



Radar Observation of Violent Wind around Typhoon ‘Jebi’

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Typhoon ‘Jebi’ landed at Kobe on 4 September 2018 and caused severe wind hazard in wide area of Kinki region. 13 peoples were killed and more than 900 peoples were injured due to violent wind of Jebi. More than 20,000 houses were also destroyed. Maximum instantaneous wind velocity was 58.1 m/s at Kansai international airport. The violent wind of Jebi broke record of maximum instantaneous velocity at 100 observation sites including that at Kansai international airport. The present observational study aims to clarify the wind structure around Jebi. We made dual Doppler analysis by using the data obtained from the Doppler radars at Itami international airport and Kansai international airport.

The horizontal wind fields were obtained at several heights up to 3 km AGL. The cyclonic rotational wind field around typhoon eye was clearly observed. Hi-speed region was observed the east side of the typhoon eye. The maximum wind more than 60 m/s was observed in the layer lower than 1km AGL not above boundary layer. Before the landfall of Jebi at Kobe, Ekman spiral was clearly observed in vertical wind profile. But, the wind direction became uniform to south-southwest after the landfall and Ekman spiral was merely observed. Wind hazard may be caused by the violent wind due to original rotational wind and the moving velocity of Jebi.