

ATSR Core Group

Summary of the 13th meeting, held on 15 January 1999 at Rutherford Appleton Laboratory

Present:

Prof D Llewellyn-Jones (Univ. of Leicester) - Chair	Mrs K Hutchins (NRSC)
Dr J Abolins (RAL)	Dr S Laxon (UCL)
Dr V Beruti (ESRIN)	Dr P Martin (ESA)
Dr A Harris (UK Met Office)	Dr C Mutlow (RAL)
Dr J Hinton (NERC)	Dr K Pearson (DETR)
Mr N Houghton (RAL)	Dr J Settle (ESSC)
Dr R Houseago (SOC)	Ms A Morrison (NERC) - Secretary

Apologies:

Dr S Briggs (NERC)
Dr P Goryl (ESRIN)
Mr T Guymer (SOC)

ESA Status Report

Satellite operations. At a recent programme board, it was agreed verbally by all delegations to continue operation of the ERS satellites until at least 2001-2. They were clear that there should be no gap between ERS and the launch of ENVISAT, which is still scheduled for mid-2000.

There are no major problems with the satellites, except for ERS-1's power problem. RAL pointed out that ATSR-1 data quality has improved since it was switched off. They would like this message to go back to ESA, so that they are aware that it is worth maintaining it because it would be useful in the event of a problem with ATSR-2.

LRDAF Operations status. A few minor problems still need to be fixed. Operations are due to start at the beginning of February. At the beginning, one tape will contain one acquisition day. Then after a period of a few months (to be decided) more than one day of acquisition will be written to each tape. There is the possibility of 3 days storage on each exabyte tape. Transcription will begin with ERS-1 phase C (April 92 – Dec 93), to avoid noisy data from 1991 until the system is proved to be operating well. After a few months (to be decided) a second system will be installed at Fucino, which will start processing from July 91 to April 92. Feedback from RAL will be requested for qualification of the system.

Tromsø NRT service. The NRT system at Tromsø has started a test phase (4 orbits acquired and processed since December), with no major problems. One performance problem was solved in December by a new hardware configuration. The system is based on direct ingestion. The user interface was developed by WebBridge and is under final acceptance test (OSAT 14-15 January) before being shipped to Tromsø. Operation will begin with one test client (Matra) in February 1999. The link between Tromsø and ESRIN needs to be upgraded to 64Kbps (CIR 32Kbps) in order to support this and other missions. Operationally, 10 ASST orbits will be generated, along with a limited amount of GBT and GSST. A 4-day rolling archive of products will be maintained. Distribution will adhere to the ERS data policy. The system will have password-controlled access. It will also be possible for spurious demands for immediate data to be handled through ESRIN with reduced bureaucracy. The service will be free of charge to PIs, scientists, etc. It will also be free of charge to commercial companies in the beginning, until the service is proven.

RAL Progress Report

Chris Mutlow presented the RAL quarterly report (ACG.83) and the schedule for the next quarter (ACG.84). Good progress has been made this quarter.

An international Users Group meeting is being organised for 23-25 June at ESRIN in conjunction with ESA.

The SISTeR instrument has been successfully deployed on a BAS cruise, though with some penalty to the completion of SISTeR-2 as the same staff were involved. More staff have now been assigned to this work, and a completion date of 1 March 1999 is anticipated, with deployment soon after.

The "intercomparison kit" project is moving ahead well. This required the development, ahead of schedule, of the ABT merging tool to extract buoy matches, and significant progress has been made with this.

ATSR web pages are undergoing a major review and upgrade. The review and upgrade of pages is intended to make it easier to keep up-to-date.

RAL are considering the future development of SADIST, bearing in mind AATSR products.

Level of user requests. Figures were presented showing the level of requests from users over the 4 years 1995 to 1998. In addition to the MRF, there was a steady level of about 60 requests completed per year from 1995 through 1997, with a drop to just 32 in 1998. The total number of products delivered in 1995, 1996, 1997, 1998, respectively was 96K, 23K, 32K, 81K, including the MRF. Excluding the MRF, the total number of products was 96K, 14K, 14K, 30K. If the figures are adjusted to exclude very large requests, the number was 20K, 15K, 15K, 9K. This last figure is believed to be the best indicator of the level of requests, and shows a large fall in 1998.

RAL generates more products than these figures show, and GBROWSE figures are not included. In 1998 approximately 1.5 to 2 million products were generated.

There are 13 entries in the MRF, of which some entries cover more than one geographical site.

Promotion of ATSR

a) December '98 User Group Meeting

The user group meeting took place 2-4 December at RAL, with around 30 people in attendance. The meeting was felt to be a worthwhile forum, and a few surprising points came out of it.

Each day of the meeting was split into 2 parts, with general status/discussion of issues each morning, and science talks in the afternoons. The science talks by users were of high quality and demonstrated ATSR's benefits over AVHRR. One talk of particular interest by Hugh Eva highlighted the work being done under a contract with NOAA, which has been running for one year, and involves cross-calibrating AVHRR and ATSR.

