

Overview and Plan of Enhancing Early Warning Service for Hazardous Weather Based on Radar Update

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Abstract

Due to the progress of updating the current radar network into dual-polarimetric (dual-pol) radar in the future, the Central Weather Bureau proposed the Dual-Polarimetric Radar-Based Disaster Early Warning Technique Improvement (DEWTI) project. The main goal of DEWTI project is to develop the dual-pol radar-based nowcasting technique and to construct an information system that incorporates the dual-pol radar observation and its derived products. In this presentation, an overview of multiple strategies and technique development which assist in improving short-term forecasts will be given. In addition, the future plan of how to incorporate information mentioned above to make better early warning decision for severe weather will be summarized. Under the DEWTI project, we expect to increase the ability of early warning technique, to shorten the time of early warning operation, and to improve the quality of early warning message to mitigate the damage caused by the hazardous weather.

Keywords: Early warning, Dual-polarimetric radar, Nowcasting technique, Hazardous weather