EGOWS Interoperability testing
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Participants :

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- ECMWF : Stephan Siemen, Sylvie Lamy-Thepaut ,
- IBL : Jozef Matula, Michal Weis,
- KNMI : Ernst deVreede ,
- Météo-France : Frederic Bacheviller, Fabien Marty, Marie-Francoise Voidrot,
- Norvegian Meteorological Institute : Trond Michelsen,
- *Observer* : Adrian Custer,

With a contribution from :

- Technische Universität Dresden : Matthias Müller

5 Servers, 4 Met clients, 2 General purpose clients

Tested servers:	Tested clients
DWD / Ninjo IBL /Visual Weather, Meteo-France /Synopsis ECMWF / ecChart Dresden UCAR/motherlode	*Specialised in Meteorology* IBL/Visual Weather KNMI/ Agaduc ECMWF / Metview Meteo-France / Synergie ---------- *General purpose :* gvSIG Gaia

Testing Process

1- Free tries

- To test the connections and availability of servers and data
- To validate the tokens and others access restrictions
- To make some « monkey testings » on products with different caracteristics

2- Validate the responses to the requests

- Get the same data from different servers

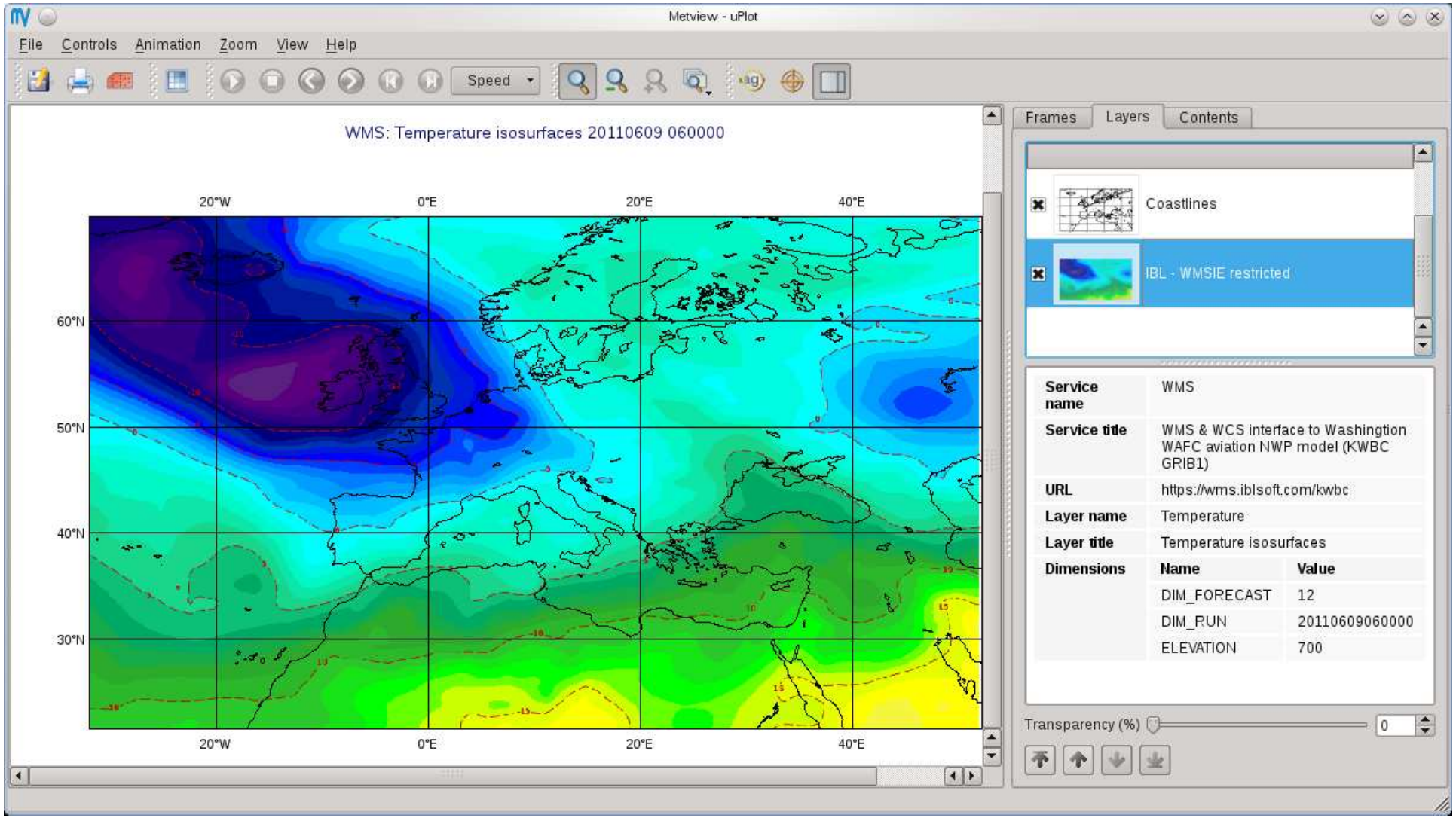
3- Test a real use case defined by forecasters

4- Test the TU Dresden server serving WMS Climate Change products

Metview WMS Client – IBL KWBC layer

Type of product *: numerical model outputs*

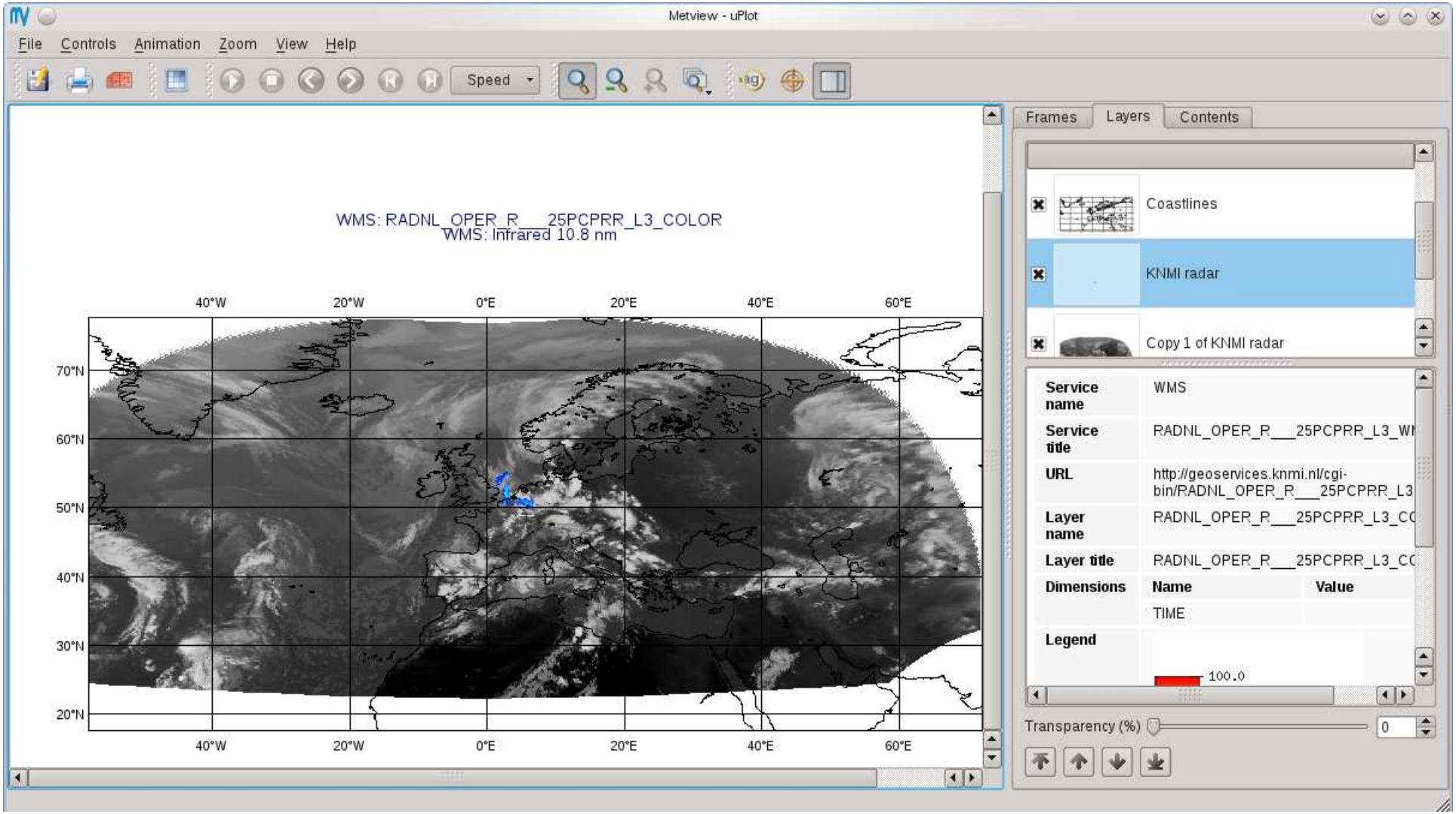
WMS implementation issues *: time definition, elevation*



Metview WMS Client – KNMI satellite and radar layers

Type of product *: Radar composite image overlayed on top of Geostationnary Satellite*

