

# Supplementary Information for Simulated Antarctic iceberg melting occurs primarily within the Southern Ocean mixed layer

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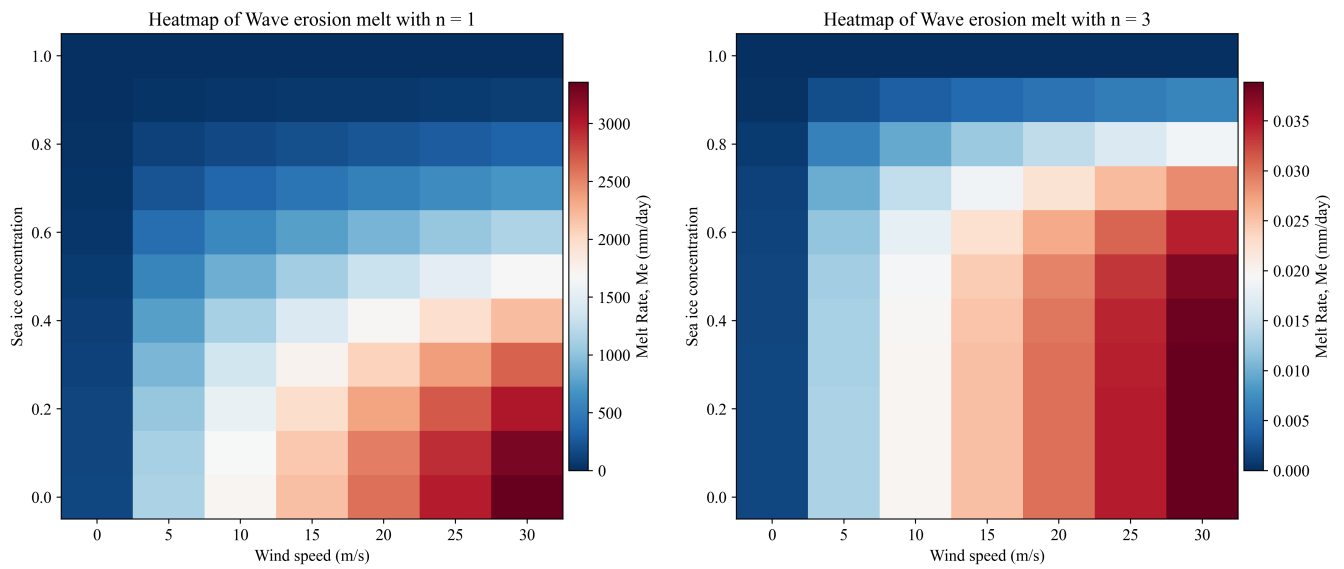
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## Contents of this file

