AERONET-Ocean Color International Workshop:

Overview and Future Developments

AERONET-OC, the AERONET sub-network supporting satellite ocean color applications with standardized measurements of normalized water leaving radiance and of aerosol optical properties, since its launch in 2006, has substantially increased in both number of sites, as well as individual scientific users. In addition, there has been increasing interest in the network from several Space Agencies and the VIIRS Team.

This 1st workshop will provide an avenue to bring together scientists that are 1) managing AERONET-OC sites; and 2) using the data, both for a) research and b) operations, such as for the upcoming launch of VIIRS and other ocean color satellites.

Title: AERONET-OC: 1st Workshop Overview and Future Developments
Location: JPSS Program Office (GreenTech IV), Greenbelt, Maryland (USA)

Potential participants: AERONET Personnel, AERONET-OC PIs, Current Data Users (including representatives of interested Space Agencies), Scientists supporting AERONET-OC development and expansion, and Ongoing and future ocean color satellite calibration and validation networks (see attached proposed list).

Draft Agenda:

February 23, 2011

8:00 Welcome and AERONET maritime aerosol contributions: B. Holben, NASA
8:30 AERONET-OC status: G. Zibordi
9:00 AERONET for VIIRS EDR Validation Activities:
   AERONET for VIIRS Aerosol EDR Validation Activities: (C. Hsu and J. Huang)
   Land (J. Privette)
   AERONET for VIIRS Ocean EDR Validation Activities: B. Arnone

10:00 Overview of individual AERONET-OC sites. PIs will have 10' -15' for their presentations. Current AERONET-OC sites include:

1. Abu_Al_Bukhoosh, Persian Gulf: G. Zibordi/B. Holben
2. SeaPrism Operations at the COVE site: B. Fabbri
3. LISCO, Long Island Sound: S. Ahmed/A. Gilerson
5. Helsinki_Lighthouse, Gulf of Finland: G. Zibordi
6. Venise, Adriatic Sea: G. Zibordi
7. Lucinda, Coral Sea: V. Brando
8. MVCO, Mid-Atlantic Bight: H. Sosik/H. Feng
9. Palgrunden, Palgrunden Lake: S. Kratzer (Presented by Zibordi)
10. WaveCIS_Site, Gulf of Mexico: B. Gibson/ A. Weidemann
11. Potential new sites in highly sediment dominated waters: A. Dogliotti

12:40 **Lunch Break**

13:30 Additional AERONET-OC sites under construction:

11. U.S. West Coast: B. Jones/ C. Davis
12. Gloria, Black Sea: G. Zibordi
13. Chevron gas platform, Gulf of Thailand: B. Holben

14:10 Application of Data Products: space agency prospectuses

- JPSS Program Office: (Karen St. Germain’s)
- NASA: (TBD)
- ESA: (M. Bouvet and K. Baker)
- Korean: (Y. Baek Son)
- China (R. Ma)

15:30 SeaPRISM Instrument calibration, traceability and characterization 20’ each

- Instrument calibration and Data processing. M. Sorokin
- Measurement protocols and uncertainties: G. Zibordi
- Spectral characterization: C. Johnson

16:30 AERONET-OC data processing and quality assurance (I. Slutsker and G. Zibordi)

16:50 AERONET-OC data handling and product distribution (D. Giles)

17:10 AERONET-OC Future Plans:

- AERONET Expansion: G. Zibordi and B. Holben
  - Define new site at desired locations

18:00 Adjourn

**February 24, 2011**

This day is entirely devoted to working groups (from 9:00 to 17:00)

**Working Group I: Application of AERONET-OC Data Products with Satellite Product Match-ups**

Co-Chair: Charles McClain and Bob Arnone

Topics to be covered are:

- Inter-satellite product comparison and validation
• Atmospheric and in–water validations
• Assessing “in-situ” uncertainty
• Validation of satellite ocean color primary products;
• Minimization of uncertainties and biases in satellite ocean color products;
• Regional Vicarious Calibration of satellite ocean color sensors.

Presentations planned: 20’ each

- NASA ocean color calibration and validation. (Franz)
- Spatial and temporal uncertainty of satellite ocean color; real time satellite-AERONET-OC database: (Arnone, Fargion, Weidemann)
- Satellite Covariance and Uncertainty Index at the AERONET–OC sites: (Alvarez, Pennucci, Trees, Fargion)
- Regional application of AERONET-OC data to validation, vicarious calibration and bias-reduction: (Zibordi)
- Evaluation of the satellite ocean color atmospheric corrections in coastal regions using AERONET-OC data (Cedric)
- Aerosol model development and validation. (Ahmad)
- TBD (Wang)

Working group II: Assessments and Future Developments of the AERONET-OC sites

Chair: Giuseppe Zibordi

Topics to be covered are:

• Revision of measurement protocols, algorithms for data analysis and processing code.
• Expansion of in situ measurement at the sites;
• Independent assessment of measurements and data products;
• Cross-comparison of instrument calibrations.

Presentation planned: 20’ each

Deployment requirements for AERONET-OC instruments (G. Zibordi).
Band-shift corrections for match-up analysis (G. Zibordi).
f/Q corrections for Case-2 waters (Z. Lee)
TBD (V. Brando)
Hyperspectral Characterization, etc. (S. Amed/B. Gibson)
-Other

16:00 Closure
- Summary of recommendations from each working group
- Action plans

List of attendees:

1.) Ana Dogliotti
2.) Alan Weidemann
3.) Alberto Tonizzo
4.) Alexander Gilerson
5.) Alexander Smirnov
6.) Antonio Mannino
7.) Bill Gibson
8.) Bob Arnone
9.) Brent Holben
10.) Bryan Fabbri
11.) Bryan Franz
12.) Burt Jones
13.) Carol Johnson
14.) Cedric Jamet
15.) Christina Hsu
16.) Curtiss Davis
17.) David Giles
18.) David Lewis
19.) Georgiy Stenchikov
20.) Giulietta Fargion
21.) Giuseppe Zibordi
22.) Hui Feng
23.) Jeremy Werdell
24.) Jingfeng Huang
25.) Karen St. Germain
26.) KAtheryn Barker
27.) Kevin Turpie
28.) Marc Bouvet
29.) Menghua Wang
30.) Mikhail Sorokin
31.) Rick Gould
32.) Ronghua Ma
33.) Samir Ahmed
34.) Sean Bailey
35.) Vittorio Brando
36.) Young Baek Son
37.) Zhongping Lee
38.) Ziauddin Ahmad