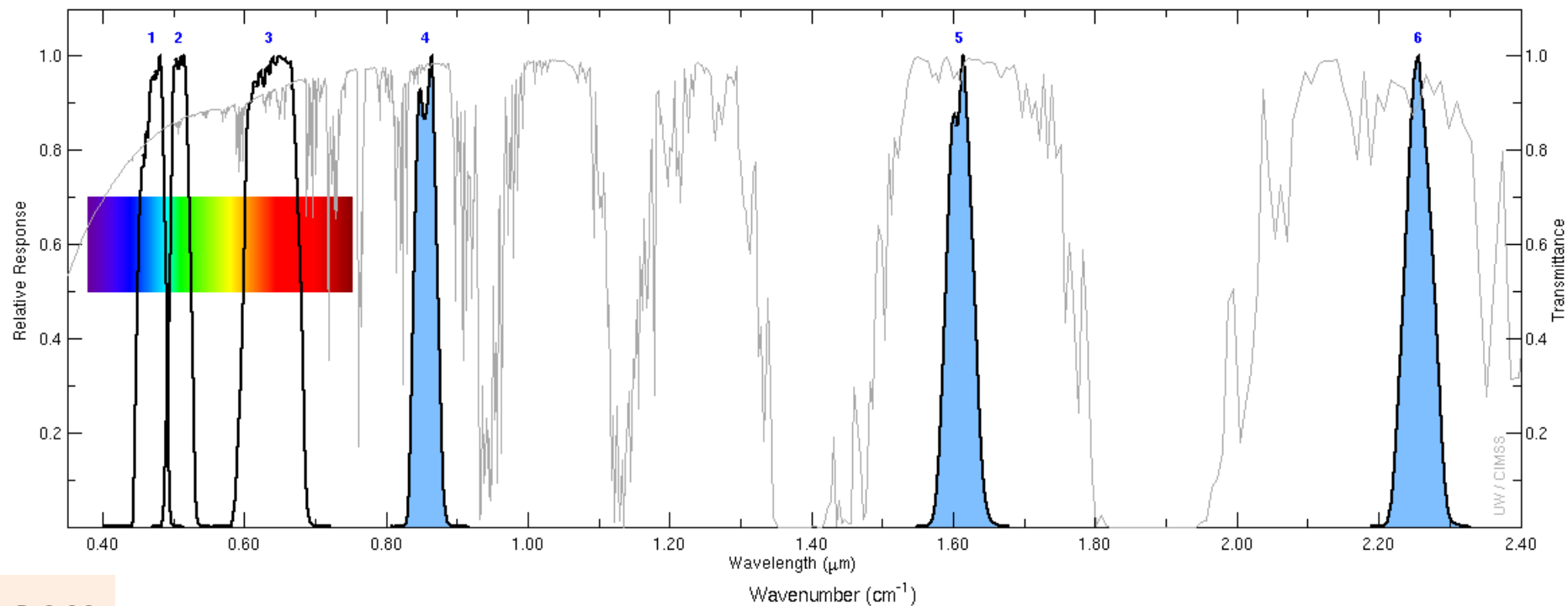


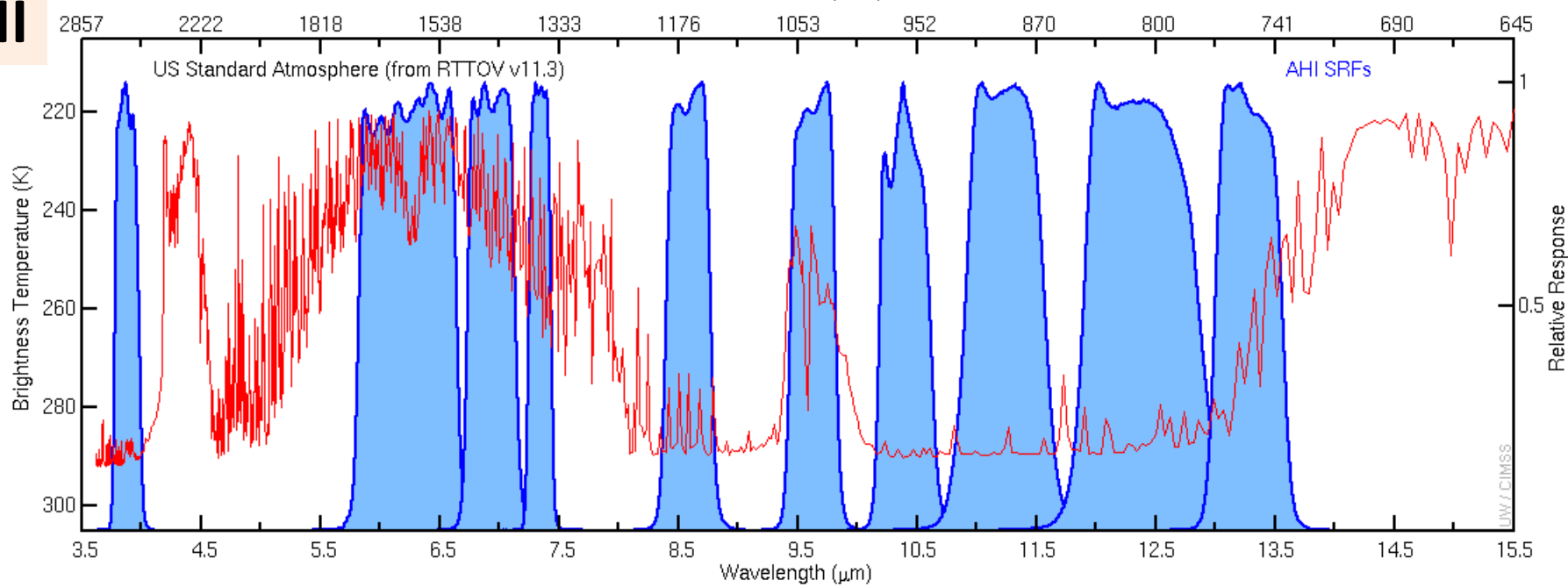
Advanced Baseline Imager Spectral Bands

AHI Band	AHI Approximate Central Wavelength (μm)	ABI Approximate Central Wavelength (μm)	ABI Band	Type	Nickname
1	0.47	0.47	1	Visible	Blue
2	0.51			Visible	Green
3	0.64	0.64	2	Visible	Red
4	0.86	0.86	3	Near-Infrared	Veggie
		1.4	4	Near-Infrared	Cirrus
5	1.6	1.6	5	Near-Infrared	Snow/Ice
6	2.3	2.2	6	Near-Infrared	Cloud Particle Size
7	3.9	3.9	7	Infrared	Shortwave Window
8	6.2	6.2	8	Infrared	Upper-level Water Vapor
9	6.9	6.9	9	Infrared	Mid-level Water Vapor
10	7.3	7.3	10	Infrared	Lower-level Water Vapor
11	8.6	8.4	11	Infrared	Cloud-Top Phase
12	9.6	9.6	12	Infrared	Ozone
13	10.4	10.3	13	Infrared	“Clean” Longwave Window
14	11.2	11.2	14	Infrared	Longwave Window
15	12.4	12.3	15	Infrared	“Dirty” Longwave Window
16	13.3	13.3	16	Infrared	CO₂ Longwave

