Relatório de Missão

Local: Alemanha e Croácia.

Visita a Selex e participação na Conferência Europeia de Tempestades Severas.

Período: de 13 a 22 de setembro 2017

- **Objetivo da participação:**

Tem objetivo de conhecer as novas técnicas de previsão imediata de tempestades severas e divulgar as pesquisas que estão sendo realizadas no Projeto SOS-CHUVA. Além disso, discutir com o fabricante do radar de dupla polarização que está sendo utilizado no Projeto as questões de manutenção e operação no verão 2017-2018.

- **Benefício da viagem:**

O benefício da viagem pode ser apresentado em diversos aspectos, por um lado divulgar as pesquisas de previsão imediata, que estão no estado da arte desta área da ciência e ao mesmo tempo conhecer as novas técnicas e interagir com os especialistas visando o estabelecimento de uma cooperação nesta área. A previsão imediata é uma nova ciência e a interação e desenvolvimento de uma rede de pesquisa é fundamental. Por outro lado, a visita a Selex permitirá a operação de nosso radar da melhor forma possível para que não haja falhas no verão 2017-2018.

- **Descrição da Missão**

A reunião na Selex teve a participação de técnicos especialistas no hardware e no software do radar. Uma série de questões e exemplos de problemas foram apresentados e discutidos. A discussão foi muito importante para a operação do radar nessa estação chuvosa que se inicia na primavera. Por exemplo, questões relacionadas ao radome, as medidas de correlação que apresentam ruído e ao alisamento da variável KDP. Um conjunto de ações foi definido para aprimorar a estratégia de operação, bem como testes para definir os problemas levantados. (anexo uma lista dos tópicos discutidos com ações)

Além dessas discussões foi discutida a troca de alguns equipamentos que apresentam problemas e uma revisão antes da operação neste período. Os documentos de garantia e revisões que foram contratados serão enviados em breve.

Em suma, além de conhecer a fábrica, visitar as diferentes instalações e o desenvolvimento de softwares, foi possível estabelecer procedimentos para a operação mais precisa do radar neste último ano de operação em Campinas.

A participação na Conferência Europeia de Tempestades severas foi também muito interessante do ponto de vista científico, do estabelecimento de contados e da oportunidade de mostrar o trabalho que está sendo realizado no Brasil. A participação se deu através a apresentação de dois trabalhos, na forma de pôster, um sobre o projeto SOS CHUVA como um todo e outro sobre a modelagem numérica em alta resolução. Além desses trabalhos participei da reunião do Convection Working Group, na qual sou membro e das sessões. A reunião contou com um total de em torno de 250 pesquisadores principalmente da Europa, mas também do Estados Unidos e Ásia, eu fui o único participante da América do Sul. As sessões foram muito importantes para o conhecimento do estado da arte na componente de modelagem e assimilação de dados, radar, descargas elétricas e satélites, além da apresentação dos diferentes sistemas de previsão imediata que estão sendo implantadas na Europa e Estados Unidos. Anexo os dois posters e o programa do evento.

Visit SELEX

Some Topics for our Discussion.

General Questions

1) The document of the warranty and Maintenance with the coverage period.
2) Next maintenance
3) Summer operation (October to March)

New radar

1) Possible solutions for Campinas radar replacement.

Technical questions

1) About the washer problem with the radome:
- You will find attached a pdf
What they can do to remove this problem? Change washer Radome ?
- Is there an automatic way to remove the crappy outputs (raw and att. corr.) with Rainbow ?
2) Can we set directly the SNR (for instance at 10dB) for any radar outputs ? How minimal SNR is computed ?
3) From their experiences, what KDP classical values they get for a X-band in Tropics ? Up to 5 deg/km ? Up to 10 deg/km ? 15 deg/km ?
4) I have the feeling that the RhoHV seems sometimes very noisy and pretty low. Is there any possibility to deal with? And with Rainbow?
5) The trailer license plate is not of the required type for a federal government vehicle. This was informed as soon as Cesar sent us the plate. We need that replaced otherwise we will have trouble sending the radar to São Borja.
6) One of the transmitter box fan is not working properly and needs to be replaced
7) The GDRX-SP computer is not rebooting properly about 50% of the time. Maybe it is a hardware problem or maybe is just a hard drive that needs inspection.
8) - Since we replaced the TSI the generator output is showing a strange oscillation and sometimes the radar would not start on the generator power. The last technician (André Richter) noticed this and told me he would check if some adjustment should be done on the TSI panel.

Topics of Discussion

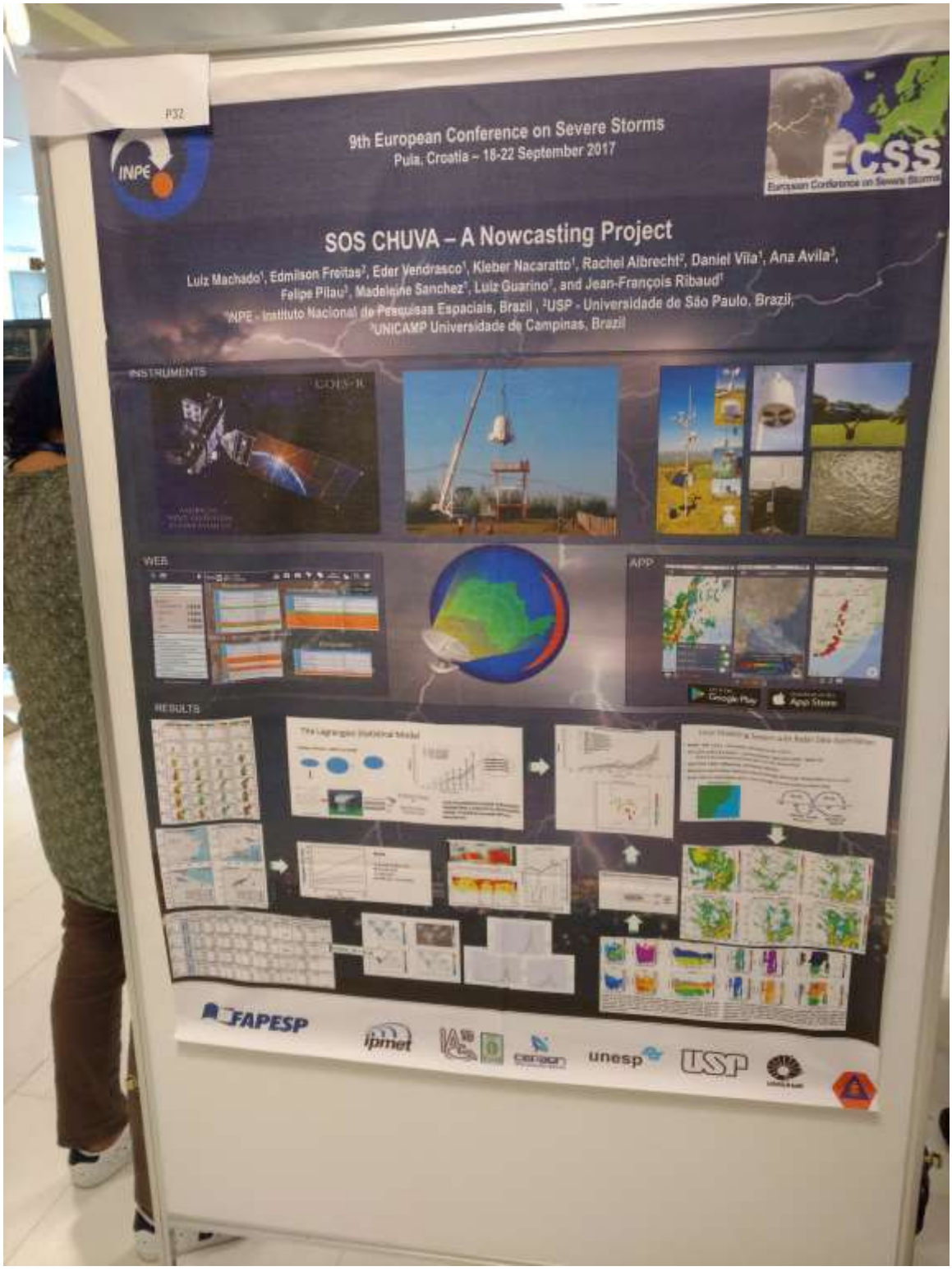
1) Radome – About the radome we need to perform some test to really check the radome and send the volscan data to Selex. A) run before and after wet radome and check the blocking and how it changes from dry to wet and with the elevation. Selex believe it is not radome , but some fix clutter. I explained that it changes with wet and dry and with elevation. They asked to send the volscan as discussed above. Also, Selex asked the inspection the inside the radome to see if there is some water or problem and take picture. Another test is to follow this procedure: when there is a rain cloud on the region, wet the radome (wash the radome) and check the signal (also send it to selex).

