

L1 frequency for NavIC

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In news– To promote the use of NavIC, the Indian version of GPS, the Indian Space Research Organisation (ISRO) will introduce the L1 frequency in all its future satellites.

The L1 frequency for NavIC-

- As per ministry of Science and Technology, the next satellites, starting from NVS-01 onwards, will have an L1 band for civilian navigational use.
- The seven satellites in the NavIC constellation so far use two frequencies for providing positioning data – the L5 and S bands.
- The new satellites NVS-01 onwards, meant to replace these satellites, will also have L1 frequency.
- L1 sends a navigation message at 1575.42 MHz, the coarse acquisition C/A code (which is open to the public), and an encrypted precision (P) code known as the P(Y) code (restricted access).
- The **L1 is the oldest and most established GPS signals**, which even the less sophisticated, civilian-use devices such as smartwatches are capable of receiving.
- Thus, with this band, the use of NavIC in civilian-use gadgets can go up.

About 'NAVigation with the Indian Constellation' (NavIC)-

- NavIC is India's homegrown alternative to GPS. Developed by ISRO, the navigation satellite system was first approved in 2006 at a cost of \$174 million, but became operational only by 2018. At present, it consists of eight satellites, covering the whole of India and up to 1,500 km from its boundaries.
- NavIC is mainly being used in public vehicle tracking, to provide emergency warning alerts to fishermen venturing into the deep sea, and for tracking data

related to natural disasters.

- Apart from the US-owned GPS, the other prominent navigation systems are Galileo from the European Union, Russia-owned GLONASS and China's Beidou. QZSS, operated by Japan, is another regional navigation system covering Asia-Oceania region.

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