

## **Do Extreme Climate Events Require Extreme Forcings?**

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### **Abstract**

For the severe drought during May-July (MJJ) 2012 over the Great Plains as a case study, the question whether extreme climate events require extreme forcings is assessed. This drought event had a rapid onset and no indications, or early warnings for its occurrence existed. The analysis is based on a dynamical seasonal climate forecast system where close to the analysis period of MJJ 2012 different components – ocean, atmosphere, land, sea ice – were initialized and an ensemble of forecasts were made. Based on the analysis of spectrum of possible outcomes for precipitation over the Great Plains, it is concluded that extreme climate events do not necessarily require extreme external forcings, and could just be a manifestation of atmospheric noise. Implications for developing early warning system for extreme events is also discussed.