2) SNR – There is no perfect value to use. The default is 2 db, but Selex suggests use 10 db. As high as the SNR less you see from small reflectivity. You should look the different result and chose what you want. The KDP value is correct, Selex argued that the R-KDP equation, $R=19.63*KDP^{0.823}$ gives RR values for 5 and 10 of around 70 mm.hr-1, so we expect to have values in this range. Also, to have better KDP values as well all other parameters you need to do what I will discuss below.

3) Correlation – Selex didn't know very well why we have such behavior. Selex asked me if the average value was ok and the noisy was the problem, I said yes, but we need to re-check and send statistics about the average value, variability and the small correlation values inside de clouds. The must plausive explanation was related to our strategy and we should try another strategy to check if the data is better. For instance, Selex said the double PRF gives worst results, Selex would expect some noisy from this because needs to combine two PRF. In addition, Selex suggests run the antenna slowly, they suggest to have high PRF, and average antenna speed of 18 and large patch.

4) Radar fix – Selex think the GDRX has some problems, will not only be the HD problem, he considered there are more problem and maybe they need to change the GDRX. The Box fan will also be changed. The TSI they will check and send a feedback.

5) Maintenance and Warranty – Selex will send a document clarifying the period e number.


P32
9th European Conference on Severe Storms
Pula, Croatia – 18-22 September 2017
ECSS
SOS CHUVA – A Nowcasting Project
Luiz Machado[1], Edmilson Freitas[2], Eder Vendrasco[1], Kleber Nacaratto[1], Rachel Albrecht[2], Daniel Vila[1], Ana Avila[3], Felipe Pilau[3], Madeleine Sanchez[1], Luiz Guarino[1], and Jean-François Ribaud[1]
[1]INPE - Instituto Nacional de Pesquisas Espaciais, Brazil , [2]USP - Universidade de São Paulo, Brazil, [3]UNICAMP Universidade de Campinas, Brazil
INSTRUMENTS
WEB
APP
RESULTS
FAPESP
ipmet
unesp
USP

Use of mesoscale models in operational severe weather forecast over large cities in Brazil – Results from the SOS-CHUVA Project

Edmilson D. Freitas[1], Luiz Machado[2], Rachel Albrecht[1], Enzo Todesco[1], Jean Pares[1], Andréia Bandel[1], Isabela Siqueira[1], Jorge Martins[3], Leila Martins[3], Ricardo Hallak[1], Éder Vendrasco[2], Madeleine Sanchez[2], Lianet Hernandez[2]

[1] Universidade de São Paulo, Instituto de Astronomia, Geofísica e Ciências Atmosféricas, Departamento de Ciências Atmosféricas, São Paulo, Brazil (edmilson@model.iag.usp.br), [2] Instituto Nacional de Pesquisas Espaciais, [3] Universidade Tecnológica Federal do Paraná

1.INTRODUCTION

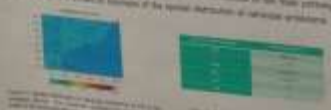
The SOS-CHUVA Project has the aim of improve nowcasting during severe weather season over the south-southeast part of Brazil. This region evolve some of the main urban area in the country, including the metropolitan areas of São Paulo, Rio de Janeiro, Curitiba, and Belo Horizonte. Figure 1 shows the domain of the monitored area during SOS-CHUVA Project.

Figure 1: Domain of the monitored area during the SOS-CHUVA Project.

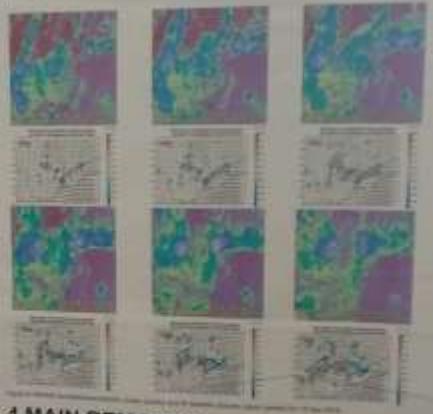
Severe weather in the region is responsible for many human and economical losses. Unfortunately, the development of forecasting systems in Brazil still in an incipient process. Hopefully, the use of combined area observation networks and numerical modeling approach, which is the main goal of the SOS-CHUVA Project. This work presents how the numerical modeling component of the project will be conducted.

2.METHODOLOGY

Operational nowcasts using two models in three different setups: 1) WRAMS 1.2; 2) WRF 2.1/ARPS Data As the integration of radiation, energy for natural or anthropogenic sources, on the development of severe weather is of great interest in the region, WRF/Chem was selected both advection and chemical emissions of the trace pollutants. Figure 2 shows an example of the typical distribution of carbonate emissions.

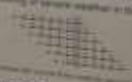


3.RESULTS



4.MAIN REMARKS

Until now, the simulations for the operational cycle were based on the Global Forecast System (GFS) provided data only in a 24 hours integration period. In this procedure, model's spinup prevents the use of the first hours of simulation, with is not suitable for nowcasting purposes. Next steps in the project will be dedicated to reduce model spinup, based in a statistical procedure. The methodology will be based in a streamline of WRAMS simulations started every hour and succeeding are members to provide initial condition to the succeeding model. Figure 6 give us an idea of such procedure. We can see in this figure that every six hour forecast outputs will provide one member for the ensemble, using each of them with a different weight (Bayesian method). We expect to improve considerably the results for the first simulation hours and to use this ensemble, together with other measurement fields, such as radars, satellite images, surface stations, for a better nowcasting of severe weather in the region.



5.REFERENCES

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Machado, L. A. T., M. T. Kayano, M. A. F. Silva Dias, P. L. Silva Dias, C. F. Angelis, E. P. Morais, J. W. Bottino, R. Guedes, R. C. Biazon, A. M. Durães, H. R. Oliveira, G. Held, E. D. Freitas, C. E. Teixeira, A. J. Tomaz, A. A. Lima, J. C. Xavier, T. Tiveron, P. H. Hilário, 2004: The Wet Season Onset over South America during the Experiment. Journal of Hydrometeorology, 5, 1118–1131.

Machado, L. A. T., M. A. F. Silva Dias, C. Morales, G. F. Fisch, C. A. Vila, M. T. Kayano, R. I. Sakai, E. D. Freitas, H. M. J. Barbosa, J. F. Ferreira de Souza, A. M. Durães, L. F. Adaime, J. C. Xavier, A. J. Tomaz, A. A. Lima, 2009: The Chuva Project: How does convection vary across Brazil? Bull. Amer. Meteor. Soc., 90, 1617–1626.

Acknowledgements

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18–22 September 2017, Pula, Croatia
ECSS2017-**PREVIEW**

SOS-CHUVA - A Nowcasting Project

Luiz Machado (1), Edmilson Freitas (2), Eder Vendrasco (1), Kleber Nacaratto (1), Rachel Albrecht (2), Daniel Vila (1), Ana Avila (3), Felipe Pilau (3), Madeleine Sanchez (1), Luiz Guarino (1), and Jean-François Ribaud (1)

(1) INPE - Instituto Nacional de Pesquisas Espaciais, Brazil , (2) USP - Universidade de São Paulo, Brazil, (3) UNICAMP - Universidade de Campinas, Brazil

This presentation describes some of the initiatives of the SOS-CHUVA a nowcasting project running in São Paulo, Brazil. The aims of this project is to develop research in nowcasting of intense and severe thunderstorms using dual polarization radar, satellite, ground instrumentation and modeling. The project also developed an Application for cell phone to award population about the weather in real time. Examples of the intense events selected for case studies will be presented from the observation point of view and modeling. The project uses the WRF and BRAMS cloud resolving model (CRM - 1 km resolution) for the studies and nowcasting. In addition, several networks were installed as hail pads, raingauge, disdrometers and field mills. WRF is being used assimilating radar data and testing different microphysics parametrization, the main goal is to reduce the model spin up to be used in nowcasting. From the observation side, new methodologies are being tested as nowcasting routines using dual pol radar and lightning information from field mill and VHF sensors. An adapted hydrometeor classification is being evaluated to develop a nowcasting system based in the Lagrangian time derivation of the volume occupied by specific hydrometeor types. Routines adapted to the WRF model are employed allowing comparison between CRM and radar.

