

An aerial photograph of a town, likely in the French Alps, is shown from a high angle. The town is surrounded by green hills and valleys. Overlaid on the bottom half of the image is a white weather map with contour lines and wind vectors. The background is a dark blue gradient with a stylized sun and clouds in the top left corner.

French Forecasters Workstation Synergie-Next

Synopsis Project

A. Lasserre-Bigorry

F. Marty

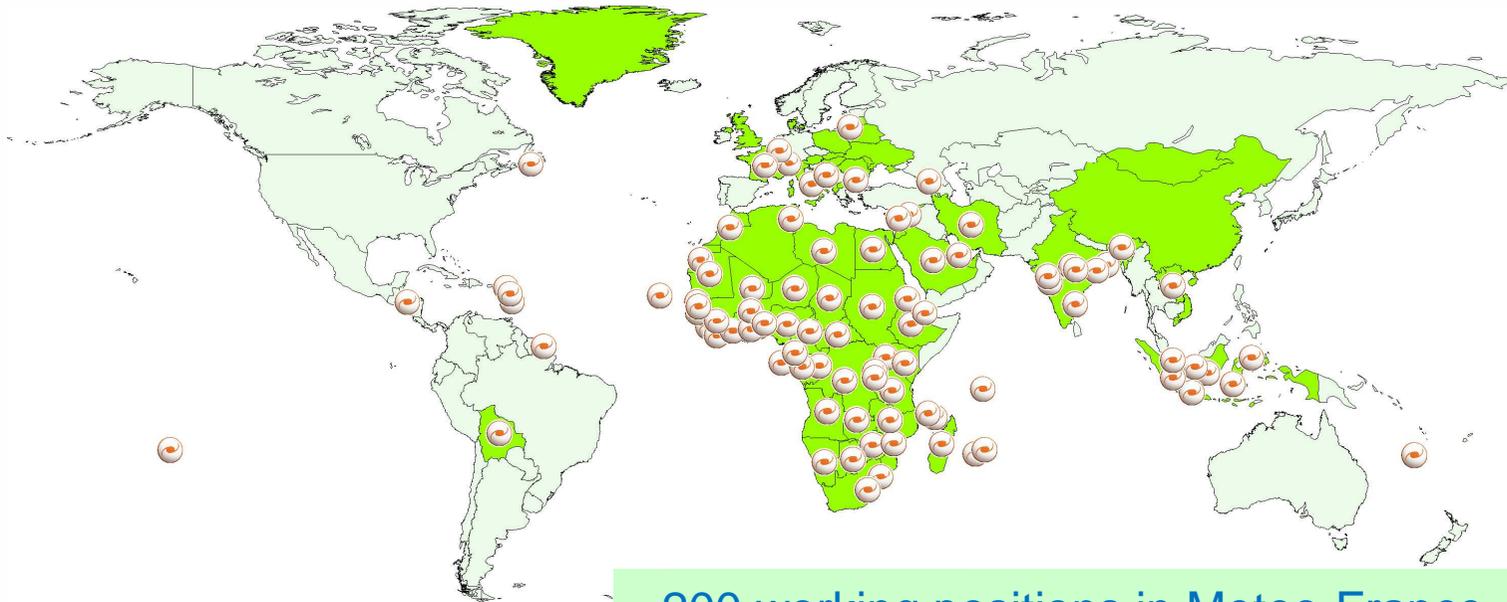
H. Vandeputte

J. Nicolau

P. Salerno

Context

Synergie is smoothly moving to Synergie-Next.



- 200 working positions in Meteo-France and main customers (e.g. Air France, Kourou Space Centre, French forces)
- 200 positions abroad (in more than 60 countries)

Synopsis Project

Meteo-France National Project



- Started in 2010, end planned in 2016
- Joint development by Météo-France and Météo-France International (MFI)
- Aim : a new workstation, developed in the form of interoperable services (SOA) for forecasters from
 - Météo-France
 - Institutional partners (French forces, hydrology, forest fires, ...)
 - Commercial clients (CNES, French Electricity board, ...)
 - Export with MFI
- 2 main phases :
 - Visualization functionalities (end 2013)
 - Production functionalities (end 2015)



Main functional specifications

- 1) **Interoperability**
- 2) **Zooming & panning free of geographic area (GIS functionalities)**
- 3) **Adaptive User Interface (lot of data !)**
- 4) **GUI « customizable » (bookmark, preferences)**
- 5) **Continuous link between past and future data (seamless vision)**

Main technical specifications

1) « OGC » Rules and SOA (Service-Oriented Architecture)



2) Multi-platform GUI and automatic deployment



3) Flexible architecture server (eg standalone)

4) Horizontal Scalability and high performance (challenge !)



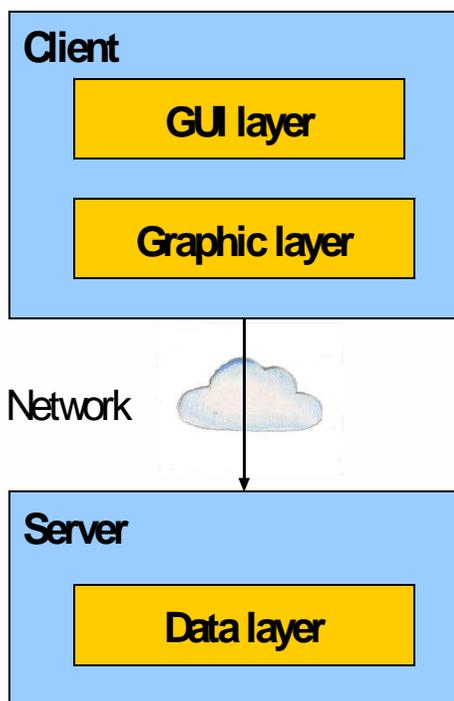
5) Dynamic adaptation to the data flow

Technical choice

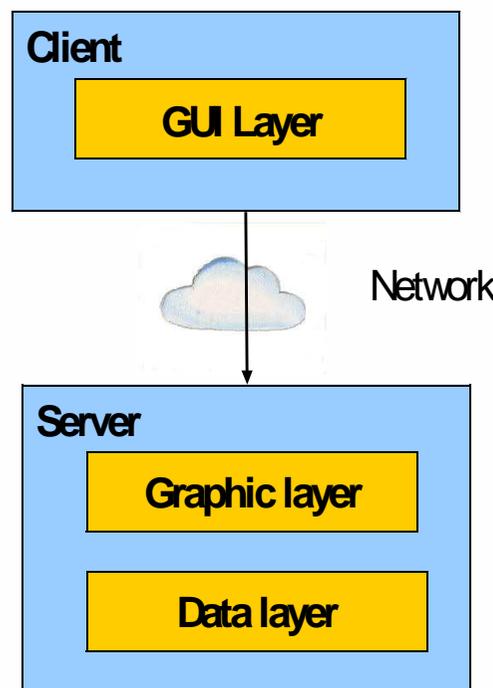
- A gravity center on the server side
- Many open source components...



