



ECSS 2013

7th European Conference on Severe Storms

3 - 7 June 2013, Scandic Marina Congress Center, Helsinki, Finland

organized by:



FINNISH METEOROLOGICAL INSTITUTE

Scientific Programme

The 7th European Conference on Severe Storms is supported by:

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World
Meteorological
Organization

Sunday 2 June

Monday 3 June

Tuesday 4 June

Wednesday 5 June

Thursday 6 June

Friday 7 June

08:00	Registration at Marina Congress Center opens at 08:00					
09:00	Opening Session Session 1 Climate and Severe Storms <i>chair: Harold Brooks</i> <i>keynote: Angelika Werner</i> 42 Brooks, 44 Stransky,		Session 4 Storm and Tornado Dynamics I <i>chair: Yvette Richardson</i> <i>keynote: Robert Davies-Jones</i> 111 Weiss, 22 Markowski, 54 Buker, 79 Nowotarski		Session 7 Lightning and Microphysics <i>chair: Jean Dessens</i> <i>keynote: Colin Price</i> 149 Kumjian, 169 Defer, 106 Stein, 84 Wang	
09:30	Session 1 Climate and Severe Storms <i>chair: Harold Brooks</i> <i>keynote: Angelika Werner</i> 42 Brooks, 44 Stransky,		Session 4 Storm and Tornado Dynamics I <i>chair: Yvette Richardson</i> <i>keynote: Robert Davies-Jones</i> 111 Weiss, 22 Markowski, 54 Buker, 79 Nowotarski		Session 10 Advances in numerical modelling and forecasting <i>chair: Johannes Dahl</i> <i>keynote: Louis Wicker</i> , 107 Pessi, 231 Pinty 15 Geresdi, 2 Peyraud	
10:30	Opening of Technical Exhibition & Coffee Break Hang up Session 1 Posters		Coffee Break		Coffee Break remove Poster Session 2 posters	
11:15	20 Dessens, 105 Mohr, 186 Sander, 2 Yin, 139 Punge, 183 Pistotnik		Session 5 Forecasting I <i>chair: Chris Nowotarski</i> 165 Petersen, 48 Böhme, 179 Groenemeller, 109 Shafer 253 Goeber, 70 Pucik		Session 11 Forecasting II <i>chair: Pertti Nurmi</i> 136 Garcias, 137 Smiljanic, 133 Vich, 147 Bech, 112 Heinselmann, 198 Nietosvaara	
12:45	Lunch Break		Lunch Break		Session 14 Forecasting III <i>chair: Bogdan Antonescu</i> 7 Lennartson, 49 Fritzsche, 129 Kohler, 39 Tuovinen 146 Sakwa, 62 Stich	
14:30	Lunch Break		Lunch Break		Closing and Awards session end around 13:30	
15:00	Session 2 Severe Storm Damage and Impacts <i>chair: Jenni Rauhala</i> <i>keynote: Peter Hoeppe</i> , 248 Kühne 50 Svabik, 3 Kosiba, 226 Molarius		Session 9 Remote sensing: satellite and radar <i>chair: Martin Setvák</i> <i>keynote: V. Chandrasekar</i> 143 Pinto, 93 Horvath, 240 Antonescu, 216 Zibert, 158 Cremonini		Poster Session 2 with coffee at 16:00 at 14:00: closed side event (room Nautica) Convection Working Group meeting	
16:00	Opening of Technical Exhibition & Coffee Break Session 3 Floods <i>chair: Climent Ramis</i> 24 Turkington, 104 Winterrath, 160 Goudenhooft, 225 Reis 233 Llasat, 257 Dhurmea		Session 6 Storm and Tornado Dynamics II <i>chair: Paul Markowski</i> <i>keynote: Yvette Richardson</i> , 246 Dahl, 242 Marquis, 227 Sassa, 167 Schenkman		Session 12 Societal impacts and public weather understanding <i>chair: Michael Kunz</i> <i>keynote: Charles Deswell III</i> , 131 Demetriades, 37 Mäkelä 29 Kox, 87 Keul	
16:45	Session 3 Floods <i>chair: Climent Ramis</i> 24 Turkington, 104 Winterrath, 160 Goudenhooft, 225 Reis 233 Llasat, 257 Dhurmea		Session 6 Storm and Tornado Dynamics II <i>chair: Paul Markowski</i> <i>keynote: Yvette Richardson</i> , 246 Dahl, 242 Marquis, 227 Sassa, 167 Schenkman		Social Event (not included, € 62): Helsinki and the Suomenlinna Sea Fortress bus and boat tour	
18:15	remove Poster Session 1 posters		remove Poster Session 1 posters		18:15	
18:30	18:30		18:30		18:30	
19:00	Ice breaker at City Hall		Conference Dinner			
20:30						

Monday 3 June 2013

9:00

Opening Session

Session 1
CLIMATE AND SEVERE STORMS
Chair: Harold Brooks

09:30 KEYNOTE TALK
Convective storm hazards from a reinsurance perspective (259)
Angelika Werner

10:00 Increased variability of tornado occurrence in the United States in recent years (42)
Harold Brooks

10:15 Estimating severe thunderstorm risk in North America (44)
Scott Stransky, Tomas Girnus and Eric Robinson

10:30 Coffee break

11:15 Changes in hailstone size distributions in relation with a rise in the freezing level (20)
Jean Dessens, Claude Berthet and José Luis Sanchez

11:30 Changes of thunderstorm and hail potential in climate change (105)
Susanna Mohr and Michael Kunz

11:45 Climate-driven increase in the variability and multi-year mean level of severe thunderstorm-related losses and thunderstorm forcing environments in the U.S. since 1970 (186)
Julia Sander, Eberhard Faust, Jan Eichner and Markus Steuer

12:00 Modeling and quantification of severe hailstorm risk in Spain from re/insurance perspectives (2)
Jianming Yin, Bo Yu and Junwa Shimada

12:15 A new stochastic event catalogue for hail in Europe (139)
Heinz Jürgen Punge, Kristopher Bedka, David B. Stephenson, Michael Kunz, Marc Puskeiler and Angelika Werner

12:30 Assessment of the European severe convective storm climatology using reanalysis data (183)
Georg Pistotnik, Pieter Groenemeijer and Thilo Kühne

12:45 Lunch break

Session 2
SEVERE STORM DAMAGE AND IMPACTS
Chair: Jenni Rauhala

14:30 KEYNOTE TALK
Severe weather in North America (57)
Peter Hoeppe

15:00 Obstacles and barriers in research work on historical tornadoes in Central Europe (248)
Thilo Kühne, Georg Pistotnik, Emmanuel Wesolek, Pierre Mahieu and Artur Surowiecki

15:15 Hail Risk Areas in Austria, on the basis of reports 1971-2011 and Weather Radar Images 2002-2011 (50)
Otto Svabik, Vera Meyer, Lukas Tüchler and Gernot Zenkl

15:30 Integrated In Situ, DOW, and damage observations in tornadoes (3)
Karen Kosiba and Josh Wurman

15:45 The effects of extreme weather on the European transport system: an analysis based on media reports (226)
Riitta Molarius, Pekka Leviäkangas, Jaana Keränen, Ilkka Juga and Andrea Vajda (presented by Jaana Keränen)

16:00 Coffee break
Opening of Technical Exhibition

Session 3
FLOODS
Chair: Climent Ramis

16:45 Linking meteorological conditions to flood and flash flood occurrence - why is it so difficult? (24)
Thea Turkington, J. Ettema and C. J. van Westen

17:00 A 10-year radar-based precipitation reanalysis for Germany – first steps and future directions (104)
Tanja Winterrath and Elmar Weigl

17:15 Statistics of extreme areal rainfall depths based on radar observations (160)
Edouard Goudenhoofdt and Laurent Delobbe

