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## European Severe Storms Laboratory e. V. (ESSL) Newsletter 2012-1

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### First ESSL Testbed to take place in June



**2012**

Preparations are underway for the first ESSL Testbed that will take place in the new ESSL Research and Training Centre in Wiener Neustadt, Austria during June 4 and July 6 2012.

The ESSL Testbed, jointly organized by European Severe Storms Laboratory - Science and Training (ESSL e.V.'s newly-founded subsidiary) with the Austrian Institute for Meteorology and Geodynamics (ZAMG), will be a platform for



interaction for researchers and forecasters. Participation in the Testbed means one week of intense severe weather forecasting training - primarily using real-time weather as it occurs across the European continent - as well as testing forecasting and nowcasting tools based on model, satellite, radar or observational data.

As a basic resource for the hands-on forecast training, standard meteorological data will be available, complemented with the experimental Testbed products. The basic data includes ECMWF, GFS and local model data, as well as EUMETSAT and radar data. At the time of writing, work on the infrastructure at the Research and Training Centre and the programming of the Testbed software is being completed. Over 40 participants from Europe and overseas are expected. Most of the participants are employees of Europe's National (Hydro-) Meteorological Institutes.

The Testbed project is co-organized by ZAMG and supported by:



In addition, ESSL cooperates with the European Centre for Medium-range Weather Forecasts (ECMWF) and the World Meteorological Organization (WMO) - Region VI.

## Víctor Homar leaves the Executive Board

The Executive Board regrets that Víctor Homar has decided to leave the EB of ESSL effective in March 2012 upon resigning as a Deputy Director. Instead of a role inside the Executive Board, Victor will now be an Assessor to the Board and stay with his valuable experience within reach. He has expressed the hope that the Board “will achieve its objectives and makes the ESSL a successful enterprise” and that “more motivated and dedicated people contribute to the e. V.”

## ESSL Research and Training Centre in Wiener Neustadt to open officially on 21<sup>st</sup> June

In February Wiener Neustadt's mayor Bernhard Müller handed over the rental contracts of the ESSL Research and Training Centre to Director of Operations, Alois M. Holzer, and Assistant to the Board, Magdalena Pichler. The ESSL Science and Training, the newly founded Austrian daughter of ESSL, will use these premises as the venue for the ESSL Testbed. The ESSL Research and Training Centre is located in Wiener Neustadt and will accommodate the newly established ESSL project Testbed starting in June this year.

Currently the rooms are being renovated and furnished. The official opening of the ESSL Research and Training Centre will be celebrated on the evening of June 21 2012 amidst the ESSL Testbed activities.



The ceremony on the occasion of signing the contract took place in the protocol hall of Wiener Neustadt. Attendees of the ceremony from left to right: Ingrid Winkler (City Council for Commerce Wiener Neustadt), Alois M. Holzer (ESSL Director of Operations), Bernhard Müller (Mayor of Wiener Neustadt), Magdalena Pichler (ESSL Assistant to the Board), Christian Mürkl (Head of Financial Administration of Wiener Neustadt), Barbara Dunst (Executive Director EcoNova Wiener Neustadt), Andreas Stickler (EcoNova Wiener Neustadt). Foto: M. Baumgartner

## ESWD Version 4 and overview 2011



Additional severe weather types were defined and implemented into the ESWD in its new version 4, that was introduced 1 January 2012.

