

# 5th HyMeX Workshop



## WORKSHOP PROGRAMME

(update: 4 May 2011)

## WEEK CALENDAR

|             | Monday   | Tuesday                               | Wednesday  | Thursday                              | Friday              |
|-------------|--|---------------------------------------|--|---------------------------------------|---------------------|
| 8:30-9:00   |  | Registration                          | W1<br>Int. air-sea exch.<br>Cont. hydrol. cycle<br>& water resources | TH1<br>HP-FF-F                        | ISSC at IME,<br>Mao |
| 9:00-9:30   |  | Opening                               |  |                                       |                     |
| 9:30-10:00  |  | T1<br>HP-FF-F                         |  |                                       |                     |
| 10:00-10:30 | Meeting of<br>science working group<br>and task team leaders | Coffee break                          |  |                                       |                     |
| 10:30-11:00 |  |                                       |  |                                       |                     |
| 11:00-11:30 |  | T2<br>HP-FF-F                         | W2<br>Cont. hydrol. cycle<br>& water resources                       | PW7, PW8<br>PW9                       |                     |
| 11:30-12:00 |  | Water budget                          | HP-FF-F  |                                       |                     |
| 12:00-12:30 |  |                                       |  |                                       |                     |
| 12:30-13:00 |  | Lunch                                 |  |                                       |                     |
| 13:00-13:30 |  |                                       |  |                                       |                     |
| 13:30-14:00 |  |                                       |  |                                       |                     |
| 14:00-14:30 |  |                                       |  |                                       |                     |
| 14:30-15:00 |  | T3<br>Societal and economic<br>impact | W3<br>HP-FF-F  | Parallel national<br>meetings         |                     |
| 15:00-15:30 |  |                                       |  | Rendering of<br>parallel sessions     |                     |
| 15:30-16:00 |  | Poster session and coffee break       |  | Coffee break                          |                     |
| 16:00-16:30 |  |                                       |  | Summary and<br>closing remarks        |                     |
| 16:30-17:00 |  |                                       |  | ISSC meeting<br>at the workshop venue |                     |
| 17:00-17:30 |  | PW1, PW2<br>PW3                       | PW4, PW5<br>PW6  |                                       |                     |
| 17:30-18:00 |  |                                       |  |                                       |                     |
| 18:00-18:30 |  |                                       |  |                                       |                     |
| 18:30-19:00 |  |                                       |  |                                       |                     |
| 19:00-19:30 |  |                                       |  |                                       |                     |
| 19:30-20:00 |  |                                       |  |                                       |                     |
| 20:00-      |  |                                       | Workshop dinner  |                                       |                     |

