**PROTOCOLS FOR THE MEASUREMENT OF CDOM ABSORPTION USING DIFFERENT TECHNOLOGIES AND TECHNIQUES: RESULTS FROM THE THIRD NASA CDOM WORSKSHOP ROUND ROBIN**

Michael G. Novak Antonio Mannino1 Mathias Belz2 Jean Francois-Berthon3 Neil Blough4 Emmanuel Boss5 Annick Bricaud6 Joaquin Chaves7 Carlos Del Castillo8 Rosanna Del Vechio9 Eurico D’Sa10 Scott Freeman11 Atsushi Matsuoka12 Richard Miller13 Aimee Neeley14 Norm Nelson15 Rüdiger Röttgers16 Maria Tzortziou17 Jeremy Werdell18

Chromophoric Dissolved Organic Matter (CDOM) is a major optical constituent of inland waters, estuaries, coastal ocean, and open ocean. This significant contribution of CDOM to aquatic optical properties requires quantitation and characterization of CDOM spectral absorption for development and evaluation of ocean color satellite remote sensing algorithms. CDOM absorption can be quite high in coastal regions; however from coastal to open ocean waters, the CDOM decreases significantly and becomes much more difficult to quantify accurately. UltraPath instruments (long-pathlength spectrophotometer) and Liquid Waveguide Capillary Cell (LWCC) technology were developed to resolve the CDOM absorbance sensitivity issues and have been in use for over a decade to quantify CDOM absorption. However, developing a correction method to account for the spectral offset caused by the refraction index of dissolved salts has been challenging. As part of the NASA CDOM absorption protocol working group, a third Round Robin experiment was carried out in 2015 with U.S. and international participants. Extremely low CDOM seawater collected from the South Pacific near Tahiti was distributed to the group and measured following the same protocol within the same 48 hour period. Three different salt correction methods were evaluated using NaCl dissolved in Ultrapure water. In addition, two freshwater solutions of different concentrations of Suwanee River Fulvic Acid (SRFA) were measured in order to characterize them for the use as consensus reference material to monitor the performance and relative accuracy of absorbance measurements from various instruments. These samples were measured with Ultrapath and LWCC instruments as well as conventional double-beam spectrophotometers, ac-meters, and an a-sphere. The results were analyzed to ascertain the amount of error and variability associated with these instruments and technology and in development of a community consensus protocol.

1. Antonio.mannino@nasa.gov

Goddard Space Flight Center

Building 22 room 240

8800 Greenbelt rd.

Greenbelt, MD

20771

2. masthiasb@wpiinc.com

World Precision Instruments

Zossener Strasse 55-58

Berlin, Germany 10961

3. jean-francois.berthon@jrc.ec.europa.eu

Joint Research Centre (JRC)

Institute for Environment and Sustainability (IES) - Water Resources Unit

TP270 Via Enrico Fermi 2749

21027 Ispra (VA), Italy

4. neilb@umd.edu

University of Maryland

Department of Chemistry and Biochemistry

3114 Chemistry Building

College Park, Md

20742-4454

5. emmanuel.boss@maine.edu

5706 Aubert Hall

University of Maine

Orono, Me

04469-5706

6. annick.bricaud@obs-vlfr.fr

Laboratoire d'Océanographie de Villefranche (LOV),

UMR 7093 - CNRS / UPMC

Observatoire Océanologique,

181 chemin du Lazaret, 06230

Villefranche-sur-Mer, France

7. joaquin.e.chavescedeno@nasa.gov

Goddard Space Flight Center

Building 22 room C197B

8800 Greenbelt rd.

Greenbelt, MD 20771

Eurico D'Sa, Ph.D.

8. carlos.e.delcastillo@nasa.gov

Goddard Space Flight Center

Building 28 rm W135A

8800 Greenbelt rd.

Greenbelt, MD 20771

9. rossdv@umd.edu

Earth System Science Interdisciplinary Center

University of Maryland

M Square Office Building # 950, Suite 4001

5825 University Research Court

College Park, MD 20740

10. ejdsa@lsu.edu

Associate Professor

Department of Oceanography and Coastal Sciences

306 Howe-Russell Geosciences Bldg.

Louisiana State University

Baton Rouge, LA 70803

|  |  |
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| 11. scott.a.freeman@nasa.gov Goddard Space Flight Center Building 22 room C197C8800 Greenbelt rd.Greenbelt, MD 20771 12. atsushi.matsuoka@takuvik.ulaval.caDepartment de BiologiePavillion Alexandre-Vachon1045,av. De la Medecone, local 2078Universite LavalQuebec G1V OA6,Canada13. MILLERRI@ecu.edu Department of Geological Sciences and the Institute for Coastal Science and PolicyFlanagan Building, Suite 250East Carolina UniversityGreenville, NC  27858-435314. aimee.neeley@nasa.govGoddard Space Flight Center Building 22 room C197A8800 Greenbelt rd.Greenbelt, MD 20771 15. norm@eri.ucsb.eduEarth Research InstituteMC 3060University of CaliforniaSanta Barbara, CA 93106 USA16. rroettgers@hzg.deMax-Planck-Straße 1, 21502, Geesthacht, Germany17. maria.a.tzortziou@nasa.govGoddard Space Flight Center Building 33 room E4158800 Greenbelt rd.Greenbelt, MD 20771 18. jeremy.werdell@nasa.govGoddard Space Flight Center Building 28 room W135B8800 Greenbelt rd.Greenbelt, MD 20771  |  |