

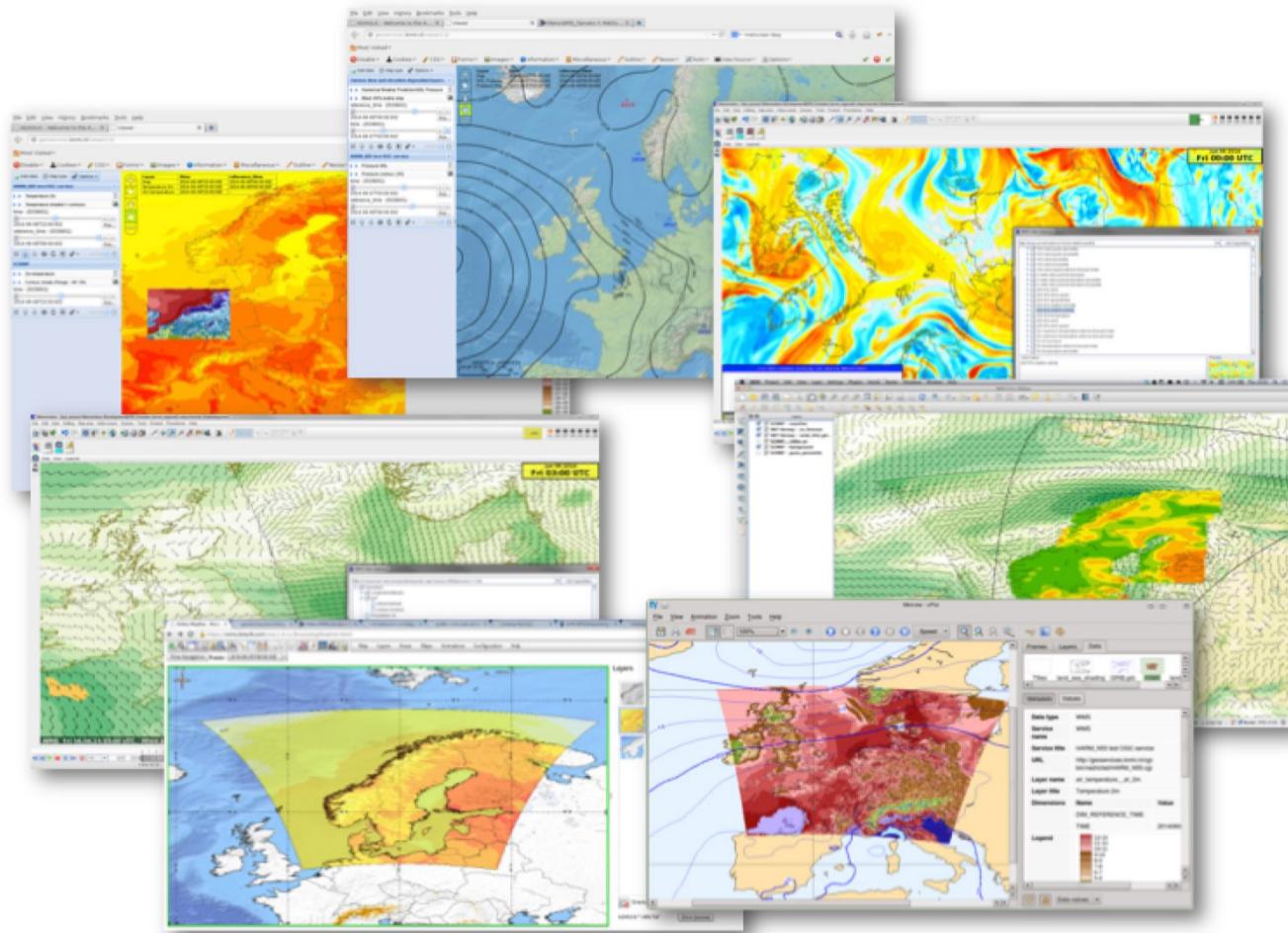
# A short history of visualisation developments at ECMWF

