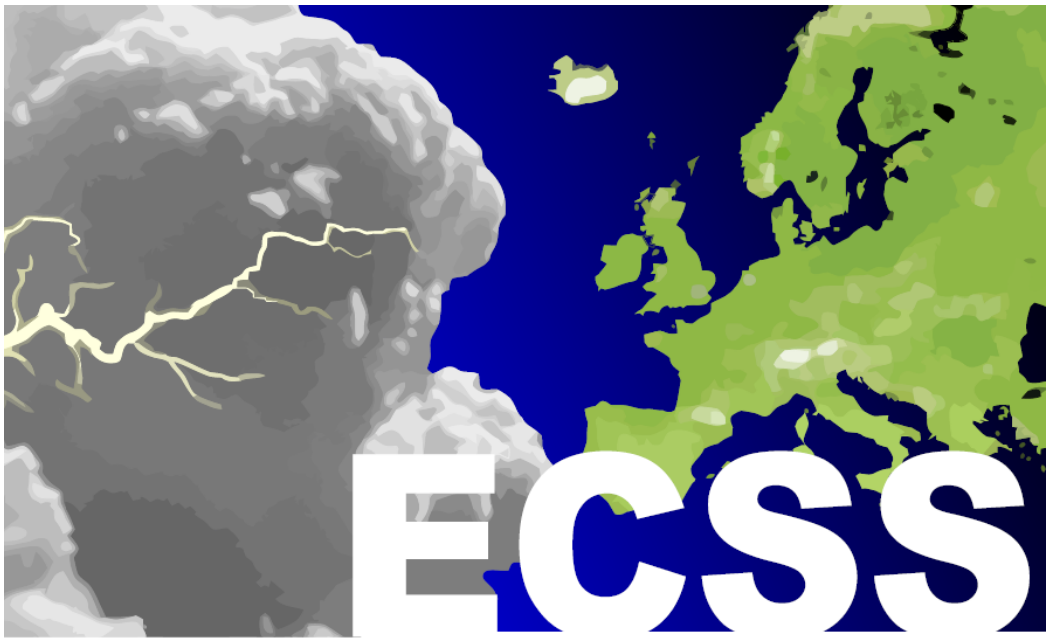
12th European Conference on Severe Storms

Utrecht, the Netherlands

17 – 21 November 2025

Programme



Programme overview - ECSS2025

	Monday	Tuesday - MTG day	Wednesday	Thursday	Friday
09:00	OPENING SESSION	2: Satellite imager studies of convective storms and their environment	6: Hail studies	8: Nowcasting and forecasting of severe weather and forecaster training	10: Impact of storms on society, impact mitigation, and early warning systems
09:30	9: Numerical modelling, convection-allowing models, data assimilation, and machine learning				
10:45	COFFEE BREAK	COFFEE BREAK	COFFEE BREAK	COFFEE BREAK	COFFEE BREAK
11:15	1: Convective storm and tornado dynamics	3: Satellite sounder studies relevant to the formation of convective storms 4: Storm electrification, lightning, microphysics, and space-based lightning observations	8: Nowcasting and forecasting of severe weather and forecaster training - Chuck Doswell Memorial Session	7: Floods, flash floods, and convective storms within extratropical, tropical and hybrid cyclones	11: Storm climatologies, risk assessments, and climate change
11:30					
13:00			Panel discussion on Chuck Doswell's legacy		
13:15	LUNCH BREAK Early Career Lunch	LUNCH BREAK Women's Lunch	LUNCH BREAK	LUNCH BREAK	CLOSING and CONFERENCE AWARDS SESSION until 13:30
14:30	11: Storm climatologies, risk assessments, and climate change	TUESDAY POSTER SESSION In parallel: TIM Field Campaign Meeting	*SPONSORED SOCIAL EVENTS: city tour options*	THURSDAY POSTER SESSION In parallel: CWG Splinter Meeting	EUMETSAT-ESSL MTG Forecaster Workshop (14:00 - 17:00)
16:00					
16:15	COFFEE BREAK	COFFEE BREAK		COFFEE BREAK	
16:45	12: Collection of storm data, historical events, and damage assessments - 8: Nowcasting and forecasting of severe weather and forecaster training	Session 4 continued		5: Radar and non-satellite remote sensing studies of storms	
17:30		Panel discussion on MTG			
18:15					
18:30	Informal Icebreaker Reception		19:00 Conference Dinner		

On site registration desk opening hours:
Sun 15:00 – 20:00 – do it the relaxed way, get your conference badge, fix your poster on the poster wall
Mon 08:00 – 18:00
Tue – Fri starting at 08:30 and until the end of the scientific programme

All printed programme information as of 6 November 2025. Please check the online programme on our webpage www.ecss.eu for updates. Updates will also be provided via local announcements.

Please use the hashtag **#ecss2025** for your social media posts.

Sunday, 16 November 2025

Location: Conference lobby and poster area in front of room Hertz Zaal.

15:00–20:00

Relaxed Sunday on site registration

No cues, relaxed atmosphere.

Possibility to already hang posters for the Tuesday poster session.

Monday, 17 November 2025

The registration desk opens at 08:00.

Opening Session

Room Hertz Zaal | 09:00–09:30

Session 9
Numerical modelling, convection-allowing models, data assimilation, and machine learning

Room Hertz Zaal | 09:30–10:45

09:30–10:00: ECSS2025-90
Improving Our Understanding of Global Severe Convective Storm Hazards
Andreas F. Prein, Praveen Pothapakula, Christian Zeman Zeman, and Boris Blanc

10:00–10:15: ECSS2025-140
Postprocessing Global AI Weather Prediction Models for Severe Weather Forecasting
Aaron Hill and Evan White

10:15–10:30: ECSS2025-261
Improving Polarimetric Radar Simulations in AROME: Evaluation of Microphysics and Forward Operator Assumptions
Clotilde Augros, Cloé David, Benoit Vié, and François Bouttier

10:30–10:45: ECSS2025-176
Performance assessment of drone-based photogrammetry coupled with machine-learning for the estimation of hail size distributions on the ground
Jannis Portmann, Martin Lainer, Killian P. Brennan, Marilou Jourdain de Thieulloy, Matteo Guidicelli, and Samuel Monhart

Session 1 Room Hertz Zaal | 11:15–13:15
Convective storm and tornado dynamics

11:15–11:30: ECSS2025-204
ERIES-CLIMATHUNDERR: Buoyancy effects on large-scale experimental downburst winds
Federico Canepa

11:30–11:45: ECSS2025-4
A New Pathway for Tornadogenesis Exposed By Numerical Simulations of Supercells in Turbulent Environments
Paul Markowski

11:45–12:00: ECSS2025-67
The Low-level Internal Flow of Tornadoes (LIFT) Experiment: Observations from the 2024 and 2025 Campaigns
Christopher Weiss, Ethan Steward, Michael Coniglio, and Erik Rasmussen

12:00–12:15: ECSS2025-272
DOW radar studies of the mechanisms for tornadogenesis, maintenance, and dissipation
Karen Kosiba and Joshua Wurman

12:15–12:30: ECSS2025-194
Observational Analysis of Left- and Forward-Flank Boundaries in Supercells
Adam Houston, Peyton Stevenson, and Mark De Bruin

12:30–12:45: ECSS2025-65
Variability in supercell motion
Matthew Parker

12:45–13:00: ECSS2025-136
Exploring the developmental milestones of supercell thunderstorms from convection initiation through maturity
Luke LeBel and Paul Markowski

13:00–13:15: ECSS2025-199
A numerical investigation of supercell storm interactions with the urban environment
Francesco De Martin, Cristopher Rozoff, Stefano Alessandrini, Andrea Zonato, and Silvana Di Sabatino

Lunch break

>>> Early Career Lunch

Monday, 17 November 2025

Session 11
Storm climatologies, risk assessments, and climate change

Room Hertz Zaal | 14:30–16:15

14:30–14:45: ECSS2025-12
Modelling hail risk in Europe based on convection-resolving climate simulations: Methods and expected changes in a warming climate
Timo Schmid, Valentin Gebhart, and David N. Bresch

14:45–15:00: ECSS2025-15
The contribution of climate change to Europe's increasing hail losses
Steffen Münch, Paul Della-Marta, Niklaus Merz, Martin Frischknecht, and Leonie Villiger

15:00–15:15: ECSS2025-26
Convective systems and climate change in observations and model simulation using pseudo global warming.
Geert Lenderink, Hylke de Vries, Erik van Meijgaard, Bert van Ulft, and Rob Groenland

15:15–15:30: ECSS2025-66
A storyline climate-change attribution study of the extreme hail event in Switzerland on 28 June 2021
Robert Trapp, Sonia Lasher-Trapp, Duanne Claybrooke, and Olivia Romppainen-Martius

15:30–15:45: ECSS2025-34
Supercell thunderstorms in Europe – insights from km-scale climate simulations
Monika Feldmann, Michael Blanc, Sandro Beer, Lena Wilhelm, Killian Brennan, Iris Thurnherr, Patricio Velasquez, Olivia Martius, and Christoph Schär

15:45–16:00: ECSS2025-17
The Future of (Very) Large Hail Globally: Application of the AR-CHaMo models to the CMIP6 Ensemble
Francesco Battaglioli, Pieter Groenemeijer, Tomáš Púčik, and Mateusz Taszarek

16:00–16:15: ECSS2025-84
The CSSL – A New Era in Severe Storms Data and Research in Canada
David Sills, Julian Brimelow, Connell Miller, and Gregory Kopp

Session 12
Collection of storm data, historical events, and damage assessments

Room Hertz Zaal | 16:45–17:45

16:45–17:00: ECSS2025-192
Damage Surveying Methods for Canadian Severe Wind Events
Aaron Jaffe, Lesley Elliott, Connell Miller, and David Sills

17:00–17:15: ECSS2025-186
Automated Satellite Detection of Tornado Forest Damage in Canada
Daniel Butt, Lesley Elliot, David Sills, Gregory Kopp, and Mark Daley

17:15–17:30: ECSS2025-273
Radar Determined Intense Tornado Frequencies, Wind Profiles and the BEST Tornado Study
Joshua Wurman and Karen Kosiba

17:30–17:45: ECSS2025-172
A reconstruction of 1 August 1674 thunderstorms over the Low Countries
Gerard van der Schrier and Rob Groenland

Session 8
Nowcasting and forecasting of severe weather and forecaster training

Room Hertz Zaal | 17:45–18:15

17:45–18:00: ECSS2025-151
Status and perspectives of SINFONY – the seamless combination of Nowcasting and NWP at DWD
Ulrich Blahak and the Team SINFONY & Friends

18:00–18:15: ECSS2025-105
Combining Nowcasting and NWP for Improved Thunderstorm Prediction with KONRAD3D-SINFONY
Nora Linn Strotjohann, Lukas Josipovic, and Ulrich Blahak

Informal Icebreaker Reception

Winkel van Sinkel | 18:30–20:30

Venue address: Oudegracht 158, Utrecht

About 10 minutes by foot from the conference venue.

