Norwegian Meteorological Institute
met.no

Diana – status and recent developme

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Outline

- Diana – a meteorological workstation
  - Features

- Recent developments in Diana
  - Improved building system
  - New field editing
  - More data formats

- Diana - an open source project
  - Experiences

# Diana – a Meteorological Workstation
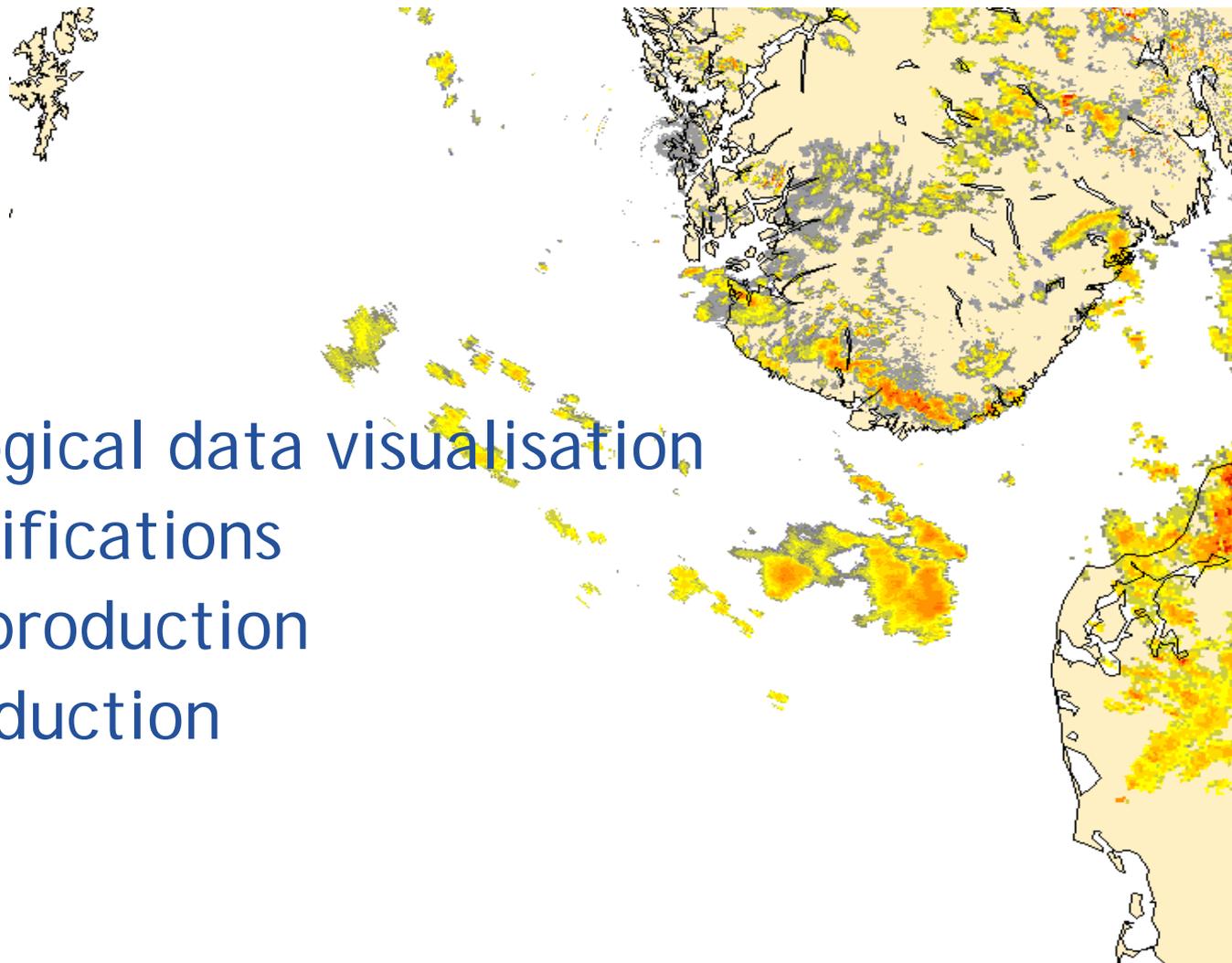
Providing:

- Meteorological data visualisation
- Field modifications
- Forecast production
- Batch production

NWP, satellite, radar, obs, fronts, etc.

