



Measuring East Asian Summer Monsoon rainfall contributions by different weather systems over Taiwan

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The East Asian summer monsoon (EASM) is characterized by a distinct life cycle consisting of the active, break, and revival monsoon phases. Different weather systems prevail in each phase following the change of large-scale flow regime. During the active phase, mid-latitude cold, dry air moving equator-ward into the tropics develops eastward-propagating fronts and rainstorms. The western ridge of the North Pacific subtropical anticyclone, which leads to the break phase, suppresses the development of synoptic-scale weather systems but enhances the diurnal heating. In the revival phase, the monsoon trough displaces the anti-cyclonic ridge northward and increases typhoon activity. This study examines quantitative measurements of climatological rainfall contributed by these weather systems that will help to validate simulations of the EASM climate system and facilitate water management by government agencies.