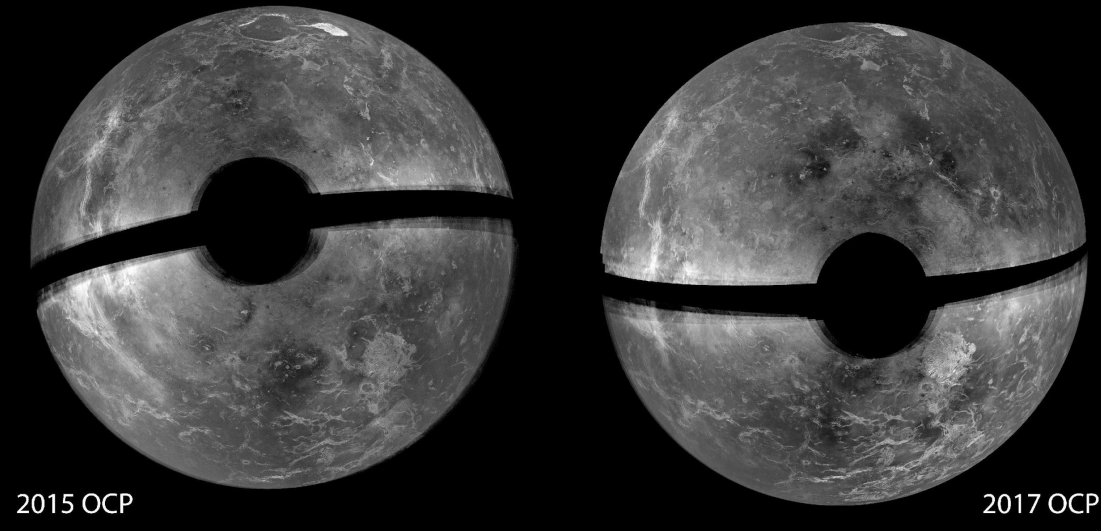


Arecibo Radar Maps of Venus from 1988 to 2020

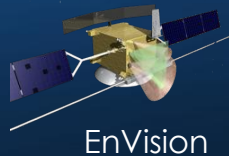
Campbell and Campbell (2022) *The Planetary Science Journal*

Over its 57-year history, the Arecibo telescope was used to produce radar maps of Venus that pioneered our understanding of surface landforms and geologic processes. Recently, the high-resolution images from observing runs in 1988, 2012, 2015, 2017, and 2020 have been archived with the NASA Planetary Data System to preserve these legacy data set.



Opposite-sense Circular (OC) maps of Venus from 2015 and 2017. The dark horizontal band is due to limits placed on echoes within 450 km of the Doppler equator.

- Mapping the surface of Venus represents a triumph of the early Arecibo radar program, and the PDS archive of observations from 1988 through 2020 leaves a legacy for future researchers.
- With spatial resolution of about 1.5 km, the various maps reveal surface properties like recent pyroclastic eruptions and crater ejecta in the highlands.
- These results are particularly relevant for long-term monitoring of the spin rate, surface change detection, and planning for S-band polarimetry from the EnVision orbiter mission.
- Arecibo radar maps of Venus remain important as we enter the era of renewed Venus exploration with VERITAS, DAVINCI, and EnVision.



EnVision



VERITAS