



WRF sensitivity simulations on the CORDEX African domain

Jesús Fernández (1), Lluís Fita (1), Markel García-Díez (1), and José Manuel Gutiérrez (2)

(1) Santander Meteorology Group, University of Cantabria, Santander, Spain (fernandej@unican.es), (2) Santander Meteorology Group, Instituto de Física de Cantabria CSIC-UC, Santander, Spain

The COrordinated Regional climate Downscaling EXperiment is a framework devoted to coordinate international efforts on regional climate simulations. In the first phase of CORDEX, Africa has been selected as the key region with the aim to improve the knowledge on climate change impacts in the continent. The results of a kick-off experiment with the WRF-ARW model are presented. A sensitivity test on different physical parametrisations for annual simulations of the African continent was carried out. The domain covers the whole African continent (aprox. 50S-50N, 30W-92E) with a horizontal resolution of 50 km and 26 vertical levels. The simulation results are validated with surface observations and TRMM satellite monthly precipitation rates. This study is a first step toward the selection of physical parameterizations to be run in the long term to produce CORDEX-compliant simulations for Africa using WRF.