

Technical Page

This proposal has not been submitted before.

Proposal Type: Urgent
 General Category: Astronomy
 Observation Category: Ionosphere
 Total Time Requested: 16 Hours
 Minimum Useful Time:

Proposal Title: Study for E-F layer coupling under HF activity

ABSTRACT:

Strong differences in activity when billows occur in the E-region can be used to show coupling between the E and F region. The observation in coupling effects is enhanced under HF activity or excitation of the region. In our observation data, we look for sporadic-E layers with the right conditions for billow formations on the neutral wind activity (Richardson number <0.25). Previous datasets have depicted the sporadic activity to occur during the night time in the summer. When the right conditions are found, we look for differences between the artificial and the natural ionosphere to evaluate the coupling effects. The stronger E-region layer can be maintained for longer periods using HF; therefore we study the correlation with HF. We also look for strong irregularities in the F-region and the time correlation with the sporadic-E layer activity. To estimate the difference with HF excitation, we make our observations with the Gregorian and the line feed.

| 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 Heating Facility

Atmospheric Observation Instruments:

Tilt-Photometer Spectrophotometer Fabry-Perot Ionosonde Lidar

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned