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Dominant climate variability ensures the skillful prediction of precipitation in sub-seasonal time-scale over East Asia in GloSea5 system

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The dominant modes according to predictability of East Asian summer rainfall in sub-seasonal time-scale during boreal summer season (May-August) for 1991-2010 is examined using GloSea5 hind-cast. Using the linear-correlation analysis, correlation coefficients of East Asian Summer Rainfall Anomaly index were calculated for every case. The dominant mode of the good prediction cases is Rossby wave train from the mid-latitude of North Atlantic to East Asian through India at the upper level of the geopotential height field. On the other hand, the dominant mode of the bad prediction case is characterized by direct propagation of Rossby wave train from mid-latitude of the North Atlantic to East Asia. In conclusion, this study has identified the dominant mode according to predictability of EASRA in GloSea5 system.