Tuesday, 18 November 2025

Session 2
Satellite imager studies of convective storms and their environment

Room Hertz Zaal | 09:00–10:45

09:00–09:30: ECSS2025-250
Nowcasting severe storms using full-constellation Meteosat Third Generation satellite data
Nataša Strelec Mahović and Stephan Bojinski

09:30–09:45: ECSS2025-268
What does the new Meteosat-12 see on top of the storms that we couldn't see before?
Ivan Smiljanic, Natasa Strelec Mahovic, and Vesa Nietosvaara

09:45–10:00: ECSS2025-153
Differences in severe storms in cold versus warm climate regimes: what do 500+ years of historical data tell us?
Pao K. Wang

10:00–10:15: ECSS2025-290
Assessing Severe Storm Frequency and Risk Using Multi-Decadal Geostationary Infrared Satellite Data Records
Kristopher Bedka, Kyle Itterly, Douglas Spangenberg, Konstantin Khlopenkov, Francesco Battaglioli, Brice Coffer, and Pieter Groenemeijer

10:15–10:30: ECSS2025-234
Exploring spatio-temporal distributions of MTG-FCI TCWV fields in pre-convective environments
Cintia Carbajal Henken, Jan El Kassar, and Rene Preusker

10:30–10:45: ECSS2025-258
Unlocking the Potential of MTG FCI Data for Severe Storm Nowcasting and NWP Applications
Johan Strandgren, Andrea Meraner, Alessandro Burini, Loredana Spezzi, Alessio Bozzo, Sven-Erik Enno, and Bartolomeo Viticchie

Session 3
Satellite sounder studies relevant to the formation of convective storms

Room Hertz Zaal | 11:30–12:00

11:30–11:45: ECSS2025-233
Level 2 products from EUMETSAT's first geostationary hyperspectral Infrared sounder mission
Stefan Stapelberg, Harshitha Bhat, Simon Warnach, Cedric Goukenleuque, Marc Crapeau, Jonas Wilzewski, Tim Hultberg, and Dorothee Coppens

11:45–12:00: ECSS2025-313
Exploring the potential of MTG-IRS to diagnose convective instability for nowcasting and situational awareness.
Ruth Taylor

Session 4
Storm electrification, lightning, microphysics, and space-based lightning observations

Room Hertz Zaal | 12:00–17:30

12:00–12:15: ECSS2025-152
Meteosat-12 Lightning Imager: first year of observations and the main performance characteristics
Sven-Erik Enno, Bartolomeo Viticchie, David Navia, and Jochen Grandell

12:15–12:30: ECSS2025-298
Using the Lightning Imager for nowcasting severe convective storms: experience from ESSL-EUMETSAT Testbeds and workshops
Tomas Pucik, Alois Holzer, Pieter Groenemeijer, Stephan Bojinski, and Natasa Strelec Mahovic

12:30–12:45: ECSS2025-230
Satellite Multi-Sensor Perspective on Electrified Convection: EarthCARE and MTG-LI Synergy
Blanka Piskala, Johanna Mayer, Thorsten Fehr, Edward Malina, Daniele Gasbarra, and Ondrej Nedelcev

12:45–13:00: ECSS2025-271
Lightning ring signatures with the Meteosat Lightning Imager (MTG-LI) compared to the Lightning Mapping Array in northeastern Spain
Oscar van der Velde, Tomáš Púčik, Nicolau Pineda, Joan Montanyà, Jesús López, David Romero, Bartolomeo Viticchie, and Sven-Erik Enno

13:00–13:15: ECSS2025-222
Lightning jump in the NWC SAF RDT-CW product: application to MTG-LI, validation and comparison with Météorage
Zoé Pelletier, **Ronan Houel**, Michaël Claudon, Jean-Marc Moisselin, and Thibaut Montmerle

Lunch break

>>> *Women's Lunch*

– followed by poster session

TIM Field Campaign Meeting

Open for all interested.

Room Hertz Zaal | 14:30–16:00

Session 4 continued
Storm electrification, lightning, microphysics, and space-based lightning observations

Room Hertz Zaal | 16:45–17:30

16:45–17:00: ECSS2025-104
MTG Lightning Imager usability from a high-latitude perspective
Antti Mäkelä, Sini Jääskeläinen, and Janne Kotro

17:00–17:15: ECSS2025-293
Environments associated with lightning occurrence based on pre- and post-convective rawinsonde measurements in Central Europe
Patryk Matczak, Mateusz Taszarek, Adrian Sobisiak, and Leszek Kolendowicz

17:15–17:30: ECSS2025-77
Enhancing Early Warnings in Africa with MTG Lightning Imager Observations
Sini Jääskeläinen, Antti Mäkelä, Matti Eerikäinen, and Harri Pietarila

Panel Discussion:

Meteosat Third Generation

- Impact of novel MTG data
- Needs for research or training
- How AI-based techniques are entering nowcasting

Panel host: Stephan Bojinski

Room Hertz Zaal | 17:30–18:30

Tuesday Posters

Session 1
Convective storm and tornado dynamics

Poster area | Attendance time: 14:30–16:00

P1: ECSS2025-9
Sensitivity of Supercell Behavior to Artificial Airmass Boundaries in High-Resolution CM1 Simulations
Kornél Komjáti, Kálmán Csirmaz, and Hajnalka Breuer
P2: ECSS2025-20
ERA5-Based Environmental Characteristics of F2 Tornadoes in Germany since 1950
Hendrik Feige and Christian Horn
P3: ECSS2025-40
Describing long term seasonal and interannual variability of tornado frequency across the USA and Europe
Aqsa Muhammadi and Piero Lionello
P4: ECSS2025-82
The Severe to Extreme storms over Bosnia and Herzegovina in July 2023
Dusko Mrkonjic
P5: ECSS2025-106
High-altitude cloud characteristics in tropical deep convective clouds from Aircraft observations
Sreehari Kizhuveettil, Jordi Vilà-Guerau de Arellano, Martina Krämer, Armin Afchine, Luiz A. T. Machado, Martin Zöger, and Wiebke Frey
P6: ECSS2025-127
A significant tornado event near a dryline bulge in Northern Italy
Federico Pavan, Francesco De Martin, Nicola Carlon, Guido Cioni, Christopher Rozoff, Virginia Poli, Sebastiano Carpentari, and Mario Marcello Miglietta
P7: ECSS2025-130
A novel analytical deep-convection updraught model and how it compares against observations
Tobias Bölle and John Mecikalski
P8: ECSS2025-131
A low-dimensional model of the thunderstorm lifecycle and its verification in remote-sensing observations
Tobias Bölle, Christoph Metzl, and Kianusch Vahid Yousefnia
P9: ECSS2025-183
Identification of discrete updrafts within quasi-linear convective systems using gridded radar data and potential implications for tornadogenesis prediction
Edward Wolff, Robert Trapp, and Stephen Nesbitt
P10: ECSS2025-197

Effects of the urban land use on a severe convective windstorm
Francesco De Martin, Andrea Zonato, and Silvana Di Sabatino
P11: ECSS2025-239
Analysis of the 1984 Ivanovo tornado outbreak using the WRF-ARW model
Kirill Gostev, Natalia Vazaeva, Andrey Shikhov, Victor Stepanenko, and **Alexander Chernokulsky**
P12: ECSS2025-244
Thermodynamic and Kinematic Observations within Severe Convective Storm Updrafts
Kelly Lombardo, Matthew Kumjian, and Joshua Soderholm
P13: ECSS2025-251
How do the raindrop size distributions of convective and stratiform precipitation change in Great Britain?
Shan Jiang and Miguel Rico-Ramirez
P14: ECSS2025-301
A strange supercell embedded in a linear convective system
Koji Sassa