Forecast Services Department, ECMWF, Reading, United Kingdom

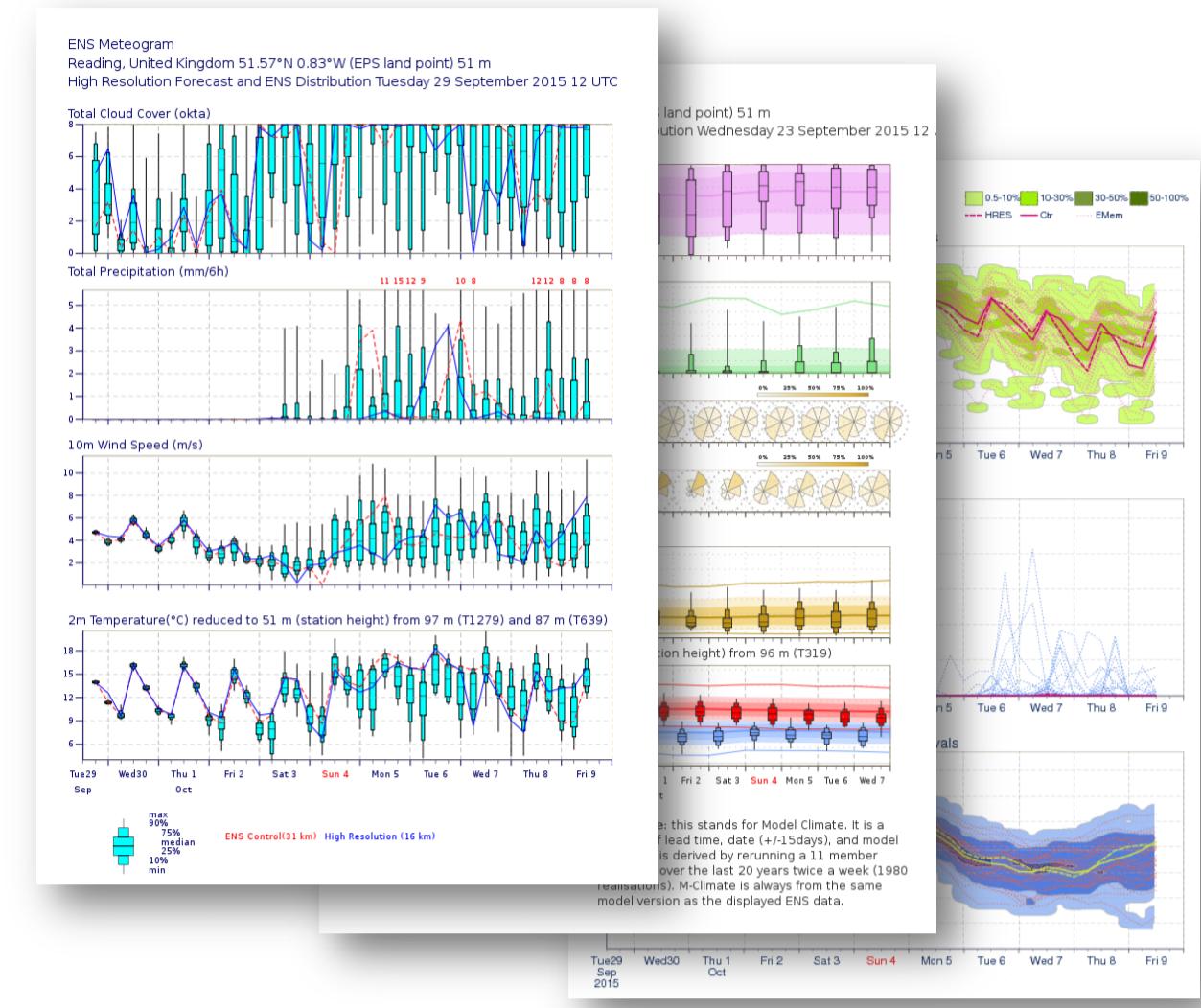


## Why visualisation matters to ECMWF

We generate a lot of complex data sets which are not always easy to use/analyse by our users. Visualisation helps to make our forecasts more accessible.



