Mission Report
18th GERB International Science Team Meeting

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Location : Valencia, Spain.
Schedule : May 14-16 2003.

This meeting was the second one after the switch on of the GERB instrument.

The on-ground life test for the bearing system was completed successfully for a lifetime of 7 years plus a 20% margin.

For the next eclipse season, EUMETSAT advises to shutdown GERB during 5 hours per day. It will be discussed in the next GERB Operations Meeting if this advise will be followed.

Most special calibration modes were executed except the alpha scan mode. Two shortwave calibrations have been done on 10th February and 30th April around 15:00 UTC.

The in-flight calibration of GERB is now correct except for the total channel around midnight ± 3 hours due to stray light problems.

There is a 0.1 pixel difference in pointing between the two sides of the de-scan mirror.

The main problem with geolocation is due to drift and jumps of the start-of-line (SOL) pulse. There is a jump of 4 GERB pixels when a change of sensor for the pulse generation occurs. If only the Earth sensor is used which happened for example on the 1st May, very noisy East-West geolocation is obtained. The drift of the SOL causes a diurnal cycle in the geolocation error. There is a systematic North-South difference between the GGSPS and the RGP geolocations. The North-South smear is still unknown. The GGSPS does not receive the full SEVIRI header information yet.

The first CERES special scans for comparisons with GERB were made on the 7th and 8th May. For every day, there were 4 useable CERES orbits. The next special scans will be made from 24th May to 6th June. It is required to receive SEVIRI images for this period.

A special validation campaign will be held near Valencia in mid-June for the validation of GERB/SEVIRI with CERES, surface measurements (e.g. Sun photometers for aerosols and lidar), possible radio soundings and high resolution imagers (Landsat, MERIS, AATSR).

Gary Robinson (ESSC) presented a method for the in-flight measurement of the GERB PSF.

Lou Smith gave some information about lunar calibrations. The moon has an albedo around 10%, is spatially not uniform, its illumination conditions change with time and it is highly non-Lambertian. As a conclusion, it is not useful as a GERB calibration source.

The detector spectral response measurements were affected by a shutter timing problem. It appears possible to retrieve some better measurements from the collected data.

We presented the comparisons of GERB with CERES indicating a good correspondence for the reflected solar radiances and a 2% difference for the emitted thermal radiances. This 2% difference is probably due to the calibration problem around midnight. We also presented a method for the geolocation validation.

It is requested that we provide information to our data users about the known quality and artefacts of our products.

The next GIST meeting will be held at Rutherford Appleton Laboratory the last week of August.