| <b>Tuesday, 17 May 2011</b>   |  |
|---|--|
| 08:30 - 09:00   | <b>Registration</b>  |
| 09:00 - 09:30   | <b>Opening session</b> <ul style="list-style-type: none"> <li>• Welcome address (Authorities and representatives)</li> <li>• Workshop introduction (P. Drobinski, V. Ducrocq, P. Lionello, and the HyMeX ISSC)</li> <li>• Practical information (Local Organizers)</li> </ul>  |
| <b>T1 - Plenary session - Science talks</b>   |  |
| <b>Heavy precipitation, flash-floods and floods – observations</b><br><b style="text-align: right;">Chair: V. Homar</b> |  |
| 09:30 - 09:45   | <b>T1.1</b> - Next-generation satellite precipitation products for understanding global and regional water variability<br><i>A. Hou</i>  |
| 09:45 - 10:00   | <b>T1.2</b> - HyFLOW: Hydrometeorological Field Laboratory On Wheels<br><i>J. Gourley, Y. Hong, E. Anagnostou, O. Bousquet and D. Jorgensen</i>  |
| 10:00 - 10:15   | <b>T1.3</b> - Sensitivity analysis of Mediterranean High-Impact weather: guiding routine and targeted observation plans<br><i>L. Garcies and V. Homar</i>  |
| 10:15 - 10:30   | <b>T1.4</b> - Cloud properties climatology from CloudSat/CALIPSO synergy above the Hymex area: a tool for preparing flight plans.<br><i>J. Delanoë, A. Protat and C. Flamant</i>   |
| 10:30 - 11:00   | <b>Coffee Break</b>  |
| <b>T2 - Plenary session - Science talks</b>   |  |
| <b>Heavy precipitation, flash-floods and floods – observations</b><br><b style="text-align: right;">Chair: A. Jansa</b> |  |
| 11:00 - 11:15   | <b>T2.1</b> - Lidar and radar measurements of the melting layer in the frame of the convective and orographically-induced precipitation study: observations of dark and bright band phenomena<br><i>P. Di Girolamo, D. Summa, R. Bhawar, T. Di Iorio, G. Vaughan, G. Peters and Y. Dufournet</i>                             |
| 11:15 - 11:30   | <b>T2.2</b> - Heavy rainfall and flash flood in Dubrovnik on 23 <sup>rd</sup> November 2010<br><i>M. Tudor, K. Horvath, D.M. Drvar, A. Stanesic, S. Ivatek-Sahdan and D. Placko-Vrsnak</i>   |
| <b>Water budget of the Mediterranean Sea</b><br><b style="text-align: right;">Chair: D. Gomis</b>                       |  |
| 11:30 - 11:45   | <b>T2.3</b> - Water vapor transport and precipitation over the Mediterranean region<br><i>A. Elizalde and D. Jacob</i>   |
| 11:45 - 12:00   | <b>T2.4</b> - Seasonal to interannual variability of the mass contribution to Mediterranean Sea level variability. Links with the Mediterranean water budget<br><i>F.M. Calafat, M. Marcos, G. Jordà and D. Gomis</i>  |
| 12:00 - 12:15   | <b>T2.5</b> - Regional Climate System Modelling at CNRM: a multi-component approach to study the Mediterranean Sea Water Budget<br><i>S. Somot, F. Sevault, S. Calmanti, C. Dubois, A. Alias, B. Decharme and M. Déqué</i>   |
| 12:15 - 12:30   | <b>T2.6</b> - The regional coupled system WRF-NEMO over the Mediterranean (MORCE platform): impacts of mesoscale coupled processes on the water budget estimation<br><i>C. Lebeaupin Brossier, K. Béranger, P. Drobinski, S. Bastin, S. Mailler, G. Samson, S. Masson, G. Madec, S. Valcke, L. Coquart and E. Maisonnave</i> |
| 12:30 - 12:45   | <b>T2.7</b> - Multiparametric analysis and validation in the Mediterranean of 4 eddy-permitting global OGCM hindcasts of past decades<br><i>E. Vidal-Vijande, A. Pascual, S. Somot, B. Barnier, J.M. Molines and J. Tint</i>   |

