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: May 19 - 2006

(2) Title of Proposal: Multifrequency Monitoring of the superluminal giant radio galaxy 1144+35

(3) AUTHORS (Add * for new location)	INSTITUTION	E-mail	G/U	Students Only For Thesis?	Ph.D. Year
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(4) Related VLA previous proposal number(s): AG619, AG702

(5) Contact author for scheduling: Gabriele Giovannini
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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 or B				
(9) Wavelength(s) (400, 90, 20, 6, 3.5, 2, 1.3, 0.7 cm)	20, 6, 3.5, 2, 1.3, 0.7				
(10) Time requested (hours)	2 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)

We request high resolution VLA observations to continue long-term monitoring of the core flux density of the giant radio galaxy 1144+35. Previous observations have revealed long time scale variations in the flux density of the arcsecond-scale core. VLBI observations have shown that the arcsecond-scale core has a complex structure at mas resolution and that the presence of motion and morphological changes in the mas-scale structure are related to the long-term flux density variability found at arcsecond-scale resolution. These monitoring programs with the VLA and VLBA can improve our knowledge of the time evolution of the properties of the inner region of a giant FR I radio galaxy.

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)
1144+35	11 47, +35.0	BnA-B	20		50	0.4	P	0.1	1000	15 min.
		BnA-B	6		50	0.3	P	0.1	1000	15 min.
			3.5		50	0.2	P	0.1	1000	15 min.
			2		50	0.15	P	0.3	1000	20 min.
			1.3		50	0.15	P	1.0	500	25 min.
			0.7		50	0.1	P	1.0	300	30 min.

*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