



Rare 'X-Class' Solar Flare Sparks Spectacular Auroras in US

Description

Astronomy enthusiasts may get a chance to witness a spectacular show this weekend as a large burst of charged particles is heading towards Earth following a massive X-class solar flare. This burst, known as a coronal mass ejection (CME), is expected to reach our planet sometime between Saturday night and early Sunday morning, causing a minor to moderate geomagnetic storm.

This storm might disrupt satellite operations, lead to radio blackouts, and push the beautiful northern lights to lower latitudes than usual. The National Oceanic and Atmospheric Administration warns that the impact of the CME is uncertain, but there is a possibility of seeing auroras along the U.S.-Canada border starting Saturday night.

The CME was launched from the sun on August 14 after a powerful X-class solar flare. These flares occur when the sun's magnetic field lines twist and release bursts of electromagnetic radiation into space. Auroras are created when the charged particles from CMEs interact with Earth's magnetic field, producing colorful lights in the sky.

These celestial events are more common during solar maximum, the peak of the sun's activity cycle. If you want to catch a glimpse of the northern lights, head away from city lights and use a dark-sky map for the best viewing spots. Don't forget your smartphone or a good camera to capture this mesmerizing natural phenomenon!

Vocabulary List:

1. **Coronal** /kə'roʊ.nəl/ (adjective): Relating to the crown or outer part of the sun.
2. **Mass** /mæs/ (noun): A large quantity or accumulation of something.
3. **Geomagnetic** /ˌdʒi.oʊ.mæg'net.ɪk/ (adjective): Relating to the magnetic field of the Earth.
4. **Auroras** /ə'roʊ.rə/ (noun): Natural light displays in the sky typically seen in polar regions.
5. **Electromagnetic** /ˌɪlɛk.trəʊ.mæg'net.ɪk/ (adjective): Relating to the interrelation of electric and magnetic fields.
6. **Viewing** /'vjuː.ɪŋ/ (noun): The act of watching or observing something.

Comprehension Questions



Multiple Choice

1. What is the burst of charged particles heading towards Earth called?

- Option: X-class flare
- Option: Coronal mass ejection (CME)
- Option: Geomagnetic storm
- Option: Aurora borealis

2. When is the CME expected to reach Earth?

- Option: Sunday morning
- Option: Saturday afternoon
- Option: Saturday night
- Option: Wednesday

3. What can the CME cause on Earth?

- Option: Tornadoes
- Option: Satellite disruptions
- Option: Volcanic eruptions
- Option: Heavy rainfall

4. What natural phenomenon might be visible along the U.S.-Canada border following the CME?

- Option: Tornadoes
- Option: Rainbows
- Option: Auroras
- Option: Sandstorms

5. What creates auroras in the sky?

- Option: Rain
- Option: CMEs
- Option: Tornadoes
- Option: Sandstorms

6. When are celestial events like CMEs more common?

- Option: During solar minimum
- Option: During solar eclipse
- Option: During solar maximum
- Option: During lunar eclipse



Answer

Multiple Choice: 1. Coronal mass ejection (CME) 2. Saturday night 3. Satellite disruptions 4. Auroras 5. CMEs 6. During solar maximum

Vocabulary quizzes

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

1. Which term means to grab or seize quickly and roughly?

- Option: Tackle
- Option: Disrupt
- Option: Snatch
- Option: Prosecution

2. What word refers to distinctive attributes or characteristics?

- Option: Setbacks
- Option: Innovative
- Option: Features
- Option: Unauthorized

3. Which term describes a passage or travel from one place to another?

- Option: Variant
- Option: Journey
- Option: Adorned
- Option: Bespoke

4. Which word signifies strong and intense emotions or enthusiasm?

- Option: Iconic
- Option: Coronal
- Option: Passion
- Option: Mass

5. What term relates to the Earth's magnetic field and its interaction with other magnetic fields?

- Option: Auroras
- Option: Electromagnetic
- Option: Geomagnetic
- Option: Viewing



6. Which word describes something fascinating or captivating due to being interesting or mysterious?

- Option: Potentially
- Option: Biosignature
- Option: Intriguing
- Option: Tentative

7. What term indicates something that is the subject of disagreement or debate?

- Option: Exploring
- Option: Disputed
- Option: Implications
- Option: Postponed

8. Which word denotes the quality of being trustworthy and dependable?

- Option: Features
- Option: Setbacks
- Option: Reliability
- Option: Concerns

9. What term signifies that something is widely recognized and seen as a symbol?

- Option: Unauthorized
- Option: Iconic
- Option: Setbacks
- Option: Snatch

10. Which word refers to the outermost layer of the sun's atmosphere?

- Option: Mass
- Option: Geomagnetic
- Option: Coronal
- Option: Innovative

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

11. Accessing the system without permission is considered _____.

12. The team is _____ new ways to improve efficiency.

13. Finding a _____ on Mars could suggest the presence of life.

14. The _____ of the object affects its gravitational pull.

15. The event has been _____ due to unforeseen circumstances.



16. There are _____ about the safety of the new product design.
17. Despite the _____ the team persevered and completed the project.
18. The agreement is only _____ until both parties sign the contract.
19. The discovery has far-reaching _____ for the future of medicine.
20. The new technology is _____ groundbreaking in its application.

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

21. The beautiful natural light display in the sky is known as auroras.
22. The spectrum of waves that includes light radio and X-rays is electromagnetic.
23. Observing the stars through a telescope is called viewing.
24. The amount of matter in an object is referred to as mass.
25. Characteristics or elements that make something unique are called features.
26. A different form or version of something is known as a variant.
27. Challenges or obstacles that hinder progress are setbacks.
28. Delaying an event or activity to a later time is called postponed.
29. The legal process of pursuing criminal charges against an individual is prosecution.
30. The degree of trustworthiness and dependability is referred to as reliability.

Answer

Multiple Choice: 1. Snatch 2. Features 3. Journey 4. Passion 5. Geomagnetic 6. Intriguing 7. Disputed
8. Reliability 9. Iconic 10. Coronal

Gap-Fill: 11. Unauthorized 12. Exploring 13. Biosignature 14. Mass 15. Postponed 16. Concerns 17. Setbacks
18. Tentative 19. Implications 20. Potentially

Matching sentence: 1. Auroras 2. Electromagnetic 3. Viewing 4. Mass 5. Features 6. Variant 7. Setbacks
8. Postponed 9. Prosecution 10. Reliability



CATEGORY

1. Sci/Tech - LEVEL3

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