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East Asian Summer Monsoon – Onset Definition and Circulation Characteristics during Onset Period

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ABSTRACT

The climatological feature of the East Asian summer monsoon is characterized by gradational development as the season migrates, and the South China Sea is regarded as the root of the East Asian summer monsoon. Due to multi-scale variations of the monsoon circulation, it is difficult to objectively define the onset of the South China Sea summer monsoon. By the use of 1979-1995 observational data, based on the evolution of monsoon development and the comparison of monsoon onset dates determined by different onset definitions, this study discusses in details the local circulation pattern in the South China Sea area during the onset period and its association with the onset definition. The monsoon circulation patterns as revealed in this 17-year analysis indicate that the mid-latitude weather system plays an important role in the development of South China Sea summer monsoon. This study also suggests a semi-objective definition of the South China Sea summer monsoon onset. Hope this onset definition will be beneficial to the study of the interrelationship between the mid-latitude weather system and the South China Sea summer monsoon development.

Key words: South China Sea summer monsoon, Onset definition, Monsoon circulation pattern