

# 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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