

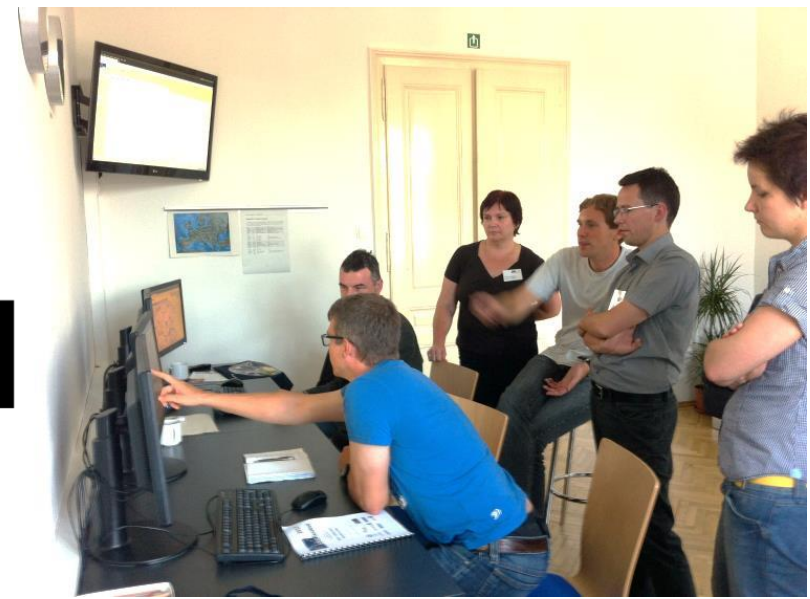


# ESSL Testbed

in 2012, 2013 and beyond...

*what forecasters and  
researchers can learn from  
each other when working  
together in one room*

Pieter Groenemeijer  
Alois M. Holzer  
Georg Pistotnik



organized in cooperation with:



**ZAMG**

ZentralAnstalt für Meteorologie und Geodynamik

supported by:



