Rohini RH-200

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Why is in news? ISRO eyeing 200th successful launch of Rohini RH-200 sounding rocket in a row

Rohini is a series of sounding rockets **developed by the Indian Space Research Organisation** (ISRO) for **meteorological and atmospheric study**.

These sounding rockets are **capable of carrying payloads of 2 to 200 kilograms** (4.4 to 440.9 lb) between **altitudes of 100 to 500 kilometres** (62 to 311 mi).

The ISRO currently uses **RH-200, RH-300, RH-300 Mk-II, RH-560 Mk-II and RH-560 Mk-III rockets**, which are launched from the **Thumba Equatorial Rocket Launching (TERLS) in Thumba and the Satish Dhawan Space Center in Sriharikota.**

The rockets in the series are designated with the letters RH (for "Rohini"), followed by a number corresponding to the **diameter (in millimetres)** of the rocket.

RH-200: The RH-200 has a **maximum launch altitude of 70 kilometres** (43 mi).

The ISRO has launched **more than 1,600 RH-200 rockets so far**.

The rocket celebrated its **100th consecutive successful mission on July 15, 2015**.

Over the years, the rocket has served as a flexible platform for **experiments and testing out new technologies**.

The **3.5-metre-tall RH-200**, a trusted member of the Rohini sounding rocket family used by the ISRO for atmospheric studies, has **completed 198 consecutive successful flights**, according to the Vikram Sarabhai Space Centre (VSSC), Thumba.

The 199th launch, from Thumba, will happen on October 7 during the **World Space Week celebrations**.

RH-200 is a **two-stage rocket** capable of climbing to a height of 70 km bearing scientific payloads. The **first and second stages** of RH-200 are powered by **solid motors**.

The **first sounding rocket** to be **launched from Thumba** was the **American Nike-Apache** — on November 21, 1963.

After that, **two-stage rockets** imported **from Russia (M-100) and France (Centaure)** were flown.

The **ISRO launched** its **own version — Rohini RH-75 — in 1967**.

The RH-200 rocket had used a **polyvinyl chloride (PVC)-based propellant**. The first RH-200 to use **a new propellant based on hydroxyl-terminated Polybutadiene (HTPB)** was successfully flown from the TERLS in September 2020