



Rare Venus-Bright Comet Visible from Earth

Description

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Comet C/2024 G3 (ATLAS) captured on 31 December 2024 in Río Hurtado, Chile

Photo by Lionel Majzik

A surprising comet, named C/2024 G3 (ATLAS), has caught the attention of astronomers and is expected to shine brightly like Venus in our night sky over the coming days.

Discovered last year by NASA's Asteroid Terrestrial-impact Last Alert System, this comet, previously thought to disintegrate, is now on a course that may allow it to pass by Earth intact.

Its new 160,000-year orbit path makes it visible to stargazers in the southern hemisphere. As it journeys closer to the sun, it may become visible with binoculars in the northern hemisphere as well.

Recent observations show the comet is becoming brighter, hinting at a possible breakup. However, it has maintained its brightness, leading to speculations of a brilliant appearance akin to Venus.

If the comet survives, it is expected to be most luminous around its closest approach to the sun on January 13th, offering a three-day viewing opportunity for those in the northern hemisphere from January 12th to 14th.

Whether the comet will be easily visible will depend on various factors, such as its distance from the sun and the potential phenomenon of forward scattering caused by dust particles.

Stay tuned for this rare celestial event and mark your calendars for a chance to witness the beauty of Comet C/2024 G3.

Vocabulary List:

1. **Astronomers** /ə'strɒn.ə.mərz/ (noun): Scientists who study celestial bodies and the universe.
2. **Disintegrate** /dɪ'sɪn.tɪ.ɡreɪt/ (verb): To break apart into small pieces or fragments.
3. **Luminous** /'luː.mɪ.nəs/ (adjective): Emitting or reflecting light; shining.
4. **Phenomenon** /fə'nɒm.i.nən/ (noun): An observable event or occurrence particularly one that is unusual.
5. **Scattering** /'skæt.ər.ɪŋ/ (noun): The process of spreading out over a larger area.
6. **Speculations** /,spɛk.jə'leɪ.ʃənz/ (noun): Conjectures or guesses based on incomplete evidence.

Comprehension Questions



Multiple Choice

1. When was Comet C/2024 G3 (ATLAS) captured in Río Hurtado, Chile?
Option: 31 December 2024
Option: 15 August 2024
Option: 11 November 2024
Option: 3 April 2024
2. Who captured the image of Comet C/2024 G3 (ATLAS) in Río Hurtado, Chile?
Option: Lionel Majzik
Option: NASA
Option: Astronomers
Option: Unknown photographer
3. What system discovered the comet C/2024 G3 (ATLAS)?
Option: NASA's Asteroid Terrestrial-impact Last Alert System
Option: Hubble Space Telescope
Option: ESO's Very Large Telescope
Option: Spitzer Space Telescope
4. How long is the new orbit path of Comet C/2024 G3 (ATLAS)?
Option: 160,000 years
Option: 100 years
Option: 50,000 years
Option: 200,000 years
5. When is the comet expected to be most luminous?
Option: January 13th
Option: December 25th
Option: February 9th
Option: March 30th
6. What phenomenon might affect the visibility of the comet?
Option: Forward scattering caused by dust particles
Option: Backward scattering caused by asteroids
Option: Solar flares
Option: Cosmic rays



True-False

- 7. Comet C/2024 G3 (ATLAS) was previously thought to disintegrate.
- 8. The comet is not visible to stargazers in the northern hemisphere.
- 9. The brightness of the comet has decreased over time.
- 10. The closest approach of the comet to the sun is on January 14th.
- 11. The visibility of the comet does not depend on its distance from the sun.
- 12. The comet is not expected to provide a viewing opportunity in the northern hemisphere.

Gap-Fill

- 14. If the comet survives, it is expected to be most luminous around its closest approach to the sun on _____ 13th.
- 15. As the comet journeys closer to the sun, it may become visible with _____ in the northern hemisphere.
- 16. Whether the comet will be easily visible will depend on various factors, such as its distance from the sun and the potential phenomenon of _____ caused by dust particles.
- 18. Comet C/2024 G3 (ATLAS) has maintained its brightness, leading to speculations of a brilliant appearance akin to _____.

Answer

Multiple Choice: 1. 31 December 2024 2. Lionel Majzik 3. NASA's Asteroid Terrestrial-impact Last Alert System 4. 160,000 years 5. January 13th 6. Forward scattering caused by dust particles

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

Gap-Fill: 14. January 15. binoculars 16. forward scattering 18. Venus



Vocabulary quizzes

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

1. What term describes the rivalry between companies in the same industry?
Option: Regulation
Option: Scattering
Option: Competition
Option: Payload
2. Who are scientists that study celestial bodies and phenomena?
Option: Astronomers
Option: Payload
Option: Inaccuracies
Option: Platform
3. What are actions taken to improve a situation or prevent further issues?
Option: Implications
Option: Interventions
Option: Artificial
Option: Authorize
4. What describes the process of monitoring and enforcing rules?
Option: Notifications
Option: Payload
Option: Regulatory
Option: Challenge
5. What term refers to something that can be used more than once?
Option: Artificial
Option: Inaccuracies
Option: Reusable
Option: Compliance
6. What is the process of evaluating something to determine its quality or performance?
Option: Luminous
Option: Test
Option: Violation
Option: Platform
7. What term signifies a task or situation that tests one's abilities?



- Option: Concerns
- Option: Challenge
- Option: Disintegrate
- Option: Incidents

8. What is a specific task or goal that one is set to achieve?

- Option: Astronomers
- Option: Payload
- Option: Mission
- Option: Scattering

9. What refers to the act of providing a brief overview of something?

- Option: Summarizing
- Option: Strategic
- Option: Artificial
- Option: Implications

10. What term denotes the quality of being trusted or believed in?

- Option: Credibility
- Option: Regulation
- Option: Inaccuracies
- Option: Payload

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

11. Non-compliance with regulations may result in _____ .
12. Many expressed their _____ about the potential risks involved.
13. The aim is to establish guidelines to effectively _____ the industry.
14. The decision had far-reaching _____ that impacted various stakeholders.
15. Before deployment the system undergoes rigorous _____ to ensure functionality.
16. Users will receive instant _____ regarding any system updates.
17. The new software will serve as a versatile _____ for various applications.
18. Strict measures are in place to prevent security _____ from occurring.



19. The intelligence displayed by the system is purely _____ and not human-driven.
20. The government plans to introduce new _____ to address environmental concerns.

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

21. The multinational corporation the market with its innovative products.
22. The company formulated a plan to expand its reach globally.
23. The glow of the stars illuminated the night sky.
24. The phenomenon of light as it passes through the atmosphere was observed.
25. There were numerous about the possible outcomes of the merger.
26. The spacecraft carried a crucial for its upcoming mission.
27. The report was criticized for its and lack of reliable data.
28. Adhering to industry standards is essential for regulatory .
29. Only top-level management can major decision-making processes.
30. The ancient manuscript started to due to its fragile condition.

Answer

Multiple Choice: 1. Competition 2. Astronomers 3. Interventions 4. Regulatory 5. Reusable 6. Test 7. Challenge 8. Mission 9. Summarizing 10. Credibility

Gap-Fill: 11. Violation 12. Concerns 13. Regulate 14. Implications 15. Test 16. Notifications 17. Platform 18. Incidents 19. Artificial 20. Regulation

Matching sentence: 1. Dominates 2. Strategic 3. Luminous 4. Scattering 5. Speculations 6. Payload 7. Inaccuracies 8. Compliance 9. Authorize 10. Disintegrate

CATEGORY

1. Sci/Tech - LEVEL3

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Author

aimeeyoung99