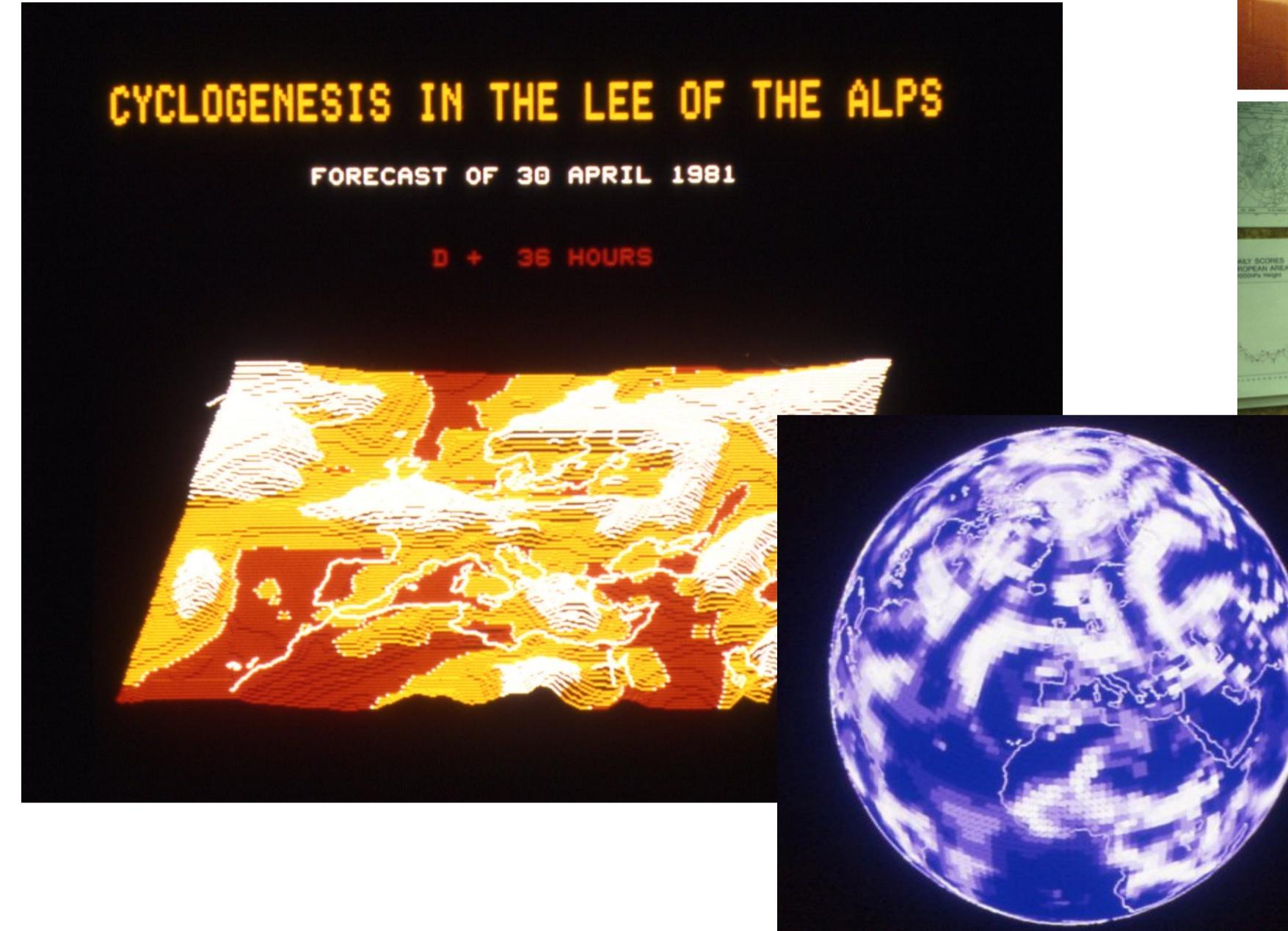
ECMWF supported forecaster workstations and web solutions across our MS through EGOWS community



