

DAVINCI+ will explore past and present Venus

Deep Atmosphere Venus Investigation of Noble Gases, Chemistry, and Imaging *Plus*

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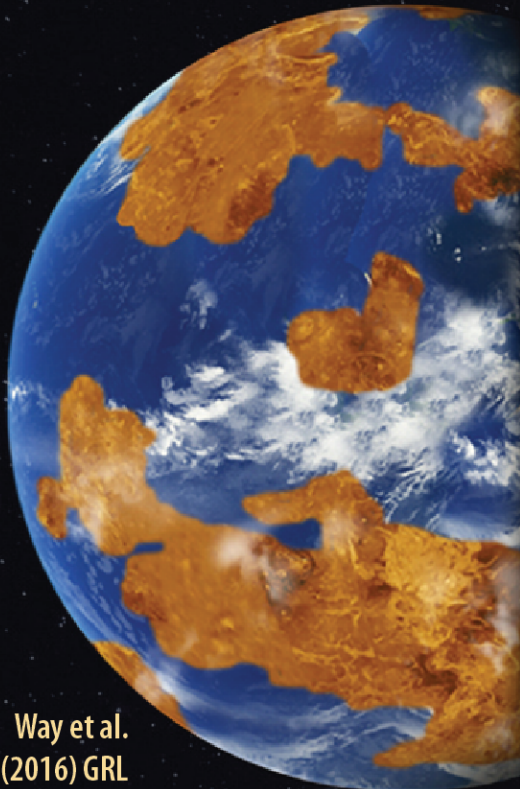
*Establishing Venus' place
in our Solar System*

*Enabling exploration of Venus-like
exoplanets and Earths*

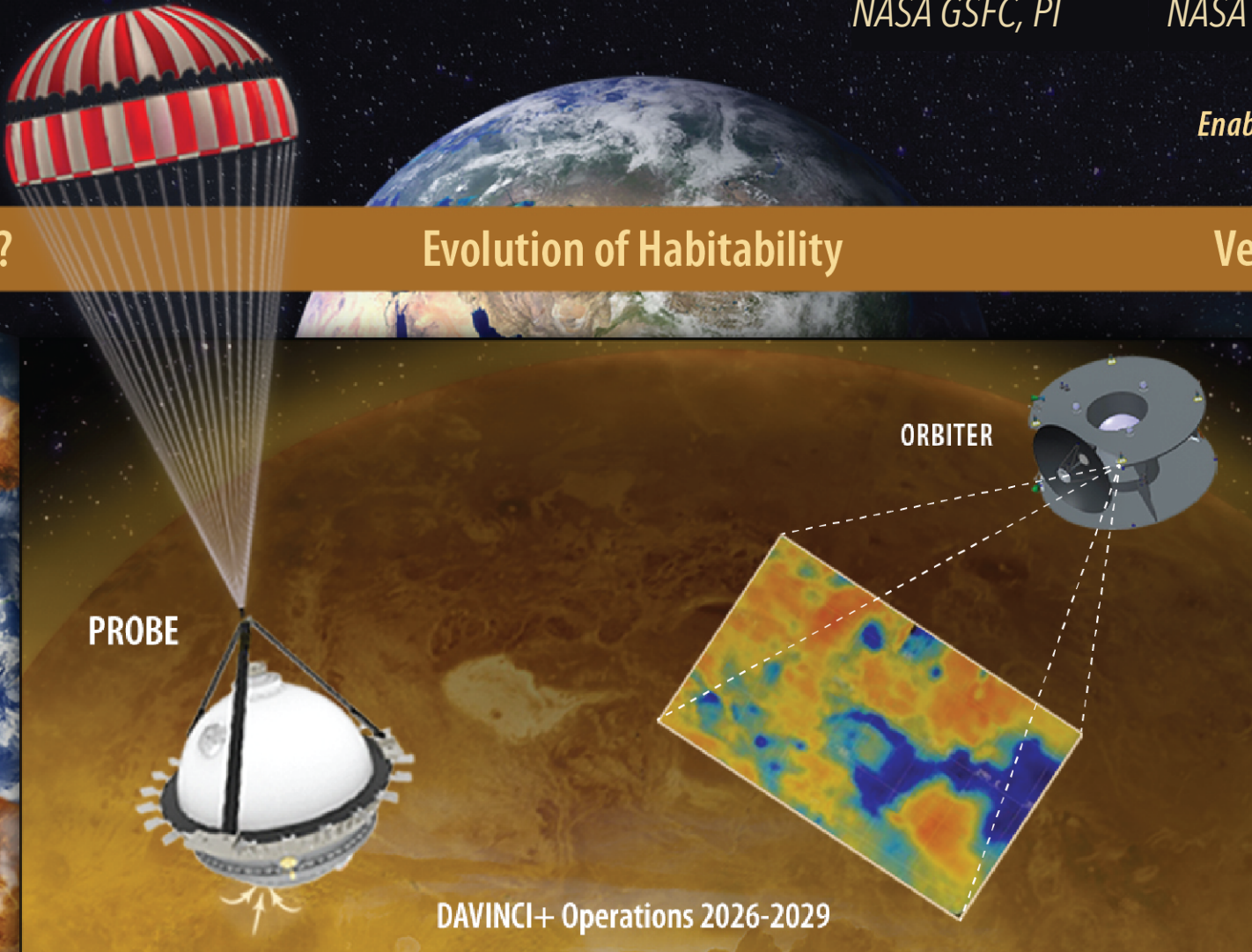
Ancient Oceans on Venus?

