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OSI SAF Sea Surface Temperature reprocessing of MSG/SEVIRI archive.

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The Ocean and Sea-Ice Satellite Application Facility (OSI-SAF) of the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT) is planning to deliver a reprocessing of Sea Surface Temperature (SST) from Spinning Enhanced Visible and Infrared Imager/Meteosat Second Generation (SEVIRI/MSG) archive (2004-2012) by the end of 2016. This reprocessing is drawing from experiences of the OSI SAF team in near real time processing of MSG/SEVIRI data.

The retrieval method consist in a non-linear split-window algorithm including the algorithm correction scheme developed by Le Borgne et al. (2011). The bias correction relies on simulations of infrared brightness temperatures performed using Numerical Weather Prediction model atmospheric profiles of water vapour and temperature, and RTTOV radiative transfer model.
The cloud mask used is the Climate SAF reprocessing of the MSG/SEVIRI archive. It is consistent over the period in consideration.
Atmospheric Saharan dusts have a strong impact on the retrieved SST, they are taken into consideration through the computation of the Saharan Dust Index (Merchant et al., 2006) which is then used to determine an empirical correction applied to SST.
The MSG/SEVIRI SST reprocessing dataset consist in hourly level 3 composite of sub-skin temperature projected onto a regular 0.05° grid over the region delimited by 60N,60S and 60W,60E.

This presentation gives an overview of the data and methods used for the reprocessing, the products and validation results against drifting buoys measurements extracted from the ERA Clim dataset.