18–22 September 2017, Pula, Croatia
ECSS2017-140

Use of mesoscale models in operational severe weather forecast over large cities in Brazil – Results from the SOS-CHUVA Project

Edmilson D. Freitas (1), Luiz Machado (2), Rachel Albrecht (1), Enzo Todesco (1), Jean Peres (1), Andréia Bender (1), Isabela Siqueira (1), Jorge Martins (3), Leila Martins (3), Ricardo Hallak (1), Éder Vendrasco (2), Madeleine Sanchez (2), and Lianet Hernandez (2)

(1) Universidade de São Paulo, Instituto de Astronomia, Geofísica e Ciências Atmosféricas, Departamento de Ciências Atmosféricas, São Paulo, Brazil (efreitas@model.iag.usp.br), (2) Instituto Nacional de Pesquisas Espaciais, (3) Universidade Tecnológica Federal do Paraná

A large Project aiming the nowcasting of severe weather is under development in the southeast of Brazil. The SOS-CHUVA project evolve the use of ground-based instruments, including different sensors and a Dual Polarimetric Radar, satellite derived products, and numerical modeling. In this work we will present some results of the numerical operational forecast system that is running. Five different case studies simulated by the Brazilian developments on the Regional Atmospheric Modeling System (BRAMS) will be analyzed, stressing situations where severe weather was satisfactorily forecasted and the type of the mesoscale system that occurred (e.g., squall line or supercell). Simulations show that besides the turbulence parameterization, the correct land use identification and the way that urban areas are considered in the model are a determinant factor for the success of the forecast. In some cases, the influence of anomalous heating observed in the metropolitan areas of Campinas and São Paulo is identified as responsible for increasing the atmospheric instability and for the trigging or intensification of the thunderstorms observed. Cases that were not well represented by the model will also be presented with possible causes or weakness of the model in representing such events.

9th European Conference on Severe Storms

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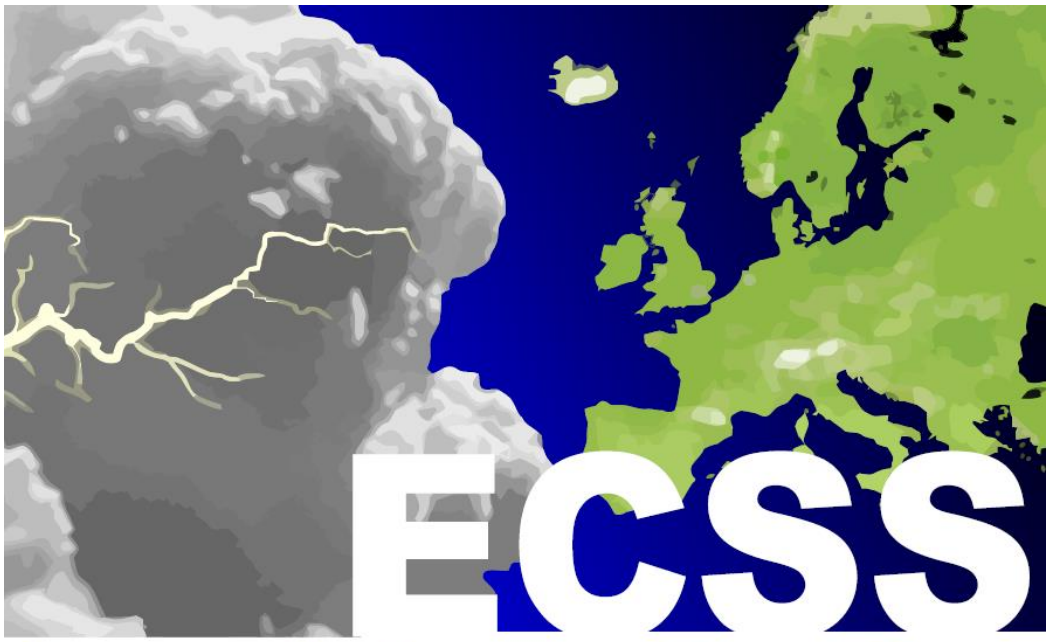
Programme



Sunday, 17 September 2017

Location: Conference Lobby

15:00–21:00

On site registration.

Location: Room Belica

17:00–19:00

E
ESSL General Assembly

For members of the European Severe Storms Laboratory.

All printed programme information as of 7 September 2017.

Please check local announcements or see ECSS message board or tweets for latest updates.

ECSS Twitter updates by @essl_ecss.
Please use #ecss2017 for your tweets.

Coffee break catering is included in the registration fee, meals during lunch break are not.

Monday, 18 September 2017

Location: Room Ulika

09:00–09:30

A
Opening

09:30–10:45

Session 2
Numerical modelling of storms, storm-scale data assimilation

09:30–09:45: ECSS2017-1
The Behavior and Characteristics of Squall Lines within Coastal Environments
Lombardo, Kelly; Kading, Tristan

09:45–10:00: ECSS2017-60
High-resolution ensemble data assimilation of a medicane event: challenges and beneffits
Homar Santaner, Victor; Carrió Carrió, Diego; Stensrud, David

10:00–10:15: ECSS2017-94
Supercell predictability studies in support of NOAA Warn-on-Forecast
Potvin, Corey; Flora, Montgomery; Murillo, Elisa; Wicker, Louis

10:15–10:30: ECSS2017-113
Ensemble-based storm-scale analysis and prediction of severe convection: Assimilation of radar reflectivity
de Lozar, Alberto; Blahak, Ulrich; Seifert, Axel

10:30–10:45: ECSS2017-146
Correcting Storm Displacement Errors in Ensembles Using Feature Calibration and Alignment (FCA)
Stratman, Derek; Potvin, Corey; Wicker, Louis

10:45 Coffee break

11:30–11:45: ECSS2017-40
Simulations of devastating tornadoes embedded within supercell thunderstorms
Orf, Leigh

11:45–12:00: ECSS2017-181
Towards real-time high-resolution precipitation forecasts for the city of Rotterdam
Banks, Robert; Basu, Sukanta; Schleiss, Marc; Russchenberg, Herman

12:00–12:15: ECSS2017-157
The potential impact of unmanned aircraft systems on storm-scale numerical weather prediction of supercells: Results from ensemble sensitivity analysis and observing system simulation experiments
Houston, Adam; Limpert, George; Keeler, Jason

12:15–12:30: ECSS2017-133
Ensemble-based storm-scale analysis and prediction of severe convection: Single- vs double-moment microphysics
Seifert, Axel; de Lozar, Alberto; Blahak, Ulrich

12:30–12:45: ECSS2017-192
A Numerical Investigation of the Potential Effects of Aerosol-Induced Warming Aloft and Updraft Width and Slope on Updraft Intensity in Deep Convective Clouds
Lebo, Zachary

12:45–13:00: ECSS2017-135
Forecasting both mature stage and initiation of a line-shaped mesoscale convective system by assimilation of XRAIN data
Yamaguchi, Kosei; Nakakita, Eiichi; Furuta, Kohei; Horiike, Yosuke

END OF ORAL PROGRAMME SESSION 2

13:00 Lunch break

14:30–16:00

Session 3
Impact of storms on society, impact mitigation and early warning systems

14:30–15:00: ECSS2017-4
Some Issues to Consider as Forecasts Evolve Over Time (solicited)
Brooks, Harold

15:00–15:15: ECSS2017-127
Modelling Straight-Line Wind Impact in Europe
Dixon, Mark

15:15–15:30: ECSS2017-26
Elasticity of Tornado Casualties in the United States
Elsner, James; Fricker, Tyler

15:30–15:45: ECSS2017-70
Impact-Based Warnings of Severe Thunderstorms in South Africa
Webster, Elizabeth

15:45–16:00: ECSS2017-201
A catastrophe model of severe convective storms in Europe built using a combination of ESWD, ERA-interim and satellite data sources
Brocklehurst, Aidan; Georgiadis, Alexandros; Braun, Lukas; Ulbrich, Sven

16:00 Coffee break

Session 7
Severe weather forecast training

16:45–17:15: ECSS2017-200
Pre-Testing Trainees in Forecaster Training Workshops (solicited)
Doswell III, Charles A.

17:15–17:30: ECSS2017-134
Combined use of complementary methods for a continuous thunderstorm forecast
Hamann, Ulrich; Besic, Nikola; Beusch, Lea; Buzzi, Matteo; Clementi, Lorenzo; Figueras i Ventura, Jordi; Hering, Alessandro M.; Leonarduzzi, Elena; Leuenberger, Andreas; Nerini, Daniele; Nisi, Luca; Sassi, Marco; Germann, Urs

17:30–17:45: ECSS2017-69
Baltic+ 2017 course on Convection - Collaborative Effort for High Quality Convection Training
Marcinoniene, Izolda; Nietosvaara, Vesa

END OF ORAL PROGRAMME SESSION 3

Location: Conference Lobby

18:00–20:00

J
Icebreaker Reception

Informal welcome cocktail and hors d'oeuvres.

