Comment on essd-2022-244
Elizabeth Jones (Referee)

Referee comment on "A database of marine macronutrient, temperature and salinity measurements made around the highly productive island of South Georgia, the Scotia Sea and the Antarctic Peninsula between 1980 and 2009" by Michael J. Whitehouse et al., Earth Syst. Sci. Data Discuss., https://doi.org/10.5194/essd-2022-244-RC2, 2022

Review of A database of marine macronutrient, temperature and salinity measurements made around the highly productive island of South Georgia, the Scotia Sea and the Antarctic Peninsula between 1980–2009. Michael Whitehouse et al.

General Comments

This study presents a compilation of macronutrient data collected during the period 1980-2009 from an important biological region in the Southern Ocean. The valuable and extensive data comprise vertical profiles and surface measurements and are presented in the context of distinguishing spatial and temporal variability from long-term change in a dynamic region. The manuscript is well written and accompanied by well-presented figures and key information is reported in tables. I recommend publication of the dataset and the manuscript. In the version of the manuscript reviewed here there are a number of minor revisions that can be made before proceeding with publication.

Specific Comments

The results section would greatly benefit from a description of the macronutrient variability with respect to the different water masses, fronts and regions, as described in the Introduction. In the Methods section, are descriptions the same both of the vessels (JB and JCR)? For example, the depth of the underway seawater supply and time taken for seawater to pass through the ship. Usage of (a) and (b) in figures: in figure 1 and 2 the (a) and (b) have small boxes around and in figures 5 and 6 they have no boxes.

Technical Corrections
Line 48 how do the eddies “… influence…” the region? One or two examples would complement the statement

Line 76 insert ‘marine environment’ after ‘South Georgia’

Line 107 insert ‘phytoplankton’ before ‘bloom’

Line 110-111 repetition of the phrase ‘play a role’

Line 111 is the word ‘and’ after ‘nutrient cycling’ a typo?

Line 241 is the word ‘ship’ after ‘compiled with’ a typo?