

Active volcano found on Venus

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In news— A new analysis of archival radar images taken around three decades ago has found direct geological evidence of recent volcanic activity on the surface of Venus, also known as Earth's twin, for the first time.

Key findings-

- Researchers have **observed a volcanic vent changing its shape and getting bigger in size** in around eight months.
- The **research has been carried out by Robert Herrick of the Geophysical Institute**, University of Alaska Fairbanks (USA), and Scott Hensley of Jet Propulsion Laboratory (JPL), California Institute of Technology (USA).
- For years, **scientists have known that numerous volcanoes cover Venus** but there **wasn't any evidence up till now to show if any one of them is still active**.
- **Scientists made the new discovery by pouring over images of Venus taken by NASA's Magellan spacecraft between 1990 and 1992.**
- During their examination, **they looked at the planet's Atla Regio area, where two of the biggest volcanoes of Venus, Ozza Mons and Maat Mons**, are located.
- They **noticed a vent situated on the north side of a domed shield volcano** that is part of the larger Maat Mons volcano that changed significantly in shape and size between February and October 1991.
- The study said in the February radar image, this vent appeared nearly circular and deep with steep walls, covering 2.6 sq km of area.
- However, in the images that were taken eight months later, the same vent had become irregular in outline, shallower and nearly filled while covering about 3.9 sq km. This **indicated an eruption or flow of magma beneath**

the vent.

- **As volcanoes act like windows to provide information about a planet's interior, the new findings take scientists a step further to understand the geological conditions** of not just Venus but also other exoplanets.
- Apart from this, the findings give us a glimpse of what more is to come regarding Venus as in the next decade, three new Venus missions would be launched, including the European EnVision orbiter and NASA's DAVINCI and VERITAS missions.

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