Tuesday, 19 September 2017

Location: Room Ulika

09:00–13:00

Session 11
Storm climatologies, risk assessments and climate change

09:00–09:30: ECSS2017-168
Future of severe thunderstorm environments in Europe: simulated changes and uncertainties (solicited)
Pucik, Tomas; Groenemeijer, Pieter; Rädler, Anja; Tijssen, Lars

09:30–09:45: ECSS2017-103
Impact of climate change on intense rainfall events in the Ligurian Sea region due to strong MCSs
Gallus, William; Parodi, Antonio; Maugeri, Maurizio

09:45–10:00: ECSS2017-129
The Tornado Climatology of Australia: Assessing Risk and Evolution Through Time
Allen, John; Allen, Edwina

10:00–10:15: ECSS2017-109
The modern climatology of Northern Eurasia tornadoes and waterspouts
Chernokulsky, Alexander; Kurgansky, Michael; Mokhov, Igor; Selezneva, Evgeniya; Shikhov, Andrey; Azhigov, Igor; Zakharchenko, Denis; Antonescu, Bogdan; Kühne, Thilo

10:15–10:30: ECSS2017-125
Tornadic stoms in the Iberian Mediterranean area and Balearic Islands: study of sounding-derived parameters
Rodriguez, Oriol; **Bech, Joan**; García, Sergio

10:30–10:45: ECSS2017-139
Development of a globally consistent severe hail risk quantification model from re/insurance perspectives
Liu, Zhiyuan; **Yin, Jianming**; Shinohara, Mizuki; Uchimura, Ryoma

10:45 Coffee break

11:30–11:45: ECSS2017-131
A European Probabilistic Severe Thunderstorm Model for the Insurance Industry
Robinson, Eric; Parker, Melanie; Bednarczyk, Chris; Luo, Jianjun; Kafali, Cagdas; Reinhardt, Bernhard; **Meul, Stefanie**

11:45–12:00: ECSS2017-177
An additive regression convective hazard model (ARCHaMo) for detecting past and future trends in severe weather events
Rädler, Anja T.; Groenemeijer, Pieter; Púčik, Tomáš; Sausen, Robert; Faust, Eberhard

12:00–12:15: ECSS2017-186
Estimating the combined risk due to hail, convective gusts and tornadoes
Haines, Philip; Grieser, Juergen

12:15–12:30: ECSS2017-150
A climatology of severe convective wind events in western central Europe
Kreitz, Michaël; Gatzen, Christoph; Schielicke, Lisa; Leprince, Sébastien; Martet, Maud

12:30–12:45: ECSS2017-72
Climatological aspects of convective parameters over Europe: a comparison of ERA-Interim and sounding data
Taszarek, Mateusz; Brooks, Harold E.; Czernecki, Bartosz; Szuster, Piotr

12:45–13:00: ECSS2017-198
Trends of rain, wind-, snow- and thunderstorm events during the 21st Century according to regional climate models
Groenemeijer, Pieter; Púčik, Tomáš; Vajda, Andrea; Lehtonen, Ilari; Kämäräinen, Matti; Becker, Nico; Nissen, Katrin; Ulbrich, Uwe

END OF ORAL PROGRAMME SESSION 11

13:00 Lunch break

Location: Belica

14:30–16:00

H
ECSS press briefing

16:00 Coffee break

Location: Room Ulika

16:45–18:15

Sessions 4 & 5
Convective storms within extratropical, Mediterranean and tropical cyclones & Floods and flash floods

16:45–17:00: ECSS2017-154
Vortex identification and interactions across the scales
Schielicke, Lisa; Gatzen, Christoph

17:00–17:15: ECSS2017-86
Tornado-like Vortices in a Meso-β-scale Vortex Associated with a Maritime Extratropical Cyclone: A Numerical Study
Tochimoto, Eigo; Yokota, Sho; Niino, Hiroshi; Yanase, Wataru

17:15–17:30: ECSS2017-152
Study of flash floods in Portugal by radar-rain gauge adjustment
Narciso, Paulo

17:30–17:45: ECSS2017-52
Understanding and PreDiction of Rainfall Associated with landFalling Tropical cyclones (UPDRAFT)
Wang, Yuan

17:45–18:00: ECSS2017-160
Analysis of the evolution of lapse rates in the early evolution of a European cold-season derecho
Gatzen, Christoph

18:00–18:15: ECSS2017-106
Entrainment rate of typhoon-associated supercells estimated by a large eddy simulation
Sueki, Kenta; Niino, Hiroshi

END OF ORAL PROGRAMME Sessions 4 & 5

Tuesday posters

Location: Conference Lobby

Attendance time: 14:30–16:00

Session 2
Numerical modelling of storms, storm-scale data assimilation

P1: ECSS2017-28
Aircraft Moisture Observations: Their importance in Nowcasting and NWP
Petersen, Ralph; Hoover, Brett; Daloz, Anne-Sophie; Cronce, Lee; Wagner, Tim; Williams, Skylar; Mamrosh, Richard; Baker, Randy; Pauley, Patricia; Baker, Nancy

P2: ECSS2017-53
Forecasting a wet microburst with high-resolution numerical models
Pasi, Francesco; Capecchi, Valerio; Messeri, Gianni; Melani, Samanta; Antonini, Andrea; Gozzini, Bernardo

P3: ECSS2017-56
Convection-permitting ensemble forecast system design
Romine, Glen; Sobash, Ryan; Schwartz, Craig; Fossell, Kate

P4: ECSS2017-91
Supercell Predictability: Exploring Ensemble Sensitivity to Initial Condition Spread
Flora, Montgomery; **Potvin, Corey**; Wicker, Louis; Skinner, Patrick; Wheatley, Dustan; Knopfmeier, Kent

P5: ECSS2017-96
A WRF-DART Study of the Nontornadic and Tornadic Supercells Intercepted by VORTEX2 on 10 June 2010
Klees, Alicia; Richardson, Yvette; Romine, Glen

P6: ECSS2017-117
Assimilation of dual-polarization radar observations into convective scale models
Augros, Clotilde; Caumont, Olivier; Ducrocq, Véronique; Gaussiat, Nicolas

P7: ECSS2017-130
Analysis of nocturnal convection initiation using convective-scale data assimilation of mobile radar and thermodynamic observations collected during PECAN
Marquis, James; Wurman, Joshua; Romine, Glen; Weckwerth, Tammy; Wilson, Jim

P8: ECSS2017-137
Assimilation of Radial Winds in an Ensemble Kalman Filter on the Convective Scale
Bauernschubert, Elisabeth; Potthast, Roland; Blahak, Ulrich; Stephan, Klaus

P9: ECSS2017-140
Use of mesoscale models in operational severe weather forecast over large cities in Brazil - Results from the SOS-CHUVA Project
D. Freitas, Edmilson; Machado, Luiz; Albrecht, Rachel; Todesco, Enzo; Peres, Jean; Bender, Andréia; Siqueira, Isabela; Martins, Jorge; Martins, Leila; Hallak, Ricardo; Vendrasco, Éder; Sanchez, Madeleine; Hernandez, Lianet

P11: ECSS2017-148
The role of vertical grid spacing in the simulation of storms
Martins, Jorge A.; Conceição, Ana F. G.; Martins, Leila D.; Moraes, Marcos V. B.; Fujita, Thais; Rudke, Anderson P.; Eiras, Marília M.; Brand, Veronika S.; Rafee, Sameh A. A.; Hallak, Ricardo; Freitas, Edmilson D.

P12: ECSS2017-167
Behavior of Vertical-Vorticity Rivers in Simulated Supercells
Dahl, Johannes; **Weiss, Christopher**; Bruning, Eric; Dowell, David; Alexander, Curtis

P13: ECSS2017-187
A review of microphysics schemes within WRF model on the example of an isolated tornadic supercell in Poland on 20 June 2016
Pilguj, Natalia; Pajurek, Łukasz; Szuster, Piotr

Session 3
Impact of storms on society, impact mitigation and early warning systems

P14: ECSS2017-15
Severe weather and citizen science - Chasing the Austrian storm spotter
Keul, Alexander; Diaconu, Madalina

P15: ECSS2017-85
Information on severe weather related damage as a background for better risk assessment
Havrle Kozaric, Ivana; Placko-Vrsnak, Dunja

P16: ECSS2017-101
Nowcasting warning tools in the Meteorological Service of Catalonia
Cladera, Pere; Andrés, Aleix; Segalà, Santi; Aran, Montse

P17: ECSS2017-170
Decision Support System for Winter Maintenance of the Motorways (DARS MDSS)
Kršmanc, Rok; **Korošec, Marko**; Šajn Slak, Alenka; Čarman, Samo

P18: ECSS2017-178
Design and preliminary test of a X-band polarimetric radar for gust detection system for safe railway operation
Fujiwara, Chusei; Kusunoki, Kenichi; Inoue, Hanako; Ishitu, Naoki; Arai, Ken-ichiro; Onomura, Shiho; Suzuki, Hiroto

Tuesday posters continued

Location: Conference Lobby

Attendance time: 14:30–16:00

Sessions 4 & 5
Convective storms within extratropical, Mediterranean and tropical cyclones & Floods and flash floods

