

Technical Page

This proposal has been submitted before.

The previous proposal number is S3039.

Proposal Type: Urgent
 General Category: Astronomy
 Sub-Category: Radar
 Observation Category:
 Total Time Requested: 1 Hours
 Minimum Useful Time:

Proposal Title: Characterization of radio frequency interference in Arecibo ALFA Array observations

ABSTRACT:

ALFA array observations of the quarter-phase (waxing half-moon) at 1410MHz were conducted to search for possible ElectroMagnetic Pulses (EMPs) generated by gram-class meteoroid strikes on the Arecibo-visible lunar surface in the beginning of this year. While possible EMP signatures have been identified in the current dataset, we wonder if similar features are always present due to the out-of-band strong radar signals. In specific, we would like to investigate if the intermods/mixer modes of the radio frequency interference generated from the nearby radars can be the possible sources. As a part of these proposed observations, we hope to study and characterize the properties of radio frequency interference sources located nearby Arecibo observatory that can possibly generate wideband transient signals.

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Remote Observing Request

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

Instrument Setup

ALFA

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned

This proposal requires coordination with Punta Salinas radar within the band 1222-1381 MHz..