

**PACE Science Team Workshop**  
**January 14-16, 2015**

**Marriott Hotel and Conference Center**  
**3501 University Blvd, East Hyattsville**  
**Maryland 20783 USA**

**Workshop Agenda**

**Wednesday, January 14**

8:15 – 8:30	Registration
8:30 – 8:45	Welcome, Meeting Logistics and Introductions <i>Emmanuel Boss, Univ. of Maine and Lorraine Remer, UMBC</i>
8:45 – 9:05	Status of PACE mission <i>Paula Bontempi, NASA HQ</i>
9:05 – 9:15	Role of Ocean Biology Processing Group <i>Jeremy Werdell and Bryan Franz, NASA GSFC</i>
9:15 – 9:30	Report from the PACE Science Definition Team <i>Carlos Del Castillo</i>
9:35 – 10:50	<u>Atmospheric Correction I</u> Bayesian Methodology for Atmospheric Correction of PACE Ocean Color <i>will be presented by Lorraine Remer, UMBC</i> Atmospheric Correction for Retrieval of Ocean Spectra from Space (ACROSS) <i>Jacek Chowdhary, Columbia University</i> Hyperspectral and Multispectral Atmospheric Correction Algorithms Supporting the NASA PACE Mission <i>Bo-Cai Gao, NRL</i> Atmospheric Correction Over Bright Water Targets with Non-Negligible Radiances in the Near Infrared <i>Heidi Dierssen, Univ. Connecticut</i>
10:50-11:00	<u>Coffee Break</u>
11:00 – 12:15	<u>Atmospheric Correction II</u> Evaluation of UV Atmospheric Correction in the Presence of Absorbing Aerosols and Quantification of Enhancements Provided by Multiangle Polarimetric and Oxygen A-Band Observations <i>Olga Kalashnikova, NASA JPL</i> Aerosol Absorption Retrievals from Base-Line OCI Observations: Risk Reduction for Atmospheric Correction of the PACE Mission <i>Lorraine Remer, UMBC</i> Retrieval Studies In Support of Cloud Property Products from the PACE Ocean Color Imager <i>Steven Platnick, NASA GSFC</i> Maximizing the Societal Benefits of PACE Atmospheric Data by Actively Linking the Mission to Its Applications <i>Ali Omar, NASA LaRC</i>
12:15 – 1:00	<u>Lunch</u>

1:00 – 2:30	<p><u>Inherent Optical Properties I</u>  How Useful Will the PACE UV Bands Be for the IOP Retrievals and Atmospheric Correction? <i>Stephane Maritorena, ERL/UCSB</i>  Derivation of Inherent Optical Properties from Satellite Top of Atmosphere Measurements in Optically Complex Waters  <i>Susanne Craig, Dalhousie University</i>  Development of Datasets and Algorithms for Hyperspectral IOP Products from PACE Ocean Color Measurements  <i>ZhongPing Lee, Univ. of Massachusetts Boston</i>  PACE Applications to Case II Waters: Quantifying the Uncertainty in Inherent Optical and Water Constituent Properties and the Impact On Remotely Sensed Ocean Color  <i>Steve Ackleson, NRL</i>  Improved Satellite Ocean Color Retrievals of Ocean Inherent Optical Properties and Biogeochemical Properties Utilizing the Capabilities of PACE <i>Greg Mitchell, Scripps Institution of Oceanography</i></p>
2:30 – 2:45	<p><u>Coffee Break</u></p>
2:45 – 4:00	<p><u>Inherent Optical Properties II</u>  Phytoplankton Composition Algorithms for PACE  <i>Cecile Rousseaux, USRA/NASA</i>  Quantifying Uncertainties in Phytoplankton Absorption Coefficients for Accurate Validation of the PACE Ocean Color Sensor: Moving Towards Satellite Retrieved Phytoplankton Functional Types (PFTs)  <i>Collin Roesler, Bowdoin College</i>  Quantifying the Spectral Absorption Coefficients of Phytoplankton and Non-Phytoplankton Components of Seawater from in Situ and Remote-Sensing Measurements <i>Dariusz Stramski, Scripps Institution of Oceanography</i>  A Global Database of High Horizontal Resolution IOPs for Validation of Remotely Sensed Ocean Color <i>Emmanuel Boss, University of Maine</i></p>
4:00 – 5:15	<p><u>Inherent Optical Properties III</u>  Improving IOP Measurement Uncertainties for PACE Ocean Color Remote Sensing Applications  <i>James Sullivan, WET Labs Inc.</i>  Improving Retrieval of IOPs from Ocean Color Remote Sensing Through Explicit Consideration of the Volume Scattering Function  <i>James Sullivan, WET Labs Inc</i>  Understanding Natural Variability of VSFs and Its Impact on Biogeochemical Retrieval from Ocean Color  <i>Xiaodong Zhang, Univ. North Dakota</i>  Maximizing the societal benefits of PACE IOP data by actively linking the mission to its applications.  <i>Maria Tzortziou, CUNY/ NASA Goddard</i></p>
6:30	<p><u>Dinner at Franklins in Hyatsville</u></p>

