

Technical Page

Proposal Type: Regular
 General Category: Terrestrial Aeronomy
 Sub-Category: Radar
 Observation Category: Middle-Lower Atmosphere
 Total Time Requested: 36 hrs Hours

Proposal Title: Measurement of Negative Ions in the D-region and Comparison with New Models
ABSTRACT:

The D-region of the Earth’s ionosphere is known for its complex chemistry. This arises from (a) relatively high pressure, which causes major and minor species to be important in the photochemical reactions, and (b) several different sources of ionization contribute significantly to ion production. Most of the negative charge that occurs in the form of negative ions is located below 70 – 80 km depending on whether it is day or night. Our goal of this project is to gain a better insight into the distribution of negative ions during the day, and of the ion mass of sporadic layers at night, than what has been achieved to date. The new data acquisition system recently installed on the Arecibo incoherent scatter radar will help us achieve this goal.

Name	Institution	E-mail	Phone	Student
Shikha Raizada	Arecibo Observatory	shikha@naic.edu	787-878-2612 ext. 259	no

Service Observing Request

Remote Observing Request

- | | | | |
|-------------------------------------|----------------------------|-------------------------------------|-------|
| <input checked="" type="checkbox"/> | None | <input checked="" type="checkbox"/> | No |
| <input type="checkbox"/> | All of the observing run. | <input type="checkbox"/> | Maybe |
| <input type="checkbox"/> | Part of the observing run. | <input type="checkbox"/> | Yes |
| <input type="checkbox"/> | Queue Observing | | |

Instrument Setup

430 CH radar

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned