

ATSR Core Group

Summary of the 23rd meeting, held on 11th October 2001 at Rutherford Appleton Laboratory

Present:

Prof D Llewellyn-Jones (Univ. of Leicester) - Chairman	Dr S Brown (DEFRA)
Dr M Edwards (Univ. of Leicester)	Dr S Wilson (NERC)
Mr N Houghton (RAL)	Mr T H Guymmer (SOC)
Dr B Maddison (RAL)	Philippe Goryl (ESA)
Dr C Mutlow (RAL)	Pascal Lecomte (ESA)
Dr A Birks (RAL)	Dr S Laxon (UCL)
Dr R Saunders (Met Office)	Dr H Tait (ESTEC)
Dr L Horrocks (Met Office)	Dr Y C Robertson (NERC) - Secretary
Dr J Settle (ESSC)	

Apologies:

Ian Barton (CSIRO)
Mr A Underwood (Infoterra Ltd)

ESA Status Report

LRDAF activities have been transferred from Fucino to Matera. Processing of Phase C of the ATSR mission (April 92 – December 93) has been completed and the data sent to RAL. Processing of phase A data (starting August 91) is under way on the first system, and data up to October 91 has been received at RAL. It is intended that all data up to the start of phase C will be processed on this system. The second system has just started processing Phase D data (second ice phase from January 94).

The ACG conveyed their appreciation to ESA for the work done on transcribing the data.

It is planned to have all the data transcribed by 2002. The data are put on the ESA on-line browser as they become available.

ERS2 Attitude control

Zero gyro mode was switched on at the end of June. This reduced the yaw uncertainty from +/-10° to about 1-1.5°. The geolocation error has also been reduced, from 20-30km to a maximum of 5km (at nadir). Attitude monitoring uses wave products and is incompatible with the high data rate ATSR2 products. Yaw data obtained in this way can be used to correct the on-board model, but this cannot be done too often, so on-board yaw control of 1-1.5° may be the best that can be achieved in practice. Better values (of the order of 0.3°) are available on the ESA web site for a posteriori use by informed users and ESA would welcome feedback on this data to verify their method.

RAL reported that geolocation problems have not fed through to SST products as the data is not being processed at present. SADIST is being upgraded to take new geolocation information, and RAL would welcome advice on how to proceed. The impact of geolocation errors on cross-calibration activities was also raised.

ESA reported that out of plane manoeuvres necessary to correct the orbit are not possible at present. It is hoped that this will be possible before Envisat launch. The present orbit is slightly out of specification, with the inclination changing.

The Chairman asked about the basis for the 5-year design lifetime of ERS2. The components that might fail with time include the tape recorder and amplifiers. The situation is better than for ERS1 at the same stage, and fuel supply, battery lifetime are not likely to cause problems for some time.

Promotion Activities

ESA are promoting the ten years of ERS (see ESA web site).

ESA have awarded a contract for an AATSR and MERIS user toolbox project.

RAL Progress Report

RAL presented their quarterly report. Updates and discussion/actions arising are noted here. RAL had prepared three presentations for the ACG, on the coefficients used for SST processing, on sunglint and quality assurance.

Andrew Birks (RAL) gave a presentation on the coefficients used to calculate SST from the BT data.

Some details of the SST processing were then discussed. Topics covered included use of the new version of HITRAN, wider availability of RADGEN for comparison with other radiative transfer models, and the effects of data sparse areas in the reanalysis data used for the coefficients.

The latest reprocessing of ASST uses SADIST version 322. The ACG agreed that information on the current status of SADIST and the various products should be summarised and put on the web site for potential users.

The sunglint presentation was not given because of time constraints. Andrew Birks summarised the effect of sunglint as a perturbation of up to 0.2K in the 11 and 12 micron channels under conditions of very strong sunglint. Sunglint will be discussed at the next PCB meeting.

Chris Mutlow gave a presentation on aspects of quality assurance. The differences between 4 and 6 channel retrieval have values up to 0.6K, with the 6 channel algorithm giving higher SST values than the 4 channel one. Cloud and/or water vapour may be the cause. ASST data has been generated with SADIST 322 for the complete CABT dataset. The Chairman emphasised the importance of this work and would like it discussed further at a PCB meeting.

Indian Ocean cruise. There will be 9 overpasses during the 11 days of the first leg of the cruise, and 8 during the 14 days of the second leg.

ATSR-2/AATSR Cross-validation

Marianne Edwards circulated a document listing 3 cross-validation options and the rationale behind their selection.

Chris Mutlow gave a short presentation on the cross-validation activities for ATSR 1 and 2. These were carried out early in the lifetime of ATSR 2. BT and SST were both compared using the original algorithms. The differences between ATSR 1 and 2 values were within the noise level.

The separation between AATSR and ATSR2 during the commissioning phase will be 30 minutes, so that cross-validation should be easier.

The ATSR Core Group supports the action of making an application for a NERC Enabling Grant for funding towards SISTeR's participation in the SCIPIO cruise in May/June 2002.

ATSR/AATSR archiving

The Chairman had received input on the archiving question from three ACG members and from two sources outside the ACG.

There is a good scientific case for a level 1b archive. However data size, access and timescale have to be considered. Potential interest in an archive of ATSR data is growing. RAL pointed out the necessity of taking action whilst funding was available, and before the raw data archive deteriorates.

Steven Wilson informed the meeting that the role of the NERC Earth Observation Data Centre (NEODC) is being redefined, and that ATSR data will be discussed in the context of the plans for NEODC.

The meeting accepted the suggestion from RAL that they should produce a technical note detailing the costs and implications (time ...) of a Level 0 and Level 1 archive.

Next Meeting

The next meeting will be on **Friday 1st February 2002 at Leicester.**