



European Conference on Severe Storms

6th European Conference on Severe Storms ECSS 2011 Programme

Organized by:



Universitat de les Illes Balears

Sponsored by:



Servei Meteorològic de Catalunya



	Sunday 2 Oct	Monday 3 Oct	Tuesday 4 Oct	Wednesday 5 Oct	Thursday 6 Oct	Friday 7 Oct		
8:00	Registration at Es Baluard open 15:00 - 20:30	Registration desk opens 08:00 <i>hang up posters session A</i>	Registration desk open 08:30	Registration desk open 08:30	Registration desk open 08:30	Registration desk open 08:30	8:00	
8:30		Session 3 (part 1) Convective Storm and Tornado Dynamics	Session 1 Impact of Storms on Society;	Session 8 Remote Sensing of Storms	Session 10 Storm Climate, Risk	Session 2 Convective Initiation	8:30	
9:00			Coffee break until 11:15	Coffee break	Coffee break	Coffee break until 11:45	9:00	
9:30							9:30	
10:00							10:00	
10:30							10:30	
10:45							10:45	
11:00		Coffee break / local press		Coffee break	Coffee break		11:00	
11:15			Session 3 (part 2)	<i>hang up posters session B</i>		Session 9 Storm Electrification; Lightning; Microphysics; Hail	11:15	
11:30		Opening Ceremony		Session 8 (part 2)	Session 10 (part 2)		11:30	
12:00		Session 7 Forecasting and Nowcasting of Severe Weather			Session 11		12:00	
12:30				Lunch break	Lunch break		12:30	
13:00			Lunch break	Lunch break	Lunch break		13:00	
13:30				<i>hang up posters session B</i>		13:15 Closing session presentation Dotzek and Tooming Awards	13:30	
14:00							14:00	
14:30					14:30 presentation ESSL	<i>remove posters session B</i>	14:30	
15:00	Registration at Es Baluard open 15:00 - 20:30	Session 7 (part 2)	Session 5 Extratropical, Mediterranean and Tropical Cyclones	Session 4 Numerical Modeling of Storms; Storm-Scale Data Assimilation	Session 11 (part 2) Collection of Storm Data; Damage assessment	Session 9 Storm Electrification; Lightning; Microphysics; Hail	15:00 ESSL General Assembly <i>location: Es Baluard Conference room</i>	15:00
16:00	<i>hang up posters session A</i>	Coffee break	Coffee break	Coffee break	Coffee break		16:00	
16:30		Session 7 (part 3)	Poster session A Sessions 1, 3, 5, 6, 7	Session 4 (part 2)	Poster session B Sessions 2, 4, 8, 9, 10, 11		16:30	
17:00		Session 6 Floods and flash floods	17:00 CWG meeting (members) <i>remove posters session A</i>				17:00	
17:30							17:30	
18:00							18:00	
18:30							18:30	
18:45							18:30	
19:00							19:00	
19:30							19:30	
20:00							20:00	
20:30		20:00 Bus departure at Museu Es Baluard to Bellver Castle Official reception at Bellver Castle	20:00 University Choir Concert , Church Sta Creu (near Es Baluard)	20:30 Appointment at Es Baluard for walk to restaurant Bahía Mediterráneo			20:00	
21:00				21:00 Gala dinner			20:30	
21:00							21:00	
Saturday:	Workshop by Chuck Doswell: Convective Severe Weather Diagnosis and Forecasting (at University lecture room, 09:30 to 18:00, with lunch break), for those registered Tour of Mallorca organized by UIB (09:00) both activities are not included in the Conference Fee							

