DAVINCI+ will explore past and present Venus

Deep Atmosphere Venus Investigation of Noble Gases, Chemistry, and Imaging Pla

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Establishing Venus' place in our Solar System

Enabling exploration of Venus-like exoplanets and Earths

Ancient Oceans on Venus?

Evolution of Habitability

Venus-like Exoplanets

DAVINCI+ Operations 2026-2029

Way et al. (2016) GRL

Major partners: Lockheed-Martin • JPL • MSSS • LaRC • ARC • APL • KinetX • University of Michigan

Kepler-69c
Venus tells the story of the *life and death of habitability*.

*Early Venus habitability* may have been enabled by the same climatic processes that occur on slowly rotating *M dwarf planets* (Way et al. 2016, 2020).
DAVINCI+ studies Venus from above & within

**What** is the origin of the Venus atmosphere and how has it evolved?

**How** and why is Venus different or similar to Earth, Mars, and exoplanet analogues?

**Was** there an early ocean on Venus? If so, when and where did it go?

**What** can we learn about the atmosphere below the clouds and surface mineralogy?

**What** is the origin of the tesserae?
what can we learn?

Noble gases → origin & evolution

atmospheric trace gases → chemistry & composition

D/H ratio → history of H₂O

surface geology & composition → past and present surface processes
Launch: late May 2026
Entry, Descent, Science & Touchdown: April 2028
Venus orbit insertion: early Nov. 2028
End of mission: late May 2029 (~1 Venus year) with possible extension

Note overlap with JWST lifetime
Venus is waiting...