

## Technical Page

This proposal has not been submitted before.

Proposal Type: Regular  
 General Category: Astronomy  
 Observation Category:  
 Total Time Requested: 4 Hours  
 Minimum Useful Time: 90 minutes

**Proposal Title:** Studying mechanisms responsible for the formation and decay of the plasma line overshoot as observed by the 430 MHz radar

*ABSTRACT:*

Experiments in the 1980' s indicated a direct correlation between the decay of the plasma line overshoot phenomenon and the formation of short scale striations in the heated ionospheric region. The plasma line overshoot was not always observed, although it was almost always observed following an extended HF-heater off time period. In the 1980' s, the plasma line overshoot was observed by the Arecibo 430 MHZ radar, and the rise time of the short scale striations were observed by 50 MHZ radars with views perpendicular to the magnetic field over Arecibo. Since that time, new techniques have been developed to measure the formation of short scale striations with the 430 MHz radar. We propose to test the relationship of the plasma line overshoot to the rise time of the short scale striations utilizing these new radar capabilities.

Name	Institution	E-mail	Phone	Student
Anthea J Coster	MIT Haystack Ob- servatory	ajc@haystack.mit.edu	9784601018	no

### Remote Observing Request

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

### Instrument Setup

430 G

### Atmospheric Observation Instruments:

**Special Equipment or setup:** none

## RFI Considerations

### Frequency Ranges Planned