Oral presentations

Monday 3 October 2011

Session 3 (part 1) CONVECTIVE STORM AND TORNADO DYNAMICS Chair: Charles A. Doswell III	
09:00	INVITED KEYNOTE TALK Supercells and tornadoes: The past, present, and future roles of observations and models in advancing our understanding Paul Markowski
09:30	Waterspout outbreaks over Europe and North America: environment and predictability (104) Michalis Sioutas, Wade Szilagyi and Alexander Keul
09:45	In situ and radar observations of low-level winds in tornadoes (122) Karen Kosiba, Josh Wurman and Paul Robinson
10:00	Physics and dynamics around the overshooting top of severe thunderstorms (82) Pao Wang, Shih-Hao Su, Martin Setvák and Zdenek Charvat
10:15	Characteristics of mesocyclones observed on Tosa Bay in Japan (55) Koji Sassa, Ipppei Hamada, Yoshiki Hamaguchi and Taiichi Hayashi
10:30	Wall clouds, scud and turbulence (253) Gregory Tripoli and Amanda Schulz
10:45	Observations of low level mesocyclonegenesis using a new trajectory mapping technique (81) Daniel Betten, Michael Biggerstaff and Gordon Carrie
11:00	Coffee break

11:30	Opening Ceremony
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Session 7 (part 1) FORECASTING AND NOWCASTING OF SEVERE WEATHER Chair: Harold Brooks	
12:00	Progress and challenges with Warn-on-Forecast (39) David Stensrud, Nusrat Yussouf, Dustan Wheatley and Jidong Gao
12:15	Operational forecast of thunderstorms over Piemonte region: a simulation of past cases, using different weather forecaster's output (10) Paolo Bertolotto
12:30	Very short range severe weather warning based on satellite and model data in South Africa (59) Estelle De Coning
12:45	Usefulness of MPEF divergence product in diagnosing the environment of deep convection (97) Christo Georgiev
13:00	15 August 2010 – synoptic and aerological analysis (31) Tomáš Púčik, Michaela Valachová and Martin Setvák
13:15	Interannual variations in tornado frequency and their association with regional atmospheric conditions: Implications for seasonal predictions (207) Robert Trapp
13:30	Lunch break

<p style="text-align: center;"><i>Session 7 (part 2)</i> FORECASTING AND NOWCASTING OF SEVERE WEATHER Chair: José A. García-Moya</p>	
15:00	<p><i>INVITED KEYNOTE TALK</i> Severe convective weather forecasting in Europe Charles A. Doswell III</p>
15:30	<p>Storm-scale ensemble forecasting for the NOAA Hazardous Weather Testbed (171) Fanyou Kong, Ming Xue, Keith Brewster, Xuguang Wang, Kevin Thomas, Yunheng Wang, Steven Weiss, Adam Clark and Jack Kain</p>
15.45	<p>The mesocyclone detection algorithm of DWD (196) Thomas Hengstebeck, Dirk Heizenreder, Paul Joe and Peter Lang</p>
16:00	<p>T-re plots generated from MSG data in severe storms forecasting – testing in Central Europe (219) Michal Pokorny and Michal Zak</p>
16:15	<p>Nowcasting and very short range forecasting of supercell thunderstorms in a weakly- or moderately-sheared environment (220) Kálmán Csirmaz, Zoltán Polyánszky, Georg Pistotnik, André Simon, Michal Neštiak, Zsolt Nagykovácsi and Alois Sokol</p>
16:30	Coffee break

17:00	<p>Nowcast warnings within AutoWARN - A system for the automatic support of the weather warning service at Deutscher Wetterdienst (84) Bernhard K. Reichert, Paul James and Sebastian Trepte</p>
17:15	<p>Comparative verification of different nowcasting systems to support optimization of severe weather warnings (100) Kathrin Wapler, Sebastian Trepte, Martin Goeber and Paul James</p>
<p style="text-align: center;"><i>Session 6</i> FLOODS AND FLASH FLOODS Chair: Agustí Jansà</p>	
17:30	<p>Variants of meteorological conditions during large-scale rain floods (157) Marek Kaspar and Miloslav Müller</p>
17:45	<p>Heavy and extreme precipitation from supercell thunderstorms in the United States (205) Nathan Hitchens and Harold Brooks</p>
18:00	<p>Synoptic and mesoscalar environments associated with the heavy local rains of 16 august 2010 in the south of the Iberian peninsula (132) José María Sánchez-Laulhé</p>
18.15	<p>The new system of flash flood forecasting in the Czech Republic (198) Lucie Březková, Petr Novák, Hana Kyznarova, Milan Šálek, Martin Jonov and Petr Frolík</p>
18.30	End