P19: ECSS2017-83
Heavy precipitation events during HyMeX SOP1 Intensive Observation Periods over Croatia: Evaluating CNRM-ALADIN52 regional climate model
Ivusic, Sarah; Güttler, Ivan; Horvath, Kristian

P20: ECSS2017-54
Continental Tropical Low pressures over southern Africa
Webster, Elizabeth; Dyson, Liesl

P21: ECSS2017-93
Flash Flood Forecast Verification - Croatia, 2016
Mutic, Petra; Pelajic, Izidor

P22: ECSS2017-153
Analysis of run-off rates and tracks of the resulting flash floods during a heavy rain event in Vienna (Austria) on 24 May 2014
Strommer, Gabriel

P23: ECSS2017-77
Analysis of short-term rainfall time structure by concentration indexes
Müller, Miloslav; Bližňák, Vojtěch; Kašpar, Marek

Session 6
Forecasting and nowcasting of severe weather

P24: ECSS2017-37
Significant-hail producing thunderstorms in Finland: Synoptic environment
Rauhala, Jenni; Laurila, Terhi; Mäkelä, Antti; Jylhä, Kirsti

P25: ECSS2017-14
Development of a new seamless prediction system for very short range convective-scale forecasting at DWD
Blahak, Ulrich; Potthast, Roland; Wapler, Kathrin; Seifert, Axel; De Lozar, Alberto; Bauernschubert, Elisabeth; Welzbacher, Christian; Osinski, Robert; Rempel, Martin; Hoff, Michael; Junk, Markus; Bach, Liselotte

P26: ECSS2017-18
Excessive precipitation over parts of Germany in June 2016: Characteristics of the general weather situation and aspects of the forecast
Beyer, Marcus; Tuschy, Helge; Fruntke, Julia

P27: ECSS2017-25
Tracking of radar reflectivity cores and their characteristics - utilization in operational application
Kyznarova, Hana; Novak, Petr

P28: ECSS2017-39
A case study of a EF1 tornado in eastern Bohemia (Czech Republic) in 2016
Tomšů, Radek

P29: ECSS2017-43
Fog nowcasting system for Irkutsk airport
Bazlova, Tatiana; Bocharnikov, Nikolai; Solonin, Alexander

P30: ECSS2017-49
The use of prognostic spatial information at the evaluation of the QPF for heavy convective rainfalls
Zacharov, Petr; Řezáčová, Daniela; Brožková, Radmila

P31: ECSS2017-50
Stability indices and wind shear for forecasting severe storm type over Bulgaria
Markova, Boryana; Dimitrova, Tsvetelina; Kadiyska, Nadezhda; Mitzeva, Rumjana

P32: ECSS2017-51
SOS-CHUVA - A Nowcasting Project
Machado, Luiz; **Freitas, Edmilson**; Vendrasco, Eder; Nacaratto, Kleber; Albrecht, Rachel; Vila, Daniel; Avila, Ana; Pilau, Felipe; Sanchez, Madeleine; Guarino, Luiz; Ribaud, Jean-François

Session 7
Severe weather forecast training

P33: ECSS2017-46
The advantages of using intra-cloud data for severe weather warnings
Rigo, Tomeu; Farnell, Carme

P34: ECSS2017-182
Step by Step Guidance for Monitoring Convection through Satellite Observations
Irsic Zibert, Mateja; Tusinska, Aleksandra; Nietosvaara, Vesa

Tuesday posters continued

Location: Conference Lobby

Attendance time: 14:30–16:00

Session 8
Satellite studies of storms and their environment

P35: ECSS2017-11
Comparison of satellite-, lightning- and radar observations in some severe thunderstorm cases
Simon, André; Putsay, Mária; Kocsis, Zsófia; Csirmaz, Kálmán; Szenyán, Ildikó

P36: ECSS2017-138
Numerical analysis of mesoscale shear in convective environments using data assimilation of super-rapid-scan GOES-derived wind vectors
Marquis, James; Wurman, Joshua

P37: ECSS2017-179
30 days reveal a lot - A cumulonimbus (CB) verification of the convective cloud mask by Berendes et al. (2008) in central Europe.
Schubert, Thomas

P38: ECSS2017-190
The relationship between cloud parameters and storm severity based on lightning and satellite data over Ukraine
Kryvobok, Oleksii

P39: ECSS2017-29
Improving Convective Weather Nowcasts by Coupling Convective Initiation Products to GOES-R Legacy Sounding NearCasts of the Storm Environment
Petersen, Ralph; Cronce, Lee; Mecikalski, John; Jewett, Chris

Session 11
Storm climatologies, risk assessments and climate change

P40: ECSS2017-6
Characteristics of convective wind gusts in Germany
Mohr, Susanna; Kunz, Michael; Richter, Alexandra; Ruck, Bodo

P41: ECSS2017-8
Ten years of tornadoes and waterspouts in Italy
Miglietta, Mario Marcello; Matsangouras, Ioannis

P42: ECSS2017-20
Long-term characteristics of convective storms over the Czech Republic derived from 15-Yr datasets of lightning detection and weather radar measurements
Novak, Petr; Kyznarová, Hana

P43: ECSS2017-21
Florida's Annual Expected Property Losses from Tornadoes
Elsner, James; Ryan, Emily; Strode, Georgiana; Mesev, Victor

P44: ECSS2017-30
Lightning activity in central Europe - preliminary climatology
Mikus Jurkovic, Petra; Strelec Mahovic, Natasa

P45: ECSS2017-38
Cold season tornadoes in Bulgaria
Bocheva, Liliya; Markova, Boryana

P46: ECSS2017-42
Estimating severe windstorm occurrence across Australia using Bayesian modelling
Spassiani, Alessio; Mason, Matthew; Krupar III, Richard J.

P47: ECSS2017-48
Favorable meteorological conditions for different types of organized convection
Blašković, Marko; Strelec Mahović, Nataša; Mikuš Jurković, Petra; Renko, Tanja

P48: ECSS2017-62
Temporal and spatial variability of convective predisposition across Europe and potential drivers
Kunz, Michael; Piper, David; Mohr, Susanna

P49: ECSS2017-75
A satellite-based study of tornado climatology in forested regions of northeast Europe
Shikhov, Andrey; Chernokulsky, Alexander

P50: ECSS2017-78
Effects of orography on spatial distribution of convective precipitation in Banská Bystrica district (Slovakia)
Kvak, Róbert; Müller, Miloslav

P51: ECSS2017-88
Modeling and Correcting Reporting Biases in the Storm Prediction Center Tornado Database
Potvin, Corey; Broyles, Chris; Skinner, Patrick; Brooks, Harold

P52: ECSS2017-89
Ten-year lightning patterns in Catalonia using Multivariable Analysis
Aran, Montse; Peña, Juan Carlos; Pineda, Nicolau; Soler, Xavier; Pérez-Zanón, Núria

P53: ECSS2017-90
Summertime hailstorms over Switzerland in surrogated climate change simulations
Martynov, Andrey; Nisi, Luca; Martius, Olivia

P54: ECSS2017-111
Modelling Hail Impact, part 2: From hazard to loss
Hill, Marc; Grieser, Juergen

P55: ECSS2017-115
Long-term variations and trends in the occurrence of thunderstorms in Finland
Laurila, Terhi; Mäkelä, Antti; Jylhä, Kirsti

Tuesday posters continued

Location: Conference Lobby

Attendance time: 14:30–16:00

P56: ECSS2017-116
Modelling Hail Impact, part 1: How many hail stones of what size?
Grieser, Jürgen; Hill, Marc

P57: ECSS2017-120
A Cloud-to-Ground Lightning Climatology for Basque Country
Gaztelumendi, Santiago; Etxezarreta, Arkaitz; Egaña, Joseba; Aranda, José Antonio

P58: ECSS2017-132
Statistical analysis of the spatial and temporal distribution of tornadoes in Germany
Kühne, Thilo; **Kollmohr, Andreas**; Hubrig, Martin; Sävert, Thomas; Schlenczek, Oliver; Simon, Werner; Wichmann, Heiko

P59: ECSS2017-147
Future convective weather risks in Europe and Near East
Kahraman, Abdullah

P60: ECSS2017-173
100 Years after Alfred Wegener's Opus on Tornadoes in Europe
Antonescu, Bogdan; Ricketts, Hugo; Schultz, David M.