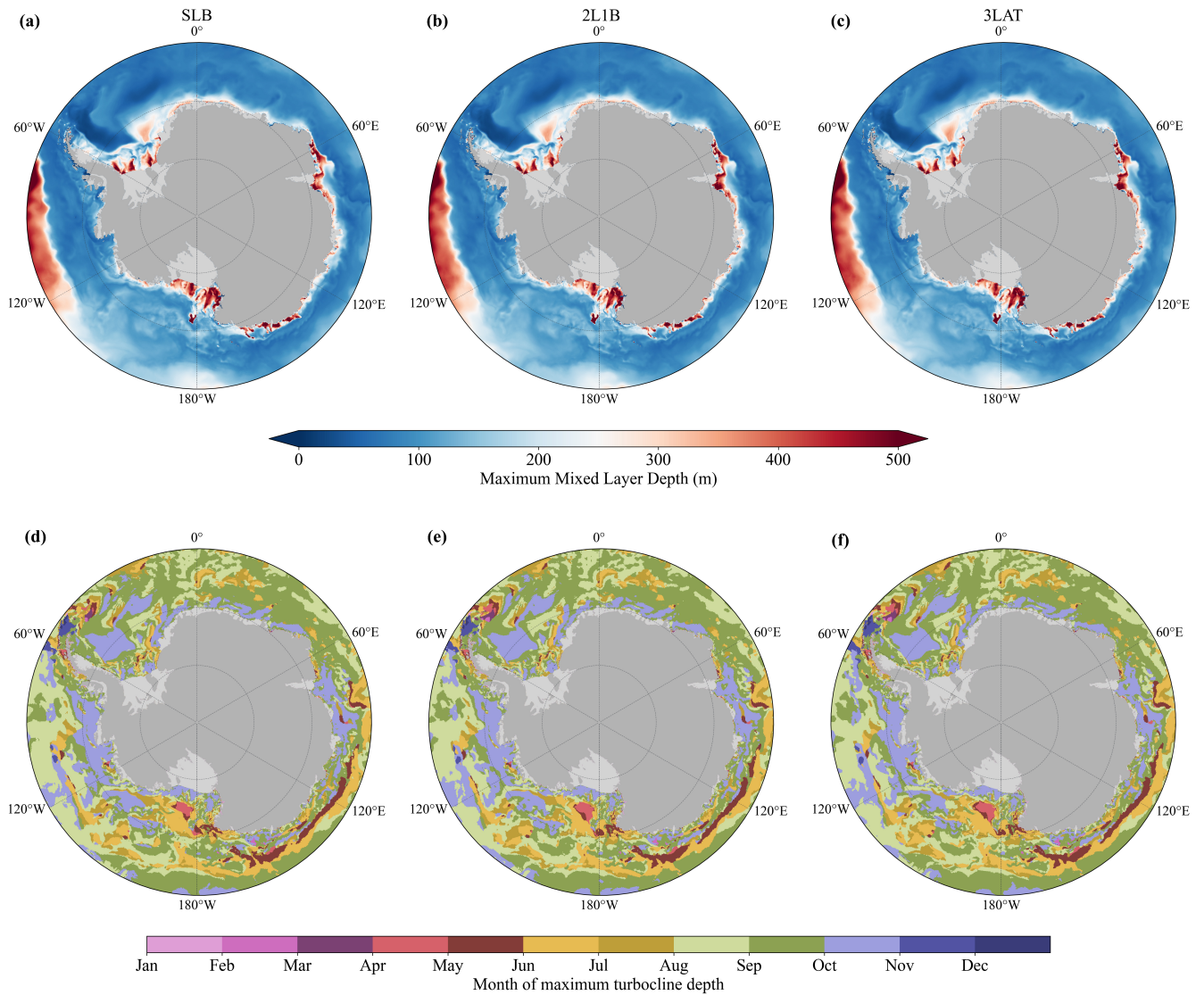
1. Figures S1 to S4

## Introduction

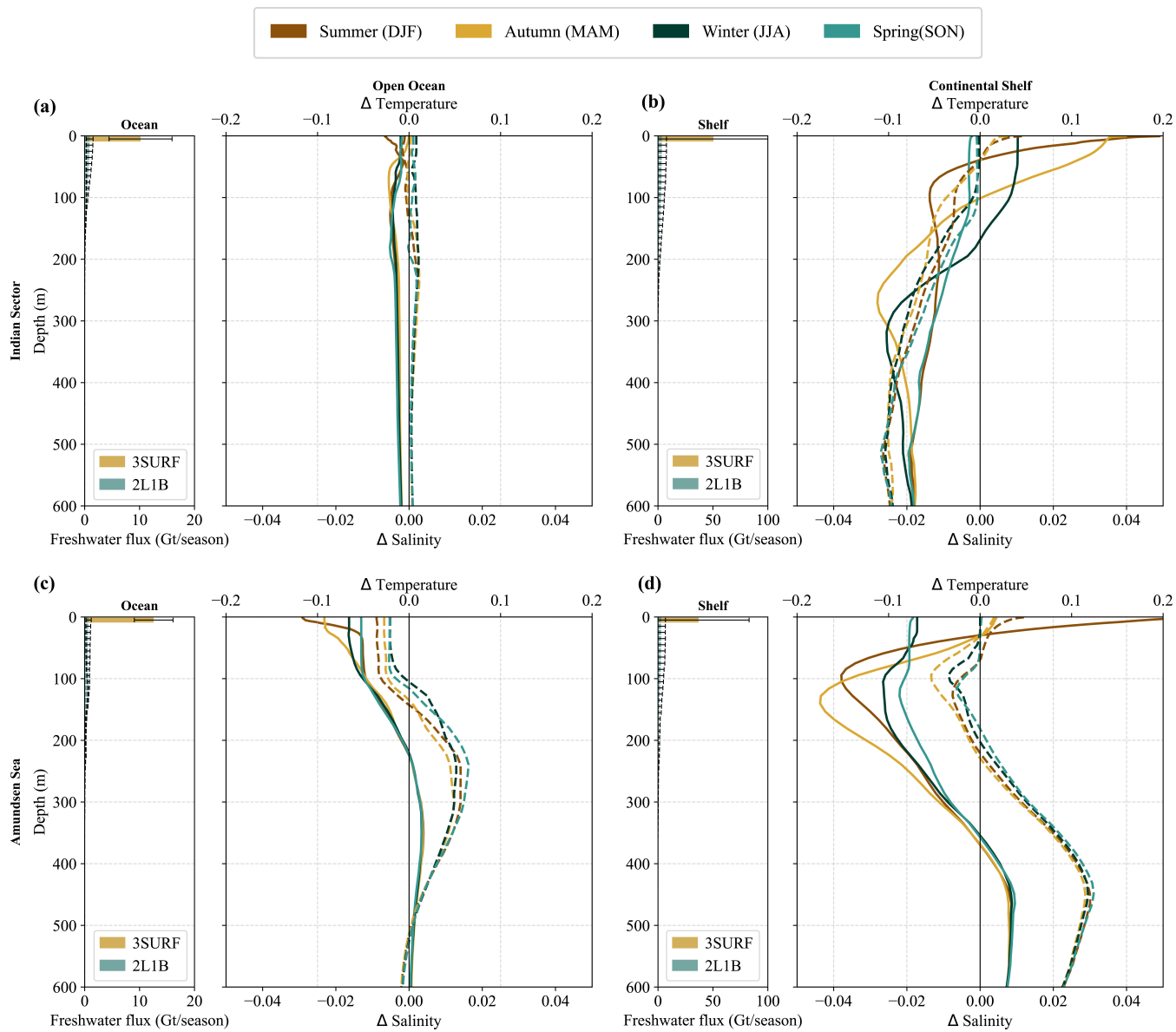
The Supporting Information contains 4 figures supporting the results presented in the main text. Each figure has its own  
5 caption describing its contents.