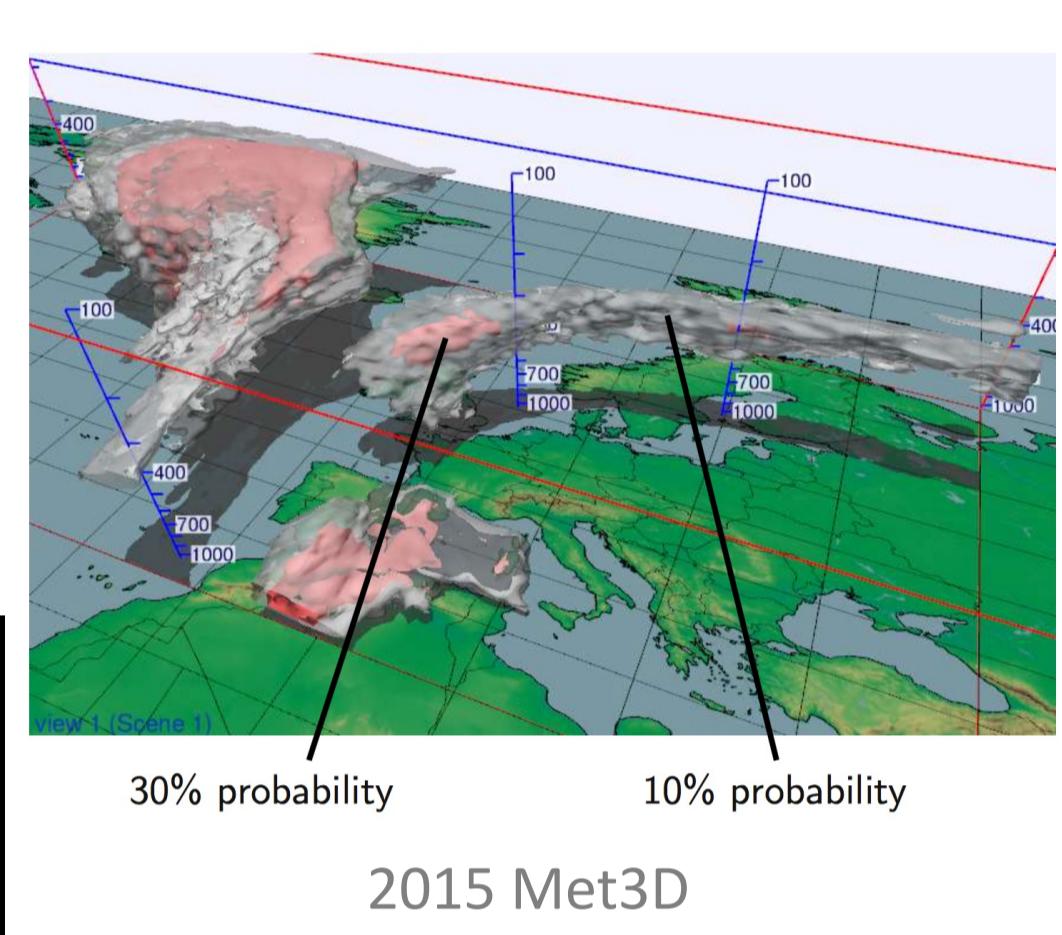
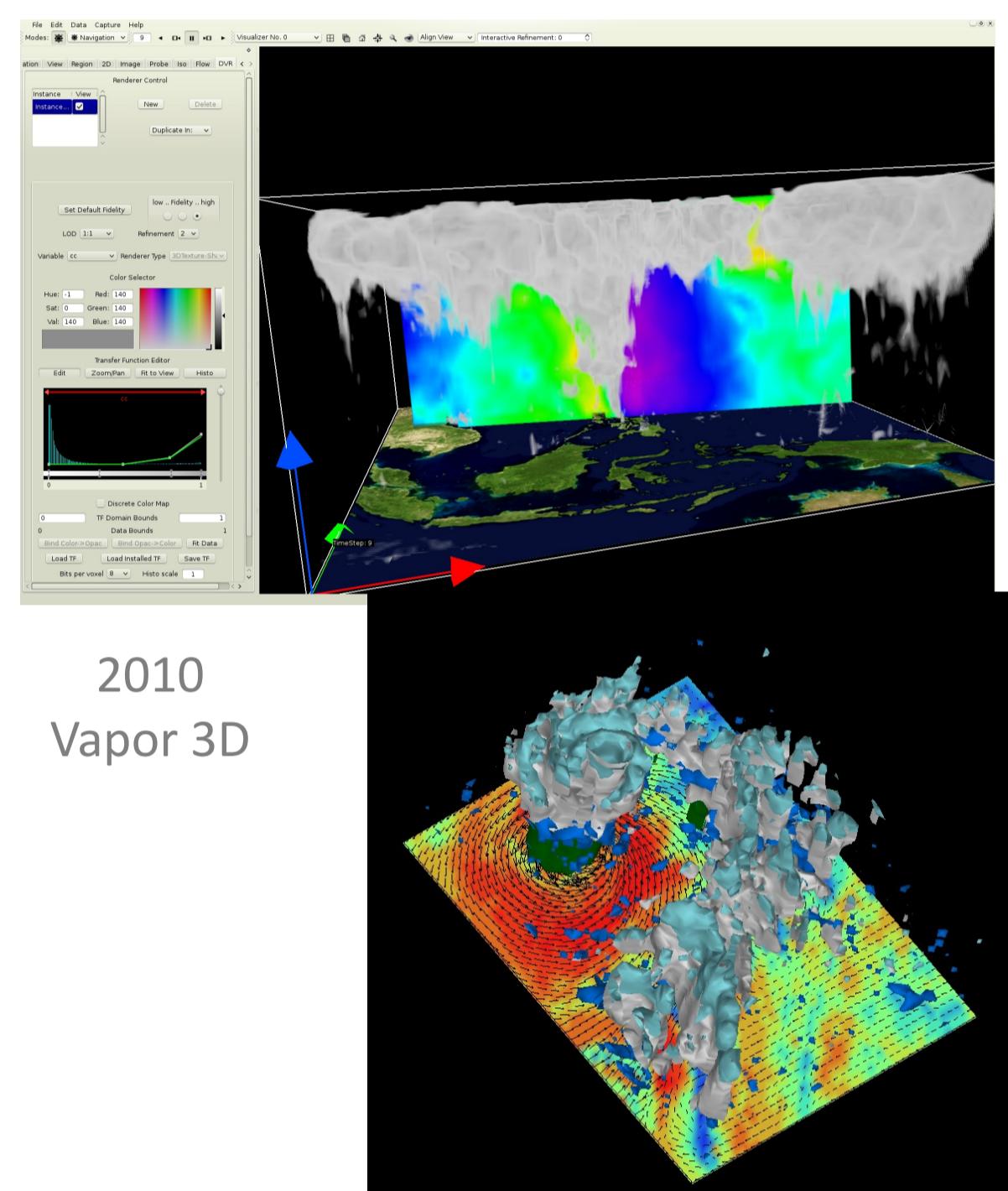
ECMWF meteograms have been a powerful tool communicating ensemble forecasts