P61: ECSS2017-189
Analysis of severe convective wind gusts in Serbia
Rabrenović, Maja; Gatzen, Christoph

P62: ECSS2017-193
Comparison between European and US severe convective weather environments
Rädler, Anja T.; Pucik, Tomas; Groenemeijer, Pieter; Tijssen, Lars

P64: ECSS2017-197
Decadal Predictability of Convective Hazards: A Possibility?
Tijssen, Lars; Groenemeijer, Pieter; Rädler, Anja

P65: ECSS2017-122
The Cerdanya-2017 field experiment: preliminary analysis of storm events
Bech, Joan; Trapero, Laura; Soler, Maria Rosa; Udina, Mireia; Paci, Alexandre; Garcia-Benadí, Albert; Gonzalez, Sergi; Miró, Josep Ramon; Mercader, Jordi; Molinié, Gilles; Codina, Bernat; Albalat, Anna; Rossell, Àngela

Session 14
Additional posters (Tuesday)

P66: ECSS2017-87
Characteristics of Thunderstorms in Slovenia
Irsic Zibert, Mateja

END OF POSTER PROGRAMME

Wednesday, 20 September 2017

Location: Room Ulika

09:00–13:00

Session 6
Forecasting and nowcasting of severe weather

09:00–09:30: ECSS2017-105
What have we learned about high-shear low-CAPE severe weather? A review. (solicited)
Parker, Matthew

09:30–09:45: ECSS2017-2
Forecasting and Nowcasting Severe Weather Using the Operational Warning Decision Support System AutoWARN at DWD
Reichert, Bernhard

09:45–10:00: ECSS2017-5
Performance of waterspout forecasting method using high resolution numerical weather model
Ivusic, Sarah; **Renko, Tanja**; Telisman Prtenjak, Maja; Horvat, Igor; Soljan, Vinko; Szilagyi, Wade

10:00–10:15: ECSS2017-7
Numerical simulations of a tornadic supercell in the Mediterranean
Miglietta, Mario Marcello; Mazon, Jordi; Rotunno, Richard

10:15–10:30: ECSS2017-23
Evaluation of ECMWF products for forecasting severe convection
Tsonevsky, Ivan; Doswell III, Charles A.; Brooks, Harold; Pillosu, Fatima; Hewson, Tim

10:30–10:45: ECSS2017-44
Utilization of a 3D High-Precision Network (LINET) for Optimized Nowcasting of Hail
Moehrlein, Matthias; Riso, Silvia; Betz, Hans-Dieter

10:45 Coffee break

11:30–11:45: ECSS2017-55
Remote sensing: data combination as a key for storm nowcasting
Valachova, Michaela; Kyznarova, Hana; Novak, Petr; Setvak, Martin

11:45–12:00: ECSS2017-81
Analysis of May 13th 2015 tornado event at Gerbépal (France) using radar, lightning and NWP model data
Le Bastard, Tony; Kreitz, Michael; Baille, Sébastien; Prévot, Daniel

12:00–12:15: ECSS2017-118
The use of self-organizing maps to characterize the tornadic near-storm environment
Anderson-Frey, Alexandra; Richardson, Yvette; Dean, Andrew; Thompson, Richard; Smith, Bryan

12:15–12:30: ECSS2017-119
Object-based operational nowcasting of severe thunderstorms in the Alpine area
Hering, Alessandro; Nisi, Luca; Hamann, Ulrich; Besic, Nikola; Trefalt, Simona; Germann, Urs

12:30–12:45: ECSS2017-191
Forecasts of convective storms using 3-km and 1-km horizontal grid spacing: When is higher resolution needed?
Sobash, Ryan; Schwartz, Craig; Romine, Glen; Weisman, Morris

12:45–13:00: ECSS2017-13
A multi-data process study of a severe hail storm in complex topography
Trefalt, Simona; Martynov, Andrey; Germann, Urs; Martius, Olivia

END OF ORAL PROGRAMME SESSION 6

13:00 Lunch break

14:30–23:00

C
Social Events

14:30
Bus transfer from the hotel Histria (ECSS venue) to Fažana. Meeting place in front of hotel Histria.

15:30
Boat departs from Fažana for NP Brijuni (island tour, no drinks or meals included).

19:30
Boat returns to Fažana from NP Brijuni

20:00
Return to the hotel Histria (ECSS venue) via bus transfer.

21:00
Conference Dinner at hotel Histria (ECSS venue) and giving of the Nikolai Dotzek Award.

Thursday, 21 September 2017

Location: Room Ulika

09:00–10:45

Session 1
Convective storm and tornado dynamics

09:00–09:30: ECSS2017-163
The regulation of tornado intensity by updraft width (solicited)
Trapp, Robert; Marion, Geoffrey; Nesbitt, Stephen

09:30–09:45: ECSS2017-104
Above-ground thermodynamic observations in supercell thunderstorms obtained from pseudo-Lagrangian drifters
Markowski, Paul; Richardson, Yvette; Richardson, Scott

09:45–10:00: ECSS2017-66
The TWIRL (Tornado Winds from In-situ and Radars at Low-level) Project: Part 1: Project Overview and Combined Radar-in situ-damage analyses
Kosiba, Karen; Wurman, Josh

10:00–10:15: ECSS2017-67
TWIRL: Part 2: Very Fine-Scale Dual-Doppler and In Situ Analysis of a Strong Tornado
Wurman, Josh; Bluestein, Howard; Kosiba, Karen; Reif, Dylan; Robinson, Paul; Wienhoff, Zachary

10:15–10:30: ECSS2017-143
Numerical simulations of tornadoes in complex urban landscape
Jewtoukoff, Valérian; Markowski, Paul; Richardson, Yvette

10:30–10:45: ECSS2017-155
Preliminary Results from the 2016 and 2017 VORTEX-SE Project
Weiss, Christopher; Bruning, Eric; Dahl, Johannes; Dowell, David; Alexander, Curtis; Hill, Aaron; Chmielewski, Vanna

END OF ORAL PROGRAMME Session 1

10:45 Coffee break

11:30–13:00

Session 9
Radar studies of storms

11:30–12:00: ECSS2017-165
Hail frequency in central Europe estimated from 2D radar data and the relation to atmospheric characteristics (solicited)
Kunz, Michael; Fluck, Elody; Baumstark, Sven; Wandel, Jan; Ritz, Stefan; Geissbuehler, Peter; Schemm, Sebastian; Schmidberger, Manuel

12:00–12:15: ECSS2017-3
Tornadogenesis and tornado evolution documented using rapid-scan, mobile, Doppler radars
Bluestein, Howard; Thiem, Kyle; Wienhoff, Zach; Reif, Dylan; Snyder, Jeffrey; Houser, Jana

12:15–12:30: ECSS2017-45
Mesoscale Convective Systems in the Western Mediterranean
Rigo, Tomeu; Berenguer, Marc

12:30–12:45: ECSS2017-63
Radar and satellite observations of a severe wet microburst over Tuscany
Melani, Samantha; Antonini, Andrea; Pasi, Francesco; Capecchi, Valerio; Messeri, Gianni; Ortolani, Alberto; Gozzini, Bernardo

12:45–13:00: ECSS2017-22
Tracking hailswaths on radar data between 2002 and 2016: a new perspective for climatological studies of hail in the Alps.
Nisi, Luca; Hering, Alessandro; Germann, Urs; Martius, Olivia

END OF ORAL PROGRAMME SESSION 9

13:00 Lunch break

Location: Room Belica

15:00–16:30

F
CWG splinter meeting

On invitation. Meeting of the EUMETSAT Convection Working Group.

16:00 Coffee break

Location: Room Ulika

16:45–18:15

Session 8
Satellite studies of storms and their environment

16:45–17:15: ECSS2017-27
Potential of stereoscopic imagery based on Meteosat Second Generation satellites (solicited)
Kaňák, Ján; Okon, Ľuboslav; Setvák, Martin; Diószeghy, Márta; Nietosvaara, Vesa

17:15–17:30: ECSS2017-12
Satellite observations of gravity waves, generated by convective storms
Setvak, Martin; Wang, Pao K.; Šťástka, Jindřich; Radová, Michaela

17:30–17:45: ECSS2017-41
Convective cloud detection product derived from Himawari-8/9 rapid scan observation
Sumida, Yasuhiko; Suzue, Hiroshi

17:45–18:00: ECSS2017-80
Convective growth and glaciation with Meteosat in relation to precipitation formation
Senf, Fabian; Deneke, Hartwig

18:00–18:15: ECSS2017-73
Spatio-temporal variation of hail features and associated mix phase microphysical properties as detected by satellite onboard sensors in two different climatic convective regimes
Sharma, Sanjay; Roy, Partha; Biswasharma, Rupraj

END OF ORAL PROGRAMME SESSION 8

Location: Room Ulika

18:20–19:00

I
Informal Photo and Video Session

Additional material on stereoscopic satellite imagery will be presented by Ján Kaňak. Also photos or videos of historical and recent European tornadoes will be shown by other presenters.

