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Generation of long term surface albedo datasets with Meteosat First Generation images.

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The importance and the key-role of the surface albedo in the study of the climate change have been clearly addressed by the Global Climate Observing System (GCOS). The requirements for this and others essential climate variables are (i) a global coverage over long-term periods with adequate spatial and temporal resolution, (ii) reliability and accuracy as well as a (iii) quality control.

The Coordination Group for Meteorological Satellites (CGMS) assigned to EUMETSAT an actions (T18 (TF7)) in order to prototype and test new algorithm able to retrieve surface albedo using geostationary satellites as described in the "Implementation plan for the global observing system for climate in support of the UNFCCC" document (WMO/TD No. 1219).

In this frame EUMETSAT decided to develop a new specific code, the Meteosat Surface Albedo (MSA) based on an algorithm proposed by Pinty et al. As Meteosat first generation satellites have not been designed for climatology, before proceeding with the analysis of the complete archive ($\sim$ 25 years of data), a detailed evaluation activity on the albedo datasets generated with the MSA has been computed in order to check the compliance with the previous points (ii) and (iii). Specific efforts have been put on the estimation from the data of the measurement error.

MSA is currently running in the Operation reprocessing facility of EUMETSAT in order to generate reliable albedo dataset starting from the 1982, through the analysis of data acquired by the six different Meteosat first generation platforms. Currently almost 50% of the archive has been processed and the albedo datasets can be requested

to the EUMETSAT archive facility.

In this paper it will be presented the strategy and some results of the analysis of the archive performed to check the applicability of the algorithm to the complete Meteosat series and the presence of potential problems due to the differences between those platforms. It will be shown how the MSA, according to this analysis, is a reliable algorithm for the generation of long term albedo datasets.