20:00 *Social Event:*
 Official reception at
 Bellver Castle
 meeting point: Museu Es Baluard

<i>Session 1</i>	
IMPACT OF STORMS ON SOCIETY; IMPACT MITIGATION	
Chair: Antonio Parodi	
09:00	<i>INVITED KEYNOTE TALK</i> The “Consortio de Compensación de Seguros” and its wind storm insurance coverage <i>Alejandro Izuzquiza</i>
09:30	IMGW project on SMS presence alert system and IMGW Monitor SH (11) <i>Lukasz Legutko and Aleksander Plygawko</i>
09:45	Investigating historical severe storms in Austria (1604, 1807) and England (1638) (38) <i>Katrin Pfeifer and Niki Pfeifer</i>
10:00	Quality of radio/television weather warnings in the eyes of the Austrian public (72) <i>Alexander Keul, Alois Holzer and Thomas Wostal</i>
10:15	Consequences of tornadic storms in urban areas: Case study of the Paris tornado (France) in September 10, 1896 (112) <i>Emmanuel Wesolek and Pierre Mahieu</i>
10:30	Use of severe weather outlooks for damage prevention and civil protection in Finland (185) <i>Ari-Juhani Punkka and Jenni Rauhala</i>
10:45	Coffee break

<i>Session 3 (part 2)</i>	
CONVECTIVE STORM AND TORNADO DYNAMICS	
Chair: David Stensrud	
11:15	<i>INVITED KEYNOTE TALK</i> Tornado dynamics <i>Howard Bluestein</i>
11:45	The Verification of the Origins of Rotation in Tornadoes 2 (VORTEX2) (203) <i>Josh Wurman, Louis Wicker, Yvette Richardson, Erik Rasmussen, Paul Markowski, David Dowell, Don Burgess and Howie Bluestein</i>
12:00	Observations from VORTEX2: The pre-tornadic phase of the Goshen County, Wyoming, supercell (5 June 2009) (125) <i>Paul Markowski, Yvette Richardson, Josh Wurman, Karen Kosiba, Paul Robinson and Jim Marquis</i>
12:15	Observations from VORTEX2: The genesis of the Goshen County, Wyoming tornado (05 June 2009) (120) <i>Karen Kosiba, Joshua Wurman, Paul Markowski, Yvette Richardson and Paul Robinson</i>
12:30	Observations from VORTEX2: The intensification of the Goshen County, Wyoming tornado (05 June 2009) (241) <i>Josh Wurman, Karen Kosiba, Paul Markowski, Yvette Richardson and Paul Robinson</i>
12:45	Mechanisms producing heavy precipitation event in the southern Adriatic area <i>Branka Ivančan-Picek, Kristian Horvath and Nataša Streleć Mahovic</i>
13:00	Vorticity induction: alignment of RFD vortex ring segments within the mesocyclone (235) <i>Marcus Büker and Gregory Tripoli</i>
13:15	Detailed diagnostic analysis of tornado genesis within simulated supercell storms (237) <i>Ming Xue, Alexander Schenkman and Brett Roberts</i>
13:30	Lunch break

