



# Major updates and improvements of the EBAS database and web portal

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## Introduction

The EBAS database hosts observational data of atmospheric chemical and physical properties. The increase in content and usage by a multiplicity of different groups led to a growing demand on the database functionality. Several improvements and changes concerning the database core and user interface were determined and implemented to support the present and future requirements on the EBAS database.

## Web interface

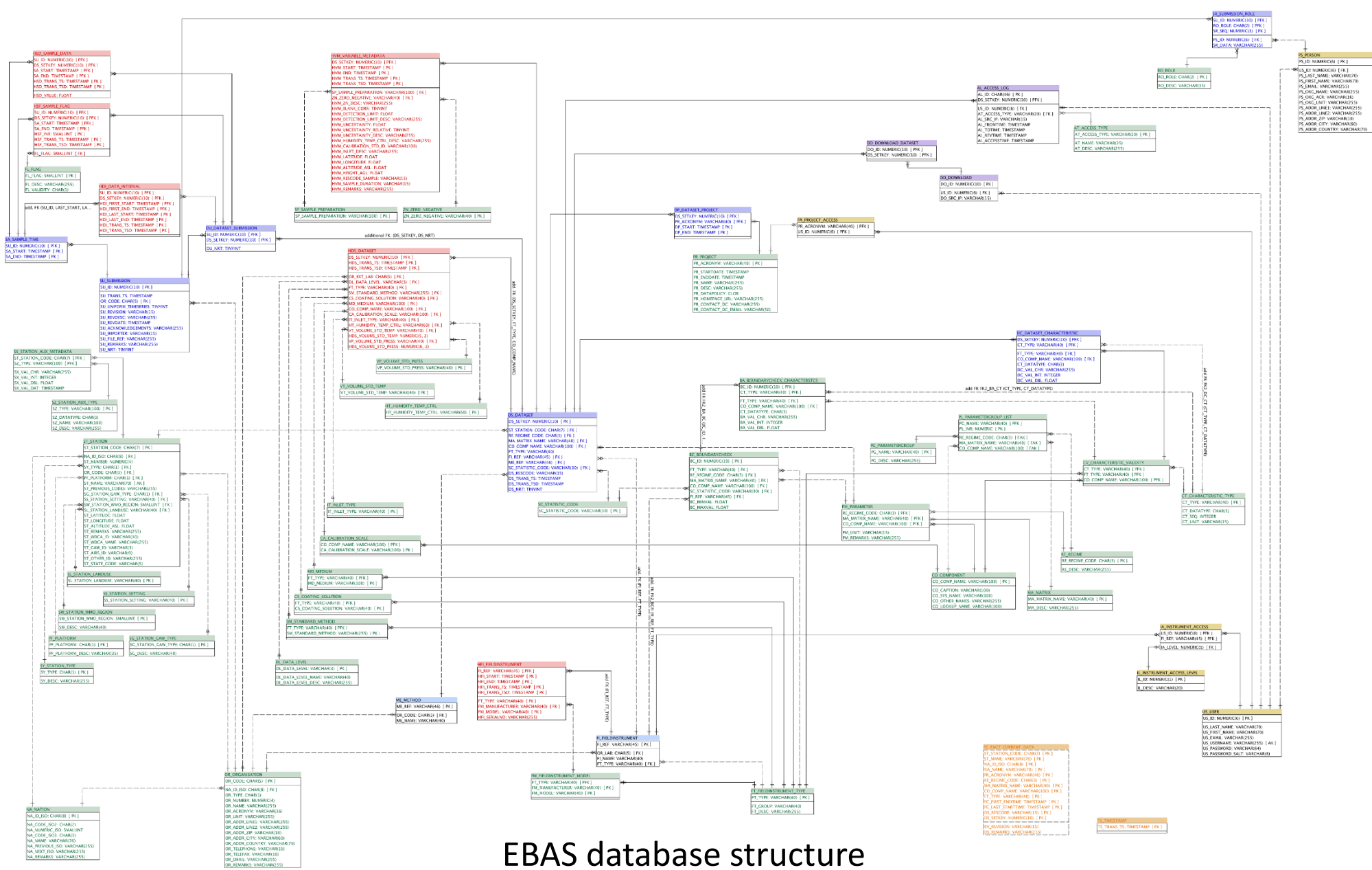
New implementations in the EBAS web interface improve the performance and usability of the web application during start up and data selection. Several bugs are corrected in the web representation of EBAS and its online visualisation tools. Within the development of the ACTRIS Data Centre new online visualisation methods are implement and will be ported to the EBAS web interface in the future (see oral presentation S3.07 by Lund Myhre et al., Wed. 16:30-16:45).

