



Satellites

A satellite is something that orbits the Earth or other heavenly body. The first artificial satellite was Sputnik 1, launched by the USSR on 4 October 1957.

There are now over 3000 satellites in orbit around the Earth. They are used for many purposes, ranging from remote sensing, communications, military surveillance to space astronomy.

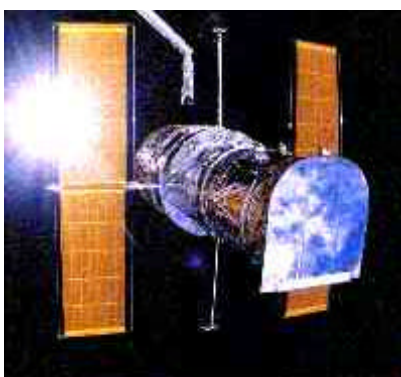
Russia is responsible for 65% of all launches, with USA, Japan and Europe launching the rest.

A geostationary satellite is one that orbits the Earth at a height of 35 900 km (22 300 miles). A satellite at this height will take 24 hours to orbit the Earth and because the Earth takes 24 hours to rotate once, the satellite stays in the same part of the sky at all times.



Geostationary satellites are used for many purposes, most commonly for communications. For instance, satellite television uses several geostationary satellites to 'beam' the signal to users on the ground. Mobile phone users send their signal up to a satellite which is then passed on to the person they are speaking to.

The picture right is of Skylab (actually Skylab IV). This was an American space station launched in 1973. It set an American record when it was manned by the third crew for almost 84 days. After this it was left unmanned and it eventually crashed back down to Earth in Australia in 1979.



This duration record has been easily smashed by the Russian space station Mir, with several crews spending around a year in space!

One of the most famous satellites is perhaps the Hubble Space Telescope (HST). Launched in 1990 the HST is a large (2.4 m) telescope used for viewing in the visible and ultraviolet wavelengths. It has taken some spectacular pictures and has helped astronomers understand the universe. The HST can easily beat any pictures taken by a ground based telescope.

(see picture left and picture right)

