

**Answer on Question#39175 – Physics – Other**

Where from the satellite gets force for its motion? Explain the condition for good satellite communication

**Solution:**

The fundamental principle to be understood concerning satellites is that a satellite is a projectile. Satellite is an object upon which the only force is gravity. Once launched into orbit, the only force governing the motion of a satellite is the force of gravity.

At about 3200 km above Earth surface the satellite is given an initial horizontal thrust. The satellite starts to move in a straight line, but because of the Earth's gravitational force the satellite slightly changes its direction.

The centripetal force is provided by gravitational force (attraction) between the Earth and satellite.

For good satellite communication the satellite should send its signal via Radio waves as it can travel longer than any other waves. Also the satellite should be in geostationary orbit so that it can remain in contact with the ground station at all times (direct visibility of satellite).

Communications between satellites is also important according to the channel bandwidth. The most used method of communication is laser.

Compared to radio technology, laser communications has the promise of much higher data rates. In addition, the ability to tightly collimate the transmitted laser emission limits the interference between satellites.