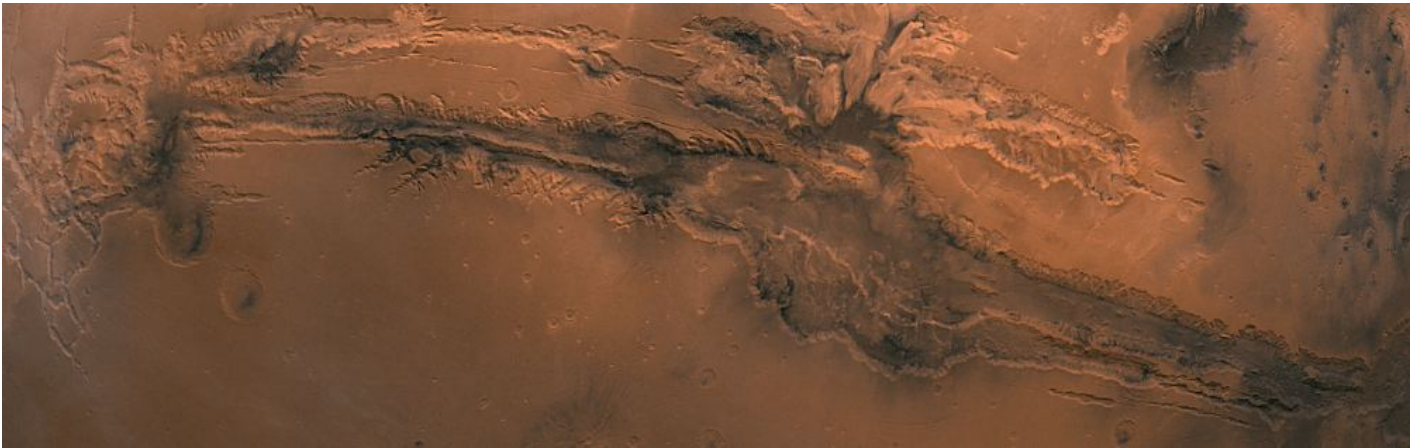


Valles Marineris

March 15, 2026 • vajiramandravi.com



Valles Marineris Latest News

By combining laboratory experiments with orbital data, researchers recently identified an unusual iron sulfate—ferric hydroxysulfate—forming in layered deposits near the massive Valles Marineris canyon system.

About Valles Marineris

- Valles Marineris, or **Mariner Valley**, is a **vast system of interconnected canyons** on the **planet Mars**.
- The system was **discovered during, and named for**, the **Mariner 9 mission in 1971**.
- The canyons extend in an east-west direction for roughly **4,000 km just south of the equator**.
 - By comparison, **Earth's** natural wonder, the **Grand Canyon**, is only **446 km long**.
- It is **one of the larger canyons** in the **solar system**.
- It spans about **20 percent of the entire circumference of Mars**.
- **Individual canyons** are typically **200 km** across and have **walls 2-5 km high**.
- **At the centre** of the system, **several canyons merge to form a depression** 600 km across and 9 km deep.
- The canyon system contains a number of different features that give clues to its formation.
 - **Some of the canyon walls** appear to be **fault scarps** that formed as a **result of crustal movement along faults radiating from the Tharsis rise**, an **enormous volcanic bulge** to the northwest.
 - **Erosion**, however, has also **played a significant role** in canyon formation, as indicated by **deep gullies cut in the walls**.
 - In places, the canyons contain **thick sedimentary sequences** that **may have been deposited in lakes** that **formerly occupied** the canyons.

- These lakes later may have drained catastrophically to the east, where there is evidence of large floods.

Source: SD

Source: <https://vajiramandravi.com/current-affairs/valles-marineris/>

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