

Technical Page

Proposal Type: Regular
 General Category: Astronomy
 Sub-Category: Spectroscopy
 Observation Category: Extragalactic
 Total Time Requested: 15 Hours

Proposal Title: Search for Water Maser Emission at High Redshift

ABSTRACT:

We propose a search for water maser emission from two gravitationally-lensed quasars, MG 0751+2716 at $z= 3.20$ and PSS 2322+1944 at $z= 4.12$. Arcsecond-resolution CO observations of both sources indicate the close proximity of molecular gas to the quasar. Multi-transition studies of PSS 2322+1944 indicate that the molecular gas is warm and dense, perhaps conducive to the formation of 22 GHz water masers similar to those found in some nearby AGN, most notably those in the Keplerian disk in NGC 4258.

Name	Institution	E-mail	Phone	Student
Elizabeth M Humphreys	Harvard-Smithsonian Center for Astrophysics	ehumphreys@cfa.harvard.edu	001 617 796 7547	no

Service Observing Request

Remote Observing Request

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

- No
- Maybe
- Yes

Instrument Setup

C

Atmospheric Observation Instruments:

Special Equipment or setup: WAPP

RFI Considerations

Frequency Ranges Planned

4000 - 6000