

Technical Page

Proposal Type: Regular
 General Category: Terrestrial Aeronomy
 Observation Category: Thermosphere
 Total Time Requested: 42 Hours
 Minimum Useful Time:

Proposal Title: Comprehensive plasma line measurements with the Arecibo radar

ABSTRACT:

We propose to study thermosphere-ionosphere-magnetosphere coupling in the F-region peak ionosphere using techniques that measure changes far more precisely than any other available. We will employ two, established but seldom utilized, ISR electron plasma line techniques that offer high precision information on the ionospheric F-region, and owing to this unprecedented precision, these techniques have revealed important scientific questions of very small discrete fluctuations is the F peak density and vertical currents that are far larger than expected. The specific techniques are, measuring the critical frequency of the F_2 peak density [Ganguly 1982], and electron drift over the Arecibo incoherent scatter radar [Behnke 1986].

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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 CH radar

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned