

## Technical Page

Proposal Type: Urgent  
 General Category: Terrestrial Aeronomy  
 Sub-Category: Radar  
 Observation Category: Ionospheric  
 Total Time Requested: 8 Hours

**Proposal Title:** Observation of Critical Ionization Velocity (CIV) Experiments on ARGOS  
**ABSTRACT:**

A set of Critical Ionization Velocity, CIV, experiments will be performed aboard the spacecraft ARGOS. The CIV phenomenon is a plasma process in which gas traveling above a critical velocity in a background magnetized plasma becomes rapidly ionized. The process has a theoretical basis and confirmed laboratory observations. However, no unambiguous observations of CIV in space exist despite several previous attempts, and the process remains unquantified. Our objective is to characterize CIV-induced ionization above Arecibo Observatory.

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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 MHz Gregorian                      430 MHz CH receiver

### Atmospheric Observation Instruments:

Photometer   Spectrometer

### Description of Observer Equipment:

**Special Equipment or setup:** Special setup: Software needs: Media needs: Raw CLOP data acquisition

### RFI Considerations

## Frequency Ranges Planned

see proposal