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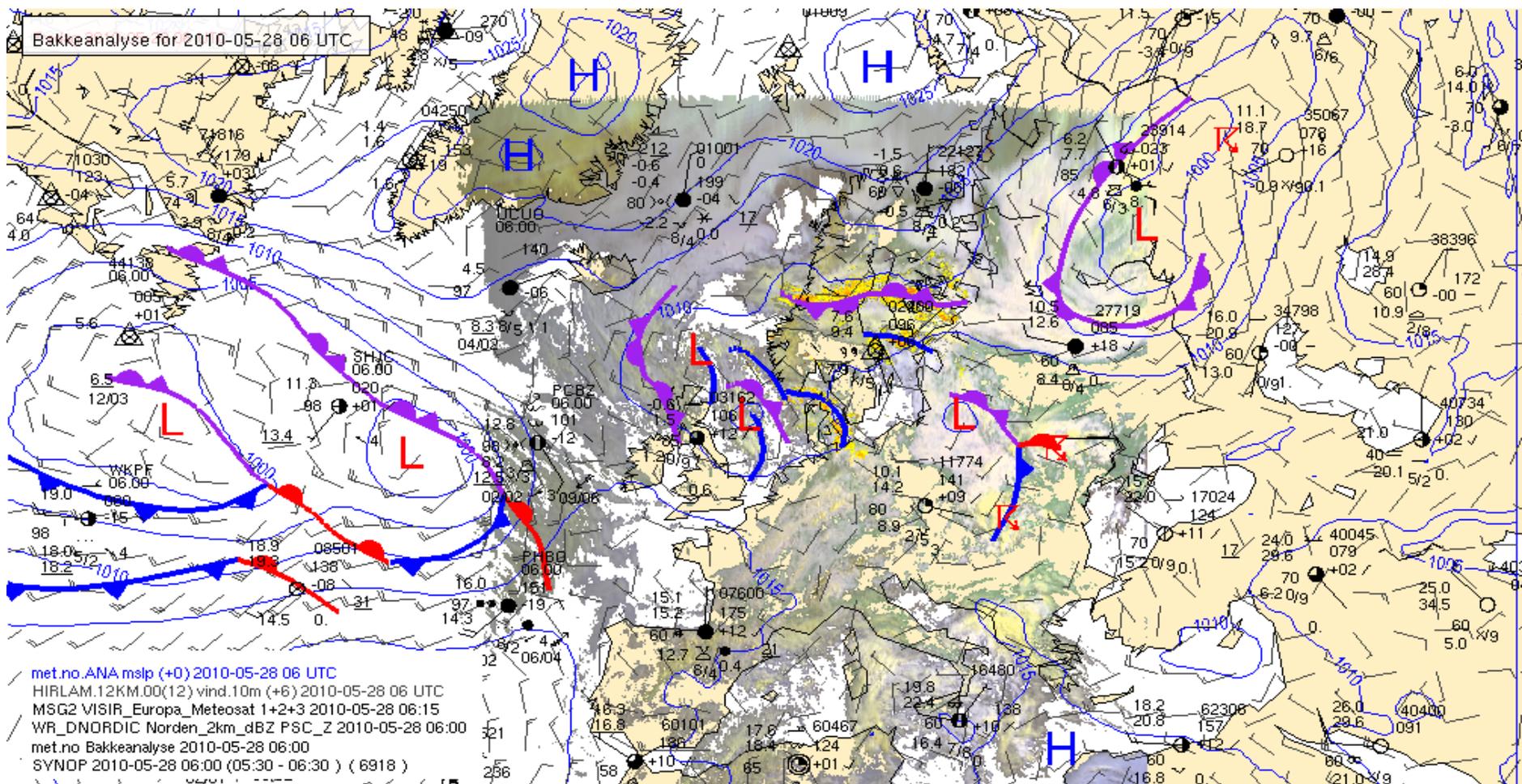
- Combinations of different layers
- Animations
- Cross sections
- Forecast index
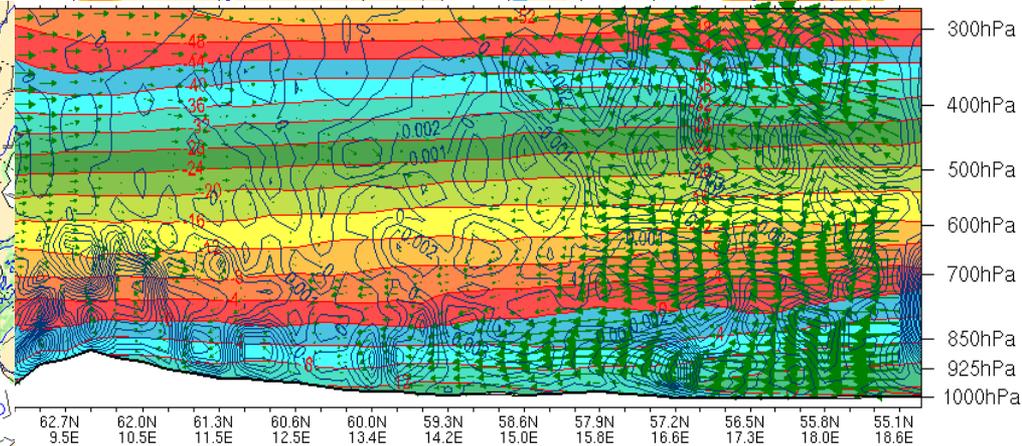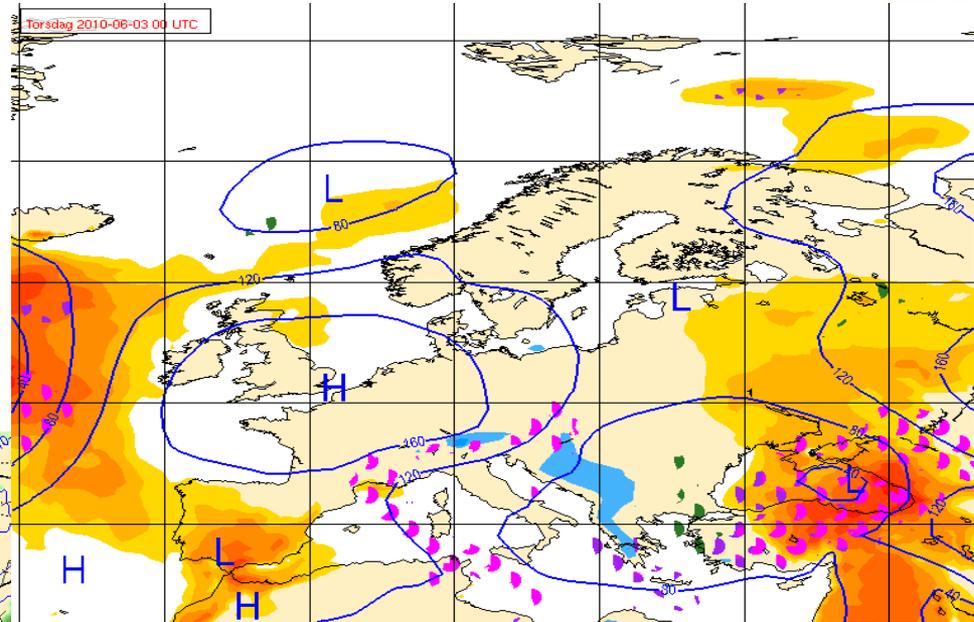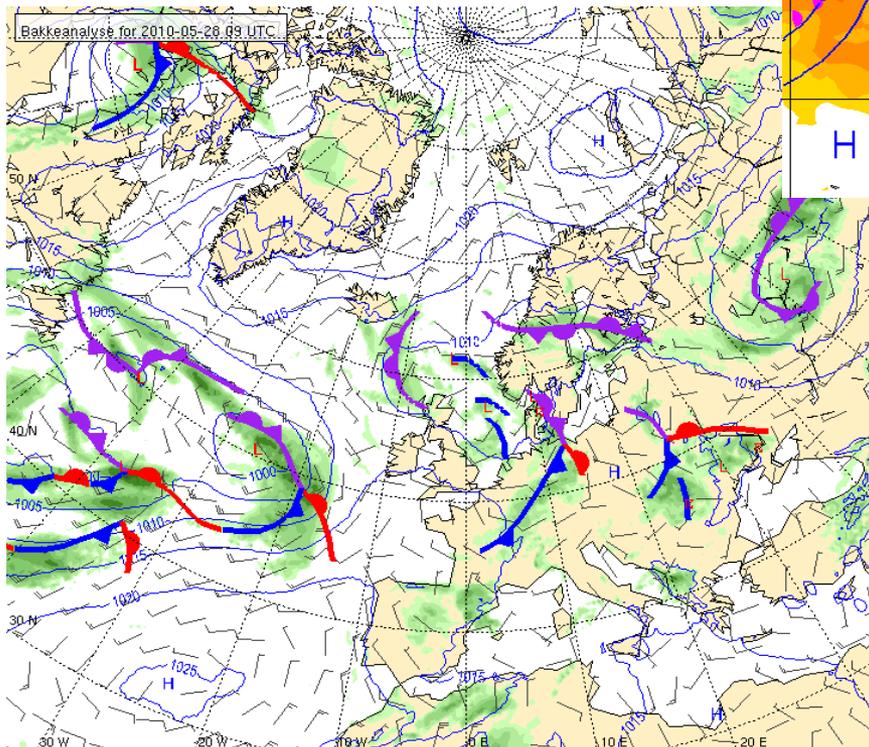
Programming environment

