

Technical Page

Proposal Type: Short
 General Category: Astronomy
 Sub-Category: Spectroscopy
 Observation Category: Extragalactic
 Total Time Requested: 3 Hours
 Minimum Useful Time: 3 hrs

Proposal Title: Testing a new model of OH megamaser emission

ABSTRACT:

A new radiative pumping model has recently been developed that predicts the expected OH megamaser strength in merging, IR-bright galaxies. We have recently completed Spitzer observations of a large sample of such galaxies that are able to test this model through measurements of the dust opacity and temperature. This is a critical first step in uniting theories of megamasers with observations of their global properties. We have identified a single galaxy (IRAS 23498+2423) that is predicted to show a strong OHM, but which has only an upper limit on the OH emission. We plan to observe this galaxy at Arecibo to a significantly deeper limit in OH and thus help to confirm or refute this new theory.

Name	Institution	E-mail	Phone	Student
Kyle Willett	University of Colorado	willettk@colorado.edu	303.492.6857	G

Remote Observing Request

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

Instrument Setup

L-wide

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned

1360-1390

This proposal requires coordination with Punta Salinas radar within the band 1222-1381 MHz..

This proposal requires coordination with GPS L3 at 1381 MHz.