VSOP AO2 PROPOSAL COVER SHEETS

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

(1) Date prepared : 30-Apr-1998

(2) Proposal title : Detection of faint, mJy level, radio sources with VSOP

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(5) Proposal Abstract :

We propose to observe two faint mJy-level compact radio sources using the technique of phase referencing with VSOP and a global VLBI array (EVN+VLBA). Both sources and a superb phase-calibrator 1156+295, all lie well within HALCA's primary beam at 18cm. The observations will test whether phase-referencing is possible with HALCA over relatively large angular separations. The results may be of particular relevance These cases may be typical of the case likely to be encountered by second generation SVLBI missions.

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

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

Observation type:
☑ Continuum, ☐ Spectral Line, ☐ Polarization, ☐ Time-critical, ☑ Other : Phase reference

(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: 1

(8) Details of proposed experiments

	Experiment 1	Experiment 2	Experiment 3	Experiment 4
Source name (J*hhmm*±*ddmm*)	J1159+291			
Alternative name	B1156+291			
RA(J2000) (hh mm ss.ssss)	11 59 31.8333			
Dec(J2000) (dd mm ss.ssss)	+29 14 43.820			
Observing frequency band (GHz)	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)	15			
Min. spectral channels per IF channel	32			
Correlator averaging time (sec)				
No. of correlating passes (if >1)	3			
Total flux density (Jy)	2			
Correlated flux (mJy)	1000			
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			
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):

☑ 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 :

We require EVN+VLBA (full global array for sensitivity), correlation in Socorro with p-ref qualified correlator

(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