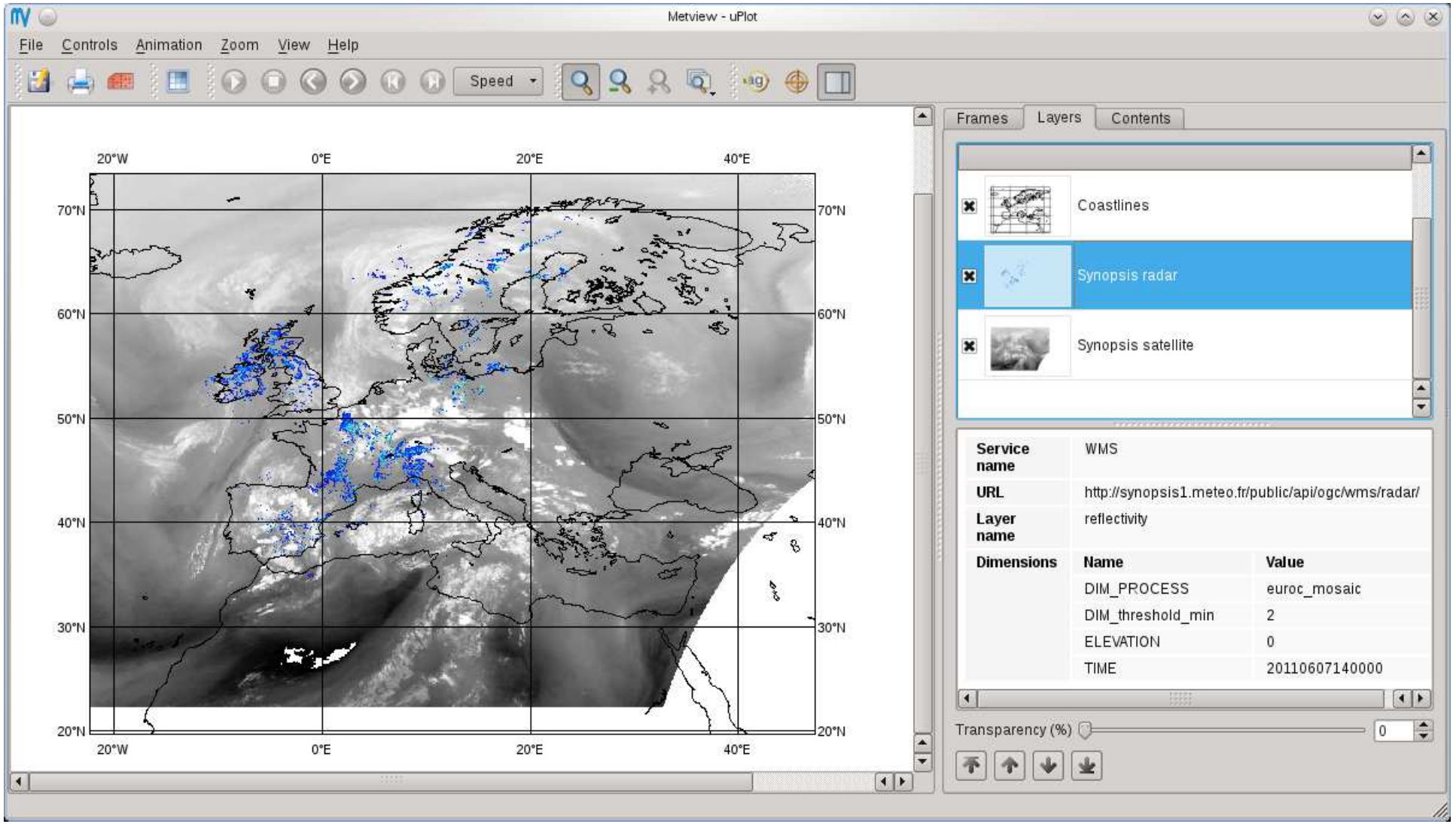
WMS implementation issues *: time definition, transparency*



Metview WMS Client – Meteo-France satellite and radar layers

Type of product *: Radar composite image overlayed on top of Geostationnary Satellite*

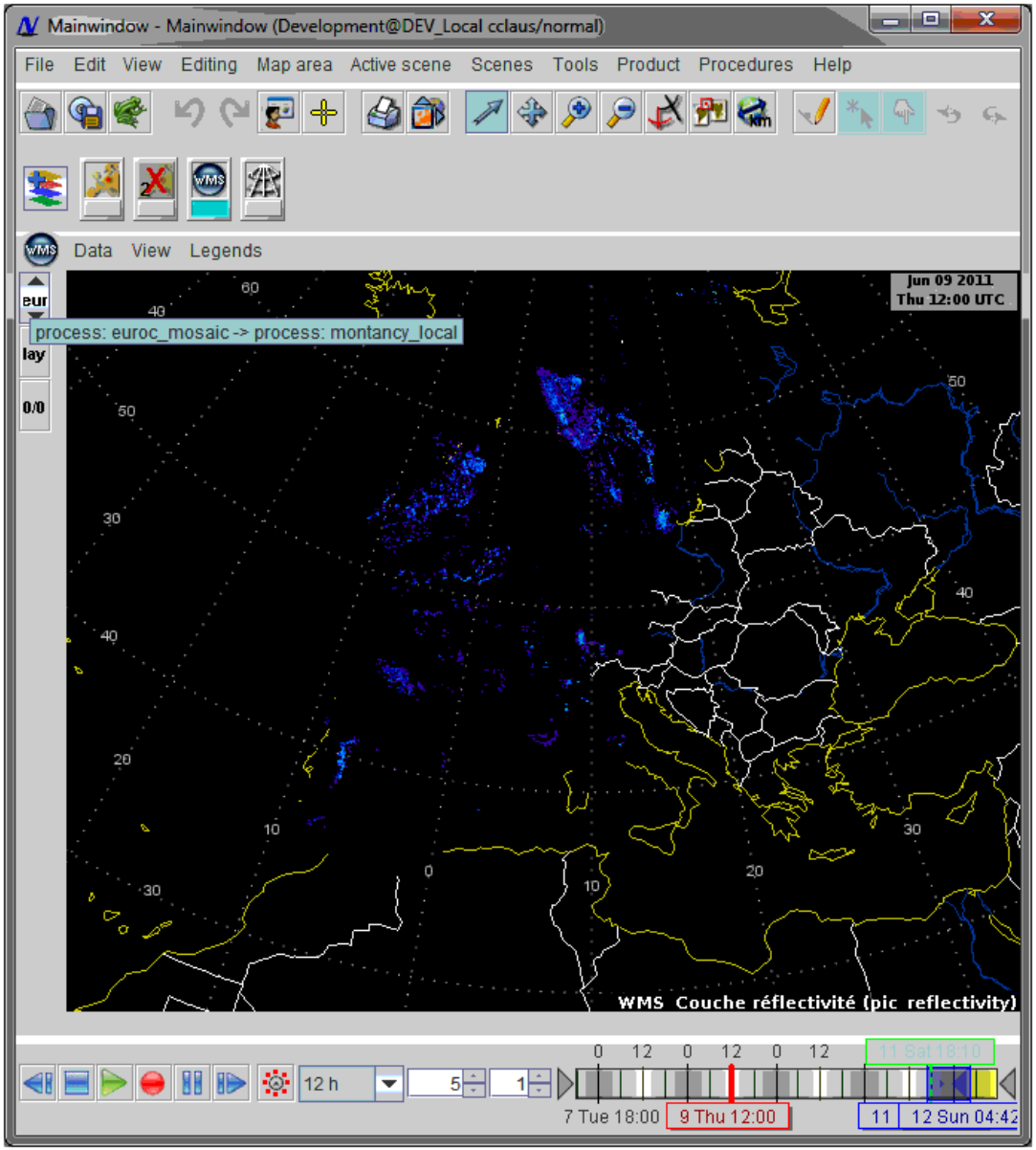
WMS implementation issues *: time definition, threshold for the radar echos, transparency*



Ninjo Client- Meteo-France radar layer

Type of product *: Radar product*

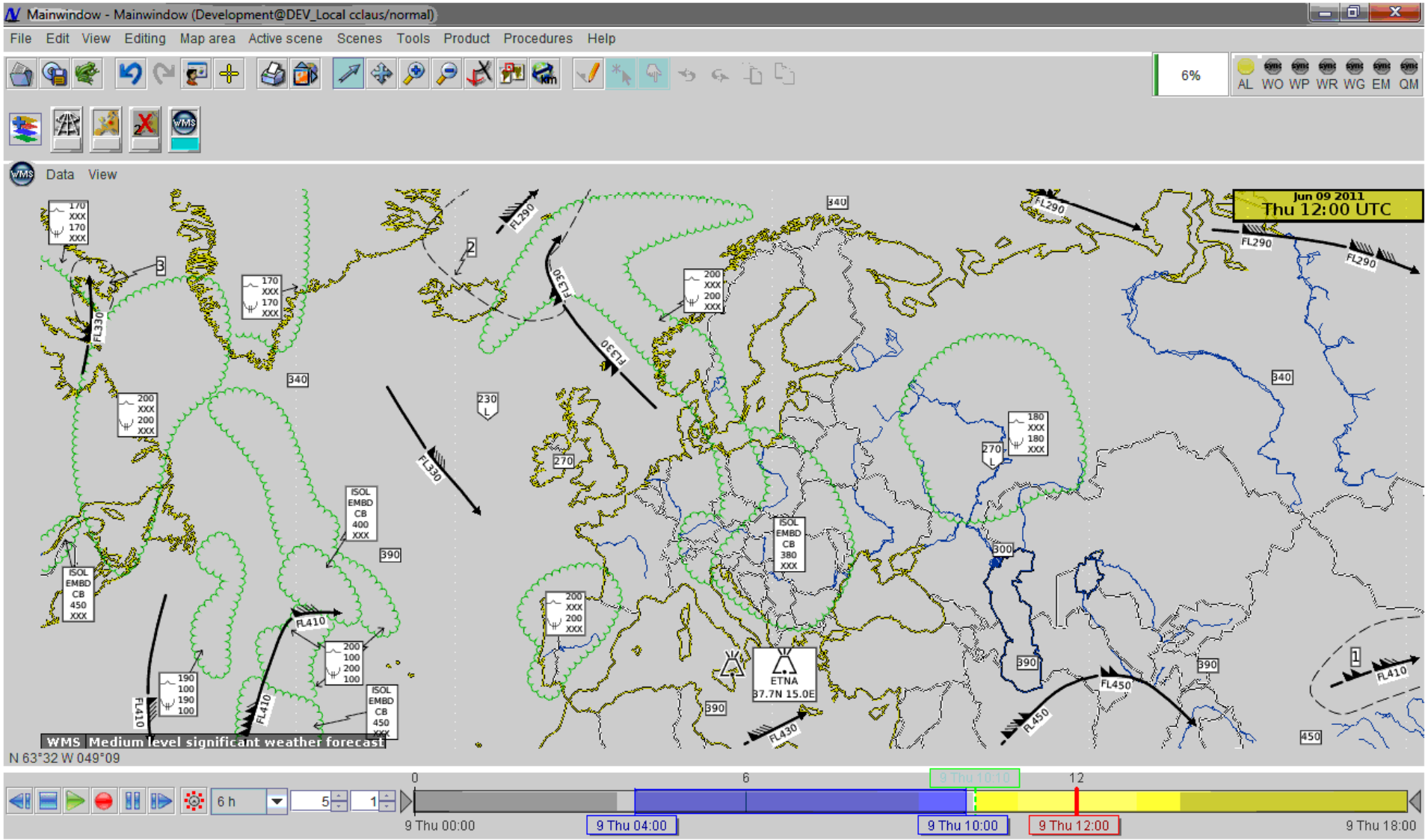
WMS implementation issues *: time definition*



