PROPOSAL COVERSHEET

rcvd:

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

(1) Date Prepared: August 29, 2007

(2) Title of Proposal: 3C 111 in Outburst (Target of Oportunity)

(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): GL029A ◯ 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: 512 (16 BB channels at 16 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		14 hr
other NRAO		
GMVA	Effelsberg, Pico Veleta, Pl. de Bure, Onsala, Metsahovi, + VLBA (all available)	14 hr
Non-VLBI Intruments		

(12) ABSTRACT (Do not write outside this space. Please type)
Millimeter flux density measurements performed at IRAM and the SMA reveal an ongoing major flux-density outburst in the radio galaxy 3C 111. Recent measurements with the IRAM 30-m telescope show more than 8 Jy at 1 mm and more than 12 Jy at 3 mm! We would like to use this unique opportunity and request 14 hours of GMVA time to observe the very early state of the flaring jet base. We will study an expected forward-reverse shock-in-jet structure in response to an enhanced injection of relativistic plasma in the 3C 111 jet utilizing the unprecedented angular resolution and the high observing frequency of the GMVA.

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>): 0.49

(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: _____ Spectral channels per baseband channel: _____
◯ Other special processing: _____

(19) Postprocessing Location: MPIfR, NASA GSFC

(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)	3C111			
RA (hh mm)	04 18			
Dec (dd.d)	+38.0			
GST range (Europe)	22:00 - 12:00			
GST range (US)	03:00 - 17:00			
GST range (Other)				
Band(s)				
Flux density (Total, Jy)	>10			
Flux density (correlated, mJy)	5000 – 7000			
RMS needed (mJy/beam)	5			
Peak/RMS needed	∼500			

(21) Preferred VLBI session or range of dates for scheduling, and why:
Oct 2007

(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).