



Scientists Find Distant Planet with Unusual Urine-Like Atmosphere

Description

Scientists using the James Webb Space Telescope have made an unusual discovery about a planet called Epsilon Indi Ab, located 12 light-years away. This gas giant has an atmosphere that contains ammonia, which gives it a smell similar to urine.

Epsilon Indi Ab was first found in 2002 and officially confirmed in 2018. It is classified as an exoplanet, meaning it orbits a star outside our solar system. Over the last 20 years, researchers have observed this planet closely and recently identified water-ice clouds in its atmosphere.

Unlike the water vapour clouds we see on Earth, Epsilon Indi Ab's clouds are mostly made of ammonia. Scientists had predicted this presence, as they believed the planet would have large amounts of ammonia gas, creating a strong smell. However, they found less ammonia than they expected.

This fascinating finding has captured the attention of many online, with social media users nicknaming Epsilon Indi Ab the 'Piss Planet'. Astronomer James Mang commented that this discovery highlights the progress made with the James Webb Telescope, allowing scientists to investigate the atmospheres of distant planets more effectively.

Epsilon Indi Ab is known as a 'super-Jupiter' because it is much larger than our gas giant Jupiter. This latest discovery is one of many amusing findings in space research, as scientists continue to learn more about our universe.

Vocabulary List:

1. **exoplanet** //ˈɛksəʊ,plæniːt// (noun): planet that orbits a star outside our solar system
2. **ammonia** //ə'moʊniə// (noun): a gas with a strong, sharp smell
3. **atmosphere** //ˈætməsfɪr// (noun): layer of gases around a planet
4. **discovery** //dɪ'skʌvəri// (noun): something new that people learn or find
5. **identified** //aɪ'den.tɪ.faɪd// (verb): found and named or described clearly
6. **investigate** //ɪn'vestə,geɪt// (verb): look at closely to learn more

Comprehension Questions



Multiple Choice

1. How far is Epsilon Indi Ab located from Earth?
Option: 10 light-years
Option: 12 light-years
Option: 15 light-years
Option: 20 light-years
2. When was Epsilon Indi Ab first found?
Option: 2000
Option: 2002
Option: 2005
Option: 2010
3. What peculiar characteristic does the atmosphere of Epsilon Indi Ab contain?
Option: Hydrogen
Option: Oxygen
Option: Ammonia
Option: Nitrogen
4. What nickname has been given to Epsilon Indi Ab by social media users?
Option: Giant Jupiter
Option: Piss Planet
Option: Ammonia World
Option: Water Cloud
5. Which telescope made the discovery about Epsilon Indi Ab?
Option: Hubble Space Telescope
Option: Kepler Space Telescope
Option: James Webb Space Telescope
Option: Spitzer Space Telescope
6. What are the clouds in Epsilon Indi Ab's atmosphere primarily made of?
Option: Water vapor
Option: Ammonia
Option: Carbon dioxide
Option: Sulfur



True-False

7. Epsilon Indi Ab is classified as a planet within our solar system.
8. The atmosphere of Epsilon Indi Ab gives off a smell similar to urine.
9. Epsilon Indi Ab was officially confirmed in 2018.
10. Scientists discovered more ammonia on Epsilon Indi Ab than they expected.
11. Epsilon Indi Ab is known as a 'super-Jupiter'.
12. James Mang is an astronomer who commented on the discovery.

Gap-Fill

13. Epsilon Indi Ab is located _____ light-years away from Earth.
14. The atmosphere of Epsilon Indi Ab contains _____ gas.
15. Epsilon Indi Ab was first found in _____.
16. This planet's clouds are mostly made of ammonia instead of _____.
17. The nickname 'Piss Planet' was given to Epsilon Indi Ab by _____.
18. The discovery was made possible by the _____ Space Telescope.

Answer

Multiple Choice: 1. 12 light-years 2. 2002 3. Ammonia 4. Piss Planet 5. James Webb Space Telescope

True-False: 7. False 8. True 9. True 10. False 11. True 12. True

Gap-Fill: 13. 12 14. ammonia 15. 2002 16. water vapor 17. social media users 18. James Webb

Vocabulary quizzes



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

1. What is an exoplanet?
Option: A planet outside our solar system
Option: A planet within our solar system
Option: A moon of Jupiter
Option: A star in the Milky Way
2. Which substance is known to be a significant component of the atmosphere on some exoplanets?
Option: Carbon Dioxide
Option: Ammonia
Option: Oxygen
Option: Hydrogen
3. What is a crucial aspect of space exploration related to exoplanets?
Option: Collaboration
Option: Discovery
Option: Destruction
Option: Navigation
4. What surrounds a planet and can consist of various gases?
Option: Surface
Option: Magnetosphere
Option: Atmosphere
Option: Core
5. What type of vehicle is often used to explore space?
Option: Craft
Option: Ship
Option: Plane
Option: Car
6. What term refers to introducing new ideas or methods in technology?
Option: Replication
Option: Innovation
Option: Copying
Option: Tradition
7. What is required for assembling physical components of technology?
Option: Software
Option: Hardware
Option: Firmware



Option: Utilities

8. What term describes the detail an image holds, often important in observational astronomy?

- Option: Resolution
- Option: Intensity
- Option: Brightness
- Option: Color

9. What term indicates being involved or committed to a task?

- Option: Disengaged
- Option: Engaged
- Option: Distracted
- Option: Inactive

10. What refers to different stages in the lifecycle of an exoplanet's atmosphere?

- Option: Phases
- Option: Stages
- Option: Segments
- Option: Cycles

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

11. The exoplanet was first _____ in 1995 by astronomers.

12. Scientists aim to _____ the composition of the atmosphere on different exoplanets.

13. A method was developed to _____ the holes in the spacecraft's hull.

14. The recent expedition to study exoplanets placed many _____ on the crew.

15. The researchers focused on the possible _____ of the atmosphere by solar radiation.

16. The presentation was divided into several distinct _____ for clarity.

17. The team worked to develop a _____ of tools for the mission.

18. The spacecraft was painted in a special _____ that reflects its purpose.

19. Every successful project has an interesting _____ that explains its inception.

20. Meeting the environmental _____ is critical for the experiment's success.



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

21. The new telescope will display stunning images of distant exoplanets.
22. The partnership between organizations has led to significant advancements in space exploration.
23. Some atmospheres on exoplanets are incredibly dense, making exploration challenging.
24. The team made a deliberate choice to focus on planets similar to Earth.
25. High resolution images are crucial for analyzing the details of exoplanet atmospheres.
26. Continuous optimisation of the spacecraft's systems leads to better performance.
27. The new spacecraft is designed for efficient travel to various exoplanets.
28. This year marks the anniversary of the first exoplanet discovery.
29. Innovation in propulsion technology is critical for future space missions.
30. The research project will unfold over several critical phases to ensure thorough exploration.

Answer

Multiple Choice: 1. A planet outside our solar system 2. Ammonia 3. Discovery 4. Atmosphere 5. Craft
6. Innovation 7. Hardware 8. Resolution 9. Engaged 10. Phases

Gap-Fill: 11. identified 12. investigate 13. patch 14. demands 15. destruction 16. segments 17. bundle 18.
livery 19. backstory 20. requirement

Matching sentence: 1. display 2. partnership 3. dense 4. deliberate 5. resolution 6. optimisation 7. craft
8. anniversary 9. innovation 10. phases

CATEGORY

1. Sci/Tech - LEVEL3

POST TAG

1. atmosphere
2. distant planet
3. ESL learning
4. esl news
5. Level 3
6. pee planet



7. urine

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