

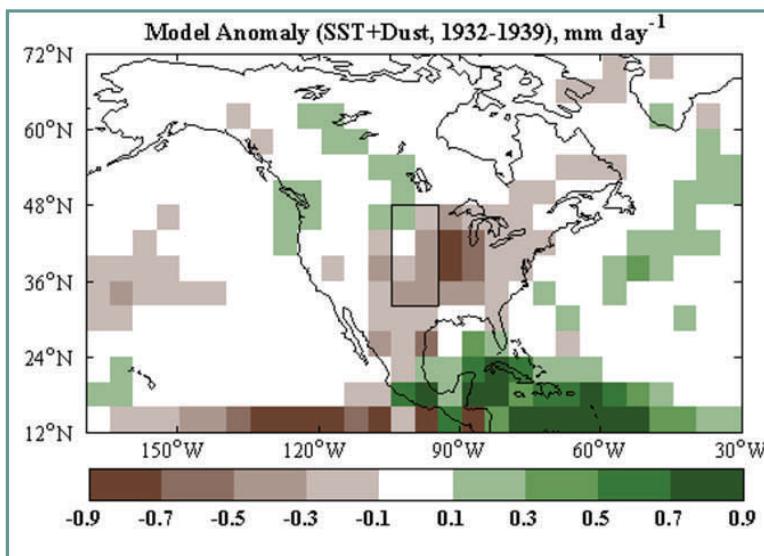
Cooperative Institute for Climate Applications and Research

Office of Oceanic and Atmospheric Research

CICAR develops and promotes research to address NOAA's mission goal of Climate Adaptation and Mitigation through a wide range of science and social topics consistent with three main themes: **(1) Earth System Modeling** - improve the predictive understanding of climate variability and change, and make that capability usable to advance the forecasts and climate information products at application centers, such as the National Centers for Environmental Prediction (NCEP); **(2) Modern and Paleoclimate Observations** - develop, collect, analyze, and archive instrumental Earth System data and paleoclimate proxy records to monitor the climate system, provide information for model verification and development, and to enrich the record of past climate variability and change; and **(3) Climate Variability and Change Applications Research** - develop tools and methods to provide useful climate information to support impact assessments, planning, and decision making in areas of public health, public policy, water resources management, and agriculture.

CICAR facilitates a multi-disciplinary collaboration between NOAA and Columbia University in Earth climate research and education. The CICAR program of research and education is designed to enhance NOAA's research capabilities in climate observations, modeling and prediction; developing methods and tools for providing climate information to users and decision makers; and improving the effectiveness of graduate- and undergraduate-level education by enabling graduates and undergraduates participation in joint NOAA-Columbia research projects.

CICAR's major NOAA partners are the Geophysical Fluid Dynamics Laboratory (GFDL), the Climate Program Office (CPO), and the National Environmental Prediction Centre (NCEP).



The precipitation anomaly for the Dust Bowl drought years of 1932-39 as simulated by a climate model. The severe drought was centered in the Great Plains. Our research has shown that the drought was initiated by tropical sea-surface temperature anomalies in the Pacific and Atlantic Oceans. Research sponsored by the CPO Climate Variability and Predictability program.

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