

New developments in the GERB products suite: BARG and HR Edition release

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The Geostationary Earth Radiation Budget (GERB) instrument has been flying on Meteosat since Meteosat-8, and has been providing broadband measurements of outgoing Top-Of-the-Atmosphere (TOA) shortwave and longwave flux since 2004. The data record extends over 10 years now, making it a useful resource for the assessment of climate variability, as well as providing a benchmark to compare model output to.

The science results of the GERB instrument are disseminated in several forms, two of which will be presented in this contribution. The first is the High-Resolution (HR) product, with a spatial resolution of 9 km at nadir and a temporal resolution of 15 minutes. The high resolution of this product renders it very useful for the study of fast, small-scale processes. The second product is the Binned Averaged Rectified Geolocated (BARG) product, with a spatial resolution of 45 km at nadir and a temporal resolution of 15 minutes. It is intended to be used by weather and climate modellers for model validation. The Point Spread Function (PSF) of the instrument has been removed from both products to make them more accessible to weather and climate scientists.

In this contribution, we present the features of the upcoming release of the GERB BARG and HR products. The new release is aimed at constructing more robust monthly and daily means. Improvements to the RMIB Level 2 GERB processing are discussed, and special consideration is given to the treatment of the shortwave flux in the sun glint area and in the terminator region.