



# EUMETSAT's Archive

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- EUMETSAT's Archive
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- The Status and future Plans



# Brief Overview of the Archive

The Archive contains Image Data and Products from:

**Meteosat Series of Geo-stationary Satellites**  
**European Polar Satellite (Metop-A)**  
**Foreign Satellite Data (NOAA Polar Satellites)**

Future data sets planned to be ingested by the Archive are:

**Jason-2**  
**SAF Products**

All operational data sets ingested are presented to the user community via an online catalogue. Data sets can be ordered from this catalogue.

The Archive has over 1600 registered users for online ordering. Approximately 50 new users register with the Archive per month.

Retrievals from the Archive is in excess of 20 TBytes per month.

The size of the Archive is approximate 375 TBytes (>6,000,000 files). It grows at a rate of 180 to 240 Gbytes per day depending on satellite configurations.

# Archive Online Ordering Interface: archive.eumetsat.int/umarf/

The screenshot displays the UMARF Online Ordering web application. The interface includes a navigation menu with options like 'Log out', 'Account Management', and 'Help'. The main content area is divided into two sections. On the left, a 'Tree Management' panel shows a hierarchical list of products under 'MET OP-A (EPS)' and 'GRAS Instrument (EPS)'. The 'GOME Instrument (EPS)' section is expanded, showing several data products with checkboxes, all of which are checked. Below the tree, there are input fields for 'Date/Time Range (UTC)' (From: 2008/01/04 11:24:29, To: 2008/01/09 11:24:29) and 'Region of Interest' (Upper Left corner Lat/Lon (deg) and Lower Right corner Lat/Lon (deg)). A 'Search' button is located at the bottom of this section. On the right, a 'Map Navigation' section features a globe with a grid overlay. The globe is centered on Europe and Africa. Above the globe, there are radio buttons for 'Map Navigation', 'Footprint Selection', and 'Area Selection', and a 'Map Layers' button. The EUMETSAT logo and the user name 'petermiu logged in' are visible in the top right corner.



# The Challenges

The total data volume of the archived information is growing continuously

The processing of long time series of data to generate enhanced information is becoming an logistical problem (data transfer via Internet and/or offline media – associated costs !)

Occasional reprocessing of original data can be anticipated (e.g. reprocessing of MSG level 1.5) – This might result in subsequent reprocessing of higher level derived products.



# The Challenges

For generation of higher level information based on the archived data, ancillary datasets are often required. These might reside in other archives – this results in archive interoperability requirements.

The data formats should be most generic to avoid data access problems. BUFR and GRIB are not the most convenient data formats for archiving purposes. NetCDF is becoming more and more of a standard.

The generation of higher level information (products) might be optimally achieved at the source of the bulk of the lower level input data.



# Archive SAF Implementation

## Implement an interface

**For the ingestion of SAF product's metadata and browse images (if available) into the Archive's catalogue. The user community can access this metadata via the online catalogue, visualise the browse image (if available) and order the product associated with it.**

**To inform the SAF of the order.**

**For the SAF to inform the Archive when the order has been completed and shipped to the customer.**

**An enhancement planned is to ingest SAF products directly into the Archive.**



# Archive SAF Implementation Status (1)

The beta version of the Archive SAF interface is completed. Interface testing is in progress; SAFs sending metadata samples to check schemas defined are correct.

Test Status Summary for products generated on the SAF operational chain:

## **O3 SAF (6 products TEN/07/1052):**

**Off line Total Ozone (O3MOTO) tested and can be made operational (Produced by DLR).**

**O3 Aerosols and Ozone Profile (O3MARS,O3MOOP) - tested, more samples needed (Produced by KNMI – Products not yet on the SAF operational chain still waiting for migration).**

**Off-line UV and HIRS Total Ozone (O3MOUV, O3MHTO) - being tested, some minor issues to be resolved (produced by FMI).**

## **LAND SAF (11 products according TEN/07/1052):**

**Downwelling Surface Temperature Longwave fluxes (LSA DSLF) tested and can be made operational (Produced by IM).**

**Land Surface Temperature (LSA LST) tested, more samples needed (Produced by IM).**



# Archive SAF Implementation Status (2)

Test Status Summary for products generated on the SAF operational chain:

## **CLM SAF (22 products according TEN/07/1052):**

**Vertical Integrated Water Vapour Information (HTW) – one sample received, some minor issues to be resolved (waiting for CLM).**

**Cloud Fractional cover (CLM CFC) - one sample received, some minor issues to be resolved (waiting for CLM).**

Status of other SAFs

**GRAS SAF (25 products TEN/07/1052):**  
**No samples have been received.**

**OSI SAF:**

**OSI SAF Archive migration is in preparation – metadata schema received for the Global Sea Surface Temperature (Global SST).**





# When are SAF products available from the Archive ?

In February/March 2008, the following SAF products are expected to be available for ordering from the Archive:

Off Line Total Ozone (O3DLR).

Downwelling Surface Temperature LW (LSA).

Land Surface Temperature (LSA).

Possible, if minor issues are resolved in time:

Off Line UV and HIRS Total Ozone (O3FMI).

Aerosols and Ozone Profile (O3KNMI).



# When are SAF products available from the Archive ?

## **To be available at a latter stage:**

Vertical Integrated Water Vapour (CLM).  
Cloud Fraction Cover (CLM).

## **SAF products planned but not yet integrated:**

GRAS SAF products.  
OSI SAF products.



# Future Archive SAF Implementations

## Enhancement of the Archive ordering application to:

- Display all metadata values of SAF products.
- Provide a footprint display on selection of a product.
- Provide a region of interest search for regions and occultation points.

## OSI SAF product ingestion.

In preparation.

## Ingestion of New SAF metadata and products.

In the planning process.



# Summary (1)

An Archive SAF implementation is available for testing with planned SAF products.

The time taken for a SAF product to be available from the Archive depends on sample data received from the SAF, and on how long it takes to resolve issues.

For future SAF products, planning and resource management is required on both sides.

The Archive is always open for comments and suggestions from the SAFs.



## Summary (2)

In future it might be more adequate to send algorithms to the archives for processing than to send huge data amounts to processing centres.

Significant efforts are required to ensure the full exploitation of archived information.



# End of Presentation

Questions ??

**Demonstration of the Archive order interface for interested parties.**