

VSOP PROPOSAL COVER SHEETS

ID :

TR :

SR :

DEADLINE : 17 November, 1995

SEND TO : VSOP SOG, ISAS, 3-1-1 Yoshinodai, Sagamihara, Kanagawa 229, JAPAN

Please read Appendix C of Announcement of Opportunity for details on how to fill in this Cover Sheet.

(1) Date prepared : 9 November 1995

(2) Proposal title : The Pearson-Readhead Survey from Space

(3)	INVESTIGATORS	INSTITUTION
P.I.	R.A. Preston	JPL, Caltech (USA)
co-I.	T.J. Pearson, A.C.S. Readhead	Caltech (USA)
co-I.	D.W. Murphy, D.L. Meier, D.L. Jones	JPL, Caltech (USA)
co-I.	H. Hirabayashi, H. Kobayashi	ISAS (Japan)
co-I.	M. Inoue	NRO (Japan)
co-I.		
co-I.		
co-I.		
co-I.		

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

Name : Robert Preston

Address : JPL, M/S 238-332

: 4800 Oak Grove Drive

: Pasadena, CA. 91109

: USA

Internet : rap@sgra.jpl.nasa.gov

Other e-mail :

Fax : 818-393-6890

Telephone : 818-354-6895

(5) Proposal Abstract :

We propose to use VSOP and the VLBA to perform an imaging survey of the intensely-studied Pearson-Readhead sample. Based on image simulations, we have shown that data from only a single orbit of VSOP with co-observation by the VLBA is sufficient to achieve images of almost equivalent quality to four-orbit images. Due to the limited observing time available with VSOP, such single-orbit images provide the only practical means of performing an imaging survey of a statistically significant complete sample of sources. The goal of the survey is to obtain two-epoch 5 GHz images of 31 sources from this well-studied sample, and single-epoch 22 GHz images of 12 sources. This would allow us to deduce the general properties of the sub-parsec nuclear regions of these objects (*e.g.*, brightness temperature, variability, position angle, proper motion, and general morphology) and compare them to the properties of regions farther downstream.

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

Object type:

☒ AGN, ☐ Masers, ☐ Stellar, ☐ Other :

Experiment type:

☒ Single-observation, ☒ Monitoring, ☐ Polarization,
☐ Time-critical, ☐ Target of Opportunity, ☐ Other :

(7) 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),

☐ 2 channel x 32 MHz, 1-bit,

☐ 1 channel x 32 MHz, 2-bit

Phase calibration tones:

☒ On (Standard continuum mode),

☐ Off (Standard spectral line mode)

(Include justification of any non-standard choice at (14) below)

(8) Ground radio telescope setup

Polarization :

☒ VSOP Standard (IEEE LCP), ☐ Non-standard :

Recording mode :

☒ As for VSOP spacecraft (Standard), ☐ Other :

(9) Investigator participation in scheduling

☐ PI (or co-I) wishes to participate in scheduling ground radio telescopes

☐ PI (or co-I) wishes to participate in scheduling the space radio telescope

(10) Preferred correlator (see Sections 9.11 and 12 of VSOP Proposer's Guide):

☐ No preference, ☐ Mitaka, ☒ Socorro, ☐ Other :

(11) Preferred post-correlation data analysis location:

☒ Home Institution, ☐ Mitaka, ☐ NRAO AOC, ☐ JIVE, ☐ Other

(12) Post-correlation data analysis assistance required:

☐ None, ☒ Consultation, ☐ Extensive help

(13) Details of proposed experiments

An 'experiment' is one or more observations of one source in one wavelength band.

A request to observe the same source in all 3 wavelength bands requires 3 columns to be filled in.

To observe the same source at the same frequency multiple times – a 'monitoring experiment' – requires only one column to be filled in.

