ISRO to launch NVS-03, the 12th NavIC satellite, on GSLV Mk II from Sriharikota on 30 Oct

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News

According to ISRO's announcement on 22 Oct 2026, NVS-03 – the 12th satellite of the Indian Regional Navigation Satellite System (IRNSS / NavIC) and the third of the second-generation NVS series – will be launched on 30 Oct 2026 by a GSLV Mk II from Satish Dhawan Space Centre, Sriharikota. Mass 2,232 kg; life 12 years; it carries an indigenous Rubidium atomic clock developed by the Space Applications Centre (SAC), Ahmedabad. It was earlier targeted for 15–20 Oct. With ageing satellites and clock failures, only three satellites now provide service (standalone positioning needs at least four), so NVS-03 aims to restore NavIC.

Key facts

Satellite	NVS-03 – 12th NavIC satellite (counting failed IRNSS-1H and NVS-02); 3rd of NVS series; 2,232 kg; 12-year life
Launch	30 Oct 2026 – GSLV Mk II, Satish Dhawan Space Centre, Sriharikota (Andhra Pradesh)
Signals	L1, L5 and S bands; indigenous Rubidium atomic clock (SAC, Ahmedabad)
NavIC	7-satellite design (3 geostationary + 4 geosynchronous); India + ~1,500 km beyond its borders

NVS-02	29 Jan 2025 – GSLV-F15 (100th launch from Sriharikota); orbit-raising failed due to a pyro-valve problem
ISRO chief	Dr V. Narayanan (since Jan 2025; Kanyakumari district)

Background

- History: IRNSS-1A – 1 July 2013, PSLV-C22. In 2016 PM Modi named it 'NavIC' (Navigation with Indian Constellation). IRNSS-1H (2017) failed as its heat shield did not separate. Failures of imported Rubidium clocks created the need for replacements. NVS-01 (29 May 2023, GSLV-F12) carried the first indigenous atomic clock.
- Science: satellite navigation fixes position from the time differences of signals from several satellites – so highly precise atomic clocks are essential. NavIC offers a Standard Positioning Service (SPS) for civilians and a Restricted Service (RS) for authorised users. The NVS series adds the L1 band to L5 and S – helping use in common devices such as phones.
- Global systems: GPS – USA; GLONASS – Russia; Galileo – European Union; BeiDou – China (global); QZSS – Japan and NavIC – India (regional). GSLV Mk II is a three-stage rocket with solid, liquid and indigenous cryogenic stages.

Tamil Nadu link: GSLV's cryogenic and liquid engines are tested at the ISRO Propulsion Complex (IPRC), Mahendragiri, Tirunelveli district. ISRO Chairman Dr V. Narayanan hails from Kanyakumari district. ISRO's second spaceport, for small rockets (SSLV), is coming up at Kulasekarapattinam, Thoothukudi district.

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