VSOP AO3 PROPOSAL COVER SHEETS

DEADLINE : 1 October, 1999
SEND TO : VSOG, ISAS, 3-1-1 Yoshinodai, Sagamihara, Kanagawa 229-8510, JAPAN

(1) Date prepared : 22-September-1999

(2) Proposal title : Regular Monitoring of 1928+738

(3)	INVESTIGATORS	INSTITUTION
P.I.	D. W. Murphy	JPL, USA
co-I.	J. E. Conway, A. Polatidis	Onsala Space Observatory, Sweden
co-I.	R. A. Preston, D. L. Jones, D. L. Meier	JPL, USA
co-I.	S. J. Tingay	ATNF, Australia
co-I.	H. Hirabayashi, Y. Murata	ISAS, Japan
co-I.	H. Kobayashi, Japan	NAO, Japan
co-I.		
co-I.		
co-I.		

(4) Principal Investigator (or contact person) details...

Name : David W. Murphy
E-mail : dwm@casa.jpl.nasa.gov
Fax : 1-818-393-6890
Phone : 1-818-354-0845

Address : MS 238-332
: JPL
: 4800 Oak Grove Drive
: Pasadena, CA 91109-8099
: USA

(5) Proposal Abstract :

One of the most valuable results of the VSOP mission will be an uninterrupted series of images for a few sources over the mission lifetime. Such continuous monitoring is only possible for a small region of the sky. We propose to continue our 5 GHz monitoring campaign on the superluminal quasar 1928+738. We hope to confirm or reject the hypothesis that the observed wiggle in the jet is caused by the orbital motion of a massive binary black hole system. Analysis of our existing data show that this source does indeed show evidence for jet oscillations. However, more data is needed to confirm this tentative but nevertheless intriguing result.

(6) Proposal Category (indicate all that apply):

Object type:

☑ AGN, ☐ Maser, ☐ Stellar, ☐ Pulsar, ☐ Other :

Observation type:

☑ Continuum, ☐ Spectral Line, ☐ Polarization, ☐ Time-critical, ☐ Other :

(7) Number of proposed experiments

An 'experiment' is one or more observations of one source at a fixed HALCA set-up. A request to observe the same source at 1.6 GHz and separately at 5 GHz requires two columns to be filled in in item (8) below. A request to observe the same source with HALCA simultaneously observing at 1.6 GHz and 5 GHz requires one column to be filled in. Multi-epoch observations of the same source at the same frequency – a 'monitoring experiment' – requires only one column to be filled in. Suggested observing dates, especially for for time-critical and monitoring experiments, should be specified in item (11).

The number of experiments in this proposal is: 3

(8) Details of proposed experiments

	Experiment 1	Experiment 2	Experiment 3	Experiment 4
Source name (J*hhmm*±*ddmm*)	J1927+7358			
Alternative name	B1928+738			
RA(J2000) (hh mm ss.ssss)	19 27 48.4951			
Dec(J2000) (dd mm ss.ssss)	73 58 01.569			
Observing frequency band (GHz)	5			
Continuum observations:				
Standard VSOP freq. channels?	☑	☐	☐	☐
Channel A range (MHz)				
Channel B range (MHz)				
Spectral line observations:				
Ch.A spectral line rest freq. (MHz)				
Ch.A LSR velocity (km/s)				
Ch.B spectral line rest freq. (MHz)				
Ch.B LSR velocity (km/s)				
FWHM of field of view required (mas)				
Min. spectral channels per IF channel	128			
Correlator averaging time (sec)				
No. of correlating passes (if >1)				
Total flux density (Jy)	3.8			
Correlated flux (mJy)	1500			
Ground Radio Telescopes:				
Suggested array given at Item (11)?	☑	☐	☐	☐
GRT observing mode:				
128Mbps LCP (standard)	☑	☐	☐	☐
128Mbps LCP/RCP	☐	☐	☐	☐
256Mbps LCP/RCP	☐	☐	☐	☐
Preferred correlator:				
No preference	☐	☐	☐	☐
Mitaka	☐	☐	☐	☐
Penticton	☐	☐	☐	☐
Socorro	☑	☐	☐	☐
Monitoring programs:				
Number of observations	3			
Mean interval (days)	90			
Related VSOP proposal code(s)	V034, W027			

(9) VSOP spacecraft observing mode (see Section 3 and Table 5 of the VSOP Proposer's Guide):

☑ 2 channel x 16 MHz, 2-bit (Standard mode),

☐ Other:

Phase calibration tones:

☑ On (Standard continuum mode),

☐ Off (Standard spectral line mode)

(Include justification of any non-standard choice at (11) below)

(10) Assistance with preparation of ground telescope schedule files:

☐ VSOG assistance requested, ☑ Consultation desired, ☐ No assistance required

(11) Additional notes to the scheduler :

Suggested GRT array: VLBA, EB. This worked well for AO1 and AO2 observations.

(12) Attach a scientific and technical justification, not in excess of 2 pages of text and 2 pages of figures. Refer to the VSOP Announcement of Opportunity for detailed instructions. Preprints and reprints will not be forwarded to the Scientific Review Committee.

EITHER e-mail the completed LaTeX file to submit@vsop.isas.ac.jp and send two paper copies of the complete proposal to:

VSOP Observing Proposals
VSOP Science Operations Group
Institute of Space and Astronautical Science
3-1-1 Yoshinodai, Sagamihara
Kanagawa 229-8510 JAPAN

OR e-mail the completed LaTeX Cover Sheets file and, in a separate e-mail, the postscript file of the scientific and technical justification, to submit@vsop.isas.ac.jp

Information from the Cover Sheets of scheduled proposals will be made available from the VSOP WWW site.

Proposals must be received at ISAS by 1 October 1999