- Platform - Ubuntu, Fedora, Suse
- C++
- Qt – GUI, window handling, etc.
- OpenGL (Mesa3D)
- Other open source libraries (fonts etc.)

- Available under the Gnu General Public License (GPL)

What characterizes Diana?

- Small development group (~4 developers)
- Developed in close cooperation with forecasters and researchers
- Relatively lean, stand alone
- Open source
  - Released as open source in 2006

Recent developments

Improved building system

- Autotools, configure based installation
- More platform independent
- .deb package generation

New field editing

- Product generation from a gridded database
- Forecasters manually correct the database
- Operational since November 2009

More data formats

- Formal cooperation with SMHI
  - (Swedish Meteorological and Hydrological Institute)
- Contributions from SMHI
  - Data formats
    - Shape
    - Geotiff
    - Grib1
    - HDF5
  - Forecast production
    - More symbols etc.
  - Bugfixes
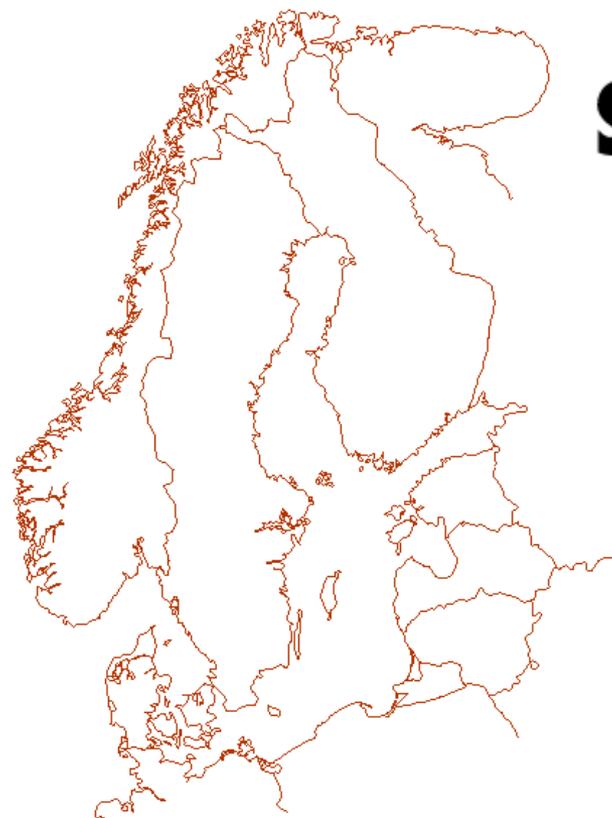
SMHI

