

KERALA

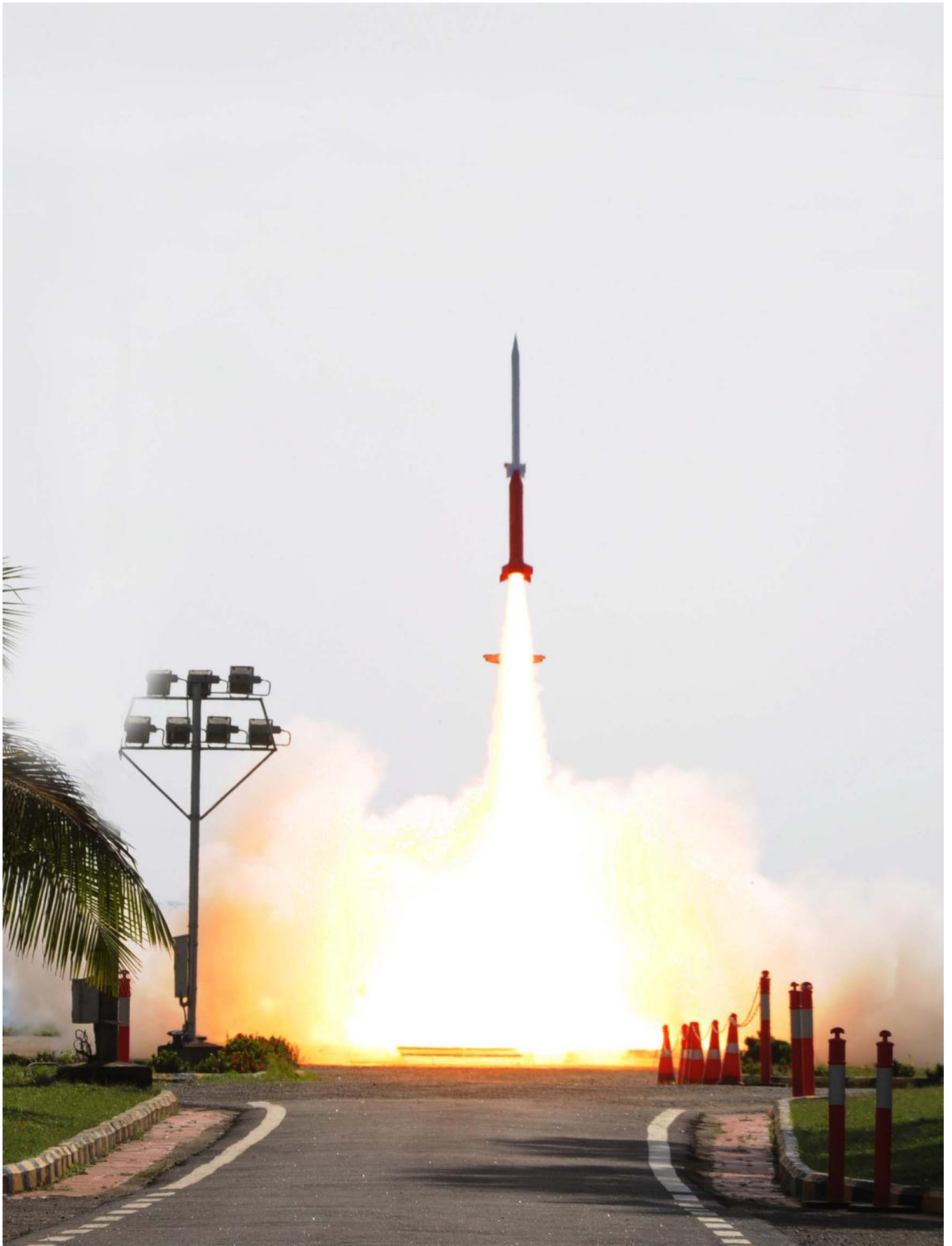
ISRO eyeing 200th successful launch of RH-200 sounding rocket in a row

Tiki Rajwi

THIRUVANANTHAPURAM SEPTEMBER 24, 2022 19:39 IST

UPDATED: SEPTEMBER 25, 2022 07:58 IST

3.5-metre-tall RH-200 is a trusted member of the Rohini sounding rocket family used by ISRO for atmospheric studies





In a few weeks' time, the Indian Space Research Organisation (ISRO) hopes to achieve a remarkable feat – the 200th successful launch of the Rohini RH-200 sounding rocket in a row.

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. The 200th will take place either towards the end of October or the beginning of November, VSSC Director S. Unnikrishnan Nair told *The Hindu* on Saturday.

“When RH-200 was first introduced, we were taking our baby steps in rocketry. So there was focus on aspects such as spin-stabilisation and solid motors, in addition to atmospheric studies. Sounding rockets have since been used for a variety of experiments, including those on phenomena related to eclipses,” Dr. Unnikrishnan Nair said.

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 ‘200’ in the name denotes the diameter of the rocket in mm. Other operational Rohini variants are RH-300 Mk-II and RH-560 Mk-III.

Sounding rockets have an important place in the ISRO story. 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 sounding rocket programme “was indeed the bedrock on which the edifice of launch vehicle technology was built”, the space agency has noted.

Today, these small rockets are launched both from the Thumba Equatorial Rocket Launching Station (TERLS) and the Satish Dhawan Space Centre, Sriharikota.

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.

For years, 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.