Synergie



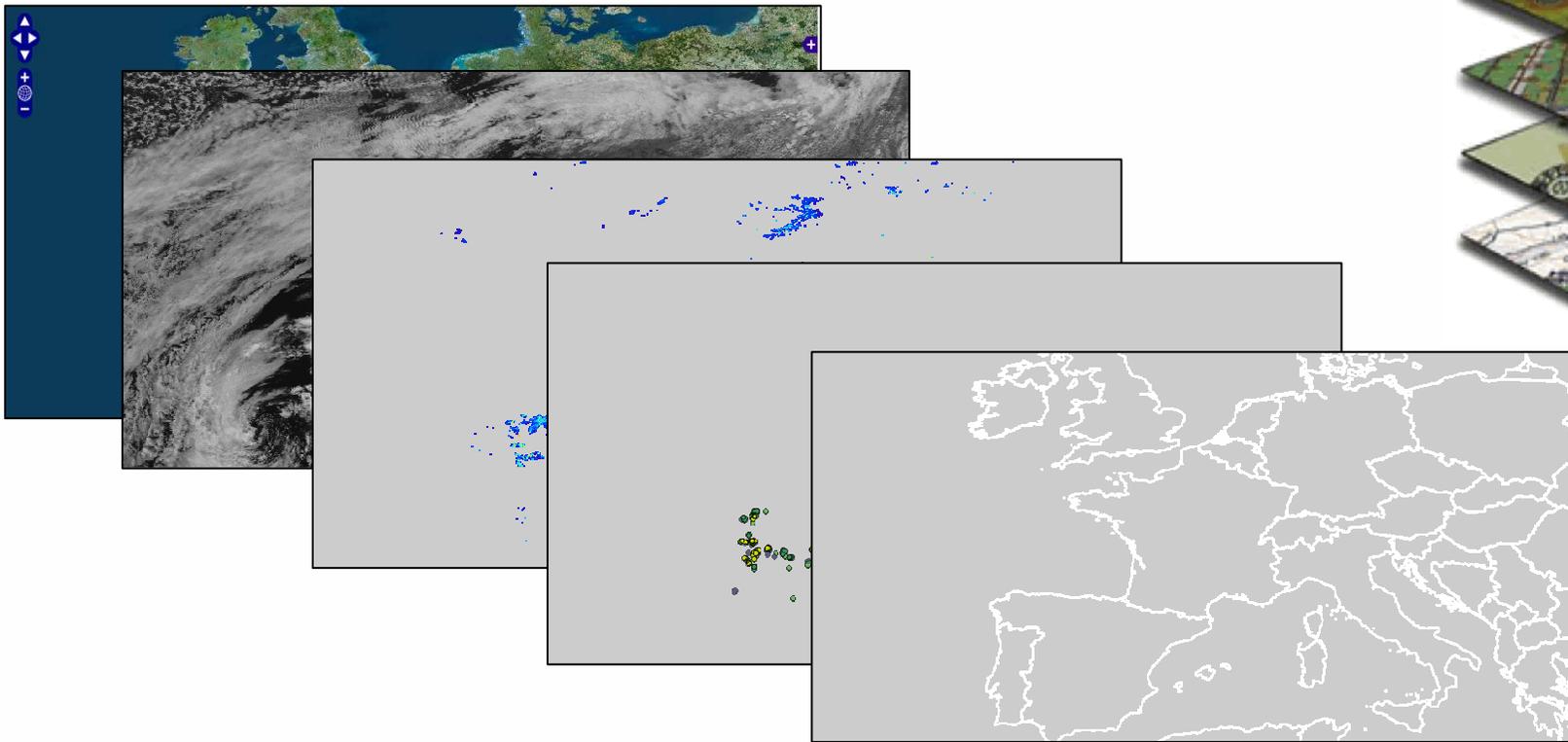
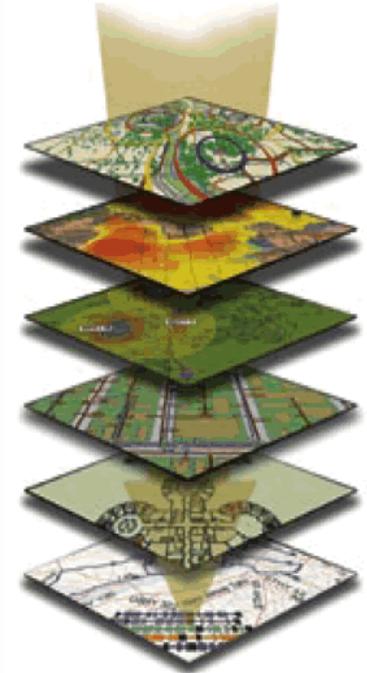
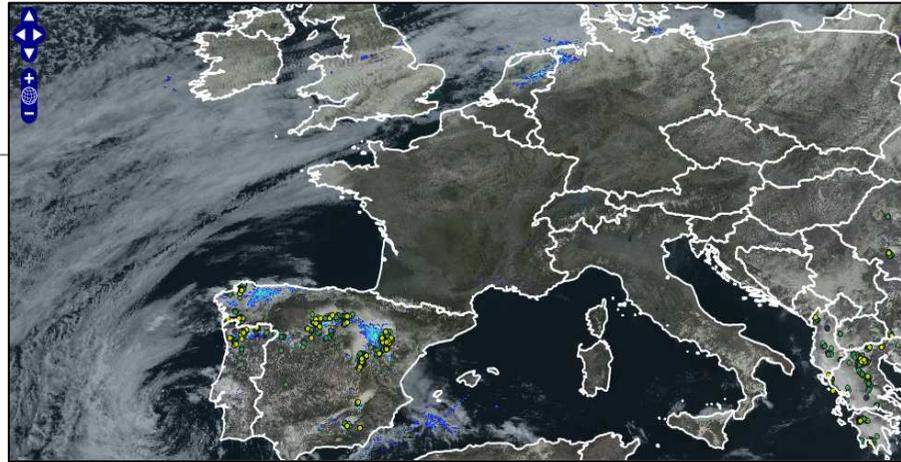
Synergie Next



