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Forecast Skills in prediction of the precipitation in Global Seasonal Forecasting System version 5 during the East Asian Summer Monsoon

Sang-Min Lee, Hyun-Suk Kang, and Young-Hwa Byun

National Institute of Meteorological Sciences, Korea Meteorological Administration, Jeju, Korea, Republic Of (lsmin9@gmail.com)

This study presents an assessment of the forecast skills in predicting the precipitation in Global Seasonal Forecasting System version 5 (GloSea5) at the onset and withdrawal day of the East Asian Summer Monsoon (EASM, 110-140E, 30-40N) during recent 10 years (2000-2009). The ensemble mean precipitation of seasonal hindcasts is analyzed, and hindcast members from the previous three weeks are combined, resulting in a 12-member ensemble with the exponential weighting. The date of onset and withdrawal of the EASM are defined as the first and last day of climatological 5-day running mean precipitation with more than 5mm/day from the Global Precipitation Climatology Project (GPCP) data set. On the average, the EASM starts in early June and lasts in late July. GloSea5 underestimates the amount of precipitation and has the negative bias at both onset and withdrawal day of the EASM. And it shows not bad performance in prediction of precipitation with threat score of 0.6, false alarm ratio of 0.3 and pattern correlation coefficient of 0.2. Also, the forecast skill of the precipitation during the EASM will be discussed from comparing with the performance of models provided by operational forecasting groups in this study.