IRNSS — NAVIC

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Indian Regional Navigation Satellite System (IRNSS)

Indigenous GPS — NavIC

Source:ISRO

What is Navigation with Indian constellation(NavIC)?

- **It is a Indian version of American GPS**
- IRNSS is also named NavIC.
- It provides timing services,real-time position and navigation which covers the whole India and the region extending 1500 km around it.

About IRNSS

- IRNSS is named NavIC
- IRNSS is an independent regional navigation satellite system being developed by India. It is designed to provide accurate position information service to users in India as well as the region extending up to 1500 km from its boundary, which is its primary service area.
- IRNSS will provide two types of services, namely, Standard Positioning Service (SPS) which is provided to all the users and Restricted Service (RS), which is an encrypted service provided only to the authorised users.
- The IRNSS System is expected to provide a position accuracy of better than 20 m in the primary service area.
- **The IRNSS Signal-in-Space: The IRNSS Signal-in-Space Interface Control Document for Standard Positioning Service (SPS) is released to the public to provide the essential information on the IRNSS signal-in-space, to**

facilitate research & development and aid the commercial use of the IRNSS signals for navigation-based applications.
- **IRNSS-1A spacecraft:** It provides **messaging service to users in the Indian region**.

Position and space segment

- The space segment consists of the IRNSS constellation of eight satellites, NavIC.
- Three satellites are located in suitable orbital slots in the **geostationary orbit** and the remaining four are located in **geosynchronous orbits** with the required inclination and equatorial crossings in two different planes.

Applications of IRNSS

- Terrestrial, Aerial and Marine Navigation
- Disaster Management
- Vehicle tracking and fleet management
- Integration with mobile phones
- Precise Timing
- Mapping and Geodetic data capture
- Terrestrial navigation aid for hikers and travellers
- Visual and voice navigation for drivers