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Biogeosciences Discussions

Interactive comment on "Optical backscattering properties of the "clearest" natural waters" *by* M. S. Twardowski et al.

M. S. Twardowski et al.

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This review was useful and helped improve the manuscript. We personally thank the reviewer for his/her comments and criticisms.

The suggested text with respect to errors in bb measurements relative to pure water was added.

Regarding the questioned use of bbp(650) in the analysis, I ask the reviewer to please understand that bbp(650) was only indistinguishable from pure water in the very clearest waters measured (between 300 and 350 m in the central gyre). Overall, and as indicated in the text, the bbp(650) measurement had the BEST estimated uncertainty (+/- standard error) and BEST estimated accuracy (% standard error normalized to magnitude) of any of the 3 measurements. This primarily is a function of good LED

source intensity and detector response at this wavelength (the relative high uncertainty in bb(462) is the result of a weaker LED at that wavelength). This is why the analysis focused on bb at 650 nm. The comment that “…bb(650) is clearly negative a large amount of the time” is not accurate, as can be observed in the right panel of Figure 7.

Thank you again for your helpful comments.

Interactive comment on Biogeosciences Discuss., 4, 2441, 2007.