

# ***Interactive comment on “Wind, waves, and surface currents in the Southern Ocean: Observations from the Antarctic Circumnavigation Expedition” by Marzieh H. Derkani et al.***

## **Anonymous Referee #2**

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This paper describes a dataset of winds, surface currents and ocean waves collected during the ACE expedition that circumnavigated the Southern Ocean from December 2016 to March 2017. The ocean wave observations from the WaMos-II wave and surface current monitoring system are particularly novel and the fact that the sea state and wind observations were made at the same time make these an interesting and extremely useful dataset for scientists studying air-sea-ice-ocean processes in the Southern Ocean. Such datasets are rare in the Southern Ocean and tend to be collected along regular shipping tracks. The datasets comprise both oceanic and atmospheric conditions over the three to four months and these novel data constitute a valuable resource that will be of interest to a variety of readers.

The manuscript is well-written and well-structured. The authors provide a good overview and introduction that synthesizes the literature on air-sea-ice-ocean processes in the Southern Ocean. They provide the rationale for collecting and publishing these data by highlighting the lack of in situ observations for the region and the consequences of the lack of observational data. The figures are well-presented, informative, and easy to follow. The manuscript supports the publication of these data sets.

The datasets are available and accessible at the links referenced in the abstract and under the “Data availability” heading. At these links, the datasets are well-described and straightforward to access.

I have some very minor comments detailed in the supplement pdf.

Please also note the supplement to this comment:

<https://essd.copernicus.org/preprints/essd-2020-255/essd-2020-255-RC2-supplement.pdf>

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Discussion paper