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| 12:45 - 13:00                               | <b>T2.8</b> - HyMeX/MED-CORDEX analysis of the Mediterranean water budget variability regarding the effects of horizontal resolution<br><i>H. Omrani, C. Lebeaupin-Brossier, P. Drobinski, S. Bastin and K. Beranger</i>                        |
| 13:00 - 14:30                               | <b>Lunch</b>  |
| <b>T3 - Plenary session - Science talks</b> |   |
| <b>Societal and economic impact</b>         |   |
| <b>Chair: P. Lionello</b>                   |   |
| 14:30 - 14:45                               | <b>T3.1</b> - Assessing insured flood losses in Spain - An overview<br><i>J.I. Barredo, D. Saurí and M.C. Llasat</i>  |
| 14:45 - 15:00                               | <b>T3.2</b> - Consequences of the climate change on water scarcity in the Mediterranean basin<br><i>H. Nassopoulos and P. Dumas</i>   |
| 15:00 - 15:15                               | <b>T3.3</b> - A quantile-quantile approach for the adjustment of climate potential for tourism at local and regional scales: application to the Mediterranean coastal region<br><i>A. Amengual, V. Homar, R. Romero, S. Alonso and C. Ramis</i> |
| 15:15 - 15:30                               | <b>T3.4</b> - First results of the Social Impact Research group in Catalonia and the Balearic Island.<br><i>J. Amaro, M. Gayà, M. Aran, and M.C. Llasat</i><br>As an introduction to PW3  |
| 15:30 - 15:45                               | <b>T3.5</b> – Overview of the regional modelling Implementation Plan<br><i>S. Somot and P. Ruti</i><br>As an Introduction to PW1  |
| 15:45 - 16:00                               | <b>T3.6</b> - Overview of the SOP1-EOP operations dedicated to Heavy Precipitation and Flash-floods<br><i>V. Ducrocq et al.</i><br>As an introduction to PW2  |
| 16:00 - 17:00                               | <b>Poster session and coffee break</b>  |
| 17:00 - 19:00                               | <b>TPW - Parallel Working sessions</b>  |
|   | <b>PW1</b> - Regional climate modelling - International coordination (TTM3 activities)<br><b>Chairs:</b> <i>P. Ruti, S. Somot</i>   |
|   | <b>PW2</b> - SOP1 (EOP) operations - International coordination of research instruments deployment<br><b>Chairs:</b> <i>U. Corsmeier, P. Di Girolamo, E. Richard</i>  |
|   | <b>PW3</b> - Societal and economical impacts - Fostering and coordination of activities<br><b>Chairs:</b> <i>P. Dumas, C. Llasat</i>  |

| <b>Wednesday, 18 May 2011</b>   |   |
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| <b>W1 - Plenary session - Science talks</b>                           |   |
| <b>Intense air-sea exchanges</b>                                      |   |
| <b>Chair: J. Tintoré</b>  |   |
| 08:30 - 08:45   | <b>W1.1</b> - Role of an Upper-Level Jet in Explosively Deepening a Mediterranean Storm<br><i>J.-P. Chaboureau, F. Pantillon, D. Lambert, E. Richard and C. Claud</i>   |
| 08:45 - 09:00   | <b>W1.2</b> - High frequency atmospheric forcing of coastal microtidal sea<br><i>A. Schaeffer, A. Molcard, P. Fraunié, P. Garreau and Y. Seity</i>  |
| 09:00 - 09:15   | <b>W1.3</b> - The role of drainage winds in the formation of nocturnal convective systems in the western Mediterranean coast<br><i>J. Mazon and D. Pino</i>   |
| 09:15 - 09:30   | <b>W1.4</b> - Participation of Naval Research Laboratory (NRL) in HyMeX<br><i>C. H. Bishop, E. Coelho, C. Rowley and A. Zhao</i>  |
| <b>The continental hydrological cycle and related water resources</b> |   |
| <b>Chair: F. Belda</b>  |   |
| 09:30 - 09:45   | <b>W1.5</b> - Evaluation of dynamical and statistical methods for downscaling of extreme precipitation and surface temperature in the Mediterranean region in the frame of HyMeX and MED-CORDEX<br><i>E. Flaounas, P. Drobinski, M. Vrac, S. Bastin, K. Béranger, M. Borga, J.-C. Calvet, G. Delrieu, C. Lebeaupin, E. Morin, H. Omrani, G. Tartari and R. Toffolon</i> |
| 09:45 - 10:00   | <b>W1.6</b> - Intercomparison between regional climate models (RCMs) and global climate models (GCMs) for monthly precipitation and temperature fields over the Mediterranean region<br><i>L. Congedi and P. Lionello</i>   |
| 10:00 - 10:15   | <b>W1.7</b> - The Report on Climate Change in Catalonia<br><i>M.C. Llasat and GECCC steering committee</i>  |
| 10:15 - 10:30   | <b>W1.8</b> - Droughts in the Twentieth Century: patterns and characteristics simulated over the Mediterranean by two version of ORCHIDEE<br><i>N. Bertrand and J. Polcher</i>  |
| 10:30 - 11:00   | <b>Coffee Break</b>   |
| <b>W2 - Plenary session - Science talks</b>                           |   |
| <b>The continental hydrological cycle and related water resources</b> |   |
| <b>Chair: P. Drobinski</b>  |   |
| 11:00 - 11:15   | <b>W2.1</b> - Meteorological dry and wet spells in Europe: observed and simulated by climate models<br><i>B. Ahrens</i>   |
| 11:15 - 11:30   | <b>W2.2</b> - Assessing the vulnerability of hydrosystems to combined effect of climate changes and human activities in Mediterranean area<br><i>Y. Caballero, L. Maton, I. Terrasson, P. Fleury, N. Dorfliger, B. Ladouche, S. Chazot, J.-D. Rinaudo, L. Neppel, E. Martin, D. Salas and Melia</i>   |
| <b>Heavy precipitation, flash-floods and floods</b>                   |   |
| 11:30 - 11:45   | <b>W2.3</b> - Origin and transport of the moisture supply to the Mediterranean Heavy Precipitating Events<br><i>F. Duffourg and V. Ducrocq</i>  |
| 11:45 - 12:00   | <b>W2.4</b> - Moisture sources for heavy precipitation events: results from tagging experiments<br><i>A. Winschall, S. Pfahl, H. Sodemann and H. Wernli</i>   |

