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
  OR MAIL TO: Director NRAO, 520 Edgemont Rd., Charlottesville, VA 22903-2475

(1) Date Prepared: 15 April 2004

(2) Title of Proposal: Indentifying a new supernova remnant (G254.6-0.1) from Spitzer with the VLA at 20 and 6 cm- an exploratory proposal

(3) AUTHORS (Add * for new location)	INSTITUTION	E-mail	Grad Students Only For Ph.D. Thesis?	Anticipated Ph.D. Year
Jeonghee Rho	Caltech, IPAC	rho@ipac.caltech.edu		
Miller Goss	NRAO	mgoss@nrao.edu		
Anne Green	Sydney University , School of Physics	agreen@physics.usyd.edu.au		

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

(5) Contact author for scheduling: Miller Goss
address: NRAO, Socorro, NM

(6) Telephone: 505 835 7267
E-mail: mgoss@nrao.edu
Fax: 505 835 7027

(7) Scientific Category: ○ solar system ⊗ galactic ○ extragalactic ○ other:

(8) Configurations (one per column) (A+Pt, A, B, C, D, BnA, CnB, DnC, Any)	DnC				
(9) Wavelength(s) (400, 90, 20, 6, 3.5, 2, 1.3, 0.7 cm)	6cm, 20cm				
(10) Time requested (hours)	1 x 7 h				

(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)

Using the recently launched infrared *Spitzer* Space Telescope, we have discovered a well-defined circular source of 3-4 arcmin radius with a complex filametary structure. There is no H α suggesting that this is not an HII region. We propose exploratory VLA observations (20cm and 6cm) to determine if this is a SNR or HII region using its radio spectral index and 6 cm polarization. If this is proven to be a SNR, it will be one of the first infrared identified SNR. The DnC array is requested for a 7 hour period.

NRAO use only
(03/02)

(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: **2**

(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)
G254.6-0.1	08 19	−36.3	DnC	20cm		50	100 mJy	6-7′	0.15-0.2	50	3
G254.6-0.1	08 19	−36.3	DnC	6cm		50	55 mJy	6-7′	0.05	50	3

*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: