



NASA Satellite Tumbles from Orbit as Rescue Team Mobilises

Description

The Swift spacecraft is expected to crash back to Earth, likely before the year ends, unless it receives a boost in altitude. Katalyst Space Technologies plans to use its robotic servicing spacecraft, named Link, to dock with Swift and extend its operational life.

This mission involves several challenges. Swift was not originally designed for docking or altitude boosts. Additionally, this will be Katalyst's first attempt to connect with another satellite. NASA has set a tight deadline of nine months for Katalyst to build, test, and launch the mission before Swift descends too low for a safe intervention.

Ghonhee Lee, founder and CEO of Katalyst, described the mission as technically ambitious. The spacecraft is scheduled for launch on June 1, but there is little room for mistakes. By late summer or early autumn, Swift's altitude could drop below 200 miles (320 kilometres), jeopardising the mission.

NASA aims to achieve two objectives: to showcase important technology for future space missions and to save the Swift spacecraft from an uncontrolled re-entry, allowing it to continue its scientific work. Lee noted that achieving a 100% success rate is unlikely.

During a recent visit to Katalyst, technicians were diligently soldering parts and assembling solar panels. A company official commented that while the project is not as advanced as typical government missions, significant progress has been made in just five months.

Vocabulary List:

1. **altitude** //ˈæltə,tu:d// (noun): height above the ground or sea
2. **dock** //dɒk// (verb): to join two ships or vehicles together
3. **robotic** //rəʊˈbɒtɪk// (adjective): made or controlled by robots or machines
4. **deadline** //ˈdɛd,lɑɪn// (noun): a time by which something must be finished
5. **jeopardising** //ˈdʒɛpərə,daɪzɪŋ// (verb): putting something at risk of harm or loss
6. **intervention** //,ɪntərˈvenʃən// (noun): an action to change a dangerous situation

Comprehension Questions



Multiple Choice

1. What is the expected timeline for the Swift spacecraft to crash back to Earth?
Option: Before the year ends
Option: Next year
Option: In five years
Option: In a month
2. What does Katalyst Space Technologies plan to use to extend Swift's operational life?
Option: A satellite
Option: A rover
Option: Link
Option: A drone
3. What is the deadline set by NASA for Katalyst to complete the mission?
Option: Six months
Option: Nine months
Option: One year
Option: Three months
4. Who is the founder and CEO of Katalyst?
Option: Elon Musk
Option: Jeff Bezos
Option: Ghonhee Lee
Option: Richard Branson
5. When is the spacecraft scheduled for launch?
Option: June 1
Option: July 1
Option: May 1
Option: August 1
6. What altitude could Swift's altitude drop below by late summer or early autumn?
Option: 300 miles
Option: 150 miles
Option: 200 miles
Option: 250 miles



True-False

7. The Swift spacecraft was originally designed for docking.
8. Katalyst's mission is their first attempt to connect with another satellite.
9. NASA has allowed ten months for Katalyst to complete the mission.
10. Ghonhee Lee described the mission as easy and straightforward.
11. The mission aims to save the Swift spacecraft from an uncontrolled re-entry.
12. Achieving a 100% success rate for the mission is considered likely by Lee.

Gap-Fill

13. The Swift spacecraft is expected to crash back to Earth unless it receives a boost in altitude. Katalyst plans to use _____ to dock with Swift.
14. NASA set a deadline of nine months for Katalyst to build, test, and launch the mission before Swift descends too _____.
15. Ghonhee Lee noted that achieving a _____ success rate is unlikely.
16. The spacecraft is scheduled for launch on June 1, but there is little room for _____.
17. By late summer or early autumn, Swift's altitude could drop below _____ miles.
18. During a recent visit to Katalyst, technicians were soldering parts and assembling _____.

Answer

Multiple Choice: 1. Before the year ends 2. Link 3. Nine months 4. Ghonhee Lee 5. June 1 6. 200 miles

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

Gap-Fill: 13. Link 14. low 15. 100% 16. mistakes 17. 200 18. solar panels



Vocabulary quizzes

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

1. What factor is often challenged during a meteor shower?
Option: Visibility
Option: Altitude
Option: Density
Option: Ecosystem
2. Which type of system is designed for flexibility and durability?
Option: Robotic
Option: Reusable
Option: Certified
Option: Simulated
3. What type of mission may involve exploring new ecosystems?
Option: Breakthrough
Option: Intervention
Option: Expedition
Option: Transfer
4. Which term refers to the variety of life in a particular ecosystem?
Option: Ecosystem
Option: Breakthrough
Option: Biodiversity
Option: Microbial
5. Which technology is often used to simulate complex biological interactions?
Option: Robotic
Option: Supercomputer
Option: Genome
Option: Anomaly
6. What type of organisms are often involved in the microbial ecosystem?



- Option: Robotic
- Option: Microscopic
- Option: Fragile
- Option: Reusable

7. What is often required to combat environmental anomalies?

- Option: Visibility
- Option: Intervention
- Option: Transfer
- Option: Deadline

8. Which structure contains the complete genetic information of an organism?

- Option: Microbial
- Option: Genome
- Option: Enzyme
- Option: Altitude

9. What process involves water infiltrating through small openings?

- Option: Seep
- Option: Transfer
- Option: Breakthrough
- Option: Fragment

10. What is often a critical point that can jeopardize a project?

- Option: Ecosystem
- Option: Fragment
- Option: Deadline
- Option: Robotic

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

11. The spacecraft needed to _____ at the station to complete the transfer.
12. The fireball broke apart into several _____ that fell to the ground.
13. Operating the robotic system at high altitude can be very _____.
14. The _____ of microbial life can indicate the health of an ecosystem.
15. Scientists studied the strange _____ detected in the data.



16. Researchers discovered a new _____ that could improve biological processes.
17. The project required _____ to adapt to unforeseen challenges.
18. A significant _____ in technology was achieved during the research phase.
19. The study focused on _____ interactions within the soil environment.
20. The system was built to be _____ under various operational conditions.

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

21. The sky was illuminated by a fireball that streaked across the night.
22. Fog often reduces visibility for drivers on the road.
23. Robotic systems are increasingly used in manufacturing for their precision.
24. The product was certified for safety and effectiveness before it could be sold.
25. Emergency intervention may be necessary in the event of a natural disaster.
26. The rainforest is a rich ecosystem known for its high levels of biodiversity.
27. An ecosystem consists of all living and non-living things in a particular environment.
28. The density of the population influences urban planning and resource management.
29. The scientist ran a simulated experiment to predict the outcome.
30. The research team utilized a supercomputer to analyze vast amounts of data.

Answer

Multiple Choice: 1. Visibility 2. Robotic 3. Expedition 4. Biodiversity 5. Supercomputer 6. Microscopic
7. Intervention 8. Genome 9. Seep 10. Deadline

Gap-Fill: 11. dock 12. fragments 13. challenging 14. density 15. anomaly 16. enzyme 17. flexibility
18. breakthrough 19. microbial 20. robust

Matching sentence: 1. fireball 2. visibility 3. robotic 4. certified 5. intervention 6. biodiversity 7. ecosystem
8. density 9. simulated 10. supercomputer



CATEGORY

1. Sci/Tech - LEVEL4

POST TAG

1. B2
2. ESL learning
3. esl news
4. falling out of orbit
5. Level 4
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