DEADLINES: 1st of Feb., June, Oct.
EMAIL TO: toosoc@nrao.edu

rcvd:

(1) Date Prepared: February 11, 2007

(2) Title of Proposal: Radar Interferometric Imaging of Near-Earth Asteroid 2006 VV2

(3) AUTHORS (Add * for new location)	INSTITUTION	E-mail	G/U	Students Only: For Thesis?	Ph.D. Year
Michael W. Busch	Caltech	busch@caltech.edu	G	Yes	2010
Lance A.M. Benner	JPL	lance@reason.jpl.nasa.gov			
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(4) Related previous or current VLBI proposal(s): ○ Resubmission

(5) Contact author for scheduling: Michael W. Busch
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(7) Scientific Category: ○ astrometry & geodesy ○ galactic ○ extragalactic ⊗ other: Asteroid Radar
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:____ (____ BB channels at ____ MSamples/sec of ○ 1 bit, ⊗ 2 bit)

(10) ⊗ Multi-epoch observation: 2 epochs of 1 hours each, separated by 1 day

(11) Network	Requested antennas	Total time requested
EVN & MERLIN		
VLBA	ALL	2
other NRAO	GBT	2
Non-VLBI Intruments		

(12) ABSTRACT (Do not write outside this space. Please type)
The near-Earth asteroid 2006 VV2 will make a close-Earth approach at the end of March 2007. We propose VLBA+GBT imaging of the object during two Goldstone radar tracks, with resolution of a few tens of meters. Radar brightness maps will give us information on the object's shape, spin state, and surface structure. 2006 VV2 was discovered only recently, making it a target of opportunity.

Scheduler use only
(8/03)

(14) Proposal is ◯ Suitable ⊗ Unsuitable for dynamic scheduling.

(15) Polarization: ◯ Single Polarization ⊗ Dual Circular Polarization
Global network standard for single polarization is LCP for all λs 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 Software correlator
Special processing: ◯ XPol, ◯ Pulsar gate, ◯ Multiple Fields: ________
Averaging time: ________ Spectral channels per baseband channel: 1024
⊗ Other special processing: Software correlator requires raw data

(19) Postprocessing Location: NRAO-SOC, offsite

(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)	Near-Earth asteroid 2006 VV2			
RA (hh mm)	Ephemeris to be provided when time scheduled.			
Dec (dd.d)	Ephemeris to be provided when time scheduled.			
GST range (Europe)	See science justification.			
GST range (US)	See science justification.			
GST range (Other)	See science justification.			
Band(s)	X-band.			
Flux density (Total, Jy)	Unknown.			
Flux density (correlated, mJy)	Unknown.			
RMS needed (mJy/beam)	Unknown.			
Peak/RMS needed	Unknown.			

(21) Preferred VLBI session or range of dates for scheduling, and why:
See science justification.

(22) Dates which are NOT acceptable, and why:
All dates not in science justification.

(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.

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