VSOP AO2 PROPOSAL COVER SHEETS

DEADLINE : 8 May, 1998
SEND TO : VSOG, ISAS, 3-1-1 Yoshinodai, Sagamihara, Kanagawa 229-8510, JAPAN

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

(1) Date prepared : May 04 1998

(2) Proposal title : 0836+710: Jet Kinematics Related to the Broad-band Activity.

(3)	INVESTIGATORS	INSTITUTION
P.I.	A.P. Lobanov	MPIfR, Germany
co-I.	T.P. Krichbaum	MPIfR, Germany
co-I.	A. Kraus	MPIfR, Germany
co-I.	A. Witzel	MPIfR, Germany
co-I.	J.A. Zensus	MPIfR, Germany
co-I.		
co-I.		
co-I.		
co-I.		

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

Name : A.P. Lobanov
E-mail : alobanov@mpifr-bonn.mpg.de
Fax : +49 228 525 229
Phone : +49 228 525 295

Address : MPIfR
: Auf dem Hügel 69
: Bonn 53121
: GERMANY
:

(5) Proposal Abstract :

We propose to use VSOP at 1.6 and 5 GHz to monitor at high–resolution the jet in the ultraluminous quasar 0836+710. We request to schedule 2 observing epochs separated by ~ 6 months from each other. We intend to study the jet kinematics and physical properties at milliarcsecond scales. We will investigate the changes of speed, brightness and width along the jet. The VSOP observations will be combined with the data from our ongoing VLBA monitoring at 8, 22, and 43 GHz, and with the total spectrum information in order to derive a self–consistent model able to explain both spectral and kinematic changes in 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 (10).

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*)	J0841+709	J0841+709		
Alternative name	4C71.07	4C71.07		
RA(J2000) (hh mm ss.ssss)	08 41 24.3652	08 41 24.3652		
Dec(J2000) (dd mm ss.ssss)	+70 53 42.173	+70 53 42.173		
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)				
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)	2.5	2.2		
Correlated flux (mJy)	700	650		
Ground Radio Telescopes:				
Suggested array given at Item (10)?	☑	☑	☐	☐
GRT observing mode:				
128Mbps LCP (standard)	☑	☑	☐	☐
128Mbps LCP/RCP	☐	☐	☐	☐
256Mbps LCP/RCP	☐	☐	☐	☐
Preferred correlator:				
No preference	☐	☐	☐	☐
Mitaka	☐	☐	☐	☐
Penticton	☐	☐	☐	☐
Socorro	☑	☑	☐	☐
Monitoring programs:				
Number of observations	2	2		
Mean interval (days)	180	180		
Related AO1 proposal code(s)	V041	V041		

(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 (10) below)

(10) Additional notes to the scheduler :

Preferred array: VLBA
Preferred dates: early April, late October 1999.

(11) 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 229-8510 JAPAN

In addition, e-mail the completed LaTeX file 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 8 May 1998