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: 2006 March 14

(2) Title of Proposal: **The Birthplace of PSR B1834−06?**

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

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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)	A				
(9) Wavelength(s) (400, 90, 20, 6, 3.5, 2, 1.3, 0.7 cm)	20				
(10) Time requested (hours)	1				

(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)

Figer et al. recently announced the discovery of a massive cluster of red supergiants. The cluster is potentially one of the most massive in the Galaxy, having an estimated mass of order 30 000 solar masses, and it has multiple high-energy and non-thermal radio counterparts. Located 10′ away from this cluster is the pulsar PSR B1834−06. Within the various uncertainties, both the pulsar and the cluster are at comparable distances, and the angular separation between the pulsar and the stellar cluster corresponds to a linear separation of 16.7 pc. With even a modest (for a pulsar) velocity, the pulsar could move this distance in a small fraction of the cluster's lifetime. The goal of the proposed observations is to obtain a second epoch measurement of the position of PSR B1834−06, which will be combined with observations in the VLA Archive, to measure or constrain the proper motion of the pulsar and assess its possible origin from this stellar cluster.

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.)				
Rest Frequency (MHz)				
Velocity (km/s)				
Observing frequency (MHz)				
Correlator mode				
IF bandwidth(s) (MHz)				
Hanning smoothing (y/n)				
Number of channels per IF				
Frequency Resolution (kHz/channel)				
Rms noise (mJy/bm, nat. weight., 1 hr)				
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)
PSR B1834−06	18 37, −06.8	A	20	4	25	0.008	...	0.8	10	1

*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