

## ***Interactive comment on “High-resolution under-water laser spectrometer sensing provides new insights to methane distribution at an Arctic seepage site” by Pär Jansson et al.***

### **Anonymous Referee #3**

Received and published: 11 June 2019

The manuscript by Pär Jansson et al "High-resolution under-water laser spectrometer sensing provides new insights to methane distribution at an Arctic seepage site" describes the application of a new methane sensor to methane seeps off Svalbard. As the sensor measures methane in situ with a high temporal resolution a very accurate methane inventory of this probably highly variable area is given. Overall the Ms is well written and straightforward. However, the figures contain too much information, which is either not well explained or not necessary for the specific message, and thus are sometimes rather confusing. For a “non-modeller” I found it sometimes difficult to follow the outline of the applied models. In the discussion, both the technical and the scientific aspects should be discussed, But both are rather short. I would be interested

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in the comparison with the other commercial methane sensor which was attached to the device. .... Also an estimation on which temporal resolution is really necessary to dissolve the methane distribution would be appreciated, and what influence has the towing speed on the pattern?? More detailed comments can be found in the attached pdf-file

Please also note the supplement to this comment:

<https://www.ocean-sci-discuss.net/os-2019-28/os-2019-28-RC3-supplement.pdf>

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Interactive comment on Ocean Sci. Discuss., <https://doi.org/10.5194/os-2019-28>, 2019.

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