Number of experiments in this proposal: 43

	Experiment 1	Experiment 2	Experiment 3	Experiment 4
Source name	0016+731	0133+476	0153+744	0212+735
RA (hh mm ss.s)	00 19 45.8	01 36 58.6	01 57 35.0	02 17 30.8
Dec (dd mm ss)	73 27 30	47 51 29	74 42 43	73 49 33
J2000 or B1950?	J2000	J2000	J2000	J2000
Observing frequency band (GHz)	5	5	5	5
<i>Continuum observations:</i>				
Standard VSOP freq. channels?	☒	☒	☒	☒
Channel A range (MHz)				
Channel B range (MHz)				
<i>Spectral line observations:</i>				
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)				
Min. spectral channels per IF channel				
Correlator averaging time (sec)				
FWHM of field of view required (mas)				
No. of correlating passes (if >1)				
Measured total flux density (Jy)				
Measured correlated flux density on > 5000 km baseline (Jy)	1.3	2.0	0.5	0.9
Image RMS needed (mJy/beam)	1	1	1	1
<i>Ground Radio Telescopes:</i>				
<i>Preferred choice:</i>				
Number of medium telescopes	10	10	10	10
Number of large telescopes	1	1	1	1
Suggested array given at Item (14)	☒	☒	☒	☒
<i>Minimum acceptable:</i>				
Number of medium telescopes	8	8	8	8
Number of large telescopes	0	0	0	0
Suggested array given at Item (14)	☒	☒	☒	☒
<i>Length of observation:</i>				
Preferred length (orbits)	1	1	1	1
Minimum acceptable length (orbits)	1	1	1	1
<i>Scheduling constraints:</i>				
Preferred P.A. of beam <i>major</i> axis (deg)				
‘No holes’ (<i>u,v</i>) coverage?	☐	☐	☐	☐
<i>Or</i> maximum resolution (<i>u,v</i>) coverage?	☒	☒	☒	☒
Preferred range of dates for scheduling (for monitoring experiments give range for 1st observation only)	to	to	to	to
<i>For monitoring programs:</i>				
Number of observations	2	2	2	2
Mean interval (days)	400	360	450	450
Acceptable variance from mean (days)	50	120	60	60

	Experiment 5	Experiment 6	Experiment 7	Experiment 8
Source name	0316+413	0454+844	0711+356	0804+499
RA (hh mm ss.s)	03 19 48.2	05 08 42.4	07 14 24.8	08 08 39.7
Dec (dd mm ss)	41 30 42	84 32 05	35 34 40	49 50 37
J2000 or B1950?	J2000	J2000	J2000	J2000
Observing frequency band (GHz)	5	5	5	5
<i>Continuum observations:</i>				
Standard VSOP freq. channels?	☒	☒	☒	☒
Channel A range (MHz)				
Channel B range (MHz)				
<i>Spectral line observations:</i>				
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)				
Min. spectral channels per IF channel				
Correlator averaging time (sec)				
FWHM of field of view required (mas)				
No. of correlating passes (if >1)				
Measured total flux density (Jy)				
Measured correlated flux density on > 5000 km baseline (Jy)	10.0	0.6	0.5	1.2
Image RMS needed (mJy/beam)	1	1	1	1
<i>Ground Radio Telescopes:</i>				
<i>Preferred choice:</i>				
Number of medium telescopes	10	10	10	10
Number of large telescopes	1	1	1	1
Suggested array given at Item (14)	☒	☒	☒	☒
<i>Minimum acceptable:</i>				
Number of medium telescopes	8	8	8	8
Number of large telescopes	0	0	0	0
Suggested array given at Item (14)	☒	☒	☒	☒
<i>Length of observation:</i>				
Preferred length (orbits)	1	1	1	1
Minimum acceptable length (orbits)	1	1	1	1
<i>Scheduling constraints:</i>				
Preferred P.A. of beam <i>major</i> axis (deg)				
‘No holes’ (<i>u,v</i>) coverage?	☐	☐	☐	☐
<i>Or</i> maximum resolution (<i>u,v</i>) coverage?	☒	☒	☒	☒
Preferred range of dates for scheduling (for monitoring experiments give range for 1st observation only)	to	to	to	to
<i>For monitoring programs:</i>				
Number of observations	2	2	2	2
Mean interval (days)	160	450	450	360
Acceptable variance from mean (days)	30	50	50	120

