



Assessment of seasonal prediction skill of East Asian summer monsoon in CMIP5

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The East Asian summer monsoon (EASM) is a strong monsoon system with a complicated internal variation. Its seasonal predictability is a long-standing issue in climate science. We analysed the seasonal prediction skill of EASM and the correlation between EASM and El Niño Southern Oscillation (ENSO). Our study is based on historical and decadal experiments of six prediction systems (i.e. BCC-CMS1.1, CanCM4, GFDL-CM2p1, HadCM3, MIROC5 and MPI-ESM-LR) from the Coupled Model Intercomparison Project phase 5 (CMIP5) in 1979-2005. We find that initialised simulations improve the prediction skill of EASM in CanCM4 and GFDL-CM2p1 model experiments, but lower it in the HadCM3 simulation, especially after the anomaly initialisation. The better predictability of EASM in the CanCM4 and GFDL-CM2p1 simulations due to their good performance in capturing the coupled ENSO-EASM mode, which is better than in the HadCM3 experiments. In predicting EASM, the coupled Southern Oscillation-EASM mode plays a more important role than the coupled El Niño-EASM mode.