

# Interactive comment on “Hydrographic data from the GEF Patagonia cruises” by M. Charo and A. R. Piola

Anonymous Referee #1

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*I read this manuscript with great interest. I find particularly useful this kind of accompanying papers to give visibility and properly support the publication of a given dataset. Hydrographic data collected during three cruises carried out in October 2005 and March and September 2006 over the Argentine continental shelf are reported. The dataset itself is certainly significant in terms of usefulness and uniqueness. This sort of seasonally gathered hydrographic data are not frequent for the southern Southwestern Atlantic. The region is overall quite understudied and poorly understood despite its great ecological and economical importance. In this case, I emphasize the fact that data from the three cruises are reported at once in one only set (though in three separate folders for clarity, one for each cruise).*

*Regarding the quality of the data, as far as I can tell the reported protocols used for sampling, calibration and measurements are the standard ones, commonly used. The data sets are currently available at the National Oceanographic Data Center, NOAA. US (doi:10.7289/V5RN35S0), which I assume must have their own quality controls. For the rest, this was a reasonably straightforward report, with little in the way of discussion or interpretation. Following are a few specific comments, which need some attention:*

**We thank Reviewer 1 for his/her comments (in italics). Below we respond to each of the reviewer comments (in red font).**

*p. 94, line 17 – “The oxygen from water samples was compared with historical data collected. . .”*

*Perhaps the source or quote for the oxygen historical data should be mentioned.*

**Historical data were obtained from the Argentine Oceanographic Data Center (CEADO, <http://www.hidro.gob.ar/ceado/Fq/extrnac.asp#nacionales>). CEADO archives data originated by Argentine and international research institutions. This information is given in the revised manuscript.**

*p. 95, lines 2 – “. . . standard seawater batch P131 (1996). . .”*

*As far as I understand, standard seawater batches older than about 2-3 years should not be used for standardization. Please explain if there was a reason for using a batch from 1996. May have this circumstance affected Autosol standardization for the GEFPAT-1 data, which were collected about ten years later?*

**To test the possible effects of aging of standard seawater we have performed a number of runs standardizing the instrument with more recent batches (P146, 2005). The tests indicate that the conductivity ratios of these batches are within  $3 \times 10^{-6}$  of the**

values stated by the manufacturer. This indicates that our salinity determinations were not affected by the age of the standard seawater. This is indicated in the revised manuscript.

In addition we detected a typing error: the correct batch number is P130 (1996).

*p. 95, lines 2-3 – “. . . standard seawater (SSW) batches P131 (1996) and P141 (2002, GEFPAT-1), P141 (2002) and P146 (2005, GEFPAT-2) and P146 (2005, GEFPAT-3). . .”*

*The way the batches are referred to each cruise is rather confusing. So, I would suggest changing slightly the text to something like:*

*“. . . standard seawater (SSW) batches P131 (1996) and P141 (2002) were used for GEFPAT-1 processing, P141 (2002) and P146 (2005) for GEFPAT-2 and P146 (2005) for GEFPAT-3. . .”*

Done.

*p. 95, lines 6-18 – “The double conductivity ratio of SSW during GEFPAT-3, showed a positive trend with time determined from the difference between the beginning and the completion of each run of samples. . .”*

*What about the other two cruises? It can be assumed that nothing irregular happened with them but I think it is better just to mention it.*

In GEFPAT-1 and GEFPAT-2 cruises the double conductivity ratio of SSW presented no trends. This information is given in the revised manuscript.

*p. 96, line 5 – “The data were recorded every 30 s and occasionally every 60 s along some tracks of GEFPAT-2”*

*I wonder whether it would have not be more useful the record of spatially-related data, e.g., every 1000 m. As user, I would be interested in the spatial variations rather than in time. Is this possible? Which was the recording criterion?*

We believe it is more useful to provide the thermosalinograph at the original sampling frequency. This allows users to create space or time interpolated data as required. All valid thermosalinograph data files were submitted to the NODC.

*p. 96, line 6-7 – “Bottle salinity samples were taken periodically from the thermosalinograph water intake to calibrate the thermosalinograph conductivity sensor”.*

*I am not sure if “calibrate” is the correct word to be used here. The sense of this sampling is to check (not calibrate) for the correct functioning of the thermosalinograph, isn't it?*

Done, we now refer to verify instead of calibrate.

*p. 97, line 6 – “. . . in standard Seabird format”*

*What do you mean by standard Seabird format? What is this format like?*

In the revised manuscript the format is briefly described as follows:

The hydrographic data sets from GEF Patagonia cruises are reported in standard Seabird Converted Data File (.cnv) format. Converted files consist of a descriptive header followed by data converted to engineering units. The header contains station time and position information, the name of the raw input data file, the number of data rows and columns, a description of observed and derived variables in each column, interval between rows, scan rate or bin size, records of all processing steps. The header information is followed by data records with a flag field in the last column, indicating if the data record was interpolated in the last column. Data from individual stations are presented in separate ASCII character files consisting of 1 dbar data records in physical.

*p. 97, line 24 – Typing error, replace “form” by “from”*

Done.

*Table 1. I think that last calibration dates of the instruments should be also provided.*

We have included the sensor calibration dates in Table 1.

*With regard to the quality of the dataset publication as currently available at NOAA, if re-use is bore in mind, I found confusing how to discriminate between files referring to CTD data and those from thermosalinograph. Headers are hard to follow. This is likely related to the publication format, and so I do not think there is much that can be done at this stage. I would suggest trying a better, user-friendly format in the future, if this is possible.*

We have renamed the thermosalinograph files to discriminate between files referring to CTD data and those from thermosalinograph. The thermosalinograph filenames use TSG prefixes. This is indicated in the revised manuscript. The renamed thermosalinograph files were submitted to the NODC.

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