Multimodel ensemble prediction on intraseasonal timescales

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The goal of this project is to quantify whether a multimodel ensemble provides a benefit to making forecasts on intraseasonal timescales. The skill of a two-model, equal weights, multimodel ensemble is assessed using two U.S. climate models, currently being considered for inclusion into a U.S. National Multimodel ensemble prediction system (NMME), for forecasts at leads of 2 and 3 weeks. The skill of week-2 and week-3 forecasts of outgoing longwave radiation, 200 hPa zonal wind, 850 hPa zonal wind, and precipitation is assessed using the multimodel ensemble and compared with lagged average ensembles of the same size for the two modeling systems separately. The skill of the real-time multivariate MJO index and projections onto the index are also assessed to quantify the benefit of a multimodel ensemble for forecasts of the MJO and related variability.