PROPOSAL COVERSHEET

rcvd:

DEADLINES: 1st of Feb., June, Oct.

(1) Date Prepared: November 1, 2005

(2) Title of Proposal: ToO observations of hard X-ray quasar J0746+2549

(3) AUTHORS (Add * for new location)	INSTITUTION	E-mail	G/U	Students Only: For Thesis?	Ph.D. Year
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(4) Related previous or current VLBI proposal(s): ○ 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:______ (______ 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	3 hours
other NRAO		
Non-VLBI Instruments		

(12) ABSTRACT (Do not write outside this space. Please type)
This Target of Opportunity proposal requests 3 hours of VLBA time contemporaneous with *Suzaku* observations of J0746+2549, which will take place from 10:00 UT November 4th to 12:00 UT November 6th, 2005.
The X-ray satellite *Suzaku* has been scheduled at relatively short notice to observe the $z = 2.96$ quasar J0746+2549, which was recently detected by *Swift* to have a very flat hard X-ray source with a photon index $\Gamma \sim 1.5$ above 100 keV. Observations up to 200 keV with *Suzaku* correspond to 800 keV in the source frame, providing valuable information on the wide range spectral energy distribution of this intriguing source.
The proposed observations will constitute a key component of the supporting multiwavelength campaign and provide the tightest constraints on the radio spectrum of the compact radio structure between 1.6 and 43 GHz.

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: ________ Spectral channels per baseband channel: 32
◯ Other special processing: ____

(19) Postprocessing Location: ISAS/JAXA

(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)	J0746+2549			
RA (hh mm)	07 46			
Dec (dd.d)	25.8			
GST range (Europe)				
GST range (US)	13.5–16.5			
GST range (Other)				
Band(s)	1,2,4,8,15,22,43			
Flux density (Total, Jy)	∼0.3			
Flux density (correlated, mJy)	∼300			
RMS needed (mJy/beam)	<1			
Peak/RMS needed	>300			

(21) Preferred VLBI session or range of dates for scheduling, and why:
As close as possible to the Suzaku observation period 10UT Nov 4 to 12UT Nov 6, 2005.

(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).