

GERB status

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Please note that I expect to be on maternity leave from 20th June 2007 to late Jan 2008. During this time (although I may be looking at email occasionally!) my post will be covered by Richard Bantges (r.bantges@imperial.ac.uk).

At any time queries may also be sent to gerb@imperial.ac.uk where someone from the imperial GERB team will answer them.

GERB 2 MSG-1 (MET-8)

- 10/04/07: EUMETSAT switched from MET-8 (GERB 2) to MET-9 (GERB 1) as prime operational satellite
- Both satellites and imagers will continue to operate in parallel until 10/05/07
- GERB edition 1 will be available from the GERB 2 instrument until 10/05/07
- Due to the sun avoidance period the operation of GERB 1 (MET-9) starts on 19/04/07 giving three weeks of parallel GERB 1 and GERB 2 observations (19/04/07 to 10/05/07) with co-incident imager (SEVIRI) data from the same satellite
- We anticipate operating both GERB instruments until end May 07, however GERB edition 1 data will only be available until 10th May using the GERB 2 instrument.
- Edition data for GERB 1 will be delayed until this data set has been validated and is not expected before 2008.

GERB 1 MSG-2 (MET-9)

- 10/04/07: EUMETSAT switched from MET-8 (GERB 2) to MET-9 (GERB 1) as prime operational satellite
- Both satellites and imagers will continue to operate in parallel until 10/05/07
- Due to the sun avoidance period the operation of GERB 1 (MET-9) starts on 19/04/07 giving three weeks of parallel GERB 1 and GERB 2 observations (19/04/07 to 10/05/07) with co-incident imager (SEVIRI) data from the same satellite
- The nominal edition record from GERB 1 will begin on 10/05/07 (this allows for the two months of prior SEVIRI data required to perform the standard GERB cloud detection)
- However the release of this edition data for GERB 1 will be delayed until this data set has been validated and is not expected before 2008.

Summary of overlap data

We have 4 periods of GERB 1 (MET-9) and GERB 2 (MET-8) dual operation, two with co-incident CERES special 'GERB-PAPS' mode.

Dates	GERB 1 (MET-9) location	GERB 2 (MET-8) location	CERES PAPS scan time & location
24/04/06 – 04/07/06	-6.65 to -6.35	-3.55 to -3.25	01/06/06 – 30/06/06 6.5 W (S Hemi)
19/07/06 – 17/08/06	+0.5 to +0.25	-3.55 to -3.45	N/A
09/01/07 – 10/02/07	+0.0 to +0.8	-3.6 to -3.45	19/01/07 – 10/02/07 1.75 W (N Hemi)
19/04/07 – 10/05/07	-0.4	-3.55	N/A

Currently only the June 2006 GERB 1 data has been processed to level 2 (RMIB resource availability means we can't reprocess and process two data streams).

GERB 1 calibration

- All GERB 1 data so far has used a dummy detector spectral calibration (i.e. spectrally flat) in the absence of GERB 1 detector information, combined with the actual GERB 1 mirror responses. This means that the data are expected to 'look different' from the GERB 2 measurements.
- Current proposal for after the swap is to use the GERB 2 detector spectral response as a 'witness sample' for the GERB 1 detector response (NB from the same batch of detectors) combined with the GERB 1 mirror measurements. This would make the datasets consistent.
- Overlap data would be reprocessed with this response
- Longer term a new measurement on the GERB 1/2/3 flight spare detector and possibly the GERB 3 detector is planned

GERB edition data current availability

- After the release of the GERB level 2 ARG in May last year, the GERB level 1.5 NANRG edition 1 data was released in Jan of this year. Product quality summaries and user guides are accessible for both products from the GGSPS website (see <http://ggsp.s.rl.ac.uk/information.html>)
- Currently the GERB level 2 edition 1 ARG and level 1.5 edition 1 NANRG product archive is available for the period October 2005 to 40 days before present (will be up to 10th May 2007)
- Additionally reprocessing has now provided level 2 edition 1 ARG products from the nominal start of the available record (25th March 2004 to end July 2004)
- Additionally data for Feb 04 and 1-24 March 04 processed with the same software version as the edition data is available from the archive although not named edition due to differences in the cloud detection necessary to process this period (the cloud detection requires a reference clear sky image that is usually derived from the prior 60 days of data, however for this period the following 60 days were used). There are currently no plans to reprocess data from before Feb 04 as it presents additional problems.

GERB edition future availability

- We expect the full record for level 2 ARG and level 1.5 NANRG from 25/03/04 to 10/05/07 to be available as edition 1 products by November this year, although it is dependent available resources at RMIB.
- NOTE: there are significant outages in the GERB record during this period due to operational problems, the most significant outages when no science data was collected are:
 - 31/07/04 to 22/09/04
 - 03/10/04 to 09/10/04
 - 01/03/05 to 23/04/05
 - 18/08/05 to 29/10/05
 - 23/09/06 to 10/10/06
- A record of significant outages is maintained at <http://ggsps.rl.ac.uk/Released.html>

GERB data after 10th May 2007

- On 10th May 2007 the GERB 2 (MET-8) Edition 1 record will stop. Edition data from GERB 1 (MET-9) is not expected to be released until spring '08.
- NRT processing of the GERB 1 data will continue and be accessible from RMIB but will not initially be deemed suitable for scientific work.
- The intention is to validate the GERB 1 data for an edition release, but this initial release will be considered separate from the GERB 2 dataset as for the Edition 1, work to tie the two GERB data sets together will not be completed.

GERB processing after 10th May 2007

- The swap will be used as an opportunity to include some improvements in the processing. Expected minor improvements include:
 - Additions to the automatic quality checks and data exclusions
 - Additional fields in the products, such as pixel level flags and angle information
 - Correction to only exclude actual glint conditions, i.e. glint angle over ocean only, as opposed to currently glint angle for all scenes
 - Possible filling of the glint region, if the inclusion of pixel level flags allow it to be clearly identified
- It is being discussed if more significant changes to the processing, such as improvements to the cloud flags, or radiance to flux conversion should also be considered for the GERB 1 processing before an edition 2 reprocessing exercise on the GERB 2 data is begun. This would provide the best processing of the latest data but would mean the GERB 1 dataset was significantly different from the GERB 2 set in some respects.