



Mesoscale convective momentum flux events in the GEOS-5 Nature Run

Brian Mapes

University of Miami, Rosenstiel School, Miami, FL, (mapes@miami.edu)

Vertical transport of horizontal momentum by scales smaller than 4-degree square averages are examined comprehensively, in data from a two-year simulation with a global model with about 7km horizontal mesh spacing (the GEOS-5 Nature Run, G5NR). The impact of this sub-filter-scale eddy transport is summarized by its tendency on vertically-integrated kinetic energy, in units of Wm^{-2} . Case studies of extreme events in this quantity are examined, in the context of the entire dataset. The time mean is negative, implying that the sub-4-deg resolved motions act as a positive viscosity felt by large-scale shear, but positive values (negative viscosity) do occur in certain organized storm situations.