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| 12:00 - 12:15   | <b>W2.5</b> - Cyclones producing floods in Italy in the second half of twenty century<br><i>M. Reale, P. Lionello, L. Congedi and P. Valente</i>   |
| 12:15 - 12:30   | <b>W2.6</b> - Cloud microphysical observation strategy based on multi-sensor synergy: an HyMeX opportunity in the Cevennes-vivarais TA.<br><i>Y. Dufournet</i>   |
| 12:30 - 12:45   | <b>W2.7</b> - High resolution analysis for process studies and NWP model verification: examples from COPS and D-PHASE and possible applications to HyMeX<br><i>M. Dorninger, T. Gorgas, S. Kiesenhofer and S. Umdasch</i>  |
| 12:45 - 13:00   | <b>W2.8</b> - AROME WMED, a mesoscale model designed for HyMeX<br><i>N. Fourri , M. Nuret, P. Brousseau, F. Duffourg, V. Guidard, P. Martinet and E. Wattrelot</i>   |
| 13:00 - 14:30   | <b>Lunch</b>   |
| <b>W3 - Plenary session - Science talks</b>                                     |  |
| <b>Heavy precipitation, flash-floods and floods</b><br><i>Chair: S. Davolio</i> |  |
| 14:30 - 14:45   | <b>W3.1</b> - Sensitivity of precipitation forecasts to uncertainties in the physical parametrisations of a forecasting model<br><i>A. Hally, S. Fresnay, E. Richard and D. Lambert</i>  |
| 14:45 - 15:00   | <b>W3.2</b> - Sensitivity tests to different IC and DA strategy to investigate the impact of radar data assimilation on WRF rainfall<br><i>I. Maiello, R. Ferretti, S. Gentile, M. Montopoli, E. Picciotti and F.S. Marzano</i>  |
| 15:00 - 15:15   | <b>W3.3</b> - Testing SAL QPF verification measure: some Mediterranean heavy precipitation cases<br><i>C. Santos and A. Ghelli</i>   |
| 15:15 - 15:30   | <b>W3.4</b> - HyMeX TTM4a: a unique opportunity for DA-EPS research<br><i>V. Wulfmeyer, N. Fourrie, Y. Michel, and T. Auligne</i><br>As an introduction to PW4   |
| 15:30 - 15:45   | <b>W3.5</b> - The IDRAX field experiment within the HyMex Target Area in Central Italy<br><i>R. Ferretti, S. Gentile, E. Pichelli, I. Maiello, G. Panegrossi, D. Cimini, M. Montopoli, E. Picciotti, F.S. Marzano, M. Borga and E.M. Anagnostou</i><br>As an introduction to PW6 |
| 15:45 - 16:00   | <b>W3.6</b> – The Adriatic Sea TA - Plans for the HyMeX SOP<br><i>B. Ivancan-Picek, B. Grbec, M. Morovic, K. Horvath, M. Tudor, S. Ivatek-Sahdan, F. Matic, A. Bajic, A. Stanesic, N. Strelec-Mahovic, I. Stiperski, B. Grisogono, M. Telisman</i><br>As an introduction to PW5  |
| 16:00 - 17:00   | <b>Poster session and coffee break</b>   |
| 17:00 - 19:00   | <b>WPW - Parallel Working sessions</b>   |
|   | <b>PW4</b> - Data Assimilation and Ensemble Prediction Systems - International coordination of the HyMeX test bed activities<br><i>Chairs: V. Homar, Y. Michel, A. Montani, V. Wulfmeyer</i>   |
|   | <b>PW5</b> - SOP2 (EOP) operations - International coordination of research instruments deployment<br><i>Chairs: P. Coquerez, B. Ivanean Picek, E. Schiano, P. Testor</i>  |
|   | <b>PW6</b> - EOP (SOP) hydrometeorological and atmospheric sites<br><i>Chairs: O. Bousquet, G. Delrieu, R. Ferretti, A. Jansa</i>  |
| 20:00   | <b>Conference diner</b>  |

