

Integrated SAF product

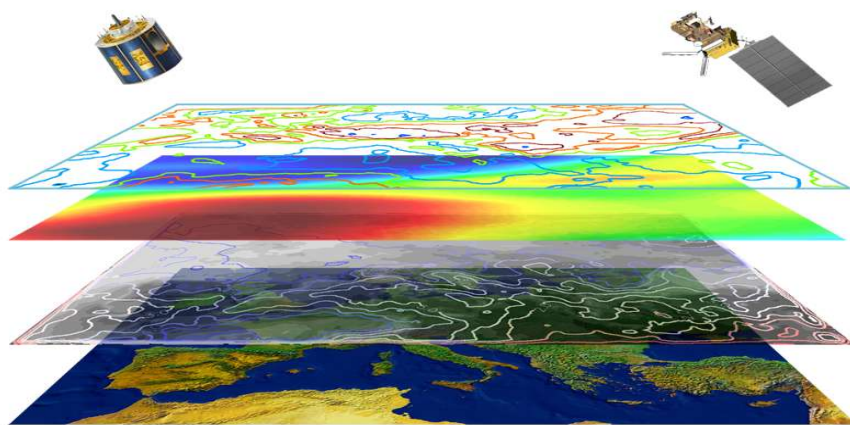
Andi Walther¹, Werner Thomas²

- 1) Institut für Weltraumwissenschaften, Freie Universität Berlin, Germany
- 2) Climate-SAF, Deutscher Wetterdienst, Offenbach, Germany

In Summer 2004, representatives from EUMETSAT, GCOS, WMO, and the Climate-SAF (CMSAF) initiated a discussion about „global demonstrators“, i.e. possible global products useful for climate monitoring delivered by the various SAF consortia, namely the CM-SAF. First ideas were shown during a workshop in October 2004, held at EUMETSAT facilities where (among CM-SAF) colleagues from the OSI-SAF, the O3M-SAF, and the LSA-SAF were present. Here, CM-SAF/DWD presented a draft outline of an „integrated SAF product“ which basically describes the Earth-Atmosphere system by a layer model. A follow-up meeting in December 2004 confirmed the usefulness of the integrated SAF product and encouraged further planning. The content of the integrated SAF product are primarily products generated by the SAFs.

The first version concentrates on a consistent data model (with respect to projection and output format) of a limited number of parameters.

The quantities of the initial version are e.g., land and sea surface temperature (from the Land-SAF and the OSI-SAF, respectively), sea ice coverage (OSI-SAF), total ozone content (O3MSAF), and cloud parameters (e.g. fractional coverage, cloud-top height, cloud-top temperature), surface albedo, total water vapour content and radiation fluxes at surface and at top-of-atmosphere (CM-SAF). All data are transformed to the same spatial grid. The initial temporal resolution is a month, i.e. monthly mean values will be generated. The software package is able to handle input data at any lat/lon projection (as monthly mean value) while the output data is in sinusoidal projection. Input data can be provided as ASCII, binary or any scientific format (HDF4, HDF5, NETCDF) data. The output data format is hdf5, together with colour palettes for easy usage with the freely available hdfview-package from NCSA. A visualisation tool (based on IDL 6.x) for input and output data are provided.



Layer model of the Integrated SAF product.