Session 5 EXTRATROPICAL, MEDITERRANEAN AND TROPICAL CYCLONES Chair: Evelyne Richard	
15:00	Mesoscale numerical simulations of Medicanes: Comparison against satel- lite-derived trajectories and isolation of key physical processes(74) <i>Maria Tous, Romu Romero and Climent Ramis</i>
15:15	Wind field distribution within hurricane force extratropical cyclones over North Pacific and Atlantic using QuikSCAT scatterometer measurements (4) <i>Zorana Jelenak, Paul Chang and Jo- seph Sienkiewicz</i>
15:30	A case study of heavy convective pre- cipitation events over the Canary Is- lands associated with a polar-subtropical cyclone (23) <i>Olinda Carretero, Felisa Aguado and Francisco Martin</i>
15:45	Power law behaviour of atmospheric vortices (37) <i>Lisa Schielicke and Peter Nevir</i>
16:00	The numerical simulation of the genesis and intensification of the severe cyclon- ic storm in the north Indian ocean (1) <i>Medha Deshpande and Purva Salvekar</i>
16:15	Verifying sensitivity climatologies of Mediterranean intense cyclones for op- timal adaptive observations (186) <i>Lorena Garcies and Víctor Homar</i>
16:30	Coffee break
17:00	Poster Session A posters of sessions 1 · 3 · 5 · 6 · 7
18.30	End

19:30 *Social Event:*
Concert by the University
Choir at the Church of
Santa Creu

Wednesday 5 October 2011

<p style="text-align: center;"><i>Session 8 (part 1)</i></p> <p style="text-align: center;">REMOTE SENSING OF STORMS</p> <p style="text-align: center;">Chair: Jenni Rauhala</p>		<p style="text-align: center;"><i>Session 8 (part 2)</i></p> <p style="text-align: center;">REMOTE SENSING OF STORMS</p> <p style="text-align: center;">Chair: Martin Setvák</p>	
09:00	<p><i>INVITED KEYNOTE TALK</i></p> <p>Remote sensing of convective storms: A-Train observations of storm tops Martin Setvák, Alois Sokol, Daniel Lindsey, Kristopher Bedka, Pao Wang, Jindřich Šřástka and Zdeněk Charvát</p>	11:30	<p>Observations of a supercell storm structure, its visual appearance and relationship with severe weather (147) Jenni Rauhala</p>
09:30	<p>Correlating overshooting tops and severe weather (16) Petra Mikus and Natasa Strelec Mahovic</p>	11:45	<p>Remote sensing observations of a Mediterranean thundersnow and low-altitude heavy snowfall event (193) Joan Bech, Montserrat Aran, Clara Bruçet, Nicolau Pineda, Tomeu Rigo and Eliseu Vilaclara</p>
09:45	<p>Automatic recognition of cold-ring pattern on IR satellite images (110) Mateja Irsic Žibert, Benedikt Strajnar and Janez Žibert</p>	12:00	<p>Lightning nowcasting towards lightning warnings using geostationary satellite data (226) John Mecikalski and Lori Schultz</p>
10:00	<p>Detection of Rapidly Developing Cumulus Areas from MTSAT-1R Short-Time-Interval Images (148) Akira Sobajima, Izumi Okabe, Takahito Imai and Yasushi Izumikawa</p>	12:15	<p>Results of the 2010-2011 lightning measurement campaigns in Spain (249) Oscar van der Velde, Joan Montanyà, David Romero, Robert Rico, Ferran Fabró, Victor March, Glòria Solà and Nicolau Pineda</p>
10:15	<p>The use of NOAA/ATOVS satellite data for convective storms nowcasting and early warnings (156) Bozena Lapeta</p>	12:30	<p>The benefits of GLD360 lightning location data in operational weather forecasting (113) Heikki Pohjola, Antti Mäkelä, Nick Demetriades, Nikki Hembury and Ron Holle</p>
10:30	<p>8-year statistical analysis of 3D radar storm tracks (167) Edouard Goudenhoofdt and Laurent Delobbe</p>	12:45	<p>A close look at a severe mesoscale convective system surrounding the Air France 447 crash (118) Humberto Barbosa, Michel Mesquita and Ivon da Silva Júnior</p>
10:45	<p>Objective satellite-based overshooting top and enhanced-V/cold ring signature detection: Validation and their relationships with severe weather (200) Kristopher Bedka, Jason Brunner, Richard Dworak and Wayne Feltz</p>	13:00 Lunch break	
11:00	Coffee break		

