

Technical Page

Proposal Type: Long-term
 General Category: Terrestrial Aeronomy
 Sub-Category: Radar
 Observation Category: Middle-Lower Atmosphere
 Total Time Requested: 240 Hours
 Minimum Useful Time:

Proposal Title: Radar and lidar study of mesopause dynamics and chemistry

ABSTRACT:

We propose to study mesopause dynamics and chemistry using the Arecibo ISR and resonance lidars. The scientific objectives include the study of : 1. ion neutral collision frequency; 2. tides and planetary waves in wind, temperature and density; 3. ion composition in sporadic layers; 4. chemistry of metal layers. We also propose to explore the development and calibration of potassium lidar wind measurement capability. We request a total of 10 days of radar time over two years. In order to maximize the scientific output, we request radar time scheduled in conjunction with World Days focusing on lower thermosphere and mesosphere.

Name	Institution	E-mail	Phone	Student
Qihou Zhou	Miami University		513-523-0768	no

Remote Observing Request

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

Instrument Setup

430 CH receiver

Atmospheric Observation Instruments:

Tilt-Photometer Spectrophotometer Fabry-Perot Ionosonde Lidar

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned