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## European Severe Storms Laboratory Newsletter 2014-2

No. 11 December 2014

### Testbed 2014

From June 2 to 27 2014 the third edition of the ESSL Testbed took place in our ESSL Research and Training Centre in Wiener Neustadt, Austria.



**2014**

**ESSL Testbed**

The ESSL Testbed is a project to enhance severe weather forecasting across Europe. The Testbed provides forecaster training, testing of forecasting tools, and is a platform for interaction for researchers and forecasters.

This year's Testbed was again very successful. A total of 50 participants from 14 countries attended this year's Testbed. The participants and ESSL staff were full of vigour exchanging their knowledge about forecasting convective severe weather. Severe weather has occurred frequently over Italy during the Testbed weeks. However, Italy as a forecasting domain does partly belong to the domain focusing around Toulouse and partly to the Sofian domain. Thus, an additional forecasting domain focusing on Naples, had been added after the second Testbed week.

This year, two new products of the DWD were under evaluation: the vertically integrated liquid water (VIL) and VIL-track and the rotation and rotation-track. A new version of the Mesocyclone Detection Algorithm product was evaluated as well as an integrated visualisation into the Testbed nowcast display of the products: NowcastMix by DWD and the Overshooting Top Detection by Kristopher Bedka.

The following products are once more part of the Testbeds product evaluations: GLD360 by Vaisala and COSMO-DE-EPS, now including vertically integrated total water and total graupel, by DWD.

The Testbed activities were posted on the Testbed blog on a daily basis:  
<http://www.essl.org/testbed/blog/>

**2014**  
**ESSL Testbed**

### Information

Home Daily Weather Summaries Sponsors

#### Verification and overshooting top detection algorithm

Posted on June 18, 2014 (14:32 UTC) by admin

This week severe weather is likely to occur mainly in Italy and Balkan Peninsula. As usually, we began our day with Pieter's verification of previous day1 and day2 forecasts. Quick look on them below:

Day 2 Forecast valid Tue 17 Jun 2014 06:00 - Wed 18 Jun 2014 06:00 UTC  
Issued: Mon 16 Jun 2014 14:38 UTC, Forecaster: ESSL TESTBED

RECENT POSTS

- Verification and overshooting top detection algorithm
- Stormchasing presentation
- Is the level 3 for Albania too much?
- The person behind this blog
- Week no. 3

RECENT COMMENTS

In 2015 the Testbed will take place from 25 - 29 May, 1 - 5 June, 15 - 19 June and 22 - 26 June at our ESSL Research and Training Centre in Wiener Neustadt, Austria.

The registration is now open. For further information have a look at <http://www.essl.org/testbed> or contact:

Magdalena Pichler

E-mail: [testbed@essl.org](mailto:testbed@essl.org)

The Testbed 2014 was organized in cooperation with the Austrian Central Institute of Meteorology and Geodynamics (ZAMG).

The 2014 Testbed was made possible by:



## RAIN Project has started

Since May 2014 the ESSL is engaged in the new FP7 EU-project RAIN. ESSL is leader of the workpackage 2, dealing with hazard identification.

The EU-project on Risk Analysis of Infrastructure Networks (RAIN) in response to extreme weather analysis how vulnerable Europeans transport, energy and telecommunication infrastructures are.

The objectives of RAIN include minimising the impact of extreme weather events on these networks. The project plans to develop early warning systems, decision support tools and engineering solutions to ensure rapid reinstatement of the network. This will improve reliability of critical infrastructures and reduce disruption for citizens. Further information can be found on the RAIN website (<http://rain-project.eu/>).

## ESWD summary 2013 part 2

A total number of 10754 reports have been added into the ESWD for the year 2013 (as of 16 June 2014). Most of these reports, 4459 (41 %), are related to the weather type severe wind gusts, followed by the types heavy rain with 2122 reports (20 %) and large hail with 1977 reports (18 %). For the year 2013, a new record was established: 9 951 severe weather events were added to the ESWD. In comparison, 9 019 events were reported in 2012. More than 85 % of the 2013 reports have quality status QC1 and above and are summarised in the following table.

<b>weather type</b>	<b>number of reports in 2013</b>	<b>percentage of report numbers</b>	<b>number of fatalities caused by weather type</b>	<b>percentage of fatality numbers</b>
<b>tornado</b>	432	4.0	3	1.2
<b>severe wind gust</b>	4459	41.5	37	15.1
<b>large hail</b>	1977	18.4	0	0
<b>heavy rain</b>	2122	19.7	53	21.6
<b>funnel cloud</b>	234	2.2	0	0
<b>gustnado</b>	4	0.04	0	0
<b>dust devil</b>	13	0.1	0	0
<b>heavy snowfall</b>	395	3.7	0	0
<b>ice accumulation</b>	398	3.7	0	0
<b>avalanche</b>	260	2.4	106	43.3
<b>damaging lightning</b>	460	4.3	46	18.8
<b>total</b>	10754	100	245	100

Table 1: Number of ESWD reports and fatalities caused per severe weather type for the year 2013 (as of 16 June 2014).

