NASA’s Psyche Spacecraft Reveals New Images of Familiar World

Description

NASA's Psyche spacecraft recently approached Mars, capturing images from a unique angle. The spacecraft passed Mars from the side opposite the Sun, making the planet look like a thin crescent. This view highlighted Mars’ delicate atmosphere, showing sunlight filtering through dust clouds above its reddish surface.

During this close encounter on May 15, 2026, Psyche took a wide-angle view of Mars’ southern polar ice cap. Jim Bell, the leader of the Psyche imaging team at Arizona State University, reported that the spacecraft recorded thousands of images. These images help scientists check how well the cameras are working.

Psyche’s instruments possibly detected the solar wind interacting with Mars’ upper atmosphere. The spacecraft's spectrometers aimed to measure the chemical makeup of the Martian surface during its flight.

Many other missions are studying Mars, so major discoveries from Psyche’s data are unlikely. Instead, scientists will use these observations to improve the mission's instruments by comparing them with data from previous Mars missions.

While it's fascinating to see Mars from a new angle, the Psyche mission will really shine when it reaches its namesake asteroid in three years. This asteroid, rich in metals like iron and nickel, is about the size of Massachusetts. The spacecraft will have plenty of time to explore this uncharted territory, unlike the brief visit to Mars.

Vocabulary List:

1. **atmosphere** /ˈætməsfɪr/ (noun): thin layer of gases around a planet
2. **crescent** /ˈkrɛsənt/ (noun): curved thin shape like a moon
3. **spectrometers** /spɛkˈtrɑmɪtərz/ (noun): instruments that measure light to find chemicals
4. **interacting** /ˌɪntərˈæktɪŋ/ (verb): acting on each other; affecting one another
5. **namesake** /ˈneɪmseɪk/ (noun): the person or thing giving a name
6. **uncharted** /ʌnˈtʃɑrtɪd/ (adjective): not mapped, explored, or known before

Comprehension Questions

Multiple Choice

1. What unique angle did NASA's Psyche spacecraft use to capture images of Mars?

   Option: From the side opposite the Sun
   Option: From the North Pole
   Option: From the South Pole
   Option: Directly facing the Sun

2. On what date did Psyche approach Mars?

   Option: May 15, 2026
   Option: June 20, 2025
   Option: April 10, 2027
   Option: August 12, 2026

3. Who is the leader of the Psyche imaging team at Arizona State University?

   Option: Jim Bell
   Option: John Doe
   Option: Alice Smith
   Option: Maria Garcia

4. What did Psyche's instruments possibly detect during its encounter with Mars?

   Option: Radio waves
   Option: Solar wind
   Option: Cosmic rays
   Option: Magnetic fields

5. What is the primary goal of Psyche's observations of Mars?

   Option: To make major discoveries
   Option: To improve mission instruments
   Option: To search for life
   Option: To map the surface

6. What is the size comparison used for Psyche's namesake asteroid?

   Option: About the size of Texas
   Option: About the size of California
   Option: About the size of Massachusetts
   Option: About the size of Florida

True-False

7. The Psyche spacecraft captured images of Mars from the side closest to the Sun.

8. Jim Bell reported that the spacecraft captured thousands of images during its flyby.

9. Psyche is expected to make significant discoveries about Mars.

10. The asteroid Psyche is rich in metals like iron and nickel.

11. Psyche's mission will have a short duration compared to its visit to Mars.

12. Psyche's instruments are designed to measure the chemical makeup of the Martian surface.

Gap-Fill

13. During its close encounter on May 15, 2026, Psyche took a wide-angle view of Mars' southern polar ice cap and recorded _____ images.

14. Mars looked like a thin crescent due to Psyche's approach from the side opposite the _____ and the delicate atmosphere.

15. Many missions are studying Mars, so major discoveries from Psyche's data are _____ unlikely.

16. Psyche's instruments possibly detected the solar wind interacting with Mars' _____ atmosphere.

17. The asteroid Psyche is about the size of _____ and is rich in metals.

18. The spacecraft will explore uncharted territory for _____ time unlike the brief visit to Mars.

Answer

Multiple Choice: 1. From the side opposite the Sun 2. May 15, 2026 3. Jim Bell 4. Solar wind 5. To improve mission instruments 6. About the size of Massachusetts
True-False: 7. False 8. True 9. False 10. True 11. False 12. True
Gap-Fill: 13. thousands of 14. Sun 15. unlikely 16. upper 17. Massachusetts 18. plenty of

CATEGORY

1. Sci/Tech - LEVEL3

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1. B1
2. ESL learning
3. esl news
4. Level 3
5. NASA
6. Psyche spacecraft
7. unfamiliar views

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Date Created
2026/05/21
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