World  
Meteorological  
Organization

WIENER  
NEUSTADT

Deutscher Wetterdienst  
Wetter und Klima aus einer Hand



**VAISALA**



## The concept

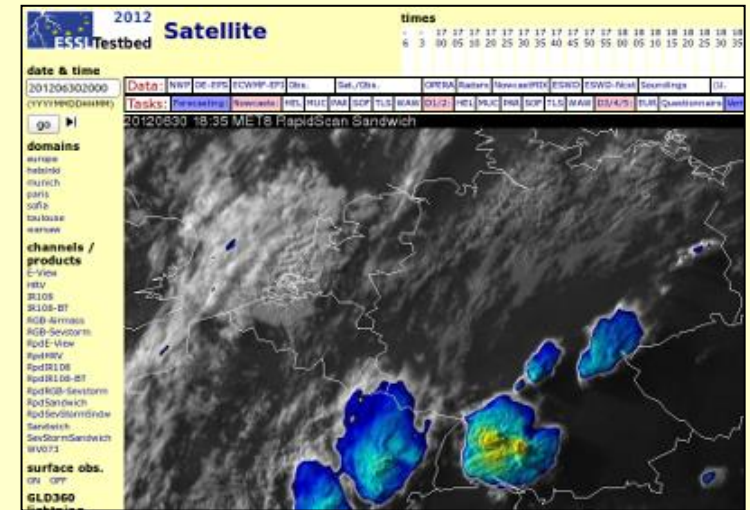
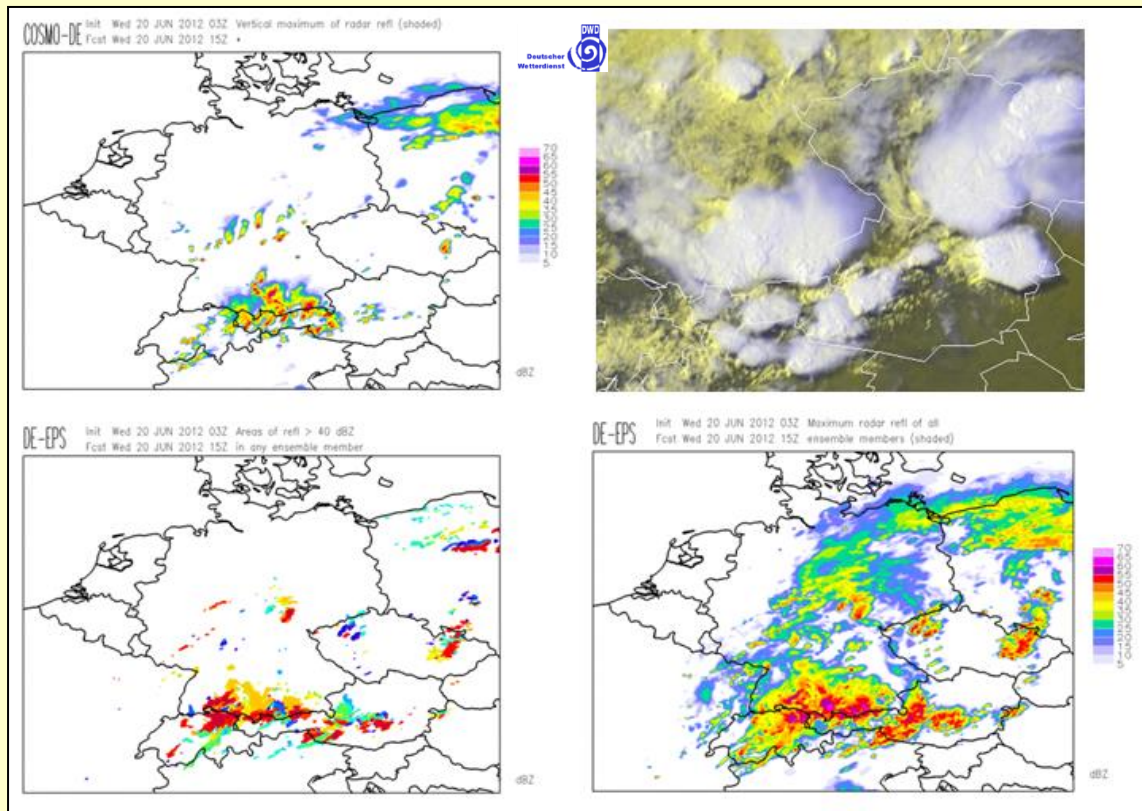
- bring **forecasters** and **researchers** together to evaluate new forecast-supporting products
- participants take part for one week **on-site** and/or join **online** sessions





