



## The Retro database for observations

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Through the EU FP5 funded project on Reanalysis of the Tropospheric chemical composition over the past 40 years, Retro, a database for observations has been set up at NILU. The database is set up as an automatic system that handles all upload and download of data through a web-interface. Information is provided on-line and data are stored in a standardized format. Tools for reformatting of data are provided through the web portal: <http://nadir.nilu.no/retro>. The data are converted to and archived in the HDF4.1r3 format, and the metadata definitions from the ENVISAT Cal/Val activity are reused and expanded for Retro. This was chosen to maintain the compatibility with the ENVISAT Cal/Val database and the possibility of cloning the existing technical solutions developed by NILU for that project. The same data format is furthermore used by the POET and the ASSET projects. In addition to HDF files, the Retro database has been expanded to allow upload of other data formats and may be used to archive images, large binaries, text files, etc.

A major task has been reformatting of old data into the new common format to be used by the Retro modellers. This includes all the ozone sonde data from the World Ozone and UV Data Centre (WOUDC / WMO-GAW), all CO data from the Global Monitoring Division of NOAA (formerly CMDL) and all O<sub>3</sub>, NO<sub>2</sub>, SO<sub>2</sub> data from the EMEP-CCC (European Monitoring and Evaluation Programme, Chemical Coordinating Centre) data centre. Monthly aggregated datasets of HCHO from GOME (1996-2002) has also been reformatted and uploaded. In addition, all surface ozone measurements from the World Data Centre for Greenhouse Gases (WDCGG) has been uploaded as text files.