

TOPIC: SATELLITES AND COMMUNICATION

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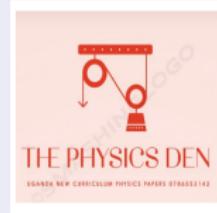
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SATELLITES

- A **satellite** is an object that moves around a large object.

KEY words

- Satellites
- Communication
- Satellite altitude
- GPS
- ISS
- HST



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Types of Satellites

- 1. Natural satellites.
- 2. Artificial satellites.

Natural satellites

- The moon which orbits the earth
- The earth which orbits the sun
- Triton (Neptune's largest moon)
- Asteroids
- Comets

Artificial satellites

These are man-made satellites

- GPS
- GOES
- MILSTAR
- TERRIERS

Uses of Satellites

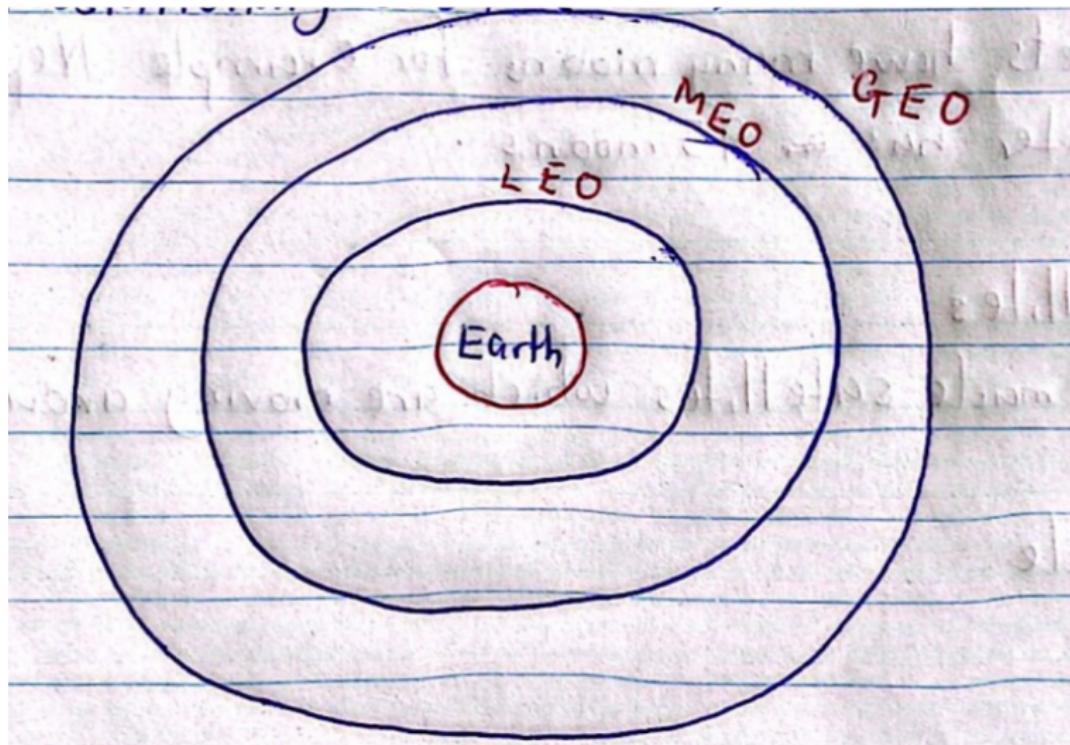
- Navigation e.g. GPS
- Earth observation – including weather forecasting, tracking storms and pollution, spying and satellite photography.
- Communication – satellite television and phone calls.
- Astronomy

Altitude of Satellites

The altitudes of artificial satellites vary depending on their use.

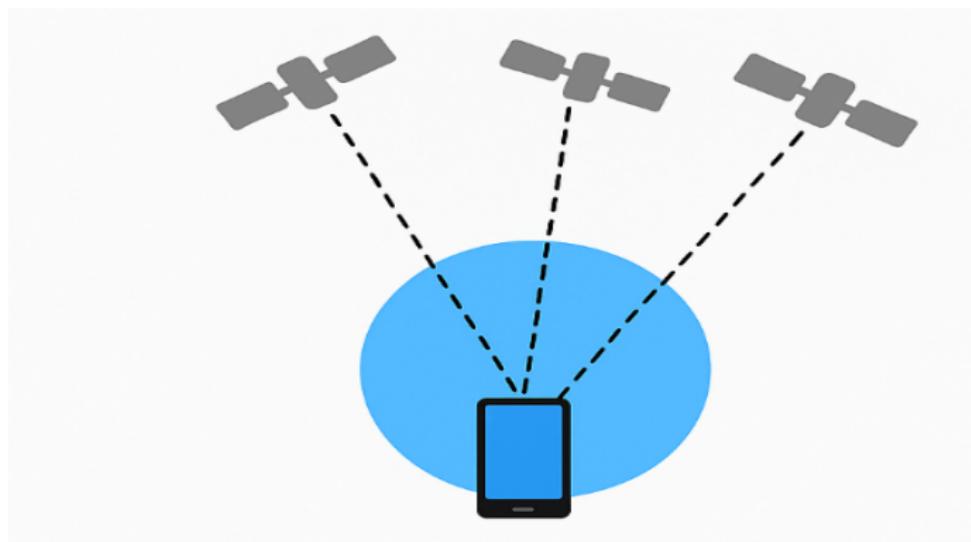
The commonly used orbits are;