There was good feedback about the User Guide, which will be incorporated into the next version. Most comments were about the organisation of the guide, rather than omissions. It is likely that the "product guide" will be reviewed in the light of comments made. There was a strong indication that users do not want to know the details of the product format, but rather how to read the products into packages such as Envi, Erdas, etc. Most users indicated a preference for a single manual to cover ATSR, ATSR-2 and AATSR.

There was a long discussion about involving users in some of the algorithm development work. It was agreed that this was a worthwhile idea, but there was little uptake because no extra funding would be available for the institutes involved. This idea will be pursued at future meetings.

Little interest was expressed for NRT data access. However, users thought they might make use of the Tromsø facility "because it's there".

Overall, 3 areas were highlight as meriting attention. First, large data sets need to be made available to the user community (but without mailing costs) by putting them online to be accessed remotely. Second, some adjustments to the User Guide and Handbook are necessary and are discussed under

item 5(c) of the agenda. Third, users want to read ATSR data into image processing packages as simply as possible. RAL will investigate this further, by asking their users which image processing packages they prefer to use, and consulting with ENVI and ERDAS, before reporting back to the ACG. IDL and C ingesters are already available on the ATSR ftp site.

b) June '99 International User Group meeting

The International User Group meeting is to be held during 23-25 June 1999 at ESRIN, Italy. This will be announced to the community during January. Abstracts for talks will be required by 9 April, using a website from March. Acceptance notices for presentations and posters will be issued 1 May. The preliminary programme will be distributed during May. Submission of full papers will be required by 1 June, via the website.

The organising committee are: G. Kohlhammer, D. Llewellyn-Jones, C. Mutlow, G. Pittella, P. Goryl and A. Buongiorno. Contact point is jfyall@esrin.esa.it (Jennifer Fyall). Proposed application areas to be covered include: atmosphere, meteorological, clouds, climate, ocean, vegetation, land applications, cryosphere, fire, volcano, fisheries, ENVISAT. Special sessions are planned on data merging, land applications (atmospheric correction, land surface temperature), and ATSR/GOME synergy.

c) User Guide and ATSR Reference Handbook

Following the comments made at the user group meeting, a number of changes will be incorporated into the user guide and reference handbook, and placed online. There was some discussion about the issue of combining ATSR and AATSR information in a single user guide. The ACG decided to keep the current ATSR User Guide as ATSR only, and then produce a new analogous document for AATSR when ENVISAT is launched.

d) "Intercomparison kit" project

In early November, Jack Abolins and John Wright (RAL) met with Andy Harris to discuss the requirements for generating GBT/GSST buoy-match-up products, which are needed as part of the ATSR Intercomparison data set. The data set is to include SADIST-2 GBT and SST products for one year of UKMO drifting buoy sea temperature measurements whenever there is an overpass of ATSR-2 within one hour of a buoy measurement. There are estimated to be 200 match-ups per week, or 20 000 products per year. The data set will be distributed on exabyte tape, along with the match-up catalogue. A new software tool has been developed to automatically identify match-ups and prepare SADIST-2 request files, and is undergoing extensive testing prior to starting the processing very soon. RAL plan to release the data set by June, before the international meeting.

Product Control Board (PCB)

The PCB met once in September 1997. The ACG agreed that the role of the PCB is to be responsible for the traceability of products and their performance. In line with this, the Chairman has modified the Terms of Reference for the PCB.

In September 1997, the PCB consisted of: Jack Abolins (RAL), Chris Mutlow (RAL), Albin Zavody (RAL), A. Buongiorno (ESRIN), P. Goryl (ESRIN), Candy (Hadley Centre), Tom Forrester (SOC), A. Harris (UCL), David Llewellyn-Jones (Leicester Univ.), Chris Hutchins (NRSC). Some of these people are have retired or moved to other jobs, and need to be substituted. The composition of the PCB should remain much the same, with members from different application areas and organisations. The Chairman and RAL agreed to settle the membership of the PCB.

The Chairman will call a meeting of the PCB within the next 3 months to consider 3 issues: SST coefficients; cloud identification; atmospheric correction for land surface temperature.

AATSR Current Status

The AATSR instrument is now back in Bristol. Some tests on the DEU are still ongoing. The delivery review board is due to meet on 1-2 February and DETR are expected to take delivery then. The noise problem has been reduced to an acceptable level and hopefully will not re-occur.

A prototype AATSR processor is working at RAL. ESA are now putting together an operational processor.

Possible schemes for atmospheric correction to visible reflectance over land

Current standard products from ATSR-2 do not include atmospherically corrected visible/NIR reflectances, which are needed for certain soil-adjusted vegetation index schemes. Following recent discussions at the AATSR Science Advisory Group and at the ATSR User meeting in December, it has been pointed out that there are now several possible atmospheric correction schemes available (some of which result from work funded by the NERC ATSR-2 Special Topic) which may be suitable for implementation. Such schemes would be unlikely to be ideal in the first place, but it may be useful to the land user community to make an atmospherically corrected reflectance available on a trial basis.

The ACG agreed that there has not previously been a demand for this product, but that it is now timely to consider this. The ACG recommended that the PCB should consider the options available, and report their findings back to the ACG.

Next Meeting

The next meeting of the ACG will take place at **10am on Monday 19th April 1999 at RAL.**