

Interactive comment on “A database of marine and terrestrial radiogenic Nd and Sr isotopes for tracing earth-surface processes” by Cécile L. Blanchet

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First of all, I would like to thank M. Krom for his swift and supportive review. I have taken good note of his comments and modified the text accordingly. This has improved the quality of reading and clarity of the text.

Comment: “The title is a bit misleading since the dataset is not global but relates to sources to the Mediterranean. This does not mean it is not valuable but it does mean that the title should be adjusted to describe exactly what area has been archived.”

Response: The referee requested that the title should better reflect the geographi-

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cal extend, which was limited to the Mediterranean in the submitted version of the database (this is also a remark from Reviewer #2). In this paper, the focus is indeed put on the Mediterranean as it can be used as a validation exercise, since sediment seafloor mapping was already available from the literature (e.g., see Krom et al., 1999; Weldeab et al., 2000; Scheuvens et al., 2013). However, during the review process (i.e., between October 2018 and March 2019) the database has been largely extended to other regions of the world. In a second iteration, an amount of ca. 900 additional data points have been added and published on the GFZ data server (<http://doi.org/10.5880/GFZ.4.3.2019.001>). Due to the now larger geographical reach of the database and the clearly-stated intention to increase the spatial resolution at global scale, it is therefore proposed to keep the titles as submitted. New maps showing the growing number of data points now appear in Fig. 1 and explanations have been added to the text to reflect the process. Data input relative to the second iteration is described in section 2.1 and in table 1.

Comment: "The author uses the first person pronoun (I) too often. This should be reduced. She also uses the adverb 'very' too often. That should be removed as it is non-scientific."

Response: Thank you for this comment. Most "I" and all "very" have been removed.

Specific comments:

Page 1, line 28: "is" has been kept as the subject is "A large amount of data".

Page 1, line 29: "very" removed.

Page 2: all "very" were removed and text was adjusted to avoid the use of "I".

Page 3, line 16: "a" removed.

Page 3, line 22: "in a second time" removed and modified according to reviewer's proposition.

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Page 3, line 30: “realised” replaced by “carried out”.

Page 4, line 3: “bellow” corrected into “below”.

Page 4, line 11: “barium concentration” replaced by “barium/aluminum ratio”.

Comment: “Page 5, line 1: The record should include how the sample was analysed. It used to be that all samples were analysed by TIMS but now there are ICP-MS analyses too.”

Response: The reviewer advises to add a column in the database about instruments used to measure the neodymium and strontium isotope ratios (TIMS or MC-ICP-MS). This is indeed generally provided in databases (e.g., in SedDB). This will be added to the next iteration of the database, as well as uncertainties values. Such addition, however, requires a modification of the structure of the database (and not a mere insertion of lines as was done for the second iteration) and will require more work.

Page 5, line 6: sentence modified according to reviewer’s proposition.

Page 5, line 9: “Potential source areas (PSA)” has now been defined in section 2.2 and is then used coherently throughout the text.

Page 5, line 14”: “very” removed.

Page 5, line 21: sentence modified according to reviewer’s proposition.

Interactive comment on Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2018-109>, 2018.

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