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 : 28 September, 1999

(2) Proposal title : Collimation and evolution of the Vir A jet.

(3)	INVESTIGATORS	INSTITUTION
P.I.	Bill Junor	UNM, USA
co-I.	John Biretta	STScI, USA
co-I.		
co-I.		
co-I.		
co-I.		
co-I.		
co-I.		
co-I.		

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

Name : Bill Junor
E-mail : bjunor@astro.phys.unm.edu
Fax : +1-505-277-1520
Phone : +1-505-846-4948

Address : Dept. of Physics & Astronomy
: University of New Mexico
: 800 Yale Blvd., N.E.,
: Albuquerque, NM 87131
: United States of America

(5) Proposal Abstract :

Four epochs of λ6 cm observations of the Key Source, Vir A, are proposed for the Spring 2000 observing window. From these observations, and in conjunction with parallel ground-based observations at λ2 cm, the spatial and temporal evolution of the jet will be followed. In particular, the nature and role of the bright sinuous structures will be examined. These may be associated with helical magnetic field lines wrapped around the jet which may collimate and stabilize the jet.

(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: 1

(8) Details of proposed experiments

	Experiment 1	Experiment 2	Experiment 3	Experiment 4
Source name (J*hhmm*±*ddmm*)	J1230+1223			
Alternative name	3C274, Vir A			
RA(J2000) (hh mm ss.ssss)	12 30 49.42340			
Dec(J2000) (dd mm ss.ssss)	+12 23 28.0442			
Observing frequency band (GHz)	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	32			
Correlator averaging time (sec)	2			
No. of correlating passes (if >1)				
Total flux density (Jy)	70			
Correlated flux (mJy)	700			
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)	 4 30			
Related VSOP proposal code(s)	V081B, W040A1–3			

(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 :

(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