A study on flash flood forecasting using threshold rainfall and quantitative radar precipitation

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Flash flood forecasting is important to prevent or mitigate flash flood disasters, and research into the use of hydrological models and quantitative precipitation information for flash flood forecasting has increasing over the past decade. This paper presents a rainfall-induced flash flood forecasting system over the South Korea, which has been developed using the threshold rainfall obtained from TOPMODEL-based Land Atmosphere Transfer Scheme (TOPALTS) model and quantitative radar precipitation. Here, threshold rainfall is amount of rainfall required to flash flooding in current soil moisture conditions. Through the comparison between calculated threshold rainfall with 3 and 6 hour duration time and the radar based precipitation forecast, flash flood guidance information is detected. For the verification, flash flood cases are selected in the period from 2005 to 2011, and the results will be shown in the conference.