## The products

- products include NWP-, radar-, satellite- and remote sensing products



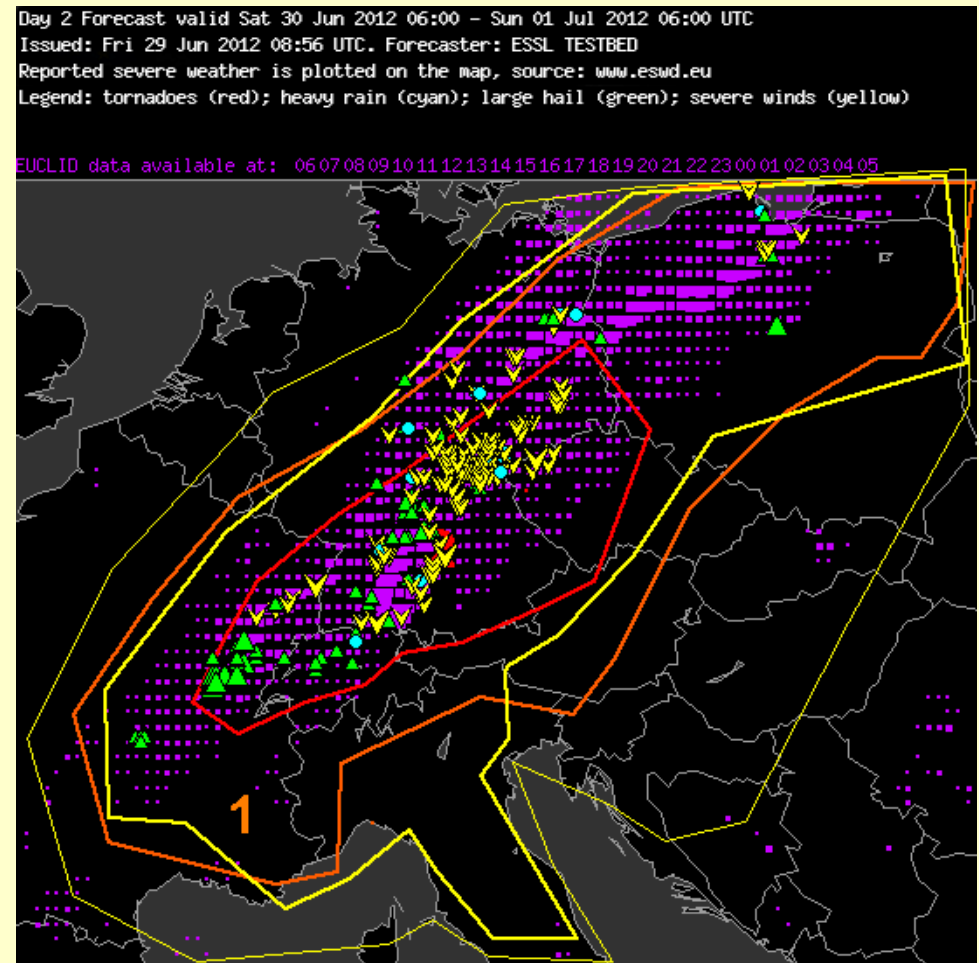
## Examples:

- COSMO-DE Ensemble Prediction System (DWD) visualizations
- Satellite-sounder based NearCasts (Univ. Wisconsin)
- GLD-360 lightning detection system (VAISALA)
- Mesocyclone Detection Algorithm (DWD)
- OPERA European Radar Composite (EUMETNET)

## The procedure

1. Participants jointly make forecasts and nowcasts
2. Forecasts are verified against observations
3. Products are evaluated (Discussion, Testbed Blog\*, and Questionnaires)

\* new in 2013



Forecast for the **next day** (coloured lines) with verification data (symbols reflect severe weather reports, magenta = lightning).



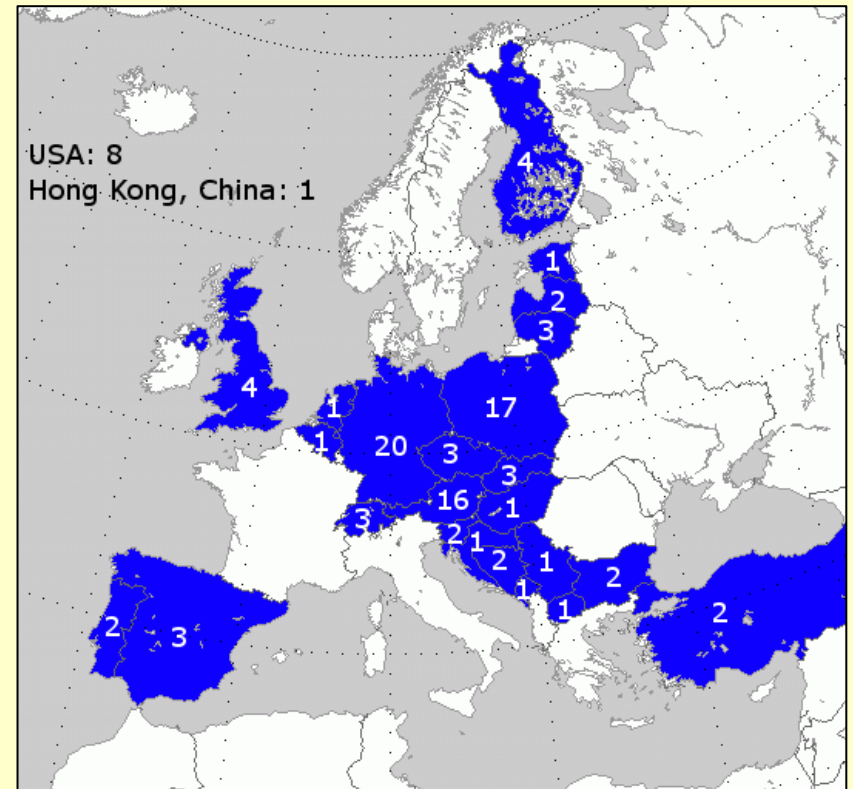
## Participants



Average grade given by participants on a scale from 1 (terrible) to 10 (fantastic):