Session 2
Satellite imager studies of convective storms and their environment

Poster area | Attendance time: 14:30–16:00

P15: ECSS2025-10
Space-Based Identification and Meteorological Analysis of Lightning with Continuing Currents from the Meteosat Lightning Imager
Isabell Stucke, Georg Mayr, Wolfgang Schulz, and Achim Zeileis
P16: ECSS2025-29
Learning about (hail-) storm development exploiting supervised and self-supervised deep learning and MSG imagery
Paula Bigalke, Claudia Acquistapace, Daniele Corradini, and Sante Laviola
P17: ECSS2025-88
Application of Machine Learning to Severe Weather Prediction from Storm Top Indicators
Anežka Doležalová, Jakub Seidl, and Jindřich Šťástka
P18: ECSS2025-97
Self-supervised cloud classification using satellite infrared imagery to characterize extreme precipitation events over the Alps
Daniele Corradini, Claudia Acquistapace, Paula Bigalke, and Elsa Cattani
P19: ECSS2025-100
Self-supervised deep-learning of cloud spatio-temporal features to improve understanding of processes and evolutions of cloud organizations.
Claudia Acquistapace, Daniele Corradini, Paula Bigalke, Dwaipayan Chatterjee, Elsa Cattani, and Leif Denby
P20: ECSS2025-143
Validation of RDT product based on MSG data with Ukrainian Total Lightning Network (UTLN) data
Oleksii Kryvobok, Oleksandr Kryvoshein, and Olena Zabolotna
P21: ECSS2025-154
Convective cloud top altitude and temperature estimates from geostationnary satellites
Tony Le Bastard, Emmanuel Fontaine, and Gaëlle Kerdraon
P22: ECSS2025-266
Towards using overshooting tops in improving probabilistic risk models of (very) large hail across Europe
Brice Coffer, Francesco Battaglioli, Pieter Groenemeijer, Kris Bedka, Kyle Itterly, and John Cooney
P23: ECSS2025-277
Clear-sky Planetary Boundary Layer Characterisation Using Near- and Thermal-infrared Observations from Satellite-based Imagers
Jan Riad El Kassar, Cintia Carbajal Henken, Rene Preusker, and Jürgen Fischer
P24: ECSS2025-294
Visualizing tropospheric humidity using differential water vapor transmittance between the 0.91 and 0.85 μm FCI channels
Pieter Groenemeijer, Tomas Pucik, and Alois M. Holzer

Session 3
Satellite sounder studies relevant to the formation of convective storms

Poster area | Attendance time: 14:30–16:00
P25: ECSS2025-300
Visualization of the MTG-IRS L2 data to enhance usage in nowcasting
Zsófia Kocsis and Kálmán Csirmaz

Tuesday Posters continued

Session 4
Storm electrification, lightning, microphysics, and space-based lightning observations

Poster area | Attendance time: 14:30–16:00

P26: ECSS2025-42
Lightning Nowcasting Using GLM and GOES-ABI Data in a High-Resolution Machine Learning-Based Predictive Model
Cesar Beneti, Kalinka Castelo Branco, Luis Pavam, and Leonardo Calvetti

P27: ECSS2025-50
First validation of the Lightning Imager on board Meteosat Third Generation with Earth Networks Total Lightning Network
Vojtech Bliznak and Zbynek Sokol

P28: ECSS2025-95
A Real-Time Radar-Based Lightning Prediction and Risk Alert System
Hae lim Kim, MyoungJae Son, and Mi-Kyung Suk

P29: ECSS2025-149
Understanding the land—ocean contrast in lightning strikes across the Australian tropics
Tanya Patel, Timothy H Raupach, Steven C Sherwood, and Robert A Warren

P30: ECSS2025-212
The kinematic and thermodynamic environment during cloud-to-ground lightning occurrence in Poland
Sławomir Sulik and Mateusz Taszarek

P31: ECSS2025-231
Linking Lightning Activity to Upper-Cloud Radar Signatures Using EarthCARE CPR and MTG-LI Satellite Observations
Blanka Piskala, Aida Galfione, Johanna Mayer, Thorsten Fehr, Edward Malina, and Daniele Gasbarra

P32: ECSS2025-297
Visualizing the geometry of lightning detected by MTG's Lightning Imager
Pieter Groenemeijer, Alois M. Holzer, and Tomas Pucik

P33: ECSS2025-322
Correspondence between MTG-LI satellite-based lightning detections and severe weather reports across Europe
Camille Waymel, Pieter Groenemeijer, and Tomáš Púčik

Session 5
Radar and non-satellite remote sensing studies of storms

Poster area | Attendance time: 14:30–16:00

P34: ECSS2025-2
Validating the Swiss automatic mesocyclone detection algorithm over the Highveld of South Africa: A case study event
Christina Liesker, Liesl Dyson, and Monika Feldmann

P35: ECSS2025-48
PrecipType: Dual-pol C-band radars for analyzing the precipitation type on the ground
Felix Erdmann, Sylvain Watelet, Maarten Reyniers, and Dieter R. Poelman

P36: ECSS2025-60
Ionospheric respons to gravity waves induced by tropospheric deep convection in mid-latitudes
Kateřina Potužníková, Petra Koucká Knížová, Mošna Zbyšek, Kouba Daniel, Chum Jaroslav, Petr Zacharov, and Martin Setvák

P37: ECSS2025-76
Polarimetric radar observations of the Jersey tornado and hailstorm of 1 – 2 November 2023
Matthew Clark

P38: ECSS2025-94
Determining the location of feeder clouds in a convective storm system based on radar observations
Tsvetelina Dimitrova, Evgeni Livshits, **Viktoria Pencheva**, Stefan Georgiev, and Denislav Bonchev

P39: ECSS2025-98
Cyclic supercell Storm in Bulgaria observed on 13 June 2024: thermodynamic conditions, evolution and structure
Tsvetelina Dimitrova, Nadezhda Kadiyska, **Stefan Georgiev**, and Viktoria Pencheva

P40: ECSS2025-110
Orographic and lake effects on the evolution of thunderstorms in the region of Lake Balaton, Hungary
Máté Kurcsics, István Geresdi, and Ákos Horváth

P41: ECSS2025-114
Evaluating the effect of mass continuity, smoothness, and resolution constraints on thunderstorm wind fields using Dual-Doppler 3DVAR wind retrieval
Massimiliano Burlando, Priya Kumari, Hanna Beatriz Wollmeister Muñoz, Renzo Bechini, Djordje Romanic, and Alessandro Battaglia

P42: ECSS2025-170
Doppler wind lidar measurements during a thunderstorm at Cabauw, The Netherlands
Tiemo Mathijssen and Steven Knoop

P43: ECSS2025-213
Use of polarimetric radar data for identification of processes in convective storms
David Rýva

P44: ECSS2025-214
Field test of mobile solid state X-band radar in central Europe
Filip Najman and Miloslav Staněk
P45: ECSS2025-215
Monitoring of convective storms in Central Europe using C-band mobile solid-state weather radar
Miloslav Staněk and Filip Najman
P46: ECSS2025-256
Lightning Activity and its Temporal Progression Using GOES/GLM sensor During the Catastrophic May 2024 Floods of Rio Grande do Sul
Leonardo Calvetti, Clarissa Tavares, Wagner Loch, and Cesar Beneti
P47: ECSS2025-275
Polarimetric Radar Signatures of ZDR and KDP in Tornadic Storms over Germany and their Use for Nowcasting
Erik Brune, Silke Trömel, and Lisa Schielicke
P48: ECSS2025-279
Tracking and Characterization of Convective Storms Through Their Lifecycle in the Monsoon Core Zone Using Polarimetric Radar Observations
Ashruba Ghorapade, Sachin Deshpande, Manisha Tupsoundare, Zhe Feng, Subrata Das, and Harshad Hanmante
P49: ECSS2025-287
Optimizing C-Band radar settings for mesocyclone and tornado detection
Bram van 't Veen and Pieter Groenemeijer
P50: ECSS2025-289
Detecting severe storms using an RGB composite combining polarimetric radar parameters
Bram van 't Veen, Pieter Groenemeijer, and Tomas Pucik
P51: ECSS2025-305
(withdrawn)

Session 8
Nowcasting and forecasting of severe weather and forecaster training

Poster area | Attendance time: 14:30–16:00
P52: ECSS2025-179
Training forecasters on the use of new generation satellite products
Vesa Nietosvaara, Natasa Strelec Mahovic, and Ivan Smiljanic

Session 9
Numerical modelling, convection-allowing models, data assimilation, and machine learning

Poster area | Attendance time: 14:30–16:00
P53: ECSS2025-38
Quality Control and Observation Thinning for 2-metre Temperature Assimilation in an Operational Convective Nowcasting Framework
Francesco Uboldi, **Elena Oberto**, Massimo Milelli, Andrea Zonato, Martina Lagasio, and Antonio Parodi
P54: ECSS2025-64
Deep Learning-Based Prediction of Severe Convective Storm Perils
Davide Panosetti and Leandro Masello
P55: ECSS2025-70
Sensitivity of Supercell Environments to Orographic Modifications
Robert Kvak, Petr Zacharov, Martin Vokoun, and Marek Kašpar
P56: ECSS2025-123
Synoptic Analysis and Simulation of the High-Shear, Low-CAPE (HSLC) F4-Tornado in Hautmont, France from August 03, 2008 using ERA5 data and Cloud Model 1
Oliver Heuser, Lisa Schielicke, and Petra Friederichs
P57: ECSS2025-125
Benefit of hectometric simulations of the 18 August 2022 derecho-producing mesoscale convective system over Corsica
Marc Mandement, Didier Ricard, Clément Strauss, Christine Lac, Benoît Vié, and Clotilde Augros
P58: ECSS2025-145
Improved Understanding of Drivers of Upper-Level Updrafts and their Role in Producing Thunderstorm Overshooting Tops
Melinda Berman, Robert Trapp, and Stephen Nesbitt
P59: ECSS2025-155
Lightning and precipitation forecast by means of hybrid deterministic and AI-based tools
Daniele Carnevale, Federico Cassola, Mattia Cavaiola, and Andrea Mazzino
P60: ECSS2025-188
The Sensitivity of Severe Convective Storm Mode to Updraft Initiation Morphology Across Large-scale Environments
Kristen Axon, Daniel Dawson II, Richard Thompson, Andy Dean, and Edward Mansell
P61: ECSS2025-200
Using an OSSE to Estimate How Hundreds to Thousands of UAS Can Improve NWP Forecasts of Severe Storm Environments
Shawn Murdzek, Therese Ladwig, **Adam Houston**, and Eric James

