



NASA to Launch Artificial Star into Space — Discover the Purpose

Description

NASA is planning to launch a cutting-edge artificial star into space to improve the accuracy of astronomical measurements. Named the Landolt mission after the renowned astronomer Arlo Landolt, this project will involve launching a small satellite equipped with lasers that will replicate the light emitted by stars and other celestial objects. Scheduled for launch in 2029, this toaster-sized device will orbit Earth at a height of 22,236 miles, providing a stationary target for ground-based telescopes to calibrate their instruments with unprecedented precision.

The main objective of the Landolt mission is to enhance the measurement of stars' brightness, crucial for understanding cosmic phenomena. By using the artificial star's consistent and well-defined brightness levels, astronomers can eliminate guesswork and improve telescope calibration significantly. This mission could revolutionize our comprehension of the universe, from studying exoplanets to determining the expansion rate of the universe. Overall, the Landolt mission promises to advance astronomical research and offer new insights into the cosmos.

Vocabulary List:

1. **Cutting-edge** /'kʌt.ɪŋ ɛdʒ/ (adjective): Being at the forefront of innovation or development.
2. **Artificial** /,ɑːr.tɪ'fɪʃ.əl/ (adjective): Made or produced by human beings rather than occurring naturally.
3. **Astronomical** /,æs.trə'nɔː.mi.kəl/ (adjective): Relating to astronomy the scientific study of celestial bodies.
4. **Calibrate** /'kæl.ɪ.breɪt/ (verb): To adjust or mark a measuring instrument or device.
5. **Phenomena** /fə'nɒm.ə.nə/ (noun): Observable events or occurrences especially in a scientific context.
6. **Comprehension** /,kɒmprɪ'hɛnfən/ (noun): The ability to understand something.

Comprehension Questions

Multiple Choice

1. What is the main objective of the Landolt mission?

Option: To enhance the measurement of stars' brightness

Option: To study the moons of Jupiter

Option: To explore underwater ecosystems



Option: To map the Earth's magnetic field

2. When is the Landolt mission scheduled for launch?

Option: 2025

Option: 2027

Option: 2029

Option: 2031

3. At what height will the Landolt mission satellite orbit Earth?

Option: 10,000 miles

Option: 15,000 miles

Option: 20,000 miles

Option: 22,236 miles

4. What is the purpose of launching an artificial star in the Landolt mission?

Option: To replicate the light emitted by stars

Option: To study ocean currents

Option: To measure atmospheric pressure

Option: To investigate volcanic activity

5. How can astronomers benefit from the Landolt mission artificial star?

Option: Improve telescope calibration

Option: Dig for minerals on asteroids

Option: Research climate change

Option: Discover new species of fish

6. What aspect of the universe could the Landolt mission help determine?

Option: Expansion rate of the universe

Option: Speed of sound in space

Option: Average temperature of stars

Option: Distance between galaxies

Answer

Multiple Choice: 1. To enhance the measurement of stars' brightness 2. 2029 3. 22,236 miles 4. To replicate the light emitted by stars 5. Improve telescope calibration 6. Expansion rate of the universe

Vocabulary quizzes



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

1. What type of black hole is typically found at the center of a galaxy?
Option: Supermassive
Option: Stellar
Option: Intermediate
Option: Primordial
2. What term is used to describe the region around a body where another body experiences a force?
Option: Gravitational field
Option: Magnetic field
Option: Electric field
Option: Radiation field
3. What happened to the highly-anticipated event due to unforeseen circumstances?
Option: Cancelled
Option: Rescheduled
Option: Postponed
Option: Concluded
4. What process involves growth or advancement in knowledge technology or infrastructure?
Option: Development
Option: Stagnation
Option: Decline
Option: Regression
5. What is the exchange of information between individuals or groups called?
Option: Communication
Option: Isolation
Option: Silence
Option: Confrontation
6. Which term describes something that is at the forefront of innovation or progress?
Option: Cutting-edge
Option: Obsolete
Option: Outdated
Option: Ancient
7. What are new ideas methods or products introduced to bring about change or improvement?
Option: Innovations
Option: Traditions
Option: Conventions



Option: Habits

8. What term describes something that is intricate detailed or difficult to understand?

- Option: Complex
- Option: Simple
- Option: Basic
- Option: Clear

9. Which term is used to describe something extremely large or related to celestial objects?

- Option: Astronomical
- Option: Microscopic
- Option: Tiny
- Option: Negligible

10. What term describes something that is absolutely necessary or fundamental?

- Option: Essential
- Option: Optional
- Option: Extraneous
- Option: Superfluous

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

11. _____ are sudden releases of energy in the form of X-rays often observed from black hole systems.

12. The scientists used a computer _____ to model the behavior of the galaxy.

13. The data _____ that there may be a correlation between the two variables.

14. In order to ensure accuracy the instruments must be properly _____ before use.

15. The scientists studied various natural _____ to understand their underlying causes.

16. The medical team performed multiple _____ to get a detailed view of the patient's internal organs.

17. The director's new film was _____ by fans who had been eagerly waiting for its release.

18. The team had high _____ for the outcome of the experiment based on previous



results.

19. A _____ is a region in space where gas and dust come together to form new stars.

20. Photography _____ often gather to share tips and tricks for capturing the perfect shot.

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

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| 21. The intelligence displayed by the robot was so advanced that it seemed almost human. |
| 22. The ceremony was conducted in a manner that followed the customs and practices of past generations. |
| 23. The exhibition served as a platform to display the latest innovations in technology. |
| 24. The initial test results were encouraging indicating a bright future for the new treatment. |
| 25. The university has multiple locations where students attend classes and engage in academics and extracurricular activities. |
| 26. The rumors regarding the merger between the two companies have been circulating for weeks. |
| 27. The teacher assessed the students' understanding of the topic through a series of questions. |
| 28. The detective applied logical thinking and deduction to solve the mystery of the missing artifact. |
| 29. The concert was called off due to unforeseen circumstances disappointing many fans. |
| 30. Water is for all living organisms to survive. |

Answer

Multiple Choice: 1. Supermassive 2. Gravitational field 3. Cancelled 4. Development 5. Communication 6. Cutting-edge 7. Innovations 8. Complex 9. Astronomical 10. Essential

Gap-Fill: 11. X-ray flares 12. Simulation 13. Suggests 14. Calibrated 15. Phenomena 16. Scans 17. Highly-anticipated 18. Expectations 19. Molecular cloud 20. Enthusiasts

Matching sentence: 1. Artificial 2. Traditionally 3. Showcase 4. Promising 5. Campuses 6. Speculated 7. Comprehension 8. Reasoning 9. Cancelled 10. Essential



CATEGORY

1. Sci/Tech - LEVEL2

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