

Technical Page

Proposal Type: Regular
 General Category: Terrestrial Aeronomy
 Sub-Category: Radar
 Observation Category: Ionospheric
 Total Time Requested: 64 hours Hours

Proposal Title: Study of Electrodynamic Coupling between Ionospheric Layers

ABSTRACT:

High resolution ISR observations of the evening and nighttime E- and F-regions at Arecibo during both "normal" low-activity periods and during an active spread-F event reveal apparent electrodynamic links between the low-lying layers, ion-rain, and the spread-F instability process. This coupling is manifested as "ion rain" structures extending from the base of the F-region onto the underlying intermediate layer and down to 100 km during intensive spread-F events. We propose measuring horizontal structure and plasma drifts at the highest possible resolution throughout the 80-450 km altitude region

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Service Observing Request

Remote Observing Request

- None
- All of the observing run.
- Part of the observing run.
- Queue Observing

- No
- Maybe
- Yes

Instrument Setup

430 MHz CH receiver

Atmospheric Observation Instruments:

Ionosonde

Description of Observer Equipment:

Special Equipment or setup: Special setup: Software needs: Media needs: exabyte

RFI Considerations

Frequency Ranges Planned

see proposal