

# LOFTID mission

November 16, 2022

**In news-** NASA completed the technology demonstration of its **Low-Earth Orbit Flight Test of an Inflatable Decelerator (LOFTID) mission.**

## **What is LOFTID mission?**

- It is a NASA mission to test inflatable reentry systems. **It is the first such test of an inflatable decelerator from Earth-orbital speed.**
- LOFTID was launched on an Atlas V 401 in November 2022 as a secondary payload, along with the JPSS-2 weather satellite.
- NASA's LOFTID, **is demonstrating a cross-cutting aeroshell a type of heat shield for atmospheric re-entry.**
- For destinations with an atmosphere, one of the challenges NASA faces is how to deliver heavy payloads (experiments, equipment, and people) because current rigid aeroshells are constrained by a rocket's shroud size.
- One answer is an inflatable aeroshell that can be deployed to a scale much larger than the shroud.
- This technology enables a variety of proposed NASA missions to destinations such as Mars, Venus, Titan as well as return to Earth.
- The "inflatable aerodynamic decelerator," or "aeroshell" technology could one day help land humans on Mars.



deployable, meaning that it will take up less room on rockets. This also allows its design to be scalable.