| <b>Thursday, 19 May 2011</b>                        |   |
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| <b>TH1 - Plenary session - Science talks</b>        |   |
| <b>Heavy precipitation, flash-floods and floods</b> |   |
| <b>Chairs: H. Wernli, V. Ducrocq</b>                |   |
| 08:30 - 08:45                                       | <b>TH1.1</b> - The 6-8 September 2010 flood over Southern France: observational and modeling analysis in the frame of HyMeX project<br><i>K. Lagouvardos, V. Kotroni, E. Defer, A. Bennett, H. Betz and O. Bousquet</i>   |
| 08:45 - 09:00                                       | <b>TH1.2</b> - Experimental investigation of precipitation structure, dynamics and microphysics in Eastern Mediterranean: the HYDREX field campaign<br><i>M.N. Anagnostou, F.S. Marzano, J. Kalogiros, J.A. Nystuen, E.N. Anagnostou, T. Chronis, M. Montopoli and E. Picciotti</i> |
| 09:00 - 09:15                                       | <b>TH1.3</b> – Weather Radar Data & Products Available in HyMeX SOPs<br><i>O. Bousquet, J. Van-Baelen, J. J. Gourley, Y. Dufournet, A. Berne, M. Hagen, E. Anagnostou, D. Jorgensen</i>   |
| 09:15 - 09:30                                       | <b>TH1.4</b> - Synoptic and mesoscalar environments associated with the heavy local rains of 16 August 2010 in the south of the Iberian Peninsula<br><i>J.M. Sánchez-Laulhé</i>   |
| 09:30 - 09:45                                       | <b>TH1.5</b> - Hydrometeorological ensemble forecasting of mediterranean flash-flood events<br><i>B. Vincendon, V. Ducrocq, O. Nuissier and B. Vié</i>  |
| 09:45 - 10:00                                       | <b>TH1.6</b> - Results of the post-event survey conducted after the extreme flash flood occurred in the Var region (South of France) in June 2010<br><i>E. Gaume, L. Marchi and HyMex TTO2d team</i><br>As an introduction to PW8   |
| 10:00 - 10:15                                       | <b>TH1.7</b> - Simulation of the water balance of the NE Iberian Peninsula with a distributed hydrological model<br><i>P. Quintana-Seguí, M.C. Llasat, E. Martin, M. Turco and J. J. Salas-Pérez</i><br>As an introduction to PW7   |
| 10:15 - 10:30                                       | <b>TH1.8</b> - Introduction to PW9  |
| 10:30 - 11:00                                       | <b>Coffee Break</b>   |
| 11:00 - 13:00                                       | <b>THPW - Parallel Working sessions</b>   |
|   | <b>PW7</b> - Hydrological modelling (TTM2)<br><b>Chairs:</b> <i>I. Braud, J. von Hardenberg, P. Quintana-Segui</i>  |
|   | <b>PW8</b> - Coordination of the LOP/EOP post-event studies<br><b>Chairs:</b> <i>L. Marchi, O. Nuissier, R. Romero</i>  |
|   | <b>PW9</b> - LOP-EOP long-term observation activities<br><b>Chairs:</b> <i>A. Chanzy, L. Coppola, A. di Sarra</i>   |
| 13:00 - 14:30                                       | <b>Lunch</b>  |
| <b>TH2 - Parallel national sessions</b>             |   |
| 14:30 - 15:30                                       | Parallel National Meetings  |
| <b>TH3 - Plenary session</b>                        |   |
| <b>Chair: J. Font</b>                               |   |
| 15:30 - 16:30                                       | Rendering of the Parallel Working sessions  |
| 16:30 - 17:00                                       | <b>Coffee break</b>   |

