

Resolution spatial resolution is the ability to distinguish between two objects on the ground. A spatial resolution capability of 5 meters means that objects closer together than 5 meters will appear to the sensor as one. Normally an increase in resolution implies a loss in the size of the field of view. Resolution may also be spectral resolution is the ability to distinguish between spectral wavebands or between objects at slightly different temperatures or it may be in velocity. The resolution of a sensor is the smallest interval capable of being detected by that sensor.

Satellite A satellite is an object which is held in orbit about another object due to gravitational attraction between the two bodies. Satellites may be man made or natural. For example, the moon is a natural satellite of the earth.

Sensor A device that can detect electromagnetic radiation or other energy emitted or reflected by an object at a distance. It is an instrument used to measure or detect radiation. A sensor may be a camera, a scanner, a radar, or a spectrometer. A sensor may also be a device that can detect other forms of energy, such as sound or heat.

Sensor resolution The distance between two objects on the earth's surface that a sensor is able to detect in one image. Resolution is determined by the sensor's ability to distinguish between two objects. Resolution is affected by the sensor's aperture, the wavelength of the radiation being detected, and the distance between the sensor and the objects.

Synthetic Aperture Radar A radar designed to enhance the resolution in the across-track direction of the radar motion. It achieves this by storing the returned data for a period of time and then processing each scan with long antennas. SAR is used primarily for ground imaging.

Tracking Once an object has been detected, tracking involves monitoring the subsequent course of the object. Tracking may be continuous, in which case the sensor continuously monitors the object, or it may be periodic, with the sensor revisiting the object to be tracked. Tracking may also be done using a series of sensors, each of which monitors a different part of the object's path.

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Repeat interval or revisit time The period required for the spacecraft to return to the same area of interest.

