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Abstract

The Indian subcontinent receives most of its annual precipitation due to Indian summer (June, July, August and September) monsoon. Southeastern coastal region of the India receives significant amount of precipitation due to the northeast monsoon (October and November). Over northern Indian region almost one-third of annual precipitation is received during winter (December, January and February) by eastward moving extratropical cyclone called 'western disturbances (WDs)' in Indian meteorological parlance. Various studies are conducted to understand the Indian summer and northeast monsoons. However, the dynamics and characterization of winter precipitation is not well understood except with reference to the western disturbances (WDs). In this study, wintertime dynamics associated with large-scale flows and WDs influencing winter precipitation is proposed and termed 'Indian winter monsoon'. In addition, winter precipitation – the Indian winter monsoon – is proposed as eastward traveling WDs embedded in the large-scale subtropical westerlies over the Indian sub-