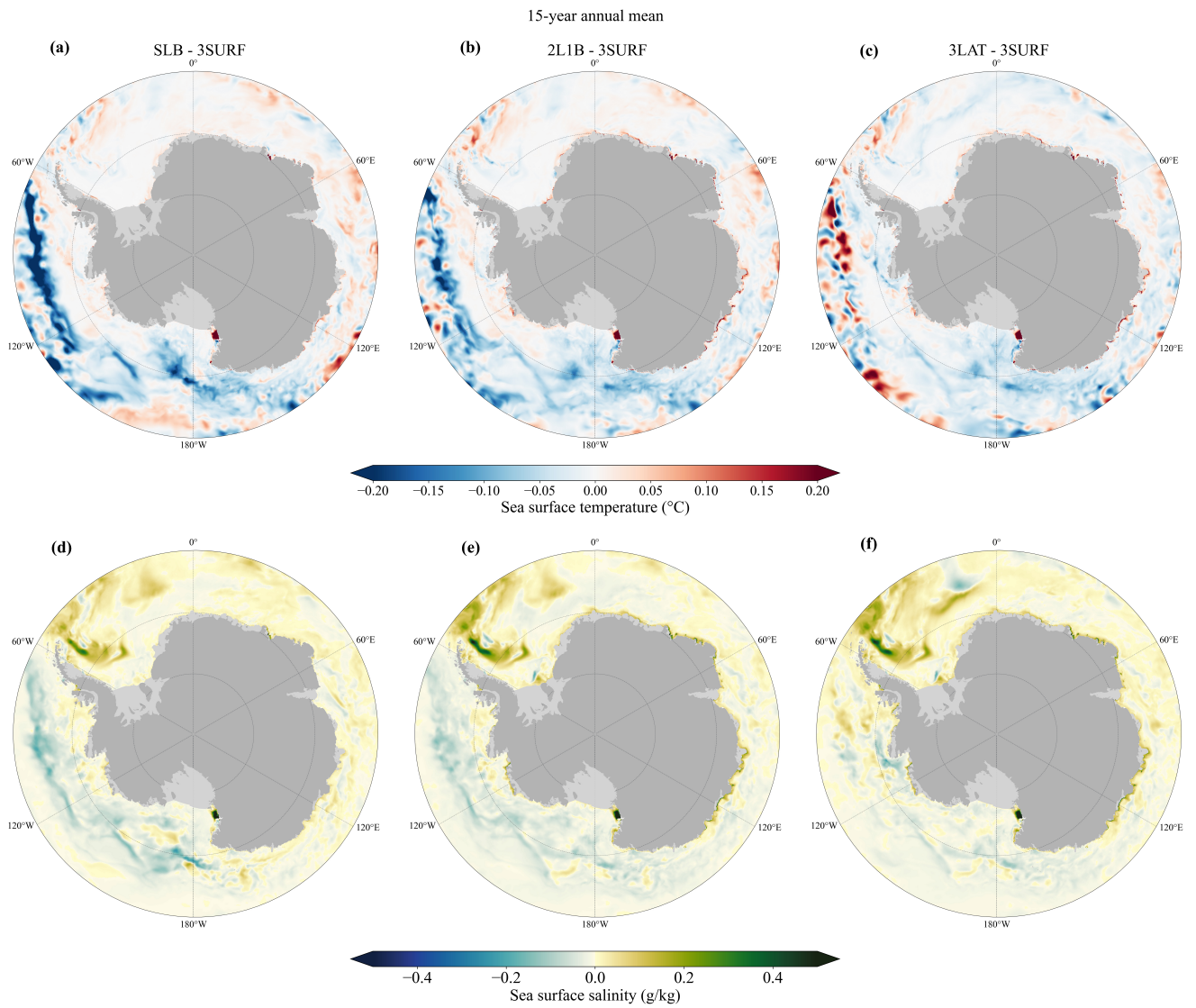
**Figure S1.** Wave-induced ablation as a function of wind speed and sea-ice concentration for (a)  $n = 1$  and (b)  $n = 3$  in Eq. (3) of the main article.



**Figure S2.** Spatial distribution of the 15-year mean annual maximum mixing layer depth (m) and the corresponding month of occurrence for (a,d) SLB, (b,e) 2L1B and (c,f) 3LAT.



**Figure S3.** 15-year seasonal mean temperature and salinity profiles obtained from the difference between the 2L1B and 3SURF experiments (2L1B - 3SURF) over the Antarctic continental shelf and offshore in (a, b) the Indian and (c, d) Amundsen sectors. Temperature is shown with dashed lines and salinity with solid lines. Insets show the corresponding freshwater flux (Gt per season) released over each domain (continental shelf or open ocean) for the 2L1B and 3SURF experiments.



**Figure S4.** Distribution of 15-year mean differences in (a-c) sea surface temperature and (d-f) sea surface salinity for the SLB, 2L1B, and 3LAT experiments relative to 3SURF.