17:30 Analysing spatial distribution of damaging floods and mass movements in Portugal from 1865 to 2010 (DISASTER database): geographical factors, weather types and human impacts. (225)
Eusébio Reis, José Luís Zêzere and Marcelo Fragoso

17:45 Flash floods evolution in Catalonia: from precipitation to societal aspects (233)
M^a Carmen Llasat, Raúl Marcos, Montse Llasat-Botija, Joan Gilibert, Marco Turco and Pere Quintana-Seguí

18:00 Flood and flash flood resulting from convective storms in the SWIO islands and their impacts on the local community: Case studies from Mauritius (257)
Kumar Ram Dhurmea and Prem Goolaup

18:15 End of Monday's Scientific Programme

19:00 Ice breaker at City Hall

Tuesday 4 June 2013

Session 4 STORM AND TORNADO DYNAMICS 1 Chair: Yvette Richardson	
09:00	KEYNOTE TALK History of storm and tornado dynamics (263) Robert Davies-Jones
09:30	A comparison of buoyancy and baroclinity within tornadic and non-tornadic VORTEX2 storms (111) Christopher Weiss, David Dowell, Paul Markowski and Yvette Richardson
09:45	New insights about tornadogenesis in supercells obtained from idealized three-dimensional numerical simulations involving a heat source and heat sink in a vertically sheared environment (22) Paul Markowski and Yvette Richardson
10:00	The role of 3D vortex-vortex interaction and superhelicity in tornado maintenance and development (54) Marcus Büker and Gregory Tripoli
10:15	Understanding the effects of horizontal convective rolls on the organization of low-level vorticity in simulated supercell thunderstorms. (79) Christopher Nowotarski and Anders Jensen
10:30	Coffee break

Session 5 FORECASTING I Chair: Chris Nowotarski	
11:15	Nowcasting system at Danish Meteorological Institute (165) Claus Petersen and Ulrik Korsholm
11:30	Nowcasting of severe weather at DWD using remote sensing and nowcast product data (48) Tim Böhme
11:45	Experimental forecasting of severe storms in Europe: a summary of the first ESSL Testbed (179) Pieter Groenemeijer, Alois Holzer, Georg Pistotnik and Kathrin Riemann-Campe
12:00	On the identification of synoptic-scale controls associated with the presence or absence of tornado outbreaks (109) Chad Shafer, Charles Doswell, Lance Leslie, Michael Richman, Andrew Mercer, Mason Rowell and Stacey Hitchcock
12:15	What is the uncertainty of weather warnings? Can we predict it? How can this uncertainty estimate be used? (253) Martin Goeber
12:30	Sounding-derived parameters and their ability to forecast individual severe weather threats for the region of central Europe (70) Tomas Pucik, Miroslav Kolar and David Ryva

12:45 **Lunch break**

14:30 **Poster Session 1**
posters of sessions

1 · 2 · 3 · 4/6 Session 6 STORM AND TORNADO DYNAMICS 2 Chair: Paul Markowski	
16:45	KEYNOTE TALK Recent developments in our understanding of tornadic storms (239) Yvette Richardson
17:15	The role of ambient horizontal vorticity in near-ground rotation of supercells (246) Johannes Dahl, Matthew Parker and Louis Wicker
17:30	An investigation of the tornadic stage of the Goshen County, Wyoming, supercell of 5 June 2009 using EnKF assimilation of mobile radar data collected during VORTEX2 (242) James Marquis, Yvette Richardson, Paul Markowski, David Dowell, Joshua Wurman, Karen Kosiba and Paul Robinson
17:45	Photogrammetric analysis of Tsukuba tornado (227) Koji Sassa and Hiromori Miyagi
18:00	Tornadogenesis in a high-resolution simulation of the 8 May 2003 Oklahoma City tornadic supercell (167) Alexander Schenkman, Ming Xue and Ming Hu
18:15	End of Tuesday's Scientific Programme

