

Reply to editor's comments 080824

**All my responses are visible in the track changes document cook\_bell\_rev2\_trackchanges.docx that can be provided on request.**

I have gone through your revised version of the manuscript and find that it still requires some relatively minor changes and improvements. There are some typos here and there that should be corrected: For example, "cam" to "came" or "come" in line 238, and "includes" to "include" in line 267. The citation in line 297 has a wrong year. I am also unsure regarding the grammar in line 100; specifically, I am confused by the placement of "are".

**I have made all these corrections and amendments.**

Table 1: Maybe you could also include a column with the longitude ranges corresponding to each part of the expeditions. This will make Table 1 more meaningful, providing insights into sectors of the oceans that were covered at each stage.

**I hve converted the "sector" column into a more specific listing of the longitudes covered by each subsection.**

Please, increase sizes of all circumpolar figures.

**This has been done in the WORD document. All tif files will be uploaded so the appropriate size can be created by the journal publication team.**

Figure 4b: Please, adjust the format to fit the style of Figure 4a.

**Lines have been added to the top and right of Fig. 4b.**

Figure 6: Please, place subfigures side by side. Right now, it is a very inefficient way to use journal space.

**Fig. 6 has been altered to go across the page rather than down.**

Sections 2.2 and 2.3: Regarding your response to my review, I would not call one extra sentence in Section 2.2 and two extra sentences in Section 2.3 a significant enhancement. More could be done to address the lack of more detailed information regarding these datasets and the analysis behind them. One could provide a table in the appendix where different satellite data and their specifics could be compared. From my point of view, "a range of satellite instruments" sounds very vague.

**I have amended the text in both sections 2.2 and 2.3 further. The editor should note that I am using datasets provided by other authors of reputable datacentres and have not done the inter-satellite comparison that she seems to believe I have done. The merged data forms part of the supplied datasets. I have made this clearer and have added more links to underlying documents provided by the data centres. I have added the daily series that underlie Figure 4 as a Supplementary spreadsheet for full disclosure. Personally, I don't think this is needed in the paper but it is now available and noted in the text if required.**

I also think that the discussion of differences in data uncertainties (Cook versus Bellingshausen) belongs to the main text instead of the figure caption.

**This text is now effectively added to the main text, although the relevant word remain in the Figure legend for better explanation of the figure.**