VLBA PROPOSAL COVERSHEET

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

rcvd:

(1) Date Prepared: January 9, 2005

(2) Title of Proposal: 3rd epoch VLBA-GBT observations of SGR 1806-20 following a giant X-ray flare.

(3) AUTHORS (Add * for new location)	INSTITUTION	E-mail	Students Only G/U	For Thesis?	Ph.D. Year
Chryssa Kouveliotou	NASA/MSFC	chryssa.kouveliotou@nasa.gov			
Mike Garrett	JIVE	garrett@jive.nl			
Bryan Gaensler	Harvard-Smithsonian CfA	bgaensler@cfa.harvard.edu			
Ralph Wijers	University of Amsterdam	rwijers@science.uva.nl			
Maura McLaughlin	Jodrell Bank Observatory	Maura.McLaughlin@manchester.ac.uk			
Mark Finger	USRA	mark.finger@nsstc.nasa.gov			

(4) Related previous or current VLBI proposal(s): BK121 ○ Resubmission

(5) Contact author for scheduling: Mike Garrett
Address: Postbus 2,
7990AA Dwingeloo
The Netherlands

(6) Telephone: +31 521596511
Fax: +31 521596539

(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:______ (______ 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, GBT	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. The source has been intensively studied at virtually all wavelengths over the last 10 days, including the radio domain. We have been monitoring the source with the VLA & ATCA (Gaensler et al.) at 20, 6, and 4 cm and MERLIN at 6 GHz (PI Fender). The latter MERLIN observations suggest that elements of the source are still compact enough (¡ 50 mas) to be detected by the VLBA-GBT at 21 cm, and it may even be impossible to measure or place limits on any possible expansion/evolution. The source is fading less rapidly than originally expected, and we therefore propose a 3rd (and very likely) final epoch of VLBA-GBT observations of the source before it fades from view.

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>): 5/6

(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

(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)	50 mJy			
Flux density (correlated, mJy)	5 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).