Technical Page

Proposal Identification No.: A2052
Date Received: 2005-

Proposal Type: Regular
General Category: Astronomy
Sub-Category: Spectroscopy
Observation Category: Galactic
Total Time Requested: 71 Hours

Proposal Title: The thinnest cold HI clouds in the diffuse ISM

ABSTRACT:
Recent observations with the Westerbork and Arecibo radio telescopes revealed several cold HI clouds with the peak optical depth of only 0.1% and with the HI column densities of about $3 \times 10^{17}$ cm$^{-2}$; these are the lowest column densities ever detected for cold neutral features in the ISM. The purpose of this proposal is to investigate how common these features are in the ISM, by performing a deep survey in HI absorption for a set of 23 sources with no previously known absorption features. We will use the observing and data reduction schemes developed recently by Heiles and Troland for their Millennium Arecibo survey. In total we ask for 71 hours of telescope time.

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
<th>E-mail</th>
<th>Phone</th>
<th>Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carl Heiles</td>
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<td>510 642 4510</td>
<td>no</td>
</tr>
</tbody>
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Service Observing Request

Remot e Observing Request

- [X] 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