Ninjo Client- IBL Significant weather layer

Type of product *: Significant weather Forecast*

WMS implementation issues *: time definition*

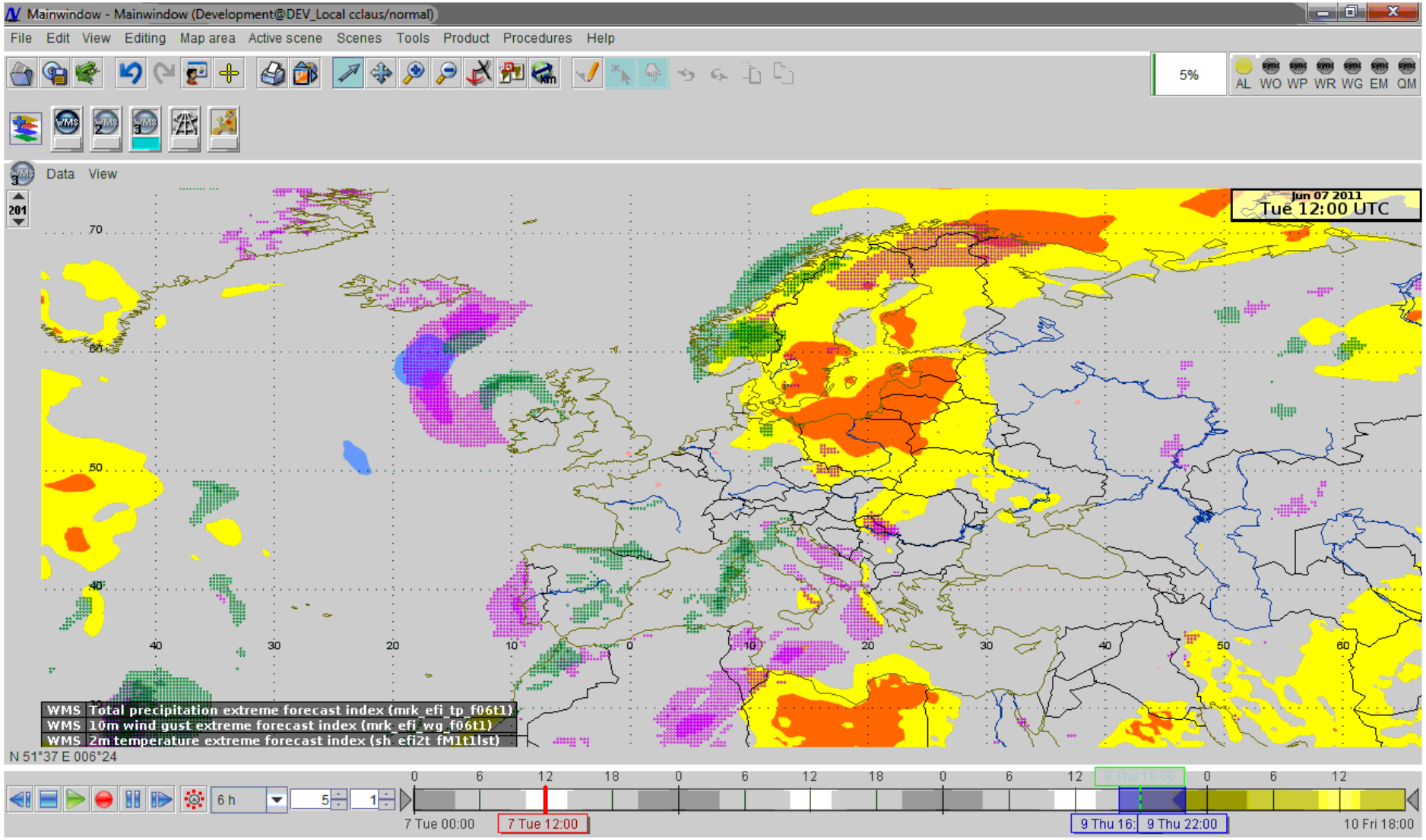


Ninjo Client- ECMWF WMS layers

Extreme Forecast Index

Type of product *: climate change simulations*

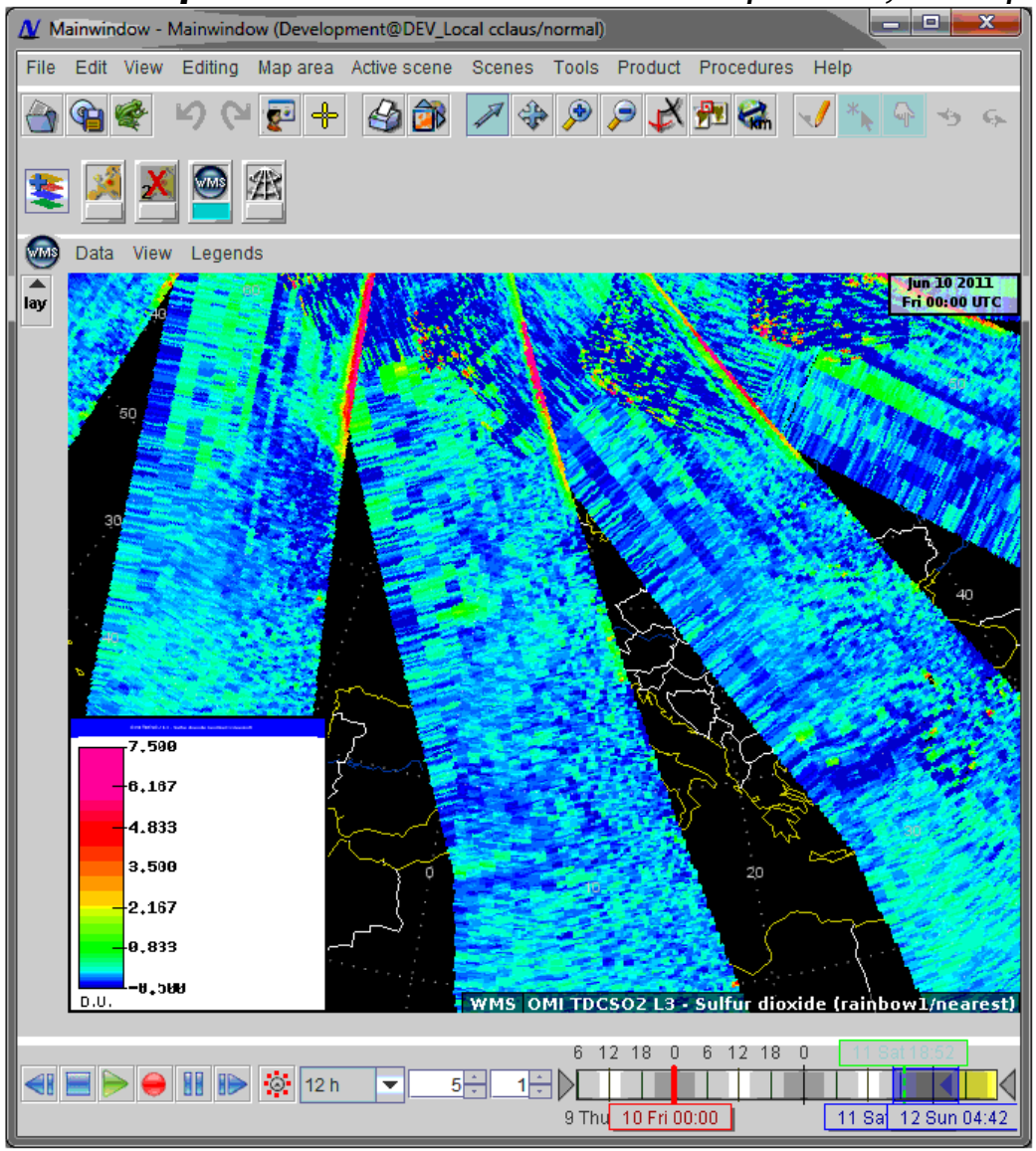
WMS implementation issues *: time definition, transparency*



