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Interactive comment on "Holocene dynamics in the Bering Strait inflow to the Arctic and the Beaufort Gyre circulation based on sedimentary records from the Chukchi Sea" *by* Masanobu Yamamoto et al.

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Thank you very much for your careful reading and for your recognizing the significance of the data we present in this paper. We are revising our paper according to your comments. Because you request to clarify the discrepancy of our data between figures and supplementary information for further review of discussion part, we reply your comments on this point.

Comments: One of the main problems with this manuscript is the data presented in the supplementary information. It does not always match what is shown in the manuscript

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Discussion paper

figures, and inconsistent data (deglacial time period in 05JPC) seem to be omitted from the discussion. Since it is not clear which data is correct (tables or figures), it is difficult to review the interpretations and discussions suggested by the authors. Reply: Thank you for your pointing the difference of dataset between figures and supplementary information. We found that the supplementary information is wrong, which was shown by a mistake, and figures show the right values. We will replace the supplementary information in the revised manuscript. We omitted the data of the C/I and (K+C)/I ratios in the deglacial period in 05JPC because the chlorite was not presumably transported from the Bering Sea but from another source in the last deglacial period. The deglacial sediments in 05JPC are characterized by high abundance of kaolinite and terrestrial soil organic matter (branched GDGTs). The last deglacial sediments that showed the same characteristic are limitedly distributed in the eastern Chukchi Borderland and the area of 05JPC (Kenta Suzuki et al., 2016 AGU fall meeting). We suppose that they are delivered from inland North America by deglacial riverine discharge.

Comment: Figure 2: There are a number of inconsistencies here. In panel C (C/I ratio), there are several data points missing compared to the other datasets. Is this a mistake, or is there no data? If there is data to show for (C+K)/I, there should also be data to show for C/I? If this is no mistake, there is probably a technical explanation for this, which can be provided in the methods or results. Reply: This is not a mistake. C/I was not determined in the samples whose (C+K)I ratio could be determined. The detection of diffraction peak of specific chlorite (C) was more difficult than the detection of combined diffraction peak of chlorite and kaolinite (C+K) when the chlorite abundance was low. Such samples are not shown in panel C of Fig. 2. We will add the explanation in the revised manuscript.

Comment: - The scale bar for the Q/F ratio in panel A ranges from 4-40, but the ratio axis for the same proxy in panel D ranges from 0.6 – 1.6. Is this a logarithmic scale? If yes, make this clear. Reply: This is our mistake. This is a logarithmic scale.

Comment:- From Panel E, one can see that there should be a data point with a CK/I

ratio around 2.0 at about 63°N. This is not visible in Panel B. Check this carefully, as there may be others? Reply: In panel C, the data point of high value was hidden by the data point of low value because both points are located very close. We will revise the panel that can show both data points.

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