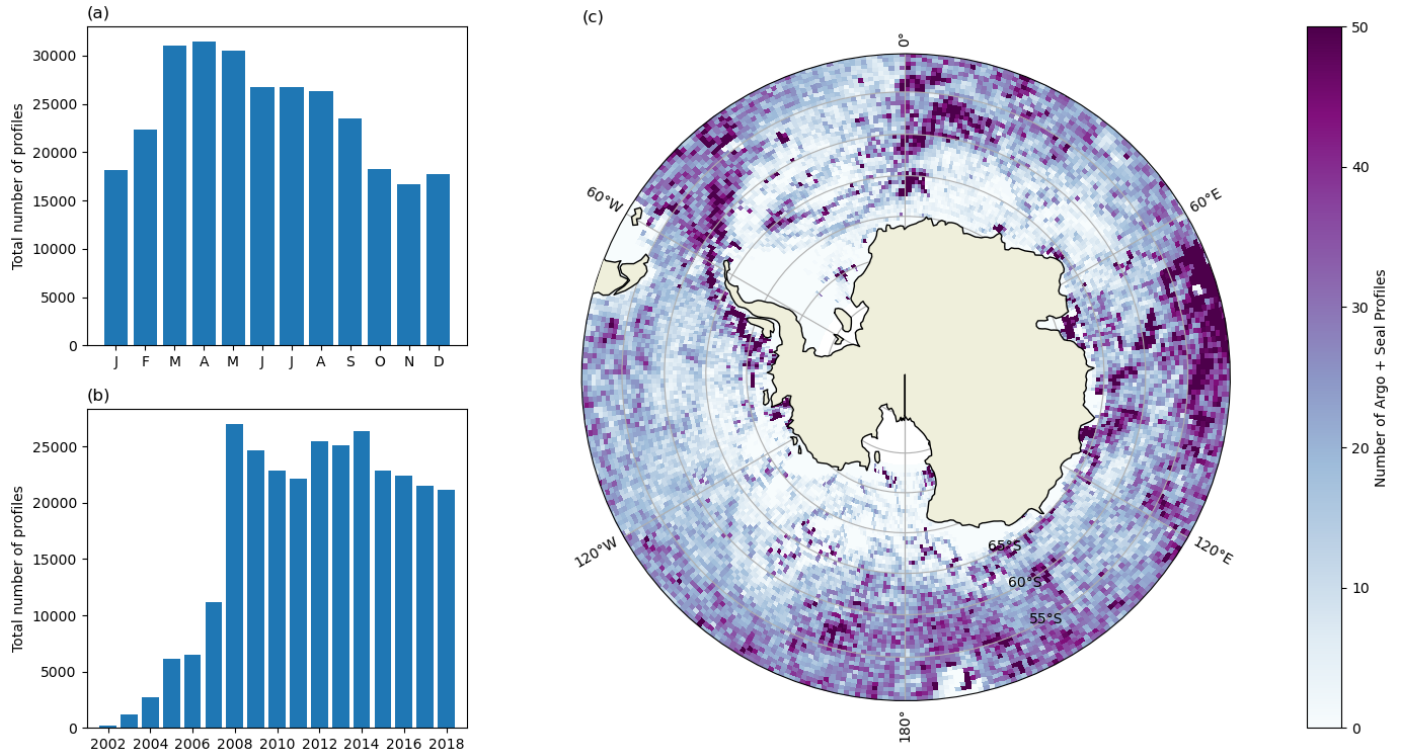


Figure S1: (a) Monthly distribution of Argo and Seals profiles. (b) Yearly distribution of Argo and Seals profiles. (c) Geographical distribution of Argo and Seals profiles.

