Technical Page

Proposal Type: Regular
General Category: Astronomy
Sub-Category: Spectroscopy
Observation Category: Extragalactic
Total Time Requested: 96 Hours

Proposal Title: CH EMISSION IN GALAXIES

ABSTRACT:

ABSTRACT: CH emission in the Galaxy is found in almost every location where one searches. Extragalactic emission has been found in some fifteen nearby galaxies but only few of these detections have been published. Some of these were detected at Arecibo with the Mini-Gregorian. Considering the widespread occurrence of CH in the Galaxy and the detections of extragalactic emission resulting from weak maser action, we propose to confirm older detections and to continue our search for extragalactic CH in FIR sources that are known for their OH and H$_2$CO properties. The long-awaited arrival of the S-high system at Arecibo makes it possible to realize our plans. Significant CH detections would greatly enhance our ability to study the molecular component of the ISM of nearby galaxies using a third centimeter-wavelength spectral line. Since CH is a low-density tracer, it will complement the HI studies that are a routine tool for such studies.

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<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>E-mail</th>
<th>Phone</th>
<th>Student</th>
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<tbody>
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Service Observing Request

Remot e Observing Request

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Instrument Setup

S-low

Atmospheric Observation Instruments:

Description of Observer Equipment: !!! S-high is required at 3.3 GHz
Special Equipment or setup: standard spectral line setup

RFI Considerations

Frequency Ranges Planned

3.2 - 3.35