Wednesday 5 June 2013

Session 7 (part 1) LIGHTNING AND MICROPHYSICS Chair: Jean Dessens	
09:00	KEYNOTE TALK Lightning applications in weather and climate research (34) Colin Price
09:30	The impact of multiple rain classes on surface DSDs in idealized simulations of supercell storms (149) Matthew Kumjian and Hugh Morrison
09:45	An overview of the electrical activity recorded during PEACH, the atmospheric electricity component of HYMEX (169) Eric Defer, Sylvain Coquillat, Jean-Pierre Pinty, Serge Soula, Jean-Michel Martin, Serge Prieur, Evelyne Richard, William Rison, Paul Krehbiel, Ronald Thomas, Daniel Rodeheffer, Veronique Ducrocq, Olivier Bousquet, Odile Roussot, Laurent Labatut, Thomas Farges, Christian Vergeiner, Wolfgang Schulz, Graeme Anderson, Stephane Pedeboy, Hans-Dieter Betz, Kostas Lagouvardos, Pascal Ortega, Gilles Molinie and Patrice Blanchet
10:00	The three-dimensional microphysical and dynamical structure of convective storms (106) Thorwald Stein, Robin Hogan, Emilie Carter, Carol Halliwell, Kirsty Hanley, Humphrey Lean, John Nicol and Robert Plant
10:15	Overshooting top: Physics and Dynamics (84) Pao Wang

10:30

Coffee break

Session 8
REMOTE SENSING OF STORMS: SATELLITE AND LIGHTNING

11:15	Geostationary Lightning Observations in Support of NWC and Severe Weather Monitoring (16) Jochen Grandell, Marcel Dobber and Rolf Stuhlmann
11:30	Analysis of lightning activity during thunderstorms with the overshooting tops (13) Petra Mikus and Natasa Strelec Mahovic
11:45	High-resolution climatology of lightning in Central Europe (91) Kathrin Wapler
12:00	The 2.5-minute Meteosat 10 rapid scan experiment and storm-top observations (67) Martin Setvák and Johannes Müller
12:15	The Comparison of GLD360 and EUCLID Lightning Location Systems in Europe (36) Heikki Pohjola and Antti Mäkelä
12:30	Lightning channels emerging from the top of thunderstorm clouds (189) Oscar van der Velde, Joan Montanyà, Serge Soula and Nicolau Pineda

12:45

Lunch break

Session 9
REMOTE SENSING: SATELLITE AND RADAR
Chair: Martin Setvák

14:30	KEYNOTE TALK Collaborative adaptive weather radar network for major metropolitan regions: The Helsinki implementation (265) V. Chandrasekar
15:00	Tornadogenic versus non tornadogenic supercell discrimination using radar in Portugal (143) Paulo Pinto
15:15	Lagrangian diagnostics of convective cells using combined satellite, lightning and radar observations (93) Akos Horvath, Kathrin Wapler, Fabian Senf and Hartwig Deneke
15:30	A radar-based climatology of tropopause folds and deep convection (240) Bogdan Antonescu, Geraint Vaughan and David M. Schultz
15:45	Cold rings and cold U/V shapes as seen atop of deep convective clouds in infrared satellite imagery in years 2006-2012 over Slovenia (216) Mateja Irsic Zibert
16:00	Dense weather radar network for observation of severe storm in Helsinki metropolitan area (158) Roberto Cremonini, Dmitri Moisseev, V. Chandrasekar, Pekka J Rossi, Susanna Lautaportti, Laura Rojas and Annakaisa von Lerber
16:15	Presentation on Special Issue of Atmospheric Research (Victor Homar)

16:30

End of Wednesday's Scientific Programme

18:30

Conference Dinner

Thursday 6 June 2013

Session 10
ADVANCES IN NUMERICAL MODELLING AND FORECASTING
Chair: Johannes Dahl

09:00	KEYNOTE TALK Toward Developing a Storm-scale Prediction System for Hazardous Weather: An Update (243) Louis Wicker and David Stensrud
09:30	Evolution of Modeled Convective Storms with and without Lightning Data Assimilation (107) Antti Pessi
09:45	Explicit simulations of mixed-phase electrified clouds of the HyMeX-SOP1 experiment with the mesoscale model MesoNH (231) Jean-Pierre Pinty, Michel Chong, Eric Defer, Christelle Barthe, Evelyne Richard, Paul Krehbiel, William Rison and Ronald Thomas
10:00	Numerical simulation of squall line by using detailed microphysics (15) Istvan Geresdi, Gregory Thompson and Noemi Sarkadi
10:15	August 1st 2012 convective episode over eastern France and western Switzerland: observations, forecasts and model deficiencies (101) Lionel Peyraud

