

Technical Page

This proposal has not been submitted before.

Proposal Type: Regular
 General Category: Terrestrial Aeronomy
 Observation Category: Thermosphere
 Total Time Requested: 48 Hours
 Minimum Useful Time: 4 hours

Proposal Title: Radar observations of sporadic E layer irregularities and E-region winds and temperatures from Arecibo and St. Croix

ABSTRACT:

We propose to observe sporadic E layers, F-region MSTIDs, irregularities in the respective layers, and contextual parameters throughout the E and F region over Arecibo in postsunset summer hours using the Arecibo incoherent scatter radar and associated imagers and lidars. The radar should be operated in dual-beam mode using a combination of maximal length coded pulses, MRACF pulses, and coded long pulses, similar to what is used for World Day mode. Additional experiments involving double maximal length codes may also be used. The objective is to measure densities, drifts, and electric fields within irregular sporadic E layers and MSTIDs as completely as possible. The experiments will be supported by an imaging coherent scatter radars on St. Croix which has a common volumes with Arecibo in the E regions. The COCONet GPS network will also be utilized.

Name	Institution	E-mail	Phone	Student
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Remote Observing Request

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

Instrument Setup

430 G 430 CH receiver 430 Xmit

Atmospheric Observation Instruments:

Fabry-Perot Ionosonde Lidar

Description of Observer Equipment: St. Croix radar

Special Equipment or setup: Lidar, ionosonde, and FPI are desired but not necessary.

RFI Considerations

Frequency Ranges Planned