

Project title: WaterS

Funding Scheme: IAPP

Event name: Seminars on inter-calibrations at multiple AERONET-OC sites- 1st event – Intercalibration in Acqua Alta Oceanographic Tower (AAOT) in Venice and European Commission Joint Research Centre (JRC) in Ispra AAOT

Event connection to WP6, M3.1, D6.3:

Due Date according to Annex 1: reporting 31.05.2011 (event 19 July-1 August 2010)

Actual Delivery Date: reporting 30.05.2011

Responsible partner and person: TO (Anu Reinart), SU (Susanne Kratzer)

Participants and names:

There were altogether 14 participants from 8 countries on the event: G. Zibordi, J.-F. Berthon, E. Canuti, L. Jankowski (JRC), Jose Beltram (University of Stockholm, Sweden), J. Icely (Segreमारisco Lda, Portugal), Gerald Moore (Bio-Otika, UK), K. Ruddick (MUMM, Belgium), A. Reinart and I. Ansko (Tartu Observatory, Estonia), A. Bialek (National Physical Laboratory, UK), W. Cordes (GKSS, Germany), K. Sorensen and M. Grung (NIVA, Norway).

Event description

a) Research programme contribution (*WP2, Task 2.1*)

Task 2.1 Exchange of know-how in the interpretation of optical signals from remote sensing platforms as well as in situ devices for the optically complex waters of lakes and Baltic Sea.

From July 19th to 30th 2010 Intercalibration workshop Acqua Alta Oceanographic Tower (AAOT) in Venice and European Commission Joint Research Centre (JRC) in Ispra, Italy. Organised by By Giuseppe Zibordi, JRC.

From July 19th to 25th 2010 there was held a field campaign for intercomparison of the water remote sensing radiometers in AAOT. Work included installation of RAMSES spectroradiometers on tower together with international teams and laboratory tests. This work was performed as participation in network of “Assessment of In Situ Radiometric Capabilities for Coastal Water Remote Sensing Applications (ARC-2010)” developed as a CEOS-WGCV initiative, supported by ESA and involving European groups contributing to the MERIS validation program.

From July 26th to 29th the laboratory calibration/inter-comparison workshop was held at the JRC. Within such a framework, three major activities took place: the absolute calibration of the radiometers deployed at the AAOT during the field inter-comparison (plus a number of additional radiometers currently in use for MERIS validation), the inter-comparison of sun-photometers and the inter-comparison of spectrally calibrated 1000W FEL lamps utilized for absolute radiometric calibration.

The radiometric data products from field measurements (duly calibrated with the coefficients produced at the JRC) were forwarded for successive analysis. These data accompanied by an

updated description of the measuring protocols, data processing and uncertainties. The inter-comparison is “blind” and results will be discussed in a following focused MVT workshop.

The aim of this campaign was to compare different instrument sets and measurement protocols used for above- and in-water remote sensing. Such intercomparison is an important step if one wants to use *in-situ* radiometric data for the satellite product validation and algorithm development. Such activities will benefit for TO optical radiometry competency development and make possible further participation in aquatic remote sensing networks and ESA projects.

The intercomparison results were presented on the MERIS MVT meeting in Ispra 8-10 March (see WP7 report, task 7.5 Participation on international T&D conferences).

Data collected were distributed between partners for further use as well create input to the ESA MERMAID database for intercalibrations.

b) Knowledge transfer programme contribution (WP6, T6.1, WP7, T7.5)

The intercalibration exercise was organised by the leading scientist in aquatic remote sensing dr. Giuseppe Zibordi (JRC) and in line with European Space Agencies activities for Earth Observation data applications and increased quality control. During the event both experienced researchers and young researchers as well as technical personal from different countries worked together.

In practice there was possible to share knowledges to work with various instruments like TACCS and TriOS Ramses – both in the sable platform (tower) and moving platform (boat). The hand held instrument WISP was not included into standard intercalibration plan, was used additionally to provide extended dataset for further comparisons.