

Relationship between rainfall distribution and surface wind during heavy rainfall occurred in central Tokyo in summer

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In recent years, it has been reported that short time heavy rainfall that occurs in summer tends to increase. The purpose of this study is to clarify the evolution process of short time heavy rainfall towards the short-range forecasting of heavy rainfall that showed clear regional characteristics.

Typical heavy rainfall days were selected and the relationship between rainfall distribution and the convergence of surface winds were examined by using high-density data obtained from meteorological observations in central Tokyo from 2011 to 2012. The values of convergence tended to be larger from several tens of minutes before the occurrence of heavy rainfall in the case of August 26, 2011. The similar temporal change was observed in approximately half of the selected cases. From these results, the possibility to predict the occurrence of heavy rainfall is expected by using the surface wind data obtained from high-density observation network.

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