



A Real-Life Star Trek Planet Revealed to be an Illusionary Stellar Mirage

Description

New research has debunked the existence of the planet Vulcan, previously believed to orbit 40 Eridani A. The signals thought to indicate the planet's presence were actually attributed to the star's surface activity. The study, published in The Astronomical Journal, used precision measurements from a NASA-NSF instrument to clarify doubts surrounding the discovery.

The methods used for detecting exoplanets were discussed, with the radial velocity method playing a key role in debunking Vulcan's existence. The analysis confirmed that the signals initially thought to be from a "super-Earth" orbiting the star were actually caused by variations on the star's surface.

Despite the disappointment for Star Trek fans, the detailed measurements offer hope for future discoveries. The study, led by astronomer Abigail Burrows, was published in May 2024, revealing that the planet candidate orbiting HD 26965 is actually due to stellar activity. The findings emphasize the importance of meticulous observation in distinguishing between real planets and surface phenomena on distant stars.

Vocabulary List:

1. **Debunked** // (verb): Expose the falseness or hollowness of a myth or belief.
2. **Existence** // (noun): The fact or state of living or having objective reality.
3. **Orbiting** // (verb): Move in a circular or elliptical path around another object.
4. **Signals** // (noun): Impulses or electromagnetic waves transmitted or received.
5. **Surface** // (noun): The outermost layer or exterior part of something.
6. **Clarify** // (verb): Make (a statement or situation) less confused and more clearly comprehensible.

Vocabulary quizzes

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

1. What is the term for the act of demonstrating or showing something?

- Option: A. Interaction
- Option: B. Transparency
- Option: C. Manifestation
- Option: D. Equipped

2. Which word refers to stories handed down from earlier times often considered historical but



unauthenticated?

- Option: A. Thriving
- Option: B. Legends
- Option: C. Discrepancies
- Option: D. Improvements

3. What term is used to describe a standard or point of reference for comparison?

- Option: A. Notable
- Option: B. Existence
- Option: C. Crucial
- Option: D. Benchmark

4. Which word indicates the ability to accomplish a job with a minimum expenditure of time and effort?

- Option: A. Bombards
- Option: B. Efficiency
- Option: C. Delves
- Option: D. Configuration

5. What does the term "debunked" mean?

- Option: A. Clarity
- Option: B. Improvements
- Option: C. Debunked
- Option: D. Orbiting

6. What term is used to describe the quality of being open and honest?

- Option: A. Obscurity
- Option: B. Transparency
- Option: C. Interaction
- Option: D. Existence

7. Which word describes something or someone worthy of attention or notice?

- Option: A. Equipped
- Option: B. Notable
- Option: C. Algorithm
- Option: D. Orbital

8. What term refers to laws designed to promote fair competition in the marketplace?

- Option: A. Antitrust
- Option: B. Configuration
- Option: C. Showcasing
- Option: D. Signals



9. Which word means to present or exhibit something to its best advantage?

- Option: A. Thriving
- Option: B. Showcasing
- Option: C. Manifestation
- Option: D. Interaction

10. What term is used to indicate making something better or more satisfactory?

- Option: A. Tidally locked
- Option: B. Improvements
- Option: C. Groundbreaking
- Option: D. Orbiting

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

11. _____ between team members is vital for a project's success.

12. The moon is _____ around the Earth.

13. The scientist made a _____ discovery that changed the field of physics.

14. The new gadget has an _____ design that appeals to young consumers.

15. The same side of the moon is always _____ to the Earth.

16. The planet in the solar system _____ by solar radiation.

17. The planet's _____ for life is being investigated by scientists.

18. The team was fully _____ to handle any challenges that arose during the expedition.

19. Efficient network _____ is essential for smooth communication.

20. Could you please _____ your statement for better understanding?

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

21. The small business began after implementing the new marketing strategy.

22. The artist's work was in for years until a retrospective brought it back into the public eye.



23. The research paper into the effects of climate change on marine life.
24. The philosopher pondered the meaning of and its relation to time.
25. The IT specialist was responsible for the network of the entire office building.
26. The actor's most performance was in the critically acclaimed film.
27. The team was fully with all the necessary gear for the dangerous expedition.
28. The new sports car set a(n) for speed and performance in its class.
29. Meaningful between coworkers can improve office morale.
30. The engineer designed a new for faster data processing.

Answer

Multiple Choice: 1. C. Manifestation 2. B. Legends 3. D. Benchmark 4. B. Efficiency 5. C. Debunked
6. B. Transparency 7. B. Notable 8. A. Antitrust 9. B. Showcasing 10. B. Improvements

Gap-Fill: 11. Interaction 12. Orbiting 13. Groundbreaking 14. Ultra-cool 15. Tidally locked 16. Bombards
17. Habitability 18. Equipped 19. Configuration 20. Clarify

Matching sentence: 1. Thriving 2. Obscurity 3. Delves 4. Existence 5. Configuration 6. Notable 7. Equipped
8. Benchmark 9. Interaction 10. Algorithm

CATEGORY

1. Sci/Tech - LEVEL2

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