

**Response to reviewers' comments on "Hydrography, circulation, and response to atmospheric forcing in the vicinity of the central Getz Ice Shelf, Amundsen Sea, Antarctica" by V. Dundas, E. Darelius, K. Daae, N. Steiger, Y. Nakayama, and T. W. Kim (<https://doi.org/10.5194/os-2022-13>)**

We thank both reviewers for reading the revised manuscript and for providing technical corrections as well as suggestions for improvements. Below we respond to comments from the reviewers. Our responses are in orange. Line numbers refer to the new manuscript.

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**Response to reviewer nr 1**

line 12, you cannot prove it (and I do not think you want to do it in this manuscript), so it should be "possibly due to anomalously..."

Re: Changed as suggested

line 166, "Fig. 4d" might be "Fig. 4b"?

Re: Corrected as suggested

lines 203-205, you can only show that they are correlated, but the correlation might not lead to causation. I suggest simply changing it to "However, while strong currents towards the ice shelf generally correspond to westward  $\tau$  over a region stretching from the ASP to the shelf break (Fig. 5a), high mCDW-temperatures generally correspond to eastward stress further east on the continental shelf (Fig. 5b)."

Re: Changed as suggested

line 256, "possibly contribution to sustain" should be "possibly contributing to sustaining"

Re: Corrected as suggested

lines 317-219, I find this sentence difficult to follow. Do you mean something like "The along-trough current's dominant response to  $\tau$ , however, differs from results from troughs both west and east of the GC6-trough: the strong westward  $\tau$  over the continental shelf between the ASP and the shelf break corresponds to a strong current toward the ice shelf (BP8D-10M, Fig. 5a and 9b)"?

Re: Changed as suggested

Fig. 3 caption, the last line, should be "Circumpolar Deep Water" with capital initials for water mass

Re: Corrected as suggested

## **Response to reviewer nr 2**

Line 38: I would add a reference to Dotto et al., 2020 (jgro) where the authors show mooring observations in the Dotson-Getz Trough.

Re: Added as suggested

Line 340-341: where is the summer correlation with winds west of Siple Island shown. Maybe you could add “not shown” if no figure highlights this.

Re: The contour of the 0.4 correlation coefficient during summer is indicated with a dashed grey contour in Fig. 5. For clarification, lines 340-341 now reads: *“In summer, the relationship between  $\tau$  and the current at GC6 shifts: the correlation turns positive, and the region of highest correlation shifts west of Siple Island (dashed contour in Fig. 5a).”*