	Experiment 9	Experiment 10	Experiment 11	Experiment 12
Source name	0814+425	0836+710	0859+470	0906+430
RA (hh mm ss.s)	08 18 16.0	08 41 24.4	09 03 04.0	09 09 33.5
Dec (dd mm ss)	42 22 45	70 53 42	46 51 04	42 53 46
J2000 or B1950?	J2000	J2000	J2000	J2000
Observing frequency band (GHz)	5	5	5	5
<i>Continuum observations:</i>				
Standard VSOP freq. channels?	☒	☒	☒	☒
Channel A range (MHz)				
Channel B range (MHz)				
<i>Spectral line observations:</i>				
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)				
Min. spectral channels per IF channel				
Correlator averaging time (sec)				
FWHM of field of view required (mas)				
No. of correlating passes (if >1)				
Measured total flux density (Jy)				
Measured correlated flux density on > 5000 km baseline (Jy)	1.4	0.7	0.5	0.5
Image RMS needed (mJy/beam)	1	1	1	1
<i>Ground Radio Telescopes:</i>				
<i>Preferred choice:</i>				
Number of medium telescopes	10	10	10	10
Number of large telescopes	1	1	1	1
Suggested array given at Item (14)	☒	☒	☒	☒
<i>Minimum acceptable:</i>				
Number of medium telescopes	8	8	8	8
Number of large telescopes	0	0	0	0
Suggested array given at Item (14)	☒	☒	☒	☒
<i>Length of observation:</i>				
Preferred length (orbits)	1	1	1	1
Minimum acceptable length (orbits)	1	1	1	1
<i>Scheduling constraints:</i>				
Preferred P.A. of beam <i>major</i> axis (deg)				
‘No holes’ (<i>u,v</i>) coverage?	☐	☐	☐	☐
<i>Or</i> maximum resolution (<i>u,v</i>) coverage?	☒	☒	☒	☒
Preferred range of dates for scheduling (for monitoring experiments give range for 1st observation only)	to	to	to	to
<i>For monitoring programs:</i>				
Number of observations	2	2	2	2
Mean interval (days)	360	380	360	480
Acceptable variance from mean (days)	120	50	120	50

	Experiment 13	Experiment 14	Experiment 15	Experiment 16
Source name	0923+392	0945+408	0954+658	1624+416
RA (hh mm ss.s)	09 27 03.0	09 48 55.3	09 58 47.2	16 25 57.7
Dec (dd mm ss)	39 02 21	40 39 15	65 33 55	41 34 41
J2000 or B1950?	J2000	J2000	J2000	J2000
Observing frequency band (GHz)	5	5	5	5
<i>Continuum observations:</i>				
Standard VSOP freq. channels?	☒	☒	☒	☒
Channel A range (MHz)				
Channel B range (MHz)				
<i>Spectral line observations:</i>				
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)				
Min. spectral channels per IF channel				
Correlator averaging time (sec)				
FWHM of field of view required (mas)				
No. of correlating passes (if >1)				
Measured total flux density (Jy)				
Measured correlated flux density on > 5000 km baseline (Jy)	0.5	1.2	0.9	0.5
Image RMS needed (mJy/beam)	1	1	1	1
<i>Ground Radio Telescopes:</i>				
<i>Preferred choice:</i>				
Number of medium telescopes	10	10	10	10
Number of large telescopes	1	1	1	1
Suggested array given at Item (14)	☒	☒	☒	☒
<i>Minimum acceptable:</i>				
Number of medium telescopes	8	8	8	8
Number of large telescopes	0	0	0	0
Suggested array given at Item (14)	☒	☒	☒	☒
<i>Length of observation:</i>				
Preferred length (orbits)	1	1	1	1
Minimum acceptable length (orbits)	1	1	1	1
<i>Scheduling constraints:</i>				
Preferred P.A. of beam <i>major</i> axis (deg)				
‘No holes’ (<i>u,v</i>) coverage?	☐	☐	☐	☐
<i>Or</i> maximum resolution (<i>u,v</i>) coverage?	☒	☒	☒	☒
Preferred range of dates for scheduling (for monitoring experiments give range for 1st observation only)	to	to	to	to
<i>For monitoring programs:</i>				
Number of observations	2	2	2	2
Mean interval (days)	480	360	360	360
Acceptable variance from mean (days)	50	120	120	120