Rows in bold are similar bands to current GOES



AHI

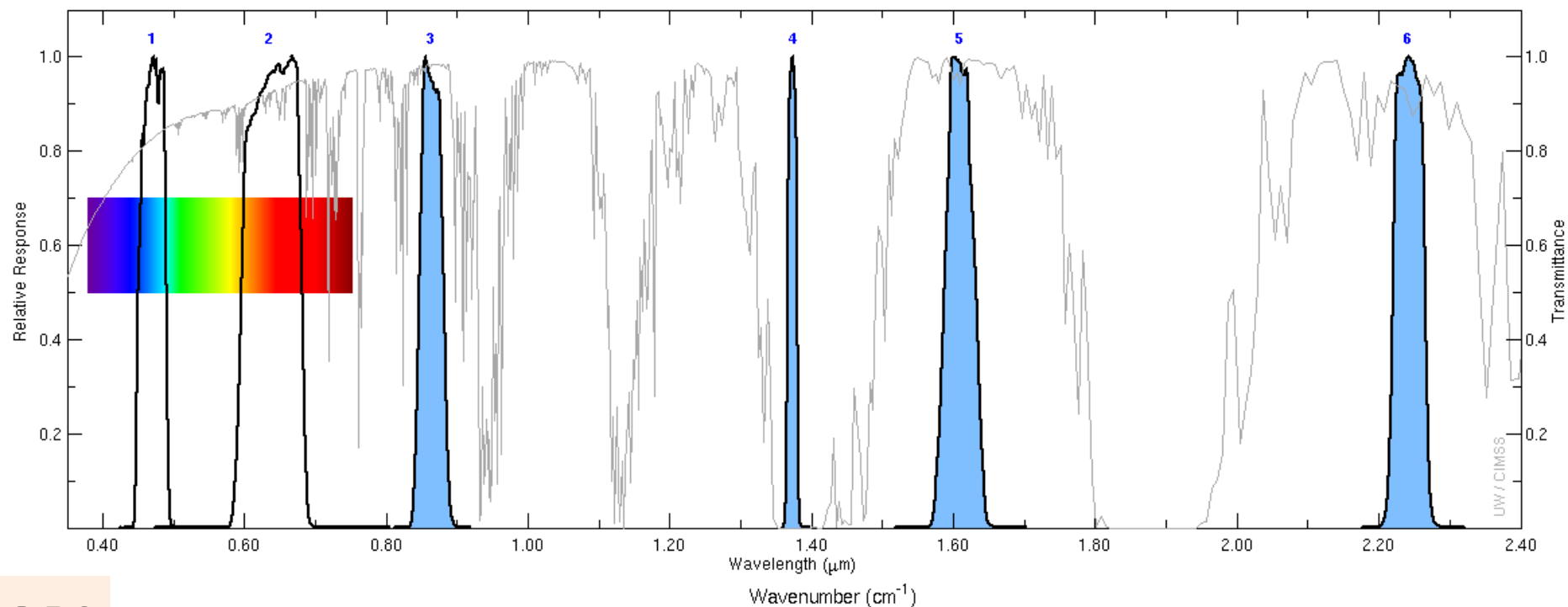


Advanced Baseline Imager Spectral Bands

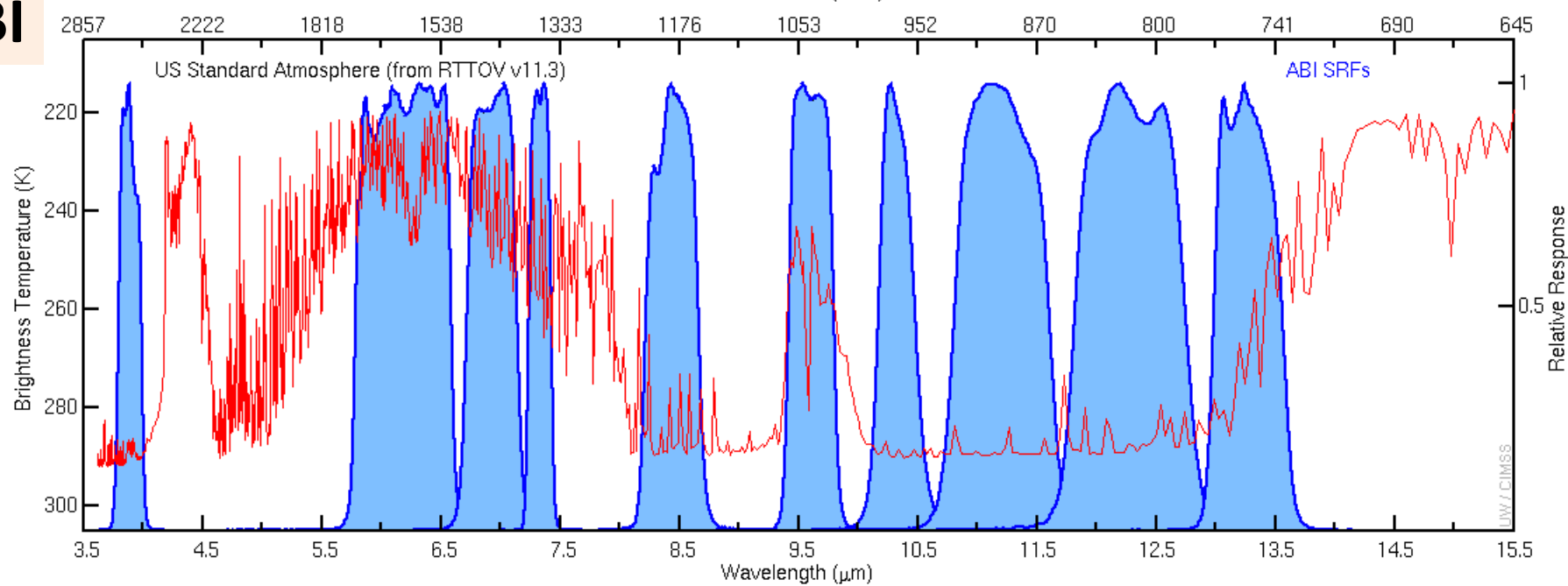
Approx. Central Wavelength (μm)	Band	Type	Nickname	Best Spatial Res.	AWIPS Min	AWIPS (/ ABI) Max*	Bit Depth	Scale Factor	Worst SNR or NEdT (300 K)
0.47	1	Visible	Blue	1	0	1	12	2.4x10 ⁻⁴	0.0010
0.64	2	Visible	Red	0.5	0	1	12	2.4x10 ⁻⁴	0.0022
0.86	3	Near-Infrared	Veggie	1	0	1	12	2.4x10 ⁻⁴	0.0015
1.4	4	Near-Infrared	Cirrus	2	0	1	12	2.4x10 ⁻⁴	0.0010
1.6	5	Near-Infrared	FIRE	1	0	1	12	2.4x10 ⁻⁴	0.0017
2.2	6	Near-Infrared		2	0	1	12	2.4x10 ⁻⁴	0.0009
3.9	7	Infrared	Shortwave Window	2	-100 °C	127 °C/138 °C	14	0.0138	0.064
6.2	8	Infrared	Upper-level Water Vapor	2	-100 °C	61/38 °C	12	0.0393	0.016
6.9	9	Infrared	Mid-level Water Vapor	2	-100 °C	61/38 °C	12	0.0393	0.015
7.3	10	Infrared	Lower-level Water Vapor	2	-100 °C	61/58 °C	12	0.0393	0.023
8.4	11	Infrared	Cloud-Top Phase	2	-100 °C	61/68 °C	12	0.0393	0.022
9.6	12	Infrared	Ozone	2	-100 °C	61/38 °C	12	0.0393	0.021
10.3	13	Infrared	“Clean” Longwave Window	2	-100 °C	61/68 °C	12	0.0393	0.032
11.2	14	Infrared	Longwave Window	2	-100 °C	61/68 °C	12	0.0393	0.022
12.3	15	Infrared	“Dirty” Longwave Window	2	-100 °C	61/68 °C	12	0.0393	0.031
13.3	16	Infrared	CO ₂ Longwave	2	-100 °C	61/45 °C	12	0.0393	0.068

