

(Heritage or Legacy) GOES Imager Characteristics						
Chan. No.	Resolution (km)	Nominal Wavelength, Band (μm)	Name of Spectral Band	Channel Names	Window or Absorption, Physical Process	Purpose
1	1	0.65 0.55-0.75	Visible	Visible	Window, reflected solar.	General wx monitoring, fog, storm systems, hurricanes, thunderstorms. Daytime only!
2	4	3.9 3.8-4.0	Near IR	Near IR, Shortwave IR, IR2	Window, emission from land and cloud surfaces; emissivity differences, some daytime reflection.	Fire hotspots, nighttime fog (with IR4), volcanic ash (w/ IR4 & IR5).
3	8 4**	6.7 (6.5 starting w/GOES-12) 6.5-7.0 (5.8-7.3 for GOES-12)	Water vapor absorption band of the thermal IR	Water vapor, WV, IR3	Absorption, Emission from clear-air atmospheric water vapor and cloud tops.	Middle and upper tropospheric water vapor and cloud tops; storm monitoring, upper atmospheric flow patterns, atmospheric short waves & upper level cyclonic vorticity maxes.
4	4	10.7 10.2-11.2	Thermal IR	IR, IR4 (formerly IR1), Window Channel	Window Emission from land and cloud surfaces.	Cloud top and surface temperature, cloud height, synoptic and mesoscale storm development, hurricanes, thunderstorms
5*	4	12.0 11.5-12.5	Thermal IR	Dirty Window, Split Window IR5 (formerly IR2)	Window, but with significant absorption by water vapor. Emission from land and cloud surfaces and lower tropospheric water vapor.	Used in conjunction with IR4 to estimate precipitable water using "split window" technique. Also can be used in conjunction with IR2 & IR4 for volcanic ash detection.
(6)**	8	13.3 12.96-13.71	Thermal IR	CO₂, IR6	Absorption (by CO ₂)	Cirrus cloud height (with IR4)
<p style="text-align: center;">* Not available on the GOES N-P (13-15) series satellites ** Replaced Channel 5 starting on GOES-12 ** GOES-12</p>						