4th International Meeting on Meteorology and Climatology of the Mediterranean

Organization Associació Catalana de Meteorologia (ACAM) and Network of Meteorology of the Mediterranean with support from Spanish Ministry of Economy and Competitiveness and Météo-France Programme

Banyuls, 27th February - 1st March 2013

Wednesday, 27th

9:00 : Conference Registration + Light Ice-Break
10:00-10:30 : Welcome

Block 0: MISTRALS Session
Chairmen: J. L. Roujean, K. Horvath (4 invited lectures)

10:30-11:00 F. Dulac, the ChArMEx Team: An overview of ChArMEx (the Chemistry-Aerosol Mediterranean Experiment)
11:00-11:30 I. Pairaud, C. Guieu, X. Durrieu de Madron, R. Sempére: Presentation of the MER-MEX program: Marine Ecosystems Response in the Mediterranean Experiment
11:30-12:00 V. Ducrocq: HyMeX, a 10-year multidisciplinary project on the Mediterranean water cycle
12:00-12:30 C. Leduc, W. Ludwig, M. Thibon, M. Voltz: Surfaces and interfaces of coastal Mediterranean areas: an overview of SICMED

12:30 to 14:00 : Lunch Break

Block 1: Climatology
Chairmen: José A. Guijarro, Josep Calbò

14:00-14:30 S. M. Vicente, (Invited talk): Climate change evidences and associated impacts in Spain
14:30-14:50 A. M. S. Delitala, P. Boi, C. Bruno, J. P. Giorgetti, V. Bonati G. Agrillo: Historical archive of meteorological information in Italy since the end of 19th century
14:50-15:10 J. A. Guijarro: Automatic benchmarking of series homogenization packages
15:10-15:30 K. Zaninovic, C. Brosky, A. Matzarakis: The bioclimatic potential of tourism in Croatia in 21st century

15:30-15:50 T. Sanjuan Olleta: Climate change effect on sustainable development of the Tigris-Euphrates basin in Turkey by using the WEAP Model

15:50 to 16:50 : Coffee-break and Climatology Poster Session (including short poster presentations)

16:50-17:10 K. Horvath, A. Bajic, S. Ivatek-Saldan: Dynamical downscaling of wind speed over the Adriatic region
17:10-17:30 A. Di Luca, E. Flaounas, P. Drobinski: Evaporation and precipitation over the Mediterranean Sea in a WRF physics ensemble
17:30-17:50 M. Tous, R. Romero, C. Ramos: Medicanes and climate change: analysis with two different methods

Thursday, 28th

Block 2: Processes and Applications
Chairmen: J. L. Palau, J. Cuxart, D. Zardi

8:30-9:00 A. Jericevic, (Invited talk): Boundary layer processes and air pollution modelling in coastal areas
9:00-9:20 J. Cuxart, J. Dünnermann, B. Wrenger, M. A. Jiménez, J. L. Palau: Nighttime surface inversions under thermally-driven low-level jets
9:40-10:00 M. Telšsman Prtenjak, M. Kvakić, G. Poljak: Effects of the large-scale wind on the
sea breeze and cumulonimbus cloud interaction over Istria

10:00-10:20 A. Shayia, H. H. Salman, B. Y. Hu: A model for modification of air in a small town by using the evaporative cooling method

10:20 to 11:20: Coffee-break and Proc. & Appl. Poster Session (including short poster presentations)


11:40-12:00 M. Udina Sistach, M. R. Soler, J. Sun, B. Kosovic: Large-eddy simulation of wave-turbulence interaction in the stable boundary layer

12:00-12:20 P. Nabat, S. Somot, M. Mallet: Aerosol radiative impact on the Mediterranean climate in coupled atmosphere-ocean regional climate simulations


12:40 to 14:00: Lunch Break

Block 3: Remote and in situ measurements
Chairmen: J. Bech, G. Scavone

14:00-14:30 M. Berenguer: On the performance of rainfall nowcasting using Continental radar mosaics


