Proposal Identification No.: A2237 Date Received: 2006-May-30_16:22:11

Technical Page

Proposal Type:	Short
General Category:	Astronomy
Sub-Category:	Spectroscopy
Observation Category:	Extragalactic
Total Time Requested:	1.2 Hours
Minimum Useful Time:	30 minutes

Proposal Title: The connection between galaxies and Damped Lyman Alpha systems

ABSTRACT:

The processes by which gas cools and collects into dark matter halos forming stars and luminous galaxies, as well as the feedback through which these stars then affect their environment, are topics of great interest in galaxy evolution studies. Damped Lyman Alpha systems (DLAs) are QSO absorbers thought to contain most of the cool gas in the universe. Exceeding the star formation threshold of local galaxy disks, the luminous counterparts of DLAs should be directly observable. Yet, only one DLA galaxy, SBS 1543+593, has been both detected in the visible and with 21-cm emission. This nearby DLA is fairly extreme, with a large HI mass for its optical luminosity ($M_{\rm HI}/L_{\rm B} = 4$). We propose to measure the HI masses of two more low-z DLA candidates (one at Arecibo and one with the GBT) for which counterpart galaxies have been detected, to determine whether they are also extreme in their HI properties.

Name	Institution	E-mail	Phone	Student
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Remote Observing Request

- [ ] Observer will travel to AO
- [X] Remote Observing
- [ ] In Absentia (instructions to operator)

Instrument Setup

L-wide

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned

1338 MHz

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

This proposal requires coordination with GPS L3 at 1381 MHz.