## 1980s – How it started

- Hardware/vendor specific solutions
- Impossible to share/collaborate
- Part of monitoring forecast production



## Exploring the use of 3D



1990s Vis5D

## 2000s – Age of the paper

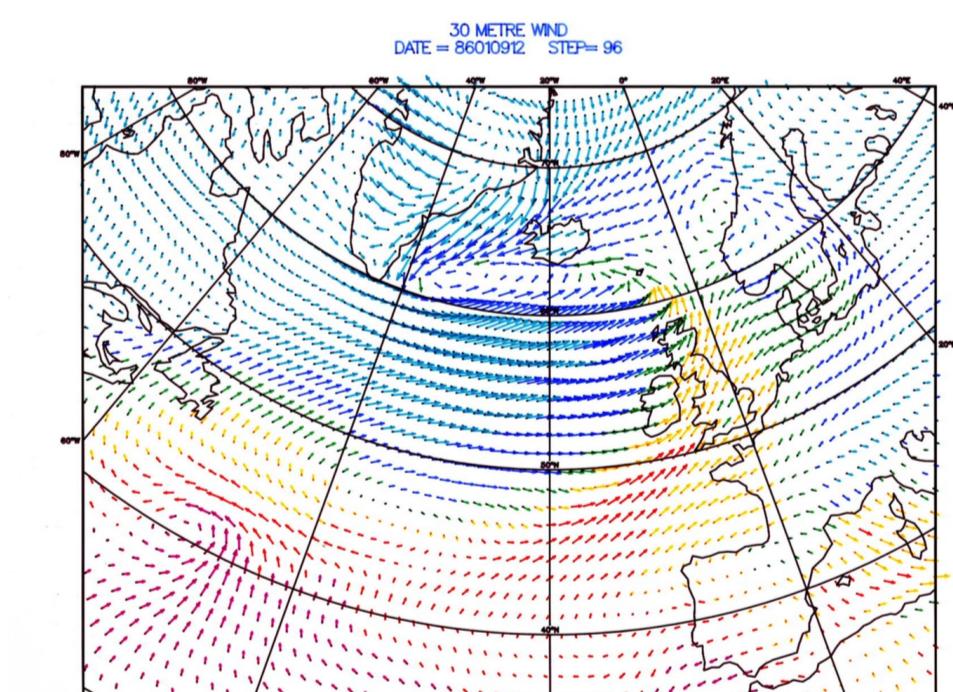


Until 2010 the MetOps room (Reading computer hall Mezzanine) was the heart of the day-to-day forecast evaluation

## Milestones from 1980 to today

- 1983 Start developments of MAGICS Meteorological Application Graphics Integrated Colour System

Library with extensible API running on HPC

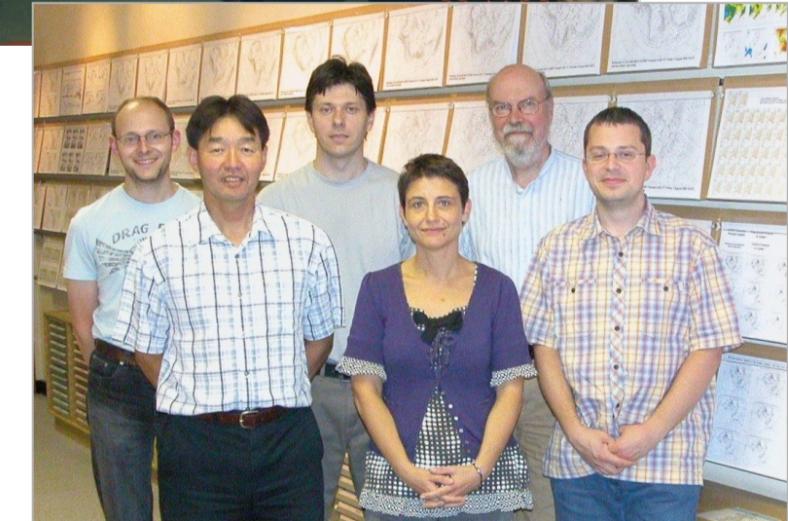


- 1985 MAGICS 0.3 plotting coloured wind arrows
- 1987 MAGICS 1.0

- 1990 Start development of Metview



- 2003 Start work on Magics++ Increasing use of on-demand web plots



- 2010 Start of web redevelopment → ecCharts



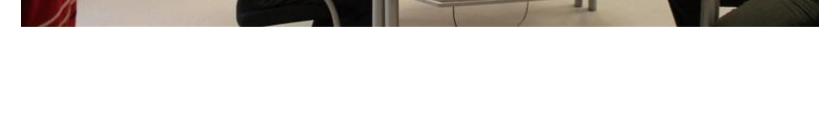
- 2012 Release of Metview as Open Source