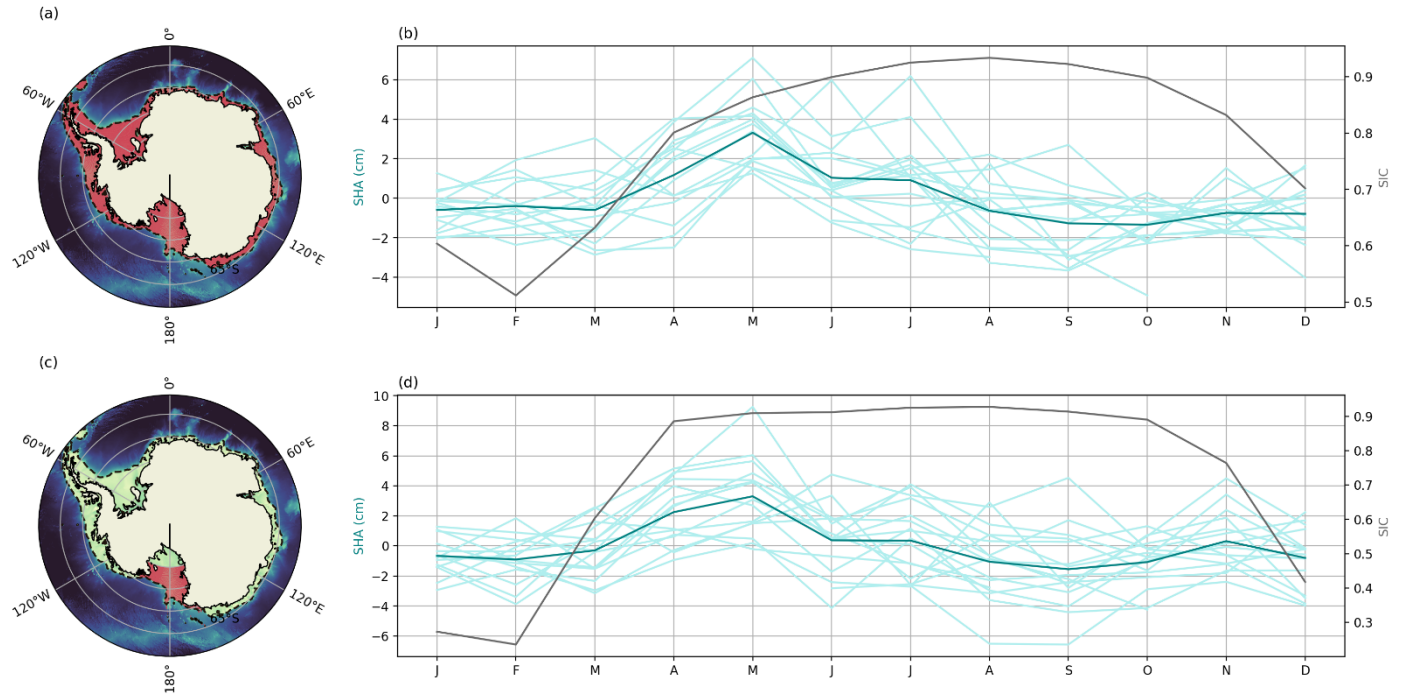


Figure S2: (a) The continental shelf region and (b) the yearly steric height anomaly (SHA) in each month averaged across the shelf region. Light colours show individual years and the dark line shows the climatology. The grey line shows the sea ice concentration (SIC). (c), (d) as for (a), (b) but restricted to the Ross Sea shelf region (South of the 1000m isobath).

