

Technical Page

Proposal Type: Regular
 General Category: Planetary Radar
 Sub-Category: Radar
 Observation Category: Solar System
 Total Time Requested: 24 Hours
 Minimum Useful Time: 4 hours

Proposal Title: A Radar Mapping Search for Recent Volcanism on Venus

ABSTRACT:

Radar mapping using the Arecibo telescope in 1988 provided the first 2-km resolution Earth-based image of Venus. The Magellan mission, over the next several years, mapped almost the entire planet at a spatial resolution of about 100 m. At the next close approach in June 2012, we thus have a 24-year baseline to search for surface changes due to volcanic processes. We propose to use the Arecibo S-band transmitter and GBT receivers for six days near close approach, providing a map of the visible hemisphere with 1-km spatial resolution. The result will be a comparison between the 1988 and 2012 datasets, and Magellan data, to show any areas of possible change.

| Name | Institution | E-mail | Phone | Student |
|------------------|-------------|---------------------|--------------|---------|
| Bruce A Campbell | USGS | bacampbell@usgs.gov | 928 556-7220 | no |

Remote Observing Request

- Observer will travel to AO
- Remote Observing
- In Absentia (instructions to operator)

Instrument Setup

S-Band radar

Atmospheric Observation Instruments:

Special Equipment or setup: none

RFI Considerations

Frequency Ranges Planned

2380 MHz