Ninjo Client- KNMI satellite layer with legend

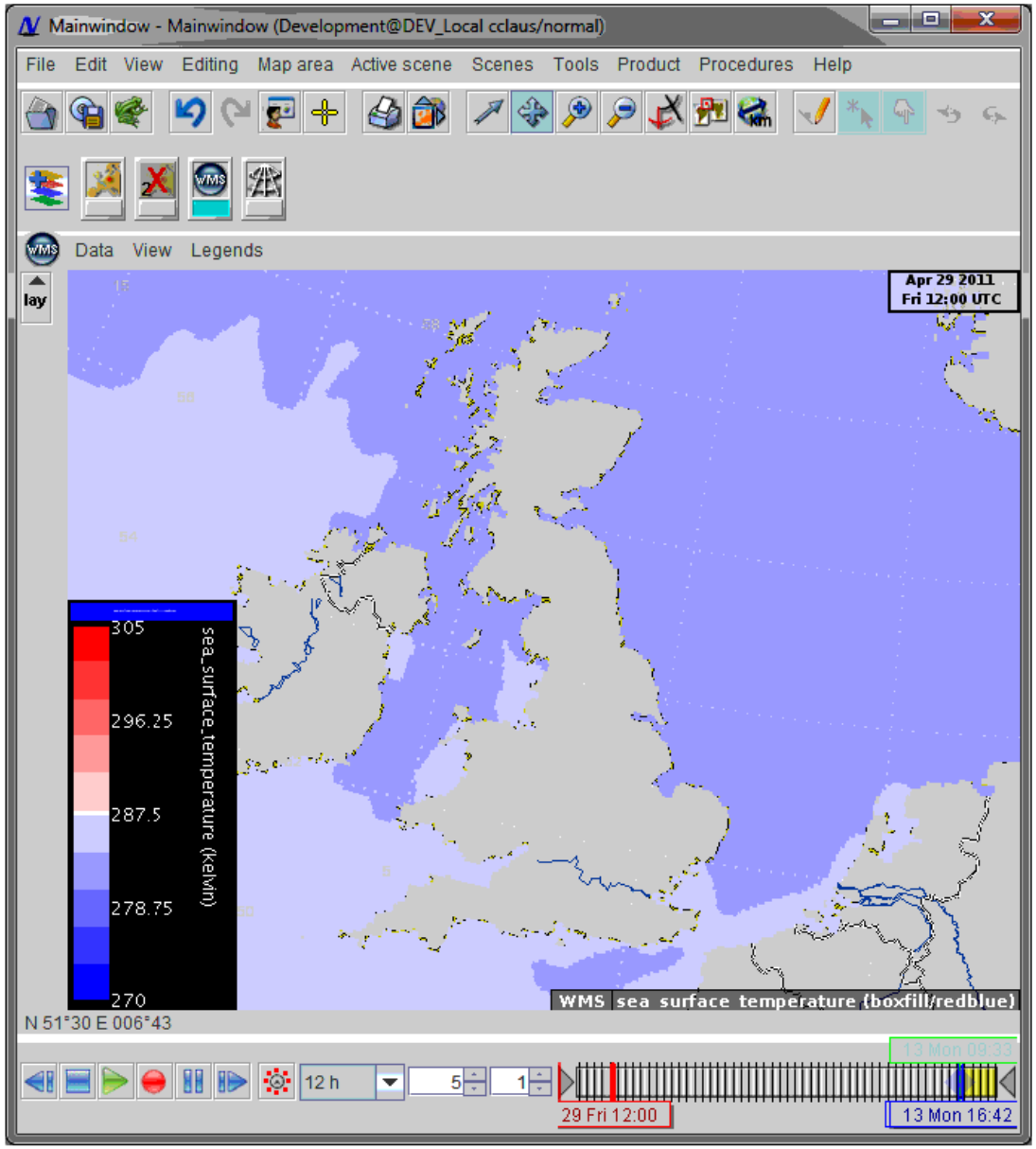
Type of product *: Satellite product*

WMS implementation issues *: time definition, transparency*



Ninjo Client- ecChart/WMS Numerical model output layer with legend

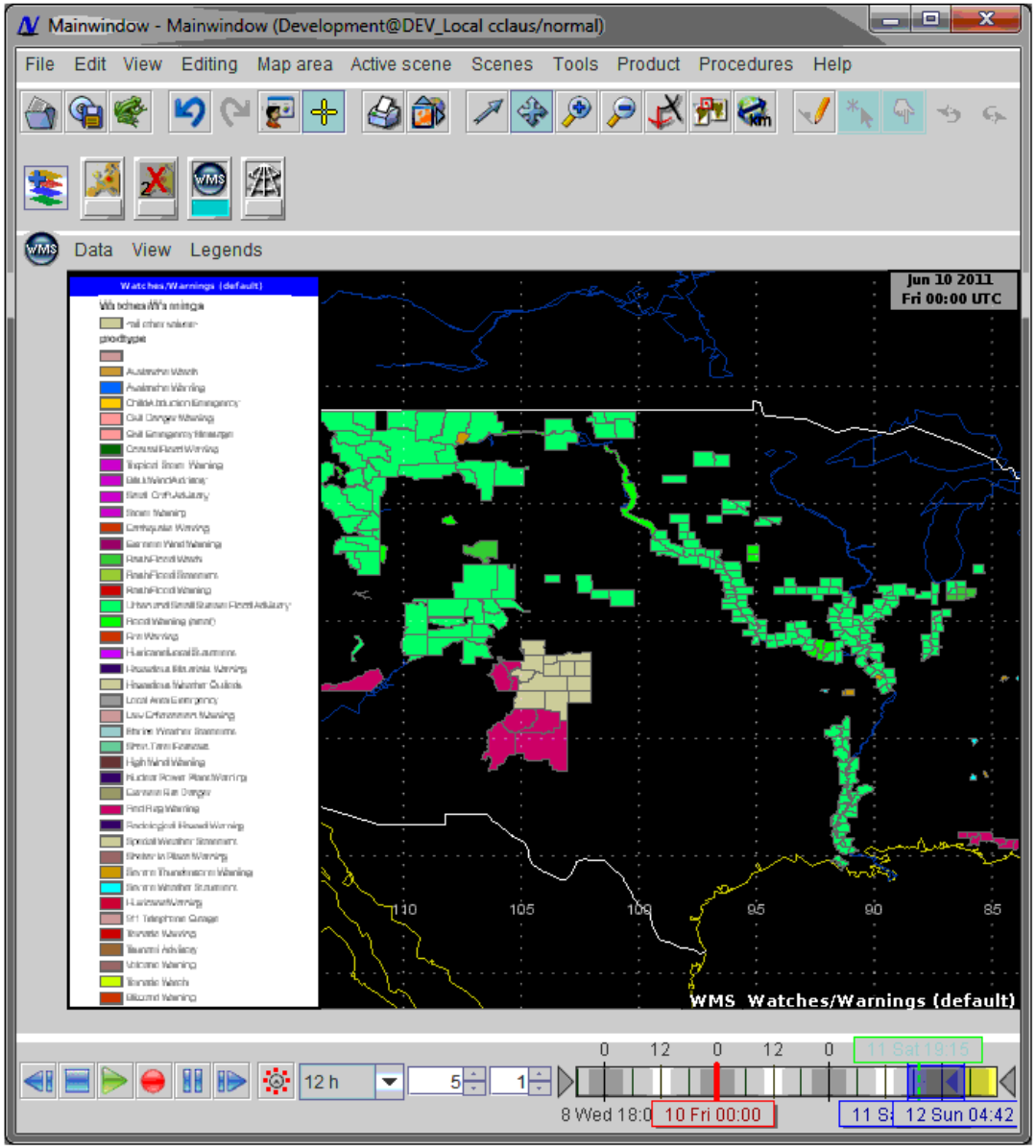
Type of product *: Numerical model output*



Ninjo Client- Motherlode WMS server layer with legend

Type of product :

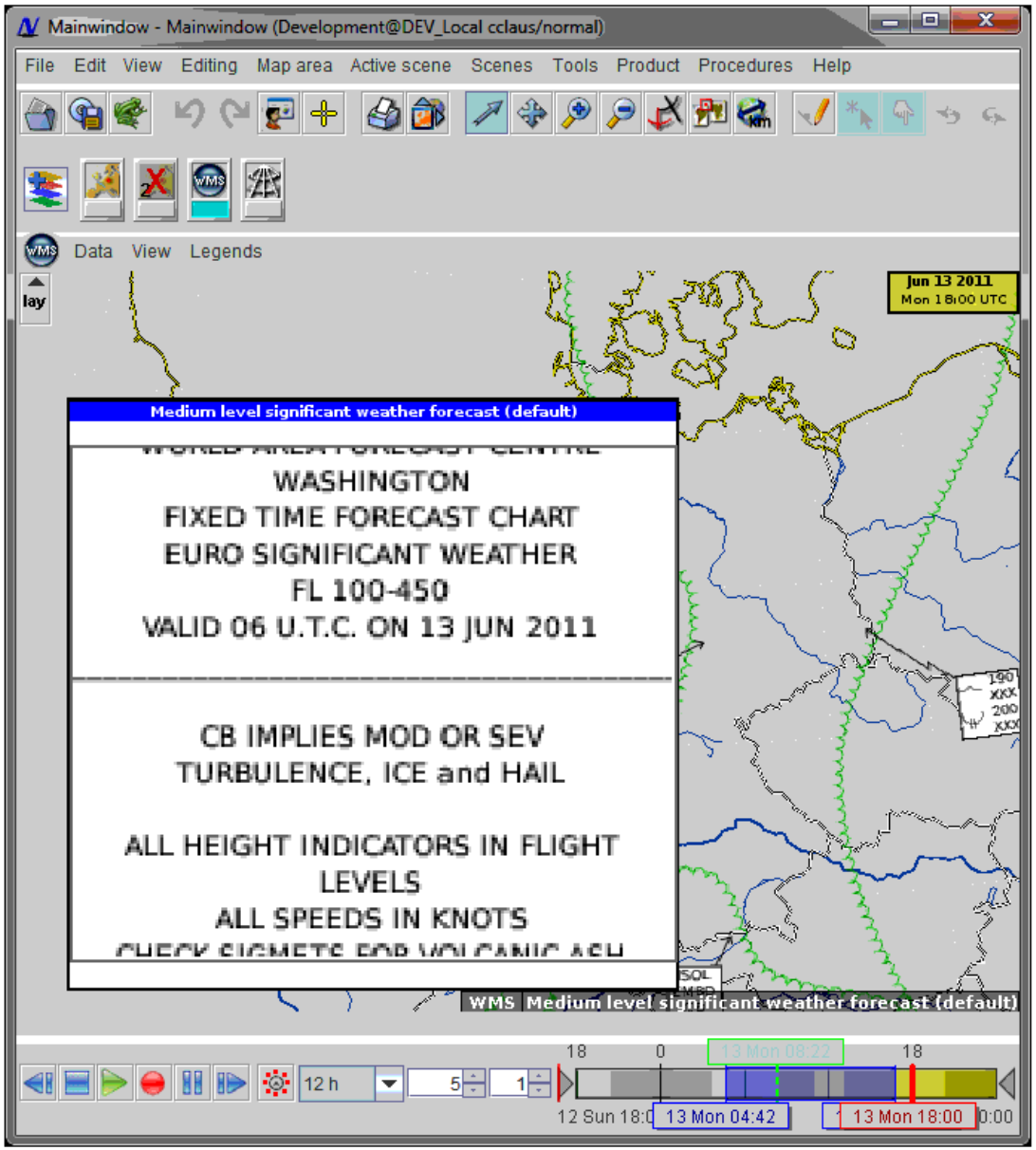
WMS implementation issues *: time definition*



