

Technical Page

Proposal Type: Regular
 General Category: Astronomy
 Sub-Category: Spectroscopy
 Observation Category: Extragalactic
 Total Time Requested: 90 Hours

Proposal Title: HI Spectroscopy at a Redshift of 2.3

ABSTRACT:

We request an initial allotment of 90 hours with the 400–450 MHz Gregorian receiver, the 430 MHz line feed and the wide–band 400–1000 MHz “Breakall” Gregorian feed (if available) to search for the spin–flip line emission of HI gas at a redshift of 2–2.5. The expected HI masses contained within the beam vary between 3 and $6 \times 10^{12} M_{\odot}$ — significantly lower than the targets of previous search experiments. We estimate that about one protocluster might be detectable for every 10 telescope pointings of 5 hours each, per 10 MHz of clear bandwidth coverage.

Name	Institution	E-mail	Phone	Student
Riccardo Giovanelli	Cornell University	riccardo@astrosun.tn.cornell.edu	607-255-6505	N

Service Observing Request

- None
- All of the observing run.
- Part of the observing run.
- Queue Observing

Remote Observing Request

- No
- Maybe
- Yes

Instrument Setup

430 MHz Gregorian 430 MHz CH receiver

Atmospheric Observation Instruments:

Description of Observer Equipment:

Special Equipment or setup: Special setup: Jim Breakall’s 400-1000 MHz receiver Software needs:
Media needs:

RFI Considerations

Frequency Ranges Planned

see proposal