

Numerical Experiment on Multi-Scale Organization of the Earth's Cloud Convection over the Tropical Ocean

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Spontaneous organization of cloud convection in the earth's tropical atmosphere in an idealized condition is examined using a large-domain two-dimensional cloud convection model. The domain extends 32768km horizontally and integrated for 80 days. The result shows a hierarchical space-time structure of cloud convection, which consists of individual convective clouds, mesoscale cloud clusters, propagating wave structure of 10000km wavelength, and, a quasi-periodic vascillation of domain averaged cloud activity.