

Interactive comment on “Particulate Rare Earth Element behavior in the North Atlantic (GEOVIDE cruise)” by Marion Lagarde et al.

Anonymous Referee #2

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First of all: Please accept my apologies for the late review. The manuscript by Lagarde et al. presents a unique sampled section for particulate YREE. Data like this are really of great value and are need to better understand the marine cycle of YREE. Although I appreciate the dataset itself, there are some issues in the manuscript that need to be addresses and clarified prior to acceptance. I have provided detailed line-by-line comments in the manuscript. However, I would like to summarise some of the points below:

Minor comments: - There are quite a few orthographic and grammatical impurities. I suggest to avoid the use of 'being' and abbreviations in the beginning of sentences. The word 'one' is also often used inappropriately. - Figures should be reorganised and it is not alway clear to which figure the captions relate. I would also suggest to

C1

make use of isolines instead of plotting 4 sections with 3 parameters. Draw salinity isolines and colour code the REE values, instead of plotting the profiles in the section. I would also strongly encourage to enlarge the upper 200m to show the features. This is the interesting depth range for most of your parameters. Also the interpolation is done differently when comparing Figure 6 and 2 A/B for which the former are without gaps while the latter section plots show white gaps. - the tables do not have units - some data, eg. Ac data, are not shown and not trackable by the reader, so discussions cannot be verified by the reader. For instance in lines 257-259 and 263-264.

Moderate comments: - There are many places with missing citations. These are highlighted in the pdf. - Parts of the discussion is found in figures in the supplement. It is awkward for the reader to keep having the supplement at hand to follow the discussion. - The paper does not come to any conclusions is that intended in this format?

Please also note the supplement to this comment:

<https://www.biogeosciences-discuss.net/bg-2019-462/bg-2019-462-RC2-supplement.pdf>

Interactive comment on Biogeosciences Discuss., <https://doi.org/10.5194/bg-2019-462>, 2020.

C2