	Experiment 17	Experiment 18	Experiment 19	Experiment 20
Source name	1633+382	1637+574	1641+399	1642+690
RA (hh mm ss.s)	16 35 15.5	16 38 13.5	16 42 58.8	16 42 07.8
Dec (dd mm ss)	38 08 05	57 20 24	39 48 37	68 56 40
J2000 or B1950?	J2000	J2000	J2000	J2000
Observing frequency band (GHz)	5	5	5	5
<i>Continuum observations:</i>				
Standard VSOP freq. channels?	☒	☒	☒	☒
Channel A range (MHz)				
Channel B range (MHz)				
<i>Spectral line observations:</i>				
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)				
Min. spectral channels per IF channel				
Correlator averaging time (sec)				
FWHM of field of view required (mas)				
No. of correlating passes (if >1)				
Measured total flux density (Jy)				
Measured correlated flux density on > 5000 km baseline (Jy)	2.9	1.5	1.0	1.0
Image RMS needed (mJy/beam)	1	1	1	1
<i>Ground Radio Telescopes:</i>				
<i>Preferred choice:</i>				
Number of medium telescopes	10	10	10	10
Number of large telescopes	1	1	1	1
Suggested array given at Item (14)	☒	☒	☒	☒
<i>Minimum acceptable:</i>				
Number of medium telescopes	8	8	8	8
Number of large telescopes	0	0	0	0
Suggested array given at Item (14)	☒	☒	☒	☒
<i>Length of observation:</i>				
Preferred length (orbits)	1	1	1	1
Minimum acceptable length (orbits)	1	1	1	1
<i>Scheduling constraints:</i>				
Preferred P.A. of beam <i>major</i> axis (deg)				
‘No holes’ (<i>u,v</i>) coverage?	☐	☐	☐	☐
<i>Or</i> maximum resolution (<i>u,v</i>) coverage?	☒	☒	☒	☒
Preferred range of dates for scheduling (for monitoring experiments give range for 1st observation only)	to	to	to	to
<i>For monitoring programs:</i>				
Number of observations	2	2	2	2
Mean interval (days)	450	360	190	260
Acceptable variance from mean (days)	50	120	40	50

	Experiment 21	Experiment 22	Experiment 23	Experiment 24
Source name	1652+398	1739+522	1749+701	1803+784
RA (hh mm ss.s)	16 53 52.2	17 40 37.0	17 48 32.8	18 00 45.7
Dec (dd mm ss)	39 45 37	52 11 43	70 05 51	78 28 04
J2000 or B1950?	J2000	J2000	J2000	J2000
Observing frequency band (GHz)	5	5	5	5
<i>Continuum observations:</i>				
Standard VSOP freq. channels?	☒	☒	☒	☒
Channel A range (MHz)				
Channel B range (MHz)				
<i>Spectral line observations:</i>				
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)				
Min. spectral channels per IF channel				
Correlator averaging time (sec)				
FWHM of field of view required (mas)				
No. of correlating passes (if >1)				
Measured total flux density (Jy)				
Measured correlated flux density on > 5000 km baseline (Jy)	0.5	0.5	0.5	1.9
Image RMS needed (mJy/beam)	1	1	1	1
<i>Ground Radio Telescopes:</i>				
<i>Preferred choice:</i>				
Number of medium telescopes	10	10	10	10
Number of large telescopes	1	1	1	1
Suggested array given at Item (14)	☒	☒	☒	☒
<i>Minimum acceptable:</i>				
Number of medium telescopes	8	8	8	8
Number of large telescopes	0	0	0	0
Suggested array given at Item (14)	☒	☒	☒	☒
<i>Length of observation:</i>				
Preferred length (orbits)	1	1	1	1
Minimum acceptable length (orbits)	1	1	1	1
<i>Scheduling constraints:</i>				
Preferred P.A. of beam <i>major</i> axis (deg)				
‘No holes’ (<i>u,v</i>) coverage?	☐	☐	☐	☐
<i>Or</i> maximum resolution (<i>u,v</i>) coverage?	☒	☒	☒	☒
Preferred range of dates for scheduling (for monitoring experiments give range for 1st observation only)	to	to	to	to
<i>For monitoring programs:</i>				
Number of observations	2	2	2	2
Mean interval (days)	360	360	340	450
Acceptable variance from mean (days)	120	120	50	50

