

Interactive comment on “Evaluation of isotopes and elements in planktonic foraminifera from the Mediterranean Sea as recorders of seawater oxygen isotopes and salinity” by Linda K. Dämmer et al.

Anonymous Referee #1

Received and published: 8 April 2020

General comments:

The manuscript entitled “Evaluation of isotopes and elements in planktonic foraminifera from the Mediterranean Sea as recorders of seawater oxygen isotopes and salinity” by Dämmer L.K. and coauthors provide new data about the marine proxy calibrations.

The study is based on planktonic foraminifera and sea water samples collected from the Mediterranean Sea in January and February of 2016. The investigation focus on the relation between element/Ca ratios, stable oxygen isotopes of the foraminiferal species

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Globigerinoides ruber (alba) and surface seawater salinity, isotopic composition and temperature. This is an important issue in the paleoceanographic investigations. Infact, in order to accurately interpret past climate and environment, it is fundamental to have reliable proxies.

Specific comments

It would be effective to insert in the Discussion section a short paragraph with “recommendation for the applications of the proxies” that the authors (based on this study) consider relevant for the paleo-reconstructions (i.e, using more specimens for the analyses, uncertainty in salinity estimates?, how collect the samples, etc. . .).

In fig 2 ($\delta^{18}\text{O}$ seawater versus salinity) all data are from Mediterranean sea except data from Cox (2010) that are from North Atlantic. I do not understand why the authors use the North Atlantic data, otherwise the authors can discuss this in paragraph 4.1 (when they report geographical variability, lines 173,174).

Technical corrections

3.1 I suggest as title: seawater geochemistry or Mediterranean Sea geochemistry 4.2 The analyses were performed on Na/Ca ratios measured on the carbonate shells of *G. ruber*. It is *G. ruber* (white) as reported in the paragraph 3.3? The same observation for paragraph 4.3 Line 191- Fig. 4a (add a point) Line 226 *G.ruber* in italic font Fig. 3, 4, 5: *G. ruber* in italic font

Interactive comment on Clim. Past Discuss., https://doi.org/10.5194/cp-2020-26, 2020.

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