

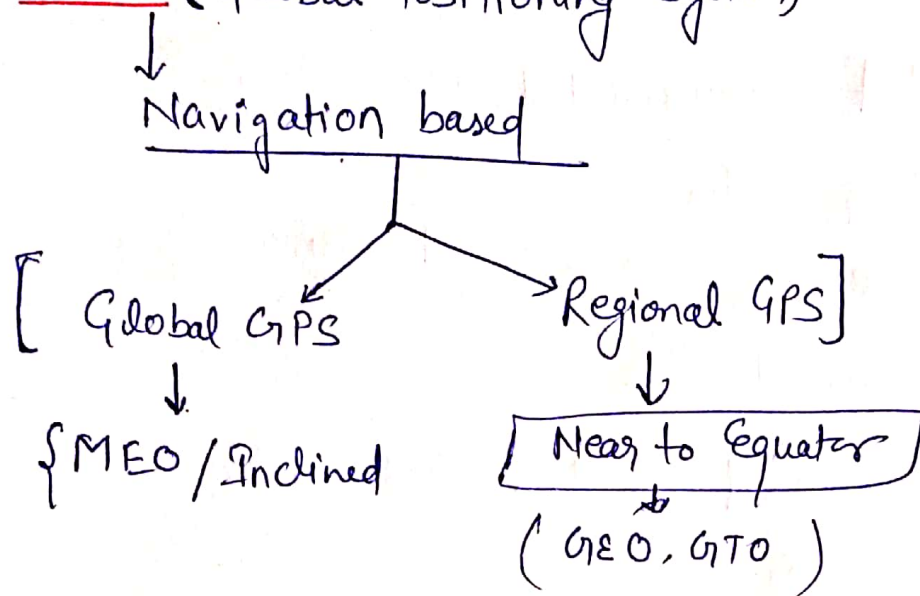
①

Date  
25/07/2020

# Science & Tech

## Topic - International Space Mission GPS

GPS (Global Positioning System)



GPS → Work ?  
 ↳ Through the help of imaginary lines

Latitude  
 Longitude  
 +  
 Altitude

1970's - GPS - NAVSTAR

"Navigation Satellite and Ranging" (US) ← Military + Civilian } Purpose

⇒ GNASS (Global Navigation Satellite System)

⇒ Beidou  
(Regional)

COMPASS - By 2020  
(GLOBAL)

⇒ Galileo  
(EU) | Regional → 2020 Globalised

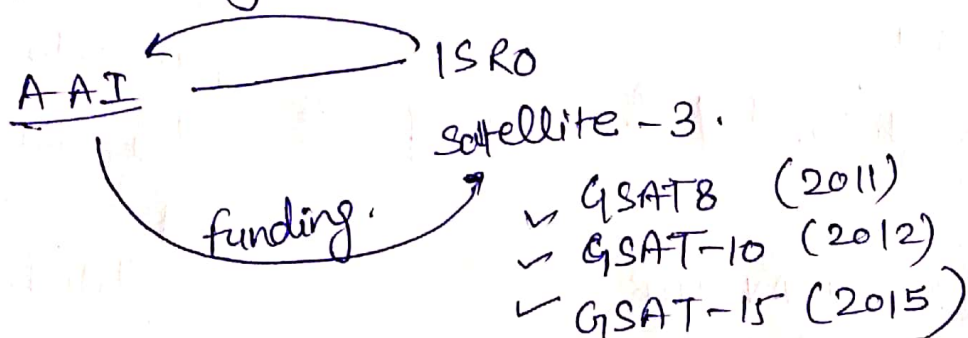
(2)

Japan France ————— 2020+

INDIAN  
GPS → Regional GPS → ~~Global GPS~~  
No target

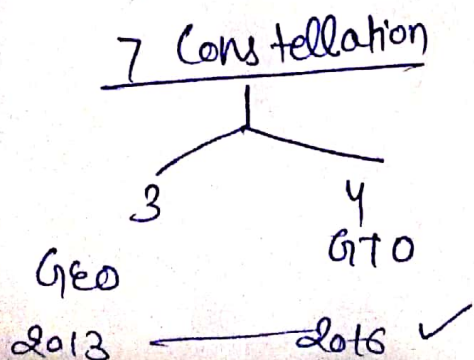
1. GAGAN - GPS aided Geo augmented Navigation.

- ↓
- 1st Regional GPS of India.
- also called as SBAS (Satellite based augmentation system).
- To modernise the air traffic
- AAI & ISRO worked together for GAGAN  
|  
{ Airport Authority of India }



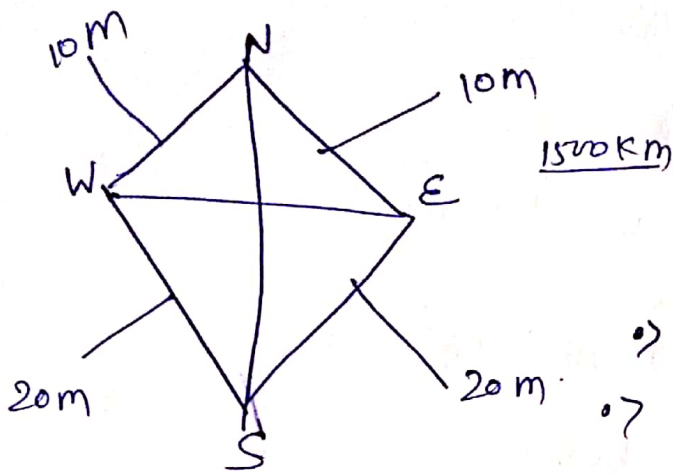
# IRNSS (Indian Regional Navigation Satellite system).

Govt of India - ~~2006~~ 2006



Two System

- ① SPS (Standard Position System)  
↳ Civilian uses
- ② PPS (Precision Positioning system)  
↳ Encrypted



Resolution  
(Clarity Closed)

- Movement of troops
- Terrorist activity
- Coastal Region.

# 2014 -

NAVIC - Navigation Indian Constellation.

↓  
Dedicated to fishermen of India.

Bhuvan - Wikipedia - 2009  
↓  
of India

• also see Boundry.

• weather detection.

• 3 Satellites Constellation → Cartosat-I & II  
→ Resourcesat-I

- NRSC/NRSA - it is the coordination agency for Bhuvan app.



④

HST - (Hubble Space Telescope)

TMT - (Thirty Meter Telescope)

ISS - (International Space Station)

# HST → launched in LEO in 1990.

(2015)

- Study about Supernova
- Information about Comet
- Study of Black hole

# TMT — China  
Japan  
Canada  
India } + USA

Mauna Kea

~~Maunakea~~ Hawaii  
Island

TMT setup at this Island

# ISS (International Space Station)

(Human Creature / Research place in space at LEO.)

USA — NASA  
Russia — Roscosmos  
Canada — CSA  
Japan — JAXA  
Europe — ESA

} Participating in ISS

ISS → place of Microgravity Environment.

- Physics (Superconductivity)
- Human & Plant