	Experiment 25	Experiment 26	Experiment 27	Experiment 28
Source name	1807+698	1823+568	1828+487	1928+738
RA (hh mm ss.s)	18 06 50.7	18 24 07.1	18 29 31.8	19 27 48.5
Dec (dd mm ss)	69 49 28	56 51 01	48 44 46	73 58 02
J2000 or B1950?	J2000	J2000	J2000	J2000
Observing frequency band (GHz)	5	5	5	5
<i>Continuum observations:</i>				
Standard VSOP freq. channels?	☒	☒	☒	☒
Channel A range (MHz)				
Channel B range (MHz)				
<i>Spectral line observations:</i>				
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)				
Min. spectral channels per IF channel				
Correlator averaging time (sec)				
FWHM of field of view required (mas)				
No. of correlating passes (if >1)				
Measured total flux density (Jy)				
Measured correlated flux density on > 5000 km baseline (Jy)	0.7	0.8	1.0	1.1
Image RMS needed (mJy/beam)	1	1	1	1
<i>Ground Radio Telescopes:</i>				
<i>Preferred choice:</i>				
Number of medium telescopes	10	10	10	10
Number of large telescopes	1	1	1	1
Suggested array given at Item (14)	☒	☒	☒	☒
<i>Minimum acceptable:</i>				
Number of medium telescopes	8	8	8	8
Number of large telescopes	0	0	0	0
Suggested array given at Item (14)	☒	☒	☒	☒
<i>Length of observation:</i>				
Preferred length (orbits)	1	1	1	1
Minimum acceptable length (orbits)	1	1	1	1
<i>Scheduling constraints:</i>				
Preferred P.A. of beam <i>major</i> axis (deg)				
‘No holes’ (<i>u,v</i>) coverage?	☐	☐	☐	☐
<i>Or</i> maximum resolution (<i>u,v</i>) coverage?	☒	☒	☒	☒
Preferred range of dates for scheduling (for monitoring experiments give range for 1st observation only)	to	to	to	to
<i>For monitoring programs:</i>				
Number of observations	2	2	2	2
Mean interval (days)	360	450	230	270
Acceptable variance from mean (days)	120	50	30	40

