



Did Venus Ever Harbor Liquid Water? New Study Explores

Description

A new study shows that Venus probably never had liquid water on its surface. The research looked at the gases in Venus' atmosphere.

Scientists have thought for a long time that Venus might have had water, maybe even oceans. They believed this because Venus is similar to Earth in many ways. It is a rocky planet and is our closest neighbor in space.

However, this new study suggests that Venus has always been hot and dry. Researchers from the University of Cambridge in Britain led the study, which was published in the journal *Nature Astronomy*.

The researchers found no water inside Venus. They said that if there was once a lot of water, we should see some now. But they did not find any.

Water is important for life. So, this study suggests that Venus was likely never able to support life.

Tereza Constantinou, the main author of the study, said their findings help show that Venus is very dry inside today. She added that they hoped to find signs of a watery past, but did not.

Before this study, scientists had two main ideas about water on Venus. One idea was that Venus was once cooler and had liquid water. The second idea was that Venus has always been too hot for water to form.

This study is a big step in understanding Venus better.

Vocabulary List:

1. **Atmosphere** /'ætməsfɪr/ (noun): The layer of gases surrounding a planet.
2. **Research** /'ri:sɜ:rtʃ/ (noun): The systematic investigation into and study of materials and sources.
3. **Suggests** /səg'dʒests/ (verb): Put forward for consideration or action.
4. **Support** /sə'pɔ:rt/ (verb): To give assistance or backing to someone or something.
5. **Findings** /'faɪndɪŋz/ (noun): The results or conclusions drawn from research or investigation.
6. **Understanding** /'ʌndər'stændɪŋ/ (noun): The ability to comprehend or grasp the meaning of something.

Comprehension Questions



Multiple Choice

1. What is the main focus of the new study on Venus?
Option: Analysis of Venus' surface composition
Option: Exploration of Venus' volcanic activity
Option: Examination of gases in Venus' atmosphere
Option: Investigation of Venus' magnetic field
2. What characteristic of Venus led scientists to believe it might have had water?
Option: Distance from the Sun
Option: Rocky composition
Option: Similarity to Mars
Option: Presence of ice caps
3. Where was the study on Venus conducted?
Option: Harvard University
Option: University of Cambridge
Option: NASA Jet Propulsion Laboratory
Option: European Space Agency Research Center
4. What is the conclusion regarding Venus' ability to support life based on the study?
Option: Venus may have supported life in the past
Option: Venus has the potential to support life in the future
Option: Venus likely never had conditions suitable for life
Option: Venus currently sustains microbial life
5. What was one of the main ideas scientists had about water on Venus before the new study?
Option: Venus has underground ice reserves
Option: Venus once had an extensive ocean
Option: Venus' water has evaporated into space
Option: Venus receives water from comets
6. Who was the main author of the study on Venus?
Option: Tereza Constantinou
Option: John Smith
Option: Emily Johnson
Option: David Lee



True-False

- 7. Venus has always been hot and dry according to the new study.
- 8. The research on Venus focused on analyzing its geological features.
- 9. Scientists previously believed that Venus had oceans like Earth.
- 10. The study suggests that Venus may have supported microbial life in the past.
- 11. Tereza Constantinou expressed disappointment at not finding evidence of a watery past on Venus.
- 12. The study on Venus challenges the notion that Venus has underground water sources.

Gap-Fill

- 13. The research on Venus was led by scientists from the University of Cambridge in _____.
- 14. According to the study, Venus is very _____ inside today.
- 15. Tereza Constantinou highlighted that the absence of water on Venus suggests it was likely never able to support _____.
- 16. Researchers found no _____ inside Venus during the study.
- 17. The study published in Nature Astronomy is considered a significant step in _____ Venus better.
- 18. One of the main ideas scientists had prior to the study was that Venus might have once had _____.

Answer

Multiple Choice: 1. Examination of gases in Venus' atmosphere 2. Rocky composition 3. University of Cambridge



4. Venus likely never had conditions suitable for life 5. Venus was once cooler and had liquid water
6. Tereza Constantinou
True-False: 7. True 8. False 9. True 10. False 11. True 12. True
Gap-Fill: 13. Britain 14. dry 15. life 16. water 17. understanding 18. oceans

Vocabulary quizzes

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

1. Who are individuals responsible for producing content or ideas?
Option: Experts
Option: Creators
Option: Support
Option: Findings
2. What is essential for improvement and progress based on reactions and comments?
Option: Gather
Option: Feedback
Option: Atmosphere
Option: Security
3. What process involves systematic investigation to establish facts or reach new conclusions?
Option: Argued
Option: Algorithm
Option: Research
Option: Simulations
4. Which type of compounds contain carbon and are typically found in living organisms?
Option: Obstacles
Option: Minerals
Option: Sulfides
Option: Organic
5. What term describes the linkage or relationship between two or more elements?
Option: Findings
Option: Connection
Option: Understanding
Option: Ban
6. What process involves the circulation of hot water through rock formations?
Option: Sulfur



- Option: Hydrothermal
- Option: Methanol
- Option: Security

7. Which term implies that something is proposed or recommended as a course of action?

- Option: Support
- Option: Sulfur
- Option: Suggests
- Option: Available

8. What refers to measures taken to ensure safety and protection?

- Option: Inaugurated
- Option: Security
- Option: Support
- Option: Gather

9. What is a step-by-step procedure used to solve mathematical problems or complete tasks?

- Option: Navigate
- Option: Information
- Option: Sulfur
- Option: Algorithm

10. What pertains to the overall mood or feeling in a particular environment?

- Option: Movements
- Option: Obstacles
- Option: Atmosphere
- Option: Creators

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

- 11. _____ are individuals with specialized knowledge or skills in a particular field.
- 12. _____ is assistance or encouragement provided to help someone or something.
- 13. A _____ is an official restriction prohibiting certain actions or behaviors.
- 14. The new facility was _____ last week with a ceremonial opening.
- 15. The artist's painting captured the fluid _____ of the dancers.
- 16. The research project concluded with unexpected _____ that challenged existing



theories.

17. Effective communication is key to building mutual _____ between individuals.
18. The panel _____ over the best approach to address the issue at hand.
19. The company's website provides detailed _____ about their products and services.
20. Pilots undergo extensive training using flight _____ to prepare for various scenarios.

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

21. The scientist used a spectrometer to analyze the composition of the light.
22. In the lab the researchers synthesized _____ to use as a solvent in the reaction.
23. The volcanic eruption released large amounts of dioxide into the atmosphere.
24. The geologist identified several valuable _____ in the rock samples collected.
25. The metallurgist studied the properties of different metal to optimize production.
26. The film credits acknowledged the _____ of the movie for their vision and artistry.
27. Before the meeting the team will _____ all relevant data to prepare for discussions.
28. The mentor provided valuable advice and emotional _____ to the new employee.
29. The forensic investigation required the expertise of _____ to analyze the evidence.
30. Customer _____ is crucial for businesses to improve their products and services.

Answer

Multiple Choice: 1. Creators 2. Feedback 3. Research 4. Organic 5. Connection 6. Hydrothermal 7. Suggests 8. Security 9. Algorithm 10. Atmosphere

Gap-Fill: 11. Experts 12. Support 13. Ban 14. Inaugurated 15. Movements 16. Findings 17. Understanding 18. Argued 19. Information 20. Simulations

Matching sentence: 1. Spectral 2. Methanol 3. Sulfur 4. Minerals 5. Sulfides 6. Creators 7. Gather 8. Support 9. Experts 10. Feedback



CATEGORY

1. Sci/Tech - LEVEL1

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