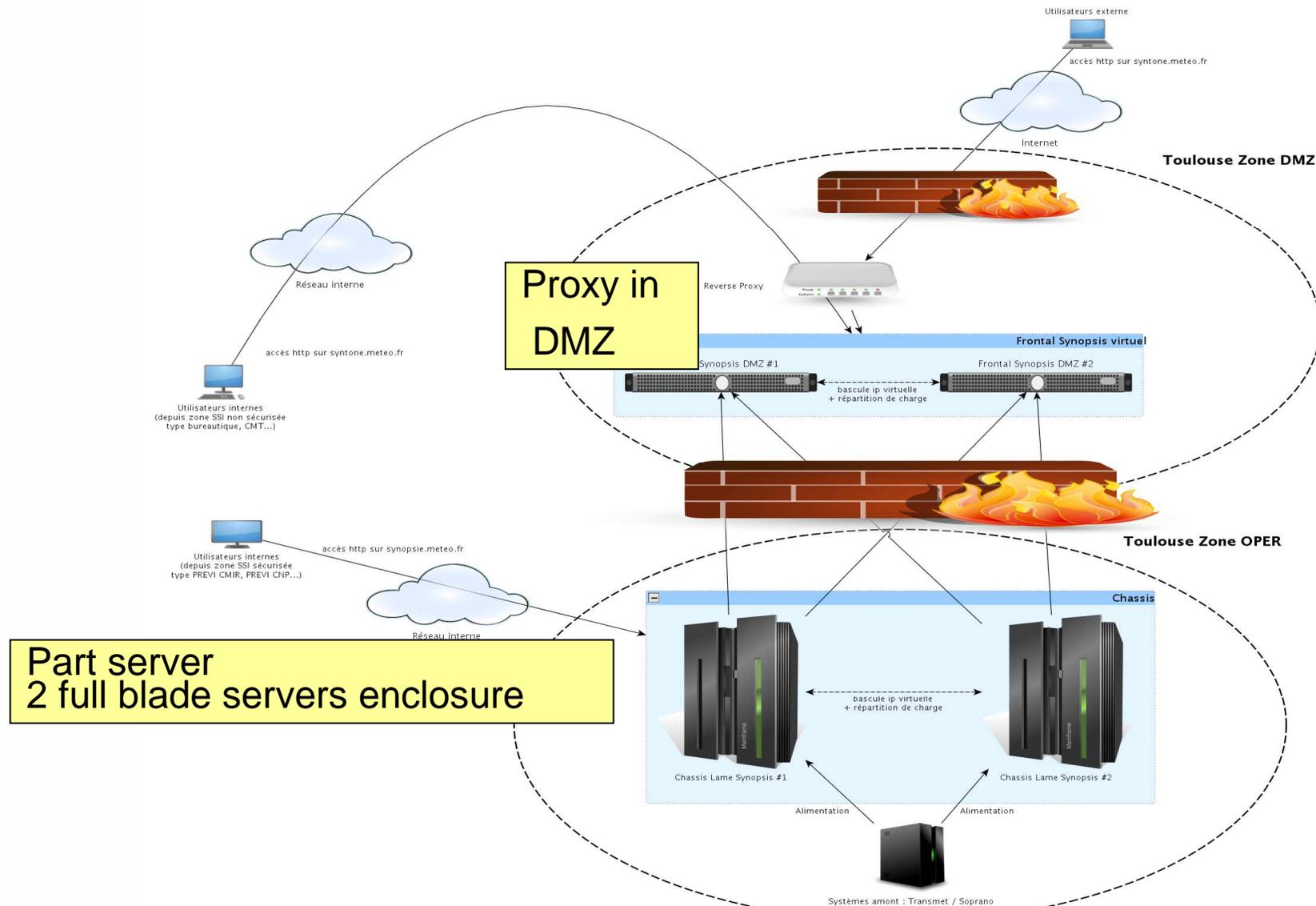


Several layers are requested from the client to the WMS server

OGC[®]
Open Geospatial Consortium, Inc.



Technical choice : *Hardware infrastructure*





- Panel of users supporting the project

They :

- Test versions under development : performance, ergonomics, new functionalities and non regression
- Complete anomaly sheets
- Give precisions on some specifications upon request from developers
- Help to train other users

Users documentation

- Choice of an editorial process (SCENARI/DOKIEL)
- Production process of homogeneous structured documents
- Block Writing independent from the final look (WYSIWYM)
- Easy update
- Use of a documentary model which can be adapted to each client
- Easy versioning
- Different outputs (online web, pdf, ppt, ...) → direct access from the GUI



Planning

- ✓ – **End of 2013** : First dev release « Synergie-next » with visualization functionalities
- ✓ – **January-May 2014** : Tests and verification
- ✓ – **March-June 2014** : Users training
- **June 2014** : Operational use of the first version (“Forecast advisers”)
- **October 2014** : Specific functionalities for snow forecasting
- **Second half of 2014** : Begin of production functionalities development
- **End of 2015** : Last dev release (visualization and production functionalities)
- **First half of 2016** : Complete replacement of SYNERGIE by SYNERGIE-Next in operational use

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The home banner



Shared into :

- Menu bars : in principle, all functionalities are available for all users !
- General functionalities area (all users)
- Specialized functionalities area
- Personal functionalities area → customization

The catalog : a dynamical « get capabilities »

[Catalogue] Créer une carte : "Radar"

09:16:10
Mer. 28/05/14
Heure locale : 11:16 - 28/05/14

+	↻	Produit* : A sélectionner	▼	▲
+	↻	Processus : AUTO	▼	▲
+	↻	Date de validité* : 28/05/2014 09:15 (Date la plus proche de maintenant)	▼	▲
+	↻	Date de run : AUTO	▼	▲
+	↻	Période de cumul : AUTO	▼	▲

Ajoutez un paramètre [nouvelle carte] ⚠

Fermer

The catalog : a dynamical « get capabilities » function

[Catalogue] Créer une carte : "Radar" : Réflectivité

09:17:12
mer. 28/05/14
Heure locale : 11:17 - 28/05/14

Produit*: **Réflectivité**

Champ advection 2PIR B Champ advection 2PIR G Réflectivité

Favoris (0/0)
Lame d'eau (16/16)
Qualité (16/16)
Risque AIGA (11/11)
Réflectivité (3/3)

Processus: **AUTO**

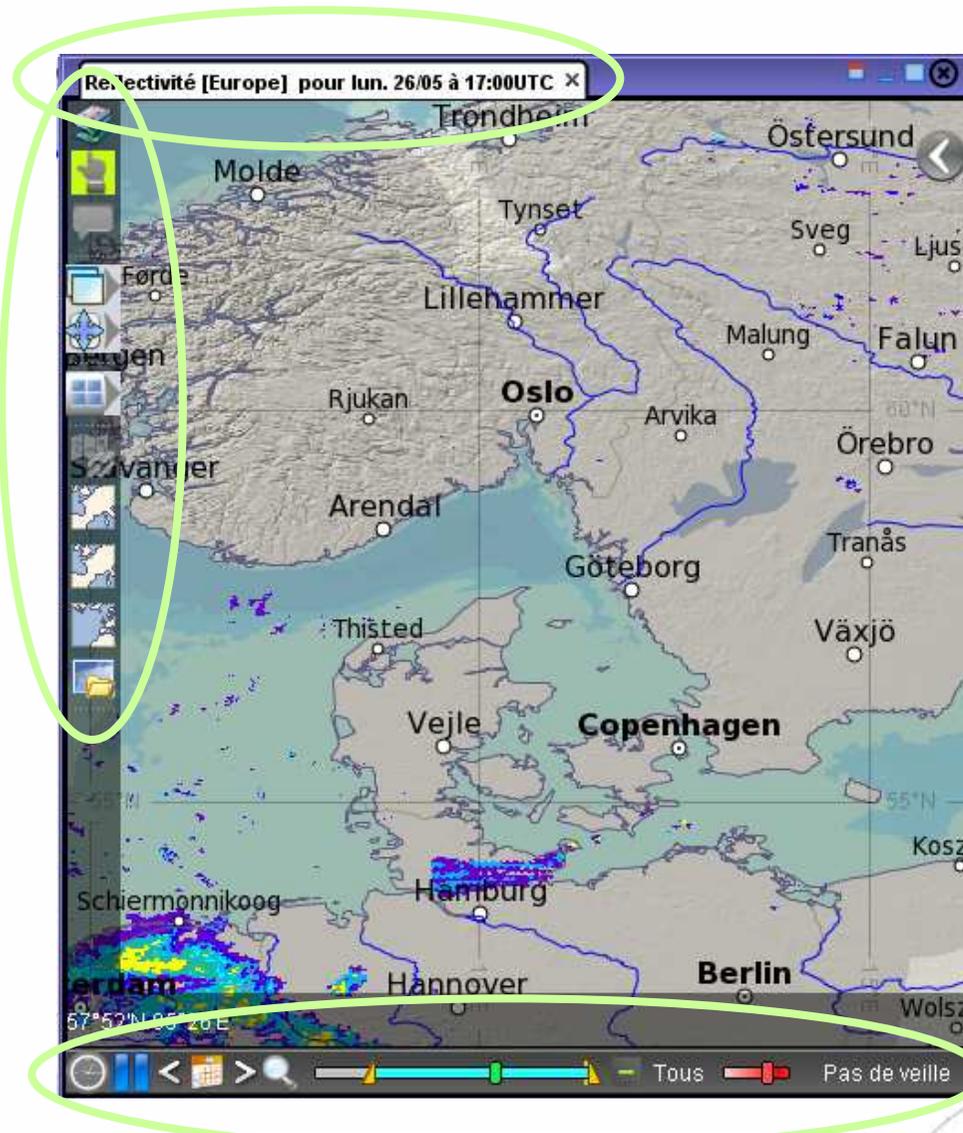
Antilles 2000m Espagne Europe France France 2pir Q20
France 2pir Q50 France 2pir Q80 **France 2pirG** France et proximité La Réunion
Nouvelle Calédonie

