

# **WMO/GEO Expert Meeting on an International Sand and Dust Storm Warning System 2007**

**IOP Conference Series: Earth and Environmental Science  
Volume 7**

**Barcelona, Spain  
7 - 9 November 2007**

**ISBN: 978-1-5108-0204-9  
ISSN: 1755-1307**

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571



**Some format issues inherent in the e-media version may also appear in this print version.**

Copyright© by the Institute of Physics  
All rights reserved.

Printed by Curran Associates, Inc. (2015)

For permission requests, please contact the Institute of Physics  
at the address below.

Institute of Physics  
Dirac House, Temple Back  
Bristol BS1 6BE UK

Phone: 44 1 17 929 7481  
Fax: 44 1 17 920 0979

[techtracking@iop.org](mailto:techtracking@iop.org)

**Additional copies of this publication are available from:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: 845-758-0400  
Fax: 845-758-2634  
Email: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

## ***Table of contents***

**Volume 7**

### **WMO/GEO EXPERT MEETING ON AN INTERNATIONAL SAND AND DUST STORM WARNING SYSTEM**

**7–9 November 2007, Barcelona Supercomputing Center (BSC), Barcelona, Spain**

**Accepted papers received: 24 February 2009**

**Published online: 22 April 2009**

### **PAPERS**

012001

[The global distribution of mineral dust](#) I Tegen and K Schepanski pg. 1

012002

[EARLINET coordinated lidar observations of Saharan dust events on continental scale](#) G Pappalardo, A Papayannis, J Bösenberg, A Ansmann, A Apituley, L Alados Arboledas, D Balis, C Böckmann, A Chaikovsky, A Comeron, O Gustafsson, G Hansen, V Mitev, L Mona, D Nicolae, M Rita Perrone, A Pietruczuk, M Pujadas, J-P Putaud, F Ravetta, V Rizi, V Simeonov, N Spinelli, D Stoyanov, T Trickl and M Wiegner pg. 7

012003

[Observation of Asian dust and air-pollution aerosols using a network of ground-based lidars \(ADNet\): Realtime data processing for validation/assimilation of chemical transport models](#) N Sugimoto and I Uno pg. 13

012004

[Use of SEVIRI images and derived products in a WMO Sand and dust Storm Warning System](#) M A Martínez, J Ruiz and E Cuevas pg. 19

012005

[Asian Dust particles impacts on air quality and radiative forcing over Korea](#) Y J Kim, Y M Noh, C H Song, S C Yoon and J S Han pg. 25

012006

[Modelling mineral dust emissions](#) B Laurent, B Marticorena, G Bergametti, I Tegen, K Schepanski and B Heinold pg. 33

012007

[Operational aerosol and dust storm forecasting](#) D L Westphal, C A Curtis, M Liu and A L Walker pg. 43

012008

[Aerosol modelling in MOCAGE and operational dust forecasting at Météo-France](#) M Martet and V-H Peuch pg. 49

012009

[Previsibility of Saharan dust events using the CHIMERE-DUST transport model](#) L Menut, I Chiapello and C Moulin pg. 55

012010

[Dust forecasting system in JMA](#) M Mikami, T Maki and T Y Tanaka pg. 63

012011

[A unified atmospheric model suitable for studying transport of mineral aerosols from meso to global scales](#) Z Janjic, H Huang and S Lu pg. 69

012012

[Ten-year operational dust forecasting – Recent model development and future plans](#) G Kallos, C Spyrou, M Astitha, C Mitsakou, S Solomos, J Kushta, I Pytharoulis, P Katsafados, E Mavromatidis, N Papantoniou and G Vlastou pg. 75

012013

[Dust modelling and forecasting in the Barcelona Supercomputing Center: Activities and developments](#) C Pérez, J M Baldasano, P Jiménez-Guerrero, O Jorba, K Haustein, E Cuevas, S Basart and S Nickovic pg. 82

012014

[LMDzT-INCA dust forecast model developments and associated validation efforts](#) M Schulz, A Cozic and S Szopa pg. 91

012015

[African dust deposition to Florida: How well do dust models perform?](#) J M Prospero and W Landing pg. 97

012016

[Impacts of sand and dust storms on agriculture and potential agricultural applications of a SDSWS](#) R Stefanski and M V K Sivakumar pg. 104

012017

[Dust and epidemic meningitis in the Sahel: A public health and operational research perspective](#) M C Thomson, I Jeanne and M Djingarey pg. 110

012018

[African dust influence on ambient PM levels in South-Western Europe \(Spain and Portugal\): A quantitative approach to support implementation of Air Quality Directives](#) X Querol, A Alastuey, J Pey, N Pérez, M Escudero, S Castillo, Á Cristóbal, M Pallarés, A González, S Jiménez, N Alonso, S Alonso-Pérez, E Cuevas and J de la Rosa pg. 114

012019

[Short-term changes in the northwest African Upwelling System induced by Saharan dust deposition events](#) A G Ramos, E Cuevas, C Pérez, J M Baldasano, J Coca, A Redondo, S Alonso-Pérez, J J Bustos and S Nickovic pg. 121