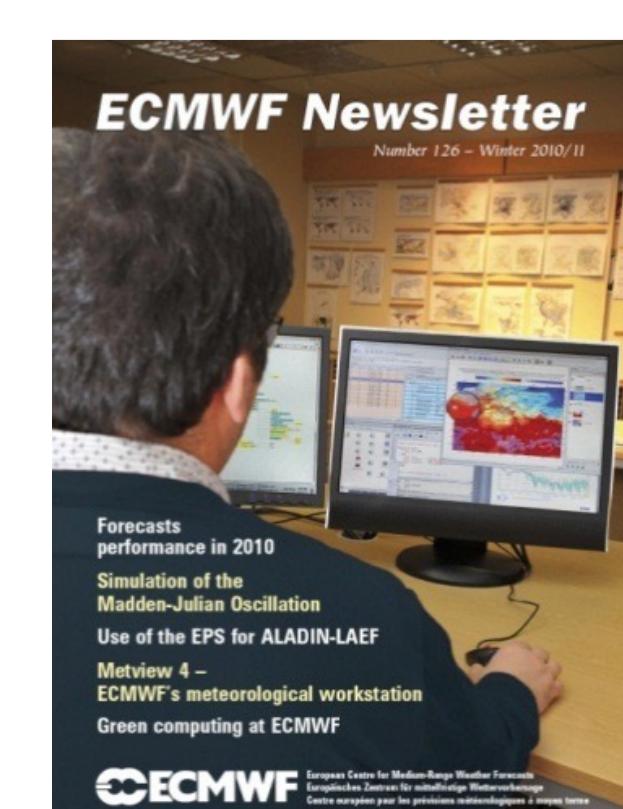
- 2013 Dedicated graphics/visualisation team is merged with other development teams



- 2015 ECMWF hosts Visualisation Week



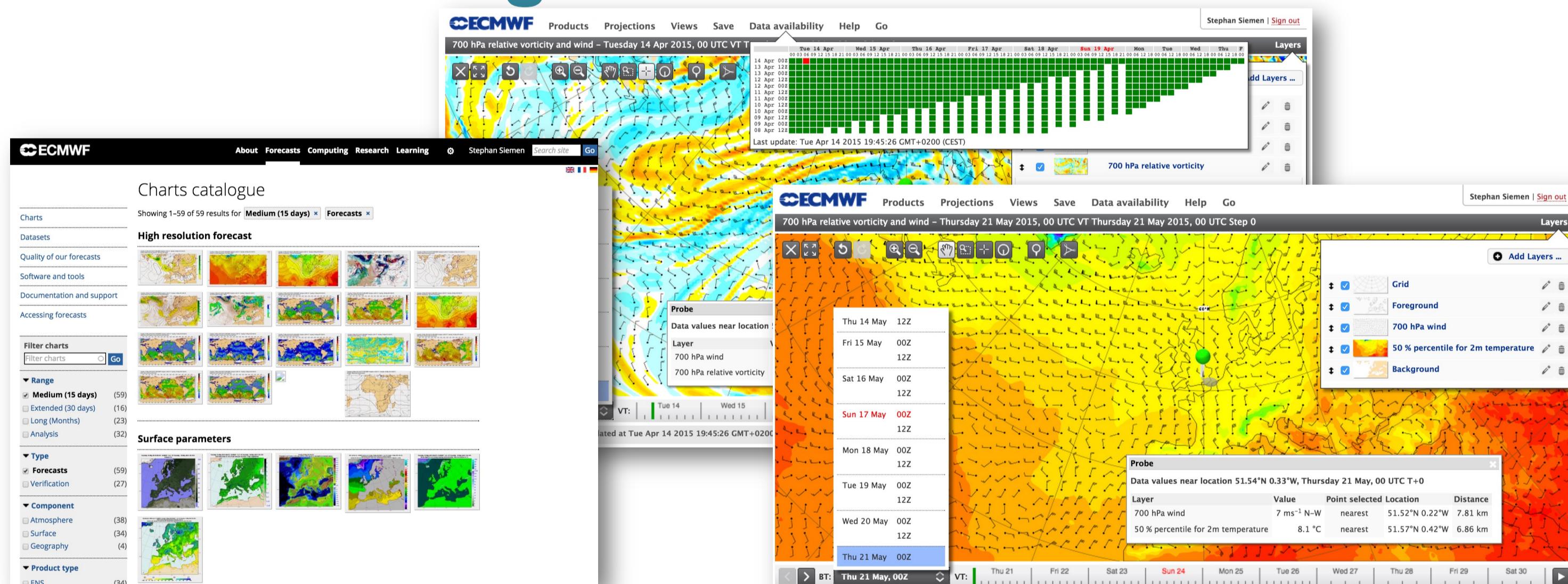
- 2017 Metview version 5 with new Python interface



- 2023 Developments on earthkit start

- 202x Metview & Magics superseded by earthkit

## 2010s – Emergence of web visualisation



## 2010s – Shinfield Park Weather Room



## 2020s → earthkit

