

Earth Syst. Sci. Data Discuss., author comment AC2
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Reply on RC2

walker smith

Author comment on "Primary productivity measurements in the Ross Sea, Antarctica: a regional synthesis" by Walker O. Smith Jr., Earth Syst. Sci. Data Discuss.,
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I agree that the data are valuable not only for bio-optical models but for ecological research in the Ross Sea. I have added a statement to that effect in the manuscript (Line 248).

Line 85: I agree that to normalize the responses to photoperiods would be difficult and even misleading, but the PAR data were requested by Reviewer 1 and added to the data files. It is of potential use in looking at effects of photoinhibition, but I did not pursue that line of investigation in this report.

Line 156: The anomalous values were carefully scrutinized prior to removal. They were confined to two stations (three depths from each station), and there may have been a duplicate inoculation of radioisotope by mistake. We don't know that for certain, but it was clear that the ^{14}C -uptake rates were much greater than would have been expected. There was no relationship to bloom development or decline.

Line 199: Corrected.

Line 211: Corrected.

Line 211: Statistical tests and significance values now included.

Figure 4: Variations within each bin were not analyzed due to the variations in the number of data points within each bin. Those numbers are now mentioned in the figure caption. I did briefly look at the variations within the bin that had the most samples, and the variability in that bin was similar to the variability over a longer time span (e.g., weeks). A complete assessment of the within-period variability is not possible.