

Interactive comment on “The GIK-Archive of sediment radiography” by Hannes Grobe et al.

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This manuscript accompanies an impressive and very useful data set of high quality X-radiographs taken at the University of Kiel from numerous marine sediment cores around the World, which has been made accessible for the scientific community in the PANGAEA data library. This data set is an invaluable resource not only for researchers who (intend to) work on the analyzed core material and those who want to compare sedimentary features they observe in their cores with features in other cores but also for students who want to learn identifying such features. I think that the authors should also highlight in the manuscript this educational aspect of the data set they are providing.

The structure of the manuscript is well organized and clear. The methods are explained in sufficient detail, and the referencing is useful and up to date. The overall presentation is good and the presented figures are all necessary and of high quality. The language

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is consistent and (with a few exceptions) clear. The manuscript length is appropriate, and I cannot see any good reason for extending or shortening the text.

The data set is easily accessible, with the X-radiographs themselves being available in jpeg format and being accompanied by useful and sufficient metadata. Some X-radiograph negatives seem to be pitch black when downloaded but they reveal their full value when brightness and contrast are increased (which is - as correctly stated in the manuscript - easily achieved by using any common graphics editor). The only issues I found with the data set are: (1) for some of the cores combined under the parent data set only photos and/or core descriptions seem to be available, and (2) some comments on the sediments (given under “Event”) were obviously not translated into English. Point (1) clearly is the more substantial issue and needs to be rectified before publication. I think the authors have two options: Either they change the title of the archive to reflect that it does not only contain X-radiographs (e.g. “GIK archive of sediment core X-radiographs, photos and descriptions”) or they remove all data sets without X-radiographs. Choosing the latter option will require that several numbers given in the manuscript (e.g. number of sediment cores in the archive) are adapted accordingly. Apart from this I found only minor issues in the text and figures and have only few recommendations for improvements, which I give in the annotated PDF of the manuscript (see supplement).

In summary, I believe that this data set and the accompanying paper will make a great contribution to marine geological science in general and the journal “Earth System Science Data” in particular.

Claus-Dieter Hillenbrand

Please also note the supplement to this comment:

<https://www.earth-syst-sci-data-discuss.net/essd-2017-69/essd-2017-69-RC1-supplement.pdf>

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