## Database

The database was entirely restructured and newly implemented to meet the new requirements. Duplicates of existing data sets and missing values were removed. Grouping of data sets was improved and follows a more logical structure.

## Content

- 317 million samples
- 49300 data sets
- 580 components
- 96 instrument types
- 818 stations
- 66 countries
- 40 frameworks



## Meta data

The EBAS meta data is closely linked to developments related to harmonization of meta data standards, including INSPIRE, ISO, CF Convention and GEO Air Quality Community of Practice (GEO AQ CoP). New meta data elements were added to the new database to support the version control of datasets. This allows for a full history of the database and data sets, to track data updates and retrieve historic data versions. Metadata elements can be time-dependent and changes can be tracked.

## Import and export

Data import and export was adapted to the new database structure.

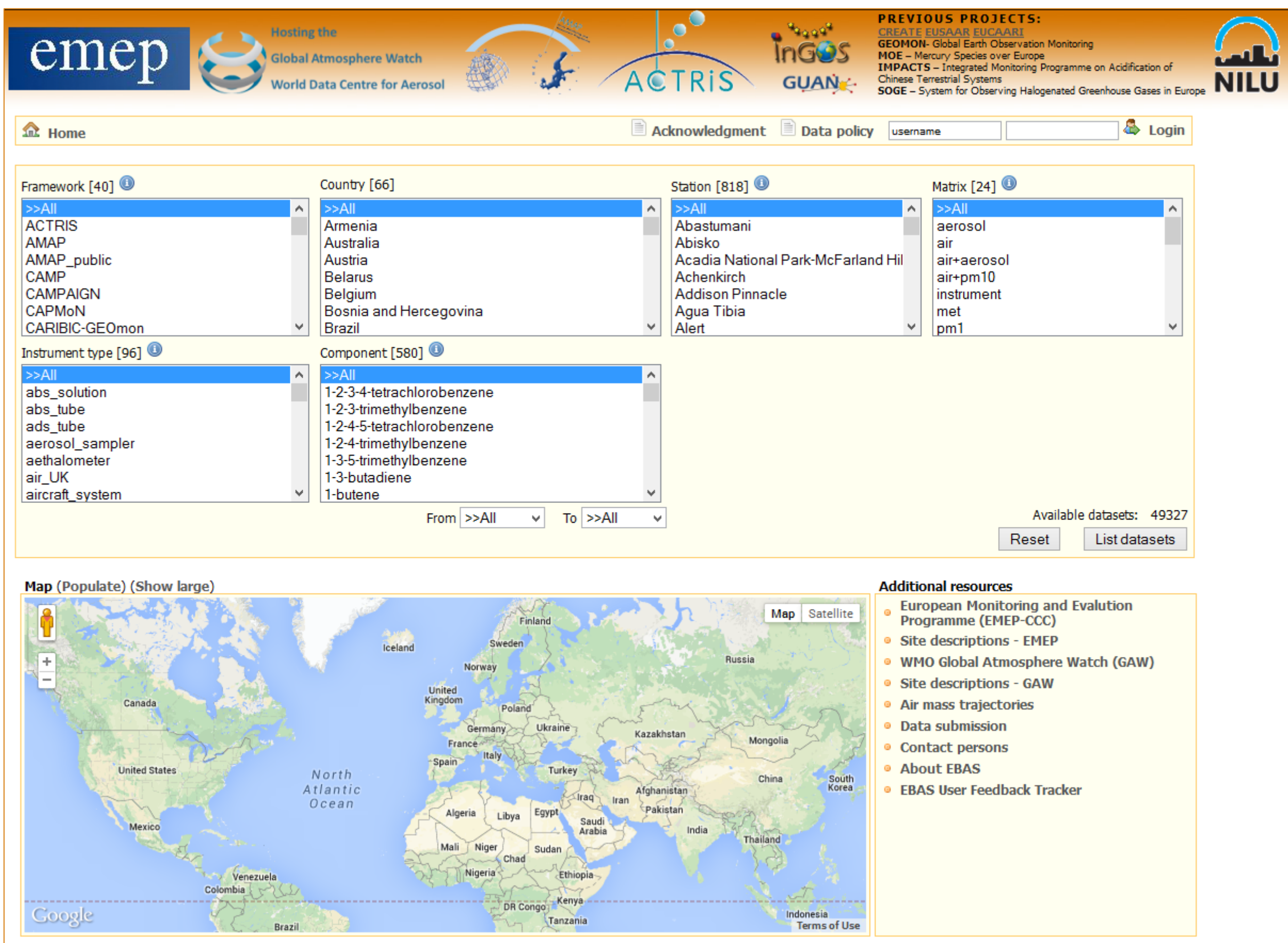
## QA/QC

Automatic tools to ensure the data quality (e.g. to detect outliers) were adapted to the new database.

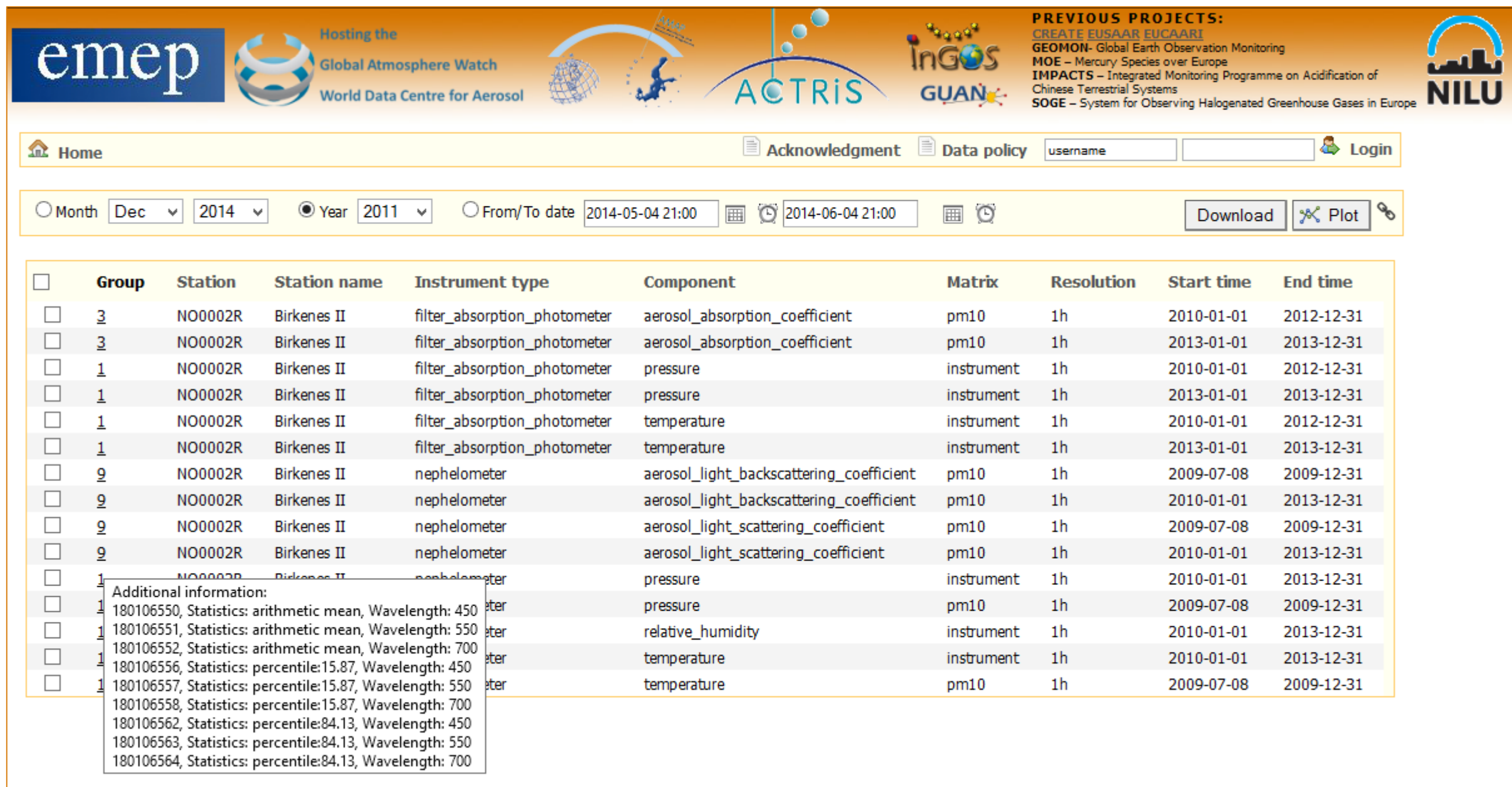
## Data statistics

New tools were implemented to derive statistics of data sets such as daily or monthly means, percentiles, extrema etc.