Mosaïque (8/11)
Outre-Mer (15/16)
Radar local (26/26)

Date de validité*: 28/05/2014 09:15 (Date la plus proche de maintenant)
Date de run: AUTO
Période de cumul: Dimension non disponible pour cette sélection

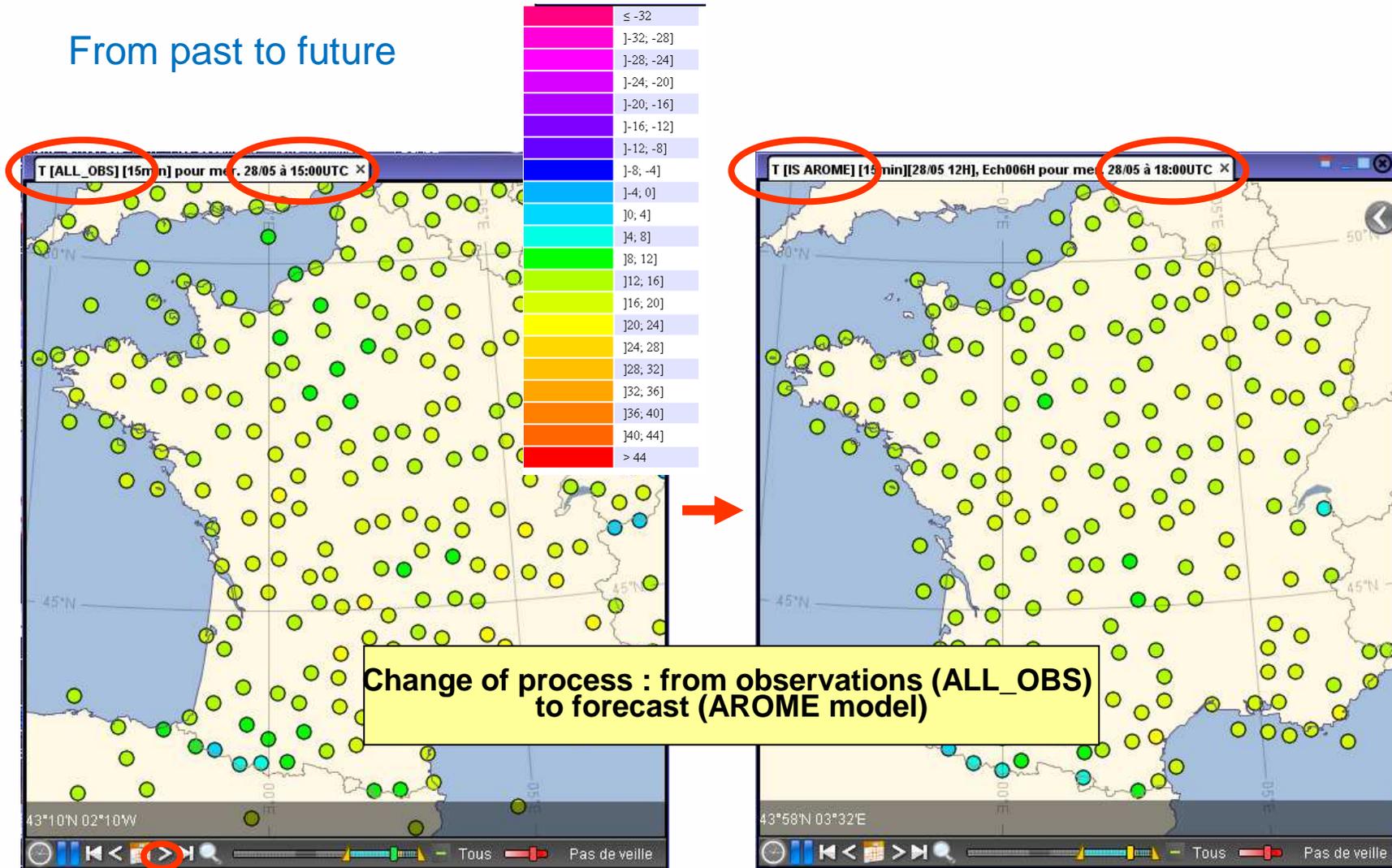
Ajoutez un paramètre [nouvelle carte] Fermer

Map + Reflectivity RADAR



The Best Data Set ...

From past to future



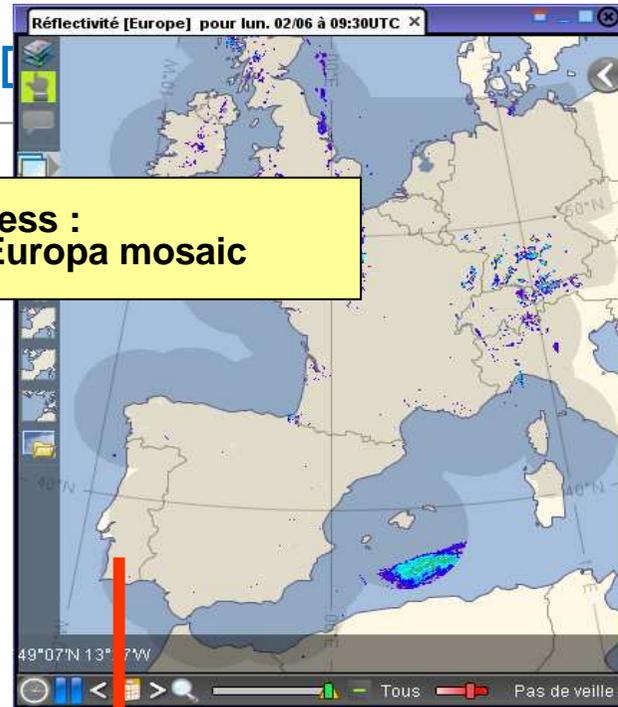
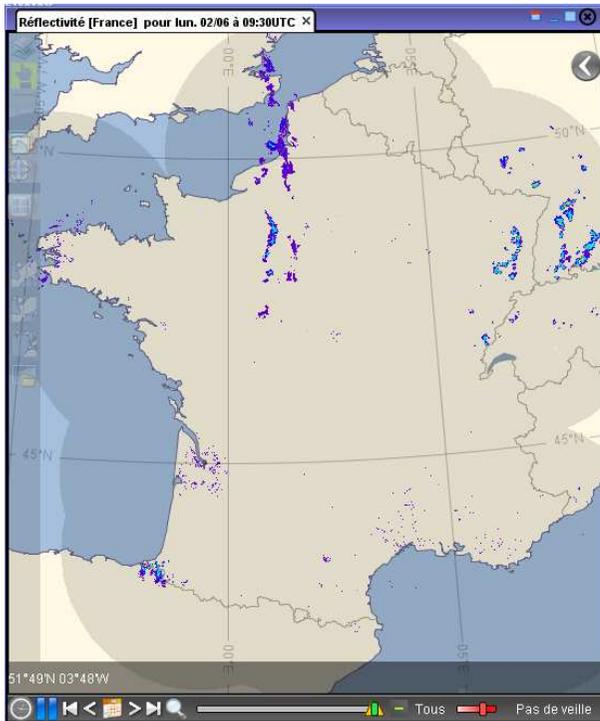


