

QUARTERLY JOURNAL OF THE ROYAL METEOROLOGICAL SOCIETY

wileyonlinelibrary.com/journal/qj

Contents

Volume 137 Number 656

April 2011 Part A

REVIEW ARTICLE

The ERA-Interim reanalysis: configuration and performance of the data assimilation system

- D. P. Dee, S. M. Uppala, A. J. Simmons, P. Berrisford, P. Poli, S. Kobayashi, U. Andrae, M. A. Balmaseda, G. Balsamo, P. Bauer, P. Bechtold, A. C. M. Beljaars, L. van de Berg, J. Bidlot, N. Bormann, C. Delsol, R. Dragani, M. Fuentes, A. J. Geer, L. Haimberger, S. B. Healy, H. Hersbach, E. V. Hólm, L. Isaksen, P. Kållberg, M. Köhler, M. Matricardi, A. P. McNally, B. M. Monge-Sanz, J.-J. Morcrette, B.-K. Park, C. Peubey, P. de Rosnay, C. Tavolato, J.-N. Thépaut and F. Vitart 553

RESEARCH ARTICLES

- Diagnosing remote origins of forecast error: relaxation versus 4D-Var data-assimilation experiments
T. Jung 598
- An extended specification of flow-dependent background error variances in the Météo-France global 4D-Var system
L. Raynaud, L. Berre and G. Desroziers 607
- Correlations of control variables in variational data assimilation
D. Katz, A. S. Lawless, N. K. Nichols, M. J. P. Cullen and R. N. Bannister 620
- Adaptive mesh method in the Met Office variational data assimilation system
C. Piccolo and M. Cullen 631
- The influence of observations propagated by convectively coupled equatorial waves
Q. Moteki, K. Yoneyama, R. Shirooka, H. Kubota, K. Yasunaga, J. Suzuki, A. Seiki, N. Sato, T. Enomoto, T. Miyoshi and S. Yamane 641
- Assessment of numerical weather forecasts against observations from Cardington: seasonal diurnal cycles of screen-level and surface temperatures and surface fluxes
J. M. Edwards, J. R. McGregor, M. R. Bush and F. J. Bornemann 656
- Bridging the gap between weather and seasonal forecasting: intraseasonal forecasting for Australia
D. Hudson, O. Alves, H. H. Hendon and A. G. Marshall 673
- A Tool to Estimate Land-Surface Emissivities at Microwave frequencies (TELSEM) for use in numerical weather prediction
F. Aires, C. Prigent, F. Bernardo, C. Jiménez, R. Saunders and P. Brunel 690
- The angle of the near-surface wind-turning in weakly stable boundary layers
B. Grisogono 700

Continued on inside back cover

Discover this journal online at
 WILEY ONLINE LIBRARY
wileyonlinelibrary.com/journal/qj

Continued from outside back cover . . .

Combined assimilation of screen-level observations and radar-derived precipitation for soil moisture analysis J.-F. Mahfouf and V. Bližňák	709
Layers of insect echoes near a thunderstorm and implications for the interpretation of radar data in terms of airflow K. A. Browning, J. C. Nicol, J. H. Marsham, P. Rogberg and E. G. Norton	723
Statistico-dynamical downscaling for Mediterranean heavy precipitation A-L. Beaulant, B. Joly, O. Nuissier, S. Somot, V. Ducrocq, A. Joly, F. Sevault, M. Deque and D. Ricard	736
An energetic view of the relation between the Mediterranean storm track and the North Atlantic Oscillation M. A. Nasr-Esfahany, F. Ahmadi-Givi and A. R. Mohebalhojeh	749
Complexities in the climate of the subpolar North Atlantic: a case study from the winter of 2007 G. W. K. Moore, R. S. Pickart and I. A. Renfrew	757
Definition of a moist entropy potential temperature: application to FIRE-I data flights P. Marquet	768
Laplace transform integration of the shallow-water equations. Part I: Eulerian formulation and Kelvin waves C. Clancy and P. Lynch	792
Laplace transform integration of the shallow-water equations. Part II: Semi-Lagrangian formulation and orographic resonance C. Clancy and P. Lynch	800
NOTES AND CORRESPONDENCE	
Nonlinear shallow-water equations on the Yin-Yang grid A. Qaddouri	810
An assessment of a mountain-wave parametrization scheme using satellite observations of stratospheric gravity waves H. Wells, S. B. Vosper and X. Yan	819