

Interactive comment on “Winter atmospheric boundary layer observations over sea ice in the coastal zone of the Bothnian Bay (Baltic Sea)” by Marta Wenta et al.

Anonymous Referee #2

Received and published: 30 October 2020

This review addresses the manuscript Winter Atmospheric Boundary Layer Observations over Sea Ice in the Coastal Zone of the Bothnian Bay (Baltic Sea) by Wenta et. al. The authors introduce a dataset of the atmospheric boundary layer of sea ice in Bothnian Bay that was obtained from aerial observations. The description of the dataset is well done, I have very few comments/corrections, and I recommend this manuscript to be accepted pending minor revision. Below my comments, I include general comments first, followed by correction recommendations by line number:

General

Justify the study area a little more. On line 38, you mention this study site was also the

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location of ISOBAR, so this area must have some significance for study in a broader context. I would be good to explain that in your manuscript. Is it just a good place to test this method out on? If there are other factors making this area a good study location, it would be good to articulate for other people hoping to replicate your methods.

Figure 1: In the scaled-up map of Finland, it would be good to make the location of Marjaniemi harbor easier to identify. Perhaps a large colored symbol that can catch the eye better. I had to look at the figure for a little while before figuring out where it is.

Line-by-line

Lines 1-12: The Abstract could use a line or two summarizing the importance of this data and its possible uses, especially in relation to your selected study area. The introduction does this fairly well, and I think even copy/pasting a few sentences from that section into the abstract would work fine.

Line 23: Perhaps give an example or two of physical processes studying ABL properties helps us to understand. Could even be in parenthesis (e.g. property A, property B).

Line 180: Could you provide a little more information on the orthomosaic maps for this section? map extent, resolution, etc, to match the detail you gave to the other datasets described in this section.

Please also note the supplement to this comment:

<https://essd.copernicus.org/preprints/essd-2020-153/essd-2020-153-RC2-supplement.pdf>

Interactive comment on Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2020-153>, 2020.

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