

# Tools

## Data access

1. **Data portal**  
The simplest way how to get rather smaller ad hoc data samples (approximately up-to 20 000 retrieved fields per request)
2. **Batch access**  
The ECMWF access in batch should be used for most common types of work (big data samples retrievals)

## Data monitoring

1. **Visual data quality monitoring (SUSPENDED FEATURE since 2017)**  
For the purpose of simple visual data quality monitoring some maps and histograms are produced for every forecast date and chosen model outputs (see the link in the Resources section). Only the first perturbed eps member and control forecast (if exists) are monitored at two chosen forecast leading times (0 and the latest available one common for all monitored datasets)
2. **History page**  
The data gaps caused by any kind of problems can be checked via so called TIGGE-LAM history web page linked in the Resources section.

## External interpolation tool

At the moment the ECMWF's interpolation package cannot handle rotated latlon projection in which 4 TIGGE-LAM datasets are coded :

- COSMO model based LAM-EPS run by DWD (Germany)
- COSMO model based LAM-EPS run by ARPA-SIM (Italy)
- HIRLAM model based LAM-EPS run by DMI (Denmark)
- Unified model based LAM-EPS run by UK Met Office

It means that at the moment users cannot ask for other than default grid for those 4 datasets (situation will change by 2016 after new interpolation package MIR is finished and implemented). Till then users are advised to use any other external interpolation package which can handle the rotated latlon. One of them can be *COSMO package versus* described below (thanks to [Davide Cesari](#))

### COSMO open source verification/interpolation package versus

<https://github.com/dcesari/smnd>

#### mogreps problem

[Davide Cesari](#) (2015-05-06)

Metoffice Mogreps grib messages are coded with an ending longitude >360, it is clear that this has been done with the good intention to make endLongitude>startLongitude when the grid crosses the zero meridian, but this seems to violate the MO rule stating that  $0 \leq \text{lon} \leq 360$  and I am afraid that it will generate an unexpected situation in versus software so that it can't be handled at the moment.

```
latitudeOfFirstGridPointInDegrees = -3.77995;
```

```
longitudeOfFirstGridPointInDegrees = 354.911;
```

```
latitudeOfLastGridPointInDegrees = 7.16005;
```

```
longitudeOfLastGridPointInDegrees = 363.311;
```

It will be tried to make sure that in next version of libsim/versus extra software all the reasonably odd cases for coordinates are taken care of, including this one.