Contribution from SMHI
- geotiff images in Diana
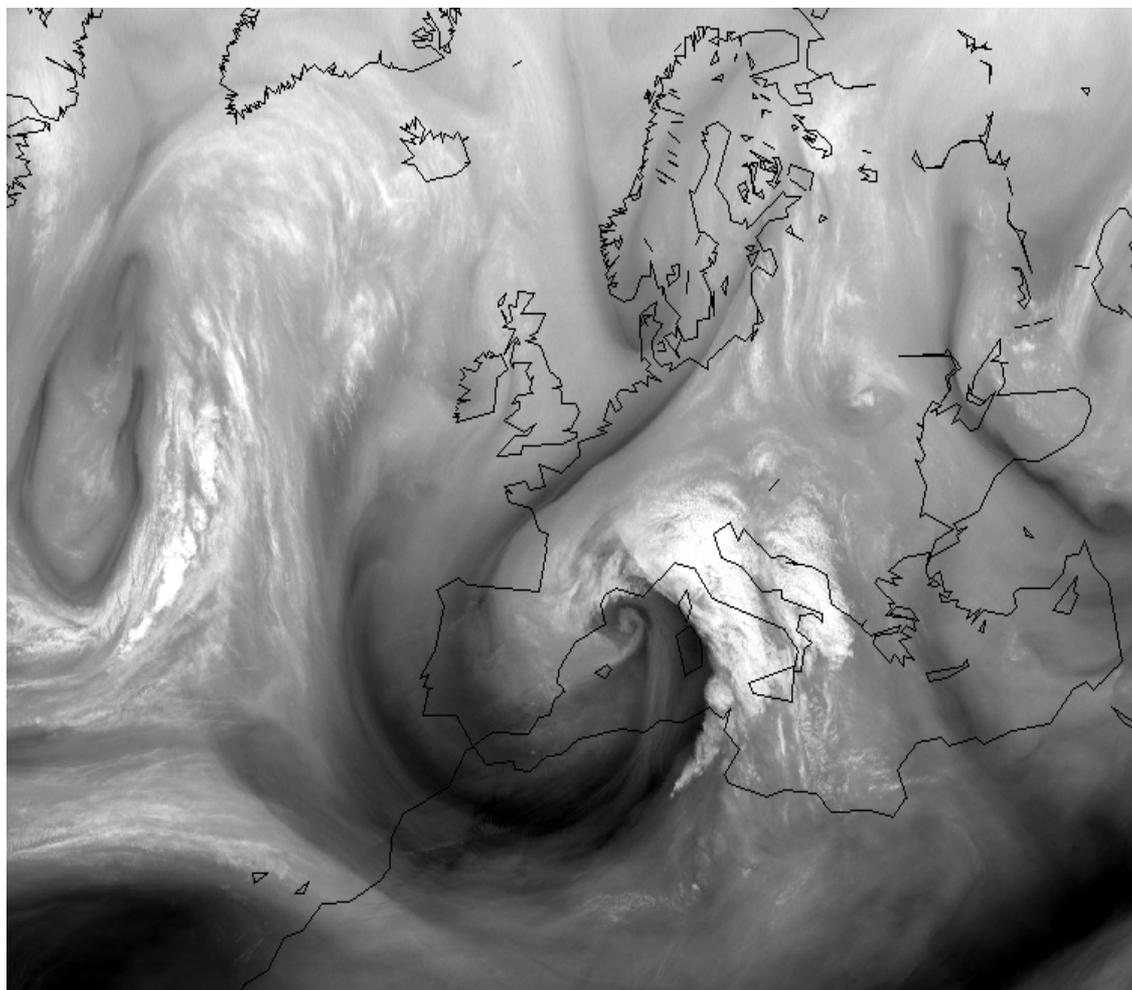
More data formats