Rows in bold are similar bands to current GOES

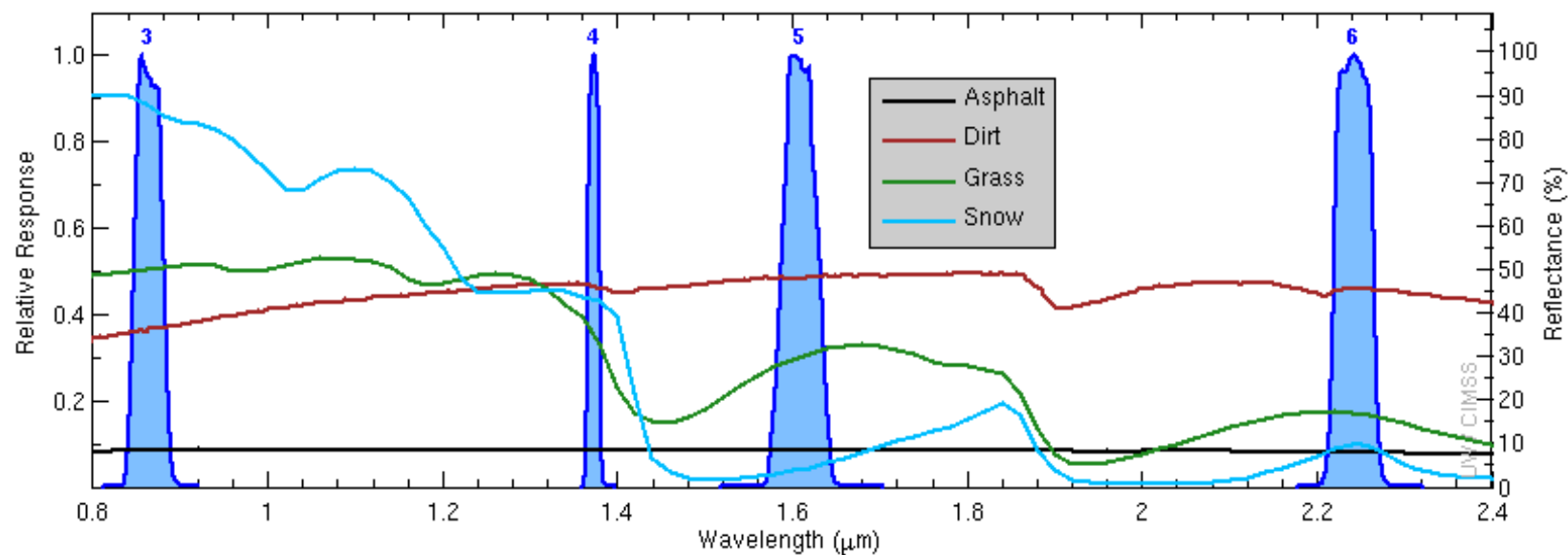
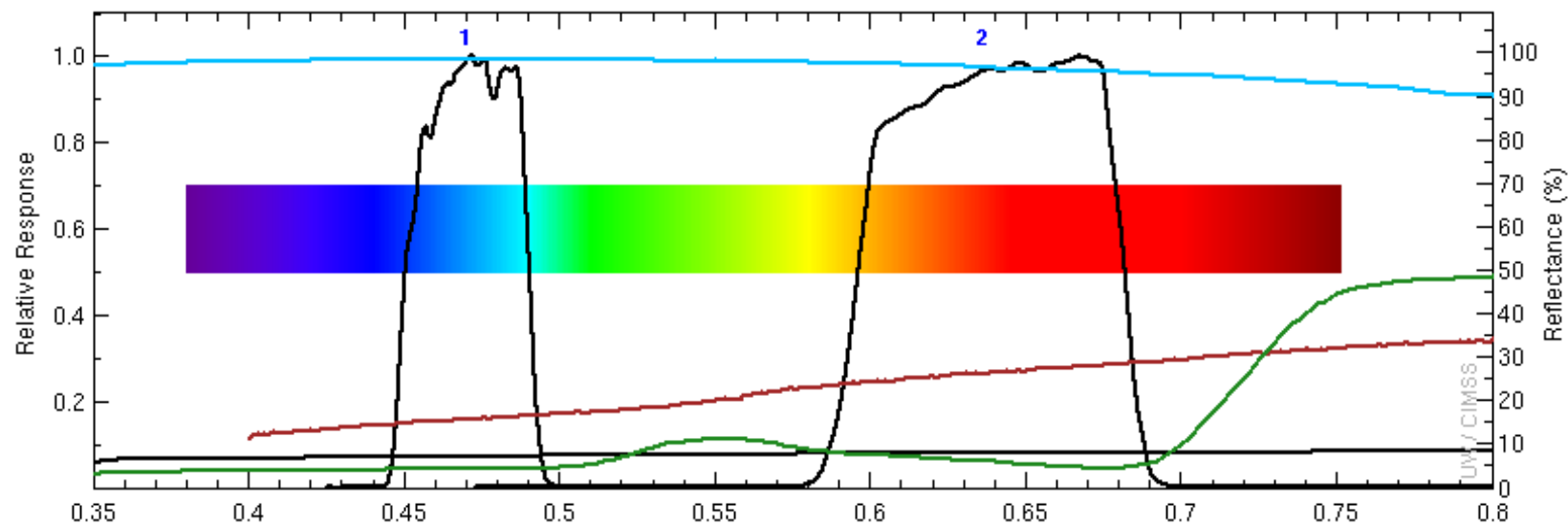
* Preliminary and subject to change

