

## ABSTRACT

### **Predicting Regional Drought on Sub-seasonal to Decadal Time Scales**

*Siegfried Schubert, Hailan Wang<sup>1</sup>, Max Suarez and Randal Koster*

*Global Modeling and Assimilation Office  
NASA GSFC, Greenbelt, Maryland*

*<sup>1</sup>Also, Science Systems and Applications, Inc.*

Drought occurs on a wide range of time scales, and within a variety of different types of regional climates. It is driven foremost by an extended period of reduced precipitation, but it is the impacts on such quantities as soil moisture, streamflow and crop yields that are often most important from a users perspective. While recognizing that different users have different needs for drought information, it is nevertheless important to understand that progress in predicting drought and satisfying such user needs, largely hinges on our ability to improve predictions of precipitation.

This talk reviews our current understanding of the physical mechanisms that drive precipitation variations on subseasonal to decadal time scales, and the implications for predictability and prediction skill. Examples are given highlighting the phenomena and mechanisms controlling precipitation on monthly (e.g., stationary Rossby waves, soil moisture), seasonal (ENSO) and decadal time scales (PDO and AMO).