

A near-global CRM study of moisture and tropical atmospheric predictability

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Nearly-global aquaplanet CRM simulations over zonally-uniform SST are analyzed. We analyze the growth of an initial small amplitude white noise humidity perturbation within realistic tropical multiscale circulation, and what factors (diabatic vs. adiabatic) control this perturbation growth at different scales. We also consider the processes maintaining spontaneously-occurring humidity anomalies at a range of horizontal scales, and compare our findings to CRM-simulated convective self-aggregation in radiative-convective equilibrium in smaller doubly-periodic domains.