Geophysical Research Abstracts, Vol. 7, 01508, 2005

SRef-ID: 1607-7962/gra/EGU05-A-01508 © European Geosciences Union 2005



Drag of the sea surface at hurricane winds

V.K. Makin

Royal Netherlands Meteorological Institute (KNMI), De Bilt, The Netherlands (makin@knmi.nl)

Based on the solution of the turbulent kinetic energy balance equation for the airflow in the regime of limited saturation by suspended sea spray droplets, some experimental evidence, and simple arguments a resistance law of the sea surface at hurricane winds is derived. It predicts the reduction of the drag coefficient for the wind speed exceeding hurricane values of 30-40 m/s in agreement with field data.