Ninjo Client- IBL WMS server layer with legend cut off

Type of product *: Significant weather forecast*

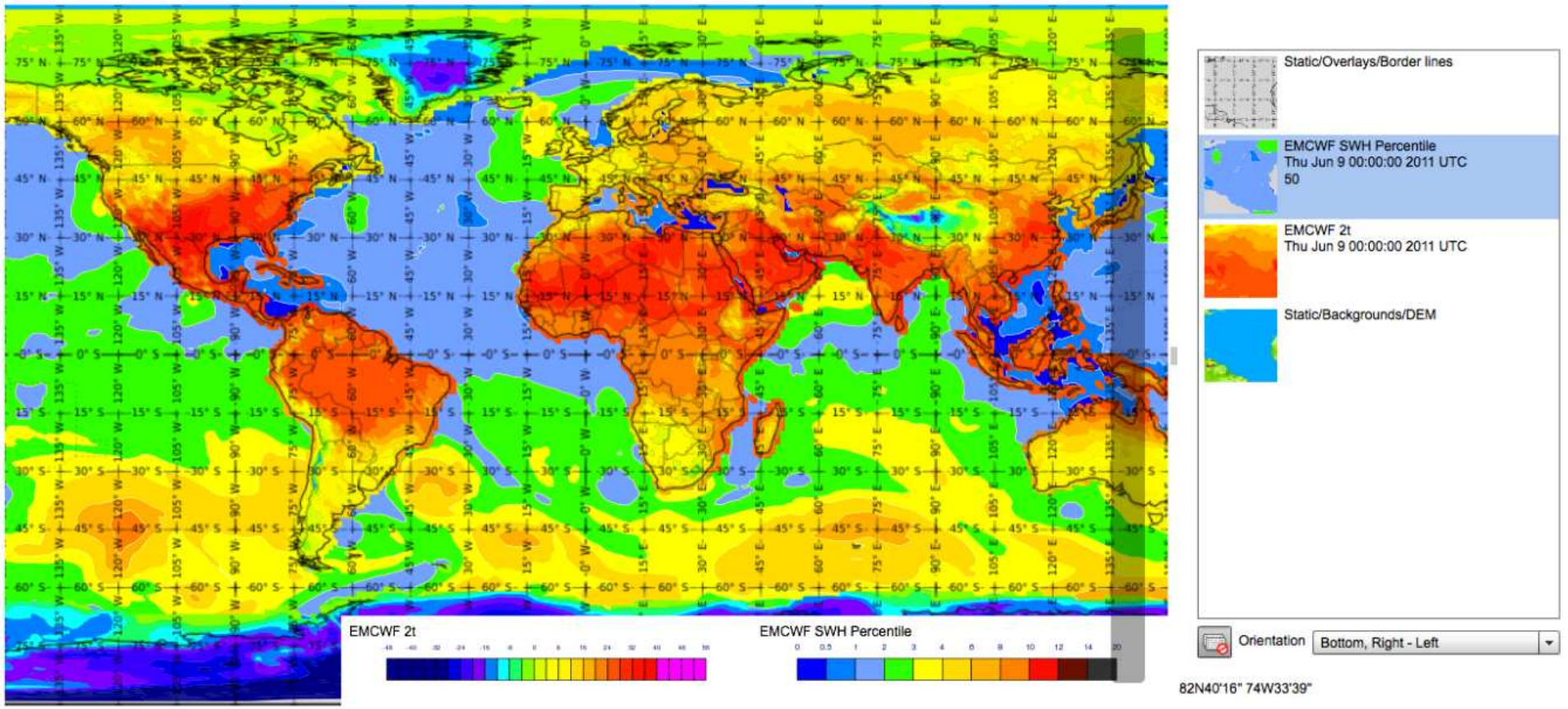
WMS implementation issues *: time definition*



IBL Client- ecChart/WMS numerical model output layers with legend

Type of product *: numerical model outputs layers*

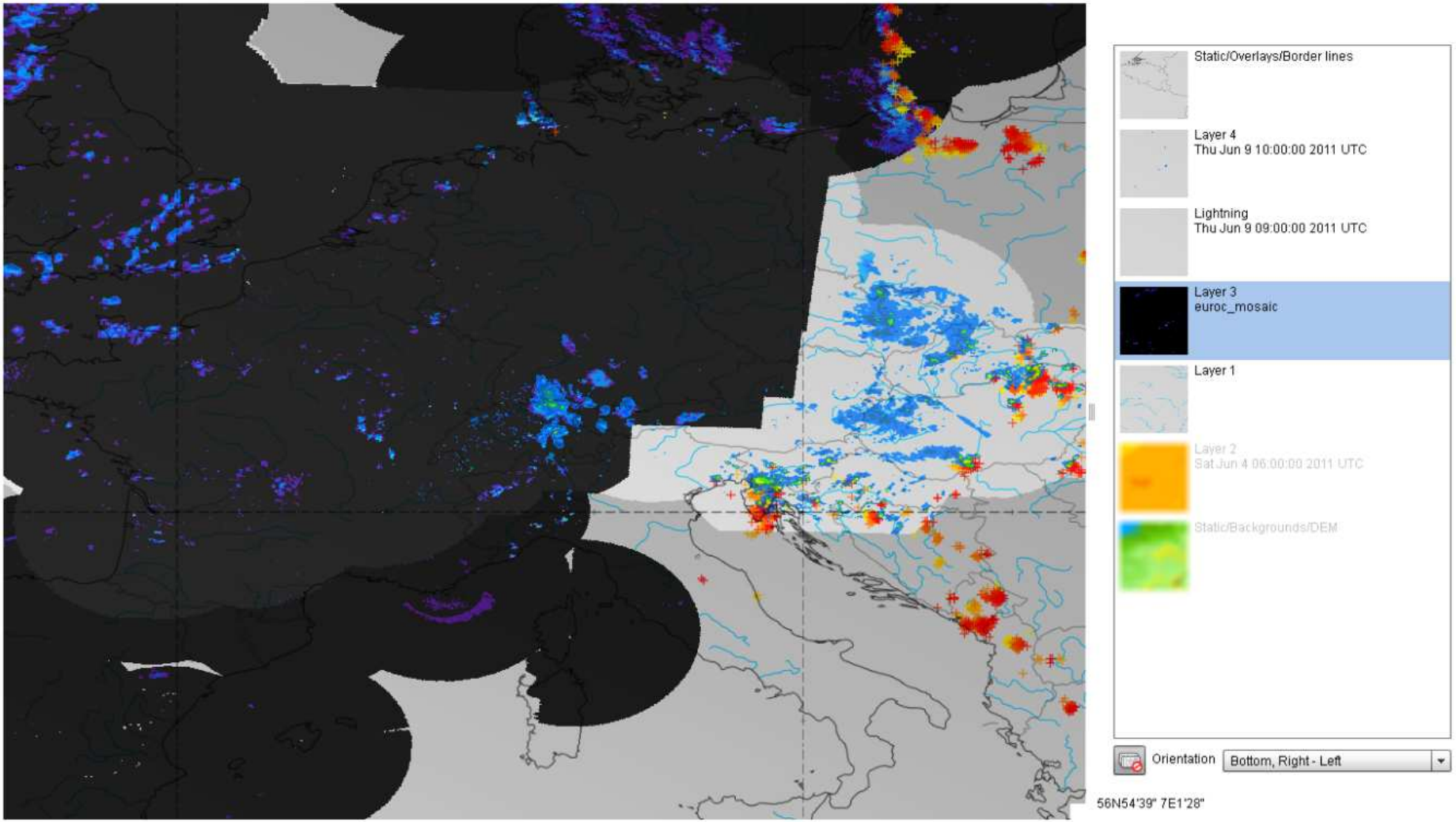
WMS implementation issues *: time definition, transparency*



IBL Client- UK Met and Meteo-France radar and lightning layers

Type of product *: Radar composite images*

WMS implementation issues *: time definition, transparency*



Feedback connections testings and free tries

GeoTools changes the parameter "token" or « map » to upper case "TOKEN" or « MAP » which was not supported by the servers tested.

For radar imagery « no reflectivity » represented by opaque pixels hide underneath layers (they are used to enhance the area where data is available).

