



Development of the Application techniques for KMA dual-pol. radar network in Korea

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Korea is located between the Eurasian continent and Northwestern Pacific. So East Asian Monsoon affects the country every season and every year with the rainy season (Chang-ma front), convective storms, snow storms, and sometimes typhoons. Korea Meteorological Administration (KMA) has been operating many kinds of meteorological observation networks, including 10 operational radars and 1 testbed radar. Weather Radar Center (WRC) of Korea Meteorological Administration (KMA) performs a task of development and application of cross governmental dual-pol. radar harmonization for the effective use of the national resources from 2013 since the tri-agencies (KMA, Ministry of Land, Infrastructure and Transport, Ministry of National Defense) signed the MOU for the co-utilization of cross governmental dual-pol. radar.

This task develops the techniques of the high-quality data processing, the support of the forecasting, etc. The techniques of the high-quality data processing are the quality control for the removal of non-meteorological echoes, the classification of the hydrometeors. The techniques for support of the forecasting are the computation and verification of the rainfall estimation of dual-pol. and single-pol. radars, etc. And it is developed the application techniques by using Yong-In Testbed dual-pol. radar, the merged rainfall field of the radars and the satellites, etc. Further works are the computation of the high-resolution 3-dimensional wind field, the quantitative precipitation forecasting, the development of the application and the information service techniques for the hydrology, climate, industry, aviation for the prevention techniques against the severe weather by using multi-wavelengths (X, C, S-band radars) of the cross governments, etc.