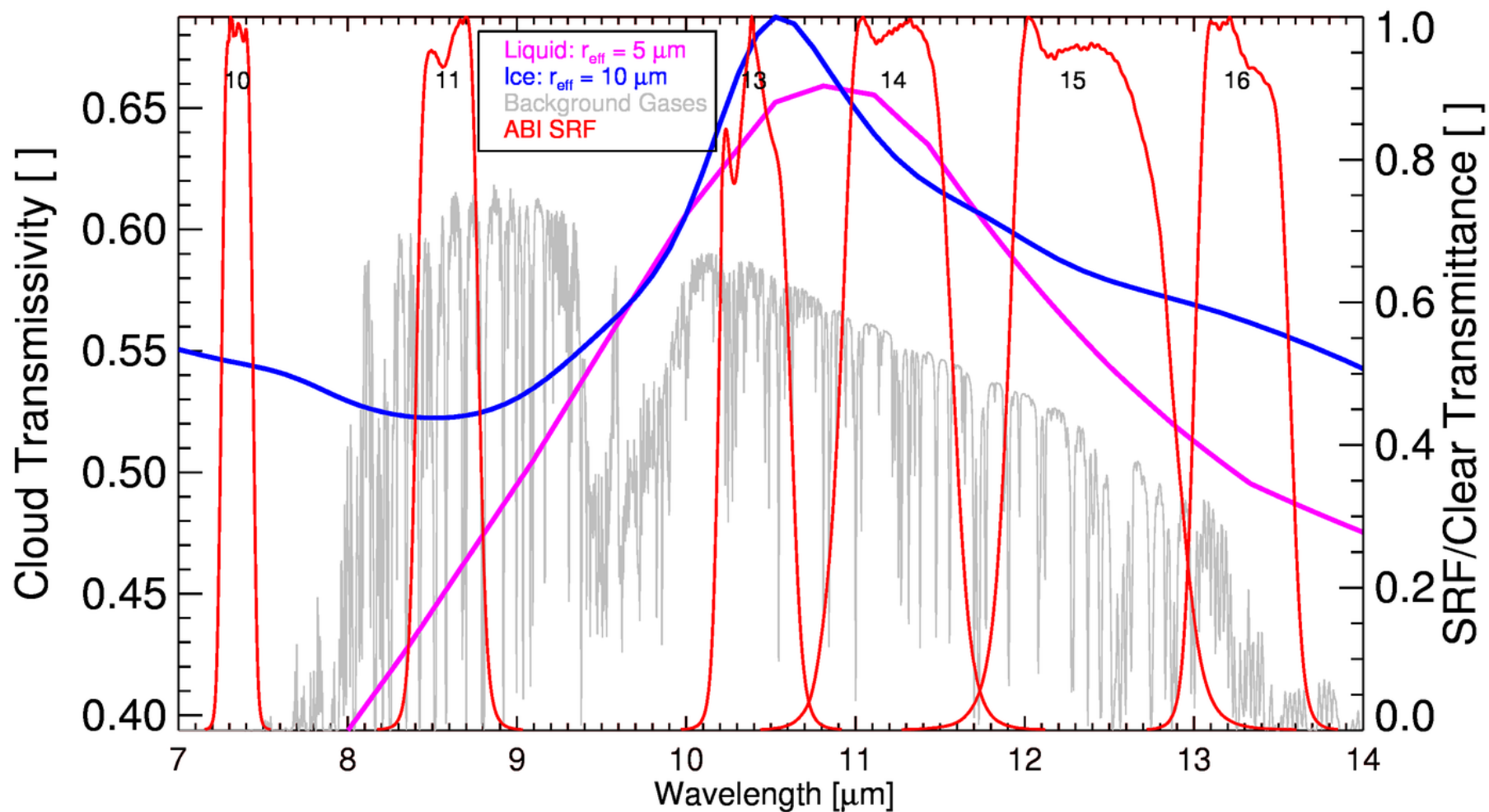


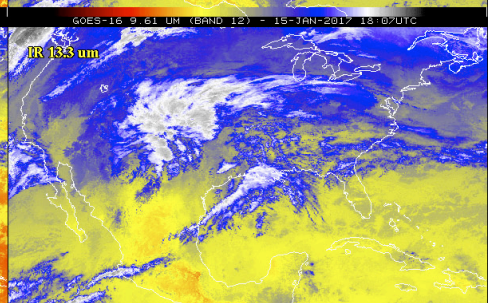
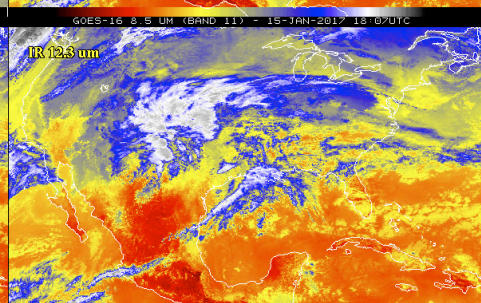
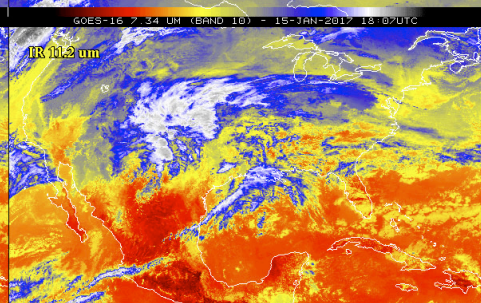
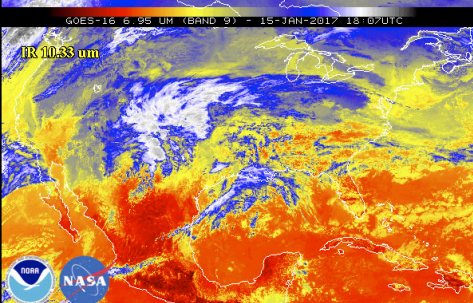
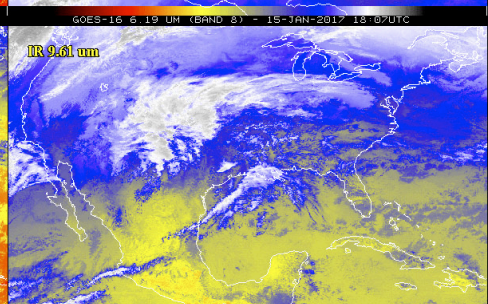
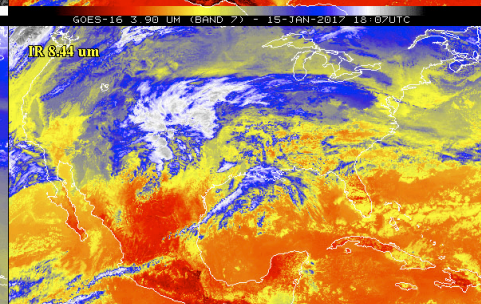
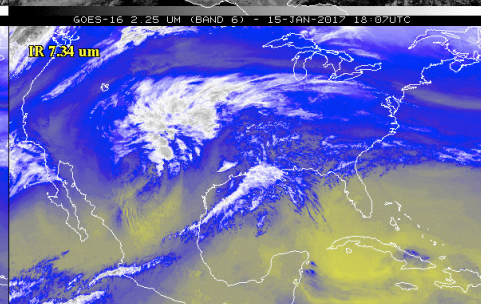
