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# *Interactive comment on* "GLODAPv2.2020 – the second update of GLODAPv2" *by* Are Olsen et al.

**Anonymous Referee #3**

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This is a "living data" update document that discussed the addition of 106 cruises to the GLODAPv2.2019 data set. These data have been extremely valuable to the community and represent an important asset to maintain and update. The manuscript is well written and informative. I only have a few minor comments below.

Line 92-93: The authors don't distinguish between discrete and in situ sensor measurements here. I assume they are referring to CTD calibration problems with respect to the sensor measurements of salinity and oxygen, not the measurements of collected samples. Please clarify, particularly in light of the merging discussed in section 3.2.1.

Lines 95-99: The manuscript uses some rather subjective terms without defining their meaning in this context. For example, "poor precision can render a set of data unusable" or "to minimize severe cases of bias". What is the definition of poor precision or severe bias?



Lines 98, 108: There are a notable number of grammatical errors in the text that should be fixed. A couple of examples are, "Adjustments are applied on the data"(should be 'to the data') or "A particular important source" (should be 'A particularly important source'). Please review the entire document for these grammatical errors.

Line 123-124: The authors decided to include cruises on the Merian, Meteor, and the Garcia del Cid that did not have any nutrient or carbon data. I thought nutrients and carbon were the primary parameters for this data set. Why did the authors decide to include these data and not the thousands of other cruises that also do not have carbon data. This seem inconsistent with the goal of this project.

Line 150: define data center acronyms the first time they are used, or at least provide links to the data centers.

Line 193-195: We the original data generators consulted before adjustments were made to the data? I believe in the past there was a step that involved checking with the people that originally made the measurement to get their perspective on possible offsets.

Line 256: This is the first time that a -888 label is discussed in the text. What does this mean? The same comes in later with -777 and -666 labels.

Lines 280-282: Why did the authors use the full GLODAPv2 data to estimate TAlk from Salinity. Wouldn't it make more sense to calculate an average ratio for the data from that cruise rather than use a global ratio that includes data from other oceans? Also, doesn't the ratio change with depth?

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