Component	Spectral Sensitivity (radiance only, radiance + polarization)			Accuracy (percent for Radiance, percent for DoLP)			Radiance stability	Angles		Horizontal resolution at nadir	Swath width		Maximum reflectance	Applications		
	UV/Blue (320 - 410nm)	VIS (440 - 870nm)	NIR/SWIR	Uv/Blue	VIS	NIR		Range	Number		For all angles	For at least one angle		Aerosol	Cloud	Other
A1	**340, 380**	**440 + 2 other channels**		**3%**	**3%, 0.5%**		0.1% in one orbit, 0.7% over 5 year period with onboard or lunar cal	± 50˚	Min. 7 to 20, G: *~100 in 1 VIS channel*	Min. between 0.5 - 6km, *G: 250m in at least 1 channel*	~400km	2 day global coverage, ~1500km	Detect equivalent reflectance of up to 1.1	AOD, AAOD, Refractive Index (400-870nm), Size distribution, Particle number concentration	Detection, top height, top phase, water path, COD, Radiative effect. *G (with ~100 angles in VIS): Droplet size distribution*	
A2	**410**	**3 channels**		**3%, 0.5%**	**3%, 0.5%**		0.1% in one orbit, 0.7% over 5 year period with onboard or lunar cal	± 50˚	Min. 7 to 20, G: *~100 in 1 VIS channel*	Min. between 0.5 - 6km, *G: 250m in at least 1 channel*	~400km	2 day global coverage, ~1500km	Detect equivalent reflectance of up to 1.1	AOD, AAOD, Refractive Index (400-870nm), Size distribution, Particle number concentration	Detection, top height, top phase, water path, COD, Radiative effect. *G (with ~100 angles in VIS): Droplet size distribution*	
*Goal: **B***		***760nm**, broad Oxygen A band*			***3%***		*0.1% in one orbit, 0.7% over 5 year period with onboard or lunar cal*	*Nadir*	*1*	*500 - 1000m*	*360 - 1500km*		*Detect equivalent reflectance of up to 1.1*	*Multilayer cloud detection*		
*Goal: **C***			***1 - 3 channels** between 900-960nm*			***3%***	*0.1% in one orbit, 0.7% over 5 year period with onboard or lunar cal*	*Nadir*	*1*	*Min. between 0.5 - 6km, G: 250m in at least 1 channel*	*~400km*	*2 day global coverage, ~1500km*	*Detect equivalent reflectance of up to 1.1*			*Total column water vapor*
D1			**1240nm**, 1 channel in 2100-2250nm. ***G: +1600nm***			**3%, 0.5%**	0.1% in one orbit, 0.7% over 5 year period with onboard or lunar cal	± 50˚	Min. 7 to 20, *G: ~100*	Min. between 0.5 - 6km	~400km		Detect equivalent reflectance of up to 1.1	**Adds over land:** AOD, Refractive Index, Size distribution, Particle number concentration	Detection, water path, COD, Droplet effective radius, Radiative effect, *G (with ~100 angles): Droplet size distribution*	Snow ice masking capability, ocean sediment detection
D2			**1600nm**, 1 channel in 2100-2250nm. ***G: +1240nm***			**3%, 0.5%**	0.1% in one orbit, 0.7% over 5 year period with onboard or lunar cal	± 50˚	Min. 7 to 20, *G: ~100*	Min. between 0.5 - 6km	~400km		Detect equivalent reflectance of up to 1.1	**Adds over land:** AOD, Refractive Index, Size distribution, Particle number concentration	Detection, water path, COD, Droplet effective radius, Radiative effect, *G (with ~100 angles): Droplet size distribution*	
E1			**1380nm. *G: 1380nm***			**3%, 0.5%**	0.1% in one orbit, 0.7% over 5 year period with onboard or lunar cal	Nadir	1	1-6km	~400km		Detect equivalent reflectance of up to 1.1	Separation of stratospheric and tropospheric aerosols. *G (with polarization): stratospheric aerosol charactization*	Cirrus Masking. *G (with polarization): Cirrus microphysical properties*	**Compared to E2 this is better if there is a stratospheric volcanic event**
E2			**1880nm. *G: 1880nm***			**3%, 0.5%**	0.1% in one orbit, 0.7% over 5 year period with onboard or lunar cal	Nadir	1	1-6km	~400km		Detect equivalent reflectance of up to 1.1	Separation of stratospheric and tropospheric aerosols. *G (with polarization): stratospheric aerosol charactization*	Cirrus Masking. *G (with polarization): Cirrus microphysical properties*	**Compared to E1 this is less sensitive to surface reflectance contamination**
*Goal: **F***			***3750nm***			***3%***	*0.1% in one orbit, 0.7% over 5 year period with onboard or lunar cal*	*Nadir*	*1*	*1-4km*	*~1500km*		*Sufficient to retrieve fire radiative power*			*Quantification of fires as aerosol sources*

Notes

Rows with the same color (eg A1 & A2) represent a choice between alternate configurations

Red indicates polarization sensitivity, **Blue** is radiance alone

Goal items are indicated with a G and italics