

What is an INFUSE Mission?

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About INFUSE Mission

- The Integral Field Ultraviolet Spectroscope Experiment (INFUSE) was launched from the White Sands Missile Range in New Mexico.
- It was launched to study the Cygnus Loop, a supernova remnant.

What will INFUSE mission do?

- The INFUSE mission is expected to collect information about the remnant for a few minutes from a height of 150 miles (240 km).
- Specifically, the instrument will gather light streaming from the Cygnus Loop in far-ultraviolet wavelengths.
- It will observe how the supernova dumps energy into the Milky Way by catching light given off just as the blast wave crashes into pockets of cold gas floating around the galaxy.
- It will study the Cygnus Loop and try to understand the life cycle of stars.

What is Cygnus Loop?

- It is the remnant of a star that was once 20 times the size of our Sun.

- Some 20,000 years ago, that star collapsed under its own gravity and erupted into a supernova.
 - Even from 2,600 light-years away, astronomers estimate the flash of light would have been bright enough to see from Earth during the day.
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Q1) What is a supernova?

A supernova is a powerful and dramatic astronomical event that occurs when a massive star reaches the end of its life cycle. During a supernova, the star undergoes a tremendous explosion, briefly outshining an entire galaxy and releasing an immense amount of energy.

Source: [NASA launches mission to 20,000-year-old supernova remnant to understand the life cycle of stars](#)

Source: <https://vajiramandravi.com/current-affairs/infuse-mission/>

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