



Astronomers Discover Unprecedented Phenomenon From Nearby Solar System

Description

Astronomers have spotted something unusual coming from a rare exploding star in our galaxy. This material is travelling at 20 million miles per hour, and scientists have compared it to "bullets."

These clumps of gas, called bullets, are from an explosion that is very rare. Scientists are unsure about what these bullets are and where they originate. No other similar bullets have been seen in exploding stars anywhere in the universe.

The bullets appeared after a cloud of dust around the Milky Way's only helium nova cleared. This stellar explosion involves a white dwarf star consuming material from a helium star. Researchers from the University of Warwick confirmed that this event is called V445 Puppis. It offers a unique chance to study this type of explosion.

Novae are bright bursts of energy in pairs of stars. They happen when a Sun-like star dies and leaves a white dwarf, which pulls in gas from its partner star. This collected gas increases temperature and pressure, leading to an explosion.

The new visibility allowed scientists to observe these bullets, likely made of oxygen-rich gas. Researchers hope that understanding this helium nova will help them learn more about such eruptions, which may be connected to bright Type Ia supernovae. These explosions can help measure distances across galaxies, but their exact origins remain unclear.

Comprehension Questions

Multiple Choice

1. What speed are the bullets from the exploding star traveling?

- Option: 10 million miles per hour
- Option: 15 million miles per hour
- Option: 20 million miles per hour
- Option: 25 million miles per hour

2. What is the name of the event associated with the observed bullets?



- Option: V445 Puppis
- Option: Helium Nova
- Option: Supernova 1987A
- Option: Milky Way Nova

3. What type of gas are the bullets likely made of?

- Option: Nitrogen-rich gas
- Option: Oxygen-rich gas
- Option: Carbon dioxide
- Option: Helium

4. Which university confirmed the observation of the bullets?

- Option: University of Oxford
- Option: University of Cambridge
- Option: University of Warwick
- Option: Harvard University

5. What do nova explosions involve?

- Option: Only helium stars
- Option: Black holes
- Option: White dwarf stars consuming material from a partner star
- Option: Supernovae

6. What may be connected to bright Type Ia supernovae?

- Option: Red giants
- Option: Helium novae
- Option: Main sequence stars
- Option: Neutron stars

True-False

- 7. The bullets seen in the explosion have previously been observed in other stars.
- 8. Novae occur when a black hole pulls in gas from a companion star.
- 9. V445 Puppis is the only helium nova in the Milky Way.
- 10. The bullets are traveling at 30 million miles per hour.



11. Researchers are unsure of the origins of the newly spotted bullets.
12. The explosions resulting in bullets can help measure distances across galaxies.

Gap-Fill

13. The bullets from the explosion can travel at speeds of _____ miles per hour.
14. The explosion that produced the bullets is known as the _____ Puppis event.
15. Researchers believe the bullets are likely composed of _____-rich gas.
16. Novae are bright bursts of energy that can occur in _____ of stars.
17. The visibility of the bullets improved after a cloud of _____ around the Milky Way cleared.
18. Understanding helium novae may lead to insights about _____ Type Ia supernovae.

Answer

Multiple Choice: 1. 20 million miles per hour 2. V445 Puppis 3. Oxygen-rich gas 4. University of Warwick 5. White dwarf stars consuming material from a partner star 6. Helium novae

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

Gap-Fill: 13. 20 million 14. V445 15. oxygen 16. pairs 17. dust 18. bright

CATEGORY

1. Sci/Tech - LEVEL2

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