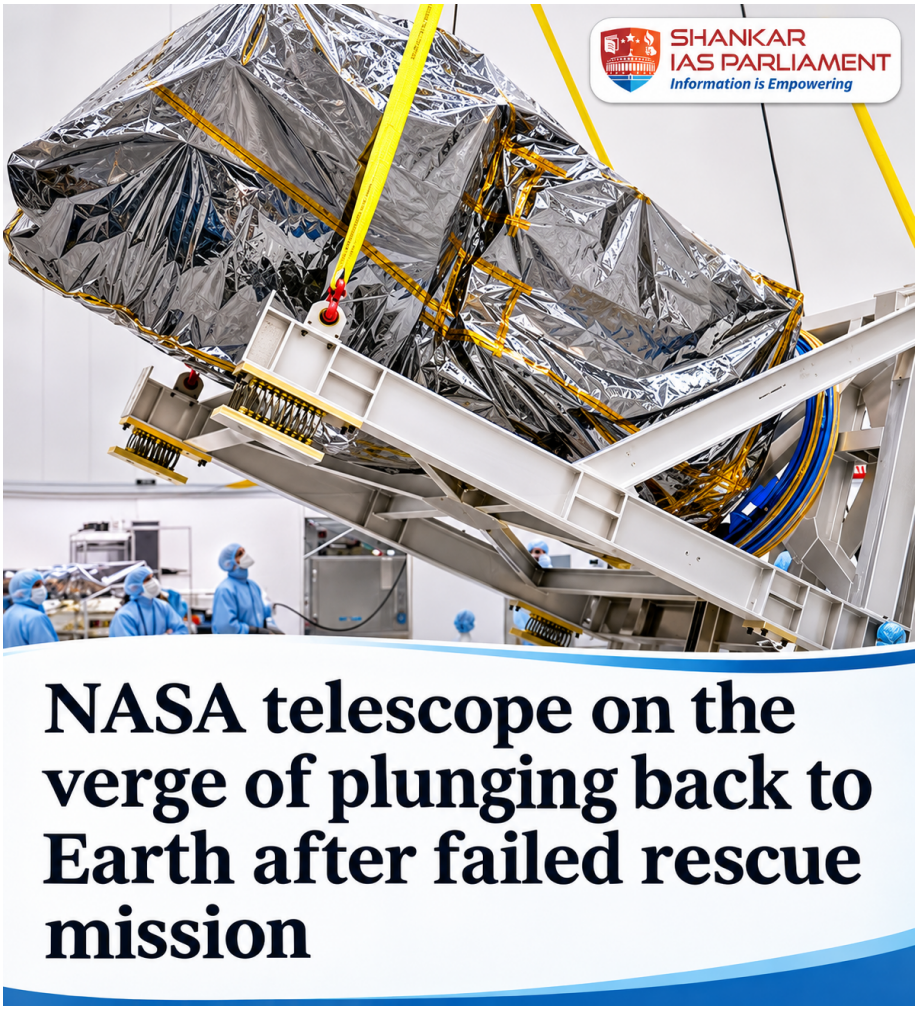
NASA telescope on verge of plunging back to Earth after failed rescue mission

Prelims: *Current events of National and International Importance| Science & Technology*

Why in News?

Recently, NASA's 1.5-ton Neil Gehrels Swift Observatory is on the verge of an uncontrolled atmospheric re-entry after a commercial robotic rescue mission failed.

- **The Telescope–** Launched on November 20, 2004, the Swift Observatory spent 22 years tracking gamma-ray bursts, supernovas, comets, asteroids, and black holes.
- **Why It Is Falling–** Intense solar activity over recent years increased atmospheric drag, pulling the low-Earth orbit satellite down faster than planned.
- **The Failed Rescue–** NASA hired Katalyst Space Technologies to launch a three-armed robotic spacecraft named **Link** in July 2026 to push Swift into a higher orbit. Link suffered attitude-control and thruster failures, spun out of control, and plunged back to Earth in September 2026.
- **Expected Impact/Re-entry–** The U.S. Space Force predicts Swift will crash back to Earth around Friday.
- **Debris Zone–** Most of the 1.5-ton observatory will burn up upon entry, though dense pieces made of tungsten and mirror fragments could survive and land in the ocean. Potential reentry zones include swaths of Africa, Australia, India, Southeast Asia, and Central and South America.
- Scientists discovered experimental niobium-titanium-based metal alloys that maintain high strength and flexibility at extreme cryogenic temperatures down to -424°F (-253°C or 20 kelvin) without turning brittle and shattering.



Reference

[The Hindu| Telescope of the Verge-NASA]

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