Tuesday Posters continued

P62: ECSS2025-205
Evaluating sub-kilometric simulations in the HARMONIE-AROME model on high-impact convective storms
Juan Jesús González-Alemán, Carlos Calvo-Sancho, Pablo Fernández-Castillo, Daniel Martín-Pérez, Samuel Viana, Javier Calvo, David Suárez, and César Azorín-Molina
P63: ECSS2025-206
Cloud-radiation coupling over the lifetime of deep convective storms
Wouter Mol, Blaž Gasparini, and Aiko Voigt
P64: ECSS2025-218
A novel Deep Learning framework for lightning probabilistic prediction based on ERA5 reanalysis data and lightning observations.
Adrien Burq, Greta Cazzaniga, Davide Faranda, Mathieu Vrac, Victor Xing, and Jean Jouhaud
P65: ECSS2025-221
Severe storm research with thundeR package - improvements in calculation procedures of convective parameters
Mateusz Taszarek, Cameron Nixon, Tomas Pucik, Piotr Szuster, Pieter Groenemeijer, Francesco Battaglioli, and Bartosz Czernecki
P66: ECSS2025-235
Machine Learning Methods for the Postprocessing and Seamless Blending of Ensemble Forecasts
Fabian Schubert and Cristina Primo
P67: ECSS2025-254
Fewer but More Intense: Changes in Extreme Precipitation Cells from Global Kilometer-Scale Climate Modeling
Fabian Senf, Leonie Hartog, and William Jones
P68: ECSS2025-260
Combining NWP and Observations with AI
Sarah Heibutzki, Thomas Deppisch, Ulrich Blahak, Jan Keller, Stefanie Hollborn, and Roland Potthast
P69: ECSS2025-270
(withdrawn)
P70: ECSS2025-276
An Idealized Parameter Study of Instability Maxima on the Cool Side of Airmass Boundaries
Jason Keeler and Adam Houston
P71: ECSS2025-306
Simulation of Canadian severe weather events using Cloud Model 1
Lisa Schielicke, Luna Awad, and Keya Raval
P72: ECSS2025-310
An open educational approach to teaching convection-resolving modeling with Cloud Model 1 (CM1)
Lisa Schielicke, Rayhan Abdul Rahman, Luna Awad, Oliver Heuser, Yidan Li, Keya Raval, Jerome Schyns, Jose Pablo Solano Marchini, Aaron Sperschneider, Patrick Zobec, and Christoph Gatzen

Session 11
Storm climatologies, risk assessments, and climate change

Poster area | Attendance time: 14:30–16:00

P73: ECSS2025-1
TCs' contribution on summertime subtropical ISOs and submonthly wave patterns over the western North Pacific
Ken-Chung Ko
P74: ECSS2025-16
A Statistical Model to Forecast Tornadoes and Reconstruct Their Climatology and Trends Globally
Francesco Battaglioli, Pieter Groenemeijer, Mateusz Taszarek, and Tomáš Púčik
P75: ECSS2025-28
Long-term variability of winter thunderstorms in Poland (1951–2020)
Jakub Wyrwas and Zuzanna Bielec-Bąkowska
P76: ECSS2025-44
A Machine Learning Based High-Resolution Large Hail Climatology for the Contiguous United States
Rebekka Koch, Andreas Prein, Ulrike Lohmann, and Neil Aellen
P77: ECSS2025-45
Deconstructing Wind Storm Impacts for Risk Assessment: The Role of Duration, Gust Factor, and Precipitation in Residential Building Damage in Germany
Andreas Trojand, Henning Rust, and Uwe Ulrbich
P78: ECSS2025-61
Comparison of convective precursors from ALADIN and ERA5 Reanalyses over Central Europe
Petr Zacharov and Robert Kvak
P79: ECSS2025-72
Tornado occurrence and characteristics in Central Europe under different synoptic conditions
Kathrin Wapler, Marcus Beyer, and Paul James
P80: ECSS2025-75
Tracing Tornadoes Through Time: Enhancing Tornado Climatology in Romania with Historical Data and Modern Analysis
Andreea Bărăscu, Bogdan Antonescu, Dragoș Ene, Monica Ioniță, Ottilia Rusz, and Thilo Kühne
P81: ECSS2025-80

(withdrawn)

P82: ECSS2025-93

Projected changes in hail damage potential and swath properties over Australian cities under global warming

Timothy Raupach and Joanna Aldridge

P83: ECSS2025-96

Climate-change projections of hazardous convective weather using an environment-informed, convection-permitting, dynamical downscaling ensemble

Songning Wang, Robert Trapp, John Allen, Deepak Gopalakrishnan, and Eric Robinson

P84: ECSS2025-113

A New Tornado Map for the United Kingdom and Ireland 1054-2025

Robert Doe and the Tornado and Storm Research Organisation (TORRO)

P85: ECSS2025-118

Deep Convective Cloud (DCC) occurrence over Europe from 1983 to 2024, based on geostationary satellite data

Andrzej Kotarba

P86: ECSS2025-132

Comparing the environments of large hail, tornadoes and non-severe convection in the United Kingdom

Henry M Wells, John Hillier, Freya K Garry, Nick Dunstone, Matthew R Clark, Abdullah Kahraman, and Mateusz Taszarek

P87: ECSS2025-134

Atmospheric mesoscale dynamics over the North Atlantic: climatology based on Coherent Vortex Structures identification

Vasilisa Koshkina and Alexander Gavrikov

P88: ECSS2025-135

Long-Term Trends in Convective Weather and Environments in the Southeastern United States

Ryan Toomey and Matthew Parker

P89: ECSS2025-138

Tornadoes in Germany: intensity, temporal and spatial distribution

Marcus Beyer, Kathrin Wapler, and Thilo Kühne

P90: ECSS2025-159

Recent trends in sounding-derived indices and thunderstorm-related observations: a wider perspective over the Po Valley.

Gabriele Fasano, Lorenza Ferraro, Luca Tomassone, Alessio Golzio, Francesco Sioni, and Agostino Manzato

P91: ECSS2025-160

Quasi-Linear Convective Systems and Derechos across Europe: Climatology, Accompanying Hazards, and Societal Impacts

Artur Surowiecki, Natalia Pilguj, Mateusz Taszarek, Krzysztof Piasecki, Tomáš Púčik, and Harold Brooks

P92: ECSS2025-162

STORM-EX: Towards bridging the transition gap in statistical synthetic storm modelling

Marjolein Ribberink, Nadia Bloemendaal, Dim Coumou, Andrew Robson, and Mona Hemmati

P93: ECSS2025-164

Preliminary investigations on convective storm initiation and evolution in the Alpine region

Costanza Di Felice Fabrizi, Dino Zardi, and Sante Laviola

P94: ECSS2025-174

Tropical Cyclone Impact Sensitivity to Different Aerosol Conditions with CLIMADA Risk Platform

Michélle Dreifuss, Andrina Caratsch, and Ulrike Lohmann

P95: ECSS2025-184

From Observation to Simulation: Building a Continental-Scale Hail Model for Re/Insurance Applications

Joel Zeder, Elisa Spreitzer, Rogier de Jong, and Elisabeth Viktor

P96: ECSS2025-190

Tornado Climatology focused on the shape of parent convective system in Japan

Taisei Shibayama and Koji Sassa

P97: ECSS2025-191

Modulation of Rainfall Patterns and Extreme Events in Ecuador under Multidecadal ENSO Influence

Cristian Paliz Acosta, Belén Rodriguez de Fonseca, and Teresa Losada Doval

P98: ECSS2025-203

Why are European severe storms most frequent near mountains?

Jannick Fischer

P99: ECSS2025-216

An analysis of intense convectively-generated wind gusts in the Brazilian Amazon

Vanessa Ferreira, Letícia de Oliveira dos Santos, Ernani de Lima Nascimento, and Anja Ramming

P100: ECSS2025-219

Global climatology and trends in modeled Storm Prediction Center (SPC) risk categories

Mateusz Taszarek, Natalia Pilguj, Patryk Matczak, and Artur Surowiecki

P101: ECSS2025-220

Climatology and trends of environments favorable to severe convectively-induced winds in tropical Brazil

Letícia de Oliveira dos Santos, **Vanessa Ferreira**, Ernani de Lima Nascimento, Nathalie Tissot Boiaski, Christiane Machado Osório, and Beatriz da Silva Bernardino

Tuesday Posters continued

P102: ECSS2025-232
Conditions during the formation of warm-season derechos in Central Europe during last 25 years
Miloslav Staněk, David Rýva, and Miloslav Müller

P103: ECSS2025-238
Derecho and derecho-like events in northern Eurasian forests
Andrey Shikhov, **Alexander Chernokulsky**, Yulia Yarinich, and Sergey Davletshin

P104: ECSS2025-247
A Comprehensive 20-Year Evaluation of radar-detected Hail Cell Severity in Germany
Markus Augenstein, Christian Sperka, Mathis Tonn, and Michael Kunz

P105: ECSS2025-263
Updated Tornado Climatology of Austria
Gabriel Strommer and Alois Holzer