10:30

Coffee break

Session 11
FORECASTING II
Chair: Pertti Nurmi

11:15	Analyzing targeting guidance for a DTS-MEDEx-2009 case study: misleading sensitivity products (136) Lorena Garcias and Victor Homar
11:30	Validation of MPEF GII product against sounding and lightning data - implications on convection forecast (137) Ivan Smiljanic, Zrinko Bahoric and Natasa Strelec Mahovic
11:45	Comparison of two mesoscale LAM-EPS generation methods for the prediction of heavy rains over the Western Mediterranean: the HyMeX IOP8 event (133) Mar Vich, Octavio Jaume, Victor Homar and Romualdo Romero
12:00	A study of the 21 March 2012 tornadic quasi linear convective system in Catalonia (147) Joan Bech, Joan Arús, Salvador Castán, Nicolau Pineda, Oscar van der Velde and Joan Montanyà
12:15	Forecaster Tornado Warning Decision Processes in PARISE 2012 (112) Pam Heinselman, Daphne Ladue, Darrel Kingfield and Robert Hoffman (presented by: Harold Brooks)

12:30	Experiences in using simulator for convection and nowcasting training (198) Vesa Nietosvaara and Kristina Petraityte
12:45	Lunch break
14:30	Poster Session 2 posters of sessions 5/11/14 · 7 · 8/9 · 10 · 12 · 13
Session 12 SOCIETAL IMPACTS AND PUBLIC WEATHER UNDERSTANDING Chair: Michael Kunz	
16:45	KEYNOTE TALK Severe Convective Storms in the European Societal Context (190) Charles Doswell III
17:15	Vaisala's new Airport Lightning Information System (ALIS): Using Vaisala's GLD360 to improve cloud-to-ground lightning warnings, present weather reporting, and low level windshear situational awareness at airports anywhere in the world (131) Nick Demetriades
17:30	Cold season thunderstorms in Finland and their effect on aviation safety (37) Antti Mäkelä, Elena Saltikoff, Jukka Julkunen, Ilkka Juga, Erik Gregow and Sami Niemelä
17:45	Perception and use of severe weather warnings by emergency management professionals in Germany (29) Thomas Kox
18:00	Lay severe weather competence - A pilot study on Brazil, India, and Germany (87) Alexander G. Keul, Luci Hidalgo Nunes, Maria Luiza De Andrade Benini, Sanjay Sharma, Devajyoti Dutta and Melanie Korff
18:30	End of Thursday's Scientific Programme

09:45	The influence of mesoscale mid-level vortices on deep convection and implications for tropical cyclogenesis (19) Melville Nicholls
Session 14 FORECASTING III Chair: Bogdan Antonescu	
10:00	KEYNOTE TALK The NWS Storm Prediction Center: An overview, and a look at new techniques (264) John Hart
10:30	Coffee break
11:15	Near Term Convective Precipitation Forecasting using Real-Time Lightning Data, Observations, and Radar (7) Daniel Lennartson
11:30	Improving forecasters skill by introducing convective initiation at DWD (49) Pierre Fritzsche
11:45	Thunderstorm forecasting by a fuzzy logic combination of model data (129) Martin Köhler and Arnold Tafferner
12:00	Significant hail producing storms in Finland: Storm morphology and environment (39) Jari Petteri Tuovinen and Jenni Rauhala
12:15	Severe weather forecasting demonstration project: a sub project for Eastern Africa (146) Vincent Sakwa
12:30	Object-based fuzzy logic fusion of multiple data sources for nowcasting of CI and storm lifecycles (62) Dennis Stich, Caroline Forster and Arnold Tafferner
13:15	Closing Session

