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 : 21 April 1998

(2) Proposal title : Parsec-scale environment of extremely misaligned quasars

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(5) Proposal Abstract :

We propose space VLBI observations of four quasars at 1.6 GHz and 5 GHz. These sources show extreme misalignment between the mas scale jet and the more extended kiloparsec-scale structure. Simultaneous VLBA observations will be proposed at 15 and 22 GHz in order to study the physics of the parsec-scale environments which may play a substantial role in jet misalignments. Superluminal motion is present or expected in these objects which can be studied by second epoch observations at 5 GHz.

(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*)	J0108+0135	J0501-0159	J2148+0657	J2348-1631
Alternative name	0106+013	0458-020	2145+067	2345-167
RA(J2000) (hh mm ss.ssss)	01 08 38.7711	05 01 12.8100	21 48 05.4587	23 48 02.6085
Dec(J2000) (dd mm ss.ssss)	+01 35 00.3177	-01 59 14.2553	+06 57 38.6043	-16 31 12.0216
Observing frequency band (GHz)	1.6/5	1.6/5	1.6/5	1.6/5
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)	3.3/2.0	1.7/2.6	2.9/8.0	2.9/3.2
Correlated flux (mJy)	800/500	850/1300	1100/3000	1450/1600
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)				

	Experiment 5	Experiment 6	Experiment 7	Experiment 8
Source name (J*hhmm*±*ddmm*)	J0108+0135	J0501-0159		
Alternative name	0106+013	0458-020		
RA(J2000) (hh mm ss.ssss)	01 08 38.7711	05 01 12.8100		
Dec(J2000) (dd mm ss.ssss)	+01 35 00.3177	-01 59 14.2553		
Observing frequency band (GHz)	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)	2.0	2.6		
Correlated flux (mJy)	500	1300		
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)				

(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 :

Suggested ground array for Experiment 1–4 is MK, KP, LA, NL, SC.
The rest of the VLBA and the single dish VLA will be proposed to observe at 15 and 22 GHz simultaneously.
Correlated flux densities at 1.6 GHz are estimates.

(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