

## ***Interactive comment on “Expanding understanding of optical variability in Lake Superior with a four-year dataset” by Colleen B. Mouw et al.***

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Response to Overall Comments: We have added a paragraph to the end of the results section to address data limitations as pointed out by the reviewer. With the exception of Mitchell et al. (2002), we have integrated the references provided into this paragraph. As the use of sodium hypochlorite is the preferred method for freshwater, we did not add it to the new paragraph on limitations. Instead, we added a sentence describing its use in section 2.2 to clarify that it is recommended over methanol extraction in freshwater. This added sentences reads: “It should be noted that while methanol extraction is common for this step in marine samples (Mitchell et al., 2003), the use of sodium

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hypochlorite is preferred in freshwater due to the resistance of some cyanobacterial pigments to methanol extraction (Porra et al., 1990; Binding et al., 2008).” We also updated the Mitchell et al. reference to the most recent revision of the NASA Ocean Optics Protocols for Satellite Ocean Color Sensor Validation (revision 4, volume 4).

Response to Specific Comments: The methods and results sections have been edited to be in past tense. The misspellings of discrete have been corrected.

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