VSOP AO3 PROPOSAL COVER SHEETS

DEADLINE : 1 October, 1999
SEND TO : VSOG, ISAS, 3-1-1 Yoshinodai, Sagamihara, Kanagawa 229-8510, JAPAN

(1) Date prepared : 22-September-1999

(2) Proposal title : Co-ordinated VSOP and Chandra Observations of 3C273 and 1156+295

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(5) Proposal Abstract :

We propose to undertake co-ordinated Chandra, HALCA+VLBA, and VLBA-only observations of two high luminosty AGN (1156+295 and 3C273) which Chandra will be observing during the primary observation period of the third VSOP AO. In this proposal we are applying for 1.6 GHz and 5 GHz HALCA+VLBA observations. We are also submitting a similar proposal for VLBA-only observations at 8, 15, 22, and 43 GHz. Using the radio and X-ray data we hope to test the standard syncrotron-self Compton model for radio and X-ray emission in AGN jets. We also want to seatch for evidence of 'non-standard' emission such as induced Compton scattering.

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

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

Observation type:
☐ Continuum, ☐ Spectral Line, ☑ Polarization, ☐ Time-critical, ☐ 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: 4

(8) Details of proposed experiments

	Experiment 1	Experiment 2	Experiment 3	Experiment 4
Source name (J*hhmm*±*ddmm*)	J1229+0203	J1229+0203	J1159+291	J1159+291
Alternative name	3C273	3C273	B1156+295	B1156+295
RA(J2000) (hh mm ss.ssss)	12 29 06.6997	12 29 06.6997	11 59 31.8339	11 59 31.8339
Dec(J2000) (dd mm ss.ssss)	+02 03 08.598	+02 03 08.598	+29 14 43.827	+29 14 43.827
Observing frequency band (GHz)	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	128	128	128	128
Correlator averaging time (sec)				
No. of correlating passes (if >1)				
Total flux density (Jy)	∼35	∼35	∼2	∼2
Correlated flux (mJy)	∼5,000-10,000	∼5,000-10,000	∼1,000	∼1,000
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	1	1	1	1
Mean interval (days)				
Related VSOP 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 (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 :

The proposal is part of a coordinated X-ray and radio campaign. We have submitted a similar VLBA-only proposal to observe these sources at 8, 15, 22, and 43 GHz. Ideally we would like simultaneous Chandra and HALCA+VLBA observations. However, this may be difficult to schedule so observations within a week or so of the Chandra observation date will enable us to meet our scientific goals. We request the use of the VLBA as the co-observing ground array as we also wish to use the VLBA at observing frequencies not supported by HALCA. We will contact the VSOG when the Chandra observing dates for 3C273 and 1156+295 are known.

(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 October 1999