P106: ECSS2025-274
From Greenland to the Mediterranean: Unveiling a new cascading atmospheric circulation mechanism promoting extreme convective activity?
Juan Jesús González-Alemán, Marilena Oltmanns, Sergi Gonzalez, Frederic Vitard, Markus Donat, Francisco Doblas-Reyes, Jacopo Riboldi, David Barriopedro, Carlos Calvo-Sancho, and Bernat Jiménez-Esteve

P107: ECSS2025-280
Hailstorms and Solar Farms: A Holistic Framework to Assess the Risk Potential to Emerging Renewable Assets
Harsh Mistry, Tim Johnson, Sarah Bobby, and Karthik Ramanathan

P108: ECSS2025-282
Warming response of convective rainfall under different synoptic forcings
Edmund Meredith, Uwe Ulbrich, and Henning Rust

P109: ECSS2025-296
Environments of major convective wind events in Finland
Jenni Rauhala, Meri Virman, and Kirsti Jylhä

P110: ECSS2025-311
The climatology of supercell thunderstorms across Poland based on multisource data.
Krzysztof Piasecki, Mateusz Taszarek, Natalia Pilguj, and Artur Surowiecki

P111: ECSS2025-314
Global Perspectives on Convective Storm Frequency from Multi-Reanalysis Climatology
John Allen, Carlos Cuervo Lopez, and Mateusz Taszarek

Wednesday, 19 November 2025

Session 6
Hail studies

Room Hertz Zaal | 09:00–10:45

09:00–09:30: ECSS2025-52
Hail and its impacts: An interdisciplinary research project in Switzerland
Valentin Gebhart, Ellina Agayar, Martin Aregger, Killian Brennan, Pierluigi Calanca, Ruoyi Cui, Olivia Martius, Christoph Schär, Timo Schmid, Iris Thurnherr, Heini Wernli, Lena Wilhelm, and David N. Bresch

09:30–09:45: ECSS2025-228
3D wind retrievals for the analysis of hailstorm dynamics in Germany and the USA
Tobias Scharbach, Silke Trömel, Elias Hühn, Michael Kunz, Jannik Fischer, Susanna Mohr, Joshua Soderholm, Dean Sgarbossa, Jordan Brook, Jana Mendrok, and Ulrich Blahak

09:45–10:00: ECSS2025-187
The Sensitivity of Hail Production in Supercell Storms to the Distribution of Vertical Wind Shear
Kelly Lombardo and Matthew Kumjian

10:00–10:15: ECSS2025-185
Timescales of Evolution for Supercell Updrafts and their Impact on Hail Trajectories
Lydia Spychalla, Matthew Kumjian, Kelly Lombardo, Joshua Soderholm, and Jannick Fischer

10:15–10:30: ECSS2025-27
Saharan dust linked to European hail events
Killian P. Brennan and Lena Wilhelm

10:30–10:45: ECSS2025-309
Overview of the In Situ Collaborative Experiment for the Collection of Hail in the Plains (ICECHIP)
John Allen, Rebecca Adams-Selin, Victor Gensini, and Andrew Heymsfield and the ICECHIP Science PIs

Session 8

Chuck Doswell Memorial Session

Nowcasting and forecasting of severe weather and forecaster training

Room Hertz Zaal | 11:30–13:00

11:30–12:00: ECSS2025-19
The Reserch Labs Component of the National

Weather Service Flash Flood Forecasters Training Course (~1978-1997): A Memorial to Chuck Doswell
Harold Brooks and Charles Doswell

12:00–12:15: ECSS2025-227
The Summer 2024 Met Office Convection Nowcasting Testbed
Matthew Clark, **Dan Suri**, Brian Golding, Katie Norman, and Rosie Nation

12:15–12:30: ECSS2025-31
AR-CHaMo probabilistic forecasts of convective hazards with ECMWF ensemble
Ivan Tsonevsky, Pieter Groenemeijer, Francesco Battaglioli, Tomàš Púčik, Andreea Barascu, and Mateusz Taszarek

12:30–12:45: ECSS2025-3
Europe's Elevated Mixed Layer: New Insights into the Spanish Plume
David M. Schultz, Daniel J. Kirshbaum, and Martin V. Young

12:45–13:00: ECSS2025-299
The ESSL: Europe's Centre of Competence on severe convective storms approaches its 20 year anniversary
Pieter Groenemeijer and **Alois M. Holzer** and the ESSL employees and Executive Board

Panel Discussion:

Chuck Doswell's legacy

Panel host: Tomáš Púčik

Room Hertz Zaal | 13:00–13:30

Lunch break

Wednesday Social Program

Various locations | 14:00–17:00

Meeting place for boat tours:
Schuttevaer boarding point ("aanlegplaats") at Oudegracht 69 under the Rembrandt Cinema. It's located 350 m from the ECSS2025 venue, an about 5-minute walk.

Meeting place for all other tours:
In front of the Tourist Information Centre (Domplein 9, Utrecht), which is 1.0 km from the ECSS2025 venue, an about 15-minute walk.

Conference Dinner

and giving of the Nikolai Dotzek Award

Location: Nicolaïkerk | 19:00–22:30

Address: Nicolaaskerkhof 8, 3512 XC Utrecht

Individual approach to the dinner venue, no organized transfer.

Thursday, 20 November 2025

Session 8
Nowcasting and forecasting of severe weather and forecaster training

Room Hertz Zaal | 09:00–10:45

09:00–09:30: ECSS2025-225
Recent work at Météo-France's Nowcasting department on warnings of exceptional rainfall and thunderstorm objects
Thibaut Montmerle, Renaud Tzanos, Enzo Pottez, Gabriel Arnould, Dorian Jaubert, and Jean-Marc Moisselin

09:30–09:45: ECSS2025-5
An object-based method to study the life cycle of mesoscale convective systems and their environment from cloud-resolving AROME-France simulations
Gabriel Arnould, Thibaut Montmerle, Lucie Rottner, and Jean-Marc Moisselin

09:45–10:00: ECSS2025-102
Physical Scales Matter: The Role of Receptive Fields and Advection in Satellite-Based Thunderstorm Nowcasting with Convolutional Neural Networks
Christoph Metzl, Kianusch Vahid Yousefnia, Richard Müller, Virginia Poli, Miria Celano, and Tobias Bölle

10:00–10:15: ECSS2025-302
(withdrawn)

10:15–10:30: ECSS2025-109
Severe storm signatures in three-dimensional lightning data (LMA): isolated lightning on the overshooting cloud tops
Oriol Rodriguez, Oscar van der Velde, Ferran Fabró, Nicolau Pineda, Marta Balagué, and Joan Montanyà

10:30–10:45: ECSS2025-173
Fast Approximation for Diagnosing Convective Cloud Top Heights
Vinko Šoljan and Jadran Jurković

Session 7

Floods, flash floods, and convective storms within extratropical, tropical and hybrid cyclones

Room Hertz Zaal | 11:30–13:15

11:30–11:45: ECSS2025-57
A phenomenological definition of "medicane"
Mario Marcello Miglietta and the medicane definition group

11:45–12:00: ECSS2025-249
Evaluation of extreme precipitation events across different timescales: A comparison of high-resolution modeling and observed data in Emilia-Romagna
Oliver Carlo, Giusy Fedele, Silvio Gualdi, Paola Mercogliano, and Piero Lionello

12:00–12:15: ECSS2025-22
Flash floods in Croatia from 2012 till 2022 – meteorological analysis
Klara Severić, Tanja Renko, Maja Telišman Prtenjak, and Vinko Šoljan

12:15–12:30: ECSS2025-181
Exploring extreme floods in two Italian watersheds through unseen ensemble scenarios
Agostino Manzato, Elena Bianco, Giuseppe Zappa, Paolo Davini, and Paolo Ruggieri

12:30–12:45: ECSS2025-147
Flood map interpolation from design storms under global warming using a national hydrodynamic model database in Aotearoa New Zealand
Joe Pelmard, Alice Harang, Cyprien Bosserelle, Emily Lane, Trevor Carey-Smith, Rose Pearson, Conrad Zorn, Luisa Hosse, and Ryan Paulik

12:45–13:00: ECSS2025-111
A multi-scale analysis of atmospheric processes associated with dam overtopping events in the Eastern United States
Deanna Hence, Jacqueline Sepulveda, and Hodo Orok

13:00–13:15: ECSS2025-85
The Northern Mesonet Project: Creation of an interconnected network of surface weather station networks in Canada
Connell Miller, Collin Town, Minh Nguyen, and Josh Muszka

Lunch break

– followed by poster session

Convection Working Group meeting (by invitation only)

Room Park 6 Pandora Foyer | 14:30–16:00

Session 5

Radar and non-satellite remote sensing studies of storms

Room Hertz Zaal | 16:45–18:15

16:45–17:00: ECSS2025-269
Three years of monitoring severe hailswaths across Canada using radar
Julian C. Brimelow, Mark Gartner, and Sudesh Boodoo

17:00–17:15: ECSS2025-208
Object-based hail-size detection and nowcasting in Switzerland using random forests on polarimetric radar data
Martin Aregger, Olivia Martius, Urs Germann, and Alessandro Hering

17:15–17:30: ECSS2025-217
A data-driven approach to predicting Severe Weather utilizing dynamic definition via dual-polarization products
Matej Murín, Matej Choma, and Jakub Bartel

17:30–17:45: ECSS2025-137
Radar Updraft Proxies for Supercell Tornadogenesis Prediction
Michael French, Erik Creighton, and Darrel Kingfield

17:45–18:00: ECSS2025-284
How well can European radars detect supercells and tornadoes?
Bram van 't Veen, Pieter Groenemeijer, and Tomas Pucik

18:00–18:15: ECSS2025-157
Framework for weather radar data processing.
Piotr Szuster and Joanna Kołodziej

