

Interactive comment on “Data recovery of A06 and A07 WOCE cruises” by N. M. Fajar et al.

Anonymous Referee #6

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The paper submitted by Fajar et al. cannot be recommended for publication in ESSD. There are still many unclear points in the approach used, and results are not presented quantitatively. Major comments are follows:

Fajar et al. attempts to recover AT and CT data collected along A06 and A07, which were judged to be unsuitable for use by international QC activity. My first impression reading this manuscript is that this is a technical paper, which would be useful if the technique could be applied to other cases. But by the following reasons, I could not accept it. (1) Description of 3-DwMLR is too abbreviated in spite of its central role in the technique; (2) Judgement of the results like “suitable”, “reliable” and “realistic” is too subjective. The authors claim that pH distributions along A06 (Fig. 1) are realistic and reliable. What is the criterion that they are realistic and reliable?

What is the merit of recovering data for A06 and A07? The authors seem to attempt

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to detect some changes of the properties by comparing recovered A06 and A07 data with recently observed MOC2 data. But to rescue the A06 and A07 data, MOC2 data were used. Thus one cannot compare the rescued data with the MOC2 data because of lack of independency.

Judging from Fig. 3, precision of the original AT data must be data of low precision, because they are patchy. By contrast, distributions of recovered AT become smooth. This seems to me a magic! In the case of data showing a systematic error with good precision, it is possible enough to give offset values by utilizing other data. But for low precision data, the first thing to be done is to reconsider how to measure.

The authors say that they recover the A06 and A07 data. But what is made in reality is to change the data. It does not recover the data. Both GLODAP and CARINA conducted QC, and gave recommended (offset) values to make the original data unbiased on a basin scale. What is made in this paper is to change the original data. Not saving the data.

Interactive comment on Earth Syst. Sci. Data Discuss., 4, 99, 2011.

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