2012: 8.6

2013: 8.647727.... 😊



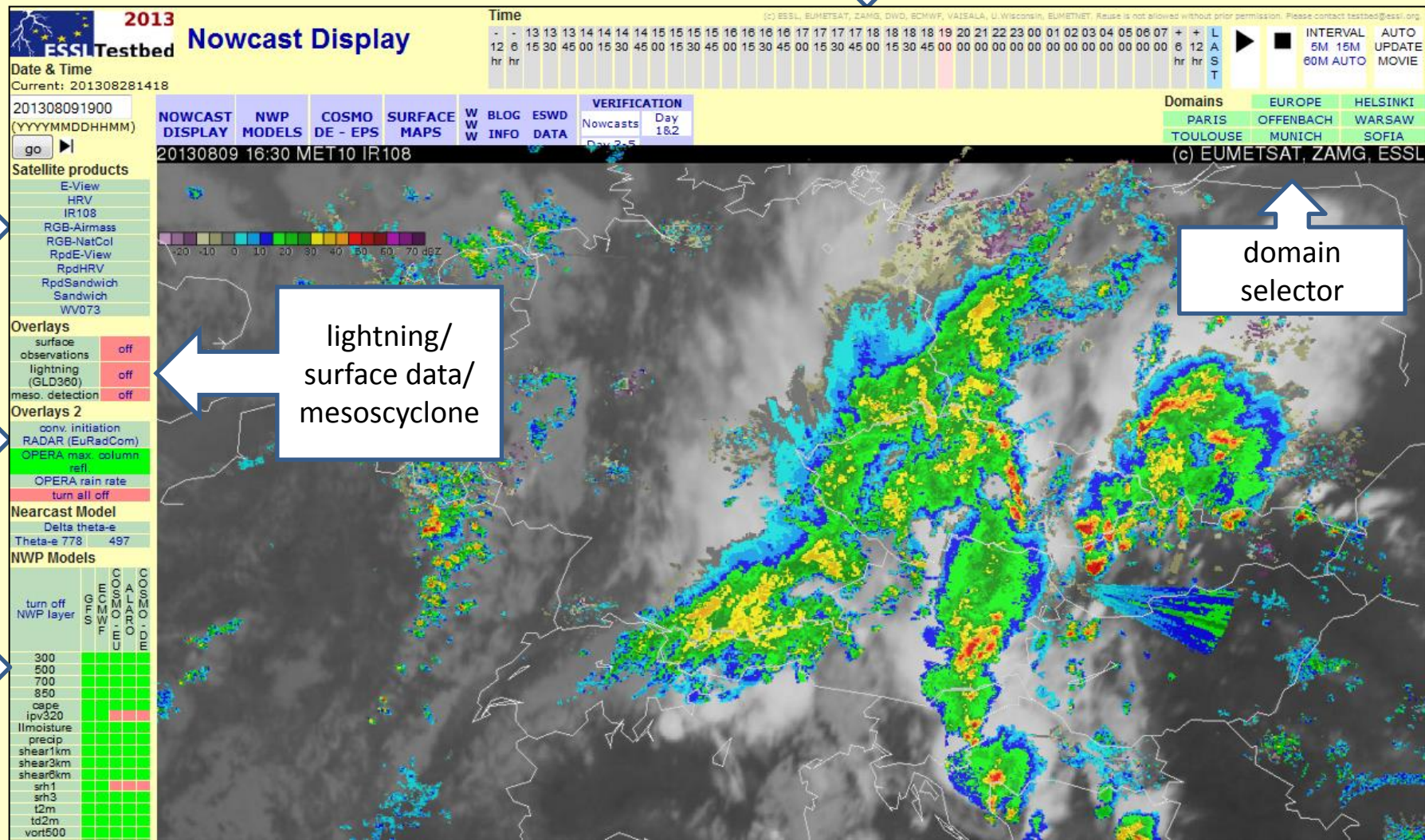
Testbeds 2012 and 2013 total:

