

Technical Page

Proposal Type: Director Discretionary Time
 General Category: Astronomy
 Sub-Category: Spectroscopy
 Observation Category: Education
 Total Time Requested: 4 Hours
 Minimum Useful Time:

Proposal Title: Radio Line Observations: An Educational Project using the Arecibo 305 m Telescope

ABSTRACT:

The increased remote observing capabilities of astronomical observatories allow their use in higher education. This is important for general high level education of science students as well as for early training of a future generation of radio astronomers. With the goal of introducing a group of New Mexico Tech students currently enrolled in the Advanced Radio Astronomy course at NMT (PHYS-566) to the techniques of professional radio astronomy, we propose spectral line observations with the Arecibo telescope. Depending on available LST interval we will observe the HI line in case of extragalactic targets, and molecular (H₂CO) and atomic (H110a) spectral lines in case of observations in the galactic plane. The students will plan, conduct, reduce and analyze the radio observations. In 2006 we have carried out a similar educational project using the Arecibo telescope with great success. The PI is very familiar with the remote use of the telescope, and here we request 2x2 hour slot, which can be scheduled at the most convenient date and time for the observatory.

Name	Institution	E-mail	Phone	Student
Peter Hofner	New Mexico Tech	phofner@nrao.edu	505-835-5233	no

Remote Observing Request

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

Instrument Setup

C ALFA

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned

4700 - 4900

1400 - 1420