

# VLBA PROPOSAL COVERSHEET

DEADLINES: 1st of Feb., June, Oct.

(1) Date Prepared: October 30, 2006

(2) Title of Proposal: Measurement of the post-seismic displacement of MK-VLBA caused by the Hawaii earthquake on 2006.10.15

rcvd:

(3) AUTHORS (Add * for new location)	INSTITUTION	E-mail	G/U	Students Only	
				For Thesis?	Ph.D. Year
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(4) Related previous or current VLBI proposal(s):

☐ Resubmission

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(7) Scientific Category: ☒ astrometry & geodesy ☐ galactic ☐ extragalactic ☐ other:

Rapid Response Science: ☐ Known Transient ☐ Exploratory ☒ Target of Opportunity

(8) Wavelength(s) requested (those not available on the global network are indicated with a small circle):

☐ 90cm ☐ 50cm ☐ 30cm ☐ 21cm ☐ 18cm ☐ 13cm ☐ 6cm ☐ 5cm ☐ 3.6cm ☒ 3.6/13cm  
☐ 2cm ☐ 1.3cm ☐ 7mm ☐ 3mm  
☒ Global Network standard bands ☐ Special frequencies:

(9) Recording format: ☒ Default continuum setup (VLBA only), ☐ VLBA/MkIV, ☐ MkIII: Mode

Bandwidth per BaseBand channel: \_\_\_\_\_

Aggregate bit rate: 128 ( 8 BB channels at 16 MSamples/sec of ☒ 1 bit, ☐ 2 bit )

(10) ☐ Multi-epoch observation: \_\_\_\_\_ epochs of \_\_\_\_\_ hours each, separated by \_\_\_\_\_

(11) Network	Requested antennas	Total time requested
EVN & MERLIN		
VLBA	ALL	24 hours
other NRAO		
IVS	KOKEE, TSUKUB32, KASHIM34, URUMQI, HOBART26	
Non-VLBI Instruments		

(12) ABSTRACT (Do not write outside this space. Please type)

On 2006.10.15 at 17:07:48 (UTC) a strong earthquake with magnitude 6.7 occurred in Hawaii. The focus of the earthquake was at a depth 29 km. The distance from the epicenter to the station of MK-VLBA is 62 km. It is known that the earthquakes of this magnitude may cause displacements of order of magnitude 1-10 cm. The post-seismic deformation may cause non-linear motion of a station for time scales from months to decades. We request a 24 hour geodetic session for the purpose of measuring possible post-seismic deformation caused by this earthquake.

- (13) Observation type: ☒ Interferometry, ☐ Spectroscopy, ☐ Pulsar, ☐ Phase referencing
- (14) Proposal is ☐ Suitable for dynamic scheduling.
- (15) Polarization: ☒ Single Polarization ☐ Dual Circular Polarization  
Global network standard for single polarization is LCP for all  $\lambda$ s except 13cm (RCP) and 3.6cm (RCP).
- (16) Tape usage (Show <recording time>/<total time>): \_\_\_\_\_
- (17) Assistance required:  
Observation Setup: ☐ Consultation, ☐ Extensive help, ☐ Observe file preparation  
Postprocessing: ☐ Consultation, ☐ Extensive help, ☐ Calibration service
- (18) Processor: ☒ Socorro, ☐ JIVE, ☐ Haystack, ☐ Bonn, ☐ Washington, ☐ Other \_\_\_\_\_  
Special processing: ☐ XPol, ☐ Pulsar gate, ☐ Multiple Fields: \_\_\_\_\_  
Averaging time: 1.0 sec Spectral channels per baseband channel: 64  
☐ Other special processing: \_\_\_\_\_
- (19) Postprocessing Location: NRAO-CV, MPIfR, GSFC
- (20) Source list: ☐ J2000 ☐ B1950  
If more than 4 sources, please attach list. If more than 30, give only selection criteria and GST range(s)

	Source 1	Source 2	Source 3	Source 4
Name(s)	ALL SKY			
RA (hh mm)	0–24h			
Dec (dd.d)	–45d to +88d			
GST range (Europe)				
GST range (US)	0–24h			
GST range (Other)				
Band(s)	S/X			
Flux density (Total, Jy)	>300 mJy			
Flux density (correlated, mJy)	>300 mJy			
RMS needed (mJy/beam)				
Peak/RMS needed				

- (21) Preferred VLBI session or range of dates for scheduling, and why:  
One 24 hour session.
- (22) Dates which are NOT acceptable, and why:
- (23) Attach a self-contained scientific justification, not in excess of 1000 words.  
Preprints or reprints will not be forwarded to the referees.

Information about the capabilities of the VLBA may be found on the World Wide Web by starting at the NRAO home page, <http://www.nrao.edu>, and selecting the VLBA from “Sites and Telescopes.”

A brief summary of the capabilities of the EVN antennas is given in the EVN STATUS TABLE in the EVN USER GUIDE, which may be found at [http://www.evlbi.org/user\\_guide/user\\_guide.html](http://www.evlbi.org/user_guide/user_guide.html).

Please include the full postal addresses for first-time users or for those that have moved (if not contact author).