108 unique on-site participants from 26 countries

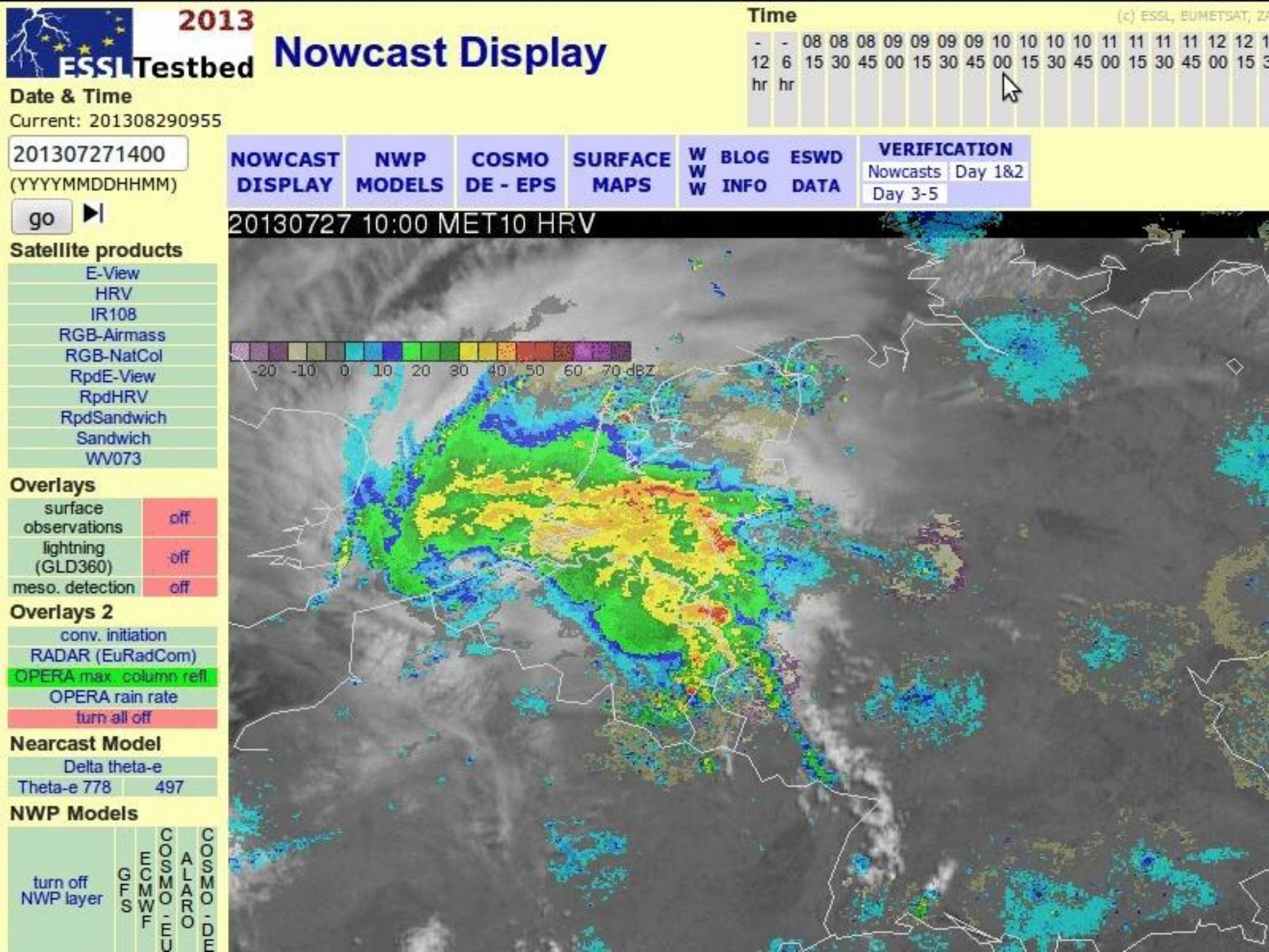
A limited number of NHMS forecasters can additionally take part in the online-sessions only through EUMETCAL.

