Earth Syst. Sci. Data Discuss., referee comment RC2
https://doi.org/10.5194/essd-2022-306-RC2, 2022
© Author(s) 2022. This work is distributed under
the Creative Commons Attribution 4.0 License.

Comment on essd-2022-306

Anonymous Referee #2

Referee comment on "Water masses distribution in the Canadian Arctic Archipelago: Implementation of the Optimal MultiParameter analysis (OMP)" by Alessandra D'Angelo et al., Earth Syst. Sci. Data Discuss., https://doi.org/10.5194/essd-2022-306-RC2, 2022

I was ending my revision when the Anonymous Referee #1 posted his/her comment, thus to avoid repetition and considering that my major comments/suggestions are in line with his/her comments, I strongly agree that the manuscript is not ready yet to be publish in ESSD. My reccomendation is that the manuscript is more appropriated for other ocean general journal (e.g. Ocean Science) if the methodological issues are solved (although this is more a Editor decision). A number of sensitivity test should be performed (i.e., weights applied, changes in SWT properties) and the parameters precision and errors identified for the calculated property (i.e. water mass fraction of mixture) should be presented. Although the efforts are valid, the present manuscript analyzed a dataset for a single year (2019) and restricted to summer, thus not making a full comprehension of the water mass structure and changes in the area (e.g. regarding the water masses variability, changes in fractions of water masses contribution), which could be usefull for the ocean and climate scientific community in the future. In addition, there is a lack of more detailed characterization of the study area (ocean circulation and geographical areas). If the reader is not familiar with the region (which is my case), it is impossible to have a fluid reading, which is enhanced by the excess of used acronyms.