Thursday posters

Location: Conference Lobby

Attendance time: 14:30–16:00

Session 1
Convective storm and tornado dynamics

P1: ECSS2017-32
Statistical features of near-ground tornadic vortices in comparison with radar-observed vortices aloft
Onomura, Shiho; Kusunoki, Kenichi; Inoue, Hanako; Ishitsu, Naoki; Arai, Ken-ichiro; Fujiwara, Chusei

P2: ECSS2017-34
A Linear Array of Wind and Pressure Sensors for High Resolution in situ Measurements in Winter Tornadoes
Kusunoki, Kenichi; Onomura, Shiho; Arai, Ken-ichiro; Fujiwara, Chusei

P3: ECSS2017-36
Two tornado events in Germany: Ingredients-based approach and cell merging
Tuschy, Helge; Fruntke, Julia; Beyer, Marcus

P4: ECSS2017-68
Plains Elevated Convection At Night (PECAN): Evaluating Severe Surface Wind Potential in a Nocturnal MCS
Kosiba, Karen; Wurman, Josh

P5: ECSS2017-142
Exploring the influence of outflow surges on developing and mature tornadoes using a toy model
Jewtoukoff, Valérian; Markowski, Paul; Richardson, Yvette

P6: ECSS2017-158
The sensitivity of simulated near-surface mesovortices to environmental vertical shear
Houston, Adam

P7: ECSS2017-159
On the role of deformation in the maintenance of (stationary) vortex systems
Schielicke, Lisa; Nevir, Peter; Müller, Annette

P8: ECSS2017-169
Measurement of the three dimensional velocity field of tornado-like vortex by the experimental study
Tanimoto, Saki; Sassa, Koji; Watanabe, Hanaka

Thursday posters continued

Location: Conference Lobby

Attendance time: 14:30–16:00

Session 6
Forecasting and nowcasting of severe weather

P9: ECSS2017-59
New adjustments to the 3D convective cells identification applied to severe weather study cases.
del Moral, Anna; Rigo, Tomeu; Llasat, Maria Carmen

P10: ECSS2017-64
Storm-Scale Ensemble Forecasts for the NOAA HWT Spring Forecasting Experiment and HMT FFaIR Experiment
Kong, Fanyou; Xue, Ming; Jung, Youngsun; Brewster, Keith; Snook, Nathan

P11: ECSS2017-79
Convection Nowcast for Air Traffic Management Verification
Šoljan, Vinko; Jurković, Jadran

P13: ECSS2017-100
Evaluation of 3 operational severe convective indexes on historical storms that have hit France.
Boisserie, Marie; Dupont, Fabienne; Maynard, Karine

P14: ECSS2017-110
Detection, tracking, and nowcasting of convective storms using KONRAD3D
Werner, Manuel

P15: ECSS2017-128
The use of a Semi-automated Severe Convection Checklist at MeteoSwiss Forecast Offices
Peyraud, Lionel; Moret, Lionel; Ulrich, Didier

P16: ECSS2017-136
Thunderstorm nowcasting by applying machine learning to a multi-sensor observation and NWP model data base
Beusch, Lea; Clementi, Lorenzo; Hamann, Ulrich; Hering, Alessandro M.; Leonarduzzi, Elena; Nerini, Daniele; Nisi, Luca; Sassi, Marco; Germann, Urs

P18: ECSS2017-151
Coastal flooding in Rovinj: the case of February 10th 2016.
Fustar, Lidija; Botica, Kata; Ljubas, Tomislava

P19: ECSS2017-171
Use of new radar products for nowcasting of severe storms
Böhme, Tim; Herold, Christian; Schappert, Sebastian

P20: ECSS2017-174
Development of operational waterspout forecast product for Adriatic Sea using ALADIN NWP model.
Horvat, Igor; Renko, Tanja; Stanešić, Antonio; Szilagyi, Wade

P21: ECSS2017-176
Supercell structures developed over Serbia associated to severe weather events in western Romania - a conceptual approach
Bugeac, Octavian Paul; Stefan, Sabina; Mihajlovic, Goran

P22: ECSS2017-196
Medium-range forecasting of convective hazards using ESSL's Additive Regression Convective Hazard Model (ARCHaMo)
Tijssen, Lars; Groenemeijer, Pieter; Rädler, Anja

Session 9
Radar studies of storms

P23: ECSS2017-35
A study of anomalous radar signatures observed in Bulgaria regarding severe hail nowcasting
Georgiev, Stefan; DImitrova, Tsvetelina

P24: ECSS2017-47
An estimation of the dual-polarization C-band radar products in the hail events cases.
Liman, Ljubov

P25: ECSS2017-61
Storm-scale surface analyses constructed from home AWS data for a severe hailstorm over northern England
Clark, Matthew; Webb, Jonathan; Kirk, Peter

P26: ECSS2017-74
Mini supercell accompanied by multiple vortex tornado in Kochi, Japan
Sassa, Koji; Yuasa, Soichiro

P27: ECSS2017-166
Occurrence of supercells in Slovakia in 2000 - 2012
Šinger, Miroslav

P28: ECSS2017-183
Spatial characterisation of hailstorms in Europe using radar data
Hartley, Sarah; Chalmers, Mutahar; Grieser, Juergen

Thursday posters continued

Location: Conference Lobby
Attendance time: 14:30–16:00

Session 10
Storm electrification, lightning, microphysics and hail

P29: ECSS2017-17
The rough Palagru¸a sailing ride - Analysis of a marine ball lightning event
Keul, Alexander; Diendorfer, Gerhard

P30: ECSS2017-24
Cloud electrification modelling - preliminary results
Sokol, Zbyněk; **Minářová, Jana**

P31: ECSS2017-31
Radar derived characteristics of hail events in Czechia
Skripniková, Kateřina; Řezáčová, Daniela; Kyznarová, Hana; Novák, Petr

P32: ECSS2017-57
Simulation of processes of artificial lightning initiation by model hydrometeors array using artificial thunderstorm cells
Temnikov, Alexander; Chernensky, Leonid; Lysov, Nikolay; Orlov, Alexander; Belova, Olga; Gerastenok, Tatiana; Zhuravkova, Daria; Kalugina, Inna

P33: ECSS2017-58
Investigation of peculiarities of discharge between artificial thunderstorm cell and ground in presence of model hydrometeors array
Temnikov, Alexander; Zhuravkova, Daria; Chernensky, Leonid; Lysov, Nikolay; Orlov, Alexander; Belova, Olga; Gerastenok, Tatiana; Gundareva, Svetlana

P34: ECSS2017-65
Lightning forecast for North Caucasus Region
Gubenko, Inna

P36: ECSS2017-108
Exploring thunderstorm patterns related to severe weather with Lightning Mapping Array data
Salvador Yuste, Albert; Pineda, Nicolau; Montanyà, Joan; Solà, Glòria; van der Velde, Oscar

P37: ECSS2017-121
A study of active thunderstorm episodes in Basque Country
Gaztelumendi, Santiago; Egaña, Joseba; Etxezarreta, Arkaitz; Aranda, José Antonio

P38: ECSS2017-180
Hail and Heavy Rain Events Measured by Videodisdrometer in Prague, Czech Republic
Chládová, Zuzana; Fišer, Ondřej; Pitaš, Karel; Skripniková, Kateřina

P39: ECSS2017-19
Comparison of haildata recorded on polygon in Austria and Croatia (2002-2016)
Počakal, Damir; Svabik, Otto

P41: ECSS2017-82
A hail climatology for South Africa
Dyson, Liesl; Pienaar, Nita

P42: ECSS2017-92
Summertime hailstorms over Switzerland in 2012 -2015 in convection-permitting WRF simulations: assessment of modeling performance
Martynov, Andrey; Nisi, Luca; Martius, Olivia

P43: ECSS2017-123
Hail Size: What We Know Around the World
Allen, John; Tippett, Michael

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

P44: ECSS2017-9
Sub-daily temporal reconstruction of historical extreme precipitation events using NWP model simulations
Bližňák, Vojtěch; Müller, Miloslav; Zacharov, Petr; Kašpar, Marek; Kvak, Róbert

P45: ECSS2017-33
Local enhancement of latent instability and vertical wind shear in the Alpine foreland during the 1984 Munich hailstorm case
Púčik, Tomáš; Zacharov, Petr; Groenemeijer, Pieter

P46: ECSS2017-71
Deadly Tornadoes in Poland from 1820 to 2015
Taszarek, Mateusz; Gromadzki, Jakub

P47: ECSS2017-95
Damage Assessment of the 2016 F2-Tornado near Karlstein, Lower Austria
Kaltenberger, Rainer; Weber, Manuel

P48: ECSS2017-124
A study of 13 september 2016 storm event in Basque Country
Egaña, Joseba; Principe, Olatz; Pierna, David; **Gaztelumendi, Santiago**

P49: ECSS2017-126
A study of convective severe storms in Basque Country during XXI century
Egaña, Joseba; **Gaztelumendi, Santiago**; Pierna, David; Principe, Olatz

P50: ECSS2017-156
Combined analysis of severe convective wind gusts in European data sets
Gatzen, Christoph; Kreitz, Michaël; Leprince, Sébastien; Schielicke, Lisa; Rabrenović, Maja; Enno, Sven-Eric

P51: ECSS2017-172
Crowd Sourcing of Weather Observations at European National Meteorological Services
Krennert, Thomas; Christian, Csekits

Thursday posters continued

Location: Conference Lobby

Attendance time: 14:30–16:00

P52: ECSS2017-184
Historic severe weather events in Austria (1815-1830): Impacts on society and magnitude assessments
Pfeifer, Katrin; Holzer, Alois M.