14:50-15:10 J. L. Roujean: Land surface albedo and downwelling shortwave radiation from MSG geostationary satellite: method for retrieval, validation, and impact assessment in NWP and LSM Models

15:10-15:30 X. Ceamanos, D. Carrer, J. L. Roujean: Detection and retrieval of dust storm episodes in Mediterranean region in combining visible and thermal infrared MSG/SEVIRI bands

15:30-15:50 J. M. Sánchez, C. Doña, J. Cuxart, V. Caselles, M. Bisquert: Looking into the surface energy balance of a Mediterranean vineyard through its thermal characterization

15:50 to 16:50: Coffee-break and Rem. & Meas. Poster Session (including short poster presentations)

16:50-17:10 M. Pagès Secall, N. Pepin, J. R. Miro: Study of temperature and humidity vertical profiles: Cerdagne transects

17:10-17:30 D. Martínez-Villagrasa, N. Wildmann, J. Bange: Measuring the atmospheric boundary layer with the unmanned aerial vehicle ‘MASC’: features and applications

17:30-17:50 L. Larit, D. Zardi, M. de Franceschi, G. Rampanelli: An investigation of the Ora del Garda wind in the Alps by means of Kriging of airborne and surface measurements


19:00: Social Dinner

Friday, 1st

Block 4: Numerical Modelling
Chairmen: Bernat Codina, E. Tan

8:30-9:00 L. Garcies, Víctor Homar: Can we target observations betting on forecast sensitivity fields for the Mediterranean high impact weather?


9:20-9:40 F. Duffourg, O. Thevenot: Assessment of the contribution of the Mediterranean Sea to the moisture supply to 04/11/2011 Heavy Precipitating Event over Genoa: sensitivity to the sea surface representation

9:40-10:00 J. Mazón, D. Pino: Frontogenesis in the meso-α and meso-β scales in the Mediterranean basin: From cloud arch to cloud cells

10:00-10:20 M. M. Vich, M. Tous, R. Romero: The 8 November 2011 medicane event: the roles of model physical parameterizations and upper-level dynamical forcing

10:20 to 11:20: Coffee-break and Num. Model. Poster Session (including short poster presentations)

11:20-11:40 E. Flaounas, P. Drobinski, S. Bastin: Dynamical downscaling of IPSL-CM5 CMIP5 historical simulations over the Mediterranean: Benefits on the representation of regional surface winds and cyclogenesis

11:40-12:00 M. Gonçalves, A. Barrera-Escoda, L. Guerreiro, J. Cunillera, J. M. Baldasano: Temperature and precipitation trends for Catalonia as
derived from dynamical downscaling of climate scenarios

**12:00-12:20** M. A. Jiménez, J. Cuxart: Study of the nocturnal flows generated in the Northern Central Pyrenees through a high-resolution mesoscale simulation


**12:40** End of the Meeting

**Poster Program**

**Block 1: Climatology**

PB1.1 Alarcón, J. Belmonte, R. Izquierdo: Influence of the WeMO and NAO decadal trends on the airborne pollen levels recorded in Catalonia (NW Mediterranean)

PB1.2 Berthou, Lebeaupin-Brossier, Mailler, Drobinski, Béranger, Bastin, Orain: Effect of the ocean/atmosphere coupling and of the SST resolution on the location of heavy precipitation events in southern France

PB1.3 A. M. S. Delitala, P. Boi, C. Bruno, J. P. Giorgetti, V. Bonati, G. Agrillo: Intense precipitation event affecting maritime regions across Italy and France

PB1.4 A. Enríquez, J. Calbó, J. A. González: Assessment of climate models with ISCCP over the Mediterranean Sea

PB1.5 S. Gandia, M. P. Utrillas, V. Estellés, J. L. Gomez-Amo, D. Serrano, F. Tena, J. M. Nuñez, J. A. Martínez-Lozano: Statistical study of UVB and Global solar radiation from ten years of data of the Spanish Radiometric Network

PB1.6 L. Giovannini, L. Laiti, D. Zardi, M. de Franceschi: Climatological characterization of the Ora del Garda wind in the Alps

PB1.7 R. Izquierdo, M. Alarcón, A. Avila: Does the WeMO index affect the precipitation amount and chemistry in the north-eastern Iberian Peninsula?