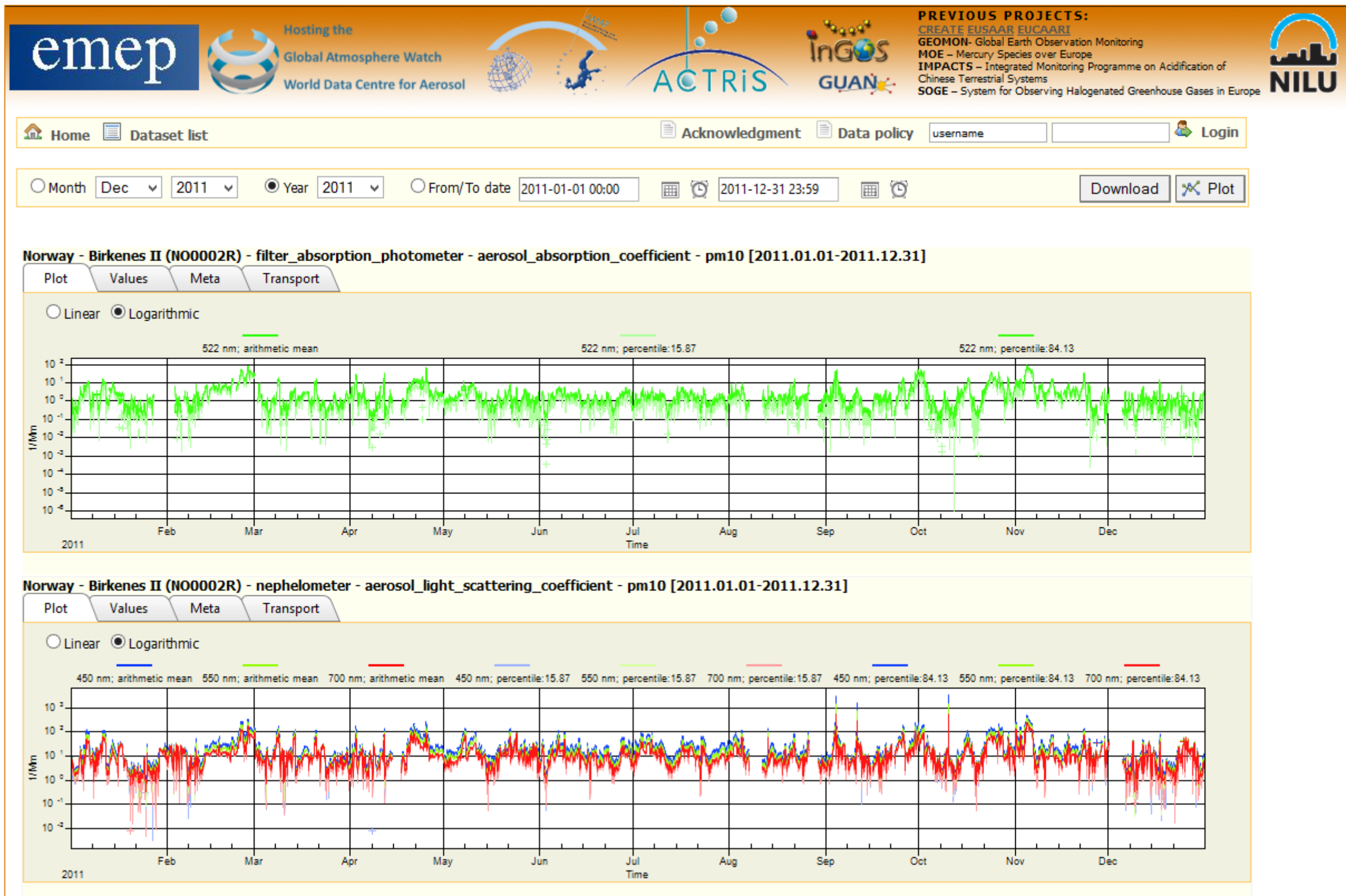
<http://ebas.nilu.no>



## Data selection



## Data visualisation



## Data information