<i>Session 4 (part 1)</i>	
NUMERICAL MODELING OF STORMS; STORM-SCALE DATA ASSIMILATION	
Chair: Maurizio Fantini	
15:00	<i>INVITED KEYNOTE TALK</i> Probabilistic forecast of severe weather events: The long way to the mesoscale José A. García-Moya
15:30	On the development of large surface vorticity in high-resolution supercell simulations (29) Johannes Dahl and Matthew Parker
15.45	Multi-model simulation of the F4 Hautmont tornado (45) Valerian Jewtoukoff
16:00	Initial results from convective-scale analysis and prediction of the 14 June 2011 Norman Oklahoma macroburst using conventional and rapid-scan weather Doppler radar data (263) Louis Wicker, Edward Mansell, Daniel Dawson and David Dowell
16:15	Numerical simulation of low-level mesocyclones associated with winter convective cells over the Japan Sea area (218) Ken-Ichi Shimose, Shugo Hayashi, Wataru Mashiko, Kenichi Kusunoki, Kotaro Bessho, Shunsuke Hoshino, Hanako Inoue, Masahisa Nakazato, Hiroshi Yamauchi, Keiji Araki, Hiroyuki Morishima and Keiji Adachi
16:30	Coffee break

<i>Session 4 (part 2)</i>	
NUMERICAL MODELING OF STORMS; STORM-SCALE DATA ASSIMILATION	
Chair: Howard Bluestein	
17:00	Assimilation of water vapour airborne Lidar observations: Impact study on the COPS precipitation forecasts (232) Evelyne Richard, Soline Bielli, Matthias Grzeschick, Cyrille Flamant and Christoph Kiemle
17:15	Comparisons of kinematical retrievals within a simulated supercell: Dual-Doppler analysis vs. EnKF data assimilation (93) Corey Potvin, Louis Wicker and Alan Shapiro
17:30	Assessing the impact of the assimilation of satellite-retrieved precipitation and humidity products into the hydrostatic BOLAM: Two Italian case studies (202) Stefano Mariani, Oxana Drofa, Silvio Davolio, Antonio Speranza and Andrea Buzzi
17.45	Explicit simulations of electrified mixed-phase clouds in MesoNH: from semi-idealized to first real-case studies (233) Jean-Pierre Pinty, Christelle Barthe and Michel Chong
18:00	Convective storms in a storm-permitting NWP ensemble (191) Nigel Roberts, Giovanni Leoncini, Changgui Wang, Emilie Carter and Humphrey Lean
18:15	The effects of low-level shear on the intensity and longevity of low-level mesocyclones in simulated supercell thunderstorms (126) George Bryan and Leigh Orf
18:30	Word of the Editor-in-Chief of Atmospheric Research José-Luis Sánchez
18.45	End

21:00 *Social Event*
Gala dinner at the Restaurant
Bahía Mediterráneo
meeting point: Es Baluard at 20:30

Thursday 6 October 2011

Session 10 STORM CLIMATE, RISK ASSESSMENTS AND CLIMATE CHANGE Chair: Paul Markowski	
09:00	INVITED KEYNOTE TALK Severe thunderstorms and climate change Harold Brooks
09:30	Regional trends in severe convective weather: a dynamical downscaling approach (69) Eric Robinson, Robert Trapp, Michael Baldwin, Alex Gluhovsky and Noah Diffenbaugh
09:45	A climatology of supercells for south-eastern Romania (95) Sorin Burcea, Bogdan Antonescu, Daniel Carbutaru, Monica Sasu and Aurora Bell
10:00	Monitoring climatic extremes with the European Climate Assessment & Dataset (ECA&D) (214) Gerard Van Der Schrier, Albert Klein Tank and Else van den Besselaar
10:15	Derechoes in Europe (30) Christoph Gatzen
10:30	Severe bow echoes in Germany (27) Christoph Gatzen
10:45	An assessment of Australian severe thunderstorm environments 1989-2010 (127) John Allen and David Karoly
11:00	Coffee break

