



SPECTRUM B

MONDAY 6 MAY (13:30 - 16:00)

SPLINTER SESSION 2

Advances in atmospheric correction of satellite ocean-color imagery

Co-CHAIRS Sean Bailey (NASA/GSFC), Robert Frouin (SIO/UCSD) and Cédric Jamet (LOG/ULCO)

13:30 - 14:00 **Atmospheric correction over turbid waters**
Cédric Jamet, Université du Littoral-Côte d'Opale

14:00 - 14:30 **Aerosol determination with emphasis on aerosol absorption**
Sean Bailey, NASA/GSFC

14:30 - 15:00 **Atmospheric correction in the presence of Sun glint, thin clouds, and adjacency effects**
Robert Frouin, Scripps Institution of Oceanography, USA

15:00 - 16:00 **The remainder of the session will be dedicated to a general discussion about the atmospheric correction advances and implications for future missions.**
The three Co-Chairs will moderate the discussion

QUESTIONS THAT WILL BE ADDRESSED INCLUDE:

- Do the new techniques address the needs adequately?
- How good the determination of the aerosol model should be?
- What areas or aspects still require improvements?
- Are better bio-optical models needed in the near infrared to deal with turbid waters?
- Are the new techniques mature enough to become operational?
- What are the criteria that make a technique applicable operationally?
- How inter-comparison and evaluation activities should be organized, and by which mechanism?

SYNOPSIS

During the past decade major improvements to atmospheric correction of satellite ocean-color imagery have been made. They allow one to deal effectively with absorbing aerosols, sun glint, thin clouds, adjacency effects, and highly turbid waters, and to attach uncertainties to the retrieved marine reflectance. The proposed techniques do not rely solely on observations in the red and near infrared, the approach currently used for processing data from ocean-color missions. Rather, they include information from the ultraviolet, visible, near infrared, and shortwave infrared. Some techniques also exploit the bidirectional and polarization properties of sunlight reflected by the ocean atmosphere system. The inversion is semi-empirical, physical, or statistical, and tools of various complexities are used, such as principal component analysis and neural networks. The session will discuss the new techniques, including advantages and limitations, and their potential for operational processing of ocean-color imagery from next-generation sensors.