



Corrigendum to **“PARASO, a circum-Antarctic fully coupled** **ice-sheet–ocean–sea-ice–atmosphere–land model involving** **f.ETISH1.7, NEMO3.6, LIM3.6, COSMO5.0 and CLM4.5”** **published in *Geosci. Model Dev.*, 15, 553–594, 2022**

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The COSMO wind stress was not properly rotated from the COSMO grid to NEMO’s in the PARASO version presented in Pelletier et al. (2022), hereinafter referred to as “the original manuscript”. Comparison with experiments relying on a fixed version of the code suggests that the impact of this error is minor. Figures supporting this claim have been uploaded to Zenodo (<https://doi.org/10.5281/zenodo.6980131>, Huot et al., 2022). The most perceivable impact is in Fig. A7 of the original manuscript, which should be substituted with Fig. A7 from this corrigendum.

The conclusions from the analysis of Fig. A7 provided in the middle of the second paragraph of Sect. 5.2 still hold in the corrected version. Generally speaking, the fix leads to better results (i.e., a slight increase in sea-ice cover). This can be attributed to the orientation of wind stress as perceived by NEMO, which now follows a more organised westerly pat-

tern. The original manuscript featured degraded sea-ice cover due to wind stress being erroneously oriented towards the coast, especially in the eastern Antarctic sector.

The error was located in the COSMO code, which, due to licensing, was only distributed on the RedC of the CLM-Community members (<https://redc.clm-community.eu/> → COSMO-CLM → “Downloads”). As of 11 August 2022, the fix has been included and re-uploaded to the RedC. The partial COSMO-deprived source code distributed on Zenodo (<https://doi.org/10.5281/zenodo.5576201>, Pelletier et al., 2021) remains relevant as is.

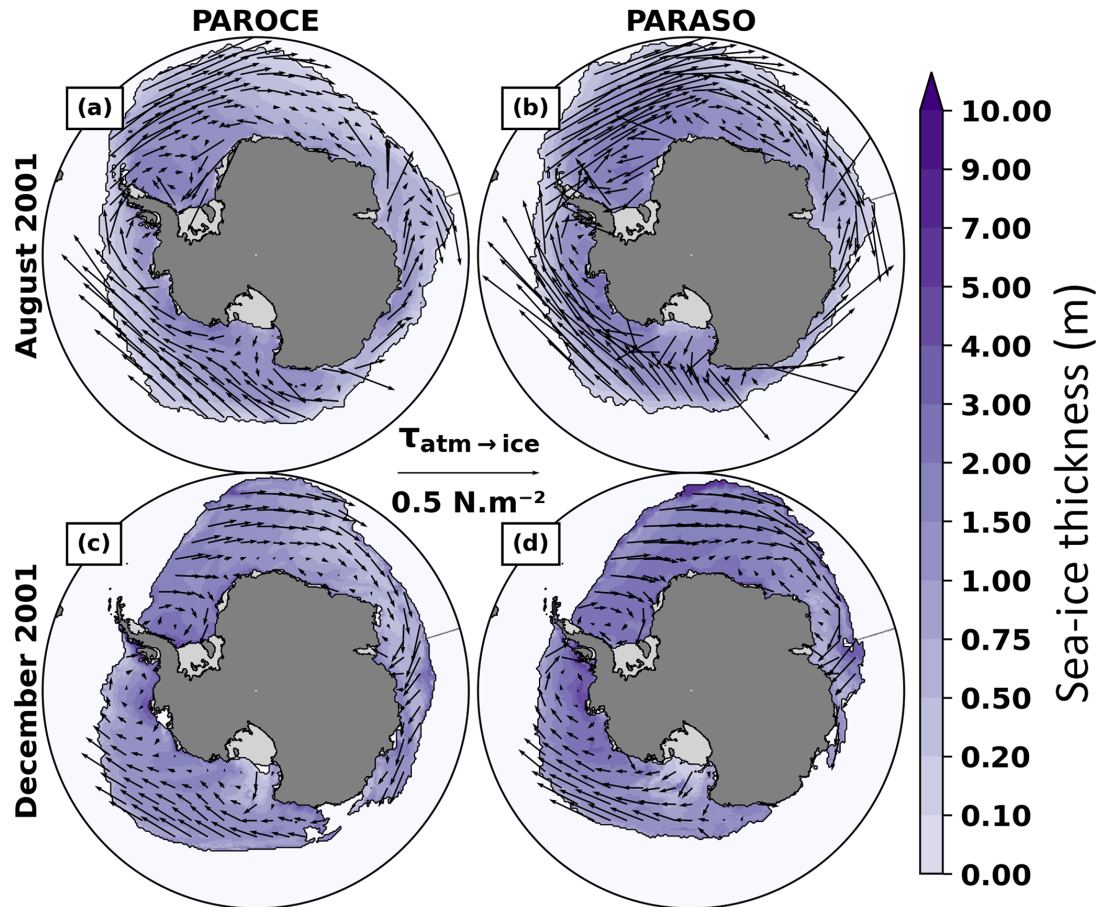


Figure A7. Corrected version of Fig. A7 in the original manuscript. Sea-ice thickness (color map) and air-sea-ice wind stress (arrows) in (a, b) August and (c, d) December 2001 (second simulated year) for (a, c) PAROCE and (b, d) PARASO. Sea-ice thicknesses are only drawn on areas with sea-ice concentrations exceeding 15 %. While the wind stress scale is linear, note that the sea-ice thickness scale is not.

Author contributions. PVH identified the bug and implemented the fix. PVH and SM performed the diagnostics to evaluate its severity. HG, PVH, SM and CP wrote this corrigendum.

References

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