

Interactive comment on “Particulate organic matter composition and organic carbon flux in Arctic valley glaciers: examples from the Bayelva River and adjacent Kongsfjorden” by Z.-Y. Zhu et al.

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I note three papers recently released that you have cited. I have concerns with the overlap of those papers and this manuscript.

I would like to suggest the authors show the estimation method of POC proportion. Maybe I miss something, but most of percent of POC is hard to follow, e.g. How the authors get the value of 10

I do not think there is a robust link between pigment and POC. Pigment POC (abstract)

C7188

does not equal to phytoplankton carbon (Pages 15670 Line 23). How to transfer them?

I see there was little variability in TSM. Does the POC sources and concentration change little before and after the freezing period? It is clear that your methods that you couple the POC concentration in a short period with discharge measurements to calculate flux is not reasonable as well as the comparison between these fluxes and others.

No detail is given on the flux of Svalbard.

You provide no detail on the effect of tide on the C fluxes in the Bayelva River.

It is clear that the methods presented in this manuscript are not adequate for a reader to critically evaluate. Finally, it is not clear what the overall lesson is from your observations that advances our understanding of C.

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