

## TOSTE MINOR REVISION : To be checked by Editor

We Thank the reviewer and editor for the comments and suggestions.

We found some issue locating the exact line number that the reviewer is referring to. We tried to make the correspondence. We hope all suggestions been tackled (response in red).

I thank the authors for addressing issues in the first round of revisions.  
However, there are still some issues that needs to be tended to, as detailed below.

In addition, there are numerous small language errors and editorial glitches, such as incomplete sentences. I recommend one more round of careful language check.

I thin this manuscript needs a minor revision. Most important is the inconsistencies in the data products available at PANGAEA with what is stated in the manuscript, as the unclear units for salinity and state of adjustments or not in the data product.

Detailed listing:

Line 170: Complete sentence

Line 180: Please explain why you do not attempt to "post calibrate" the CTD-oxygen values from winker for those cruises where you see a large offset.

Line 224: How can vertical diffusion from a layer of low oxygen lead to a bottom layer of high oxygen? I do not think this manuscript is the place to discuss processes that lead to different distribution. If you still want to do so, please refer to appropriate literature.

Line 227: "weak" ? **LINE 295 ok**

Line 260: Why use absolute salinity? The convention is to use PSU for data and data products, and do the conversion to absolute salinity in a second step working with the data.

**Yes, we just used absolute salinity and conservative temperature as a second step but the final data product contain the salinity in PSU and temperature**

Table 5: What does the colors mean?

**Added in figure 6 title :Color gradient: Blue to Green to Yellow indicate low to high values**

Line 393: Hainbucher et al. do not consider any of the two cruises mentioned above

**Changed**

Table 2: Hainbucher was the chief scientist of the MSM72 cruise. Please double check the table. I would also keep only one name for chief scientist.

**Updated**

Line 803: Please be consistent in the language: I suggest using "adjustment" to what is applied to a cruise. So that table 3, it should be adjustments, assuming that those "suggested corrections" where actually applied.

**See table 4 and the language of section 4 was updated**

Line 838: Did you apply the adjustment? I suggest using the term adjustment to what is actually applied to the data product.

For each of the descriptions of the individual cruises, end by stating what adjustment was applied based on the evidence you provide.

Summary and conclusion: Why did you not mention the 1st QC here? Point 9 in the conclusion is not the conclusion based on this work and thus do not belong in that section (perhaps in the intro).

**added**

Line 1120: Strange sentence, please reformulate.

The information about two data products (one with and one without the adjustments, but both with the results of 1st QC) is an important piece of information, and I think this belongs in the main manuscript, probably just before the conclusion section.

OK

Looking at the data page at PANGAEA, it is only one data set there. The text do not explain if this data set has the adjustments applied, or not. Please correct the text to clearly and explicitly describe the data set, rather than why and the context. Is this with adjustments, or not. And where is the other data set that the article states should be there?

YES PANGAEA IS UPDATED, under review

Also, and very importantly, what is the salinity value in the data product? The data description at PANGAEA states only salinity, but the paper states that you calculated absolute salinity, but never stated which of the absolute or practical salinity is used for the data product. This HAS to be explicitly stated. It is strongly recommended to use practical salinity for a data product. This also goes for table 4 in the paper.

Table 5