Thursday Posters

Session 1
Convective storm and tornado dynamics

Poster area | Attendance time: 14:30–16:00
P1: ECSS2025-36
Severe convective outbreaks and heatwaves – a continental-scale compound event

Monika Feldmann, Daniela I.V. Domeisen, and Olivia Martius

P2: ECSS2025-121

Inside the Asian Summer Monsoon: in situ observations from within deep convective clouds

Wiebke Frey, Bart van den Hurk, Casper Bevers, Ryan Syaifuddin, Francesco Cairo, Valentin Mitev, Renaud Matthey, Sergey Khaykin, Silvia Viciani, Fabrizio Ravegnani, Alexey Ulanovski, and Martina Krämer

Session 5
Radar and non-satellite remote sensing studies of storms

Poster area | Attendance time: 14:30–16:00

P3: ECSS2025-37

Classifying convective surface wind gusts from polarimetric radar data

Florian Ackermann, **Monika Feldmann**, Daniele Nerini, Martin Aregger, Josué Gehring, Simone Balmelli, and Olivia Martius

Session 6
Hail studies

Poster area | Attendance time: 14:30–16:00

P4: ECSS2025-30

Exploring uncertainty in future hail trends: A comparison of proxy-based and diagnostic approaches using convection-permitting climate simulations over Europe

Iris Thurnherr, Lena Wilhelm, Tim Raupach, Francesco Battaglioli, Monika Feldmann, Killian Brennan, Ruoyi Cui, Heini Wernli, and Olivia Romppainen-Martius

P5: ECSS2025-43

Will today's proxies work tomorrow? Revisiting the stationarity assumption for severe convective environments

Iris Thurnherr, Monika Feldmann, Killian Brennan, Sandro Beer, Lena Wilhelm, Ruoyi Cui, Michael Sprenger, Heini Wernli, and Olivia Romppainen-Martius

P6: ECSS2025-47

Radiosonde observations of storm environments in Northern Greece

Stavroula Stolaki

P7: ECSS2025-53

Supercells and large hail in Spain

Carlos Calvo-Sancho, Yago Martín, Juan Jesús González-Alemán, Cesar Azorin-Molina, and María Luisa Martín

P8: ECSS2025-62

Climatology of severe hail precursors in Czechia

Kateřina Skripniková and Petr Zacharov

P9: ECSS2025-69

Establishment and Analysis of the Collection System of the Ground Hail Observation data for the verification of the Hail Detection Tech. using the High-resolution Weather Radar

Jin-woo Park, Bo-Young Ye, and Mi-Kyung Suk

P10: ECSS2025-79

The efficiency of a new remotely sensed index for hail detection using Meteosat Third Generation multispectral imagery

Stavros Kolios

P11: ECSS2025-86

Automated Hailpad Dent Detection and Segmentation Using Machine Learning

Kevin Manka, Daniel Butt, Connell Miller, and **Julian Brimelow**

P12: ECSS2025-87

The $3.25 billion Calgary, Alberta Hailstorm: a Meteorological Case Study and In-Situ Observations from the Northern Hail Project

Jack Hamilton, Julian Brimelow, and Simon Eng

P13: ECSS2025-120

Clustering Large-Scale Atmospheric Patterns Associated with Hailstorms

Iciar Guerrero-Calzas, Foteini Baladima, Alberto Sanchez-Marroquin, Ana Cortés, Mauricio Hanzich, and Josep Ramón Miró

P14: ECSS2025-141

Dynamic and statistical analysis of giant hail environments in northeast Italy

Francesco De Martin, Agostino Manzato, **Nicola Carlon**, Martin Setvák, and Mario Marcello Miglietta

P15: ECSS2025-168

Risk assessment for crop hail damage in Switzerland under current and potential future scenarios

Johanna Philipps, Hans Feyen, and Katharina Schröer

P16: ECSS2025-180

Numerical simulations of two giant hail events in northeastern Italy with WRF-HAILCAST

Francesco Sioni, Andrea Perbellini, Antonio Palmeri, Agostino Manzato, and Lorenzo Giovannini

P17: ECSS2025-189

Evaluation of the hailstone size of certain hail events over Germany in 2024, comparison with ICON-RUC forecasts and estimation of the maximum hail size.

Sophie Löbel, Ulrich Blahak, Markus Schultze, and Alberto de Lozar

P18: ECSS2025-207

Hailstone Inertial Adjustment to Storm Wind Fields and Implications for Growth

Matthew Kumjian, Lydia Spychalla, and Kelly Lombardo

Thursday Posters continued

P19: ECSS2025-210
Hail risk to photovoltaic systems in Switzerland
Lena Wilhelm, Valentin Gebhart, Olivia Martius, and Aessia Boukhatmi
P20: ECSS2025-223
Estimation of hail frequency in Germany and its trends under climate change
Mathis Tonn, Susanna Mohr, Jannik Wilhelm, Christian Sperka, Markus Augenstein, and Michael Kunz
P21: ECSS2025-229
Exploring Tree-Based Machine Learning Methods for Estimation of Hail Sizes
Amruta Vurakaranam, Christian Berndt, Katharina Lengfeld, Lukas Josipovic, Markus Schultze, and Katharina Schröer
P22: ECSS2025-236
Hail Trend Estimation in Germany utilizing Radar-based Hail Tracks, Convective Parameters, and Machine Learning Techniques
Christian Sperka, Markus Augenstein, Mathis Tonn, and Michael Kunz
P23: ECSS2025-237
A 20-year spatio-temporal analysis of 3D radar-based hail tracks in Germany: Trends and regional differences
Susanna Mohr, Mathis Tonn, Markus Augenstein, and Michael Kunz
P24: ECSS2025-240
Climatology and formation environments of large hail in Russia
Alexey Bugrimov, **Alexander Chernokulsky**, Sergey Davletshin, Konstantin Pustovalov, Andrey Shikhov, and Alexander Sprygin
P25: ECSS2025-253
Towards Improved Hail Detection and Size Estimation Using Convolutional Neural Networks
Clotilde Augros, Vincent Forcadell, Louis Tariot, Pierre Lepetit, Olivier Caumont, Thibaut Montmerle, and Kevin Dedieu
P26: ECSS2025-255
Near-real-time probabilistic Hail Detection based on polarimetric radar quantities and environmental conditions using machine learning methods
Gokul Kavil Kambrath and Michael Kunz
P27: ECSS2025-262
Anything from 10 to 686 km, or what influences the hail swath length in supercells?
Tomas Pucik, Mateusz Taszarek, Pieter Groenemeijer, and Francesco Battaglioli
P28: ECSS2025-312
Ground Observations from the In Situ Collaborative Experiment for the Collection of Hail in the Plains
John Allen, Ian Giammanco, Rebecca Adams-Selin, Brenna Meisenzahl, Jake Sorber, Julian Brimelow, Aaron Kennedy, Hannah Vagasky, Daniel Dawson, Sabrina Servey, Kyle Brooks, Kaleb Clover, Madeleine Richer, Mark Gartner, Talia Kurtz, and Teagen Schultz

Session 7

Floods, flash floods, and convective storms within extratropical, tropical and hybrid cyclones

Poster area | Attendance time: 14:30–16:00

P29: ECSS2025-78
Identification of distinct types of surface-water-flood-producing convection in the UK
Matthew Clark and Andrew McNaughton
P30: ECSS2025-89
Analysis of Extratropical Cyclone Circulation Centroids using Ultra-High-Resolution 3D Radar Wind Fields in the Seoul Metropolitan Area
So-Yeon Park, Bo-Young Ye, and Mi-Kyung Suk
P31: ECSS2025-119
Using satellite data to examine the oceanographic processes over warm and cold core eddies in Bay of Bengal
Humberto Barbosa
P32: ECSS2025-175
A comparative study of observational and reanalysis data for extreme precipitation events in the Spanish Mediterranean
Jesús Gutiérrez-Fernández, Carlos Correa, Irene Rodriguez-Muñoz, María Ortega, Alfonso Hernanz, Juan Jesús Gonzalez-Alemán, and Esteban Rodríguez-Guisado
P33: ECSS2025-178
Investigating the development conditions for cyclones with tropical features in the Mediterranean Basin.
Jesús Gutiérrez-Fernández, Carmen Alvarez-Castro, Juan Jesús González-Alemán, and Esteban Rodriguez-Guisado
P34: ECSS2025-193
Dynamic tropopause folding and cyclogenesis in the western Black Sea basin
Meda Daniela Andrei
P35: ECSS2025-201
The role of Mediterranean cyclone structure in modulating convective activity
Olivia Martius, Alice Portal, Andrea Angelidou, Raphael Rousseau-Rizzi, Shira Raveh-Rubin, Jennifer Catto, **Francesco Battaglioli**, Jonatan Givon, Emmanouil Flaounas, and Mateusz Taszarek
P36: ECSS2025-202
Convective activity behaviour on tropical cyclones impacting Europe in a warmer world

Juan Jesús González-Alemán, Pedro Gómez-Plasencia, Carlos Calvo-Sancho, Íñigo Gómara, and Maria Luisa Martín-Pérez

P37: ECSS2025-252

Influence of embedded convection on precipitation amounts.

Martin Adamovský, **Miroslav Šinger**, Marie Glofáková, and Filip Smola

P38: ECSS2025-259

Characterization of thunderstorms to detect, track and extrapolate supercells.