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| <b>TH4 - Plenary session – general discussion and closing session</b> |  |
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| 17:00 - 18:00 | Summary and closing remarks (P. Drobinski, V. Ducrocq, A. Jansa, V. Homar, P. Lionello) |
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# POSTER SESSIONS

(Poster format: A0, portrait-oriented)

## PO1. Observation systems

**PO1.1** Long term GPS-based rain analysis and forecasting model

*A. Seco, F. Ramirez, E. Serna, A. Moreno, E. Prieto, X. Archanco, R. García, L. Miqueleiz, B. Garcia and E. Priego*

**PO1.2** Comparison between ground-based and satellite measurements of atmospheric water vapour at Observatoire de Haute Provence in France

*A. Sarkissian, A. Sulaf and P. Keckhut*

**PO1.3** A Mediterranean atmospheric observatory in Corsica within the framework of HyMeX and ChArMEx

*D. Lambert, F. Gheusi, M. Mallet, G. Athier, P. Augustin, A. Behrendt, S. Belamari, Y. Bezombes, G. Bouhours, O. Bousquet, C. Bruno, B. Campistron, J. P. Chaboureaud, C. Champollion, L. Coppola, S. Coquillat, U. Corsmeier, E. Defer, H. Delbarre, S. Derrien, B. Di Martino, P. Drobinski, V. Ducrocq, F. Dulac, A. Ezcurra, M. Fourmentin, H. Giordani, P. Goloub, L. Gomes, M. Hagen, N. Kalthoff, C. Kottmeier, L. Labatut, D. Legain, P. Lejeune, M.D. Loje-Pilot, M. Muselli, G. Notton, C. Paoli, P. Przygodski, J. P. Rambaud, E. Richard, F. Saïd, J. L. Savelli, J. Sciare, X. Silvani, S. Soula, V. Thouret and V. Wulfmeyer*

**PO1.4** Probing Mediterranean convection with KITcube

*N. Kalthoff, U. Corsmeier, A. Wieser, M. Kohler, C. Barthlott, J. Handwerker and C. Kottmeier*

**PO1.5** The contribution of IPM to the CORSICA sensor synergy

*A. Behrendt, V. Wulfmeyer, C. Barthlott, N. Kalthoff, U. Corsmeier, C. Kottmeier, and M. Dorninger*

**PO1.6** ISAC experimental facilities: contribution to the HyMeX project

*S. Argentini, C. Elefante, F. Grasso, P. Martano, I. Petenko, I. Pietroni, A.M. Sempreviva and A. Viola*

**PO1.7** Determination of cloud properties at the Station for Climate Observations at Lampedusa

*C. Di Biagio, G. Pace, M. Cacciani, A. di Sarra, D. Meloni, F. Monteleone, S. Piacentino and D. Sferlazzo*