Friday 7 June 2013

Session 13 SEVERE STORM INTERACTIONS WITH LARGE SCALES Chair: Evelyne Richard	
09:00	Medicane risk in a changing climate (43) Maria Tous, Romualdo Romero, Climent Ramis and Kerry A. Emanuel
09:15	Satellite-based climatology of (sub-)tropical cyclones in Europe (166) Alois M. Holzer and Pieter Groenemeijer
09:30	Past and projected future changes of North Atlantic polar low frequency (159) Matthias Zahn

Poster presentations

Session 1: Tuesday 14:30 - 16:45

Posters of Session 1 CLIMATE AND SEVERE STORMS

Climatic change adaptation amidst other environmental hazards (8)
Skyler Jayden Dembe, Cissy Namujju and Emmanuel Mbabazi

Diurnal variation of thunderstorms and meteorological conditions observed during the longest thunderstorms in Northern and Central Europe (21)
Katarzyna Grabowska and Joanna Poplawska

Determination of the area's most exposed to the hail damage in the continental part of Croatia (23)
Damir Pocakal and Zeljko Vecenaj

The application of selected methods for detection of tornadoes in Poland (case studies) (26)
Joanna Poplawska and Katarzyna Grabowska

Long-term changes in frequency of thunderstorms in the Baltic countries, 1950-2004 (32)
Sven-Erik Enno, Agrita Briede and Inga Stankunaite

Storm water and climatic change in peri – Urban cities in Sub – Saharan Africa (35)
Mutawe Eddy, Mutebi Emmanuel and Nambi Elisha

Anomalies in frequency / intensity correlations in hail climatology (41)
Claude Berthet and Jean Dessens

Hail storms over Switzerland: Spatial and temporal characteristics derived from radar-based hail products (47)
Luca Nisi, Olivia Martius, Alessandro Hering and Urs Germann

Climatic characteristics of thunderstorms in Latvia (59)
Zanīta Avotniece, Māris Kļaviņš, Agrita Briede and Lita Lizuma

Wide-spread severe convective storm events in Bulgaria (1991-2010) (71)
Liliya Bocheva, Ilian Gospodinov, Petio Simeonov and Tania Marinova

Radar-based hail climatology for the Czech territory (72)
Katerina Skripnikova and Daniela Rezacova

Sounding-derived parameters associated with tornado occurrence in Poland and universal tornadic index (81)
Mateusz Taszarek

Downscaling past severe storms in Finland (97)
Pauli Jokinen

Comparison of thermal images and NDVI of multispectral high resolution images, a contribution to the study of urban climate (116)
Jefferson Polizel, Magda Lombardo and Demostenes Silva Filho

Mitigating the impact of environmental degradation on climatic change and global warming (125)
Rehema Namuddu, Ryan Evans Ntambi, Samuel John Ssemwanga and Cissy Irine Namujju

Modelling of the hail hazard in Germany (126)
Marc Puskeiler, Michael Kunz and Manuel Schmidberger

Radar-based hail statistics over Belgium (130)
Maryna Lukach and Laurent Delobbe

Trends of natural disasters and morbidities in Uganda (155)
Robertson Evans Mbidde, Rose Mary Nalubega and Ronald Lutwama

Tornado and waterspout climatological risk for Greece (184)
Michalis Sioutas

Hail occurrence in Poland (1966-2006) (192)
Zuzanna Bielec-Bakowska

The relationship between tropical storm and precipitation patterns of heavy rain in Kochi, Japan (207)
Hitomi Makigusa and Koji Sassa

Comprehensive comparison of tornado and earthquake statistics (209)
Lisa Schielicke and Peter Nevir

Variability of strong convective storms in Ukraine (215)
Vira Balabukh, Stepan Yagodinets and Ludmila Malytska

