

Title: Characteristics of the MJO in a CSU Multi-scale Modeling Framework Simulation

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Abstract: A new kind of global climate model (GCM), the Multi-scale Modeling Framework (MMF), has recently emerged. MMF-GCM replaces conventional cloud parameterizations with a small-domain cloud-resolving model (CRM; often called in this context a "super-parameterization") embedded into each GCM grid column to explicitly represent clouds and their effects. Recently, the Colorado State University MMF was used to conduct a 19-year AMIP-style simulation using observed monthly mean SSTs and sea ice extent as the lower boundary condition. Results from an investigation of the vertical-temporal structures of MJO-like convective disturbances for this AMIP-style simulation will be presented. Improved zonal wavenumber-frequency spectral diagnostics will also be shown. These results will be compared to MJO composite structures observed in a previous study based on GPCP and ECMWF 40-year reanalysis data.