

Technical Page

Proposal Type: Long-term
 General Category: Astronomy
 Sub-Category: Spectroscopy
 Observation Category: Galactic
 Total Time Requested: 72 Hours
 Minimum Useful Time: 1 hour

Proposal Title: Arecibo Survey for Periodic CH₃OH and OH Maser Flares

ABSTRACT:

We have conducted a long-term Arecibo monitoring program for formaldehyde, methanol and hydroxyl masers toward the massive star forming region IRAS 18566+0408. We discovered recurrent maser flares from all species, with a periodicity of approximately eight months. The OH maser flares show a delay of approximately three months with respect to the H₂CO masers. The flares clearly trace some harmonic mechanism during the process of massive star formation (possibly periodic accretion events onto a protobinary system). We propose to continue and extend our monitoring program of CH₃OH and OH masers. The goal is to characterize the variability of a sample of CH₃OH masers and investigate the correlation with OH variability.

Name	Institution	E-mail	Phone	Student
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Remote Observing Request

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

Instrument Setup

C C-high

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned

4820 - 4840

6650 - 6680

6025 - 6045