

Interactive comment on “Seabed video and still images from the northern Weddell Sea and the western flanks of the Powell Basin” by Autun Purser et al.

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This short, but well-written manuscript describes two seafloor survey campaigns with the Ocean Floor Observation and Bathymetry System (OFOBS) and the significance of surveying the seabed in these areas. This camera sled with forward looking sound-waves is designed to safely operate in partly sea ice covered oceans and in areas where seafloor bathymetry varies quickly. Both these conditions have traditionally hampered seafloor studies of areas where the impact of the climate crisis on West Antarctic Peninsula seafloor habitats are happening at a fast pace, and therefore critical for us to better understand wider ecological effects (see also Barnes et al., 2020 – GCB 26,

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Discussion paper



2750-2755).

I recommend publishing this data manuscript, but I have a few minor recommendations to take into consideration to allow more users to interact with the dataset:

1. The acoustic element of the OFOBS is mentioned several times – both the forward looking acoustics and the integrated side scan sonar (SSS). The former is a truly great asset to safely survey seafloor with variable topography. The latter, the SSS, is not represented in the data images or downloadable datasets. Such high-resolution and high-quality data of backscatter intensity from just a few meters above the seabed is invaluable to assess the relationship between seafloor habitats and acoustic backscatter, and the impact of this data manuscript could be much higher if some acoustic backscatter data was visualised to capture this potential.
2. In relation to point 1 above, geo-positioning is a key component of potential time-lapse analyses from repeated surveys. Do the authors have a handle on the confidence intervals of the USBL positioning? This is a minor point out of interest, really, but I suspect the positioning is very good and once again show-cases the potential for the data to be used to study both spatial and temporal changes.
3. The video images are left unprocessed for people to download, that is good practice. For the purpose of the short manuscript, I would recommend that at least some example images are published in a processed form. That would allow the laser pointers to become visible (providing a scale, which they really need to have), and it would show-case the full potential of detail achievable with the OFOBS.
4. The authors don't emphasise enough in my opinion that the OFOBS allows seabed surveys in partly sea ice covered areas. In fact, "ice conditions were harsh" – L42, and the abstract could mention that accomplishment specifically I feel.

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