



Operational Climate Monitoring from Space: The Satellite Application Facility on Climate Monitoring (CM-SAF)

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This presentation provides an overview of EUMETSAT's *Satellite Application Facility on Climate Monitoring* (CM-SAF) that is a joint activity of the meteorological services of Belgium, Finland, the Netherlands, Sweden, Switzerland, and Germany. The product suite available from initial operations will be described and the analyses of results from the first product validation sequence will be discussed. Also the data access for operational products and future planning will be presented.

The CM-SAF is aiming at the provision of satellite-derived geophysical parameters suited for climate monitoring. After a five year development phase the CM-SAF entered the so called *Initial Operations Phase* (IOP) in January 2004 which will lead to the full operations phase expected for early 2007. CM-SAF produces a climatology of cloud parameters (e.g. cloud fraction, cloud top temperature, etc.), surface radiation fluxes and surface albedo, radiation fluxes at the top of the atmosphere, and atmospheric water vapour. The products are currently derived from data of instruments on-board the polar orbiting NOAA satellites and the geostationary Meteosat Second Generation satellite. During the IOP data from the instruments on-board the Metop satellite will be integrated into the products. As the CM-SAF has currently a mandate for regional climate monitoring the area covers Europe and part of the North Atlantic Ocean. The coverage will be extended to the whole MSG disk as well as the Inner Arctic area during the IOP. Start of operational production has started 1 January 2005

using NOAA data for cloud and surface radiation products as well as Meteosat 8 and CERES data for top of atmosphere radiation fluxes. The water vapour product consists of total precipitable water as well as layered precipitable water constructed from the ATOVS and SEVIRI estimates and will be operational available in late 2005.