Evolution of Habitability

Venus-like Exoplanets

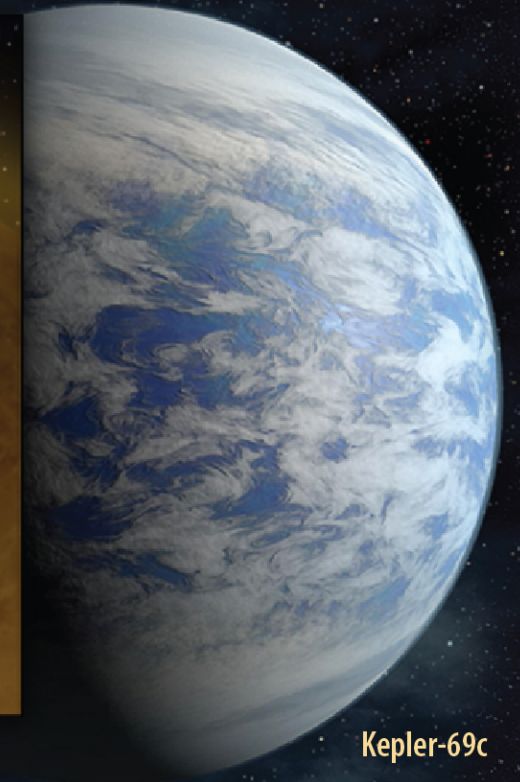


Way et al.
(2016) GRL



DAVINCI+ Operations 2026-2029

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