... to Europe

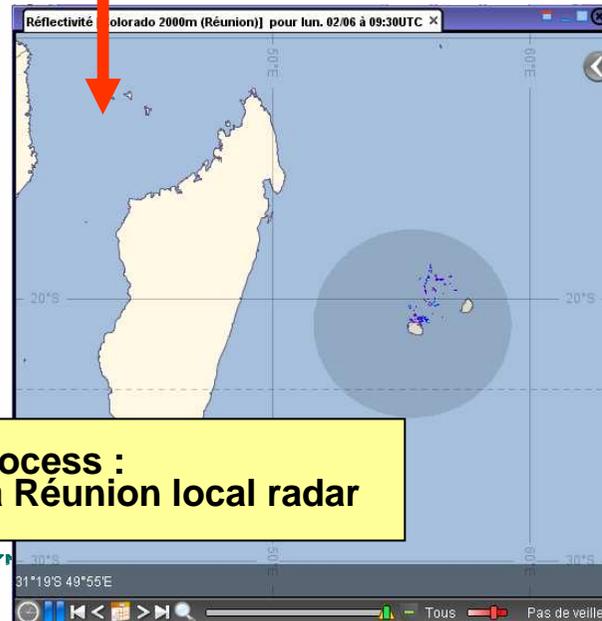
The Best I

**Change of process :
from French mosaic to Europa mosaic**

From France ...



