



Model intercomparison of land-atmosphere interactions in the North American monsoon

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As a part of the North American Monsoon Experiment (NAME), high-resolution season-long model data sets have been created, from a suite of global and regional models (including U.S. NOAA operational models), at sites in and around northwestern Mexico. Some special observations are available as evaluation standards, and the North American Regional Reanalysis is also consulted.

Substantial differences are evident among models, beginning from (surprisingly) surface albedo. The Bowen ratio also varies widely among models, as does its sensitivity to recent rain (soil moisture feedback). Radiative feedbacks through afternoon cloud shading also vary. The resulting continental heat source felt by large-scale dynamics thus varies quite widely across models. Informed by these evaluations of surface-based heating processes on the diurnal time scale, can we anticipate (and hope to correct) monsoon simulation errors at synoptic-seasonal scales?