Abstract Submitted
for the 4CF12 Meeting of
The American Physical Society

Modeling Observations from EPIC 2001 in the Weak Temperature Gradient Approximation ANDREW ARRASMITH, SHARON SESSIONS, New Mexico Institute of Mining and Technology — The Weak Temperature Gradient (WTG) is a parameterization for convection by the large scale environment used for modeling convection in the tropics. We use WTG simulations to study the extent to which tropical convection is driven by different factors by comparing these simulations to observations. Specifically, we compare the output of these simulations to data taken during the EPIC (Eastern Pacific Investigations of Climate) 2001 field campaign. The data from the EPIC program are used to generate time dependent perturbations on the reference profile used by the simulation for the ambient thermodynamic conditions as well as the local surface wind speeds. We compare four simulations: one with no perturbations, one with thermodynamic perturbations, one with wind speed perturbations, and one with all of the perturbations. Here we report on the results by comparing the evolution of dynamical quantities from the simulations to the evolution of the same in the EPIC data.

Andrew Arrasmith
New Mexico Institute of Mining and Technology

Date submitted: 21 Sep 2012 Electronic form version 1.4