

**The North American Monsoon Experiment (NAME):
Progress and challenges in improving predictions of warm season
precipitation**

David Gochis

*National Center for Atmospheric Research
Boulder, Colorado*

The North American Monsoon Experiment (NAME) is a continental-scale process study now in its seventh year that was conceived to directly address the issue of improving predictions of warm season precipitation in North America. The underlying hypothesis of NAME is that the structure and evolution of the North American Monsoon System (NAMS) provides a physical basis for determining the degree of predictability of warm season precipitation over much of North America. This overview talk will provide a summary on past and ongoing NAME research and prediction activities. Emphasis will be placed on synthesizing increases in our understanding of monsoon climate processes as a result of observations collected during the 2004 NAME Enhanced Observation Period and ongoing observational programs conducted thereafter. Highlights from diagnostic studies include a much better understanding of the regional atmospheric structure and circulation within the Gulf of California region, and a clearer definition of the diurnal cycle of land-sea and terrain circulations, convective cloud growth and evolution, land surface fluxes and their combined impacts on precipitation. Findings from recent climatological investigations will also be discussed as they relate to improving a predictive capacity for seasonal and interannual variations in warm season rainfall and streamflow. The talk will end with a short summary of ongoing synthesis activities in predictive research including a community NAME Forecast Forum which is being established to monitor prediction skill of key monsoon indices generated by research and operational prediction groups in the U.S. and Mexico.

FORECASTING AND QUANTITATIVE PRECIPITATION ESTIMATION