

### Technical Page

Proposal Type: Regular  
 General Category: Terrestrial Aeronomy  
 Observation Category: Ionosphere  
 Total Time Requested: 48 Hours

**Proposal Title:** Ionospheric disturbances resulting from Atlantic tropical storms and hurricanes  
**ABSTRACT:**

Recent observations have shown a possible connection between the occurrence of hurricanes and tropical storms and F-region range spreading and velocity variations. Identifying and describing the extent of the coupling between the ionosphere and tropospheric disturbances is vital to the overall understanding of observed ionospheric variations. Currently an investigation funded by a CEDAR post-doc grant is underway to study the effects of large-scale tropospheric disturbances, specifically hurricanes and tropical depressions, on the lower thermosphere and ionosphere. The goal of this study is to 1) Observe any evidence of F-region variations due to tropical storms, 2) Ascertain the penetration and period of any storm generated gravity waves in the thermosphere, and 3) Determine if gravity waves or electric fields are more likely to produce F-region disturbances.

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**Service Observing Request**

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

**Remote Observing Request**

- No
- Maybe
- Yes

**Instrument Setup**

430 CH radar

**Atmospheric Observation Instruments:**

**Special Equipment or setup:** none

**RFI Considerations**

**Frequency Ranges Planned**

