

An Overview of Low-Level Jets (LLJs) and Their Roles on Heavy Rainfall Over the Taiwan Area During the Early Summer Rainy Season

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During the early summer rainy season over Taiwan, three types of low-level jets are observed including a synoptic low-level jet (SLLJ), situated in the 850-hPa–700-hPa layer in the frontal zone, a marine boundary layer jet (MBLJ) embedded within the southwesterly monsoon flow over the northern South China Sea at approximately the 925-hPa level, and orographically induced jet at approximately the 1-km level off the northwestern Taiwan coast (e.g., barrier jet (BJ)). The characteristics and physical processes of the formation of these three types of low-level jets are reviewed, as well as and their roles responsible for the development of heavy rainfall are discussed.

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