Predictability of Monsoons in CFS

V. Krishnamurthy

Center for Ocean-Land-Atmosphere Studies
Institute of Global Environment and Society
Calverton, MD
and
Department of Atmospheric, Oceanic and Earth Sciences
George Mason University
Fairfax, VA

Abstract

The predictability of CFS in simulating the South Asian monsoon and South American monsoon is discussed. Using daily data from the retrospective forecasts made by the CFS with initial conditions in summer and winter, the growth of forecast errors and predictability errors are assessed. The predictability of CFS is evaluated by using Lorenz analysis of error growth. The growth rate of small errors is estimated by using Lorenz's empirical formula. For the South Asian monsoon, the error growth for states starting from active, break and normal phases is discussed. For both monsoon systems, the predictability of CFS in terms of the intraseasonal modes and persistent modes related to ENSO is also discussed.