

Technical Page

This proposal has not been submitted before.

Proposal Type: Urgent
 General Category: Astronomy
 Sub-Category: Radar
 Observation Category: Thermosphere
 Total Time Requested: 0 Hours
 Minimum Useful Time:

Proposal Title: Study of Heating Induced Langmuir and Upper-Hybrid Turbulence

ABSTRACT:

It is known from IS radar and optical observations that high frequency radio waves can induce plasma turbulence in the ionosphere near the reflection height. However, it is not yet understood which plasma turbulences are dominant at different time scales. The motivation for this experiment is to better understand the connection between Langmuir and upper-hybrid turbulence during high frequency heating. We aim to do this by studying plasma line depletions from high-resolution ISR spectra and enhanced emission intensities from optical observations during heating with different pulse lengths.

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Remote Observing Request

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

Instrument Setup

430 Xmit

Atmospheric Observation Instruments:

Tilt-Photometer Spectrophotometer

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned