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: 27 Apr 2006

(2) Title of Proposal: Target of Opportunity observations of recurrent nova RS Oph

(3) AUTHORS (Add * for new location)	INSTITUTION	E-mail	G/U	Students Only: For Thesis?	Students Only: Ph.D. Year
Dr Stewart Eyres	Univ. of Central Lancashire	spseyres@uclan.ac.uk			
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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
Joint Proposal: ◯ VLA/VLBA ◯ VLA/GBT ◯ VLA/VLBA/GBT

(8) Configurations (one per column) (A+Pt, A, B, C, D, BnA, CnB, DnC, Any)	BnA, B				
(9) Wavelength(s) (400, 90, 20, 6, 3.5, 2, 1.3, 0.7 cm)	1.3, 3.5, 6, 20				
(10) Time requested (hours)	17x2				

(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)

RS Oph is a recurrent nova, with previous outbursts occurring in 1898, 1933, 1958, 1967 and 1985. Following identification of a sixth outburst (2006 Feb 12) we have begun VLA, MERLIN, VLBA, EVN, Swift, Chandra, XMM and complimentary visual and infrared spectroscopic monitoring observations on this object.10 VLA A array observations to date have proved invaluable in understanding the radio light curve and spectral development, and relating it to VLBI and x-ray observations. This proposal seeks to extend observations into the B-array session.

NRAO use only
(10/04)

(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)
RS Oph	17 50 -06.7	B	1.3		50	0.03	0.2″			1
			3.5		50	0.03	0.2″			0.6
Repeat each set			6		50	0.03	0.2″			0.2
every seven days			20		50	0.03	0.2″			0.2

*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).

v4.3 10/04