



DEADLINES: 1st of Feb., June., Oct. for next configuration following review
 INSTRUCTIONS: Each numbered item must have an entry or N/A
 E-MAIL TO: propsoe@nrao.edu (different for some Rapid Response Science)
 OR MAIL TO: Director NRAO, 520 Edgemont Rd., Charlottesville, VA 22903-2475

A
 rcvd:

- (1) Date Prepared: January 14, 2006
 (2) Title of Proposal: Starless Halo or Harassment Relic? A Dynamically Scheduled Follow-up to AG699

(3) AUTHORS (Add * for new location)	INSTITUTION	E-mail	Students Only		
			G/U	For Thesis?	Ph.D. Year
Kristine Spekkens	NRAO/Rutgers University	spekkens@physics.rutgers.edu			
ALFALFA consortium	http://egg.astro.cornell.edu/alfalfa/people.php				

(4) Related VLA previous proposal number(s): AG699

(5) Contact author for scheduling: Kristine Spekkens
 address: 136 Frelinghuysen Road
 Rutgers University
 Piscataway, NJ 08854
 (6) Telephone: 732-445-2915
 E-mail: spekkens@physics.rutgers.edu
 Fax: 732-445-4343

(7) Scientific Category: solar system galactic extragalactic other:
 Rapid Response Science: Known Transient Exploratory Target of Opportunity
 Joint Proposal: VLA/VLBA VLA/GBT VLA/VLBA/GBT

(8) Configurations (one per column) (A+Pt, A, B, C, D, BnA, CnB, DnC, Any)	D				
(9) Wavelength(s) (400, 90, 20, 6, 3.5, 2, 1.3, 0.7 cm)	20 cm				
(10) Time requested (hours)	6				

(11) Type of observation: continuum spectroscopy multichannel continuum polarimetry solar
 (check all that apply) pulsar high-time resolution Pie Town link other:

(12) Suitable for dynamic scheduling? Suitable Unsuitable

(13) ABSTRACT (do not write outside this space)

We propose to exploit the VLA dynamic scheduling opportunities of Jan. 17 - Feb. 3 to obtain D-configuration follow-up observations of a curious HI cloud complex in the Virgo cluster, discovered in Spring 2005 by the ALFALFA survey at Arecibo. Exploratory C-configuration observations of the complex (program AG699) detected 2 of the 4 $\sim 10^8 M_{\odot}$ targeted single-dish clouds, with a peak S/N $\sim 4 - 5$; tentative counterparts (S/N $\sim 2 - 3$) to the other 2 were also identified. The detected ALFALFA clouds resolve into a network of clumps with no clear velocity structure: their origin, and in particular their relation to weak optical sources in the field as well as to the nearby spiral NGC 4424, remains unclear. The requested observations will be combined with the existing data, to assess the reality of our tentative sources and to further probe the spatial and spectral morphologies of our detections. The observations will thus elucidate the nature of this enigmatic system, helping to discriminate between "dark cloud", tidal, ram pressure, or harassment scenarios.

(15) Help required: None Consultation Friend (extensive help)

(16) Spectroscopy only	line 1	line 2	line 3	line 4
Transition (HI, OH, etc.)	HI			
Rest Frequency (MHz)	1420.4058			
Velocity (km/s)	600			
Observing frequency (MHz)	1417			
Correlator mode	2AC			
IF bandwidth(s) (MHz)	3.125			
Hanning smoothing (y/n)	y			
Number of channels per IF	64			
Frequency Resolution (kHz/channel)	48.8			
Rms noise (mJy/bm, nat. weight., 1 hr)	1.1			
Rms noise (K, nat. weight., 1 hr)	3.3			

(17) Number of sources:

(If more than 10 please attach list. If more than 30 give only selection criteria and LST range(s).)

(18) NAME	Coordinates		Conf.	λ (cm)	Corr. mode	Band- width per IF (MHz)	Total Flux (Jy)*	LAS	Required rms (mJy/bm)	Required dynamic range	Time request (hr)
	1950 <input type="radio"/> RA hh mm	2000 <input checked="" type="radio"/> Dec. \pm xx.x $^\circ$									
HI1330+0930	12 30	+ 09.5	D	20	2AC	3.125	0.025	4'	~ 0.5	5	6

*For spectral line, this should be the total flux at the peak of the line

Notes to the table (if any):

(19) Restrictions to elevation (other than hardware limits) or HA range (give reason): None

(20) Preferred range of dates for scheduling (give reason):

Observations in a compact VLA configuration are requested - dynamic scheduling in the earlier part of the D-A reconfiguration period of January 17 - February 3 is thus preferred.

(21) Dates which are not acceptable: None

(22) Special hardware, software, or operating requirements: None

(23) Please attach a self-contained Scientific Justification not in excess of 1000 words. (Preprints or reprints will be ignored.)

Please include the full addresses (postal and e-mail) for first-time users or for those that have moved (if not contact author).

When your proposal is scheduled, the contents of the cover sheets become public information (Any supporting pages are for refereeing only).

v4.3 10/04