



Scale-adaptive turbulence scheme in Hymex in the grey zone of turbulence

Rachel Honnert (1), Didier Ricard (2), and Antoine Teixeira (1)

(1) CNRM, GMAP, Toulouse, France (rachel.honnert@meteo.fr), (2) CNRM, GMME, Toulouse, France

The grey zone of turbulence is the range of scales where the grid cell is on the order of the energy-containing turbulence scale (Wyngaard, 2004). In convective boundary-layers, hectometric scales are in the grey zone of turbulence. Numerical weather prediction models are now able to run at these resolutions, but mesoscale parametrisations need to be adapted to the grey zone of the turbulence (Honnert et al., 2011). A new parametrisation is developed at Météo-France which makes scale-adaptive the current mass-flux scheme PM09 (Pergaud et al. 2009). In this study, this new scheme has been tested on the HYMEX field campaign with the Méso-NH model at resolutions between 2 km and 500 m.