VSOP AO4 PROPOSAL COVER SHEETS

DEADLINE : 2 October, 2000
SEND TO : VSOG, ISAS, 3-1-1 Yoshinodai, Sagamihara, Kanagawa 229-8510, JAPAN

(1) Date prepared : 28-September-2000

(2) Proposal title : High Ecliptic Latitude Monitoring (HELM) Program

(3)	INVESTIGATORS	INSTITUTION
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(5) Proposal Abstract :

We propose to monitor the only flat-spectrum AGNs (1642+690, 1749+701, 1807+698 and 1823+568) in the Pearson-Readhead survey which lie within 10 degrees of the north ecliptic pole. The ecliptic poles are the only region of the sky in which VSOP can perform monitoring observations given the new spacecraft constraints. Since we already have approved multiple epoch VSOP observations of an additional source in this region (1928+738), our sample is comprised of five of the best sources VSOP can continue to monitor. We plan to examine the time evolution of component brightness temperatures as components leave the core region, and see if there are any differences between the 3 BL Lacs and 2 quasars in the sample. In addition, all of these sources have shown IDV characteristics, and we will further investigate our previously detected link between the highest brightness temperature sources and the IDV phenomena.

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

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

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

(8) Details of proposed experiments

	Experiment 1	Experiment 2	Experiment 3	Experiment 4
Source name (J*hhmm*±*ddmm*)	J1642+6856	J1748+7005	J1806+6949	J1824+5651
Alternative name				
RA(J2000) (hh mm ss.ssss)	16:42:07.849	17:48:32.8401	18:06:50.681	18:24:07.068
Dec(J2000) (dd mm ss.sss)	+68:56:39.756	+70:05:50.768	+69:49:28.108	+56:51:01.491
Observing frequency band (GHz)	5	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	128	128	128	128
Correlator averaging time (sec)	2	2	2	2
No. of correlating passes (if >1)				
Total flux density (Jy)	1.2	0.6	1.6	1.6
Correlated flux (mJy)	850	500	880	1000
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	4	4	4	4
Mean interval (days)	90	90	90	90
Related VSOP proposal code(s)	v030	v030	v030	v030

(9) VSOP spacecraft observing mode (see Section 3 and Table 2 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 :

We prefer to use the VLBA as our ground array.

(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 2 October 2000