

India's first hybrid-sounding rocket

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In news- India's first hybrid sounding rocket by private players was launched from Pattipulam village in the Chengalpattu district of Tamil Nadu.

Key updates-

- Martin Foundation, in association with Dr. APJ Abdul Kalam International Foundation and Space Zone India, launched the Dr. APJ Abdul Kalam Satellite Launch Vehicle Mission- 2023.
- The organisations mentioned that 5,000 students were involved in the project.
- The selected students designed and constructed **a student satellite launch vehicle (rocket) and 150 PICO satellite research experiment cubes** that contained different payloads.
- The **reusable rocket** was made by the selected top 100 students, while the rest made the satellites.
- **The rocket can be used for research in weather, atmospheric conditions and radiation.**

What are sounding rockets?

- Sounding rockets are **one or two stage solid propellant rockets used for probing the upper atmospheric regions and for space research.**
- They also **serve as easily affordable platforms to test or prove prototypes** of new components or subsystems intended for use in launch vehicles and satellites.
- A hybrid-propellant rocket is a rocket with a rocket motor that uses rocket propellants in two different phases: one solid and the other either gas or liquid.
- With the establishment of the Thumba Equatorial Rocket

Launching Station (TERLS) in 1963 at Thumba, a location close to the magnetic equator, there was a quantum jump in the scope for aeronomy and atmospheric sciences in India.

- The launch of the first sounding rocket from Thumba near Thiruvananthapuram, Kerala on 21 November 1963, marked the beginning of the Indian Space Programme.