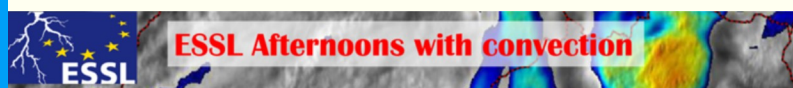


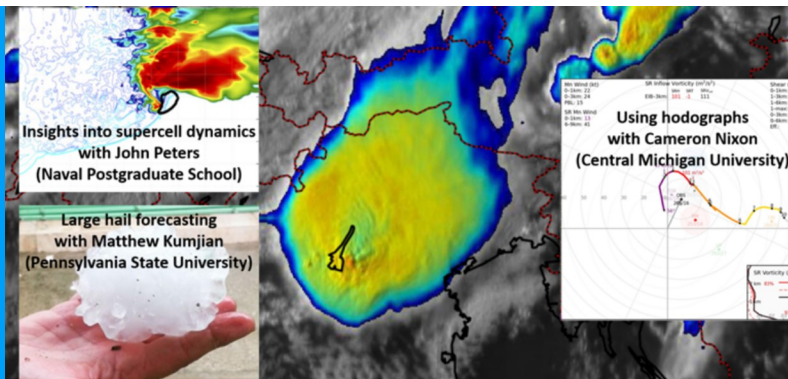


### ESSL Afternoons with convection!

Last year we brought you a series of 3 “refreshers” to get ready for convective season. While the convective season picks up over Europe, this year we are organizing a series of **3 webinars called “Afternoons with convection”** with severe weather experts to help you expand your horizons in convection forecasting!

**The webinars will take place on the Wednesdays 2, 9 and 30 June and will start at 13 UTC (15:00 CEST).** Each webinar consists of a lecture by a storm researcher followed by a discussion and concludes with a discussion of the current weather situation by Tomas Púčik and Christoph Gatzen (ESSL / ESTOFEX). The webinars end at 15 UTC.





You do not need to register for the webinars! On Mondays, two days before each webinar, we will post a link on ESSL's Twitter (@essl\_ecss) and Facebook channels and the webpage (essl.org) with instructions how to connect. As last year, we will use the BlueJeans videoconferencing system.

We are happy that the following expert researchers have offered to give a talk on their recent work in the Afternoons with Convection series:

**2 June 2021, Matthew Kumjian (The Pennsylvania State University)**

**Forecasting and nowcasting large hail.**

Large hail is the most costly thunderstorm-related threat and each year multiple events with hail-related injuries occur across Europe. Matt will discuss new findings of his research group concerning the physics of large hail formation, such as how the pre-convective environment influences the growth of large hailstones and how to recognize truly damaging hailstorms.

**9 June 2021, John Peters (Naval Postgraduate School)**

**New insights on dynamics of supercells**

Understanding why storms behave in a certain way is very important for all forecasters. John will

talk about his novel research results concerning various aspects of storm dynamics, including how shear modulates the width and strength of convective updrafts, in what ways updrafts of supercells are special, and what role entrainment plays in the evolution of updrafts.

**30 June, Cameron Nixon (Central Michigan University)**

**Using hodographs to their fullest potential.**

Long? Short? Curved? Straight? Hodographs offer a holistic approach to study vertical wind shear in the context of convective storm dynamics. Cameron will talk about how hodographs can predict supercell behavior, hazards, and even visual appearance, and how learning patterns rather than bulk shear or SRH will improve our forecasts in the future.



