

## Technical Page

Proposal Type: Regular  
 General Category: Terrestrial Aeronomy  
 Sub-Category: Radar  
 Observation Category: Meteors  
 Total Time Requested: 20 Hours  
 Minimum Useful Time: 4

**Proposal Title:** On the possible effect of the signal processing in meteor-head observations  
**ABSTRACT:**

Recent work presented at CEDAR 2010 and NRSM 2011 by the authors showed a particular signature in meteor-head echoes that seem to be related to the sampling process of current radar systems. For example, these preliminary studies showed amplitudes fluctuations around 3dBs in the signal to noise ratio of the meteor-head echoes detected with the VHF radar system at Jicamarca Radio Observatory. The understanding of the origin of these features is critical to differentiate them from actual physical processes present in meteor returns. Failing to do so could lead to misinterpretation of meteor data. We request four days of radar time to conduct a series of meteor experiments at Arecibo Observatory, in order to study this particular signature. In addition, it will also provide an opportunity for students in the Department of Electrical Engineering at Penn State University to learn about Arecibo Observatory and become familiar with the data.

Name	Institution	E-mail	Phone	Student
Freddy Galindo	Penn State Univer- sity	frg5014@psu.edu	8148651039	G

### Remote Observing Request

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

### Instrument Setup

430 CH radar

### Atmospheric Observation Instruments:

**Special Equipment or setup:** none

## RFI Considerations

### Frequency Ranges Planned