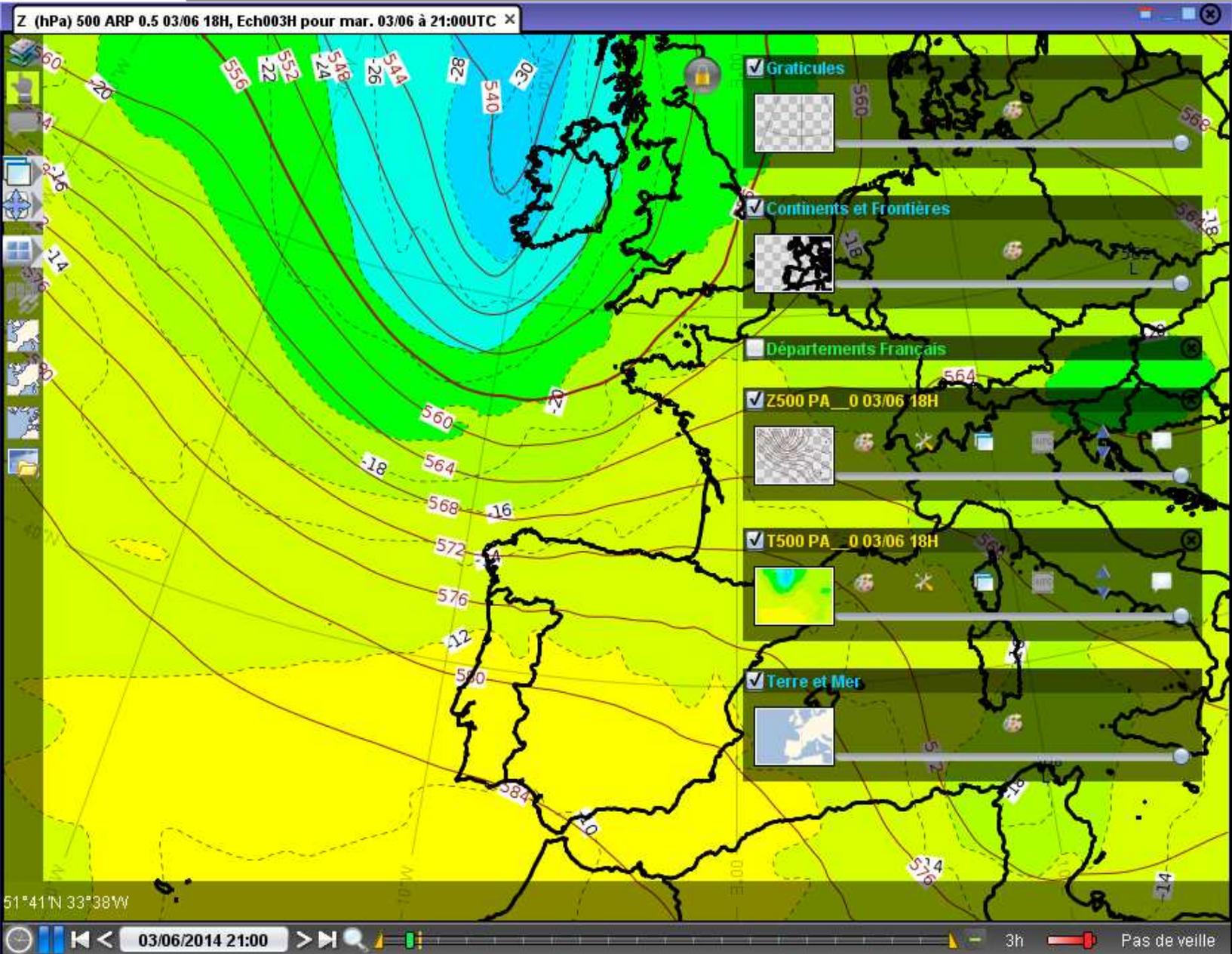
... to La Réunion



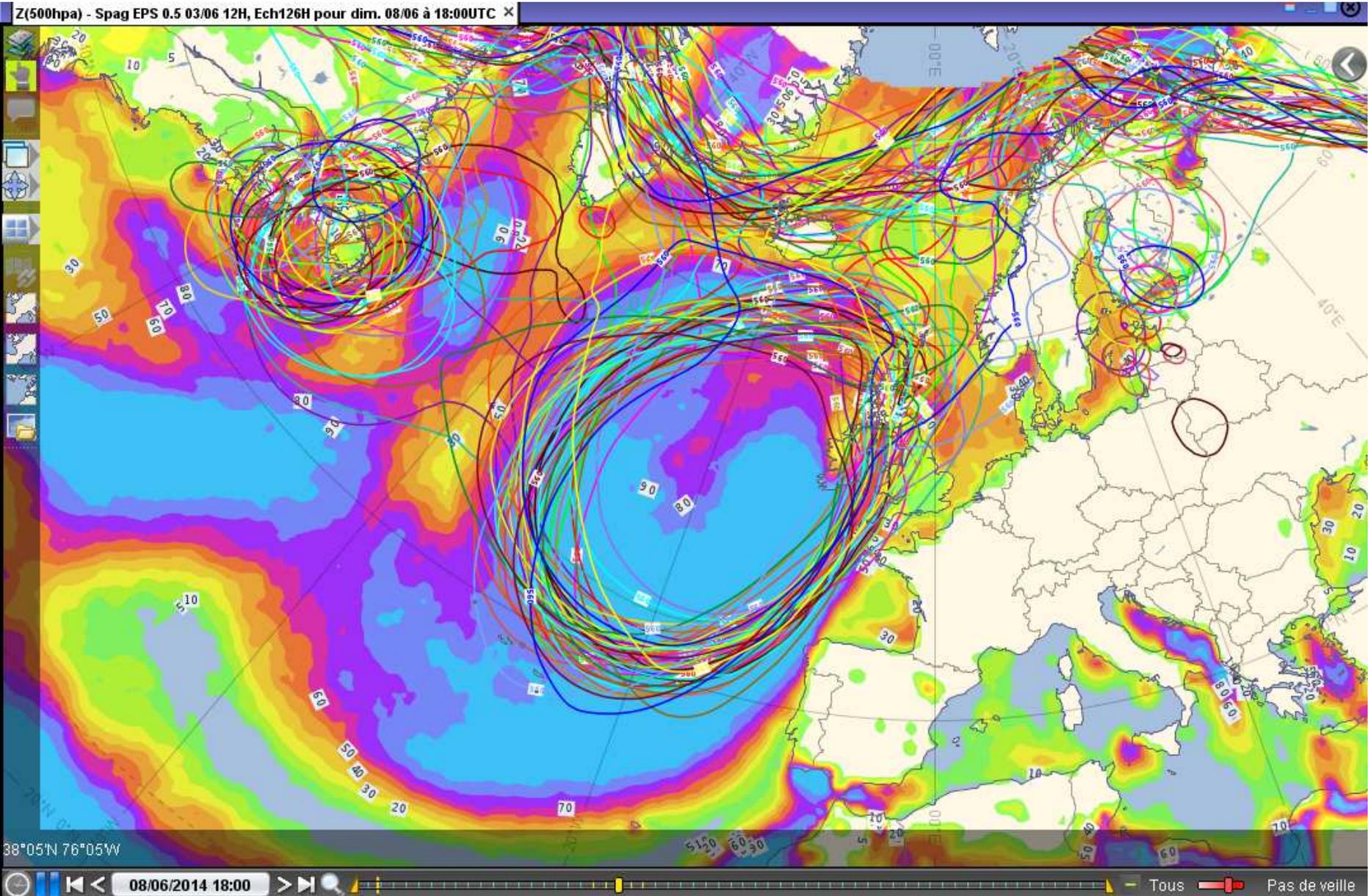
**Change of process :
from Europa mosaic to La Réunion local radar**