11:30	A four years (2007-2010) classification of convective storms in the Mediterranean basin (197) Samantha Melani, Francesco Pasi, Bernardo Gozzini and Alberto Ortolani
11:45	The representation of convective wind gusts in coarse numerical models (258) Pieter Groenemeijer, Heikki Tuomenvirta, Pauli Jokinen and Andrea Vajda

Session 11 (part 1) COLLECTION OF STORM DATA; DAMAGE ASSESSMENT Chair: Sergio Alonso	
12:00	Contribution to an European adaptation of the Enhanced Fujita Scale: Analysis of damage caused by tornadoes in France (111) Emmanuel Wesolek and Pierre Mahieu
12:15	Assessment of the hail hazard from a combination of different meteorological datasets and insurance data (138) Marc Puskeiler and Michael Kunz
12:30	Using historical information sources to reconstruct historical severe storm cases in Central Europe (208) Thilo Kühne and Heiko Wichmann
12:45	Damage survey in the Netherlands after the squall line passage of July 14 th 2010 (108) Jacob Kuiper
13:00	Lunch break

14:30 Presentation of ESSL Testbed (Es Baluard Conference Room)

<i>Session 11 (part 2)</i>	
COLLECTION OF STORM DATA; DAMAGE ASSESSMENT	
Chair: Marianne König	
15:00	<i>INVITED KEYNOTE TALK</i> Trends in weather related loss events – increasing evidence of a contribution of global warming Peter Höppe (Munich Re)
15:30	Enhancing tornado climatologies with Doppler radar (21) Mallie Toth, Jeff Trapp, Josh Wurman and Karen Kosiba
15.45	Automatic hazard level approximation of convective storms using real time emergency data (134) Pekka J. Rossi, Vesa Hasu, Antti Mäkelä, Jarmo Koistinen and Heikki Pohjola
16:00	Meteorological analysis of the extraordinary hailstreak on 26 May 2009 (165) Michael Kunz, Jan Handwerker, Susanna Mohr, Marc Puskeiler, Bernhard Mühr, Manuel Schmidberger and Rainer Langner
16:15	Towards an improved wind speed scale vs. damage description adapted for Central Europe (260) Bernold Feuerstein, Pieter Groenemeyer, Erik Dirksen, Martin Hubrig, Alois M. Holzer, Thilo Kühne and Nikolai Dotzek
16:30	Coffee break
17:00	Poster Session B posters of sessions 2 · 4 · 8 · 9 · 10 · 11
18.30	End

18:30 Photo and videos of
 severe storms
 (in Es Baluard Conference Room)

Session 2 CONVECTIVE INITIATION Chair: Rosella Ferretti	
09:00	INVITED KEYNOTE TALK Predictability and predictive ability of severe rainfall processes A. Parodi
09:30	Detection of convective initiation by objective analysis methods and its use for precipitation nowcasting (236) Georg Pistotnik, Stefan Schneider and Christoph Wittmann
09:45	Convection Initiation – Nowcasting by data fusion and its verification (142) Dennis Stich, Caroline Forster, Tobias Zinner and Arnold Tafferter
10:00	Severe convection checklist for warning operations at the MeteoSwiss forecasting offices (210) Lionel Peyraud, Lionel Fontannaz and Christophe Salamin
10:15	Conceptual model for tornadic supercell initiation in SE Romania (211) Aurora Bell and Daniel Carburaru
10:30	Slantwise circulations and convection in pre-frontal environment over central Italy: a numerical study (64) Maurizio Fantini, Piero Malguzzi and Andrea Buzzi
10:45	Investigating Hector convective development by microphysical analysis using TRMM satellite data and high resolution model simulations (225) Sabrina Gentile, Rossella Ferretti and Frank Silvio Marzano
11:00	Why does the atmosphere produce deep columnar convective vortices? (78) Charles A. Doswell III
11:15	Coffee break