**Thursday January 15**

8:30 – 9:00	Reports from Inherent Optical Properties and Atmospheric Correction <i>Emmanuel Boss, Univ. of Maine and Lorraine Remer, UMBC</i>
9:00 – 10:00	Atmospheric correction: Where are we now; Where might we be in 2.5yrs? <i>Bryan Franz, NASA GSFC</i>
10:00 – 10:20	How do we maximize our progress? <i>Moderator: Lorraine Remer, UMBC</i>
10:20 – 10:40	Coffee Break
10:40 – 11:40	Inversion of Rrs to IOPs: Where are we now; Where might we be in 2.5yrs? <i>Jeremy Werdell, NASA GSFC</i>
11:40 – 12:00	How do we maximize our progress? <i>Moderator: Emmanuel Boss, Univ. of Maine</i>
12:00 – 1:00	Lunch
1:00 – 2:10	Break out into separate rooms for IOP and AC individual discussions. Identify and prioritize tasks to be done in year 1, tasks to be done in year 2, and tasks that will not be done by this group, but should be done in the future. Include tasks that could be done now, though the benefit might not be realized until the next ST is completed. <i>Emmanuel Boss, Univ of Maine and Lorraine Remer, UMBC will facilitate discussions of each group, respectively.</i>
2:10 – 2:30	Reports to Plenary <i>Emmanuel Boss, Univ of Maine and Lorraine Remer, UMBC</i>
2:30 – 3:00	Coffee Break
3:00 – 4:10	Break out into sub-groups that span both IOP and AC. <ol style="list-style-type: none"><li>1. Combined AC/IOP inversions</li><li>2. Modeling strategies (IOP) + Radiative Transfer (AC) (building a realistic synthetic data set)</li><li>3. Data sets (Real data)</li><li>4. Uncertainties of products</li><li>5. Atmospheric Byproducts (optional)</li></ol>
4:10 – 4:30	Reports to Plenary <i>Subgroup leaders</i>
4:30 – 5:00	Plenary Discussion: Have we missed anything?
5:00	Workshop Adjourns for the day.

**Friday January 16**

8:30 – 9:30	Applied Sciences: How Can We Do Our Science In a Way That Will Maximize Its Utility <i>Maria Tzortziou, CUNY/ NASA Goddard and Ali Omar, NASA LaRC</i>
9:30-10:00	Polarization in PACE <i>Moderator: Jacek Chowdhary, Columbia University</i> <i>Support: Kirk Knoblespiesse, NASA ARC; Olga Kalashnikova, NASA JPL</i>
10:00 – 10:20	Coffee Break
10:20 – 11:30	Subgroup Reports: What have we started doing? How may we modify our activities? Set goals and a work plan for the year. <i>Dariusz Stramski, Scripps Institution of Oceanography,</i> <i>Cecile Rousseaux, USRA/NASA</i> <i>Jeremy Werdell, NASA GSFC</i> <i>Steve Ackleson, NRL</i> <i>Bryan Franz, NASA GSFC</i> <i>Jacek Chowdhary, Columbia University</i> <i>Emmanuel Boss, Univ of Maine</i> <i>Lorraine Remer, UMBC</i>
11:30 – 11:50	What gaps exist in our knowledge and data base that will not likely be addressed by this group in a 3-year time frame? <i>Moderator: Emmanuel Boss, Univ of Maine</i>
11:50 – 12:10	Calendar activities for Year 1 <i>Moderator: Emmanuel Boss, Univ. of Maine</i>
12:00 – 1:00	Adjorn