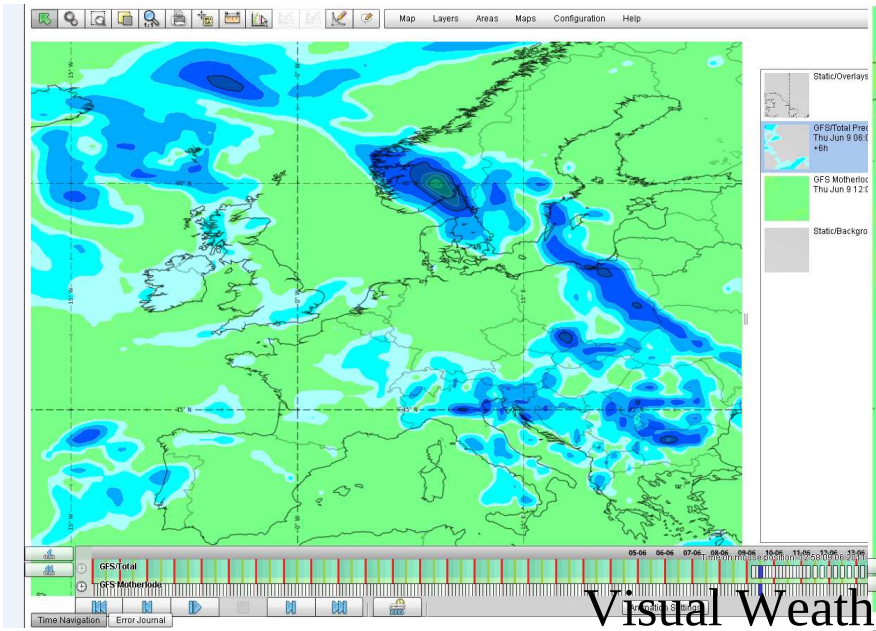
2- How can we validate the responses?

Get the same data from different servers :

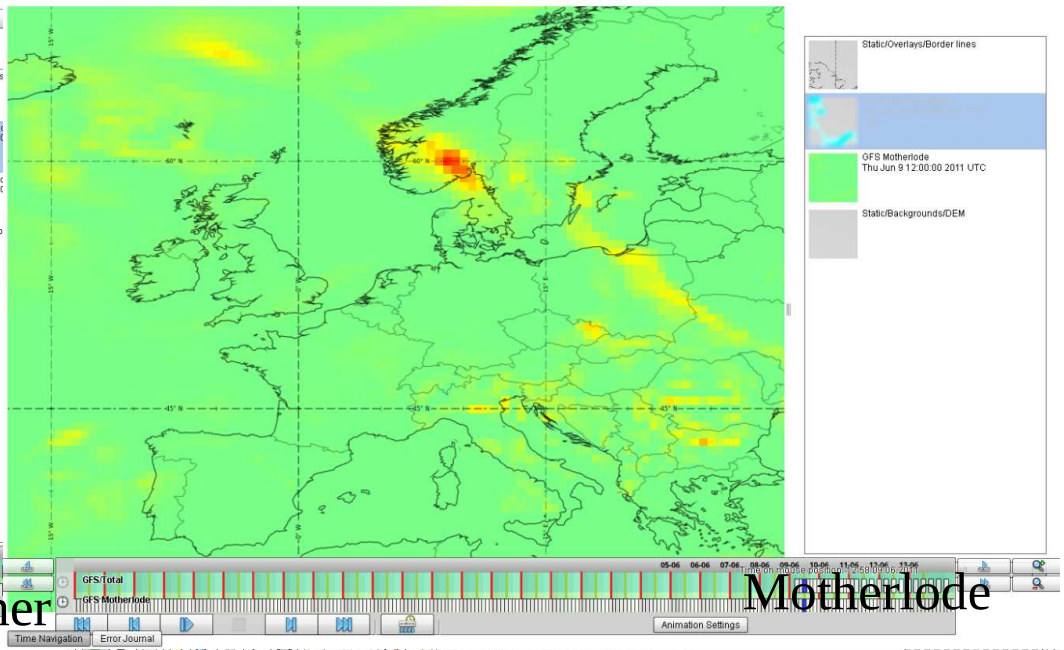
DO WE GET THE SAME THING?

IBL Client : Visual Weather & Motherlode gfs-grid

Type of product : numerical model output layers

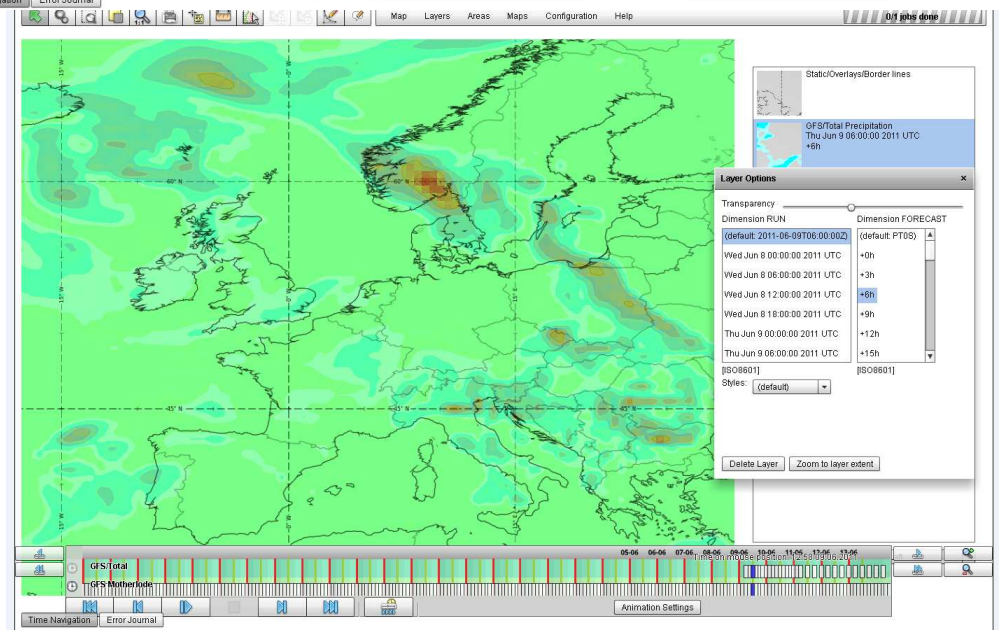


Visual Weather

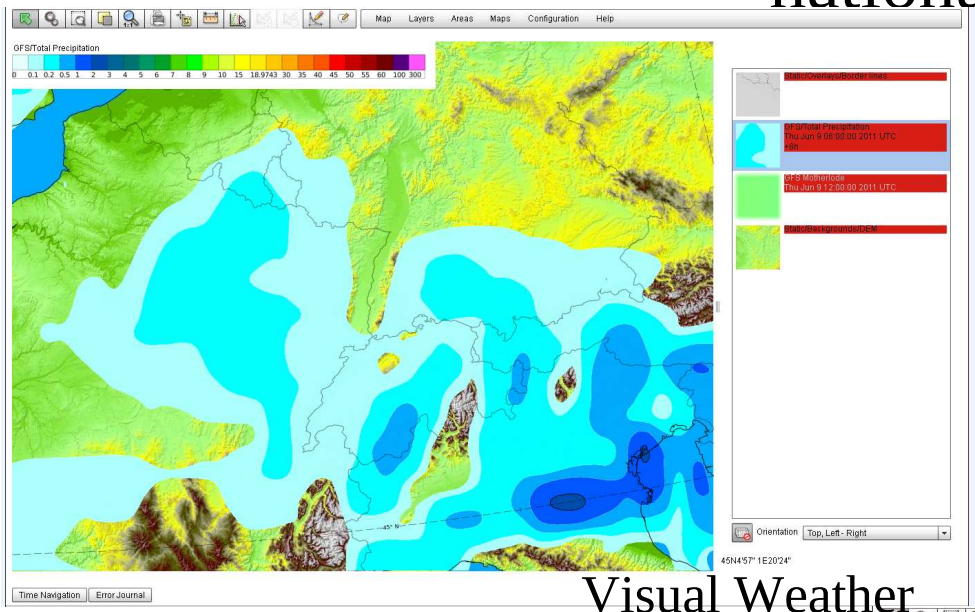


Motherlode

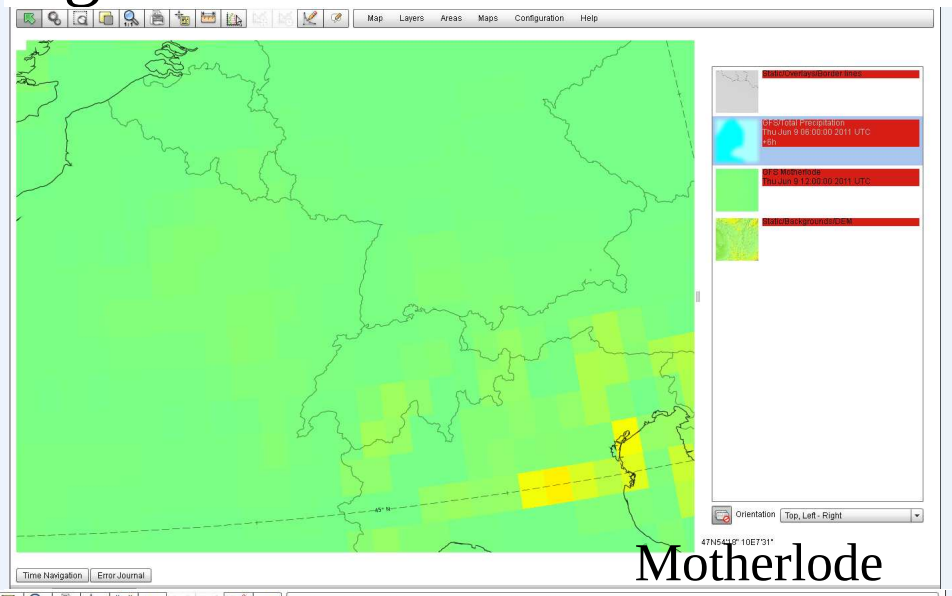
Visual Weather & Motherlode overlayed



IBL Client : Visual Weather & Motherlode gfs-british-national-grid

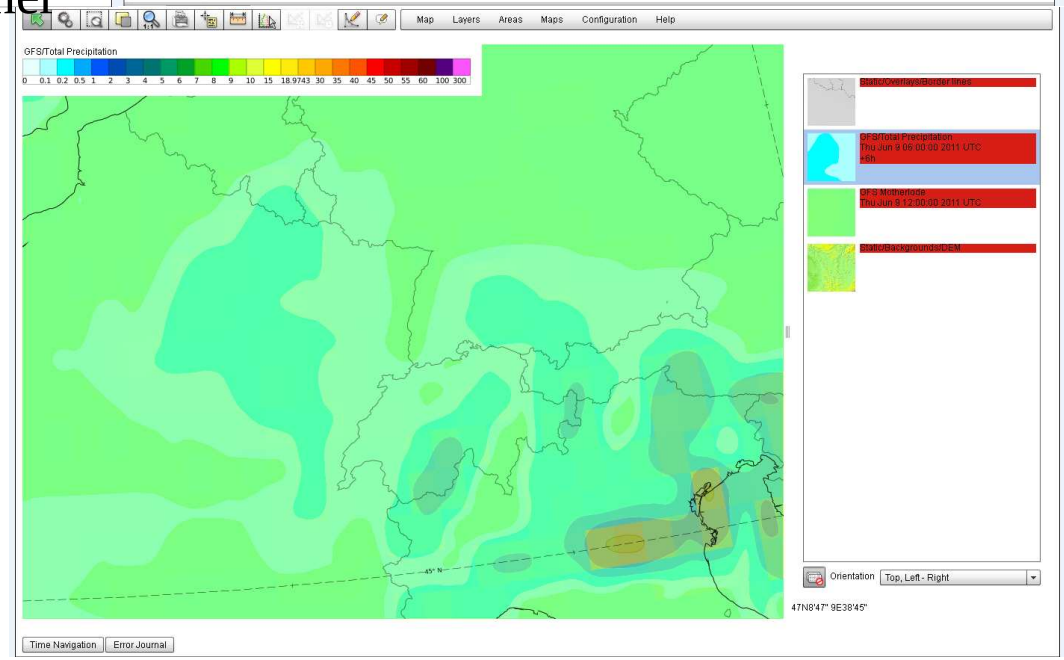


Visual Weather

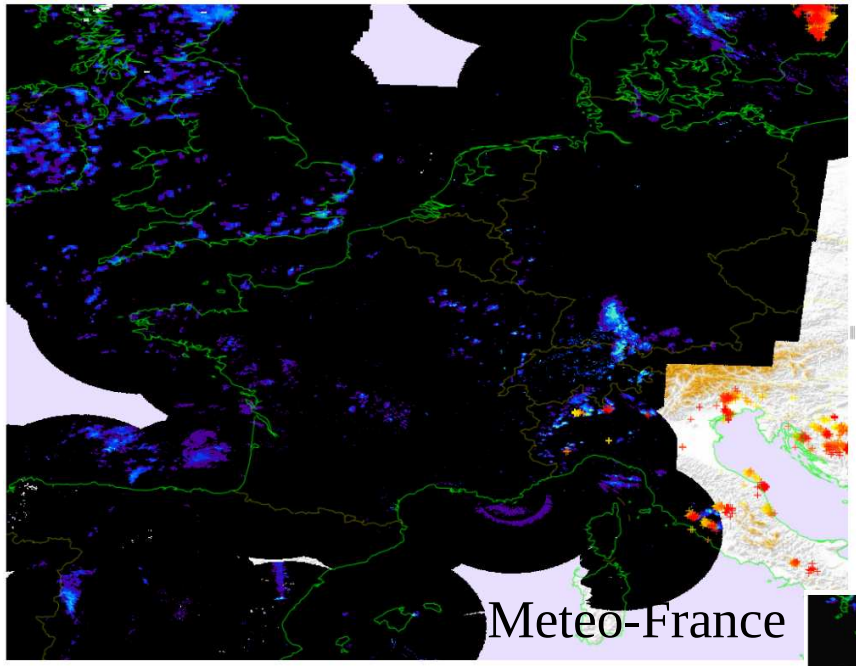


Motherlode

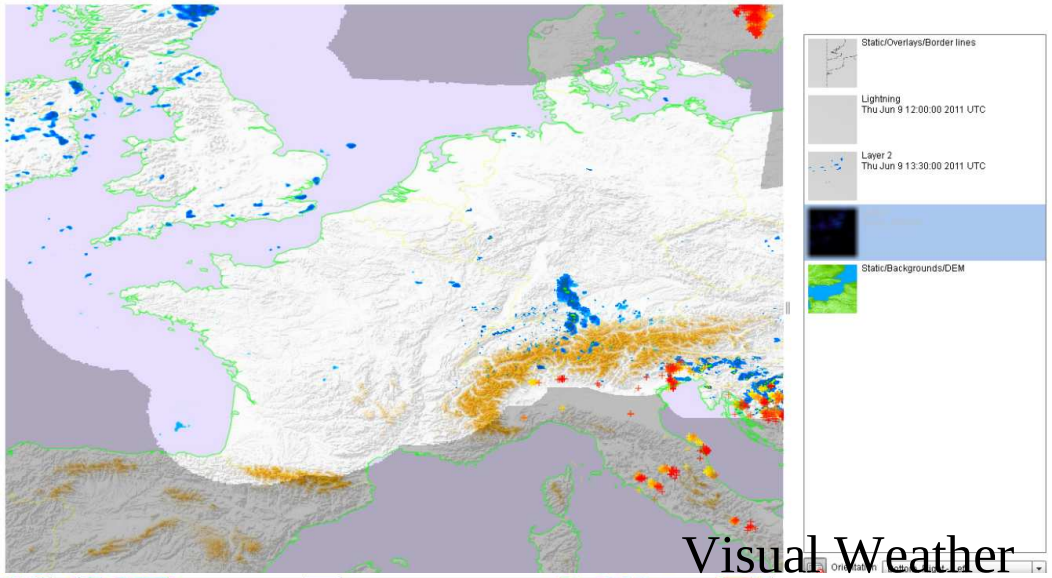
Visual Weather & Motherlode overlayed



IBL Client : Visual weather and Meteo-France radar and lightning layers

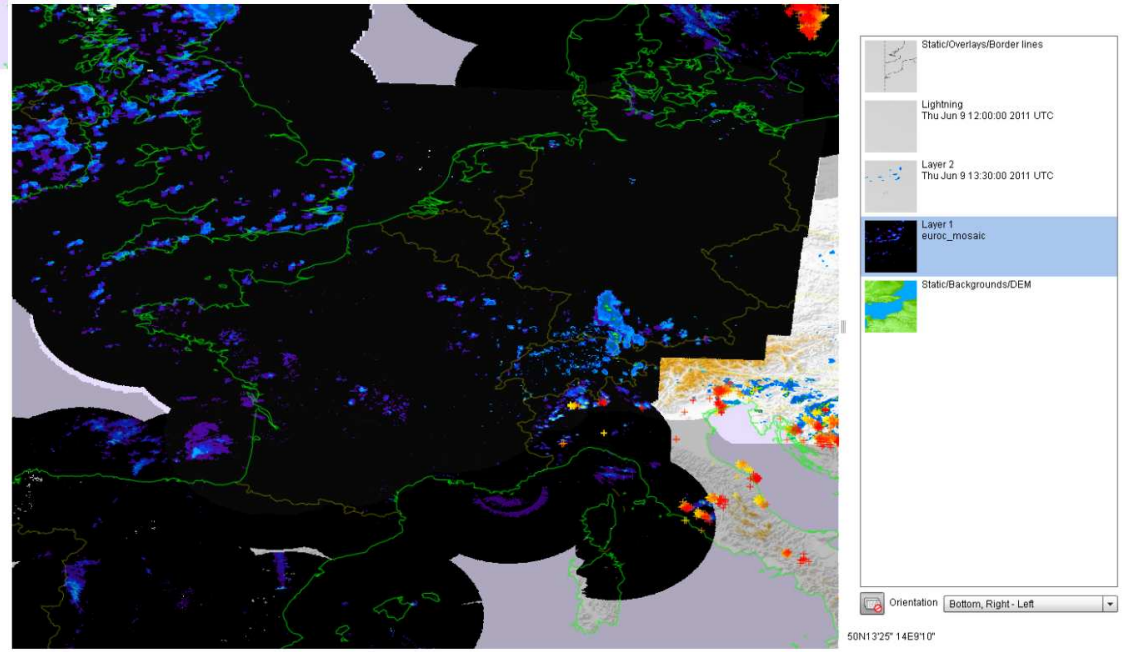


Meteo-France



Visual Weather

Visual Weather & Motherlode overlayed



3- Test a real use case defined by forecasters

GFS MSL on motherlode

+

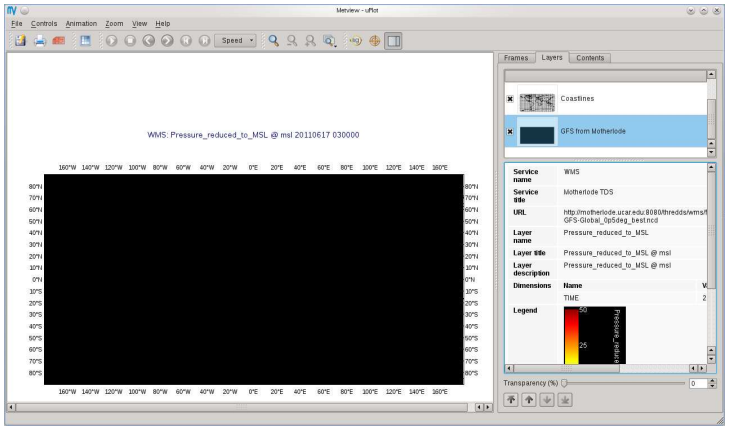
GFS MSL from IBL

Feedback Use case : GFS MSL on motherlode +GFS MSL from IBL for a certain time : do we get the same thing?

