
Development of the Technology to locate and to observe Solar Bursts

Yong-Jae Moon, Kyung-Seok Cho, Young-Deuk Park,
Yeon-Han Kim, Jung-Eun Hwangbo, Su-Chan Bong
Korea Astronomy Observatory

The Korea Astronomy Observatory (KAO) started a five year project which includes (1) the development of solar radio burst locator (SRBL) and (2) the participation in the construction of 1.6 M New Solar Telescope (NST) at Big Bear Solar Observatory (BBSO), which is the largest aperture solar telescope in the world. This project will be made with the cooperation between KAO and New Jersey Institute of Technology (NJIT) in terms of science and technology. SRBL is expected to produce multi-band (1-18 GHz) solar microwave spectra and polarization with sub-second high time resolutions as well as to locate solar microwave bursts with an accuracy of less than 2 arcmin. Its data can be used as input data for interplanetary shock propagation models as a part of space weather prediction. Thanks to excellent seeing conditions of BBSO under NJIT and high order adaptive optics, NST will provide us with very fine spatial resolution (less than 0.1 arcsec) of solar optical and IR images as well as vector magnetograms to study the physical characteristics of very small scale structures such as magnetic flux tubes.