Moureaux Mathilde, Bouilloud Ludovic, Lepy Olivier, and Le Bastard Tony

P39: ECSS2025-318

(withdrawn)

Session 8

Nowcasting and forecasting of severe weather and forecaster training

Poster area | Attendance time: 14:30–16:00

P41: ECSS2025-14

GNSS Storm Nowcasting Demonstrator for Bulgaria

Guergana Guerova, Jan Douša, Tsvetelina Dimitrova, Anastasiya Stoycheva, Pavel Václavovic, and Nikolay Penov

P42: ECSS2025-39

SWING: A Post-Processing Algorithm for Improved Nowcasting and Environmental Safeguard

Martina Lagasio, Elena Oberto, Lorenzo Campo, Francesco Silvestro, Maria Laura Poletti, Massimo Milelli, and Antonio Parodi

P43: ECSS2025-41

Impacts of Lapse Rate Adjustments on Convective Parameters in the PLUVIA Mesoanalysis System

Billie Mackenzie, Katie Norman, Matt Clark, Andrew McNaughton, Anna Booton, and Ed Pavelin

P44: ECSS2025-56

A new low-cost Unmanned Aerial Vehicle (Meteo-Dron) for monitoring upper air weather data and severe weather phenomena

Cesar Azorin-Molina, Amir Pirooz, Nicholas Kay, **Jose Gomez-Reyes**, and Carlos Calvo-Sancho

P45: ECSS2025-73

Synoptic and mesoscale conditions of deep moist convection during the cold season in Croatia

Domagoj Dolicki, **Petra Mikus Jurkovic**, and Maja Telisman Prtenjak

P46: ECSS2025-81

Integrating KONRAD3D-Sinfony Ensemble Information into the Nowcasting Guidance System NowCastMIX

Michael Debertshäuser, Paul James, Gergely Bölöni, and Manuel Werner

P47: ECSS2025-91

Detection and nowcast of severe thunderstorms over Slovenia

Matic Savli, Matevž Osolnik, Janko Merše, Barbara Gabrovšek, and Eva Bezek

P48: ECSS2025-92

Improvement of lightning nowcasting model using convective cell-based radar motion vectors

MyoungJae Son, Hae-Lim Kim, and Mi-Kyung Suk

P49: ECSS2025-103

Using Surface Moisture Flux Convergence for Convective Nowcasting

Pere Cladera, Sergio Gallego, and Francesc Figuerola

P50: ECSS2025-112

A Multimodel Approach for Forecasting of convective weather in Support of BULATSA Air Traffic management

Ilian Manfov and Rosen Penchev

P51: ECSS2025-116

Increasing NWP thunderstorm predictability using ensemble data and machine learning

Kianusch Vahid Yousefnia, Christoph Metzl, and Tobias Bölle

P52: ECSS2025-117

Probabilistic Localized Radar-Based Nowcasting of Flood-Inducing Rainfall Events

Daniel Eduardo Villarreal-Jaime, Patrick Willems, Lesley De Cruz, and Ricardo Reinoso-Rondinel

P53: ECSS2025-122

The Devastating Convective Wind Event of 24 July 2023 in La Chaux-de-Fonds, Switzerland : Causes, Probable Mesoscale and Storm-Scale Mechanisms at Play and Nowcasting Implications

Lionel Peyraud, Aude Untersee, Stephan Vogt, Marco Stoll, Barbara Galliker, and Isabelle Bey

P54: ECSS2025-124

Deep Learning vs. Traditional Satellite-Based Thunderstorm Nowcasting: Outline of a Model Benchmark Study

Philipp Straub, Christoph Metzl, Richard Müller, Virginia Poli, Miria Celano, and Tobias Bölle

P55: ECSS2025-126

Nowcasting of Thunderstorm Hazards with Deep Learning: Performance Report of the First Convective Season in Operations

Ulrich Hamann, Luca Nisi, Irina Mahlstein, Matteo Buzzi, Michele Cattaneo, Néstor Tarin Burriel, Przemyslaw Juda, Nathalie Rombeek, George Pacey, Ophélia Miralles, and Jussi Leinonen

Thursday Posters continued

P56: ECSS2025-133
Integrated use of MTG tools and radar for nowcasting storms: a case study from Istanbul Airport
Melek Erdal and Gizem Hodoglu
P57: ECSS2025-142
Development and evaluation of a new convective index
Margarida Belo-Pereira
P58: ECSS2025-146
Thunderstorm nowcasting at IMGW
Przemysław Baran, Anna Jurczyk, Agnieszka Kurcz, Krystian Specht, and Jan Szturc
P59: ECSS2025-158
Towards a machine-learning enhanced nowcasting tool for storm severity analysis and prediction
Gergely Bölöni, Paul M. James, Michael Debertshäuser, and Susanne Theis
P60: ECSS2025-163
SALAMA 1D: Identification of thunderstorm occurrence from convection-permitting forecasts of vertical profiles using deep learning
Kianusch Vahid Yousefnia, Christoph Metzl, and Tobias Bölle
P62: ECSS2025-196
The Role of CIN Depth in Regulating Deep Convection Initiation
Adam Houston, Stephen Shield, and Kylee Matousek
P63: ECSS2025-211
Nowcasting convective hazards in complex topography using machine learning
George Pacey, Ulrich Hamann, Ophélia Miralles, and Olivia Romppainen-Martius
P64: ECSS2025-226
Automated Severe Thunderstorm Oulooks from thundeR Package (ASTORP)
Mateusz Taszarek and Patryk Matczak
P65: ECSS2025-246
Localized heavy rainfall prediction using selective cloud-radar data assimilation based on automated cumulonimbus tracking
Ryohei Kato, Shingo Shimizu, Tadayasu Ohigashi, Takeshi Maesaka, Ken-ichi Shimose, and Koyuru Iwanami
P66: ECSS2025-248
Development of cell tracking method using multiple thresholds for obtaining accurate storm motion
Ken-ichi Shimose, Shingo Shimizu, and Ryohei Kato
P67: ECSS2025-257
Meteosat-12 at DWD: first experiences with novel FCI and LI products
Gerrit Holl, Alexander Halbig, Jochen Richters, and Christian Herold
P68: ECSS2025-264
Challenges of developing AR-CHaMo for severe convective wind gust forecasting
Tomas Pucik, Francesco Battaglioli, Pieter Groenemeijer, Andreea Bărăscu, and Mateusz Taszarek
P69: ECSS2025-267
Tornadic Event in Portugal in March 2024: Synoptic environment and Forecasting
Pedro M. Sousa and Paulo Pinto
P70: ECSS2025-278
(withdrawn)
Cameron Nixon, John Allen, Matthew Wilson, Matthew Bunkers, and Mateusz Taszarek
P71: ECSS2025-281
Precipitation classification functions for Northwest Bulgaria: GNSS IWV and Instability Indices
Martin Slavchev, Guergana Guerova, and Tsvetelina Dimitrova
P72: ECSS2025-308
Advancements in Automated Convective Cell Detection and Nowcasting at Deutscher Wetterdienst (DWD)
Manuel Werner, Lukas Josipovic, Robert Feger, Christian Berndt, and Cornelia Strube
P73: ECSS2025-315
Nowcasting tropical rainfall events using Commercial Microwave Links
Bas Walraven, Ruben Imhoff, Aart Overeem, Miriam Coenders, Rolf Hut, Luuk van der Valk, and Remko Uijlenhoet

Session 10

Impact of storms on society, impact mitigation, and early warning systems

Poster area | Attendance time: 14:30–16:00

P74: ECSS2025-49
PyRainWarn: pySTEPS-BE ensemble nowcasts for extreme rainfall warnings in Belgium
Felix Erdmann, Lesley De Cruz, Maarten Reyniers, Ricardo Reinoso-Rondinel, Dieter R. Poelman, and Michiel Van Ginderachter
P75: ECSS2025-74
The public warning alerts in Croatia using the CB/SMS communication channel – special focus on severe thunderstorm warning
Petra Mikus Jurkovic, Katarina Katusic, and Matea Stibuhar
P76: ECSS2025-115
Severe Weather: Challenges and Adaptive Solutions for Solar Power Resilience
Elena Collino, Giosuè Maugeri, Riccardo Bonanno, and Salvatore Guastella
P77: ECSS2025-150
Development and Field Application of a Real-

time Flood Mapping Tool Using Social Media Imagery During Severe Storm Events
Kohin Hirano, Shakti P.c., and Satoshi Iizuka
P78: ECSS2025-195
The Bayesian sinking in Porticello: a predictable convective windstorm?
Francesco De Martin, Mario Marcello Miglietta, Thomas Gastaldo, Michele Martinazzo, Federico Pavan, Matteo Siena, and Silvana Di Sabatino
P79: ECSS2025-241
Comparative Analysis on Lightning Strike Fatalities in Germany: 1900–1924 and 2000–2024
Thilo Kühne, Bogdan Antonescu, Pieter Groenemeijer, Alois Holzer, Tomáš Púčik, and Gabriel Strommer
P80: ECSS2025-295
Squall-line caused meteotsunamis over Finnish sea areas
Jenni Rauhala, Terhi K. Laurila, Antti Mäkelä, Jani Särkkä, and Ulpu Leijala
P81: ECSS2025-303
Enhancing the collaboration and communication between weather and flood forecasting in Germany following a Co-Design approach
Julia Keller, Jan Bondy, Vanessa Fundel, Ina Blumenstein-Weingartz, Olga Kiseleva, Maja Rüth, Stefan Wolff, Thomas Deutschländer, Stefanie Hollborn, Kathrin Feige, Felix Fundel, Andreas Lambert, Armin Rauthe-Schöch, Ute Badde, Manfred Bremicker, Norbert Demuth, Natalie Stahl-van Rooijen, and Joachim Stoermer
P82: ECSS2025-304
Use of ESWD and OPERA radar data for the rapid estimation of insured losses following hail storms.
Aidan Brocklehurst, Ivan Mrekaj, and Lukas Braun
P83: ECSS2025-325
Derecho-like event over France: Observation and Evaluation of the Forecast using an Automatic Verification Tool
Thibault Vallet and Alexandre Flouttard