- Work in progress
  - Diana will use the fimex-library to read gridded data
- Fimex
  - File Interpolation, Manipulation and EXtraction library for gridded geospatial data
  - Reads NetCDF, NcML, grib1/2 (and felt)
  - Common Data Model version 1 from Unidata
  - An open source project at met.no
  - https://wiki.met.no/fimex/

Projections

- PROJ.4 -
  Cartographic
 Projections Library
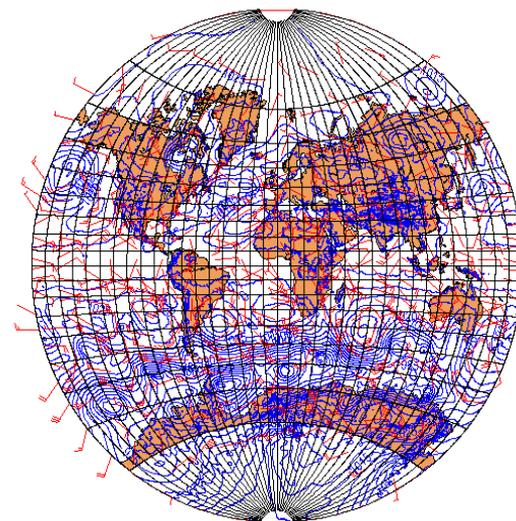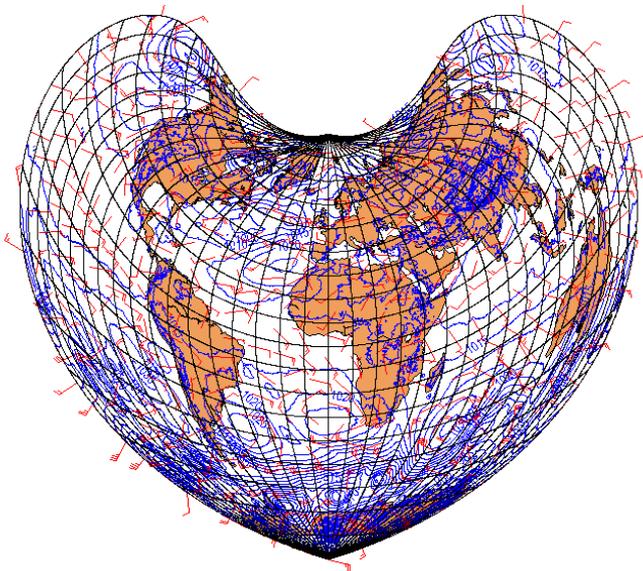
- More projections
  available
- Standard format

