

Band	Wavel. µm	Width µm	Noise	FOV km	Purpose	GATES 1999	GOES-R 2008	GOES- I 1994	POES now	MODIS S 1998	Landsat 1998
VIS											
1	0.6	0.2	250/1	0.5	cloud albedo	x	x	x	x	x	x
NIR											
2	0.8	0.2	200/1	0.5	vegetation	x			x	x	x
SWIR											
3	1.37	0.02	150/1	1	cirrus	x				x	
4	1.65	0.2	250/1	1	cloud water, snow	x	x		x	x	x
5	2.2	0.2	200/1	1	cloud ice	x				x	x
MWIR											
6	3.60	0.4	0.1 K	1	low water vapor	x		S		x	
7	3.95	0.2	0.1 K	1	sfc & cloud temp.	x	x	x	x	x	
8	4.15	0.1	0.2 K	1	low air temp.	x		S			
mLWIR											
9	5.5	1.0	0.2 K	2	mid water vapor	x	x				
10	6.5	0.4	0.2 K	2	high water vapor	x		S		x	
11	7.0	0.4	0.2 K	2	mid water vapor	x	x	x	x	x	
12	7.5	0.4	0.2 K	2	low water vapor	x		S		x	
LWIR											
13	8.5	1.0	0.2 K	2	total water vapor	x			x	x	
14	9.7	0.2	1.0 K	2	ozone	x		S	x	x	
15	11.0	1.4	0.2 K	2	sfc & cloud temp.	x	x	x	x	x	x
vLWIR											
16	12.4	0.9	0.3 K	2	total water vapor	x	x	x	x		
17	13.3	0.4	0.5 K	2	high cloud cover	x	x	S	x	x	

Figure 5: Listing of the broadband channels proposed for GATES, the union of the GOES-R and MODIS channels. A few of the GOES-I Sounder (S) broadband channels are included that are useful for multispectral imagery, as well as the current POES complement of AVHRR and HIRS channels that are useful for monitoring clouds and water vapor.

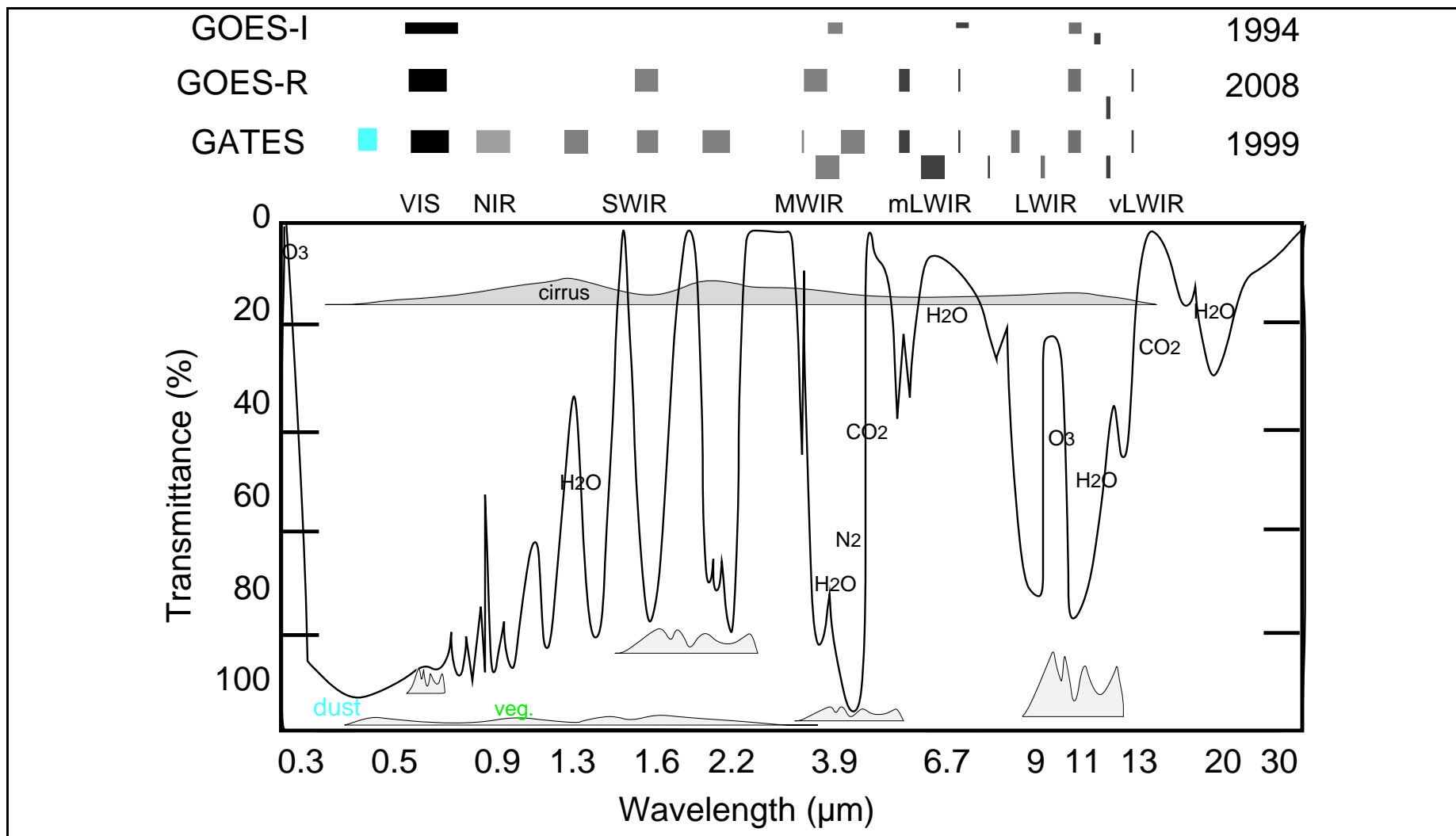


Figure 6: Graphical specification for the GATES spectral bandpasses compared to the transmittance spectrum of the Earth's atmosphere. The bandpasses for GOES-I and GOES-R are compared to GATES.