



Resolution and Dycore Dependence of the simulation of Atmospheric River in Community Atmospheric Model (CAM)

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The study examines the model resolution and dynamical core dependence of the simulation of atmospheric rivers in aqua-planet setting. Community Atmospheric Model simulations are run at 240km, 120km, 60km and 30km resolutions globally using High-Order Methods Modeling Environment (HOMME) and Model for Prediction Across Scales (MPAS) dynamical cores. The impacts of resolution and dynamical core on the simulation of tropical and extra-tropical wave dynamics relevant to atmospheric river structure and frequency, such as mid-latitude Rossby wave breaking and equatorial waves are discussed.