Targeted updates to the Ocean Optics Protocols: Past, present and future

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In situ optical and biogeochemical in- and above-water measurements are critical for calibration of satellite ocean color radiometry data products, and for refinement of ocean color algorithms. During the SeaWiFS era, NASA commissioned the development of a series of ocean optical measurement protocols, which have served as international reference standards ever since, and have promoted the collection and assembly of climate quality, ocean optical datasets by the global ocean color community. Over the past few years, NASA has sponsored several international workshops (sometimes in conjunction with IOCCG) with subject matter experts to update and develop new community consensus field measurement protocols for ocean color sensor validation. Newly-drafted protocols are available to the international user community on the IOCCG webpage for a period of time for public comment and associate editorial board peer-review, before they are accepted as international reference standards. Finalized protocols receive a version number and digital object identifier from IODE Ocean Best Practices. The updated protocols are intended to be "living" documents, periodically updated as methods and technologies advance.





✓ Front and back covers added

✓ Assemble Associate Editorial Peer-review board members



- "Final" version published on IOCCG website
- Documents can be updated periodically



Ocean Optics & Biogeochemistry Protocols for Satellite Ocean Colour Sensor Validation

> Volume 1: Inherent Optical Property Measurements and Protocols: Absorption Coefficient (v1.0)

Aimee R. Neeley and Antonio Manning

Emmanuel Boss, Eurico J. D'Sa, Scott Freeman, Ed Fry, James L. Mueller, Scott Pegau, Rick A. Reynolds, Collin Roesler, Rüdiger Röttgers, Dariusz Stramski, Michael Twardowski and J. Ronald V. Zaneveld

International Ocean Colour Coordinating Group (IOCCG) in collaboration with National Aeronautics and Space Administration (NASA)

IOCCG, Dartmouth, Canada





Volume 2: Beam Transmission and Attenuation Coefficients: Instruments, Characterization, Field Measurements and Data Analysis Protocols (v2.0)

Emmanuel Boss, Michael Twardowski, David McKee, Ivona Cetinić and Wayne Slade

Editors Aimee R. Neeley and Ivona Cetinic





Ocean Optics & Biogeochemistry Protocols for Satellite Ocean Colour Sensor Validation

Protocols for Satellite Ocean Color Data Validation: In situ Optical Radiometry

Status: Final editing and proofreading

Expected publication date: August 2019



Ocean Optics & Biogeochemistry Protocols for Satellite Ocean Colour Sensor Validation

Best Practices for the Collection and Processing of Ship-based Underway Flowthrough Optical Data

Status: Under revision, postpeer review

Expected publication date: Late 2019





Ocean Optics & Biogeochemistry Protocols for Satellite Ocean Colour Sensor Validation

Measurement Protocol Of Absorption By Chromophoric Dissolved Organic Matter (CDOM) and Other Dissolved Materials

Status: Final writing stage

Expected publication date: Late 2019/Early 2020



CCG IOCCG Protocol Series **Ocean Optics & Biogeochemistry Protocols for**





Satellite Ocean Colour Sensor Validation

Particulate Organic Carbon

Sampling and Measurement

Protocols: Consensus

Towards Future Ocean

Color Missions

Satellite Ocean Colour Sensor Validation

Data Reporting for

Phytoplankton Taxonomy

Satellite Ocean Colour Sensor Validation

Methods for Measuring

Scattering Properties

Ocean Optics & Biogeochemistry Protocols for Satellite Ocean Colour Sensor Validation

Global ocean primary production: A comprehensive guide to methodological protocols and uncertainties.

Status: Final writing stage

Expected publication date: Late 2019/Early 2020

Status: Early writing stage

Expected publication date: End 2020

Status: Early writing stage

Expected publication date: 2021

Status: Early writing stage

Expected publication date:

2021