

# China's Mengtian module

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**In news**—China has recently launched a lab module called Mengtian or “Dreaming of the Heavens”, the last of the three modules that will comprise its space station.

## What is the Mengtian module?

- Scientific equipment in the Mengtian module will be **used for studying microgravity and carrying out experiments in fluid physics**, materials science, combustion science and fundamental physics.
- Also, the Mengtian will **carry the world's first space-based set of cold atomic clocks consisting of a hydrogen clock**, a rubidium clock and an optical clock.
- It **was launched by Long March-5B Y4, one of China's biggest rockets** from Wenchang Spacecraft Launch Site on the coast of the southern island province of Hainan.
- If successful, the cold atomic clocks will form the most precise time and frequency system in space, which should not lose one second in hundreds of millions of years.

## China Space Station (CSS)-

- The **Tiangong space station consists of Tianhe, Mengtian and a module called Wentian.**
- The **T-shaped** Tiangong will host three astronauts for six months at a time, or six crew members for a brief time during crew handovers.
- **In April 2021, China began construction of its space station with the launch of the Tianhe module**, the main living quarters for astronauts.
- **In July 2022 it launched Wentian, or “Quest for the Heavens”, a laboratory module** where scientific experiments will be performed.
- The **significant feature of China's under-construction space station is its two robotic arms**, especially the

long one over which the US has previously expressed concern over its ability to grab objects including satellites from space.

- **Once ready, China will be the only country to own a space station.**
- The International Space Station (ISS) of Russia is a collaborative project of several countries.
- The Chinese-built “Celestial Palace”, as the space station is known at home, will also be an emblem of China’s growing clout and self-sufficiency in its space endeavours and a challenger to the United States in the domain.