

Report From Ocean Colour Sessions I, II, III & Lakes

MERIS/AATSR Workshop 2005



- **Data access** must be improved. The RR MERIS 7 day rolling archive is used extensively. Processing of this should be updated immediately. Users would like to access NRT FR data in a similar manner (FTP).
- Do we need **vicarious calibration**? Full Val/Cal of in water and atmospheric properties. Some indications of errors in blue (412) and red (665). ESA pay for Boussole (also Moby study) so why not use it? Best to wait and try to understand the reason for the discrepancy at 412 nm? Maybe an absolute error from pre-launch?

- IOCCG Working Group workshop showed that bio-optical variables (bb , $a(\lambda)$) were most robust outputs from many **algorithms** (band ratio algs, NN algs, BoM algs). REVAMP (regional algorithms) had an algorithm ‘testing workshop’ [Brockman consult]. For climate data records total b or a seem to be robust candidates and should be provided as product (in principle it is already the output of the neural net algorithms and easily be computed backwards from the case 2 water concentrations).
- A large number of **bio-optical** data have been collected in different regions which should be utilized in a coordinated manner to improve algorithms or validate the products and indicate possible limits but also where we can be confident in results

- Users have **different requirements**: thus a hierarchy of products should be provided (1. level) reliable water leaving radiance reflectances with error indicators, (2. level) IOPs such as total absorption and total scattering or backscattering, then split into absorption of pigments, yellow substance etc., (3. level) concentrations.

- **New products** - Phytoplankton functional types, photosynthetic parameters. Yes, but maybe we need a workshop (Combine with Algorithm workshop?). Fluorescence – we must pursue further. Relationship to photosynthetic activity?
- **Atmospheric correction** needs to be improved for inland waters (lakes, adjacency effect etc). Many points need further discussion. How will this be taken forward?
- **Flag** indicating possible adjacency effect around land, clouds, sea ice

- Necessary to enhance **synergy** between Chl a (MERIS) and SST (AATSR) they should be produced on a common grid structure (e.g. as per GHRSSST)
- Recommend production of **generalised L3** for SST, Ocean colour, AOT, cloud statistics (& more....) Compatibility of grids, dates, periods (d, 8d.....)
- Need to concentrate on the **unique features** of MERIS
 - 620, 709, 761 bands
 - FR images
 - Demonstrate programmable bands

- **Sentinel-3** recommended needs are: wide swath, tilt (sun glint avoidance), mid-day crossing time(?), 2 sensors.
- To rely on MERIS on Envisat working to 2010 is risky. (GMES-1 satellite?)
- **Documentation of the MERIS products** must be improved / simplified for Users. The potential and limits of the MERIS products must be communicated more clearly.(Including FAQ page..etc)
- Data should be provided together with their confidence ranges, on a pixel by pixel basis . Instead of flags, probability estimates of a problem should be indicated, 4 bits maybe sufficient.