VLA OBSERVING APPLICATION

A

rcvd:

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: propsoc@nrao.edu (different for some Rapid Response Science)
OR MAIL TO: Director NRAO, 520 Edgemont Rd., Charlottesville, VA 22903-2475

(1) Date Prepared: 10 February 2004

(2) Title of Proposal: Search for Water, OH Masers, and Radio Continuum from IRAS 05436-0007

(3) AUTHORS (Add * for new location)	INSTITUTION	E-mail	Students Only G/U	For Thesis?	Ph.D. Year
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(4) Related VLA previous proposal number(s):

(5) Contact author for scheduling: Mark Claussen
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(7) Scientific Category: ○ solar system ⊗ galactic ○ extragalactic ○ other:
Rapid Response Science: ○ Known Transient ○ Exploratory ⊗ Target of Opportunity

(8) Configurations (one per column) (A+Pt, A, B, C, D, BnA, CnB, DnC, Any)	Any				
(9) Wavelength(s) (400, 90, 20, 6, 3.5, 2, 1.3, 0.7 cm)	1.3, 18				
(10) Time requested (hours)	2				

(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 search for water masers, 1720 MHz OH masers, and the radio continuum from the recently discovered nebula around IRAS 05436-0007 (IAU Circular 8284, 09 Feb 2004). Detection of either or both masers will allow follow-up high angular resolution observations with VLBI, allowing kinematics of an accretion disk around a young stellar object with unprecedented spatial resolution.

NRAO use only
(08/03)

(14) Observer present for observations? ⊗ Yes ○ No Data analysis at? ⊗ Home ⊗ AOC or CV (2 weeks notice)

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

(16) Spectroscopy only	line 1	line 2	line 3	line 4
Transition (HI, OH, etc.)	H_2O	OH 1720 MHz		
Rest Frequency (MHz)	22235.080	1720.529		
Velocity (km/s)				
Observing frequency (MHz)				
Correlator mode	2AD	1A		
IF bandwidth(s) (MHz)	6.25	0.781		
Hanning smoothing (y/n)	y	y		
Number of channels per IF	32	256		
Frequency Resolution (kHz/channel)	195.3	3.05		
Rms noise (mJy/bm, nat. weight., 1 hr)	10	2		
Rms noise (K, nat. weight., 1 hr)				

(17) Number of sources:	**1**

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

(18) NAME	Coordinates 1950 ○ 2000 ⊗ RA hh mm Dec. ± xx.x°	Conf.	λ (cm)	Corr. mode	Band-width per IF (MHz)	Total Flux (Jy)*	LAS	Required rms (mJy/bm)	Required dynamic range	Time request (hr)
IRAS 05436	05 46, -00.1	any	1.3, 18							

*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):

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

(21) Dates which are not acceptable:

(22) Special hardware, software, or operating requirements:

(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).

v4.2 8/03