Session 9 STORM ELECTRIFICATION; LIGHTNING; MICROPHYSICS; HAIL Chair: Jean Dessens	
11:45	INVITED KEYNOTE TALK Performance Evaluations of the European Lightning Location System EUCLID Wolfgang Schulz (ALDIS/EUCLID)
12:15	GIS analysis of Austrian-Bavarian CG lightning data (99) Thomas Prinz, Wolfgang Spitzer, Christian Neuwirth, Wolfgang Schulz, Gerhard Diendorfer and Alexander Keul
12:30	Cloud-to-ground lightning activity in Portugal: overall characterization, spatial and temporal patterns of associated thunderstorms over the 2003-2009 period (117) Marcelo Fragoso, Sandra Correia, Solange Leite, João Santos and João Sousa
12:45	Severe hail size discrimination using dual-polarized weather radar data. A dual-wavelength comparison between C and S band (168) Rudolf Kaltenböck and Alexander Ryzhkov
13:00	Trend analysis of meteorological parameter relevant to hail from soundings and reanalysis data (140) Susanna Mohr and Michael Kunz
13:15	Closing session
13:45	End of Scientific Programme

15:00 *Side meeting:*
 ESSL General Assembly
 (Es Baluard Conference Room)

Poster presentations

Poster session A

Tuesday 17:00–18:30

Posters of Session 1
IMPACT OF STORMS ON SOCIETY; IMPACT MITIGATION

Modeling severe hail risk in the contiguous France from re/insurance perspectives (3)
Jianming Yin

Austrian media weather communication - strengths and weaknesses (73)
Thomas Wostal, Gunda Schuller, Johannes Eberl, Johannes Mayer and Louisa Hacking

Severe Rainstorms in Brazil, cultural differences expressed in a Social Media Service may signal ways to more effectively apportion prevention and mitigation funding (22)
Ana Lucia Macedo, Alfredo Behrens and Angela Ruiz

Increasing severity of thunderstorms and cyclones: Environmental and socio-economic impacts in India (76)
Shadananan Nair

Computational Fluid Dynamics (CFD) analysis of downbursts affecting overhead electricity transmission lines (192)
Simon Tschannett, Hildegard Kaufmann, Matthias Ratheiser, Wolfgang Gepp, Herbert Lugschitz and Christoph Karner

Impact of storms on society, impact mitigation (106)
Bransby Bubele Bulu

Extreme precipitation events and their socio-spatial impacts in a Brazilian urban centre: Campinas-SP (240)
Marina Soria Castellano and Luci Hidalgo Nunes

Time series of severe storms in Austria, 1951 – 2010 (94)
Otto Svabik

Analysis of hail storm characteristics obtained by radar, short- and long-term impact (159)
Svetlana Stevanovic, Mira Stepanovic-Nikolic and Julijana Nadj

Posters of Session 3
CONVECTIVE STORM AND TORNADO DYNAMICS

Rapid-Scan DOW radar observations of tornadoes during VORTEX2 (121)
Josh Wurman, Karen Kosiba and Paul Robinson

The 14 July 2010 severe MCS event over parts of central Europe (42)
Helge Tuschy and Marcus Beyer

On space-time distribution of tornado events in Bulgaria (1961-2010): analyses of two severe tornadic storms (189)
Petio Simeonov, Ilian Gospodinov and Lilia Bocheva