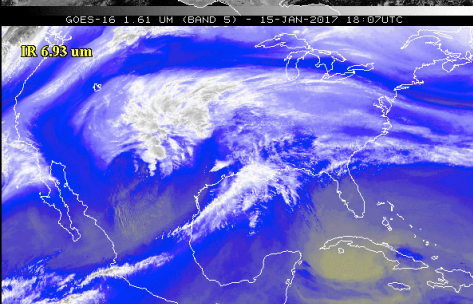
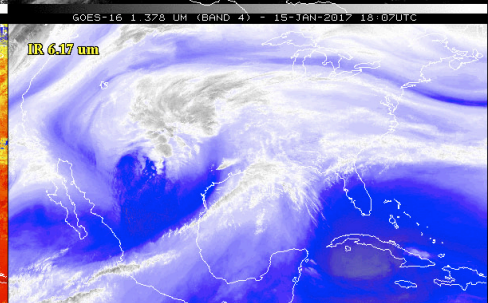
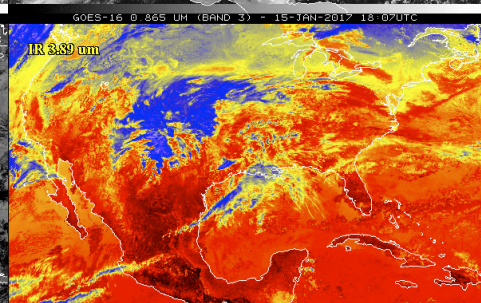
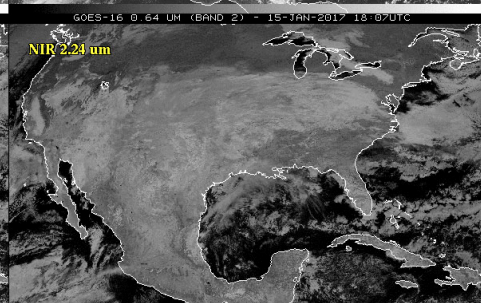
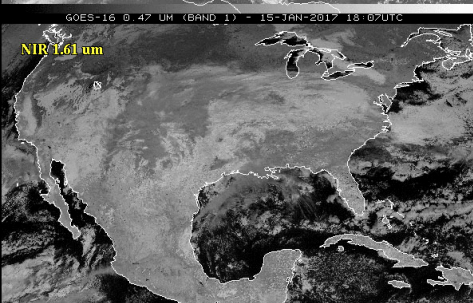
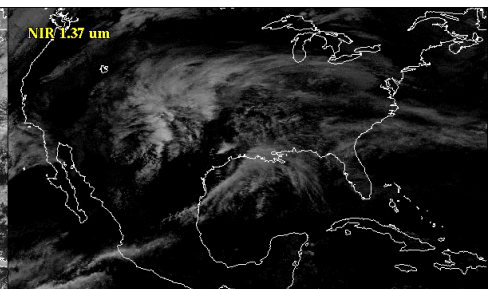
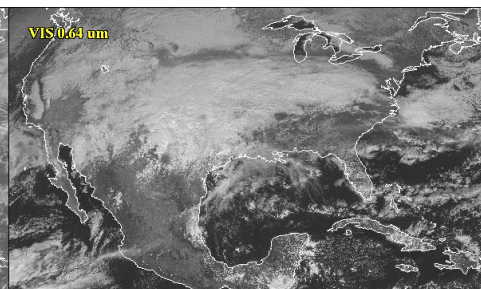
ABI

