Technical Page

Proposal Identification No.: A1910
Date Received: 2004-Feb-02 11:32:13

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

Proposal Title: Probing the ISM and the H\textsubscript{i} envelope around the Leo Triplet

ABSTRACT:

We propose to conduct sensitive measurement of possible absorption of a few background continuum sources by a variety of kinematically interesting H\textsubscript{i} reservoirs in the NGC 3628 system. Specifically, investigating the H\textsubscript{i} absorption by tidal outflow regions, driven outflow regions, and the perturbed, inter-group H\textsubscript{i} halos form the longer term objectives for this project. We propose to compile a dataset which will reveal important physical parameters of the intervening gas, such as temperature, pressure and density, and the kinematic state of the halo and of these outflow features. This information is currently lacking for the NGC 3628 group, and it is essential in understanding outflow mechanisms, and the process of galaxy interactions in general. In the particular case of the NGC 3628 group, numerical simulations have hitherto be only marginally successful and a more thorough understating of the groups gravitational potential field and the phase structure of the ISM will be critical for further progress. This early stage of the experiment will require approximately 15 hours of telescope time.

<table>
<thead>
<tr>
<th>Name</th>
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</thead>
<tbody>
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<td>no</td>
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Service Observing Request

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

Remote Observing Request

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

Instrument Setup

- L-wide

Atmospheric Observation Instruments:

Special Equipment or setup: none
RFI Considerations

Frequency Ranges Planned

1410 - 1422