Technical Page

Proposal Type:	Regular
General Category:	Astronomy
Sub-Category:	Spectroscopy
Observation Category:	Extragalactic
Total Time Requested:	130 Hours

Proposal Title: Extragalactic CH

ABSTRACT:

We propose to search for the three 9 centimeter (3 GHz) transitions of CH in 93 IRAS galaxies with S(1.4 GHz)>150 mJy. The sample is selected for far infrared emission to provide ample excitation of CH (at 150 microns) and for adequate radio flux to observe CH in emission and/or absorption down to $\tau \simeq \pm 0.005$. This well defined, flux-limited survey will provide new insight into the frequency of observable CH lines in star forming galaxies, the emission and absorption properties of extragalatic CH, the relationships between the CH line properties and the host galaxies, and will allow us to estimate a local CH line luminosity function. These observations will also assess the utility of CH as a tracer of diffuse molecular gas and of high redshift molecular absorption systems.

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Service Observing Request

- [ ] None
- [ ] All of the observing run.
- [X] Part of the observing run.
- [ ] Queue Observing

Remot e Observing Request

- [ ] No
- [X] Maybe
- [ ] Yes

Instrument Setup

L-wide S-low

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned

3400-3000 (S-high)
1800-3100 (S-low)
1670-1730 (L-wide)
1280-1390 (L-wide)

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

This proposal requires coordination with GPS L3 at 1381 MHz.