
New Bright Lines on Mercury Indicate Geological Activity

Description

The smallest planet in our Solar System, Mercury, may have an important secret. Bright streaks on its surface could show that recent geological activity is happening. This is surprising because scientists once thought Mercury was inactive.

A new study by astronomer Valentin Bickel and his team from Germany and Italy shows 402 of these bright lines, called lineae. Mercury's surface is not as dull as once believed. Instead, it appears to be more active than expected for a planet that has cooled for 4.5 billion years.

The researchers used advanced computer methods to look at 100,000 images taken between 2011 and 2015. They found that most bright lines appear on the sunny sides of craters, suggesting they are still forming. The streaks may show that heat and materials, like sulfur, rise from inside Mercury.

Bickel explained that these streaks could come from deeper layers of the planet through cracks made by impacts. The team plans to gather more images from upcoming missions by the European Space Agency (ESA) and Japan Aerospace Exploration Agency (JAXA) to support their findings.

Vocabulary List:

1. **Geological** /'dʒi:ə'lodʒɪkəl/ (adjective): Relating to the study of the Earth and its physical structure.
2. **Streaks** /stri:ks/ (noun): A long thin line or mark typically of a different color from its surroundings.
3. **Surface** /'sɜ:rfɪs/ (noun): The outside layer or top layer of something.
4. **Craters** /'kreɪtərs/ (noun): A large bowl-shaped cavity in the ground or on a celestial body.
5. **Suggesting** /sə'dʒɛstɪŋ/ (verb): Putting forward for consideration or proposing.
6. **Active** /'æktyv/ (adjective): Engaged in action; not passive.

Vocabulary quizzes

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

1. Who is involved in conducting advanced studies?

Option: Geologists

Option: Medical professionals

Option: Engineers

Option: Researchers

2. What are the components that make up a particular substance?

Option: Ingredients

Option: Experiences

Option: Textures

Option: Environment

3. What type of cells have the potential to develop into different cell types in the body?

Option: Streaks

Option: Tissue

Option: Protein

Option: Stem cells

4. What are difficulties or obstacles that need to be overcome?

Option: Welfare

Option: Immunity

Option: Challenges

Option: Neurons

5. What is the main ingredient in chocolate production?

Option: Amplifying

Option: Cocoa

Option: Researchers

Option: Disorders

6. What medical condition involves the growth of endometrial-like tissue outside the uterus?

Option: Environment

Option: Endometriosis

Option: Stigma

Option: Disorders

7. Which cells transmit information in the nervous system?

Option: Cracks

Option: Texture

Option: Protein

Option: Neurons

8. What activity involves the systematic investigation to establish facts or principles?

Option: Research

Option: Tissue

Option: Protein

Option: Environment

9. What are small chunks of valuable information or insights?

Option: Influence

Option: Nuggets

Option: Signals

Option: Disorders

10. What is the practice of avoiding extremes?

Option: Amplifying

Option: Moderation

Option: Stigma

Option: Ingredients

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

11. _____ plays a vital role in advancing knowledge and understanding in various fields.

12. People with mental health issues often face social _____.

13. Cells are organized into organs and _____ in the body.

14. Dietary sources of _____ are essential for muscle building and repair.

15. Vaccinations help strengthen the body's _____ against diseases.

16. Human activities can have a significant impact on the _____.

17. Peer pressure can have a powerful _____ on individual decision-making.

18. Genetic mutations can lead to various health _____.

19. _____ in the foundation of a building can indicate structural issues.

20. _____ gained through practical involvement is valuable in many professions.

21. The _____ of a product can determine its quality and appeal.

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

22. Scientists working on cutting-edge technology are often involved in research projects.

23. Some individuals experience discomfort and pain during their cycle.

24. The government introduced programs to ensure the of its citizens.

25. Communication systems rely on the transmission of electronic .

26. Using a microphone helps in sound for a large audience to hear.

27. The of a fabric can determine its comfort and usability.

28. Overcoming a difficult obstacle can be seen as a personal .

29. Some minerals exhibit unique color under specific lighting conditions.

30. Medical professionals work to diagnose and treat various health .

31. The protection of the natural is crucial for biodiversity conservation.

Answer

Multiple Choice: 1. Researchers 2. Ingredients 3. Stem cells 4. Challenges 5. Cocoa 6. Endometriosis 7.

Neurons 8. Research 9. Nuggets 10. Moderation

Gap-Fill: 11. Research 12. Stigma 13. Tissue 14. Protein 15. Immunity 16. Environment 17. Influence 18. Disorders 19. Cracks 20. Experience 21. Content

Matching sentence: 1. Advanced 2. Menstrual 3. Welfare 4. Signals 5. Amplifying 6. Texture 7. Challenge 8. Streaks 9. Disorders 10. Environment

CATEGORY

1. Health - LEVEL2

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