

October, 25, 2017

Dear Dr. Emmanuel Boss

Editor Associate

Biogeosciences

Please receive the final corrected version the manuscript 'Optical properties of size fractions of suspended particulate matter in littoral waters of Quebec' to be published in Biogeosciences. Below the last modifications following your suggestions.

1. Regarding the use of PSD slope as an index of particle size. The index D50 was not used in this manuscript but it was found to be correlated with LISST-derived ξ when processing data for another publication (Mohammadpour et al., 2015)

Mohammadpour G., Montes-Hugo M.A., Stavn R., Gagne J.P., Larouche L. 2015. Particle composition effects on MERIS-derived SPM: a case study in the Saint Lawrence Estuary. Canadian Journal of Remote Sensing, 41, 514-524.

2. LISST-derived ξ is not different between regions but when we compare the variability between samples (not regions) then the variability of PIM/SPM is smaller than that attributed to LISST-derived ξ .

3. Very high b_i^* $>10 \mu\text{m}$ values were corrected due to major errors on weight of size fractions of SPM

4. The spectral slope of c_{SPM} (γ) can not be compared between PSICAM and ac-s measurements because PSICAM only measures absorption values not beam attenuation values.

5. The errors on mass-specific coefficients is even larger ($>15\%$) than those corresponding to the optical coefficients due to the additional uncertainty associated to the weight of particulates in a_{SPM}^* and b_{SPM}^* determinations

Thank you again for your support and advice during the entire review.

My best regards,



Dr. Martin Montes

Professor

ISMER

University of Quebec at Rimouski