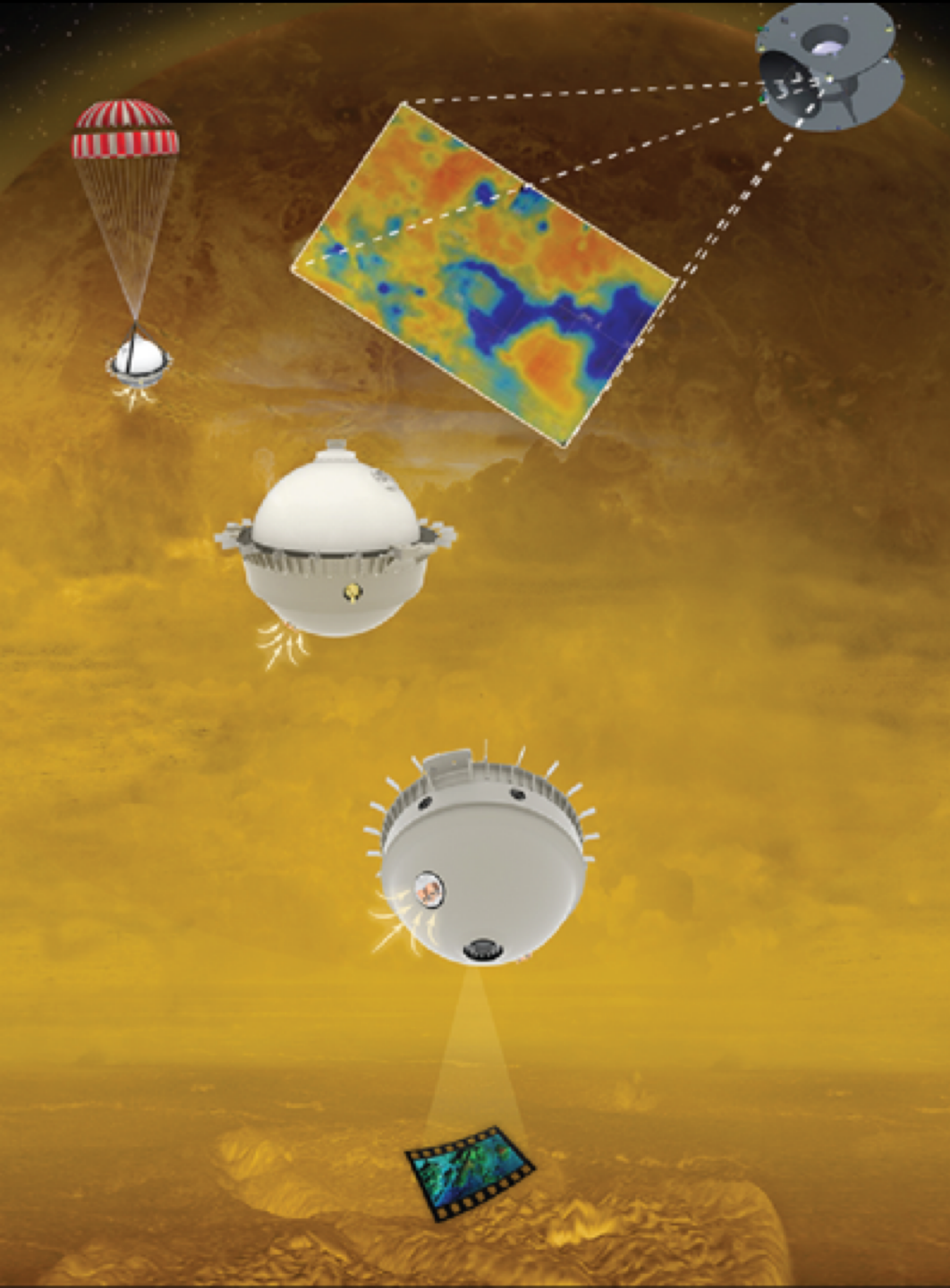


Kepler-69c



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?

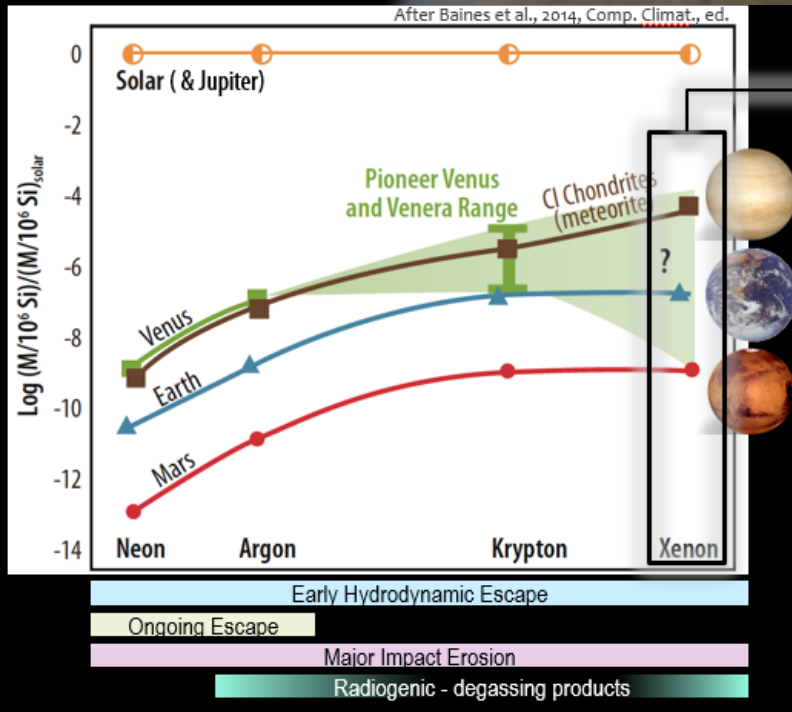
What can we learn about the atmosphere below the clouds and surface mineralogy?