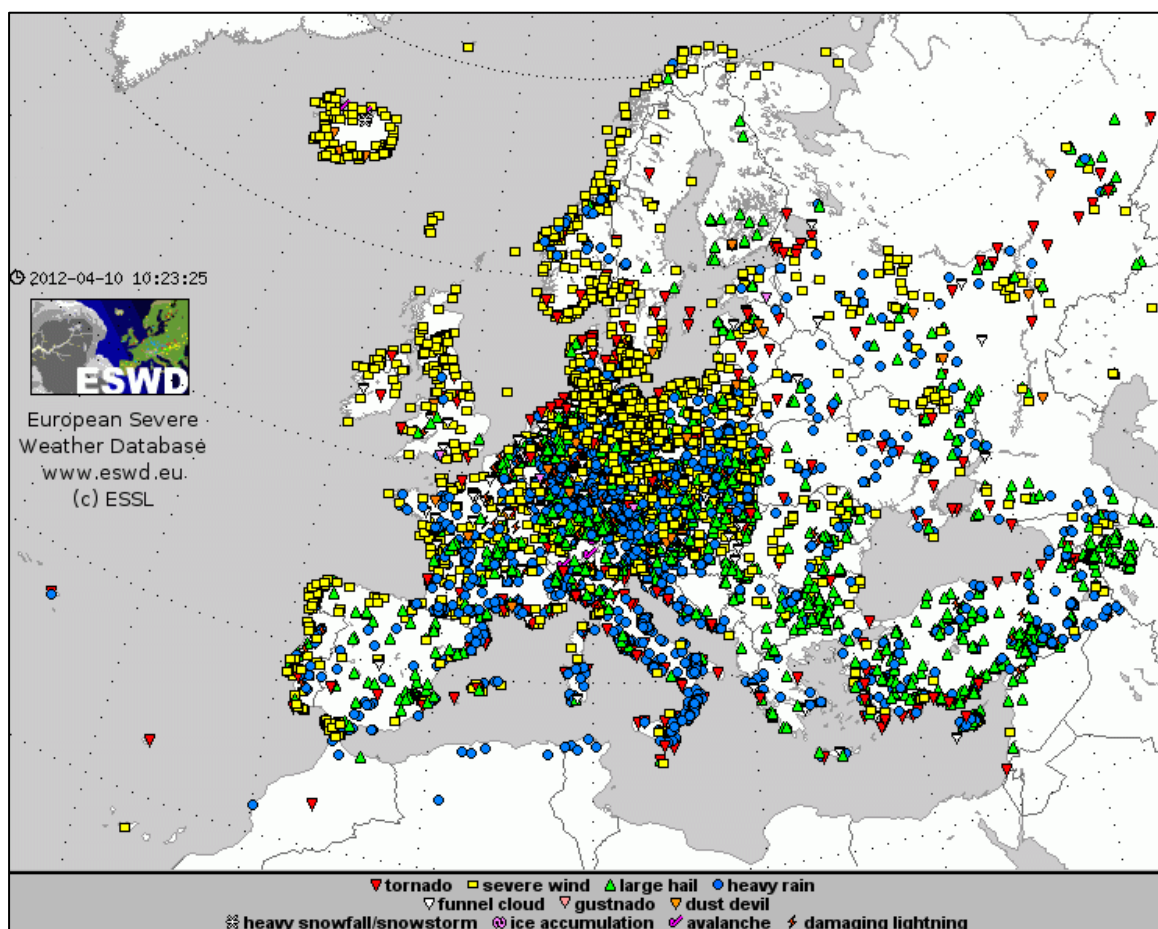
The list of severe weather phenomena that the database covers now includes tornadoes, severe wind, large hail, heavy rain, funnel clouds, gustnadoes, dust devils, and since version 4, heavy snowfall and snowstorms, ice accumulations, avalanches and damaging lightning.

For the year 2011, a total number of 7408 severe weather events were reported, which is a new record high of reports per year. About 91 % of these reports passed the first quality control level QC0+.

Number of reports 2011	Quality control applied to report
540	QC0, as received
1338	QC0+, plausibility checked
5372	QC1, report confirmed by reliable sources
158	QC2, event fully verified

The number of ESWD reports for the year 2011 per quality control category.

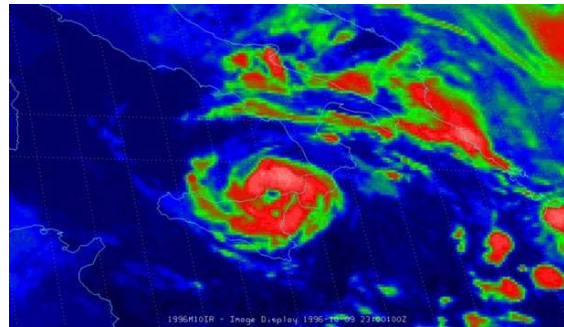
Several other records were accomplished during 2011: 399 reports were issued for one large scale convective event occurring September 11; 485 reports were collected within one day, December 12, for a European storm event; the highest number of reports, 522, within a 7-day period were issued during December 15 - 22.



All ESWD reports from 1 January to 31 December 2011. Symbols of severe weather types may overlap each other.

## **ESSL concludes EUMETSAT project ‘Satellite Based Climatology of (Sub-)Tropical Cyclones in Europe’**

In March 2012, ESSL completed an assessment of (sub-)tropical cyclone occurrence in the Mediterranean Sea, Black Sea, and in the Atlantic Ocean southwest of the Iberian Peninsula. The unique aspect of this study was that the Dvorak-method was used to assess the intensity of all (sub-)tropical like storm systems identified in Meteosat 1 imagery, back to the onset of the operational meteorological satellite era in Europe.



Picture: EUMETSAT

The results of this study will be shown in a keynote presentation during the EUMETSAT conference in Sopot, Poland in September 2012.

## **ESSL to assess tornado hazard in Wiener Neustadt**

On July 10<sup>th</sup> 1916, the city of Wiener Neustadt was hit by a severe tornado. Within minutes, the tornado led to 32 casualties, 116 severely injured and 212 slightly injured people and heavily damaged or destroyed over 100 buildings. Several less severe occurrences of tornadoes have been documented in and near Wiener Neustadt since that event. This was more than enough reason for the city of Wiener Neustadt to request a hazard assessment to be carried out by European Severe Storms Laboratory – Science and Training to determine the threat of tornadoes for the region southern Vienna Basin.

The project is called “Assessment of Wiener Neustadt tornado threats on the basis of the case study 10 July 1916”; in short TORNEUSTADT. The project includes an in-depth analysis of the 10 July 1916 tornado and all other tornado occurrences within Wiener Neustadt and adjacent regions covered by a radius of 20 km. Furthermore, the return interval of tornadoes will be estimated. The results will be the basis of emergency management scenarios. The project started March 2012 and will have a duration of 12 months.

Wessling, 13 April 2012

Pieter Groenemeijer, Director  
Aurora Bell, Deputy Director  
Alois M. Holzer, Treasurer  
Kathrin Riemann-Campe, Deputy Director