

Interactive comment on “Macromolecular composition of terrestrial and marine organic matter in sediments across the East Siberian Arctic Shelf” by Robert B. Sparkes et al.

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We thank the reviewer for their support of this work, and answer their comments below:

a) Section 2.1: Materials in this section, although important, can be tied up or shortened a bit.

We will carefully revise this section and remove any unnecessary information.

b) Throughout the manuscript, Why names of organic compound classes, such as Phenols, Aromatics, Alkylbenzenes and Cyclopentenones, etc., need capitalized for the first character?

C1

We prefer to keep the capitalisation, because these classes represent a large group of molecules than the specific, representative compounds that were measured in this study. For example “Phenols” corresponds to one particular compound in the chromatogram which is being used as the representative compound, but “phenols” corresponds to the entire group of phenol compounds. However, if the editor prefers a change to the lower case we will happily make this alteration.

c) Pg-2, Line-14: Add reference of Ping et al (2011) for pan arctic coastal erosion: Ping, C.-L., G.J. Michaelson, L. Guo, M.T. Jorgenson, M. Kanevskiy, Y. Shur, F. Dou and J. Liang. 2011. Soil carbon and material flux across the eroding coastline of the Beaufort Sea, Alaska. JGR-Biogeosciences, 116, G02004, doi:10.1029/2010JG001588

We will add this reference at the identified location.

d) Section 3.1: change “Bulk radiocarbon measurements” to read: “Bulk radiocarbon composition”

We will change this as requested.

e) Section 4.5: Regarding title of this section, instead of a sentence, I suggest the use of a regular title.

We will change the section title to “Principal Component Analysis”.

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C2