REMOTE SENSING : SATELLITES + SENSORS

SENSOR PLATFORM

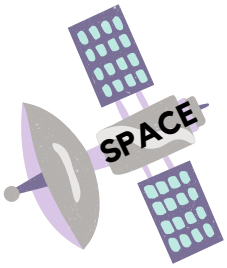
GROUND

- Detailed information about **surface** which is **compared** with information collected from **aircraft** or **satellite** sensors
- **Characterize target** which is being imaged by other sensors, for better understanding of the information in the imagery

AIR

- On a ladder, scaffolding, tall building, cherry-picker, crane etc
- **Aircraft** are often used to collect **very detailed images** and **facilitate the collection of data** over virtually any portion of the Earth's surface at any time

SPACE

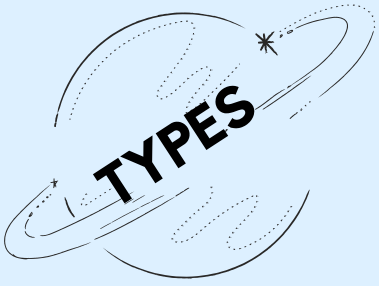


- From **space shuttle** or commonly from **satellites**
- **Satellites** revolve around the Earth
- Repetitive **coverage of the Earth's surface** on a continuing basis

SATELLITE CHARACTERISTICS

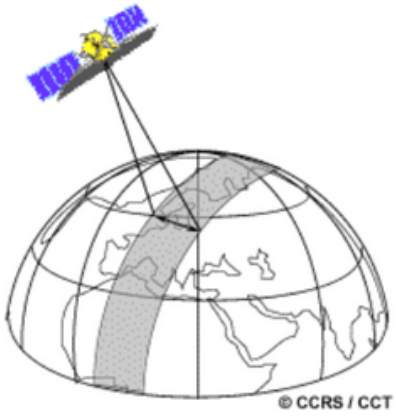
ORBIT

- The path followed by a satellite
- Matched the capability and objective of the sensor(s) they carry
- **Orbit selection varies** in terms of altitude (their height above the Earth's surface) and their orientation and rotation relative to the Earth



Geostationary orbit: revolve at speeds that match the rotation of the Earth so they seem stationary, relative to the Earth's surface

Near polar orbit: inclination of the orbit relative to a line running between the North and South poles



SWATH

- The area imaged on the surface, the sensor "sees" a certain portion of the Earth's surface as a satellite revolves around the Earth
- Imaging swaths for spaceborne sensors generally vary between tens and hundreds of kilometres wide