The vertical structures within a winter tornadic storm during landfall over the Japan Sea area (213)
Kenichi Kusunoki, Hanako Inoue, Kenichi Shimose, Masahisa Nakazato, Kotaro Bessho, Shunsuke Hoshino, Wataru Mashiko, Syugo Hayashi, Ken-Ichiro Arai, Masahide Nishihashi, Hiroyuki Morishima and Keiji Adachi

Mesoanticyclones and anticyclonic tornadoes in supercells (51)
Howard Bluestein, Jeffrey Snyder and Michael French

Planet boundary layer dynamics involved in northern Italy mesocyclonic and mesocyclonic waterspouts as well as in northern and central Adriatic Sea (61)
Angelo Bertozzi and Pierluigi Randi

Impact of Alps-Apennines orography in distribution of severe weather and tornadic events through northern Italy (96)
Angelo Bertozzi, Pierluigi Randi, Niccolò Ubalducci, Andrea Griffa and Andrea Chini

Evolution of Mesoscale Convective System in Southern Serbia (227)
Maja Rabrenovic and Tatjana Majstorovic

Mesoscale Convective Vortices in Northern East Serbia (230)
Maja Rabrenovic

Infrasound generation by strong convective storms (17)
Mariam Akhalkatsi and Grigol Gogoberidze

A case study of severe hailstorm over central part of Serbia on July 8th 2009 (56)

Ruzica Radovanovic-Bulic, Svetlana Biljic and Ivan Bulic

Fine-scale Dual-Doppler analysis of the boundary layer in Hurricane Frances (2004) (123)

Josh Wurman, Karen Kosiba and Paul Robinson

Radar and in situ observations in a winter bow echo and associated meso-vortices over the Japan Sea area (212)

Kenichi Kusunoki, Hanako Inoue, Masahisa Nakazato, Kotaro Bessho, Shunsuke Hoshino, Wataru Mashiko, Syugo Hayashi, Hiroyuki Morishima and Keiji Adachi

Posters of Session 5 EXTRATROPICAL, MEDITERRANEAN AND TROPICAL CYCLONES

A Study of Quasi-millennial Extratropical Cyclone Activity Using Tracking and Clustering Methods (2)

Lan Xia, Frauke Feser, Hans von Storch and Matthias Zahn

Climate model simulations of the large-scale conditions associated with the genesis of Medicanes (67)

Javier Martin, Romualdo Romero and Maria Tous

An adaptation of the objective cyclone detection algorithm to a medicane event (187)

M. Angeles Picornell, Joan Campins and Agustin Jansà

A Diagnostic Study of Explosive Cyclogenesis over Northern European Russia (86)

Andrey L. Vetrov and Nikolay A. Kalinin

Detection of cyclone attributes by Hofmüller diagrams (151)

Miloslav Müller and Marek Kaspar

Tropical cyclones in Bay of Bengal and Indian Ocean and solar influences on it (32)

Dhruba Banerjee and Ramaprosad Bondyopadhyaya

Heat transfer in the system Ocean-Cyclone-Atmosphere and maximum potential intensity of tropical cyclone (44)

Irakli Shekriladze

Windstorm Xhyntia: overview and comparison with other explosive cyclogenesis cases affecting Basque Country area (164)

Joseba Egaña, Santiago Gaztelumendi, David Pierna, Ivan R Gelpi, Roberto Hernandez and Kepa Otxoa De Alda

Mechanism of the TC/submonthly Wave Pattern Propagation in the Western North Pacific: A Barotropic View (201)

Ken-Chung Ko and Huang-Hsiung Hsu

Posters of Session 6 FLOODS AND FLASH FLOODS

Rainfall regime of the westernmost area of the state of São Paulo, Brazil, changed by the lake of Porto Primavera HPP (170) Mauricio Agostinho Antonio and Carlos Alberto Agostinho Antonio

Flash-flood in Pula in the North Adriatic in the night of 24 to 25 September 2010 (36)

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