

Satellite Remote Sensing

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SATELLITE REMOTE SENSING

In popular usage, the term *satellite* normally refers to an **artificial satellite**, which would be a man-made object that orbits the Earth (or another body). However, scientists may also use the term to refer to natural satellites, or moons. In general word usage, "natural satellite" is the term used to refer to moons.

Artificial satellites

- The first artificial satellite

- The first artificial satellite was Sputnik 1 launched by Soviet Union on October 4, 1957

- United States 1958 Explorer 1

- Canada 1962 Alouette

Artificial satellites

- France 1965 *Astérix*
- Japan 1970 *Osumi*
- China 1970 *Dong Fang Hong I*
- United Kingdom 1971 *Prospero X-3*
- European Union 1979 *CAT 1*
- India 1975 *Aryabhata*
- Israel 1988 *Ofeq 1*
- Kazakhstan 2006 *KazSat 1*

Types of satellites

- Astronomical satellites are satellites used for observation of distant planets, galaxies, and other outer space objects.
- Communications satellites are artificial satellites stationed in space for the purposes of telecommunications using radio at microwave frequencies. Most communications satellites use geosynchronous orbits or near-geostationary orbits, although some recent systems use low Earth-orbiting satellites.

Types of satellites

- Earth observation satellites are satellites specifically designed to observe Earth from orbit, similar to reconnaissance satellites but intended for non-military uses such as environmental monitoring, meteorology, map making etc. (See especially Earth Observing System.)

Types of satellites

- Navigation satellites are satellites which use radio time signals transmitted to enable mobile receivers on the ground to determine their exact location. The relatively clear line of sight between the satellites and receivers on the ground, combined with ever-improving electronics, allows satellite navigation systems to measure location to accuracies on the order of a few metres in real time.

Types of satellites

- Killer Satellites / Anti-Satellite Weapons are satellites designed to destroy "enemy" satellites, other orbital weapons and targets. Some are armed with kinetic rounds, while others use energy and/or particle weapons to destroy satellites, ICBMs, MIRVs. Both the US and the USSR had these satellites.

Types of satellites

- Reconnaissance satellites are Earth observation satellite or communications satellite deployed for military or intelligence applications. Little is known about the full power of these satellites, as governments who operate them usually keep information pertaining to their reconnaissance satellites classified.

Types of satellites

- Solar power satellites are proposed satellites built in high Earth orbit that use microwave power transmission to beam solar power to very large antenna on Earth where it can be used in place of conventional power sources.

Types of satellites

- Space stations are man-made structures that are designed for human beings to live on in outer space. A space station is distinguished from other manned spacecraft by its lack of major propulsion or landing facilities — instead, other vehicles are used as transport to and from the station. Space stations are designed for medium-term living in orbit, for periods of weeks, months, or even years.

Types of satellites

- Weather satellites are satellites that primarily are used to monitor the weather and/or climate of the Earth.
- Biosatellites are satellites designed to carry living organisms, generally for scientific experimentation.