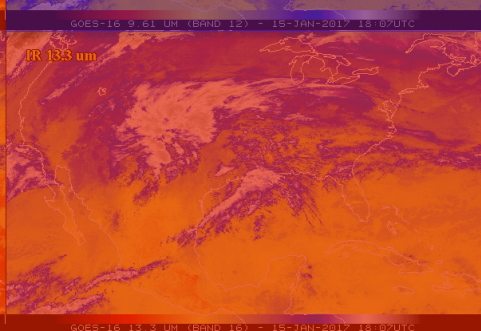
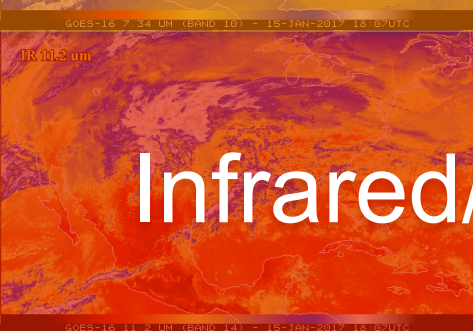
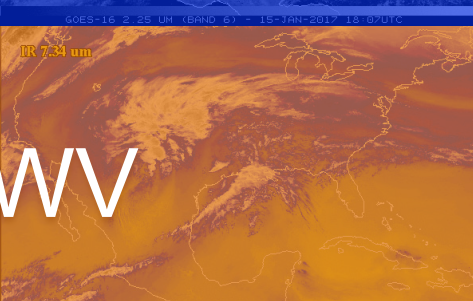
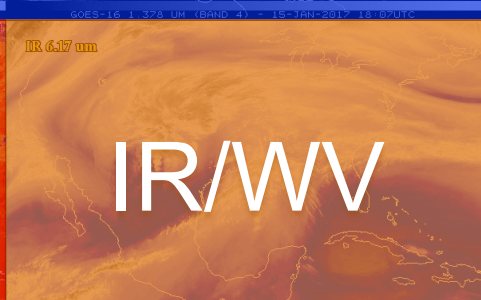


ABI FM1 v2 (Jan2014) Visible SRFs & Various ASTER Reflectance Spectra









Select Operational Applications by Suggested GOES-R ABI Band

Band Central Wavelength (µm)	Band Number	Type (Vis/NIR/R)	Band Nickname	Burn scars	Cirrus and contrails	Cloud heights	Cloud phase	Clouds (water) over ice	Clouds over land	Clouds over water	Convection - MCS decay	Convection - New cells	Dust	Extratropical cyclone	Fires	Flooding	Fog	Ice cover	Saturated soils	Skin temperature	Smoke	Snow cover	Tropical cyclone	Tropopause fold	Turbulence	Volcanic eruption (emiss.)	Water Vapor - Low trop	Water Vapor - Mid trop	Water Vapor - Upper trop
0.47	1	Visible	Blue																		X								
0.64	2	Visible	Red					X		X	X									X	X				X				
0.86	3	Near-Infrared	Veggie	X					X	X				X															
1.4	4	Near-Infrared	Cirrus		X	X					X																		
1.6	5	Near-Infrared	Snow/Ice				X	X						X							X								
2.2	6	Near-Infrared	Cloud Particle Size				X	X						X															
3.9	7	Infrared	Shortwave Window											X		X													
6.2	8	Infrared	Upper-level Water Vapor									X											X	X			X	X	
6.9	9	Infrared	Mid-level Water Vapor																					X			X	X	
7.3	10	Infrared	Lower-level Water Vapor			X						X											X	X	X	X	X		
8.4	11	Infrared	Cloud-Top Phase								X														X				
9.6	12	Infrared	Ozone																				?	?					
10.3	13	Infrared	“Clean” Longwave Window				X	X		X	X	X	X			X	X	X	X			X				X			
11.2	14	Infrared	Longwave Window				↑	↑		↑	↑	↑	↑			↑	↑	↑	↑			↑				↑			
12.3	15	Infrared	“Dirty” Longwave Window				X				X						X									X			
13.3	16	Infrared	CO ₂ Longwave		X	X																							

