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# An Overview of Mei-Yu Fronts Over Southern China and the Taiwan Area During the Early Summer Rainy Season

YI-LENG CHEN

*Department of Meteorlogy, University of Hawaii*

Monsoon circulations are planetary-scale circulations. However, rainfall associated with monsoon circulations is intermittent related to transient disturbances embedded in the large-scale monsoon flow. During the early summer rainy season over southern China and Taiwan, heavy rainfall events are frequently associated with the passage of Mei-Yu fronts. In the traditional view, the Mei-Yu front over southern China during the early summer rainy season is considered as an equivalent barotropic system driven by a CISK-type process. There are increasing evidences showing that even the feedback effects of latent heating is important for the diagnosed frontal circulations, most of these systems are baroclinic in nature with a marked vertical tilt. During the early summer rainy season, upper-level westerlies prevail over southern China allowing transient disturbances in the westerlies to affect southern China. Initially, many of the initial Mei-Yu frontal cyclones develop in the lee side of the Tibetan Plateau as a transient mid-latitude system approaches. They transformed into baroclinic systems as the transient mid-latitude system advances southeastward bringing cold air behind the trough to southern China. In this presentation, the development, evolution, structure of the Meu-Yu frontal systems and effects of latent heating on frontal circulations will be discussed.