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Title: Simulation of Monsoon Intraseasonal Variability in NCEP CFSv2 and its Role on Systematic Bias
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Abstract:

We have evaluated the simulation of Indian summer monsoon and its intraseasonal oscillations in the National Centers for Environmental Prediction (NCEP) climate forecast system model (CFS) version 2 (CFSv2). Currently in India the CFSv2 model is used to provide seasonal and extended range forecast of Indian summer monsoon.^M

The dry bias over the Indian landmass in the mean monsoon rainfall is one of the major concerns. In spite of this dry bias, CFSv2 shows a reasonable northward propagation of convection at intraseasonal (30-60 day) time scale. In order to document and understand this dry bias over the Indian landmass in CFSv2 simulations, a two pronged investigation is carried out on the two major facets of Indian summer monsoon: one, the air-sea interactions and two, the large scale vertical heating structure in the model.^M We posit that the model significantly underestimates the simulation of synoptic scale variance over the tropics as a whole and the Indian domain in particular, leading to a drier than observed Indian summer monsoon.

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