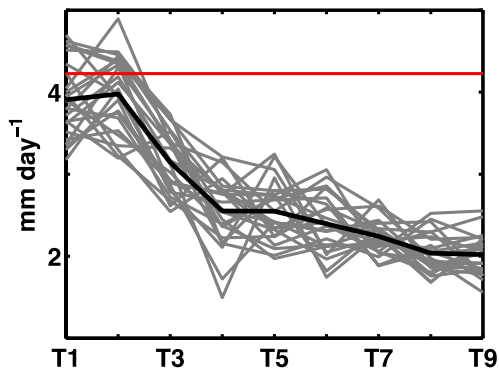


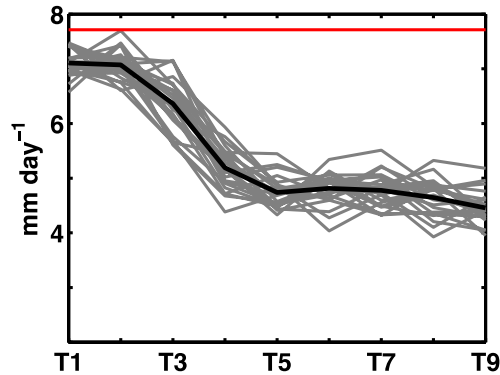
Ocean's Role in Model CFS Forecast Biases

- Ocean biases not examined in detail (for ex., ITF)
- Phenology of biases reveals that ocean tends to amplify many biases initiated by AGCM errors
- Inter-basin links via the ITCZ in the deep tropics appear to propagate biases and project onto related modes of variability like the monsoons, Atlantic and Indian Ocean zonal modes and ENSO
- Identifying the role of Ocean biases may help improve forecasts and reduce biases

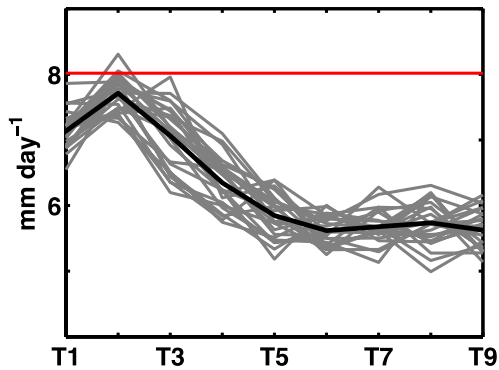
(a) JUN forecast (CI)



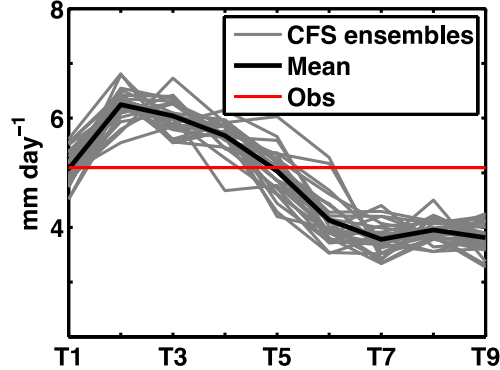
(b) JUL forecast (CI)



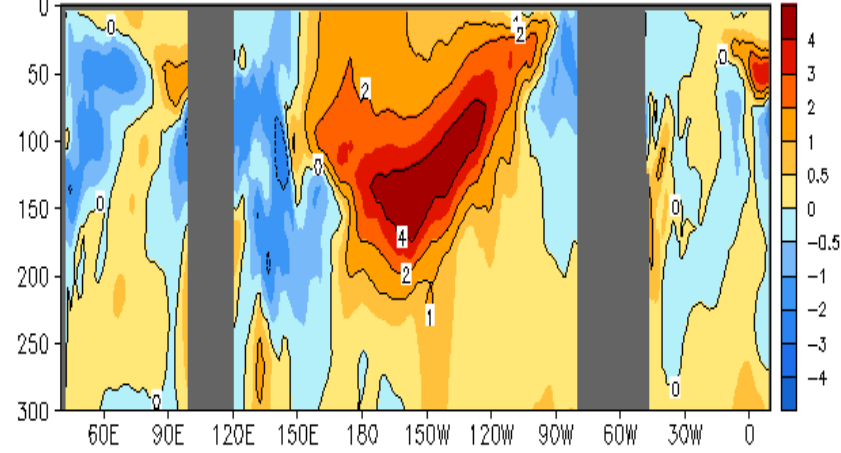
(c) AUG forecast (CI)



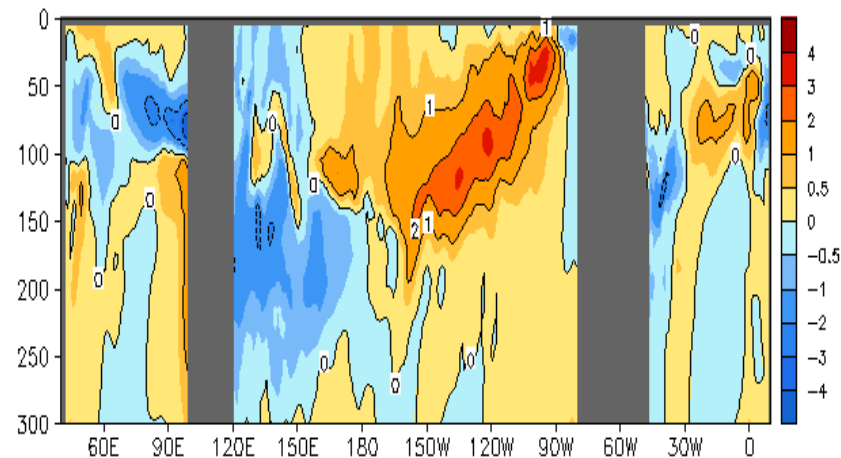
(d) SEP forecast (CI)



MAR 2015 Eq. Temp Anomaly (°C)
(GODAS, Climo. 81-10)



MAR 2015 - FEB 2015 Eq. Temp Anomaly (°C)



CFSv2 Monsoon and ENSO forecasts should be analyzed together for feedbacks in CFSRR and in CFSv2.

Role of the ITF, for ex., remains unexplored in CFSv2

- **NCEP can benefit from more detailed analysis ocean and air-sea interaction biases in CFS.**
- **Many of the ocean biases may be amplifying AGCM biases.**
- **Weeks 2-to-4 offers a nice framework to link the tropical basins and tropical modes of variability and the phenology of biases**