

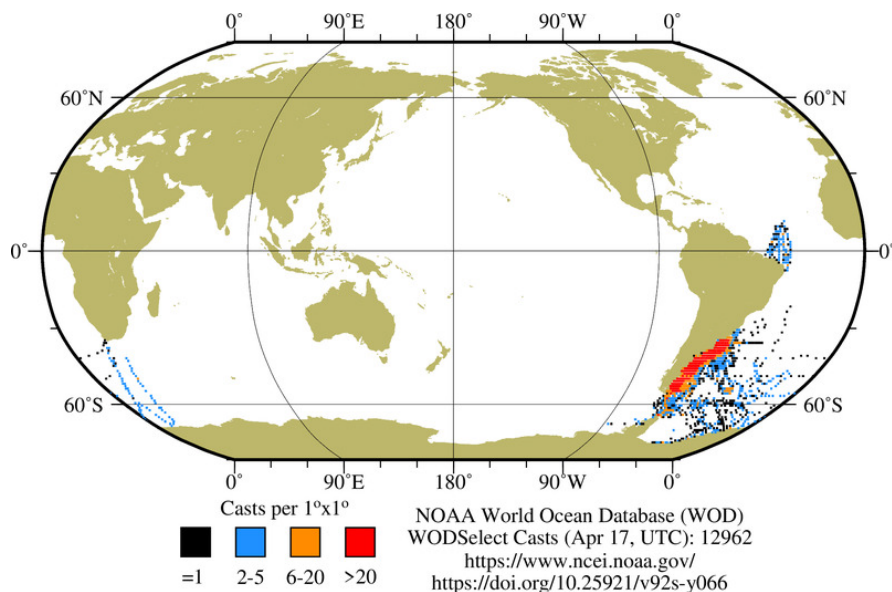
This MS describes an interesting regional database with important details regarding data collection technics, instrumentations used, raw data processing, data management and quality control, database design and data holding. It presents a wide range of topics related to the BaRDO database shedding light on different aspects of oceanographic data processing performed by Argentinean teams.

This is very comprehensive approach which provides a complete view into the database development and evolution performed by INIDEP team.

I believe this MS definitely can be published **after minor revision** addressing some remarks listed below.

I took a liberty to compare this database with Argentinean OSD and CTD data stored in the World Ocean Database (WOD) using WODselect querying interface (<https://www.ncei.noaa.gov/access/world-ocean-database-select>). At present time WOD holds 5,045 OSD casts and 7,917 CTD casts, totaling 12,962 casts also presented in the BaRDO database. The data distribution plot looks very similar to Fig.1 of the MS. I believe that fact of sharing these data with WOD should be reflected in the text and appropriate literature referred. Below is the map of those data in WOD and some refs to WOD. It would be also useful and interesting to compare BaRDO data holding with WOD to check the correctness and completeness of the Argentinean data in both databases.

Here the Argentinean OSD and CTD data held in WOD:



That is very good example of international oceanographic data exchange and I am looking forward to adding a remaining data from BaRDO to WOD.

References to WOD:

Garcia, H., Boyer, T., Levitus, S. et al. World Ocean Database 2023: A Foundational Data Resource for and by the Global Ocean and Coastal Communities. *Sci Data* 13, 613 (2026). <https://doi.org/10.1038/s41597-026-06957-2>

Mishonov AV, TP Boyer, OK Baranova, CN Bouchard, S Cross, HE Garcia, RA Locarnini, CR Paver, JR Reagan, Z Wang, D Seidov, AI Grodsky, JG Beauchamp, (2024): World Ocean Database 2023. C. Bouchard, Technical Ed., NOAA Atlas NESDIS 97, 206 pp., doi.org/10.25923/z885-h264,
Levitus, S., JI Antonov, OK Baranova, TP Boyer, CL Coleman, HE Garcia, AI Grodsky, DR Johnson, RA Locarnini, AV Mishonov, JR Reagan, C L Sazama, D Seidov, I Smolyar, ES Yarosh, and MM Zweng (2013). Data Science Journal, Volume 12, 13 May 2013

Technical remarks

Fig.1: Please add explanation for 'ZCP' abbreviation found in line 27 to the Fig.1 capture

Fig.2: Please use English for the axis's titles (e.g., Station Counts and Year).

Fig.3: no remarks

Fig.4: no remarks

Fig.5: The comparison with very old climatology (WOA01) is mentioned here. I would recommend to use WOA23 (refs below) for QC2 Climatology checks.