PB1.8 A. López-Bustins, D. Pascual, E. Pla, J. Retana: Future variability of droughts in Catalonia, northwestern Mediterranean Basin

PB1.9 L. Marotta, F. Castellví, V. Telesca: A stochastic Weather Generator for daily precipitation generation: a study case for Policoro Basilicata Region (IT)

PB1.10 M. Patarčić, M. Gajić-Čapka, K. Cindrić, Ć Branković: Changes in indices of precipitation extremes over the Croatian Adriatic in the near future climate

PB1.11 M. Rodrigo, J. A. López: An improvement of AEMET operational methodology for the estimation of high wind gust areas for insurance applications of the CCS

PB1.12 P. Rodríguez-Ros, J. P. Montávez, P. Jiménez-Guerrero: Establishing the drought trends in the Northern Africa by using dynamical downscaling

PB1.13 A. Sanchez-Romero, J. Calbó, J.A. González: Variability of turbidity level in Girona, Spain

PB1.14 C. Serra, de Larrocha, X. Lana, A. Burgueño, M. D. Martínez: Dry spell length distributions in the Mediterranean

PB1.15 D. Serrano Alcaniz, M. J. Marín, M. P. Utrillas, M. Nuñez, J. A. Martínez-Lozano: Comparison between the cloud optical depth from the UV erythemal radiation and from the broadband solar radiation, during year 2011 in Valencia, Spain

PB1.16 M. A. Sicre, Gogou, Parinos, Triantaphyllou, Kallel, Jalali, Ezat, Dimiza, Bouloubassi, Bassetti: Climate variability in the Mediterranean Sea over the last two millennia: of contribution PaleOx/MISTRALS

**Block 2: Processes and Applications**


PB2.3 R. García, R. Lorente, P. Jiménez-Guerrero: Assessing the air quality impact of harbor emissions in a Mediterranean coastal city

PB2.4 K. Horvath, B. Ivanca-Picek, N. Strelec Mahovic, M. Gajic-Capk: Formation and development of a heavy precipitation event in the Southern Adriatic area

PB2.5 K. Horvath, Z. Vecenaj, B. Grisogono: The bora flow over the complex orography of the Mid-Adriatic region

PB2.6 M. A. Jiménez, J. Cuxart: Characterization of the sea-breeze in the island of Mallorca

PB2.7 P. Navarro, R. Baró, S. Jerez, P. Jiménez-Guerrero: Characterizing the sources of future air pollution over the Mediterranean basin through sensitivity analysis

PB2.8 F. Rovira Lluch, J. L. Palau, M. J. Sales: Spatial patterns of water vapor variability on the Mediterranean Sea

PB2.9 M. J. Sales Montoliu, J. L. Palau: Average spatial distribution and temporal variability of NO2 on the Valencia area (Spain)

PB2.10 L. Trasero, F. Duffourg, V. Ducrocq, J. Bech, J. Lorente: Fine-scale numerical study of the
27/10/2011 and the 03/11/2011 Heavy Precipitating Events over Catalonia and Andorra

**PB2.11** Vázquez, : Influence of winter and summer meteorological conditions on chemical reaction mechanisms and generation of secondary products: simulations at the EUPHORE chamber

**PB2.12** M. Vázquez, F. Alacreu, E. Borrás, T. Gómez, A. Muñoz, M. Ródenas, N. Roselló, P. Sánchez, T. Vera, J. L. Palau: Field measurements of volatile organic compounds in the Mediterranean side of the Iberian Peninsula under winter and summer meteorological conditions

**PB2.13** T. Vera, A. Muñoz, J. L. Palau, F. Rovira, P. Sánchez, M. Vázquez: Pesticides dispersion: a case study in the Valencian region