P53: ECSS2017-185
Historic severe weather events in Europe (414 BC - 1590)
Pfeifer, Katrin; Holzer, Alois M.; Kühne, Thilo

P54: ECSS2017-188
Experience after 1 year of EWOB
Holzer, Alois M.; Groenemeijer, Pieter; Riemann-Campe, Kathrin; Antonescu, Bogdan

Session 13 Additional posters (Thursday)

P56: ECSS2017-202
Probabilistic nowcasting of convective rainfall
Ośródka, Katarzyna; Jurczyk, Anna; Szturc, Jan; Giszterowicz, Mateusz

P57: ECSS2017-203
Sounding-Derived Parameters Associated with Convective Hazards in Europe
Taszarek, Mateusz; Brooks, Harold E.; Czernecki, Bartosz

END OF POSTER PROGRAMME

Friday, 22 September 2017

Location: Room Ulika

09:00–11:00

Session 10
Storm electrification, lightning, microphysics and hail

09:00–09:30: ECSS2017-97
Enhancing thunderstorm warnings in developing countries based on lightning location data (solicited)
Mäkelä, Antti; Laurila, Terhi; Pietarila, Harri

09:30–09:45: ECSS2017-10
Analysis of orographic influence on hail parameters in NW Croatia
Počakal, Damir; Večenaj, Željko; Mikuš, Petra; Grisogono, Branko

09:45–10:00: ECSS2017-84
Analysis and simulations of the 4 July 2007 large hailstorm in NE Italy
Manzato, Agostino (Tino); Riva, Valentino; Miglietta, Mario Marcello; Laviola, Sante

10:00–10:15: ECSS2017-107
Numerical simulation of convective squall lines over Southwest England with detailed microphysical scheme
Sarkadi, Noémi; Geresdi, István; Thompson, Greg; Miltenberger, Annette; Rosenberg, Phil; Hill, Adrian

10:15–10:30: ECSS2017-145
Mapping of thunderstorm charge structures by automated lightning leader speed analysis of Lightning Mapping Array data: applications and statistics
van der Velde, Oscar; Montanyà, Joan; López, Jesús Alberto; Pineda, Nicolau

10:30–10:45: ECSS2017-162
The Impact of Vertical Wind Shear on Hail Growth in Simulated Supercell Storms
Kumjian, Matthew; Dennis, Eli

10:45–11:00: ECSS2017-112
The life-cycle of hail storms: lightning, radar reflectivity and rotation characteristics
Wapler, Kathrin

END OF ORAL PROGRAMME SESSION 10

11:00 Coffee break

11:45–13:00

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

11:45–12:00: ECSS2017-164
Innovative approaches for crop hail damage assessment based on Radar and drone technologies
Tani, Satyanarayana; Paulitsch, Helmut; Fraundorfer, Friedrich; Süsser-Rechberger, Barbara; Teschl, Reinhard; Rumpler, Markus; Hofer, Manuel

12:00–12:15: ECSS2017-102
Japanese Enhanced Fujita Scale: Its Development and Implementation
Niino, Hiroshi; Tamura, Yukio; Ito, Masaru; Kikitsu, Hitomitsu; Maeda, Junji; Okuda, Yasuo; Sakata, Hiroyasu; Shoji, Yoshinori; Suzuki, Satoru; Tanaka, Yoshinobu

12:15–12:30: ECSS2017-175
Trusted Spotter Network Austria - Towards a New Standard in the Field of Crowd-SourcedWeather- and Impact-Observations?
Krennert, Thomas; Kaltenberger, Rainer; Pistotnik, Georg; Holzer, Alois M.; Zeiler, Franz; Stampfl, Mathias

12:30–12:45: ECSS2017-194
The Role of Crowdsourcing in the Retrieval of Severe Weather Information in the Past, Present and Future
Pistotnik, Georg; Krennert, Thomas; Stadlbacher, Klaus

END OF ORAL PROGRAMME SESSION 12

13:00–14:15

D
Closing and Awards Session

Saturday, 23 September 2017

Location: Room Belica

09:00–18:00

G
Introduction seminar: Forecasting of Severe Convective Storms **by Dr. Charles A. Doswell.**

On registration.

Notes:

Scientific programme overview - ECSS2017

	Monday	Tuesday	Wednesday	Thursday	Friday
09:00 09:15	A: OPENING SESSION	11: Storm climatologies, risk assessments and climate change	6: Forecasting and nowcasting of severe weather	1: Convective storm and tornado dynamics	10: Storm electrification, lightning, microphysics and hail
09:30 09:45 10:00 10:15 10:30	2: Numerical modelling of storms, storm-scale data assimilation				
10:45 11:00 11:15	COFFEE BREAK	COFFEE BREAK	COFFEE BREAK	COFFEE BREAK	COFFEE BREAK
11:30 11:45 12:00 12:15 12:30 12:45	2 continued: Numerical modelling of storms, storm-scale data assimilation	11 continued: Storm climatologies, risk assessments and climate change	6 continued: Forecasting and nowcasting of severe weather	9: Radar studies of storms	12: Collection of storm data, historical events and damage assessments
13:00 13:15 13:30 13:45 14:00 14:15	LUNCH BREAK	LUNCH BREAK	LUNCH BREAK	LUNCH BREAK	D: CLOSING and AWARDS SESSION
14:30 14:45 15:00 15:15 15:30 15:45	3: Impact of storms on society, impact mitigation and early warning systems	TUESDAY POSTER SESSION	*SPONSORED SOCIAL EVENTS*	THURSDAY POSTER SESSION	
16:00 16:15 16:30	COFFEE BREAK	COFFEE BREAK		COFFEE BREAK	
16:45 17:00 17:15 17:30 17:45 18:00	7: Severe weather forecast training	4 & 5: Convective storms within extratropical, Mediterr. and tropical cyclones & Floods and flash floods		8: Satellite studies of storms and their environment	

<u>On site registration desk – opening hours:</u>

Sun 15:00 – 21:00
Mon 08:00 – 18:00
Tue – Fri starting at 08:30

Sidemeetings and social programme overview - ECSS2017

	Monday	Tuesday	Wednesday	Thursday	Friday
09:00 09:15	A: OPENING SESSION	11: Storm climatologies, risk assessments and climate change	6: Forecasting and nowcasting of severe weather	1: Convective storm and tornado dynamics	10: Storm electrification, lightning, microphysics and hail
09:30 09:45 10:00 10:15 10:30	2: Numerical modelling of storms, storm-scale data assimilation				
10:45 11:00 11:15	COFFEE BREAK	Conference Photo COFFEE BREAK	COFFEE BREAK	COFFEE BREAK	COFFEE BREAK
11:30 11:45 12:00 12:15 12:30 12:45	2 continued: Numerical modelling of storms, storm-scale data assimilation	11 continued: Storm climatologies, risk assessments and climate change	6 continued: Forecasting and nowcasting of severe weather	9: Radar studies of storms	12: Collection of storm data, historical events and damage assessments
13:00 13:15 13:30 13:45 14:00 14:15	LUNCH BREAK	LUNCH BREAK	LUNCH BREAK	LUNCH BREAK	D: CLOSING and AWARDS SESSION
14:30 14:45 15:00 15:15 15:30 15:45	3: Impact of storms on society, impact mitigation and early warning systems	14:30 ECSS press briefing (room Belica)	14:30 Bus transfer from the hotel Histria (ECSS venue) to Fažana. Meeting place in front of hotel Histria.	15:00 CWG splinter meeting (room Belica)	
16:00 16:15 16:30	COFFEE BREAK	COFFEE BREAK	15:30 Boat departs from Fažana to National Park Brijuni (island tour). No drinks or meals included.	COFFEE BREAK	
16:45 17:00 17:15 17:30 17:45 18:00	7: Severe weather forecast training	4 & 5: Convective storms within extratropical, Mediterr. and tropical cyclones & Floods and flash floods		8: Satellite studies of storms and their environment	
18:30 19:00 19:30 20:00 21:00 23:00	Informal icebreaker Reception		19:30 Boat returns 21:00 Conference Dinner at hotel Histria (ECSS venue)	Informal photo and video session	

Sun, 17 Sep 2017: 17:00 ESSL General Assembly, room Belica.

Sat, 23 Sep 2017: 09:00 Introduction Seminar - Forecasting Severe Convective Storms, room Belica.

The ECSS is kindly supported by

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Local ECSS organizing partner:

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