Fig. 6: no remarks

Table 2: I believe the very right empty column in this table could be removed

Fig. 7: no remarks

Fig. 8: no remarks

Table 3: Since used QCF are recommended by the international body (GTSP/IODE) and not invented by authors, the reference should be added to reflect the source of this QCF scheme, e.g.:

GTSP Real-Time Quality Control Manual, First Revised Edition. UNESCO-IOC 2010. (IOC Manuals and Guides No. 22, Revised Edition.) (IOC/2010/MG/22Rev.).

This document can be found at: <https://www.ncei.noaa.gov/sites/default/files/2020-11/GTSP%20Real-Time%20Quality%20Control%20Manual.pdf>

Table 4: Please use standard notation for Density, e.g., 'kg m⁻³'

Fig.9: Please add a title for 3rd pie-chart – it's unclear what it represents – total? Or something else?

Fig. 10: Marking needs to be added for 'levels [%]' axis – is it not clear what is %% of sampled data is flagged: 1, 2, 3%... or 10, 20, 30% or else?

Fig. 11: It would be more understandable if TS profiles will be shown as a line-with-dots not just dots.

Lines 338-349: comparison with more up-to-date climatology (e.g., WOA23 instead of Levitus 2005 – see refs below) could be more appropriate and interesting since lots of data have been added after WOA05. Please consider using most recent climatology for comparison (see citations below).

Locarnini, RA, AV Mishonov, OK Baranova, JR Reagan, TP Boyer, D Seidov, Z Wang, HE Garcia, C Bouchard, SL Cross, CR Paver, and D Dukhovskoy (2024). World Ocean Atlas 2023, **Volume 1: Temperature**. A. Mishonov Technical Editor, NOAA Atlas NESDIS 89, doi.org/10.25923/54bh-1613

Reagan, JR, D Seidov, Z Wang, D Dukhovskoy, TP Boyer, RA Locarnini, OK Baranova, AV Mishonov, HE Garcia, C Bouchard, SL Cross, and CR Paver. (2024). World Ocean Atlas 2023, **Volume 2: Salinity**. A. Mishonov, Technical Editor, *NOAA Atlas NESDIS 90*, doi.org/10.25923/70qt-9574

Garcia, HE, Z Wang, C Bouchard, SL Cross, CR Paver, JR Reagan, TP Boyer, RA Locarnini, AV Mishonov, OK Baranova, D Seidov, and D Dukhovskoy (2024). World Ocean Atlas 2023, **Volume 3: Dissolved Oxygen**, Apparent Oxygen Utilization, and Oxygen Saturation. A. Mishonov, Tech. Ed. *NOAA Atlas NESDIS 91*, doi.org/10.25923/rb67-ns53

Garcia, HE, C Bouchard, SL Cross, CR Paver, Z Wang, JR Reagan, TP Boyer, RA Locarnini, AV Mishonov, OK Baranova, D Seidov, and D Dukhovskoy (2024b). World Ocean Atlas 2023, **Volume 4: Dissolved Inorganic Nutrients** (phosphate, nitrate, silicate). A. Mishonov, Tech. Ed. *NOAA Atlas NESDIS 92*, doi.org/10.25923/39qw-7j08

Lines 427-429: Please check and correct those references

Levitus, S. Ed. World Ocean Atlas 2005. Locarnini, R., Mishonov, A., Antonov, J., Boyer, T., García, H. Volume 1: Temperature.

Amatov, J., Locarnini, R., Boyer, T., Mishonov, A., García, H.. Volume 2: Salinity. NOAA Atlas NESDIS 62, U.S. Government Printing Office, Washington, D.C., 182 p. , 2005.

Amatov -> it should be Antonov as in ref below.

If you will decide to keep ref to WOA05, – please use correct references as following:

Locarnini, RA, AV Mishonov, JI Antonov, TP Boyer, and HE Garcia, 2006. World Ocean Atlas 2005, Volume 1: Temperature. S. Levitus, Ed. NOAA Atlas NESDIS 61, U.S. Gov. Printing Office, Washington, D.C., 182 pp https://repository.library.noaa.gov/view/noaa/1126/noaa_1126_DS1.pdf

Antonov, JI, RA Locarnini, TP Boyer, AV Mishonov, and HE Garcia, 2006. World Ocean Atlas 2005, Volume 2: Salinity. S. Levitus, Ed. NOAA Atlas NESDIS 62, U.S. Government Printing Office, Washington, D.C., 182 pp. https://repository.library.noaa.gov/view/noaa/1127/noaa_1127_DS1.pdf