GEOS projection
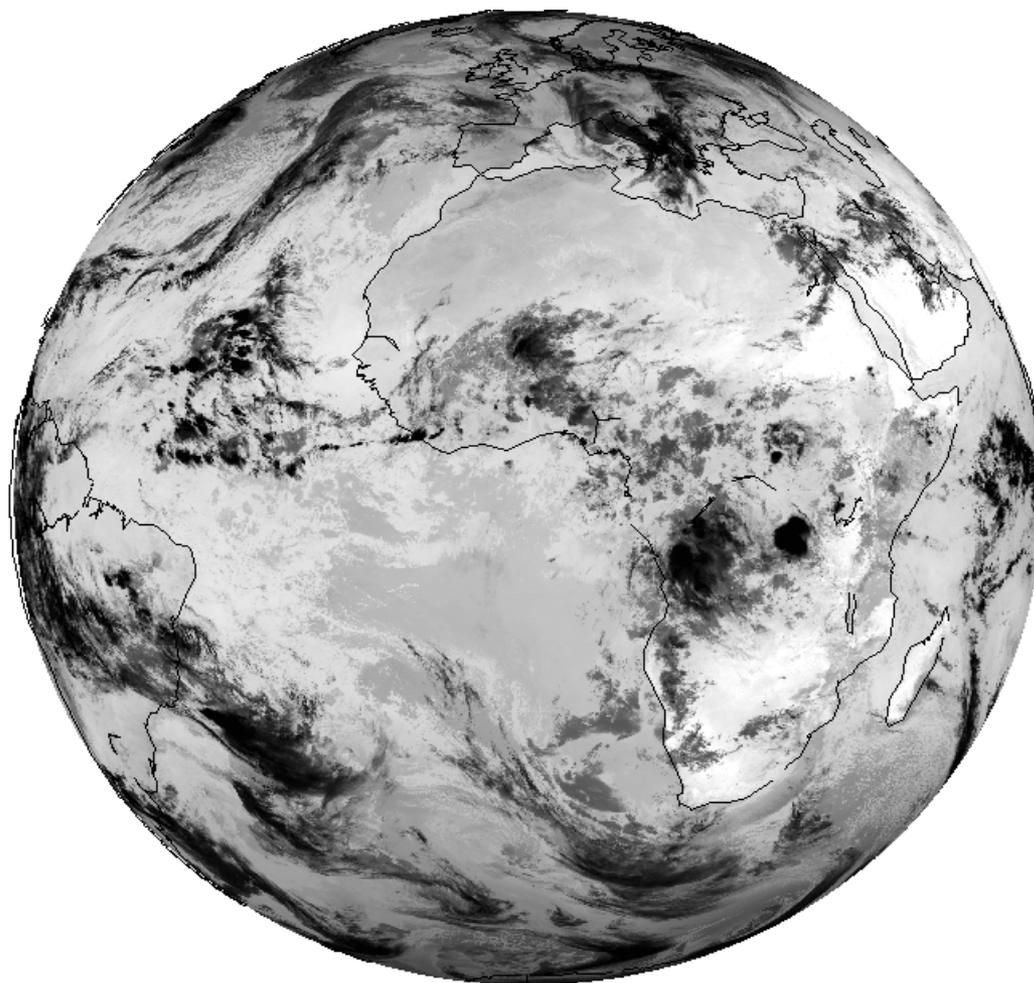
Why is Diana open source?

Others were interested in Diana.
How should we marked it?

- Commercial application?
  - Costumers would expect support
  - Diana would need customization
- Open Source?
  - No formal obligations
  - Customization done by users
  - Contributions

Diana released under the Gnu GPL

- Others can use, develop and distribute the code
- Others can sell the software and support
- They can not include the code in other programs under an incompatible license

For details on the GPL see:

http://www.gnu.org/licenses/gpl.html

Snowball effect at met.no

- More Open Source projects
- Met.no uses Open Source software wherever possible
- Met.no encurages developers to participate in Open Source projects
- Open Data Policy

Software and data policy at met.no

All data and software produced at met.no are paid for by the public and should be freely available to the public

- Example yr.no:
  - Weather forecasts
  - Point forecasts in XML
  - Observations in XML
  - NWP in grib
  - etc

How to get started with Diana?

- Information and download
  - http://diana.met.no/
- Download from
  - https://svn.met.no/diana
- Questions or contributions
  - Send an email to diana@met.no

Thank You!