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Interactive comment on “Comparison of UV/Vis and FDOM sensors for in situ monitoring of stream DOC concentrations” by G.-Y. Yoo et al.

Anonymous Referee #2

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The manuscript by Yoo et al. is a concise method paper. It deals with different sensor systems for the detection of DOC and provides a comparison of the methods. Given that, the paper is rather technical and methodological and does not focus on processes or mechanisms. There are other papers available in the literature that did comparable things (eg Downing et al 2012) but the novelty in this MS is that they compared fluorescence sensors with absorbance sensors.

Fig 1 and the respective text in the results: Please provide a statistical test + outcome for your statement that the linear regressions are significantly different.

Temperature correction of fluorescence: There is a solid theoretical foundation for a temperature dependence of fluorescence and therefore a correction makes sense. It seems that the authors just used a linear correction (please provide more through

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information about the exact formula and parameters of the correction). I wondered whether the theory would also predict a linear relationship.

The application of the sensors is not very convincing as the system did not react massively to the heavy hydrological disturbances. It would be more impressive to use a system where DOC increases over orders of magnitude and also turbidity reacts more strongly. I would assume that the applied linear corrections work fine over these narrow variation bands in DOC/turbidity. The larger the range of DOC/turbidity/temperature would be the higher is the chance of systematic deviations due to non-linearities. So, a more rigorous test in a more dynamic system would be more convincing.

Interactive comment on Biogeosciences Discuss., 11, 16855, 2014.

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11, C8883–C8884, 2015

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