When we want to look for a specific parameter , it can be difficult to find a specific one : the list is long , not ordered, and the names can differ from one server to another

- Should clients have order or look up functionnalities?

- Layers name should definitely be standardized



Results :

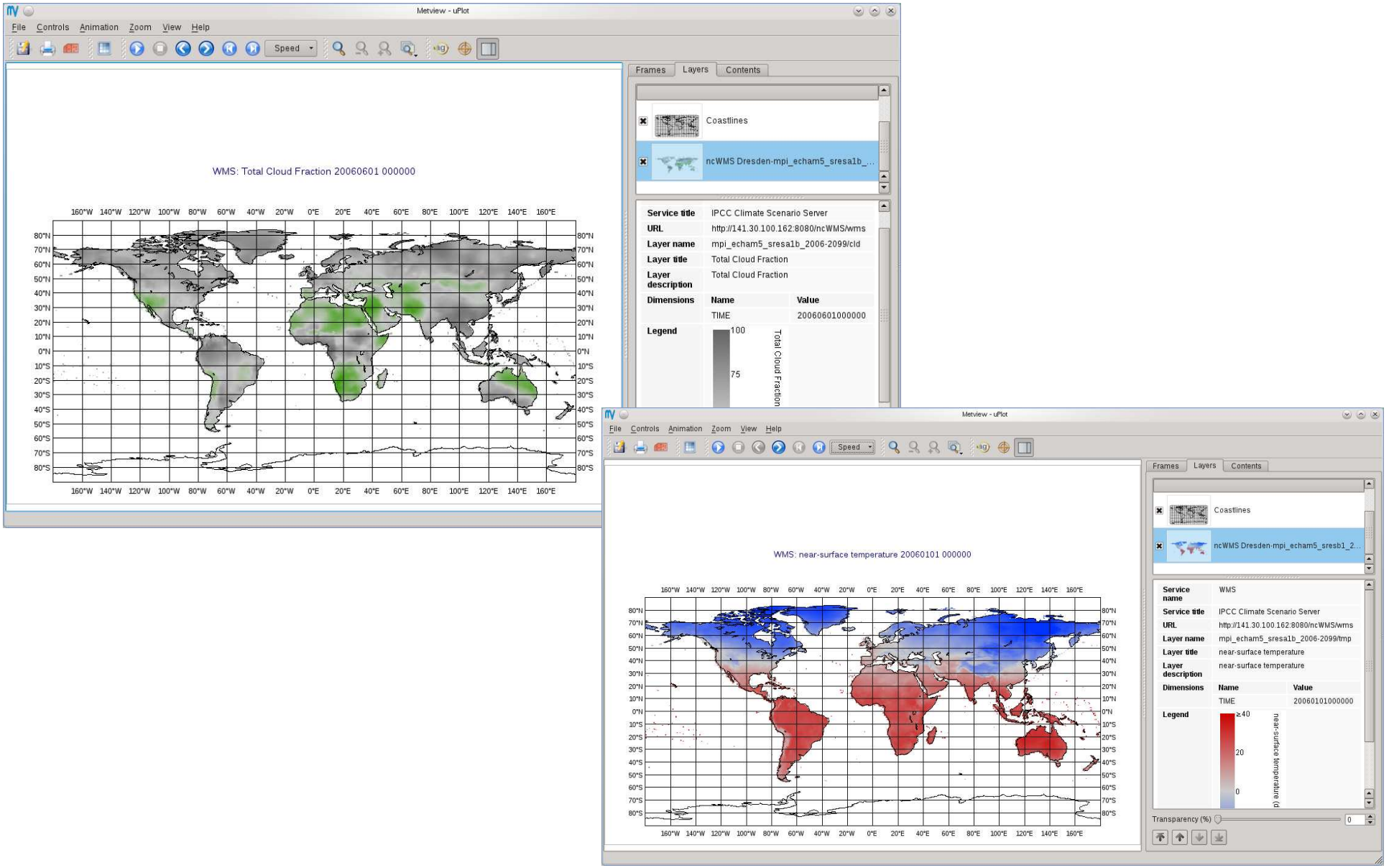
All the clients have got the same result but …. the image is black
Motherlode legend refers to value from -50 to +50 not relevant for pressure so no style correct
Since then we have learned that there is a "vendor-specific" parameter option for this particular WMS implementation. For more details on how to use COLORSCALERANGE, see http://www.resc.rdg.ac.uk/trac/ncWMS/wiki/WmsExtensions.

Remarq : IBL offers two type of access : For general purpose clients : « Best Run » and TIME
For professional clients dimensions for RUN and dimension for Time_offset. They then don't use TIME.
Another compromise is to make all combinations possible having the 3 dimensions Run , Time Offset ands TIME using Two among the 3.
If only TIME take the Best run.

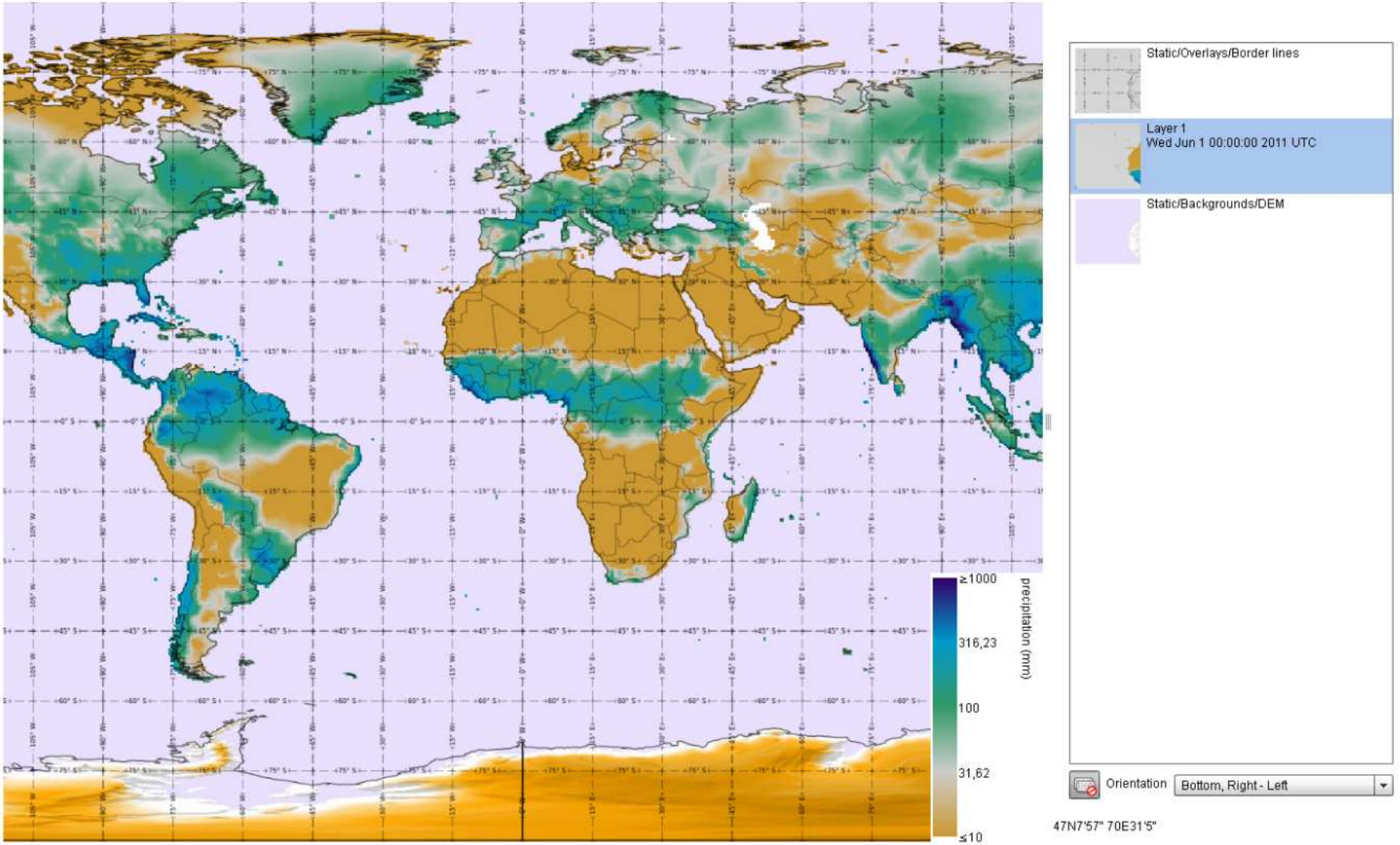
4- Test the TU Dresden WMS server

WMS with downscaled climate projections (derived from WCRP CMIP3 multi-model dataset, currently limited to ECHAM5).

Metview Client : TU Dresden WMS server



IBL Client : TU Dresden WMS server



Feedbacks :

Style called / : is sends back an error. (internal server). / : ! Are to be avoid in layer or style names or identifier
with no style map is displayed

Time Start / stop period : the Syntax is correct but default is expressed in term of time stamp when time expressed in term of month surprising but maybe correct
Some clients can stand it other not . Problem of maturity of the client as the syntax is OK.

Legends are readable

Response time : Time for rendering seems under 3s so Good then network delays not linked to the server.

gvSIG :

Handles time which seems rare for general purpose clients
OK on 1.1.1 doesn’t work with 1.3

Gaia :

Could access Dresden server WMS but feature info is not available

NEXT STEPS :

The developpers really appreciated these tries,

They could probably be done at home synchronising a day booked for the tries everywhere at the same time

A next step could be to define a checklist of things to check

People mention that cite.opengeospatial.org already provides automatic testings to validate a server