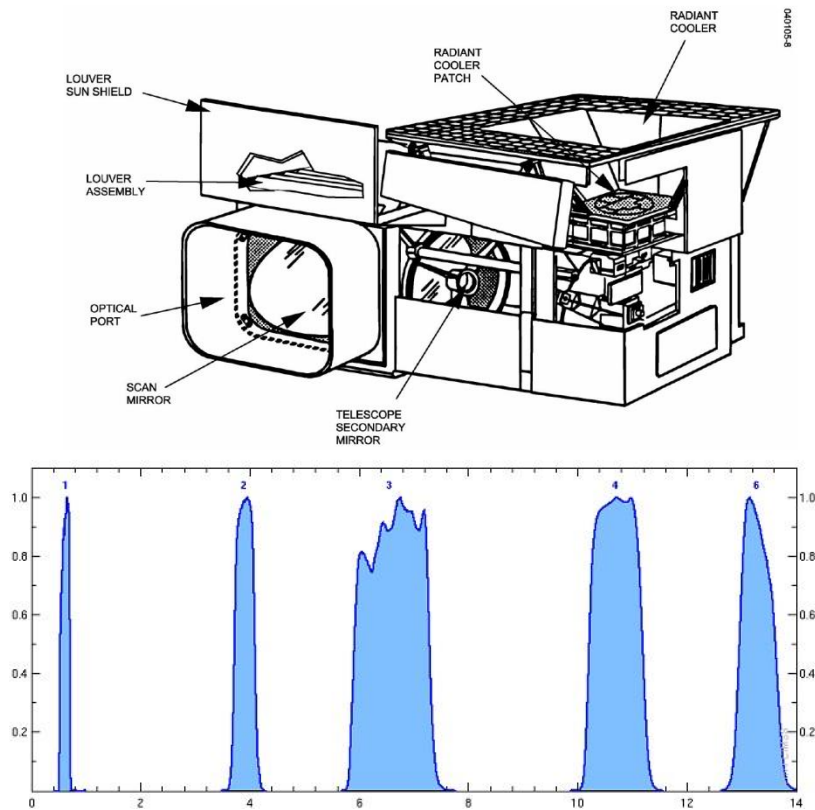


The GOES Imager Spectral Bands



The GOES (Geostationary Operational Environmental Satellite) are located at approximately 36,000 km above the earth. One of the earth-looking instruments on the GOES is an Imager that has five spectral bands. One band is in the visible part of the electro-magnetic spectrum that senses reflected energy (i.e., sunlight), while the other four bands capture emitted or infrared (i.e., heat) energy from the earth. The nominal spatial resolution (or pixel size) of the visible band is 1 km, while the other infrared bands are 4 km.

GOES Imager band nominal wavelengths (GOES-12 through 15)

GOES Imager Band	Name	Central Wavelength (μm)	Objective
1	Visible	0.63	Cloud cover and surface features during the day, smoke, etc.
2	Shortwave window	3.9	Low cloud/fog, fire detection, winds, etc.
3	Water vapor	6.48	Upper-level water vapor, winds, etc.
4	Longwave window	10.7	Surface or cloud-top temperature, precipitation, etc.
5	N/A	N/A	N/A
6	CO ₂ band	13.3	CO ₂ band: Cloud detection, etc.

More information: http://goes.gsfc.nasa.gov/text/GOES-N_Databook_RevC/Section03.pdf