

A Study of Super Heavy Rain Event over Taiwan associated with 2004 Typhoon Mindulle

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Super heavy rainfall (>350 mmday⁻¹) associated with Typhoon Mindulle was continuously observed over the windward regime of Taiwan during the time slot of 1-5 July 2004. The torrential rainfall distributions significantly shifted from the eastern windward side to the western Taiwan after the landfall and the northward propagation of the Typhoon. Based on local soundings, the moisture content distribution in the vertical was utilized to determine the selection of microphysics in numerical experiments. With the incorporation of Doppler data radial velocity using MM5 three-dimensional variational data assimilation (3DVAR) system, the performance in the prediction of super heavy rain events after the passage of the Typhoon Mindulle was improved.