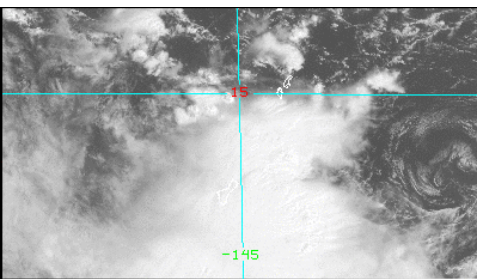
Cooperative Institute for Meteorological Satellite Studies

GOES-R ABI "Baseline" Products

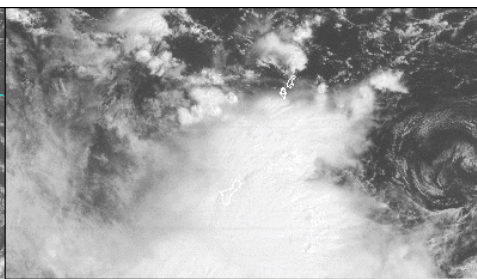
COMET

	Vis "Blue" Band	Vis "Red" Band	Near-IR "Veggie" Band													
Wavelength (micrometers)	0.47	0.64	0.86	1.378	1.61	2.25	3.90	6.185	6.95	7.34	8.5	9.61	10.35	11.2	12.3	13.3
Band Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Baseline Products																
Aerosol Detection	☑	☑	☑	☑	☑	☑	☑							☑	☑	
Aerosol Optical Depth	☑	☑	☑		☑	☑										
Clear Sky Masks		☑		☑	☑		☑		☑	☑	☑			☑	☑	
Cloud & Moisture Imagery	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
Cloud Optical Depth		☑				☑	☑							☑	☑	
Cloud Particle Size Dist.		☑				☑	☑							☑	☑	
Cloud Top Phase										☑	☑			☑	☑	
Cloud Top Height														☑	☑	☑
Cloud Top Pressure														☑	☑	☑
Cloud Top Temperature														☑	☑	☑
Hurricane Intensity													☑			
Rainfall Rate/QPE								☑		☑	☑			☑	☑	
Legacy Vertical Moisture Profile								☑	☑	☑	☑	☑	☑	☑	☑	☑
Legacy Vertical Temp Profile								☑	☑	☑	☑	☑	☑	☑	☑	☑
Derived Stability Indices								☑	☑	☑	☑	☑	☑	☑	☑	☑
Total Precipitable Water								☑	☑	☑	☑	☑	☑	☑	☑	☑
Downward Solar Insolation Surf	☑	☑	☑		☑	☑										
Reflected Solar Insolation TOA	☑	☑	☑		☑	☑										
Derived Motion Winds		☑					☑	☑	☑	☑				☑		
Fire Hot Spot Characterization		☑					☑							☑	☑	
Land Surface Temperature														☑	☑	
Snow Cover	☑	☑	☑		☑	☑	☑						☑			
Sea Surface Temperature							☑				☑		☑	☑	☑	
Volcanic Ash: Detection/Height										☑	☑			☑	☑	☑
Radiances	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑

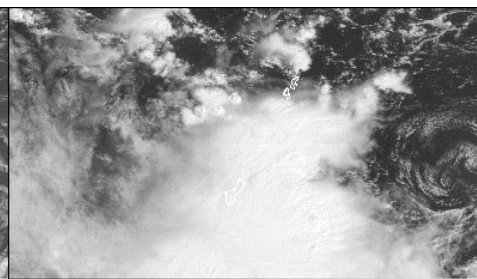
Note: Bands may also be used by other needed "upstream" products, such as the cloud mask.