- i) Low Earth Orbit (LEO)
- ii) Medium Earth Orbit (MEO)
- iii) Geostationary Orbit (GEO)

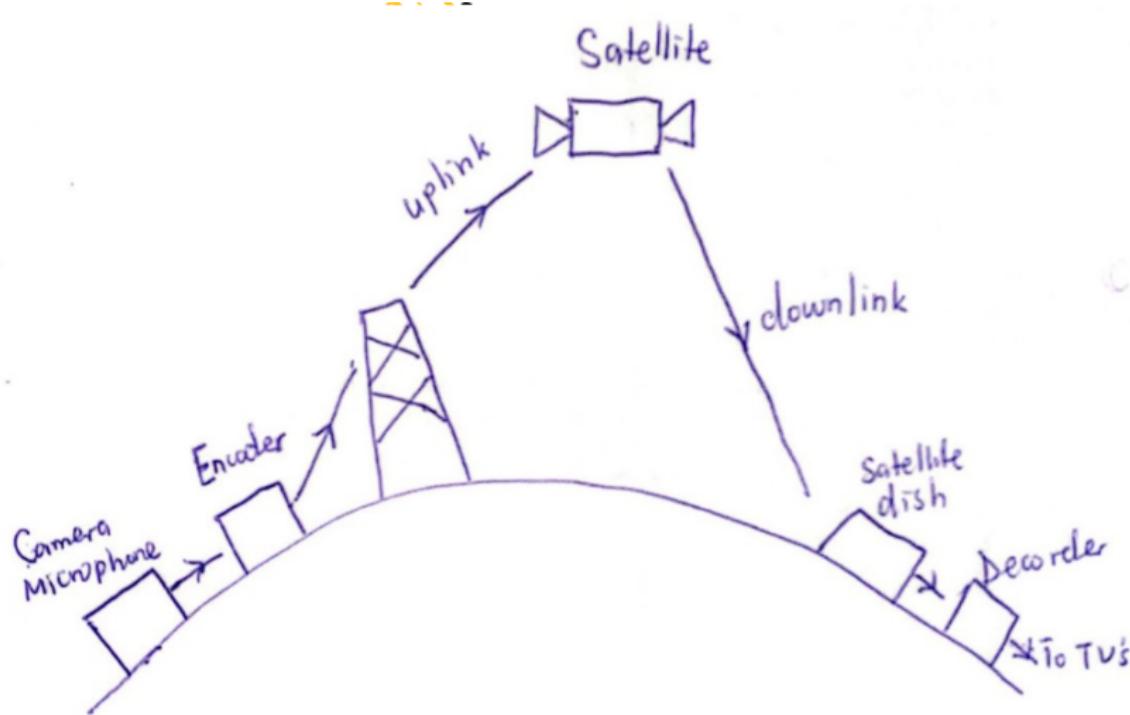


GLOBAL POSITIONING SYSTEM (GPS)

- This is a satellite-based navigation system that consists of 24 orbiting satellites.
- Each satellite orbits the earth twice every 24 hours.



Communication satellites.



CLASSIFICATION OF ARTIFICIAL SATELLITES.

- Communication satellites
- Weather satellites
- Earth observation satellites
- Astronomical satellites

INTERNATIONAL SPACE STATION (ISS)

- It is a habitable space laboratory
- It is at an altitude of 400 km traveling at speed of $28,000 \text{ kmh}^{-1}$
Orbits the earth once every 92 minutes.
- Experiments are performed from there.
- It supports navigation and exploration of space.

HUBBLE TELESCOPE

- It is a space telescope that was launched into low earth orbit in 1990
- It is one of the largest space telescopes.
- It takes sharp pictures of objects in the sky such as planets, stars and galaxies.
- These include detailed pictures of birth and death of stars, comet pieces crashing into Jupiter's atmosphere.
- Hubble telescope takes images in black and white, they are then coloured.

END