	Experiment 29	Experiment 30	Experiment 31	Experiment 32
Source name	1954+513	2021+614	2200+420	0133+476
RA (hh mm ss.s)	19 55 42.7	20 22 06.7	22 02 43.3	01 36 58.6
Dec (dd mm ss)	51 31 49	61 36 59	42 16 40	47 51 29
J2000 or B1950?	J2000	J2000	J2000	J2000
Observing frequency band (GHz)	5	5	5	22
<i>Continuum observations:</i>				
Standard VSOP freq. channels?	☒	☒	☒	☒
Channel A range (MHz)				
Channel B range (MHz)				
<i>Spectral line observations:</i>				
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)				
Min. spectral channels per IF channel				
Correlator averaging time (sec)				
FWHM of field of view required (mas)				
No. of correlating passes (if >1)				
Measured total flux density (Jy)				
Measured correlated flux density on > 5000 km baseline (Jy)	0.9	0.8	1.2	1.9
Image RMS needed (mJy/beam)	1	1	1	4
<i>Ground Radio Telescopes:</i>				
<i>Preferred choice:</i>				
Number of medium telescopes	10	10	10	10
Number of large telescopes	1	1	1	1
Suggested array given at Item (14)	☒	☒	☒	☒
<i>Minimum acceptable:</i>				
Number of medium telescopes	8	8	8	8
Number of large telescopes	0	0	0	0
Suggested array given at Item (14)	☒	☒	☒	☒
<i>Length of observation:</i>				
Preferred length (orbits)	1	1	1	1
Minimum acceptable length (orbits)	1	1	1	1
<i>Scheduling constraints:</i>				
Preferred P.A. of beam <i>major</i> axis (deg)				
‘No holes’ (<i>u,v</i>) coverage?	☐	☐	☐	☐
<i>Or</i> maximum resolution (<i>u,v</i>) coverage?	☒	☒	☒	☒
Preferred range of dates for scheduling (for monitoring experiments give range for 1st observation only)	to	to	to	to
<i>For monitoring programs:</i>				
Number of observations	2	2	2	
Mean interval (days)	360	450	80	
Acceptable variance from mean (days)	120	50	15	

	Experiment 33	Experiment 34	Experiment 35	Experiment 36
Source name	0212+735	0316+413	0923+392	1633+382
RA (hh mm ss.s)	02 17 30.8	03 19 48.2	09 27 03.0	16 35 15.5
Dec (dd mm ss)	73 49 33	41 30 42	39 02 21	38 08 05
J2000 or B1950?	J2000	J2000	J2000	J2000
Observing frequency band (GHz)	22	22	22	22
<i>Continuum observations:</i>				
Standard VSOP freq. channels?	☒	☒	☒	☒
Channel A range (MHz)				
Channel B range (MHz)				
<i>Spectral line observations:</i>				
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)				
Min. spectral channels per IF channel				
Correlator averaging time (sec)				
FWHM of field of view required (mas)				
No. of correlating passes (if >1)				
Measured total flux density (Jy)				
Measured correlated flux density on > 5000 km baseline (Jy)	1.3	1.6	2.7	1.3
Image RMS needed (mJy/beam)	4	4	4	4
<i>Ground Radio Telescopes:</i>				
<i>Preferred choice:</i>				
Number of medium telescopes	10	10	10	10
Number of large telescopes	1	1	1	1
Suggested array given at Item (14)	☒	☒	☒	☒
<i>Minimum acceptable:</i>				
Number of medium telescopes	8	8	8	8
Number of large telescopes	0	0	0	0
Suggested array given at Item (14)	☒	☒	☒	☒
<i>Length of observation:</i>				
Preferred length (orbits)	1	1	1	1
Minimum acceptable length (orbits)	1	1	1	1
<i>Scheduling constraints:</i>				
Preferred P.A. of beam <i>major</i> axis (deg)				
‘No holes’ (<i>u,v</i>) coverage?	☐	☐	☐	☐
<i>Or</i> maximum resolution (<i>u,v</i>) coverage?	☒	☒	☒	☒
Preferred range of dates for scheduling (for monitoring experiments give range for 1st observation only)	to	to	to	to
<i>For monitoring programs:</i>				
Number of observations				
Mean interval (days)				
Acceptable variance from mean (days)				