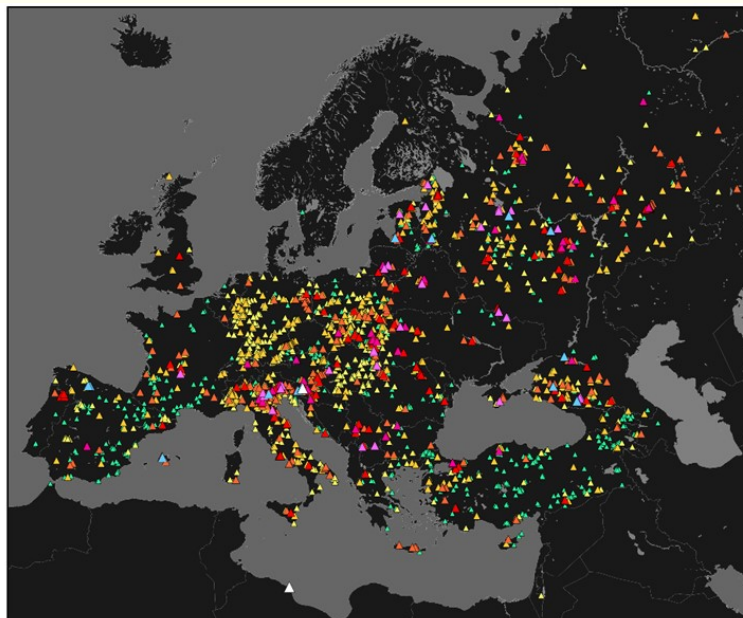
**Annual Review 2020 – Large hail**

In 2020, a total number of **3,266** large hail reports were documented from all ESWD-related countries. Compared to the previous year 2019, large hail reports showed a similar number in 2020, including a slight decrease of -1.1% (39 reports). The highest number of reports was registered in the month of June (1,321), followed by August (590) and July (566).

The top five countries with most reports in 2020 were the Russian Federation (621 reports: Europe and Asia), Poland (561), Italy (471), Turkey (334: Europe and Asia) and Germany (318). Highlighted local regions with great portions of large hail occurrence were situated in northern Italy, Slovenia, central and southern Poland, southern Austria, and parts of the southern Russian plains.

Two people were injured by large hail in the year 2020. One person died in an hailstorm-related event.

2,509 hail reports included a given hail size either measured or estimated, which matches 76.7% of the total number of hail reports in 2020. The largest hailstone was reported from Misratah town (northern Lybia, Africa) on 27th October with an estimated size of about 17 cm in diameter. The biggest hailstone from the European mainland was reported from Domžale town (Slovenia) on 29th July estimating 11 cm in diameter.



Size	unk	2 cm	3 cm	4 cm	5 cm	6 cm	7 cm	8 cm	9 cm	≥10 cm
Reports	757	1,071	715	396	187	76	40	17	1	2

All hail sizes in 2020 and table showing distribution of

### **Selected outstanding hailstorm events in Europe in 2020:**

**14th June 2020:** Several violent hailstorms hit the south Russian regions of Rostov, Karachayevo-Cherkesiya and Adygeya. Extensive damage to roofs and cars was caused by very large hail up to 8 cm i.d. The supercell in central Karachayevo-Cherkesiya tracked 60 km from SSW to NNE.

**25th June 2020:** In the afternoon, very large hail up to 8cm i.d. caused damages to cars and houses in several villages NE of La Robla town, situated in western Spanish region of Castilla y León.

**28th July 2020:** A violent hailstorm tracked about 140 km from Schwaig (E of Ingolstadt City, Bayern, Germany) to Klatovy town ([Plzeňský kraj](#), Czech Republic) during the afternoon hours. More than 15,000 HA farmland were damaged by 3 to 4 cm-sized hail. A total number of 65 large hail reports were recorded in the ESWD. Three people capsized while jet-skiing on Danube River east of Regensburg City, Bayern, Germany. A woman suffered head injuries by 4 cm large hail while swimming in the river.

**29th July 2020:** Severe hailstorm caused extensive damage to homes and cars in the area of Domžale town and neighbouring villages, central Slovenia. The town itself suffered damage from hail stones up to 11 cm i.d. (*which remarks the largest reported hailstone in Europe in 2020*).

**29th August 2020:** Violent hailstorms hit parts of north Italian provinces Lombardia, Emilia-Romagna and Veneto. Largest hailstones up to 8

cm i.d. were reported from Roncà village, Veneto. The total number of 62 large hail reports containing hail sizes of 3 to 8 cm i.d. were recorded in the ESWD.

---

## ESSL training activities

Unsure which [course](#) to attend?

[Try our online quiz!](#)

For further information about the registration for these events, please contact us at:  
[events@essl.org](mailto:events@essl.org)

Or approach us for [tailored trainings](#) or [forecaster training on-the-job](#).



---

ESSL  
European Severe Storms Laboratory

[Preferences](#) | [Unsubscribe](#)