MERIS and AATSR Validation Team Workshop
March 2006

Pascal Lecomte
ESA/ESRIN

MAVT-2006, March, 20th
MAVT-2006 working meeting objectives

This working meeting will review the results of the instrument calibration and validation of the geophysical data of MERIS and AATSR.

- to review the current status of the instrument calibration
- to review the Level 2 product algorithms using the results of the validation campaigns,
- to review the geophysical consistency of the Level 2 processor products,
- to provide an error estimation of the Level 1 and 2 products.
AATSR SST and LST Data

- **AATSR Operational Processor**
  - LST NRT data since 10 March 2004. Consolidated data prior to this date. No lake retrievals.
  - All AATSR data acquired from 30 November 2005 onwards are corrected for visible channel drift.
  - All AATSR data processed after 05 December 2005 contain SST data based on new retrieval coefficients.
  - The systematic processing of all historical data with the new coefficients will be another objective of the second AATSR reprocessing, planned for Summer 2006.
MERIS 2nd reprocessing: Changes Description

- Chl1 polynomial from LOV
- Chl1 validity range set to [0.01, 30.], no PCD raise when out of range
- Troposphere-free MAR99 replaces BLUE-\(\alpha = 1.5\) (from previous Bomem runs)
- Gothic R LUT from LOV
- Chl2 conversion factors from GKSS (revised with latest NN delivery)
- YS coding offset and scaling factor (linear to log scale, same range)
- Chl coding range \([-2, 2]\) in log10 scale instead of \([-3, 3]\) previously
- Whitecaps threshold set to 10 m.s\(^{-1}\)
- New Case 2 NN from GKSS (with and without linear reflectances as input)
- White scatterer threshold set to 4.8
- MTCI threshold on B13-B8 difference set to 0.05, on B10-B8 to 1e-6 (numerical purpose only), ceiling for B8 set to 0.3, floor for B9 to 0.1
- Preliminary version of LARS LUTs from Hygeos
MERIS Data

- This working meeting assesses the quality of the products processed by MEGS 7.4 processor or IPF 5 processor.
- MEGS 7.4 and 7.4.1 have been used for the 2st MERIS reprocessing.
- They are strictly identical in terms of products, the only differences being the values of some reference fields in the Products Headers.
- MEGS 7.4.1 and IPF 5 (to be operational soon) are equivalent.
Monday 20 March 2006, 14.00-19.30
Status of ENVISAT and of AATSR and MERIS
MERIS and AATSR Calibration - 1

Tuesday 21 March 2006, 09.00-19.00
MERIS and AATSR Calibration – 2
AATSR SST and LST Validation
Working Meeting Diner

Wednesday 22 March 2006, 09.00-19.00
MERIS Atmosphere and Land Products
MERIS Atmospheric Correction
Poster contributions and summary preparation

Thursday 23 March 2006, 09.00-19.00
MERIS Water Product Validation
Poster contributions and summary preparation

Friday 24 March 2006, 09.00-13.00
Accuracies of the AATSR and MERIS Geophysical Products
Monday 20 March 2006, 14.00-19.30, Building 14
Session 1: Status of ENVISAT and of AATSR and MERIS

14.00 Welcome Address
   Pascal Lecomte

14.05 ENVISAT Status, MERIS/AATSR data availability
   Henri Laur

14.20 Status of the AATSR and MERIS instruments and Quality Working Groups
   Philippe Goryl

14.30 MERIS Cal/Val portal
   Carsten Brockmann

14.50 (A)ATSR Archive
   David Llewellyn-Jones

15.10 MERIS processor changes
   Ludovic Bourg

15.30 Coffee Break
MERIS and AATSR Calibration and Validation

- (Vicarious) Calibration and Sensor Inter-comparison
- Validation of sea surface temperature
- Validation of land surface reflectance / temperature
- Water products validation
- Clouds and water vapour products
- Vegetation product and atmospheric corrections over land
- Data quality assessment
Have a nice and productive working meeting

‘In theory, there is no difference between theory and practice. But, in practice, there is.’

Jan L.A. van de Snepscheut