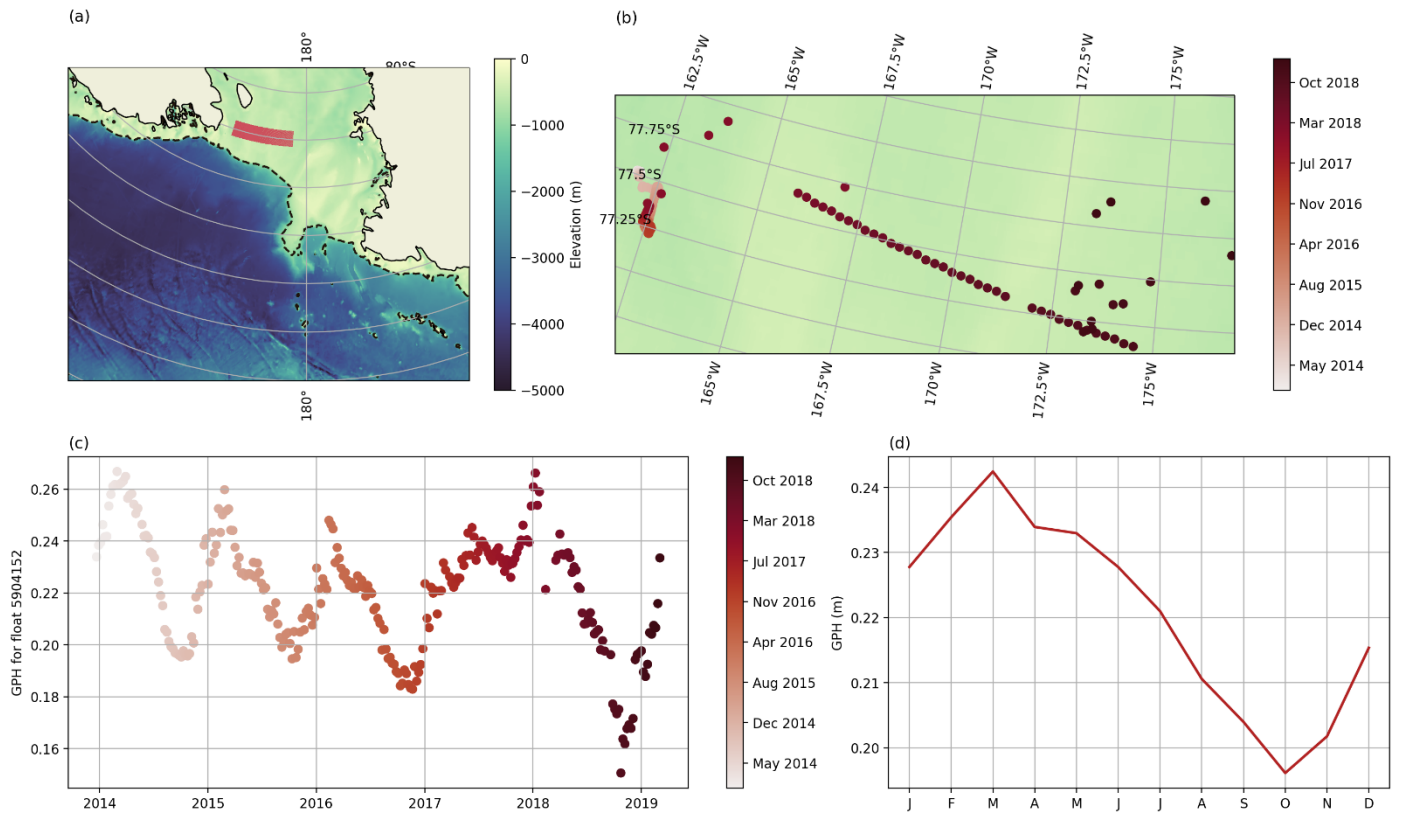


Figure S3: (a) The Ross Sea showing the total area covered by Argo float 5904152 in red. The 1000m isobath is shown (black, dashed). (b) The locations of individual Argo profiles within the region shown in (a). Point colour indicates the date the profile was recorded (darker is more recent). Points in a straight line show where profiles recorded beneath the ice have had their location computed by interpolation. (c) Time series of the geopotential height (GPH) for float 5904152. (d) Climatology of GPH for float 5904152.

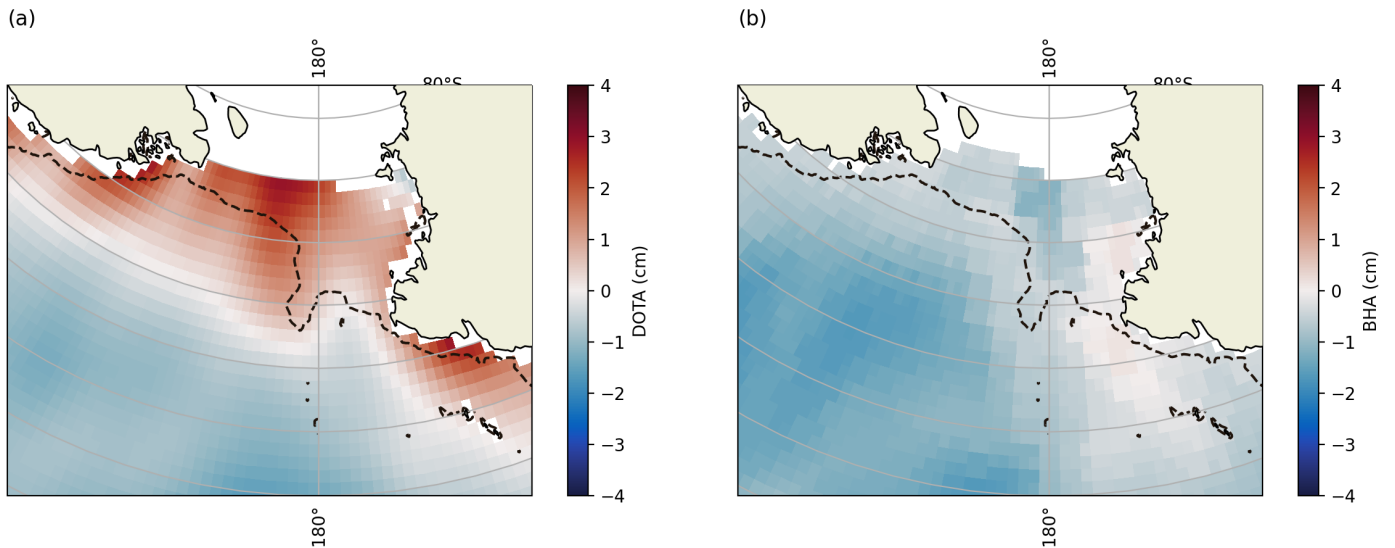


Figure S4: (a) Dynamic Ocean Topography anomaly (DOTA) and (b) barystatic height anomaly (BHA) in the Ross Sea during austral autumn (April – June).