Study of the 5th July 2012 severe hailstorm in Pla d'Urgell (NE Spain) (235)
Carne Farnell, Montse Aran, Muntsa Busto, Jordi Mateo, Nicolau Pineda, Tomeu Rigo and Maite Torà

Composite mean and anomaly of synoptic conditions for waterspout days over South Aegean Sea (S. Greece) (236)
Ioannis T. Matsangouras and Panagiotis T. Nastos

Using the European Severe Weather Database for climatological analyses (252)
Pieter Groenemeijer and Georg Pistotnik

Investigation of high shear, low CAPE severe convection in the Southeastern and Mid-Atlantic United States (260)
Jason M. Davis, Keith D. Sherburn and Matthew D. Parker

An analysis of convective parameters in the Northern Hemisphere from the ERA Interim re-analysis and CIMP5 projections (262)
Andrew Russell

Posters of Session 2 STORM DAMAGE AND IMPACTS

Convective activity over Ukraine (40)
Inna Semenova

Effects of hail damage mitigation on grapevines crop in Mendoza, Argentina, by atmospheric weather modification with cloud seeding (98)
Martín Alejandro Cavagnaro, Eduardo Martín, Diego Araneo, Leonardo Insegna and Jorge Carbonari

Severe storm reports of the 17th Century: Examples from the UK and France (100)
Katrin Pfeifer and Niki Pfeifer

TRUSTED SPOTTER NETWORK AUSTRIA – New Developments and Applications at ESWD (171)
Thomas Krennert, Barbara Chimani and Konrad Türk

Reanalysis of the fourth-deadliest tornado in European history (176)
Alois M. Holzer, Mathias Stampfl, Thomas Schreiner and Pieter Groenemeijer

A derecho in northeastern Europe on 8 August 2010 (177)
Annina Törmä, Jenni Rauhala and Andris Viksna

Application of radar observation data to predict a landslide due to localized heavy rain (197)
Seok-Hwan Hwang, Sanghun Lim, Dong-Ryul Lee, Dae Heon Ham and Kyotaek Hwang

Information system „The Dangerous Meteorological Phenomena» in Ukraine (217)
Vira Balabukh, Stepan Yagodinets, Elena Lavrinenko, Tamara Sotnik and Nataliya Talerko

Recent observations of meteotsunamis on the Finnish coast (223)

Hilkka Pellikka, Hilppa Gregow, Jenni Rauhala, Juha Aalto, Pauli Jokinen, Kimmo Kahma and Pentti Pirinen

Damage surveys at the Royal Meteorological Institute of Belgium (261)

Karim Hamid

Posters of Session 3

FLOODS

Extreme precipitation and related weather types over Croatia in the period 2001-2011 (38)

Dunja Plačko-Vršnak

Calculation characteristics of catastrophic floods on the mountain rivers of the Crimean peninsula (55)

Valeriya Ovcharuk, Elena Todorova and Ekaterina Myrza

Climate extremes and water balance in the city of Sao Paulo - SP, Brazil: Subsidy for public policies (113)

Fernanda Zanon, Magda Adelaide Lombardo and Bruna Jesus

Mathematical model for calculation of the maximal flood runoff of the ungauged watersheds (115)

Ovcharuk Valeriya and Eugene Gopchenko

On the extreme summer precipitation in Ukraine over the last decades (144)

Vladyslav Tymofeyev and Alexander Scheglov

Assessment of the skill of nowcasting to predict high-impact heavy precipitation events (145)

Joan Bech and Marc Berenguer

Intense precipitation patterns by means of Concentration Index – examples of two Brazilian sites (156)

Lucí Hidalgo Nunes, Javier Martín-Vide and Guilherme Henrique Gabriel

Meteorological Causes of Flashflood in Pila village (Slovakia) on 07/06/2011 (170)

Martin Benko, Norbert Polčák, Martina Sadloňová and Paulina Valová

The analysis of heavy precipitation events over small mountain catchments (181)

Daniela Rezacova, Petr Zacharov and Sarka Blazkova

Floods in Southeastern Brazil- Observations, Simulation, Projection and Uncertainties (185)

