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Introduction of Korean GRL activities for international cooperation field experiments between Korea, Japan and Taiwan

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Environmental atmospheric research such as heavy rainfall and aerosol particles are occurred with severe weather phenomena and transported to Korean peninsula, Japan, Taiwan and China. Natural disasters are concentrated in summer monsoon season in each country and their damages are also increased every year.

Global Research Laboratory of PKNU-HyARC Observation Network for East China Sea (GRL-PHONE) was established on June 1, 2006, for the purpose of reduction and prediction of natural disaster caused by severe weather and understanding of mechanism of heavy precipitation system in the East China Sea. And joint observation research of SoWMEX/TiMREX (Southwest Monsoon Experiment/Terrain-influenced Monsoon Rainfall Experiment) in Taiwan was accom-plished to improve the QPE/QPF during monsoon season and we had an intensive field experi-ment to understand physical process associated with the terrain-influenced heavy precipitation systems near Tokyo metropolitan city. Aerosol particles were observed on the tower of Ieodo ocean research station located in 150km southern area from Jejudo to know the fluctuation of oceanic aerosols with horizontal and vertical wind fields.

For these research projects, we continuously plan international field experiments to obtain various data using meteorological instruments such as dual polarimetric radar, AWS, radiosonde, UVW anemometer, rain gauge, LPC aerosol counter, and disdrometers (POSS, Parsivel, JWD and 2DVD).

Keywords: GRL-PHONE, SoWMEX/TiMREX, Terrain-influenced heavy precipitation, Aerosol