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 : 8 May 1998

(2) Proposal title : A Study of CSO jet deceleration.

(3)	INVESTIGATORS	INSTITUTION
P.I.	M. KIMURA	NAO, Japan
co-I.	S. IGUCHI	NAO, Japan
co-I.	M. INOUE	NAO, Japan
co-I.		
co-I.		
co-I.		
co-I.		
co-I.		
co-I.		

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

Name : Moritaka KIMURA
E-mail : kimura@hotaka.mtk.nao.ac.jp
Fax :+81-422-34-3869
Phone : +81-42234-3807

Address : VSOP Project,NAO
:2-21-1 Osawa,Mitaka
:Tokyo 181-8588
:Japan
:

(5) Proposal Abstract :

We propose multi-frequency (1.6/5GHz) and multi-epoch VSOP observations of three compact symmetric objects (CSOs). Taylor(1997) showed that 1946+708 has two terminal hot spots and several jets which have a tendency to slow down. There is evidence of that 1946+708 exists in high density region. We think jets motion near the core are faster than apart jets. Ground VLBI can't distinguish core region. But, VSOP observation can disinguish core region. This observation will provide CSO jet dynamics and materials distribution.

(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 (10).

The number of experiments in this proposal is: 6

(8) Details of proposed experiments

	Experiment 1	Experiment 2	Experiment 3	Experiment 4
Source name (J*hhmm*±*ddmm*)	1946+708	1946+708	0238-084	0238-084
Alternative name			NGC1052	NGC1052
RA(J2000) (hh mm ss.ssss)	19 45 53.5197	19 45 53.5197	02 41 04.7984	02 41 04.7984
Dec(J2000) (dd mm ss.ssss)	+70 55 48.7226	+70 55 48.7226	-08 15 20.750	-08 15 20.750
Observing frequency band (GHz)	5	1.6	5	1.6
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)	0.671	0.921	1.44	1.02
Correlated flux (mJy)	123	123	200	200
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)	2 180	2 180	1	1
Related AO1 proposal code(s)				

	Experiment 5	Experiment 6	Experiment 7	Experiment 8
Source name (J*hhmm*±*ddmm*)	2352+495	2352+495		
Alternative name	OZ488	OZ488		
RA(J2000) (hh mm ss.ssss)	23 55 09.4586	23 55 09.4586		
Dec(J2000) (dd mm ss.ssss)	+49 50 08.341	+49 50 08.341		
Observing frequency band (GHz)	5	1.6		
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)	1.5	2.7		
Correlated flux (mJy)	200	200		
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	1	1		
Mean interval (days)				
Related AO1 proposal code(s)				

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

- [x] 2 channel x 16 MHz, 2-bit (Standard mode),
- [ ] Other:

Phase calibration tones:

- [x] 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 :

Pref. array:VLBA+Y+EB+UD
Min. array:VLBA,Y or VLBA,EB
We want the spectral index map. The 5/1.6GHz observations of each sources should not be separated more than 3 monthes.

(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