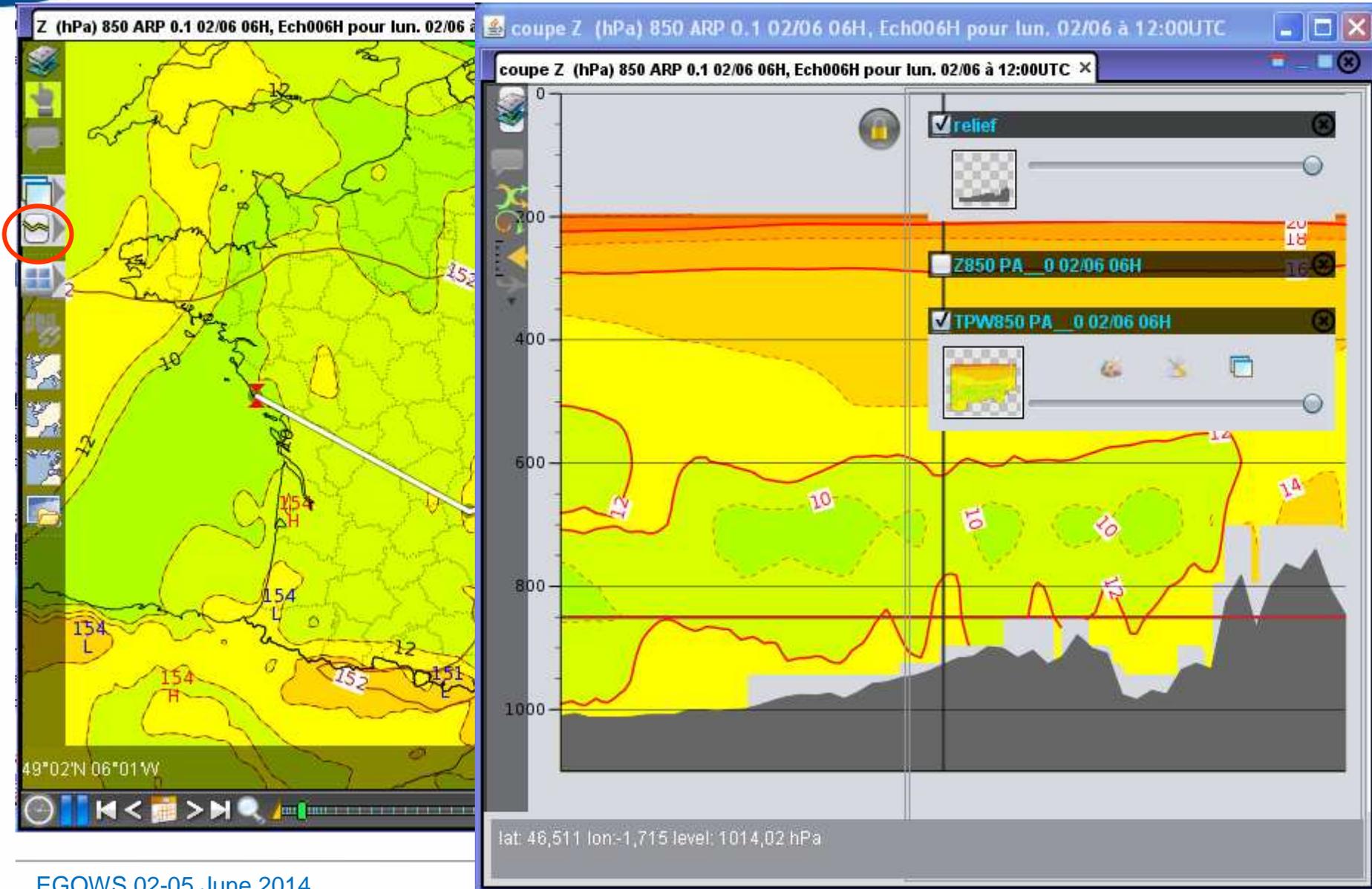
Model



Ensemble forecasting



Cross section



EGOWS 02-05 June 2014

Stations selector

Selection de stations

Processus = AS ARP Ajouter

Filtrage carte Processus = AS ARP

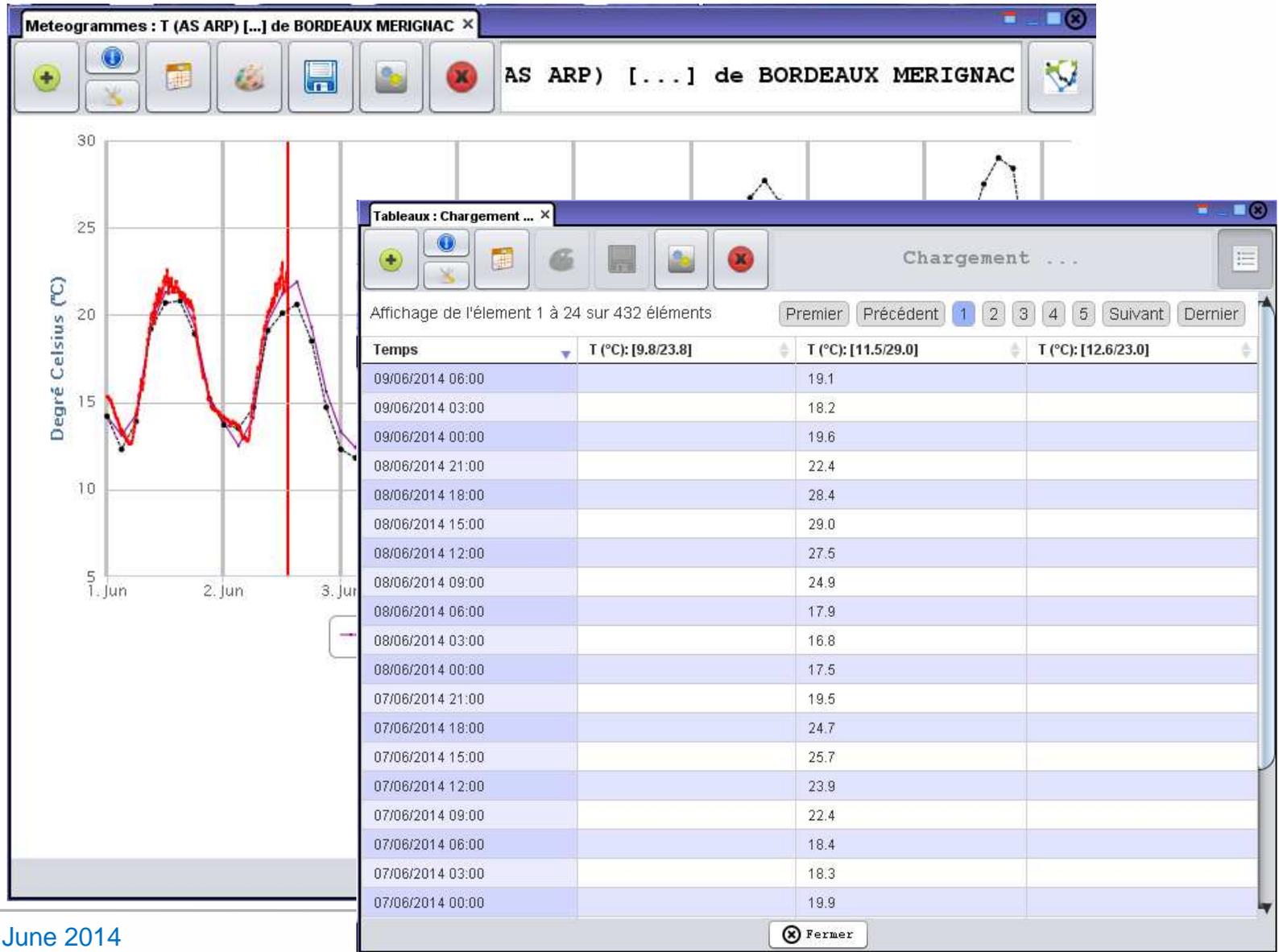
Filtre :

Favorite	Name	Altitude	Identifications	Propriétés
★	BREST GUIPAVAS		95 insee=29075001,ica...	departement=29
★	ORLY		90 insee=91027002,ica...	departement=91
★	BORDEAUX MERIGNAC		54 insee=33281001,ica...	radar_frequency=2.8,...
★	LYON ST EXUPERY		240 insee=69299001,ica...	departement=69

9 résultats

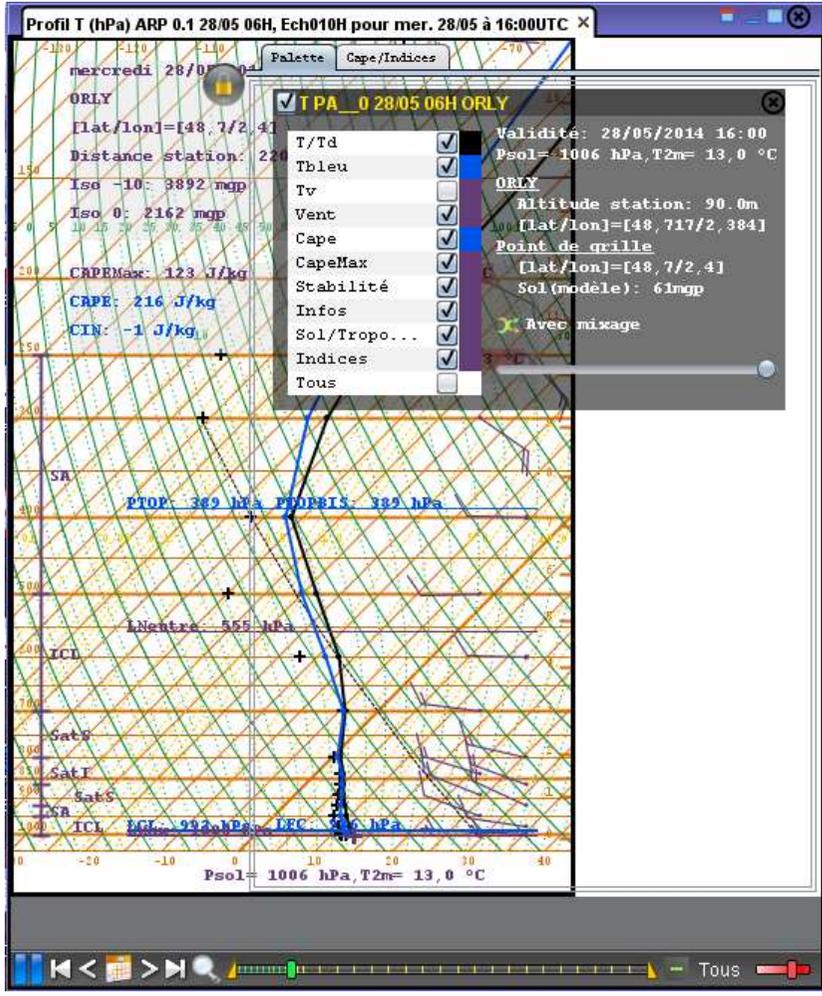
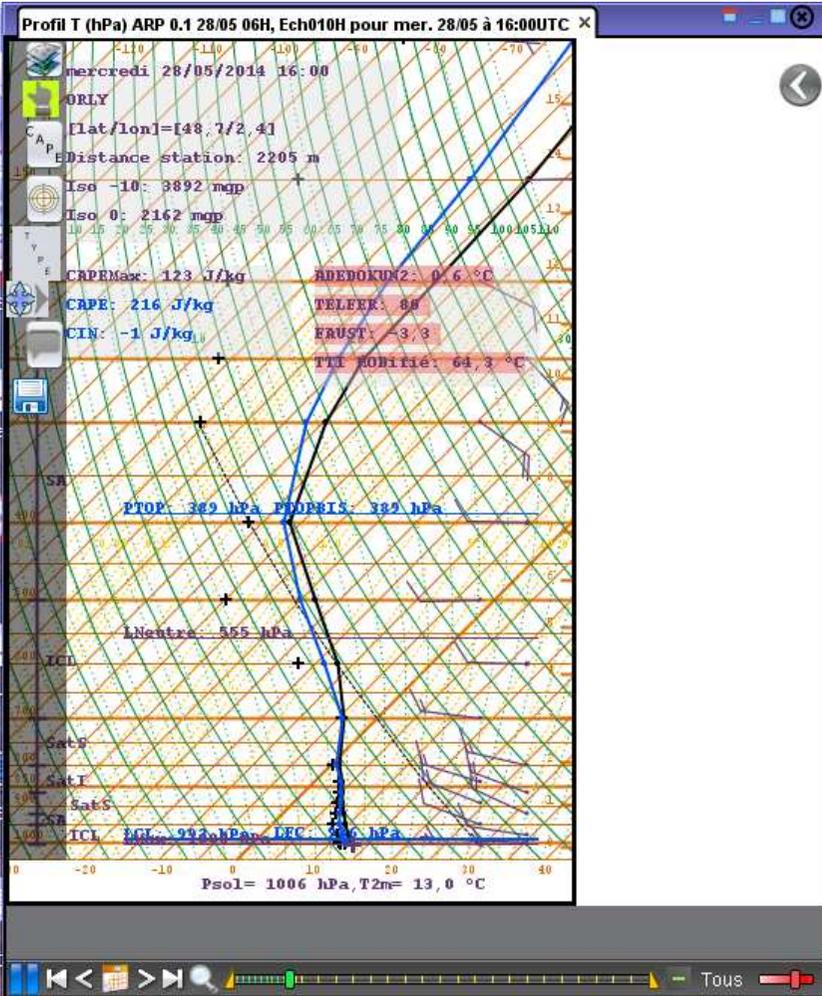
+ Sélection des paramètres pour la station : BORDEAUX MERIGNAC ✕ Fermer