What is the origin of the tesserae?

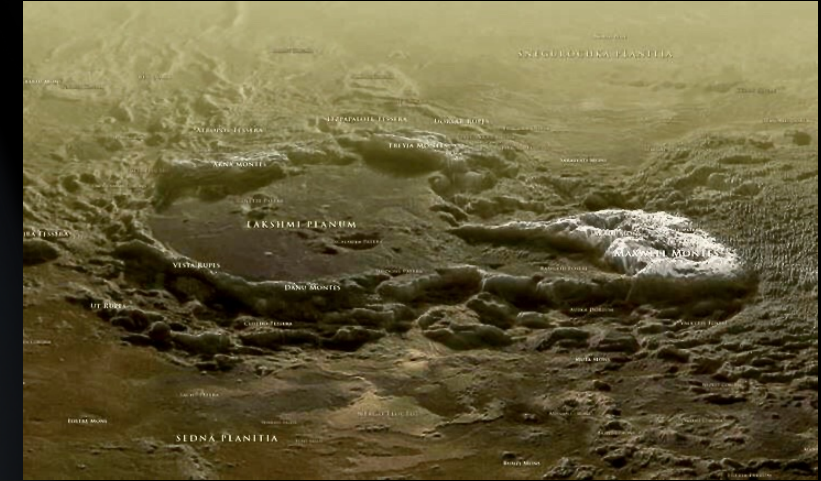
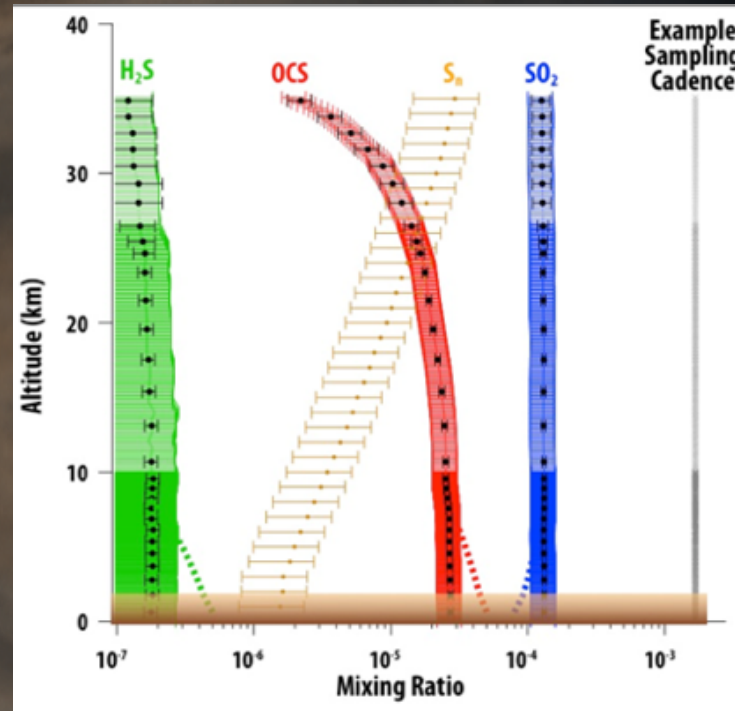
what can we learn?

