

## **MEMORANDUM**

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**To** : AATSR Users

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### **Second Reprocessing of AATSR Data and Completion of Archive**

The second reprocessing of AATSR data, begun in July 2007, has been completed. This version 2.0 AATSR data has now all been processed with IPF version 6.01, and this is the data now available from the archive.

Version 2.0 data may be ordered via the EOLI interface, or straight from the archive via the MERCI interface. Access is granted to the NEODC archive for NERC-funded UK scientists, and via the ESA archive for all other users. Requests for access should be made in the usual fashion, contact [EOHelp@eo.esa.int](mailto:EOHelp@eo.esa.int) for details.

In addition, the ATSR-1 and ATSR-2 data have been reprocessed into Envisat format, to be consistent with the AATSR data processed using IPF v6.01. This is also available from the archive, providing a consistent dataset spanning 1991 to present day.

### **(A)ATSR Archive Quality Control Activities**

The completed archive of ATSR-1, ATSR-2 and AATSR data has undergone extensive quality control (QC) checking, to ensure that the data made available is of good quality. These QC activities were performed by the IDEAS AATSR QC Team, and a summary of the results is attached (IDEAS-VEG-OQC-REP-0253).

There were no major problems found, although there were a few points noted which users should bear in mind when ordering and handling (A)ATSR data from the archives. These are included in the attached summary.

### **Introduction of the L2P Product Format for AATSR Data**

AATSR data are now available in L2P format. (See the L2P entry in the data products area: <http://earth.esa.int/object/index.cfm?fobjectid=5975>.) Access to the dataset is via FTP, please contact EOHelp for more information.

The generation of the AATSR L2P product was originally initiated by the DUE Project Medspiration, as part of the European contribution to GHR SST (<http://www.ghrsst-pp.org/>).

Acknowledging the success of the Medspiration project, in particular for its promotion of the use of AATSR data, it was decided that following the closure of this project, ESA would adopt the L2P format and produce the AATSR L2P product.

The L2P product contains dual-view Sea Surface Temperature (SST) values, equivalent to the valid SST dual-view field in the Gridded Surface Temperature (ATS\_NR\_\_2P) products. Additional datasets are provided containing the dual-nadir difference, and other ancillary information.

An estimate of the uncertainty associated with each SST value is provided via the Single Sensor Error Statistics (SSES), which provided a bias, standard deviation and a proximity

confidence value. The SSES take into account the number of channels used in the retrieval, the dual-nadir difference value and the wind speed. The bias and standard deviation are provided through comparison with a match-up database of AATSR observations to in situ data records. An allowance is also made in calculating the biases for AATSR measuring the skin SST unlike the in situ data.

Users may find the following documents useful in understanding the L2P product, including the differences between this and the Medspiration L2P products:

- (A)ATSR L2P Product Description  
(<http://earth.esa.int/object/doc.cfm?fobjectid=5984&linkSource=fulltext>)
- AATSR Single Sensor Error Statistics  
(<http://earth.esa.int/object/doc.cfm?fobjectid=5985&linkSource=fulltext>)
- (A)ATSR L2P In Situ and Ancillary Data Format Description  
(<http://earth.esa.int/object/doc.cfm?fobjectid=5983&linkSource=fulltext>)

The documents listed above are available from the Earth Observation User Services Library (<http://earth.esa.int/resources/documentation/>). For any further information or queries, please contact [EOHelp@eo.esa.int](mailto:EOHelp@eo.esa.int).

### **Improvement to colocation of nadir and forward views**

An update to the instrument characteristics auxiliary file (ATS\_CH1\_AX) has been identified, which will result in improved colocation between the nadir and forward views. The modified auxiliary file is currently undergoing final verification, after which it will be ready for implementation. There will however be a slight delay in introducing the file into the operational processing, due to the need to update the Single Sensor Error Statistics (quality indicator for SST, see above). This will require the reprocessing offline of at least six months of data using the updated file. Once the SSES have been recalculated, the new CH1 file will be integrated in the ground segment for operational processing.