## ESSL General Assembly 2014

The ESSL General Assembly (GA) 2014 took place as a side meeting of the 14th European Meteorological Society (EMS) Annual Meeting and the 10th European Conference on Applied Climatology (ECAC) in Prague (Czech Republic) on 8th October 2014. One of the main points of the agenda of the annually GA is the ESSLs Annual Report 2013 which was accepted. The full report can be found in the "Publications" section of our webpage <http://essl.org/>. Furthermore, Hans-Joachim Koppert was re-elected as Advisory Councillor for the period 2015 - 2018.

## ESSL publishes Climatology of Tornadoes in Europe

In the December Issue of the Journal Monthly Weather Review, ESSL researchers Pieter Groenemeijer and Thilo Kühne have published an article describing the climatology of tornadoes in Europe, based on the data contained in the European Severe Weather Database (ESWD).

The study found that, typically, more than 300 tornadoes over land are reported each year in Europe, of which 31 are significant (F2 or stronger), which is still a considerable underestimate of the true number. There is especially a strong underreporting of tornadoes in southern Europe. The authors estimate that between 10 and 15 people are killed by tornadoes annually. The maximum of the tornado season is in early summer across the Balkans, in mid-summer in most of central, northern and western Europe, and in autumn in the Mediterranean. The full article can be found under: <http://journals.ametsoc.org/doi/abs/10.1175/MWR-D-14-00107.1> .

## ECSS 2015

The official first announcement for the 8th European Conference on Severe Storms (ECSS) was published in 2014. The ECSS 2015 will take place in Wiener Neustadt, Austria, from 14 to 18 September 2015.



The scope of the conference covers all aspects of severe convective storms. Researchers, operational forecasters, and risk and emergency managers are invited to submit contributions. In light of the global relevance of the conference themes, participants from all over the world are encouraged to attend.

The 8<sup>th</sup> ECSS will be hosted in Wiener Neustadt, Austria, home of the ESSL Research and Training Centre.

As a side meeting of this conference, the next ESSL General Assembly (GA) will be held on 13 September 2015, starting at 17:00.

Registration and abstract submission will open 15 January 2015. The deadline for abstract submission is 20 March 2015.

For more information, please visit [www.ecss.eu](http://www.ecss.eu) .

## **ESSL Tornado and Windstorm Damage Assessment Workshop**

**From 1 to 5 September 2014 ESSL organized a workshop dedicated to the field of forensic meteorology.**

The workshop focused on a special field of "Forensic Meteorology" to determine the type of a past damage event (windstorm or tornado) and to estimate the strength of the maximum wind. The workshop started with learning the theoretical background of forensic meteorology. Experts lead through very active discussions. On day three and four the whole team went to Slovenia and Italy to recent damage sites. Participants split up into four groups, three persons each group, and went into the field in order to assess damage to buildings and trees.

Another damage assessment workshop is tentatively planned for late summer 2016:

In late summer 2015 ESSL staff will be busy with preparations for the upcoming ECSS, but ESSL is tentatively planning to organize a similar workshop in early September 2016. If you are interested to pre-register, please send an email to [magdalena.pichler@essler.org](mailto:magdalena.pichler@essler.org)

### **Book: "Stürme über Europa" by Katrin Pfeifer**

**Katrin Pfeifer has studied past severe storms across Europe from a cultural historical viewpoint. The resulting book - in German language - with a focus on events in Austria and in the Netherlands has now become available.**

The book "Stürme über Europa" (storms over Europe) describes a selection of events in the Netherlands and Austria from the viewpoint of cultural history. A new cultural historical approach is introduced together with meteorological fundamental terms and scales of measuring storms. Several partly non-published sources are analysed on how contemporary witnesses experienced and managed severe storms.

For more information, follow this link: <http://www.lit-verlag.de/isbn/3-643-50280-3> .

## Upcoming Activities:

Date	Event	Additional information	Early rate until	Registration deadline
25 - 29 May 2015 1 - 5 Jun 2015 15 - 19 Jun 2015 22 - 26 Jun 2015	ESSL Testbed 2015		1 Feb 2015	
29 Jun – 3 Jul 2015	Workshop: Dynamics and Prediction of Severe Thunderstorms	by Dr. Johannes Dahl, USA	1 Feb 2015	
7 - 11 Sep 2015	EMS Annual Meeting and ECAM	co-sponsored by ESSL in Sofia, Bulgaria		
14 - 18 Sep 2015	ECSS 2015	in Wiener Neustadt, Austria		
21 - 26 Sep 2015	Seminar: Forecasting severe convection I	by Dr. C. A. Doswell III, USA	1 May 2015	1 Jul 2015
5 - 8 Sep 2016 (tentatively)	Workshop: Tornado and Windstorm Damage Assessment	in Wiener Neustadt, Austria		
11 - 16 Sep 2016	EMS Annual Meeting and ECAC	co-sponsored by ESSL in Trieste, Italy		
27 - 29 Sep 2016 (tentatively)	Workshop: Identification and Classification of Subtropical and Tropical Storms in the Mediterranean	in Wiener Neustadt, Austria		
10 - 15 Sep 2017	EMS Annual Meeting and ECAM	co-sponsored by ESSL in Dublin, Ireland		

The up to date calendar can be found on our webpage <http://essl.org/> .

For further information on registration for these events, please contact

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**ESSL wishes everybody a happy Christmas and a happy new year 2015**

Wessling, 24 December 2014

Pieter Groenemeijer, Director

Kathrin Riemann-Campe, Deputy Director

Alois M. Holzer, Treasurer – Director of Operations