Time series



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Vertical profiles



Macros

Catalogue des macros

Affichage Sélections globales

Type d'élément: tous Créateur: tous Sélection en cours Macro/Répertoire de l'arbre

Biblio

- CAPEmax (+VV600 +TA850 +DIV950)
- CAPEmax +Zl.5PVU +div950 +VV700 +vent
- Div950+TpW925+Vent950+Zl.5pVu(+CAPE+VV600) convection
- Hu(hPa) +Hu(m) +vent(hPa) +Pmer +Coupe**
- Nébul B (+HU100m +HU250m +HU500m)
- Nébul H (+HU400hpa +HU300hpa)
- Nébul M (+HU700hpa +HU600hpa)
- NébulT (+NébulB)
- NébulT+NébulB (Hu(m) + Hu (hPa))

Tout

durée : 72H, pas : 0.001S, Pas de veille

Couches:

- Villes: visible
- Graticules: invisible
- Terre et Mer: visible

Date de validité (en UTC) : 02/06/2014 12:00

Date de validité la plus proche possible de la date actuelle pour chaque fenêtre

Sinon, choisir une date commune pour toutes les fenêtres :

lun. 02 juin mar. 03 juin mer. 04 juin jeu. 05 juin ven. 06 juin sam. 07 juin dim. 08 juin

12H 13H 14H 15H 16H 17H

Heure du Réseau (en UTC) : 02/06/2014 06:00

Réseaux les plus récents pour chacune des couches (et la date de validité choisie)

Sinon, choisir un run commun pour toutes les fenêtres (écart entre les runs conservés):

lun. 02 juin mar. 03 juin mer. 04 juin jeu. 05 juin ven. 06 juin sam. 07 juin dim. 08 juin

06H 07H 08H 09H 10H 11H

Ouvrir la macro Fermer

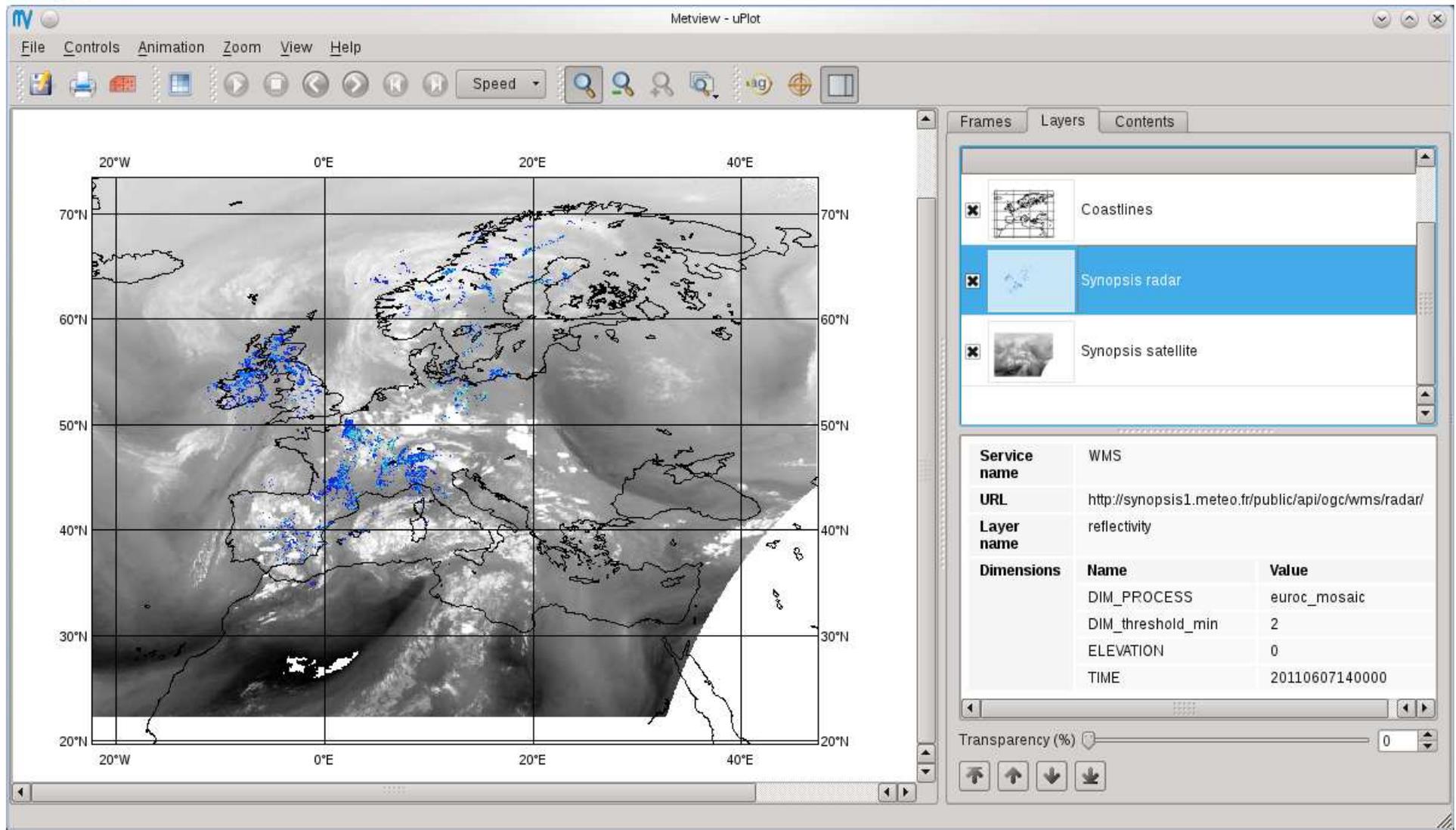
Synergie-Next server for our clients web site

The screenshot displays the Météo-France website interface. At the top, there is a navigation menu with options like 'Carte de surveillance', 'Bulletins', 'Observation', 'Prévisions', 'Prévision Routière', 'Radar', 'Satellites', and 'Superposition Radar/Satellite'. Below this, a 'SATELLITE VISIBLE' section shows a timeline of satellite images from October 24th, 2012, at various times. A large satellite image of France is displayed, overlaid with a network of roads and cities. A 'Réglages' (Settings) dialog box is open on the right, allowing users to adjust the opacity of layers: 'Relief' (100%), 'Ombrage relief' (30%), 'Villes et Routes' (100%), and 'Satellite visible' (50%). The website also features a search bar and various utility icons.

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Synergie-Next with Metview





Thanks for your attention !

More details in demo session

