Biogeosciences Discuss.,
https://doi.org/10.5194/bg-2019-198-AC1, 2019

Biogeosciences
Discussions

Interactive comment on "Benthic C fixation and cycling in diffuse hydrothermal and background sediments in the Bransfield Strait, Antarctica" *by* Clare Woulds et al.

Clare Woulds et al.

c.woulds@leeds.ac.uk

Received and published: 23 July 2019

We thank the reviewer for their comment that the experiments we report are novel and elegant, and that our results are exciting. Below we answer the substantive points that the reviewer raised:

1. The reviewer raises a valid question as to whether it is appropriate to scale up from processes measured in 10cm diameter cores to rates and measurements normalised to per m2. We acknowledge that presenting results as per cm2 is a more conservative approach, however we note that per m2 is the standard normalisation in the rest of the literature. We are happy to provide results normalised to cm2, but feel strongly that the

per m2 version should also be presented to allow readers easy comparison with the wider literature. We leave this at the discretion of the editor.

2. The reviewer notes that it does not make sense to report results as a mean and standard deviation when n=2. We acknowledge that greater replication is certainly desirable, but not always achievable. Indeed, in this case further replication was prevented y availability of cores, incubation equipment, and time at sea. We are happy to alter the way in which results are presented in line with the reviewer comment to avoid use of mean and standard deviation.

3. We will make the changes suggested in the minor comments.

Interactive comment on Biogeosciences Discuss., https://doi.org/10.5194/bg-2019-198, 2019.