VSOP AO2 PROPOSAL COVER SHEETS

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

(1) Date prepared :

(2) Proposal title : J1922+155: A Compact Object along with the Galactic Plane

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(5) Proposal Abstract :

J1922+155 is a compact radio source along with the galactic plane. A short glance of the Palomar Sky Survey print shows no corresponding object. We have observed the total flux density, and found that the radio spectrum is inverted between 2 and 15 GHz. This suggests that the object is a core-dominant extragalactic source. The VLBA Calibrator Survey shows that the source has a morphology with a slightly elongated component and an extended lobe within a few tens of mas. A powerful way to reveal the nature of the object is to observe with a highly spatial resolution at a low frequency. This kind of observations has an ability to resolve the central component into a core + jets and to detect optically thick radiation, where the source is non-thermal. We then propose VSOP observations at 5 GHz for the source.

(6) Proposal Category (indicate all that apply):
Object type:
☐ AGN, ☐ Maser, ☐ Stellar, ☐ Pulsar, ☑ Other : Unknown
Observation type:
☑ Continuum, ☐ Spectral Line, ☐ Polarization, ☐ Time-critical, ☐ Other :

(7) Number of proposed experiments

1 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: 1

(8) Details of proposed experiments

	Experiment 1	Experiment 2	Experiment 3	Experiment 4
Source name (J*hhmm*±*ddmm*)	J1922+155			
Alternative name	4C 15.65			
RA(J2000) (hh mm ss.ssss)	19 22 34.6955			
Dec(J2000) (dd mm ss.ssss)	+15 30 10.024			
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				
Correlator averaging time (sec)				
No. of correlating passes (if >1)				
Total flux density (Jy)	1.159 Jy			
Correlated flux (mJy)	> 200 mJy			
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				
Mean interval (days)				
Related AO1 proposal code(s)				

(9) VSOP spacecraft observing mode (see Section 3 and Table 5 of the VSOP Proposer's Guide):

- [x] 2 channel x 16 MHz, 2-bit (Standard mode),
- [ ] Other:

Phase calibration tones:

- [x] 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 :

We require that the observing time will be allocated during September 1999, when the FAKESAT simulator shows the most suitable UV coverage for the source. Since an extended component observed in the VLBA survey seems to be weak, space-ground baselines with a high sensitivity are needed to observe the extended component. Then we propose to use the GRTs of VLBA + Y + UD + EVN (EB and WB). We desire three to four orbits of HALCA.

(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