

Abstract Submitted  
for the SES08 Meeting of  
The American Physical Society

**Formation of African Easterly Waves and Mesoscale Convective Systems over Eastern Africa** GUOQING TANG, YUH-LANG LIN, JAMES SPINKS, North Carolina A&T State University, WILSON JONES, North Carolina State University — Based on simulations of Tropical Storm Debby (2006) using the Weather Research and Forecast (WRF) model, the African Easterly Waves (AEWs) during the hurricane season may be generated by the orography and shear zone established by the Asian monsoon currents. The vortices often form on the lee of major mountain ranges. The MCSs are originated from the moist convection over the major mountain ranges as triggered by diurnal sensible heating. An MCS may merge with a vortex in the shear zone and form a coupled AEW-MCS system. The larger-scale environments conducive to the formation of the AEW-MCS system are also investigated, but using a much larger numerical model domain. This work is supported by a grant from the National Oceanic and Atmospheric Administration, Educational Partnership Program under the cooperative agreement NA06OAR4810187.

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Date submitted: 18 Aug 2008

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