

GLOBAL VLBI PROPOSAL COVERSHEET

DEADLINES: 1st of Feb., June, Oct.
 EMAIL TO: proposevn@HP.mpifr-bonn.mpg.de
 OR MAIL TO: EVN Scheduler, MPIfR, Auf dem Hugel 69, D-53121 Bonn, Germany
 EMAIL TO: toosoc@nrao.edu
 OR MAIL TO: Director NRAO, Edgemont Rd. Charlottesville, VA 22903-2475, USA

rcvd:

- (1) Date Prepared: January 22, 2008
 (2) Title of Proposal: Relativistic Expansion Measurement of the Transient in NGC 2770: XRF 080109/SN 2008D

(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): GP045 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: 8/16 MHz

Aggregate bit rate: 512/1024 16 BB channels at 16/32 MSamples/sec of 1 bit, 2 bit)

(10) Multi-epoch observation: 3 epochs of 8 hours each, separated by 1 month

(11) Network	Requested antennas	Total time requested
EVN & MERLIN	Ar, Ef, Hh, Jb2, Mc, Nt, On25, Tr, Wb(14) (2 epochs)	8h/epoch (Ar 2-3h)
VLBA	One epoch full VLBA; 2 epochs HN and SC with he EVN	4-8h
other NRAO	GBT (one epoch, with the VLBA)	4-8h
Non-VLBI Instruments		

(12) ABSTRACT (Do not write outside this space. Please type)

We propose target of opportunity observations of XRF 080109/SN 2008D, a new transient recently discovered in the nearby (~ 30 Mpc) galaxy NGC2770. Although the source is most likely a weak X-ray flash, it shows peculiar characteristics that question its identification with a supernova explosion. Radio observations show that it is still in the optically thick phase and increasing in flux density. Its nearby location makes it an excellent candidate to study the relativistic source expansion in XRF supernovae, most of which is expected to occur in the early evolutionary phase of the phenomenon.

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 λ s 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: 1s/2s Spectral channels per baseband channel: 16ch/32ch
 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)	SN2008D			
RA (hh mm)	09h 09m 30.6506s			
Dec (dd.d)	+33 08' 20.14"			
GST range (Europe)	07:00-15:00			
GST range (US)	~11:00-19:00 (Ar~12:00-15:00)			
GST range (Other)				
Band(s)	X (VLBA); C (global)			
Flux density (Total, Jy)	0.001 Jy			
Flux density (correlated, mJy)	1.0			
RMS needed (mJy/beam)	0.001-0.002 mJy/beam			
Peak/RMS needed	50-100			

- (21) Preferred VLBI session or range of dates for scheduling, and why:
We prefer 8.4 GHz US observations (VLBA+GBT/Ar/Ef) at the earliest possible date in January. The 5 GHz global VLBI (EVN+Ar+VLBA_HN+VLBA_SC) observations should take place in early February and in the second half of March.
- (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).