

# Signs of alien life found on Venus?

Scientists have detected a rare molecule in the atmosphere of Venus that could be produced by living organisms

**Phosphine gas** detected in upper reaches of cloud deck, up to 50km above surface

On Earth, phosphine is produced by microbes living in guts of animals or in oxygen-poor environments

Left: Magellan radar map of Venus (© NASA/JPL-Caltech)

Right: False-colour image of Venus cloud tops (© PLANET-C Project Team)



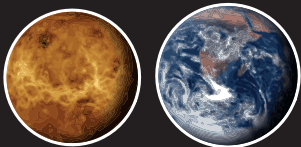
**Phosphine (PH<sub>3</sub>)**  
Molecule made up of one phosphorus atom and three hydrogen atoms

Around 90% of Venusian clouds composed of sulphuric acid – catastrophic for microbes on Earth

High clouds with mild temperatures of around 30°C could potentially harbour aerial microbes able to endure extreme acidity

## ▶ GREENHOUSE EFFECT:

Thick atmosphere traps in heat, rendering Venus solar system's hottest planet. Surface temperatures reach 471°C, hot enough to melt lead



▶ **SIZE:** Around 12,104km in diameter, slightly smaller than Earth (12,756km)

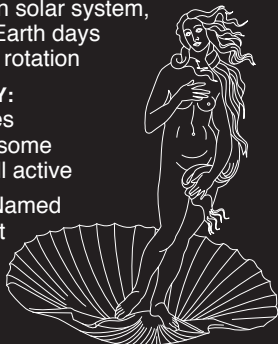
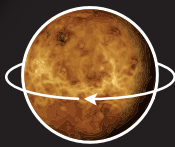
▶ **DISTANCE:** Second planet from sun and closest planetary neighbour to Earth

▶ **ROTATION:** Venus spins from east to west, opposite direction from all other planets in solar system except Uranus

▶ **DAY LENGTH:** Longest of any planet in solar system, taking 243 Earth days to complete rotation

▶ **GEOLOGY:** 37 volcanoes identified – some probably still active

▶ **VENUS:** Named after ancient Roman goddess of love and beauty



## Distance from Sun

1. Mercury 57m km
2. Venus 108m km
3. Earth 149m km

