

Development of Flood Early Warning System using Remote Sensing Technology

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Heavy rainfall is the most devastating natural hazards in Korea peninsular. As a result, Monitoring and forecasting of heavy rainfall is one of important challenges for flash floods in accurate rainfall estimation. The precipitation from satellite is very effective for flash floods. Geostationary satellite is especially important for estimating and predicting heavy rainfall in high time and spatial resolution during flash flood by Typhoon. This study validated rainfall algorithm for typhoon Chaba using Korea geostationary satellite images and GPM(Global Precipitation Mission) DPR(Dual Precipitation Radar) and GMI(GPM Microwave Imager) sensors. We makes algorithm co-located GPM Level 2 precipitation with rain flag, precipitation type flag, land/ocean flag, convective/stratiform flag, cloud top height flag and COMS geostationary satellite 5 channels. This algorithm can be applied to Himawari 8 satellite with more than 3 times as time resolution and 2 times spatial resolution comparison with COMS satellite. This paper describes improvement of application of accuracy in rainfall estimation by Himawari 8 satellite additional spectral bands.