Technical Page

This proposal has not been submitted before.

Proposal Type:	Regular
General Category:	Astronomy
Observation Category:	Corona and Heliosphere
Total Time Requested:	270 Hours
Minimum Useful Time:	one hour

Proposal Title: Arecibo Observations of Interplanetary Scintillation (IPS) for Space Weather

ABSTRACT:

Interplanetary scintillation (IPS) is a result of variations in radio signals received from distant, compact radio sources on the sky, as the radio waves travel through interplanetary medium due to density changes in the outflowing plasma. Observations of IPS allow us to infer the speed and density of the plasma, two key parameters of the inner heliosphere. The importance of the remote-sensing techniques lies in the capability of observe regions of the heliosphere that no other technique can, to complement models and in-situ data sets. Currently, one of the main challenges in Heliophysics is to understand the evolution of the structures traversing the interplanetary medium. The use of remote-sensing techniques (including IPS), along with the spacecraft in-situ data, can be combined to better understand different phenomena. In this proposal, we seek to analyse observations of IPS using the Arecibo telescope in order to obtain results that can complement heliospheric models.

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Remote Observing Request

- ☐ Observer will travel to AO
- ☐ Remote Observing
- ☒ In Absentia (instructions to operator)

Instrument Setup

430 G L-wide C 327 X-band C-wide

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned