

**[P-057/SE-5] VHF Radar and 3-component MI Magnetometer  
Development for Korea Space Weather Prediction Center**

Junga Hwang, Jae Jin Lee, Young-Sil Kwak, Kyung-Suk Cho, Khan-Hyuk Kim,  
and Young-Deuk Park

*Korea Astronomy and Space Science Institute*

Solar and space weather research group in Korea Astronomy and Space science Institute (KASI) has made effort to install atmospheric/ionospheric observation facilities including VHF coherent scattering radar, All-sky Imager, Scintmon and search coil to build Korea Space Weather Prediction Center (KSWPC). These new instruments will be operated together to produce reliable data for space weather forecasting with the existing facilities; Solar Flare Telescope (SOFT), Solar Optical Observatory's sunspot telescope and solar imaging spectrograph, and Magnetometer. In this presentation, we introduce briefly the status of development of VHF radar and 3-component MI Magnetometer. The VHF coherent scattering radar having target frequency of 40.8 MHz with 200 kHz of bandwidth is designed to monitor the irregularities in E- and F-layers, especially sporadic-E, spread-F, and traveling ionospheric disturbance (TID). The radar will be installed in a territory of Korean Air force at Gyerong city by 2009. The 3-component MI Magnetometer is a brand new search coil which can measure magnetic waves from 0.1 to 100Hz with 7pT of noise levels. This search coil will also installed at Bohyun Mountain observatory and operated with flux gate magnetometer.