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 : Oct 1,1999

(2) Proposal title : The third epoch VSOP observation of 3C 84

(3)	INVESTIGATORS	INSTITUTION
P.I.	Keiichi Asada	National Astronomical Observatory, Japan
co-I.	Seiji Kameno	National Astronomical Observatory, Japan
co-I.	Makoto Inoue	National Astronomical Observatory, Japan
co-I.	Zhi-Qiang Shen	National Astronomical Observatory, Japan
co-I.	Sinji Horiuchi	National Astronomical Observatory, Japan
co-I.	Denise. Gabuzda	
co-I.		
co-I.		
co-I.		

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

Name : Keiichi Asada
E-mail : asada@hotaka.mtk.nao.ac.jp
Fax :+81-422-34-3869
Phone : +81-422-34-3601

Address : Osawa 2-21-1
:Mikata, Tokyo 181-8588
:Japan
:
:

(5) Proposal Abstract :

3C 84(z=0.018) is one of the near-by sources among active galactic nuclei (AGNs). We have observed this source twice with VSOP, and once with VLBA. Double-ridgeline structure has been shown by the previous VSOP observations. We conclude that this structure must be a jetstream and a back. We also found that the jet has a wiggled structure. We think that this structure could be due to Kelvin-Helmholtz instability between jet and back flow. The jets motion and spectral index distribution will give us the clues to solve this wiggled structure.

(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:2

(8) Details of proposed experiments

	Experiment 1	Experiment 2	Experiment 3	Experiment 4
Source name (J*hhmm*±*ddmm*)	J0319+4130	J0319+4130		
Alternative name	3C 84	3C 84		
RA(J2000) (hh mm ss.ssss)	03 19 48.1600	03 19 48.1600		
Dec(J2000) (dd mm ss.ssss)	+41 19 51.840	+41 19 51.840		
Observing frequency band (GHz)	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)	> 16.0	> 16.0		
Correlated flux (mJy)	> 1000	> 1000		
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)	V129	V129		

(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 :

We require at least one large telescope like phased-VLA or EB to detect certain fringes.

(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