Project Details

ROSES ID: NNH05ZDA001N
Selection Year: 2006
Program Element: Data, Tools, & Methods

Topic: Shock acceleration of solar energetic particles by interplanetary CMEs

Project Title:
The Green Bank Solar Radio Burst Spectrometer: A Resource for LWS Studies

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Summary:
We propose to make available high quality dynamic spectra of solar radio bursts to the LWS community from the Green Bank Solar Radio Burst Spectrometer (GBSRBS), and to carry out science studies of the connection between radio bursts and space weather phenomena using these data. GBSRBS will operate from 14 to 1000 MHz in the radio-quiet zone around Green Bank, WVa, with 1 second time resolution and excellent spectral resolution. The site is particularly important for low frequency studies, close to the ionospheric cutoff and the upper limit of the WIND/WAVES and STEREO/SWAVES instruments, because of the very low interference environment allowing us to see phenomena undetectable from other sites. GBSRBS will greatly enhance studies of solar radio bursts and their connection to events that impact the Earth, including coronal mass ejections, flares and acceleration of solar energetic particles. GBSRBS's wide frequency range and extension

down to 14 MHz is particularly valuable for providing

a continuous connection between phenomena in the low corona and the phenomena seen by the radio detectors on the WIND and STEREO satellites. This proposal is for support of the data archive and software development to make the data freely available to the community, as well as science studies carried out with the data. This project fits into both the Tools and Individual investigation programs.

Publication References:

no references