VSOP AO2 PROPOSAL COVER SHEETS

DEADLINE : 8 May, 1998
SEND TO : VSOG, ISAS, 3-1-1 Yoshinodai, Sagamihara, Kanagawa 229-8510, JAPAN

Please read Appendix C of Announcement of Opportunity for details on how to fill in this Cover Sheet.

(1) Date prepared : 29 April 1998

(2) Proposal title : Two-Epoch Mapping of Three Variable CGRO Blazars

(3)	INVESTIGATORS	INSTITUTION
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(5) Proposal Abstract :

We propose the second epoch of 5-GHz VSOP observations of three active γ-ray blazars with known or probable superluminal properties. First-epoch observations are already scheduled between mid-1998 and January 1999. The three blazars proposed, 0208−512, 0804+499, and 1633+382, have been monitored by multiwavelength campaigns that span the entire spectrum from GeV γ-rays to cm radio wavelengths. Two of the three have been imaged by us previously in our 8-GHz VLBA program. The most popular γ-ray blazar models predict the emergence of a new VLBI jet component a period of months to years after a γ-ray flare with an apparent transverse speed that is predictable from the multiwavelength properties of the outburst. The high resolution of VSOP measurements is clearly important for these sources, both to test the models for γ-ray blazars and to better delineate the VLBI structure.

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

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

Observation type:
☑ Continuum, ☐ Spectral Line, ☐ Polarization, ☐ Time-critical, ☑ Other : 2nd epoch

(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 (10).

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*)	J0210-5101	J0808+4950	J1635+3808	
Alternative name	0208-512	0804+499	1633+382	
RA(J2000) (hh mm ss.ssss)	02 10 46.20044	08 08 39.66629	16 35 15.49298	
Dec(J2000) (dd mm ss.ssss)	-51 01 01.8915	+49 50 36.5310	+38 08 04.5005	
Observing frequency band (GHz)	5	5	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				
Correlator averaging time (sec)				
No. of correlating passes (if >1)				
Total flux density (Jy)	3.0	1.3	2.7	
Correlated flux (mJy)	2050	1000	640	
Ground Radio Telescopes:				
Suggested array given at Item (10)?	☑	☑	☑	☐
GRT observing mode:				
128Mbps LCP (standard)	☑	☑	☑	☐
128Mbps LCP/RCP	☐	☐	☐	☐
256Mbps LCP/RCP	☐	☐	☐	☐
Preferred correlator:				
No preference	☐	☐	☐	☐
Mitaka	☐	☐	☐	☐
Penticton	☑	☐	☐	☐
Socorro	☐	☑	☑	☐
Monitoring programs:				
Number of observations				
Mean interval (days)				
Related AO1 proposal code(s)	V015	V015	V015	

(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 (10) below)

(10) Additional notes to the scheduler :

Suggested array/date for J0210-5101: MK,OV,FD,AT,HH,HO,MP; 1999 December

Suggested array/date for J0810+4950: VLBA; 1999 November

Suggested array/date for J1635+3808: VLBA; 1999 September

These are second-epoch observations; the suggested epochs above give 10–18 months separation from the scheduled first epoch.

(11) Attach a scientific and technical justification, not in excess of 2 pages of text and 2 pages of figures. Up to one page of (u,v) plots per source may optionally be included.
(Refer to the VSOP Announcement of Opportunity for detailed instructions.)
Preprints and reprints will not be forwarded to the Scientific Review Committee.

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

In addition, e-mail the completed LaTeX file 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 8 May 1998