## Testbed Data Interface

'mouse-over' time selection







## Forecast Verification

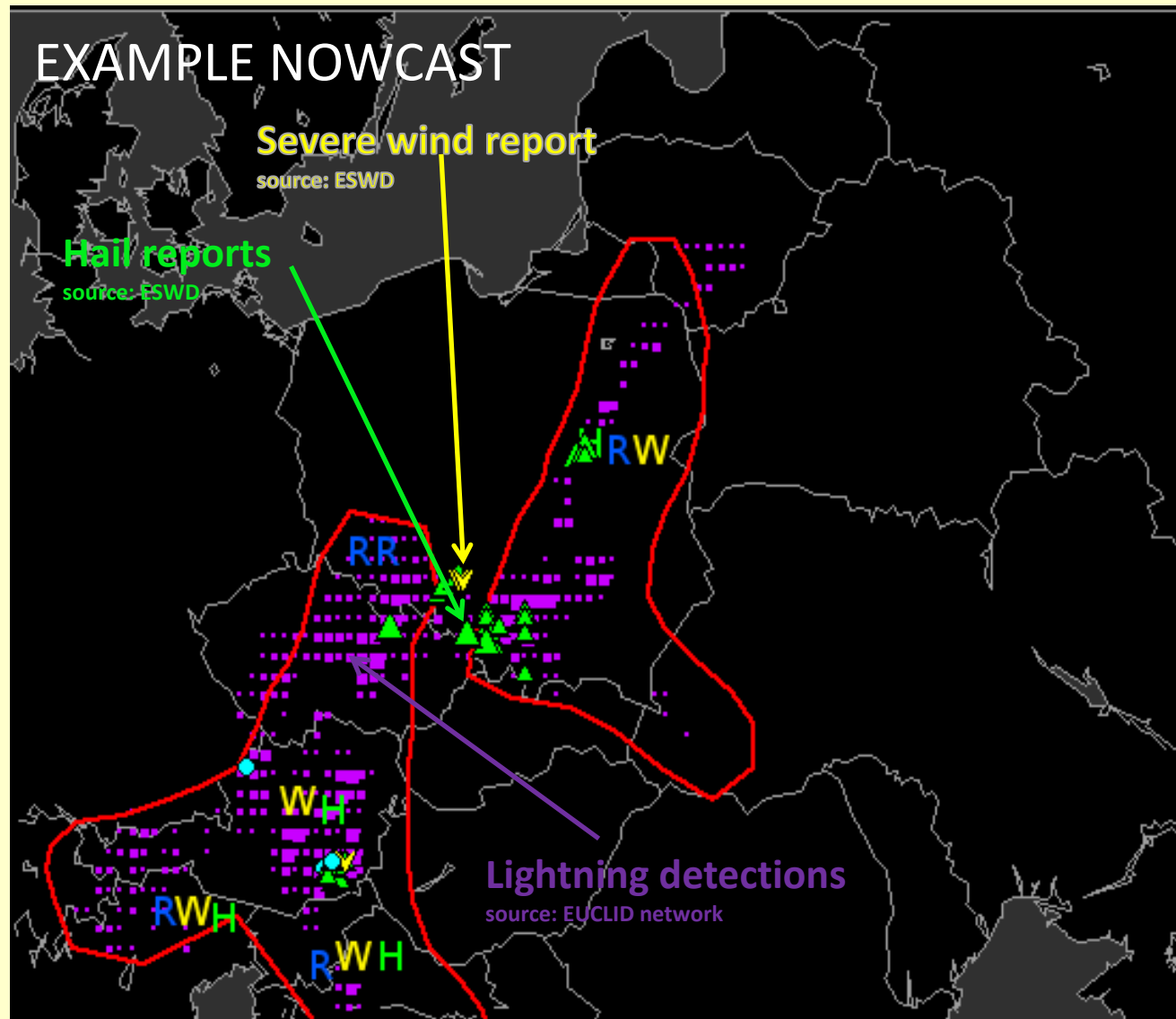
### Activity:

Compare forecast to the real observed severe weather.