Session 11

Storm climatologies, risk assessments, and climate change

Poster area | Attendance time: 14:30–16:00

P84: ECSS2025-171
Identifying Hotspots of Convective Events in the European Alps by Analyzing Synoptic Circulation Types and Report Data of the last 33 Years
Helge Jentsch and Katharina Schröer

Session 12

Collection of storm data, historical events, and damage assessments

Poster area | Attendance time: 14:30–16:00

P85: ECSS2025-7
Reconstruction of Meteorological Environment Leading to the Deadliest Polish Severe Weather Outbreak of July 4th 1928, Using Archival Data and 20th Century Reanalysis
Filip Skop
P86: ECSS2025-18
Uncovering Europe's Largest Hailstones: A cross-national hail size comparison using ESWD reports
Hendrik Feige
P87: ECSS2025-21
Human Weather- and Impact-Reports in Austria – A Crucial Support to Mitigate Extreme Weather and Climate Impacts?
Thomas Krennert
P88: ECSS2025-32
Reconstructing the 2022 France Hail Events: A Footprint at the Intersection of Science and Insurance
Harsh Mistry, Caroline McMullan, and Shane Latchman
P89: ECSS2025-51
Estimation of the damage linked to clusters of storms; a case study over the French insurer Generali
Laura Hasbini, Pascal Yiou, and Perringaux Arthur
P90: ECSS2025-55
The DOWNBURST MXO: a real-time downburst monitoring service in eastern Spain
Cesar Azorin-Molina, Francisco Granell, Jose Gomez-Reyes, **Carlos Calvo-Sancho**, Andrés Barrio-Martín, Nuria P. Plaza-Martín, Andreas F. Prein, Sergio M. Vicente-Serrano, Luis Gimeno, Raquel Nieto, Deliang Chen, Tim R. McVicar, Zhenzhong Zeng, Amir Pirooz, Marcos Martínez-Roig, Juan Jesús González-Alemán, and María Luisa Martín
P91: ECSS2025-63
Severe wind damage in the city of Córdoba, Spain, on March 9, 2024 linked to a possible misocyclone embedded within a cold front
Delia Gutiérrez Rubio and Juan de Dios Soriano Romero
P92: ECSS2025-71
A tornado in Utrecht?
Kathrin Wapler and Marcus Beyer

Thursday Posters continued

P93: ECSS2025-83
Simultaneous assessment of debris trajectories to determine characteristics of the July 1, 2023 Didsbury, Alberta, Canada EF4 tornado
Connell Miller, Collin Town, Daniel Butt, David Sills, and Gregory Kopp
P95: ECSS2025-107
Assessing tornadoes and downbursts in Catalonia: field surveys and operational insights
Oriol Rodriguez, Santi Segalà, Nicolau Pineda, Ferran Fabró, and Roger Vendrell
P96: ECSS2025-128
Contribution of personal weather stations for observing deep-convection features near the surface
Marc Mandement and Alan Demortier
P97: ECSS2025-129
Ingredient-Based Analysis and Simulation of Violent European F4/F5 Tornadoes between 1965 and 1971
Jerome Schyns, Lisa Schielicke, and Christoph Gatzen
P98: ECSS2025-165
(withdrawn)
P99: ECSS2025-166
Flash flood event in South Sardinia on 26-27 October 2024: preliminary case study and historic comparison
Pier Luigi Trudu, Lorenzo Smorlesi, and Alessandro Delitala
P100: ECSS2025-169
(withdrawn)
P101: ECSS2025-243
Proposed Conceptual Framework for an International Hailstorm Intensity Scale
Simon Eng, Julian Brimelow, and Gregory Kopp
P102: ECSS2025-292
Major tornadoes in the Netherlands: Reconstruction and re-rating using the International Fujita scale
Pieter Groenemeijer, Rob Groenland, Bogdan Antonescu, Michou Baart de la Faille, Rutger Boonstra, Alois M. Holzer, Thilo Kühne, Igor Laskowski, Tomas Pucik, Gerard van der Schrier, Gabriel Strommer, Tanja Renko, and Bram van 't Veen
P103: ECSS2025-316
Interpreting the damage from the 2022 Canadian derecho
Christoph Gatzen, David Sills, Simon Eng, Lesley Elliot, Aaron Jaffe, Connell Miller, Mark Gartner, and Gregory Kopp

Session 13

P104: ECSS2025-326
Towards improved assessment of windstorm damage risk through Impact Model calibration
Aditya N Mishra, Gabriele Messori, Lukas Riedel, Athul R Satheesh, Alexandre M Ramos, and Joaquim Pinto
P105: ECSS2025-327
Convection monitoring: recommended FCI products
Roxane Desire, Rudy Coste, and Jean-Baptiste Hernandez
P106: ECSS2025-328
Météo-France Sandwich product:a version tailored to the needs of all French users
Roxane Desire, Jean-Baptiste Hernandez, Adrien Mauss, and Laurent Perier
P107: ECSS2025-329
Météo-France Total Water Vapour composite: precipitable water imagery
Roxane Desire, Adrien Mauss, and Jean-Baptiste Hernandez

Friday, 21 November 2025

Session 10

Impact of storms on society, impact mitigation, and early warning systems

Room Hertz Zaal | 09:00–10:45

09:00–09:30: ECSS2025-46
Advancing Forensic Engineering Analyses of Tornadoes with Survivor's First-Hand Accounts
Daphne LaDue, David Roueche, Frank Lombardo, and Lara Mayeux

09:30–09:45: ECSS2025-242
Forensic Damage Assessment of a $3 Billion Urban Hailstorm – August 5, 2024 Calgary, Alberta, Canada
Simon Eng, Julian Brimelow, Jack Hamilton, Areez Habib, and Dylan Painchaud-Niemi

09:45–10:00: ECSS2025-11
Towards hurricane impact forecasting for the Caribbean Netherlands
Nadia Bloemendaal, Elco Koks, and Rob Sluijter

10:00–10:15: ECSS2025-144
From Observation to Action: Enhancing Forecasting Capabilities over Lake Victoria Through Radar Analysis and Regional Collaboration
Anna del Moral Méndez, Tammy M. Weckwerth, Christopher D. Wirz, Rita D. Roberts, and James W. Wilson

10:15–10:30: ECSS2025-99
Enhancement of the South American Meteorological Hazards and Impacts Database (SAMHI) through Atmospheric Electrical Activity as a Proxy for Severe Weather Event Detection
Constanza Inés Villagran Asiares, M. Gabriela Nicora, Paola Salio, Hernan Bechis, Vito Galligani, Eldo E. Avila, and Amalia Meza

10:30–10:45: ECSS2025-13
Towards improved hailstorm and loss prediction using random forest in the Netherlands
Maria del Socorro Fonseca-Cerda, Hans de Moel, Jeroen Aerts, Wouter Botzen, and Toon Haer

Session 11

Storm climatologies, risk assessments, and climate change

Room Hertz Zaal | 11:15–13:15

11:15–11:30: ECSS2025-224
What do large hail, tornado and severe thunderstorm wind environments have in common across continents?
Mateusz Taszarek, Tomas Pucik, Cameron Nixon, John T. Allen, Pieter Groenemeijer, John M. Peters, Francesco Battaglioli, Bruno Ribeiro, Hernan Bechis, Andrew Dowdy, and Harold Brooks

11:30–11:45: ECSS2025-319
Machine Learning-based Global Lightning Prediction from Convective Parameters
Dominique Brunet, Mateusz Taszarek, Jerry Su, and John Hanesiak

11:45–12:00: ECSS2025-156
Quasi-linear convective systems and derechos across Europe: ERA5 convective environments and synoptic-scale patterns
Natalia Pilguj, Artur Surowiecki, Mateusz Taszarek, and Krzysztof Piasecki

12:00–12:15: ECSS2025-68
Understanding the Interannual Variability in Severe Hail Storms in Australia
Boris Blanc, Timothy Raupach, Lisa Alexander, and Shirley Qin

12:15–12:30: ECSS2025-209
On Hailstorm Variability in Switzerland: Key Drivers for Seasonal Predictability
Lena Wilhelm, Katharina Schrooer, Cornelia Schwierz, and Olivia Martius

12:30–12:45: ECSS2025-148
Assessing Flood Risk During Extreme Rainfall Events: Case Studies from Recent Events in Japan
Shakti P.c., Kohin Hirano, and Satoshi Iizuka

12:45–13:00: ECSS2025-54
Storm Dynamics-based Attribution to the Valencia's deadly floods
Carlos Calvo-Sancho, Javier Díaz-Fernández, Juan Jesús González-Alemán, Amar Halifa-Marín, Mario Marcello Miglietta, Cesar Azorin-Molina, Andreas F. Prein, Ana Montoro-Mendoza, Pedro Bolgiani, Ana Morata, and María Luisa Martín

Closing and Conference Awards Session

Room Hertz Zaal | 13:15–13:30

EUMETSAT-ESSL MTG Forecaster Workshop

Club nine | 14:00–17:00

For registered participants only.

Lunch snacks prepared for the participants in room Club nine.

Important note regarding luggage on Friday, 21 November:

On the last day of the conference, it is strictly forbidden to bring luggage (including hand luggage trolleys, large bags, large rucksacks, suitcases and similar items) into the conference room.
Please store your luggage at the hotel or at another designated location outside the TivoliVredenburg conference venue. Thank you for your cooperation.

Room for personal notes:

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