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**Spatial and temporal variations of precipitation of landfall typhoons
in the Taiwan area**

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Abstract

This study examines the temporal and spatial variations of precipitation structure within 300 km radius of the typhoon center by using reflectivity data taken from Doppler radars in Taiwan. Several typhoons with different tracks and intensity in the year of 1996-2002 were analyzed. The azimuth-mean and quadrant-average reflectivity maps were calculated to show the evolution of the precipitation during their landfalling period. More than a hundred hours radar data with time interval of 6 or 8 minutes were analyzed in this study. The contraction of the eyewall, the outward propagating spiral rainbands, the concentric eyewall replacement cycle, and excitation of the organized convective systems outside the eyewall were identified. The asymmetric characteristics of precipitation were documented and the effect of Taiwan topography on the nature of these precipitation features was also discussed.

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