Iracema Cavalcanti, Sin Chou and Jorge Gomes

Flash Flood in Madeira Island in autumn 2012 (188)

Flavio Tiago Couto, Rui Salgado and Maria João Costa

A severe convective episode triggered by accumulated precipitation in the coast of Parana State, Brazil (203)

Jefferson De Lima Picanço and Lucí Hidalgo Nunes

A study of a flood episode in Basque Country (221)

Joseba Egaña, Santiago Gaztelumendi, Miriam Ruiz, Roberto Hernandez, Ivan R. Gelpi and Kepa Otxoa De Alda

Analysing spatial distribution of damaging floods and mass movements in Portugal from 1865 to 2010 (DISASTER database): geographical factors, weather types and human impacts (225)

Eusébio Reis, José Luís Zêzere and Marcelo Fragoso

Posters of Session 4 and 6

STORM AND TORNADO DYNAMICS

Synoptic and mesoscale analysis of waterspouts in the Adriatic (2001 – 2011 preliminary climatology) (14)

Tanja Renko, Josipa Kuzmic and Natasa Strelec Mahovic

Severe thunderstorm observation and regional modeling pilot field experiment 2012 and data assimilation impacts (17)

Mohan Kumar Das, Sujit Kumar Debsarma, Bishawjit Chowdhury, Md. Majajul Alam Sarker, Md. Mizanur Rahman, Nazlee Ferdousi and Uma Charan Mohanty

Mountain waves forcing deep convection at the East of the highest Andes tops (52)

Rodrigo Hierro, Horacio Pessano, Pablo Llamedo, Alejandro de La Torre, Andrés Odiard and Peter Alexander

A Subtropical Squall line in Southern China: Kinematic Structure Retrieved from Dual-Doppler Data (58)

Haiguang Zhou

Using self-organizing maps to classify supercell proximity soundings from the rapid update cycle (51)

Christopher Nowotarski, Paul Markowski, Yvette Richardson and George Bryan

Vapor volume reduction - an additional factor that contributes to the central low pressure in a cyclone (85)

Dhananjay Mardhekar

Derecho-like event in Bulgaria on 20 July 2011 (86)

Ilian Gospodinov, Tsvetelina Dimitrova, Lilia Bocheva, Petio Simeonov and Rumen Dimitrov

Numerical simulation of supercell tornadogenesis: The 2012 Tsukuba F3 tornado event (117)

Wataru Mashiko

Hail storms genesis and evolution in the Andes Region (Mendoza, Argentina) derived from radar data (123)

Horacio Pessano, Rodrigo Hierro, Pablo Llamedo, Alejandro de La Torre, Andrés Odiard and Peter Alexander

Observational Investigation of a Tornadic HP Supercell Storm in China (142)

Xiaoding Yu

Structure and Formation Mechanisms of Two Adjacent Shear Lines Accompanied by Wind Gusts in the Japan Sea Coastal Region during a Cold-Air Outbreak (172)

Wataru Mashiko, Hanako Y. Inoue, Syugo Hayashi, Kenichi Kusunoki, Syunsuke Hoshino, Kenichiro Arai, Kenichi Shimose, Masako Kusume, Masahide Nishihashi, Hiroshi Yamauchi, Osamu Suzuki and Hiroyuki Morishima

LEWP along squall line(180)

Robertus Groenland

Analysis of simulated precipitation in a 2D non-hydrostatic model (220)

Maurizio Fantini

The angular propulsion engine – a missing link in tornadogenesis? (234)

Anthony Straatman and Jeliazko Polihronov

Thunderstorm interception with a mobile automated surface weather station in Brazil (241)

Diogo M. Custodio, Ernani L. Nascimento, Mauricio I. Oliveira and Otávio C. Acevedo

Comparison of Three Summer Bow Echoes in Serbia (245)

Maja Rabrenovic

Toy model simulations of baroclinic and barotropic processes in downdrafts (247)

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