VSOP AO5 PROPOSAL COVER SHEETS

DEADLINE : 1 February, 2001
SEND TO : VSOG, ISAS, 3-1-1 Yoshinodai, Sagamihara, Kanagawa 229-8510, JAPAN

(1) Date prepared :

(2) Proposal title : Scattering screen distances and microas angular sizes

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(5) Proposal Abstract :

We propose to determine scattering screen distances and microarcsecond angular size estimates for a sample of core-dominated sources using VSOP angular size measurements. To achieve this we plan three separate but related investigations: the first is for observations of a sample of IDV and known core-dominated sources. The second is for GOT observations at 1.6 GHz of future Survey sources, and the third is for access to existing 1.6 and 4.8 GHz data for known strong core-dominated sources.

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

Object type:

- [x] AGN, [ ] Maser, [ ] Stellar, [ ] Pulsar, [ ] Other :

Observation type:

- [x] 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:15

(8) Details of proposed experiments

	Experiment 1	Experiment 2	Experiment 3	Experiment 4
Source name (J*hhmm*±*ddmm*)	J1036-29	J1146-37	1326-5256	1625-29
Alternative name	PKS 1034-293	PKS 1144-371	pmnJ 1326-5256	PKS 1622-297
RA(J2000) (hh mm ss.ssss)	10 36	1146	1326	1625
Dec(J2000) (dd mm ss.sss)	-29	-37	-52 56	-29
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)	1-3 Jy	1-3 Jy	1-3 Jy	1-3 Jy
Correlated flux (mJy)	500	500	500	500
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				
Mean interval (days)				
Related VSOP proposal code(s)				

	Experiment 5	Experiment 6	Experiment 7	Experiment 8
Source name (J*hhmm*±*ddmm*)	J0717+714	J0917+624	J0954+658	J1749+701
Alternative name				
RA(J2000) (hh mm ss.ssss)	07 17	09 17	09 54	17 49
Dec(J2000) (dd mm ss.sss)	+71 25	+61 25	+65 50	+70 10
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)	1-3 Jy	1-3 Jy	1-3 Jy	1-3 Jy
Correlated flux (mJy)	500	500	500	500
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 Mean interval (days)				
Related VSOP proposal code(s)				

	Experiment 9	Experiment 10	Experiment 11	Experiment 12
Source name (J*hhmm*±*ddmm*)	J1803+784	J1819+3845	J0133+479	J0814+425
Alternative name				
RA(J2000) (hh mm ss.ssss)	18 03	18 19	01 33	08 14
Dec(J2000) (dd mm ss.sss)	+78 25	+38 45	+47 55	+42 30
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)	1-3 Jy	0.1-0.3 Jy	1-3 Jy	1-3 Jy
Correlated flux (mJy)	500	100	500	500
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				
Mean interval (days)				
Related VSOP proposal code(s)				

	Experiment 13	Experiment 14	Experiment 15	Experiment 4
Source name (J*hhmm*±*ddmm*)	J1624+416	J1637+574	J1642+690	
Alternative name				
RA(J2000) (hh mm ss.ssss)	16 24	16 37	16 42	
Dec(J2000) (dd mm ss.sss)	41 35	57 25	69 00	
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)	1-3 Jy	1-3 Jy	1-3 Jy	1-3 Jy
Correlated flux (mJy)	500	500	500	500
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				
Mean interval (days)				
Related VSOP proposal code(s)				

(9) VSOP spacecraft observing mode (see Section 3 and Table 2 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 (11) below)

(10) Assistance with preparation of ground telescope schedule files:

[ ] VSOG assistance requested, [x] Consultation desired, [ ] No assistance required

(11) Additional notes to the scheduler :

We request the VLBA plus GO RO TI and UD for all sources except pmnJ1326-5256, for which we request CD, HH, HO, MO, AT, TI (AT is requested to provide accurate Total flux). For J1819+3845 we request WB, Y, RO, GO plus VLBA. GRTs will be shared between 1.6 and 5 GHz, except UD, TI, GO and RO at 1.6 only.

(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 1 February 2001