

Interactive comment on “Deglacial to postglacial history of Nares Strait, Northwest Greenland: a marine perspective” by Eleanor Georgiadis et al.

Eleanor Georgiadis et al.

eleanor.georgiadis@u-bordeaux.fr

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Dear referee,

We would like to thank you for having provided us with such an early review of our work along with an opportunity to revise it. The points that you address are very pertinent and we will take them into account in the revised version of our paper.

We will make sure to use our grain size data to better interpret the XRF data: there is an excellent correlation between normalised Ti counts and silt contribution in the <2 mm fraction. Better assessing the local variability in the geological sources that are prone to inducing changes in our elemental dataset may prove challenging, but we believe that our interpretations of the XRF data in terms of sources, though preliminary, reflect

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general trends in the sediment provenance. Caron et al. are working on a forthcoming paper with XRD data on the same core which will bring further insight into the Holocene sediment sources in Kane Basin and will be able to assess the reliability of the time-efficient XRF approach that we use. We will specify this in the revised version of our paper. We will also revise the age model of the top part of our core using the more logical younger ages, and incorporate the important references you mention in our discussion, such as the opening of the Strait as viewed from Hall Basin (Jennings et al., 2011).

We are glad to welcome the opportunity to submit a revised version of our paper and will do so as soon as we receive all the reviews.

Yours sincerely,

Eleanor Georgiadis on behalf of the authors

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