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 : 10-Nov-1995

(2) Proposal title : VSOP 1.6 and 5 GHz observations of 0223+341

(3)	INVESTIGATORS	INSTITUTION
P.I.	M.A. Garrett	NRAL, Jodrell Bank
co-I.	A.R. Patnaik	MPIfR, Bonn
co-I.		
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(4) Principal Investigator (or contact person) details...

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(5) Proposal Abstract :

We wish to observe 0223+341 with VSOP at 1.6 and 5 GHz. The resolution of VSOP at these low frequencies is well matched to high frequency ground based observations at 15 GHz. 0223+341 is a visually convincing, small separation gravitational lens candidate. A comparison of the spectra and sizes of the core-jet structure observed in the two distinct radio components will allow us to test the lensing hypothesis further.

(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: 2

	Experiment 1	Experiment 2	Experiment 3	Experiment 4
Source name	B0223+341	B0223+341		
RA (hh mm ss.s)	02 26 10.33437	02 26 10.33437		
Dec (dd mm ss)	34 21 30.2581	34 21 30.2581		
J2000 or B1950?	J2000	J2000		
Observing frequency band (GHz)	1.6	5.0		
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)				
Min. spectral channels per IF channel				
Correlator averaging time (sec)				
FWHM of field of view required (mas)	10 mas	10 mas		
No. of correlating passes (if >1)				
Measured total flux density (Jy)	2.9 Jy	1.6 Jy		
Measured correlated flux density on > 5000 km baseline (Jy)	1 Jy	1 Jy		
Image RMS needed (mJy/beam)	$\sim$ 5 mJy/beam			
Ground Radio Telescopes:				
Preferred choice:				
Number of medium telescopes	10	10		0
Number of large telescopes	2	2		
Suggested array given at Item (14)	☑	☑	☐	☐
Minimum acceptable:				
Number of medium telescopes	3	3		
Number of large telescopes	1	1	0	0
Suggested array given at Item (14)	☑	☑		
Length of observation:				
Preferred length (orbits)	4	4		
Minimum acceptable length (orbits)	1	1		
Scheduling constraints:				
Preferred P.A. of beam *major* axis (deg)				
'No holes' (u,v) coverage?	☑	☑		
Or maximum resolution (u,v) coverage?	☐	☐		
Preferred range of dates for scheduling (for monitoring experiments give range for 1st observation only)	97-08-15 to 97-09-15	97-08-15 to 97-09-15	to	to
For monitoring programs:				
Number of observations	1	1		
Mean interval (days)				
Acceptable variance from mean (days)				

(14) Additional notes to the scheduler :

Exp 1, Pref Array = VLBA + GO, NR or VLA; EVN (including EF)

1.6/5 GHz correlated flux of 0223+341 is unknown – value given is an estimate based on VLBA 15 GHz observations. (see Scientific justification)

(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, Sagamihara
Kanagawa 229 JAPAN
In addition, e-mail the completed 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