



Scientist Says Universe is 27 Billion Years Old and Has No Dark Matter

Description

Rajendra Gupta, a scientist, has an interesting idea about the Universe's age. He believes it's actually 26.7 billion years old, much older than we thought. His studies suggest that the big shapes in space have clues about this.

Gupta's work may change how we see dark matter and energy. Instead of these mysterious things, he thinks the way space grows and changes is enough to explain why the Universe is **expanding**. This idea goes against what most people believe.

Looking back millions of years, Gupta thinks that space wasn't so empty. The surprising thing is some very big **galaxies** look older than they should be. This could mean we need to rethink how galaxies and black holes grow, or maybe the Universe is just older.

Gupta's idea is based on something called the **tired light theory**. This theory suggests that light loses energy over time. If Gupta is right, we won't need to guess about dark matter or dark energy anymore. His new paper tries to prove his theory by talking about how **sound waves** and light from the early Universe fit his idea.

But, changing how we understand the Universe is hard. We still see it as 13.7 billion years old, but Gupta's research adds more to think about.

This study is in *The Astrophysical Journal*.

Vocabulary Insights:

- **Theory** (Noun): A set of ideas intended to explain something.
- **Expanding** (Verb): Becoming larger in size, volume, or number.
- **Galaxies** (Noun): Huge collections of stars, dust, and gas held together by gravity.
- **Tired Light** (Noun): A hypothesis that light loses energy over time, explaining the red shift observed in distant galaxies.
- **Sound waves** (Noun): Waves of pressure that travel through air, water, or solids and can be heard when they reach a human or animal ear.

Vocabulary List:

1. **Theory** // (Noun): A set of ideas intended to explain something.
2. **Expanding** // (Verb): Becoming larger in size or volume or number.
3. **Galaxies** // (Noun): Huge collections of stars, dust, and gas held together by gravity.
4. **Tired Light** // (Noun): A hypothesis that light loses energy over time explaining the red shift observed in distant galaxies.



-
5. **Sound waves** // (Noun): Waves of pressure that travel through air, water or solids and can be heard when they reach a human or animal ear.
6. **Universe** // (Noun): All existing matter and space considered as a whole, the cosmos.

Vocabulary quizzes

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

1. What is the name of the geophysicist in the scenario?
- Option: Alice
 - Option: Dawn
 - Option: Eve
 - Option: Grace
2. Which technology is known for simulating the path of light as it interacts with virtual objects?
- Option: Quantum computing
 - Option: Ray tracing
 - Option: Artificial intelligence
 - Option: Nanotechnology
3. Which astronomical objects are clusters of stars, dust and dark matter held together by gravity?
- Option: Planets
 - Option: Nebulae
 - Option: Stars
 - Option: Galaxies
4. What is the name of the artificial intelligence system mentioned in the context?
- Option: Oracle
 - Option: Lyra
 - Option: Gemini AI
 - Option: Athena
5. What kind of waves are disturbances that travel through a medium by compressing and expanding the medium?
- Option: Light waves
 - Option: Sound waves
 - Option: Radio waves
 - Option: X-rays
6. What are obstacles or difficulties that need to be overcome in the given context?
- Option: Achievements



- Option: Milestones
- Option: Challenges
- Option: Successes

7. In the context what term is used to refer to a level or rank in a hierarchy?

- Option: Node
- Option: Tier
- Option: Group
- Option: Layer

8. Which component of a computer system integrates the circuits and functionalities of various other components?

- Option: Motherboard
- Option: CPU
- Option: RAM
- Option: Chipset

9. What term is used to describe systems or devices that can process and interact with multiple modes of input?

- Option: Unimodal
- Option: Monomodal
- Option: Bimodal
- Option: Multimodal

10. What is the term used to describe all of space time matter and energy in existence?

- Option: Galaxy
- Option: Solar system
- Option: Universe
- Option: Constellation

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

11. The company introduced its new _____ product to showcase its latest technology.

12. With the advancement of technology many tasks can now be done through _____
access.

13. The business is _____ its operations to reach new markets.

14. The advertising team came up with a _____ campaign that caught the audience's



attention.

15. The soldiers fought with _____ courage against the enemy forces.
16. After the system upgrade the website was _____ for maintenance.
17. The software developer encountered some _____ while debugging the code.
18. Despite the challenges the team pushed _____ and completed the project on time.
19. The students were _____ about the upcoming field trip to the science museum.
20. The manager was _____ about meeting the quarterly targets due to slow sales.
21. The hikers had a sense of _____ as they approached the dark cave.

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

22. The artist painted a masterpiece that showcased her innovative and imaginative skills.
23. The scientist delved deep into the _____ of the universe to understand its beginnings.
24. The concept of _____ in cosmology deals with the redshift of distant galaxies.
25. The accuracy of the data input is _____ for the success of the experiment.
26. At the _____ of her career the researcher made groundbreaking discoveries in seafloor mapping.
27. The physicist proposed a new _____ to explain the behavior of subatomic particles.
28. Despite initial setbacks the team moved _____ and successfully launched the product.
29. The expert _____ on the latest research findings in the field of artificial intelligence.
30. The company's store in the city attracted a large number of customers on opening day.
31. The astronaut had to overcome her _____ of heights during the spacewalk.

Answer

Multiple Choice: 1. Dawn 2. Ray tracing 3. Galaxies 4. Gemini AI 5. Sound waves 6. Challenges 7. Tier 8. Chipset



9. Multimodal 10. Universe

Gap-Fill: 11. flagship 12. remote 13. expanding 14. creative 15. valiant 16. down 17. trouble 18. ahead
19. excited 20. worried 21. fear

Matching sentence: 1. Creative 2. Origins 3. Tired Light 4. Crucial 5. Dawn 6. Theory 7. Ahead 8. Commented
9. Flagship 10. Fear

CATEGORY

1. Sci/Tech - LEVEL2

Date Created

2024/03/18

Author

aimeeyoung99

ESL-NEWS.COM