**PO1.8** First microwave measurements of atmospheric temperature, water vapour, and liquid water path at the island of Lampedusa

*G. Pace, G. Cremona, A. di Sarra, D. Meloni, F. Monteleone, D. Sferlazzo, L. Vitali and G. Zanini*

**PO1.9** Update on the instrumentation and data/products of the HyMeX Lightning Task Team TTO1h

*C. Barthe, A. Bennett, H. D. Betz, P. Blanchet, A. Bouchard, M. Buguet, M. Chong, M. Collins, S. Coquillat, E. Defer, T. Farges, U. Finke, J. F. Georgis, H. Höller, P. Krehbiel, K. Lagouvardos, P. Lalande, P. Laroche, G. Molinié, P. Ortéga, S. Pedeboy, J. P. Pinty, W. Rison, W. Schulz and S. Soula*

**PO1.10** The MOOSE network: a contribution to the long observation period of HyMeX in the NW Mediterranean sea

*L. Coppola, P. Raimbault, L. Mortier, P. Testor, X. Durrieu de Madron, F. Bourrin, D. Lefevre, I. Taupier-Letage, F. D'Ortenzio, H. Claustre, G. Rougier and S. Kunesh*

**PO1.11** The HyMeX database

*L. Mastrorillo, K. Ramage, J.-L. Boichard, G. Brissebrat, S. Cloché, L. Fleury*

## PO2. Heavy precipitation, flash-floods and floods

### PO2.1 Non-intrusive techniques for flood discharge measurements

*J. Le Coz, G. Dramais, A. Gallavardin and I. Braud*

### PO2.2 Post-event documentation and hydrological analysis for the November 2010 flood in the Bacchiglione River basin (north-eastern Italy)

*L. Marchi, M. Borga, M. Cavalli and D. Zoccatelli*

### PO2.3 Flash flood study at the regional scale

*P.A Garambois, H. Roux, K. Larnier and D. Dartus*

### PO2.4 Preliminary analyses of rainfall parameters collected with HPicoNet

*B. Boudevillain, G. Molinié, A. Berne, R. Biron, S. Coquillat, J. Jaffrain, S. Gérard, J. M. Martin, A. Studzinski, S. Anquetin, J. D. Creutin and G. Delrieu*

### PO2.5 Multi-radar QPE: on the interest of an early merging of 3D reflectivity fields

*B. Boudevillain, G. Delrieu, P. E. Kirstetter, M. Tahanout and N. Yu*

### PO2.6 Error model for radar quantitative precipitation estimates in a Mediterranean mountainous context

*G. Delrieu, B. Boudevillain, D. Faure, L. Bonnifait and P.E. Kirstetter*

### PO2.7 X band polarimetric & Doppler radar observations of heavy precipitation events over the Mediterranean region (France)

*J.F. Rysman, Y. Lemaître and E. Moreau*

### PO2.8 Evaluation of attenuation correction algorithms for polarimetric radar

*S. Jolivet and A. Berne*

### PO2.9 Mediterranean heavy rainfall: estimation of rain kinetic energy flux density from radar reflectivity factor and/or rain rate based on a scaling formulation of the rain drop size distribution

*N. Yu, G. Delrieu, B. Boudevillain, P. Hazenberg and R. Uijlenhoet*

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*M. Buguet, S. Coquillat, S. Soula, C. Barthe, M. Chong, O. Bousquet and J. F. Georgis*

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*T.G. Chronis, F. S. Marzano, M.N. Anagnostou, W. Petersen, C. Schultz, E. N. Anagnostou, M. Montopoli, E. Picciotti, G. Alexakis and M. Sioutas*

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*M. Nuret, P. Brousseau, O. Caumont, N. Fourrié and O. Nuissier*

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*E. Bresson, V. Ducrocq, O. Nuissier and M. Nuret*

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