



Review of 'An updated version of the global interior ocean biogeochemical data product, GLODAPv2.2021' by Lauvset et al. [essd-2021-234]

Matthew Humphreys (Referee)

Referee comment on "An updated version of the global interior ocean biogeochemical data product, GLODAPv2.2021" by Siv K. Lauvset et al., Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2021-234-RC1>, 2021

This manuscript presents the latest update to GLODAP (GLODAPv2.2021) with 43 new cruises added since the previous version along with a few other minor QC-related updates. The changes and additions have been clearly explained and justified where necessary. The explanation of the overall QC procedure (inherited from the previous version of the manuscript) is comprehensive. The QC procedure itself is robust and now well established.

I have only a few minor technical/copy-editing notes and suggestions as follows. Having also been a reviewer for the previous iteration of this manuscript I focused on the track-changes supplement provided by the authors. The line numbers below refer to that version.

185 'two-years' should be 'two years' (no hyphen needed here)

188 'update, is presented here which' should be 'update is presented here, which'

192 remove comma after '989 cruises'

217 'essentially the same' implies that there are minor differences - is this intended? If not, just delete 'essentially'.

219-221 why is there no Southern Ocean identifier? Are these cruises included in the Atlantic/Indian/Pacific sectors based on longitude? Please clarify and also mention briefly how the basins are defined (what are the lat/lon/etc. cutoffs).

220 should be Arctic 'and' Mediterranean Seas

366 'as the difference, is in accordance' should be 'as the difference, in accordance'

371-372 'The TCO₂ data measured on this cruise are high by 2.15 ± 1.04 $\mu\text{mol kg}^{-1}$ when compared to the data measured on nearby cruises' suggest rephrase to 'The TCO₂ data measured on this cruise are 2.15 ± 1.04 $\mu\text{mol kg}^{-1}$ greater/higher than the data measured on nearby cruises'

391 'avoid the communicating' should be 'avoid communicating'

425 'pH dependent' should be 'pH-dependent'

425 'in calculated pH with' might be clearer as 'in calculated pH compared with'

428 'pH dependent' should be 'pH-dependent'

518, 525, 529, 530, 532, 533, 534 & 535 missing full stop at end of sentence

588 'cruises that ended at 2106' should be 'cruises, which ended at 2106'

615-616 awkward sentence; suggest rephrase 'Neutral density for all 989 cruises was calculated using/following J & M (1997).'

616 missing full stop at end of sentence

740 'Silicate in the Atlantic Ocean, for example, shows' consider rephrase to 'For example, silicate in the Atlantic Ocean shows'

771 <https://explore.webodv.awi.de/> link did not work for me (503 Service Unavailable), but it might be a temporary issue

776 expocode and doi are mostly lowercase but sometimes uppercase as here; suggest to be consistent throughout

880 & 881 'Python', not 'PYTHON'