

Technical Page

Proposal Type: Regular
 General Category: Astronomy
 Sub-Category: Spectroscopy
 Observation Category: Extragalactic
 Total Time Requested: 55 Hours

Proposal Title: Super Star Clusters: The Missing Link Between Galactic OH Masers and OH Megamasers

ABSTRACT:

We propose to observe the four 18 cm OH transitions in a sample of nearby star forming galaxies known to host dozens to hundreds of young compact star clusters. The target sample spans a wide range of starburst ages, masses, environments, and host galaxy types. The star clusters in these galaxies are likely to produce OH masers, and the 18 cm line ratios can determine whether the masers associated with super star clusters represents scaled-up Galactic masers or scaled-down OH megamasers. In either case, detection of OH masing will identify a powerful diagnostic and tracer of highly obscured star formation and possibly proto globular clusters and intermediate mass black holes. Failure to detect OH emission lines in this sensitive survey would be a surprising but very informative result, indicating that there is no intermediate regime between Galactic-style masing associated with compact HII regions and OH megamasers.

Name	Institution	E-mail	Phone	Student
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Service Observing Request

Remote Observing Request

- None
- All of the observing run.
- Part of the observing run.
- Queue Observing

- No
- Maybe
- Yes

Instrument Setup

L-wide

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned

1577-1720

This proposal requires Iridium RFI protection at 1612 MHz between 10pm and 6am EST.