



# Scientists suggest that the presence of two gases in Venus' clouds may be signs of potential life

## Description

Astronomers have recently made some intriguing discoveries about the planet Venus that could potentially point to the existence of life forms in its toxic and extreme atmosphere. At a national astronomy meeting in Hull, researchers presented evidence of two gases, phosphine and ammonia, that are typically associated with biological activity.

Phosphine, a gas produced by microbes in oxygen-starved environments on Earth, was detected in the Venusian atmosphere. Although its presence has been disputed in the past, new observations suggest that phosphine may indeed be present, potentially following the planet's day-night cycle.

Additionally, the tentative detection of ammonia, primarily produced by biological activity or industrial processes on Earth, raises further questions about the possibility of life on Venus. While these so-called biosignature gases do not definitively prove the existence of extraterrestrial life, they have sparked increased interest in Venus and the potential for life to have emerged and survived in its cloudy atmosphere.

Further research is needed to confirm these findings and explore the implications for the possibility of life on Venus. Despite the uncertainties, these discoveries have generated optimism and excitement within the scientific community, prompting calls for more studies to be conducted on this mysterious planet.

## Vocabulary List:

1. **Intriguing** /ɪn'truː.ɡɪŋ/ (adjective): Arousing curiosity or interest; fascinating.
2. **Potentially** /pə'ten.ʃəl.i/ (adverb): With the capacity to develop into something in the future.
3. **Biosignature** /'baɪ.ɒs.ɪg.nə.tʃər/ (noun): A substance or pattern that is indicative of life.
4. **Tentative** /'ten.tə.tɪv/ (adjective): Not certain or fixed; provisional.
5. **Disputed** /dɪs'pjuː.tɪd/ (adjective): Contested or argued against.
6. **Implications** /ɪm.plɪ'keɪ.ʃənz/ (noun): The possible effects or results of an action or a decision.

## Comprehension Questions



### Multiple Choice

1. What are the two gases associated with potential biological activity on Venus?

- Option: Nitrogen and Oxygen
- Option: Phosphine and Ammonia
- Option: Carbon Dioxide and Methane
- Option: Helium and Hydrogen

2. Where were the recent discoveries about Venus presented?

- Option: Paris
- Option: Hull
- Option: Tokyo
- Option: New York

3. What is phosphine typically produced by on Earth?

- Option: Plants
- Option: Microbes in oxygen-starved environments
- Option: Reptiles
- Option: Volcanoes

4. What does the detection of ammonia on Venus raise questions about?

- Option: Lava flows
- Option: Water vapor
- Option: Biological activity
- Option: Atmospheric pressure

5. What have the discoveries on Venus sparked within the scientific community?

- Option: Disinterest
- Option: Skepticism
- Option: Optimism and excitement
- Option: Fear

6. What is needed to confirm the recent findings about Venus?

- Option: Nothing the findings are conclusive
- Option: More research
- Option: Immediate action
- Option: Ignoring the evidence



## Answer

**Multiple Choice:** 1. Phosphine and Ammonia 2. Hull 3. Microbes in oxygen-starved environments 4. Biological activity 5. Optimism and excitement 6. More research

## Vocabulary quizzes

**Multiple Choice ( Select the Correct answer for each question. )**

1. Which term means to grab or seize quickly and roughly?

- Option: Tackle
- Option: Disrupt
- Option: Snatch
- Option: Prosecution

2. What word refers to distinctive attributes or characteristics?

- Option: Setbacks
- Option: Innovative
- Option: Features
- Option: Unauthorized

3. Which term describes a passage or travel from one place to another?

- Option: Variant
- Option: Journey
- Option: Adorned
- Option: Bespoke

4. Which word signifies strong and intense emotions or enthusiasm?

- Option: Iconic
- Option: Coronal
- Option: Passion
- Option: Mass

5. What term relates to the Earth's magnetic field and its interaction with other magnetic fields?

- Option: Auroras
- Option: Electromagnetic
- Option: Geomagnetic
- Option: Viewing



6. Which word describes something fascinating or captivating due to being interesting or mysterious?

- Option: Potentially
- Option: Biosignature
- Option: Intriguing
- Option: Tentative

7. What term indicates something that is the subject of disagreement or debate?

- Option: Exploring
- Option: Disputed
- Option: Implications
- Option: Postponed

8. Which word denotes the quality of being trustworthy and dependable?

- Option: Features
- Option: Setbacks
- Option: Reliability
- Option: Concerns

9. What term signifies that something is widely recognized and seen as a symbol?

- Option: Unauthorized
- Option: Iconic
- Option: Setbacks
- Option: Snatch

10. Which word refers to the outermost layer of the sun's atmosphere?

- Option: Mass
- Option: Geomagnetic
- Option: Coronal
- Option: Innovative

**Gap-Fill ( Fill in the blanks with the correct word from the vocabulary list. )**

11. Accessing the system without permission is considered \_\_\_\_\_.

12. The team is \_\_\_\_\_ new ways to improve efficiency.

13. Finding a \_\_\_\_\_ on Mars could suggest the presence of life.

14. The \_\_\_\_\_ of the object affects its gravitational pull.

15. The event has been \_\_\_\_\_ due to unforeseen circumstances.



16. There are \_\_\_\_\_ about the safety of the new product design.
17. Despite the \_\_\_\_\_ the team persevered and completed the project.
18. The agreement is only \_\_\_\_\_ until both parties sign the contract.
19. The discovery has far-reaching \_\_\_\_\_ for the future of medicine.
20. The new technology is \_\_\_\_\_ groundbreaking in its application.

**Matching Sentences ( Match each definition to the correct word from the vocabulary list. )**

21. The beautiful natural light display in the sky is known as auroras.
22. The spectrum of waves that includes light radio and X-rays is electromagnetic.
23. Observing the stars through a telescope is called viewing.
24. The amount of matter in an object is referred to as mass.
25. Characteristics or elements that make something unique are called features.
26. A different form or version of something is known as a variant.
27. Challenges or obstacles that hinder progress are setbacks.
28. Delaying an event or activity to a later time is called postponed.
29. The legal process of pursuing criminal charges against an individual is prosecution.
30. The degree of trustworthiness and dependability is referred to as reliability.

## Answer

**Multiple Choice:** 1. Snatch 2. Features 3. Journey 4. Passion 5. Geomagnetic 6. Intriguing 7. Disputed  
8. Reliability 9. Iconic 10. Coronal

**Gap-Fill:** 11. Unauthorized 12. Exploring 13. Biosignature 14. Mass 15. Postponed 16. Concerns 17. Setbacks  
18. Tentative 19. Implications 20. Potentially

**Matching sentence:** 1. Auroras 2. Electromagnetic 3. Viewing 4. Mass 5. Features 6. Variant 7. Setbacks  
8. Postponed 9. Prosecution 10. Reliability



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## CATEGORY

1. Sci/Tech - LEVEL3

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