	Experiment 37	Experiment 38	Experiment 39	Experiment 40
Source name	1641+399	1739+522	1803+784	1823+568
RA (hh mm ss.s)	16 42 58.8	17 40 37.0	18 00 45.7	18 24 07.1
Dec (dd mm ss)	39 48 37	52 11 43	78 28 04	56 51 01
J2000 or B1950?	J2000	J2000	J2000	J2000
Observing frequency band (GHz)	22	22	22	22
<i>Continuum observations:</i>				
Standard VSOP freq. channels?	☒	☒	☒	☒
Channel A range (MHz)				
Channel B range (MHz)				
<i>Spectral line observations:</i>				
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)				
Min. spectral channels per IF channel				
Correlator averaging time (sec)				
FWHM of field of view required (mas)				
No. of correlating passes (if >1)				
Measured total flux density (Jy)				
Measured correlated flux density on > 5000 km baseline (Jy)	10.7	1.8	1.1	1.5
Image RMS needed (mJy/beam)	4	4	4	4
<i>Ground Radio Telescopes:</i>				
<i>Preferred choice:</i>				
Number of medium telescopes	10	10	10	10
Number of large telescopes	1	1	1	1
Suggested array given at Item (14)	☒	☒	☒	☒
<i>Minimum acceptable:</i>				
Number of medium telescopes	8	8	8	8
Number of large telescopes	0	0	0	0
Suggested array given at Item (14)	☒	☒	☒	☒
<i>Length of observation:</i>				
Preferred length (orbits)	1	1	1	1
Minimum acceptable length (orbits)	1	1	1	1
<i>Scheduling constraints:</i>				
Preferred P.A. of beam <i>major</i> axis (deg)				
‘No holes’ (<i>u,v</i>) coverage?	☐	☐	☐	☐
<i>Or</i> maximum resolution (<i>u,v</i>) coverage?	☒	☒	☒	☒
Preferred range of dates for scheduling (for monitoring experiments give range for 1st observation only)	to	to	to	to
<i>For monitoring programs:</i>				
Number of observations				
Mean interval (days)				
Acceptable variance from mean (days)				

	Experiment 41	Experiment 42	Experiment 43	Experiment 44
Source name	1928+738	1954+513	2200+420	
RA (hh mm ss.s)	19 27 48.5	19 55 42.7	22 02 43.3	
Dec (dd mm ss)	73 58 02	51 31 49	42 16 40	
J2000 or B1950?	J2000	J2000	J2000	
Observing frequency band (GHz)	22	22	22	
<i>Continuum observations:</i>				
Standard VSOP freq. channels?	☒	☒	☒	☐
Channel A range (MHz)				
Channel B range (MHz)				
<i>Spectral line observations:</i>				
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)				
Min. spectral channels per IF channel				
Correlator averaging time (sec)				
FWHM of field of view required (mas)				
No. of correlating passes (if >1)				
Measured total flux density (Jy)				
Measured correlated flux density on > 5000 km baseline (Jy)	1.2	1.4	2.7	
Image RMS needed (mJy/beam)	4	4	4	
<i>Ground Radio Telescopes:</i>				
<i>Preferred choice:</i>				
Number of medium telescopes	10	10	10	
Number of large telescopes	1	1	1	
Suggested array given at Item (14)	☒	☒	☒	☐
<i>Minimum acceptable:</i>				
Number of medium telescopes	8	8	8	
Number of large telescopes	0	0	0	
Suggested array given at Item (14)	☒	☒	☒	☐
<i>Length of observation:</i>				
Preferred length (orbits)	1	1	1	
Minimum acceptable length (orbits)	1	1	1	
<i>Scheduling constraints:</i>				
Preferred P.A. of beam <i>major</i> axis (deg)				
‘No holes’ (<i>u,v</i>) coverage?	☐	☐	☐	☐
<i>Or</i> maximum resolution (<i>u,v</i>) coverage?	☒	☒	☒	☐
Preferred range of dates for scheduling (for monitoring experiments give range for 1st observation only)	to	to	to	to
<i>For monitoring programs:</i>				
Number of observations				
Mean interval (days)				
Acceptable variance from mean (days)				

(14) Additional notes to the scheduler :

The VLBA is required for these single-orbit imaging observations to provide similar sensitivity and coverage for all sources. The addition of a large telescope to each observation would be useful, but is not required.

(15) 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, Sagami-hara
Kanagawa 229 JAPAN

In addition, e-mail the completed $\text{\LaTeX}$ file to submit@vsopgw.isaslan1.isas.ac.jp

Cover Sheets of accepted proposals will be made available to the astronomical community.

Proposals must be received at ISAS by 17 November 1995