**Block 3: Remote and in situ measurements**

**PB3.1** V. A. Copertino, R. Palumbo, G. Scavone, V. Telesca: Realistic climate phenomena

**PB3.2** M. Di Pierro, G. Scavone, V. Telesca: Comparative performance analysis of surface energy balance residual models

**PB3.3** V. García-Santos, E. Valor, V. Caselles, M. A. Burgos, C. Coll, J. M. Sánchez: Effect of the soil emissivity anisotropy on the surface temperature and energy balance from remote sensing under different moisture conditions

**PB3.4** J. Quereda Sala, E. Montón Chiva, B. Mollà Cantavella, V. Quereda Vázquez: Atmospheric scenarios of acid rain on the Mediterranean slope of the Iberian System


**PB3.6** J. A. Valiente, R. Niclós, D. Corell, M. J. Estrela: Development of an autonomous device for the continuous acquisition of angular thermal-infrared measurements for remote sensing applications

**PB3.7** K. M. Yao, O. Marcou, C. Goyet, V. Guglielmi, J. P. Savy, F. Touratier: Temporal evolution of total and anthropogenic CO\textsubscript{2} and pH in the Mediterranean Sea for the 1995-2011 period

**Block 4: Numerical Modelling**

**PB4.1** E. Abellán, A. Callado, P. Escrigà: Ensemble prediction systems applied to aeronautics

**PB4.2** A. Garrido, N. Ratola, P. Jiménez-Guerrero: Evaluating the patterns of air pollution by PAHs over Europe by modeling techniques

**PB4.3** L. Giovannini, D. Zardi, M. de Franceschi, F. Chen: Boundary-layer processes and local circulation systems in the valleys around the city of Trento: a numerical study

**PB4.4** V. Homar Santaner, L. Garcies: Application of EnKF for the mesoscale forecast of a severe weather event in the western Mediterranean

**PB4.5** O. Jorba, C. Pérez, A. Badia, M. Spada, Z. Janjic, J. M. Baldasano, D. Dabdub: The NMMB/BSC Chemical Transport model air quality results from global to regional scales


**PB4.7** J. Mazon, D. Pino: Nocturnal offshore precipitation near the coastline in the Mediterranean basin

**PB4.8** A. Montornés, B. Codina, J. Zack: An analysis of the performance of WRF shortwave radiation schemes in the prediction of the surface irradiance using idealized and measured 1-D atmospheric profiles

**PB4.9** I. Pairaud, N. Bensooussan, P. Garreau, S. Somot, J. Garrabou: Impact of climate change on coastal benthic ecosystems from a modelling study of the NW Mediterranean Sea

**PB4.10** A. M. Palomares, J. Navarro, P. A. Jimenez: Offshore wind simulations near the Catalan coast using the WRF model

**PB4.11** F. Pastor, M. J. Estrela Navarro: Heavy rains and sea surface temperature in the Mediterranean: Modelling of recharge areas

**PB4.12** J. Rodriguez Martin, J. Sanz, P. Salvador, J. L. Casanova: Evaluating the impact of different PBL, MC and Radiance Data assimilation schemes on DANA forecast with WRF in Spanish Mediterranean Coast

**PB4.13** J. Sáenz, G. Ibarra-Berastegi, A. Eczurra, J. Diaz de Argandoña: Seasonal cycle of temperature and precipitation over the Iberian Peninsula as represented by a simulation using WRF and 3DVAR data assimilation

**PB4.14** Md. M. A. Sarker, M. K. Das: Severe Thunderstorms during SAARC Storm Program 2009: Observations and WRF model Simulations

**PB4.15** M. Stéfanon, P. Drobinski, F. D’Andrea, C. Lebeaupin-Brossier, S. Bastin: Soil moisture-temperature feedbacks at meso-scale during heat waves over Western Europe

**PB4.16** E. Tan: An Improvement in Flash Flood Prediction by using 3DVAR Analysis with the WRF Model for Turkey


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