

OCEAN OPTICS XXIV

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<https://oceanopticsconference.org>

Tuesday, October 9

Poster Session 2

10:30–12:30

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Poster 22

ADVANTAGES AND LIMITATIONS TO THE USE OF OPTICAL MEASUREMENTS TO STUDY SEDIMENT DYNAMICS

Measurements of optical properties have been used for decades to study particle distributions in the ocean. They have been found useful to constrain suspended mass concentration as well as particle intensive properties such as size, composition, packaging (aggregation) and settling velocity. Optical properties, however, provide measurements that are biased, as certain particles (based on size, composition, shape or packaging) contribute to a specific property more than others. Here we study this issue both theoretically as well as by contrasting different optical properties collected simultaneously in a bottom boundary layer, to highlight the utility of such measurements as well as the likely biases we are to encounter using different optical properties to study suspended particles.

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