surface geology & composition →
past and present surface processes

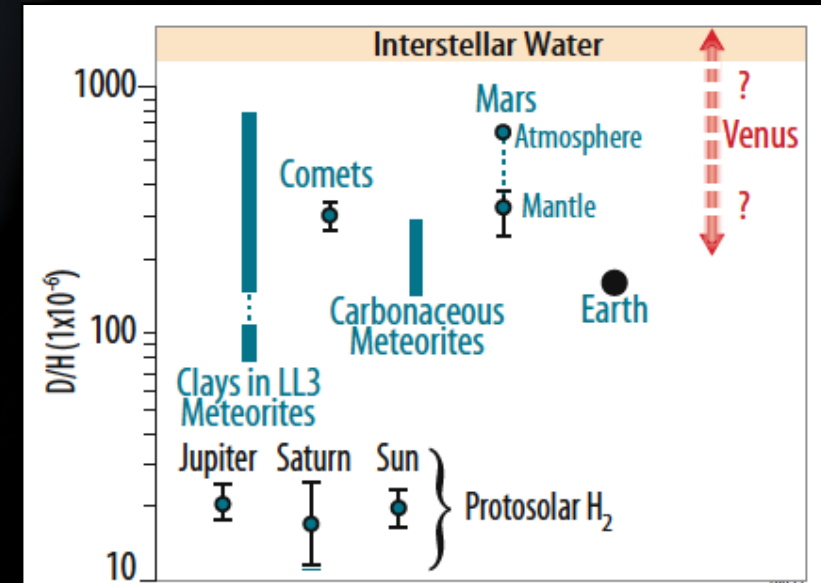
Noble gases
→ origin & evolution



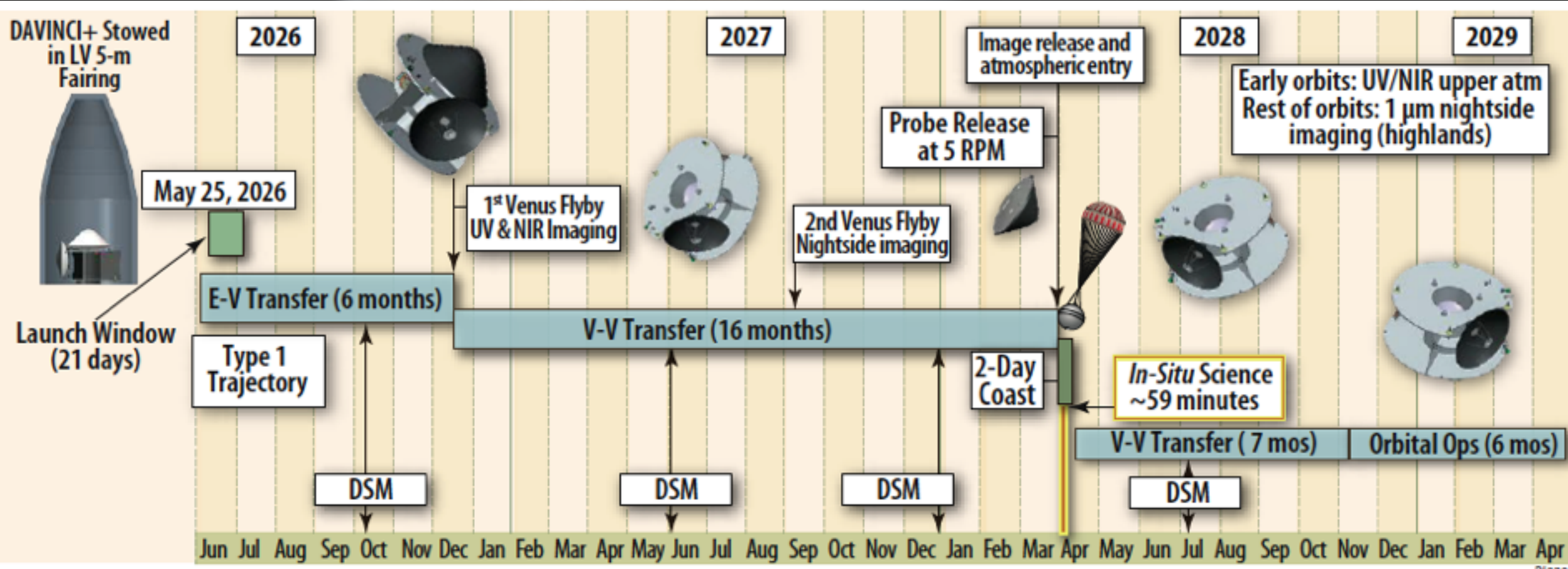
atmospheric trace gases
→ chemistry & composition



D/H ratio → history of H_2O



mission timeline



D1020

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...**

