



NASA Orbiter Detects First Confirmed Lightning on Mars

Description

Scientists have found a new signal from dust storms on Mars. This discovery happened in late 2024. The signal came from a special instrument on a spacecraft called MAVEN, which has been studying Mars since 2014.

Dust storms on Mars can cover the entire planet. They move a lot of dry sand through the thin Martian atmosphere. Researchers wanted to know if these storms create electricity, like dust storms or volcanic clouds do on Earth. They looked for signs of this, such as flashes of light or sounds from radio waves, but found nothing until now.

Dr. David Andrews and his team identified a special sound called a lightning whistler. This sound is made when electrical discharges happen. The researchers discovered this sound using data from MAVEN. The findings suggest that lightning on Mars may happen differently than on Earth.

Understanding this electrical activity may help scientists learn more about Mars. They will keep searching for more signals to see how common this activity is on the planet.

Vocabulary List:

1. **Spacecraft** /'speɪskræft/ (noun): A vehicle or machine designed to travel and operate in outer space.
2. **Atmosphere** /'ætməsfɪər/ (noun): The layer of gases that surrounds a planet.
3. **Instrument** /'ɪnstɾəmənt/ (noun): A tool or device used to make measurements or detect signals.
4. **Volcanic** /vɒl'kæɪnɪk/ (adjective): Relating to volcanoes or produced by volcanic eruptions.
5. **Whistler** /'wɪslər/ (noun): A specific low-frequency radio sound produced by electrical discharges used as a sign of lightning.
6. **Discharges** /dɪs'tʃɑ:rdʒɪz/ (noun (plural)): Sudden releases of electrical energy (e.g. lightning or electrical sparks).

Vocabulary quizzes

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

1. What does the term "salvage" most commonly refer to?

Option: Recovering goods after a loss

Option: Auctioning items of value



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- Option: Enhancing a vehicle's performance
 - Option: Developing new technologies

2. What is a V8 engine?

- Option: An 8-cylinder engine configuration
- Option: A type of electric motor
- Option: A standard bicycle gear
- Option: A brand of racing car

3. What is the primary goal of an investment?

- Option: To minimize risk
- Option: To maximize returns
- Option: To ensure liquidity
- Option: To avoid taxes

4. What does a frame in a vehicle typically provide?

- Option: Aesthetic design
- Option: Structural support
- Option: Wind resistance
- Option: Fuel efficiency

5. What is an auction primarily used for?

- Option: Selling assets to the highest bidder
- Option: Trading currency
- Option: Providing loans
- Option: Buying insurance

6. What does mileage refer to in vehicles?

- Option: The distance traveled per unit of fuel
- Option: The total distance a vehicle can travel
- Option: The total weight of the vehicle
- Option: The speed of the vehicle

7. What is a key characteristic of a community?

- Option: A group of people with shared interests
- Option: A collection of businesses
- Option: A series of isolated individuals
- Option: A network of global communication

8. What typically leads to enjoyment in activities?

- Option: Challenge and fulfillment
- Option: Monotony and repetition
- Option: Absence of feelings



Option: Ignoring outcomes

9. What is the primary objective of racing?

Option: To finish before others

Option: To socialize with participants

Option: To enjoy the environment

Option: To demonstrate endurance

10. In economic terms what does value refer to?

Option: The importance or worth of something

Option: The process of manufacturing goods

Option: The total cost of production

Option: The number of sales made

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

11. A _____ is a vehicle designed for travel or operation in outer space.

12. The Earth's _____ is essential for sustaining life.

13. A scientific _____ is used to measure different physical quantities.

14. The island was formed by _____ activity.

15. A _____ is a solid material whose atoms are arranged in a highly ordered structure.

16. A _____ is a marine creature known for its gelatinous body and tentacles.

17. Many organisms exhibit a natural _____ known as bioluminescence.

18. A _____ is essential for the growth and repair of tissues in living organisms.

19. _____ conduct experiments to explore natural phenomena.

20. A _____ studies specific topics in depth to contribute to knowledge.

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

21. The power plant discharges waste materials into the river during production.

22. The mentor encourages her students to explore new ideas and pursue their passions.



23. The treasure hunter found a gold nugget buried in the ground.
24. In the Pokémon world trainers use pokedollars to buy supplies and Pokémon.
25. The trainer prepared for battle by practicing with his Pokémon every day.
26. He faced his greatest challenge but managed to defeat the champion in the final round.
27. As players gain experience they level up their characters to unlock new abilities.
28. The whistler entertained the crowd with his melodic tunes during the performance.
29. Certain species of jellyfish have the ability to glow in the dark through bioluminescence.
30. Researchers around the world collaborate to find solutions to complex global problems.

Answer

Multiple Choice: 1. Recovering goods after a loss 2. An 8-cylinder engine configuration 3. To maximize returns 4. Structural support 5. Selling assets to the highest bidder 6. The distance traveled per unit of fuel 7. A group of people with shared interests 8. Challenge and fulfillment 9. To finish before others 10. The importance or worth of something

Gap-Fill: 11. spacecraft 12. atmosphere 13. instrument 14. volcanic 15. crystal 16. jellyfish 17. glow 18. protein 19. Scientists 20. researcher

Matching sentence: 1. discharges 2. encourages 3. nugget 4. pokedollars 5. trainer 6. defeat 7. level 8. whistler 9. glow 10. researchers

CATEGORY

1. Sci/Tech - LEVEL1

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1. ESL learning
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