

## ***Interactive comment on “Repeat hydrography in the Mediterranean Sea, data from the *Meteor* cruise 84/3 in 2011” by T. Tanhua et al.***

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We thank the reviewer for the comments to our paper, and for the suggestion to improve on it- We have implemented all suggestions by the reviewers, see below. 1) We have added some information on the over-determined carbonate system, and we refer the readers to a comprehensive analysis of the carbonate system in the cruise report and in a manuscript in preparation (Tanhua, 2013; Álvarez et al., The CO<sub>2</sub> system in the Mediterranean Sea, a basin wide perspective, manuscript in preparation). 2) We added information on the accuracy of the oxygen measurements: Overall accuracies are within expected ranges: 0.002°C for temperature, 0.003 for salinity and approximately 2  $\mu\text{mol kg}^{-1}$  for oxygen. 3) Substandards of aged surface seawater were used

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instead of CRMs in order to minimize use of expensive CRMs; several tests confirmed that this procedure produces as accurate results as using CRMs.

Additionally we have found minor errors in the section about alkalinity measurements that we corrected (corrected values for precision and accuracy). We do now also access to the carbon isotope data, and those are available at CDIAC together with the other data. Table 1 and the text are extended to reflect this. References:

Tanhua, T.: METEOR-Berichte 84/3, Repeat hydrography in the Mediterranean Sea, Hamburg, 1-45, 2013.

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