**Red lines indicate where severe weather is forecast in the next 2 hours**

Characters indicate the expected type of severe weather: **R**ain, **H**ail, **W**ind, or **T**ornadoes.

Verification data are small coloured symbols and lightning detections in **magenta**.





## Expert lecture

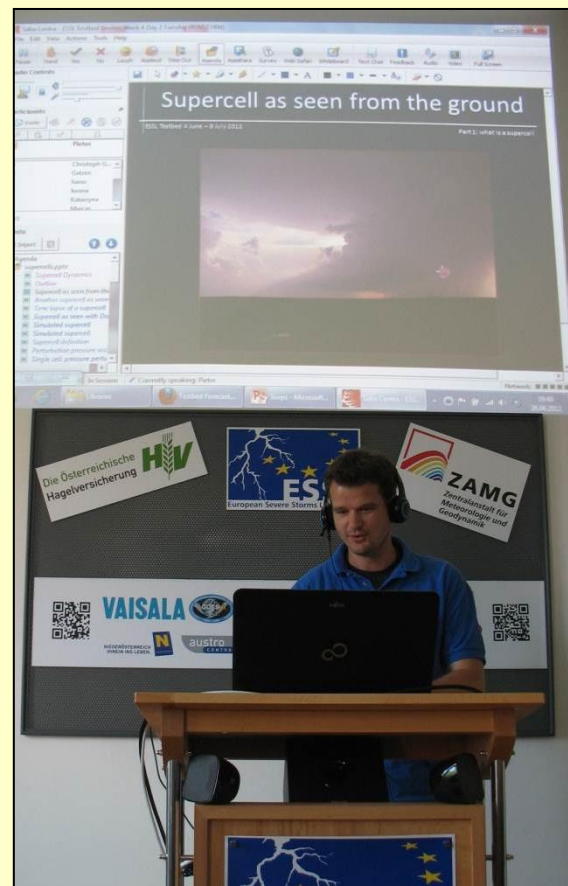
### Activity:

A researcher / developer or forecasting expert presents a tool or discusses a forecasting topic.

On-site lectures by researchers on lightning detection systems...



on supercells...



overshooting top detection.



## Product evaluation

### Activity:

Discuss product performance and collect feedback in a group discussion, guided by questionnaires for each product.

Record feedback in *Testbed Log*.



Evaluation discussion lead by Testbed staff.



### Evaluation Form

ESSL Testbed

[home](#) » [feedback](#) » [product feedback](#) "Overshooting top, Enhanced-V Cold Ring, Detection"

Note: Some questions must be answered daily, some questions only at the end of the week.

**Question 1:** (To be answered daily) What was the convective regime for today's event (i.e. supercells, mesoscale convective system, squall line, airmass thunderstorms)? Where were the storms located?

**Question 2:** (To be answered daily) How well were OTs or enhanced-V/ring signatures correctly detected when apparent in visible and/or IR Imagery?



## Plans for 2014

1. Two periods:
  - 2 – 27 June
  - 6 – 10 October
2. Improved data interface
3. New and improved products to evaluate
4. *New Participants!*





# European Severe Storms Laboratory



## Participation:

Registration is possible until fully booked

[www.essl.org/testbed](http://www.essl.org/testbed)

Early fee deadline: 20 February 2014

## Product evaluation:

Ask me or contact Pieter Groenemeijer

[pieter.groenemeijer@essl.org](mailto:pieter.groenemeijer@essl.org)

The 2013 Testbed data can be viewed at:

[www.essl.org/testbed/data](http://www.essl.org/testbed/data)

The Testbed Blog can be viewed at:

[www.essl.org/testbed/data](http://www.essl.org/testbed/data)



2 - 27 June,

13-24 October 2014

ESSL Research and Training Centre

Wiener Neustadt, Austria

