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: 23 September 2005

(2) Title of Proposal: Spectral measurements of GB 1428+4217 (J1430+420)

(3) AUTHORS (Add * for new location)	INSTITUTION	E-mail	G/U	Students Only: For Thesis?	Students Only: Ph.D. Year
Guy Pooley	Cavendish Lab Cambridge	ggp1@cam.ac.uk			
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(4) Related VLA previous proposal number(s):

(5) Contact author for scheduling: Claire Chandler
address: NRAO

(6) Telephone:
E-mail: cchandle@nrao.edu
Fax:

(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)					
(9) Wavelength(s) (400, 90, 20, 6, 3.5, 2, 1.3, 0.7 cm)	0.7,1.3,3.5,6,20				
(10) Time requested (hours)	4×0.5				

(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)

GB1428+4217 is a blazar at $z = 4.7$ which has been found to show dramatic variations in flux density at 15 GHz. The flux appears to rise in a series of near-exponential episodes, then fall back. The most recent rise has an e-folding time of about a year and may have just reached its peak. The decline phases are not well documented (yet). We request short observations of the radio spectrum at intervals of around two months to study the evolution of the flare.

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)
1428+4217	14 30, +42.1					0.4				4×0.5

*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