VLBA PROPOSAL COVERSHEET

DEADLINES: 1st of Feb., June, Oct.
EMAIL TO: toosoc@nrao.edu

rcvd:

(1) Date Prepared: February 17, 2005

(2) Title of Proposal: Searching for Compact Structure in the Flaring Magnetar SGR1806-20

(3) AUTHORS (Add * for new location)	INSTITUTION	E-mail	Students Only G/U	For Thesis?	Ph.D. Year
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(4) Related previous or current VLBI proposal(s): BK121ABC ◯ Resubmission

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(7) Scientific Category: ⊗ astrometry & geodesy ⊗ galactic ◯ extragalactic ◯ other:
Rapid Response Science: ◯ Known Transient ◯ Exploratory ⊗ Target of Opportunity

(8) Wavelength(s) requested (those not available on the global network are indicated with a small circle):
◯ 90cm ◯ 50cm ◯ 30cm ◯ 21cm ◯ 18cm ◯ 13cm ◯ 6cm ∘ 5cm ⊗ 3.6cm ◯ 3.6/13cm
∘ 2cm ◯ 1.3cm ◯ 7mm ∘ 3mm
◯ Global Network standard bands ◯ Special frequencies: _____

(9) Recording format: ⊗ Default continuum setup (VLBA only), ◯ VLBA/MkIV, ◯ MkIII: Mode _____
Bandwidth per BaseBand channel: _____
Aggregate bit rate: 256 (_____ BB channels at _____ MSamples/sec of ◯ 1 bit, ◯ 2 bit)

(10) ◯ Multi-epoch observation: _____ epochs of _____ hours each, separated by _____

(11) Network	Requested antennas	Total time requested
EVN & MERLIN		
VLBA	ALL	6
other NRAO	Y1	6
Non-VLBI Intruments		

(12) ABSTRACT (Do not write outside this space. Please type)
On 27 December 2004, the Soft Gamma Repeater, SGR 1806-20, emitted a Giant Flare, only the fourth such event to be detected over the last 25 years, and the first to produce a strong radio afterglow. The source has been intensively studied at virtually all wavelengths over the last 45 days, including the radio domain. We propose to use the VLBA at 8.4 GHz in order to resolve the scattering screen and search for small scale structure.

Scheduler use only
(8/03)

(13) Observation type: ◯ Interferometry, ◯ Spectroscopy, ◯ Pulsar, ◯ Phase referencing

(14) Proposal is ⊗ Suitable ◯ Unsuitable for dynamic scheduling.

(15) Polarization: ◯ Single Polarization ⊗ Dual Circular Polarization
Global network standard for single polarization is LCP for all λs except 13cm (RCP) and 3.6cm (RCP).

(16) Tape usage (Show <recording time>/<total time>): _____

(17) Assistance required:
Observation Setup: ⊗ Consultation, ◯ Extensive help, ◯ Observe file preparation
Postprocessing: ◯ Consultation, ◯ Extensive help, ◯ Calibration service

(18) Processor: ⊗ Socorro, ◯ JIVE, ◯ Haystack, ◯ Bonn, ◯ Washington, ◯ Other_____
Special processing: ⊗ XPol, ◯ Pulsar gate, ◯ Multiple Fields: _____
Averaging time: 2 Spectral channels per baseband channel: 32
◯ Other special processing: _____

(19) Postprocessing Location: JIVE, Stanford

(20) Source list: ⊗ J2000 ◯ B1950
If more than 4 sources, please attach list. If more than 30, give only selection criteria and GST range(s)

	Source 1	Source 2	Source 3	Source 4
Name(s)	SGR 1806-20			
RA (hh mm)	18h 08m 39.3s			
Dec (dd.d)	-20d 24' 39"			
GST range (Europe)				
GST range (US)	21 - 05 GST			
GST range (Other)				
Band(s)				
Flux density (Total, Jy)	2 mJy			
Flux density (correlated, mJy)	2 mJy			
RMS needed (mJy/beam)	0.050			
Peak/RMS needed	10			

(21) Preferred VLBI session or range of dates for scheduling, and why:
As soon as possible - source fading.

(22) Dates which are NOT acceptable, and why:

(23) Attach a self-contained scientific justification, not in excess of 1000 words.
Preprints or reprints will not be forwarded to the referees.

Information about the capabilities of the VLBA may be found on the World Wide Web by starting at the NRAO home page, http://www.nrao.edu, and selecting the VLBA from "Sites and Telescopes."

A brief summary of the capabilities of the EVN antennas is given in the EVN STATUS TABLE in the EVN USER GUIDE, which may be found at http://www.evlbi.org/user_guide/user_guide.html.

Please include the full postal addresses for first-time users or for those that have moved (if not contact author).