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Subseasonal Predictability of Early and Late Summer Rainfall Over East Asia

Xiaojing Li

Second Institute of Oceanography, Hangzhou, China (lixj@sio.org.cn)

Considering the significant differences in the rainfall characteristics over East Asia between the early [May–June (MJ)] and late [July–August (JA)] summer, this study investigates the subseasonal predictability of the rainfall over East Asia in early and late summer, respectively. Distinctions are obvious for both the spatial distribution of the prediction skill and the most predictable patterns, that is, the leading pattern of the average predictable time (APT1) between the MJ and JA rainfall. Further analysis found that the distinct APT1s of MJ and JA rainfall are attributable to their different predictability sources. The predictability of the MJ rainfall APT1 is mainly from the boreal intraseasonal oscillation signal, whereas that of the JA rainfall APT1 is provided by the Pacific–Japan teleconnection pattern. This study sheds light on the temporal variation of predictability sources of summer precipitation over East Asia, offering a possibility to improve the summer precipitation prediction skill over East Asia through separate predictions for early and late summer, respectively.