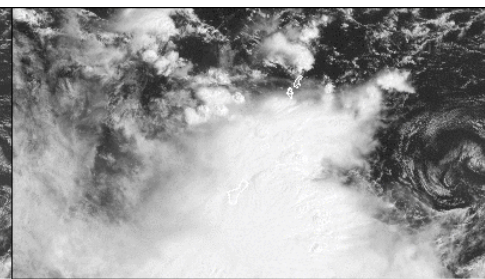
H8 0.46 UM (CH 1) 00:30Z 20-SEP-2015



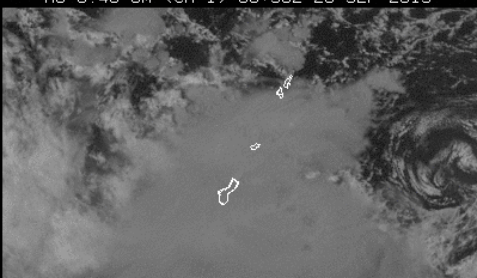
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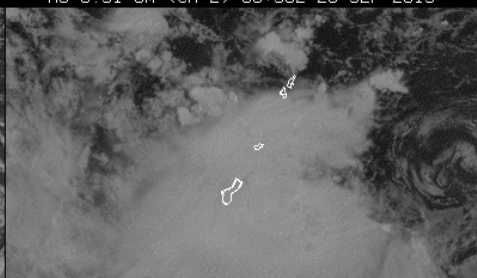
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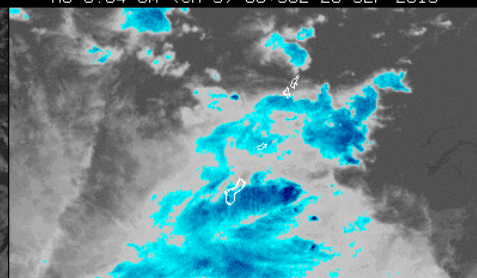
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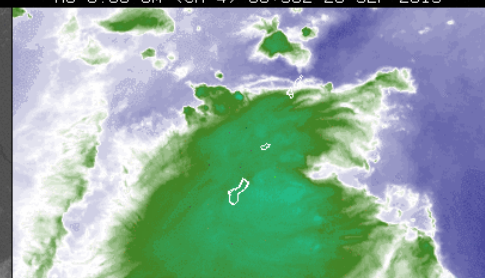
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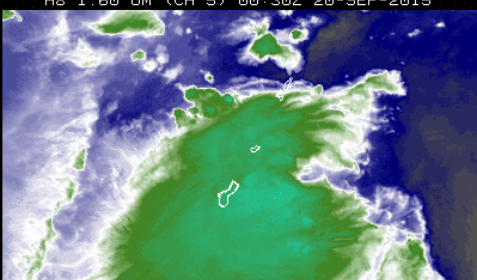
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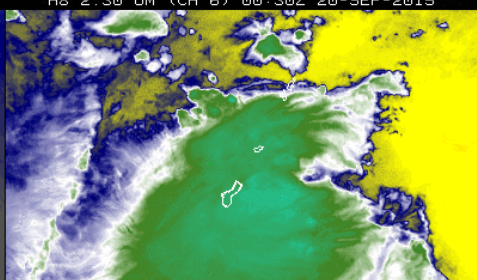
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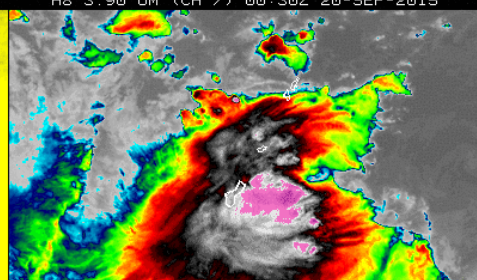
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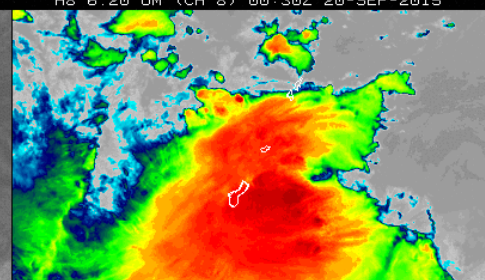
H8 7.00 UM (CH 9) 00:30Z 20-SEP-2015



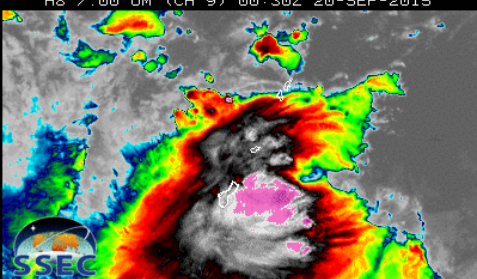
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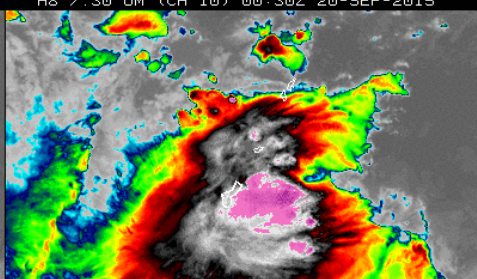
H8 8.60 UM (CH 11) 00:30Z 20-SEP-2015



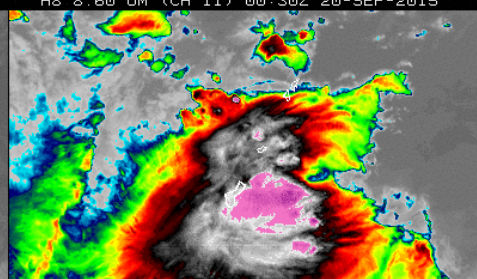
H8 9.60 UM (CH 12) 00:30Z 20-SEP-2015



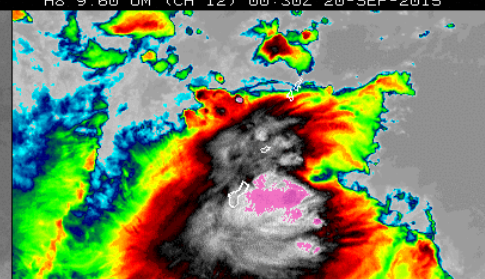
H8 10.40 UM (CH 13) 00:30Z 20-SEP-2015



H8 11.20 UM (CH 14) 00:30Z 20-SEP-2015



H8 12.30 UM (CH 15) 00:30Z 20-SEP-2015



H8 13.30 UM (CH 16) 00:30Z 20-SEP-2015

Select Operational Applications by Suggested GOES-R ABI Band

Band	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Wavelength (μm)	0.47	0.64	0.864	1.373	1.61	2.24	3.9	6.19	6.93	7.34	8.44	9.61	10.33	11.21	12.29	13.28
Application																
Burn scars			X													
Cirrus and contrails				X												X
Cloud heights				X						X						X
Cloud phase					X	X							X		X	
Clouds over land		X														
Clouds over water			X										X			
Convection - MCS decay													X			
Convection - New cells		X	X										X			
Dust		X		X							X		X		X	
Extratropical cyclone								X		X			X			
Fires					X	X	X									
Flooding			X													
Fog							X						X			
Ice cover													X		X	
Saturated soils													X			
Skin temperature													X			
Smoke	X	X														
Snow cover		X			X											
Tropical cyclone													X			
Turbulence								X	X	X		?				
Volcanic eruption (emiss.)		X								X	X					
Water Vapor - Low trop										X			X		X	
Water Vapor - Mid trop								X	X	X						
Water Vapor - Upper trop								X	X							