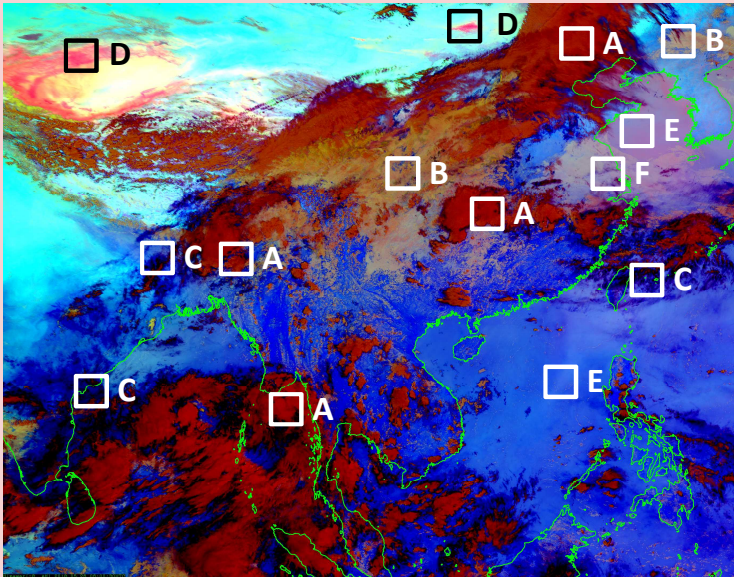


Himawari 24-hour Microphysics RGB Quick Guide



Various clouds and desert areas around Southeast Asia, China, India and the surrounding region with green beam – BTD_{B11-B14} version (06:00 UTC, 26 May 2018)

- A ■ : thick cloud with high-level top (Cb)
- B ■ : thick mid-level water cloud
- C ■ : thin high-level cloud
- D ■ : dust (yellow sand)
- E ■ ■ : ocean
- F ■ : low-level cloud

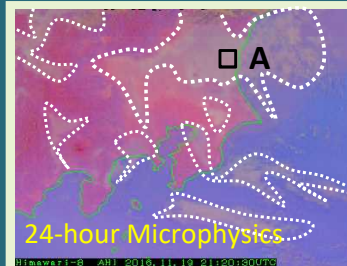
Main applications: Cloud analysis during day and night, detection of dust (yellow sand)

Benefits:

- Daytime/nighttime applicability thanks to infrared image composition
- Support for monitoring of fog/low-cloud generation and dissipation on an ongoing basis
- Support for identification of cirrus clouds
- Support for identification of dust (yellow sand)
- Support for identification of moisture boundaries in dry cloud-free areas

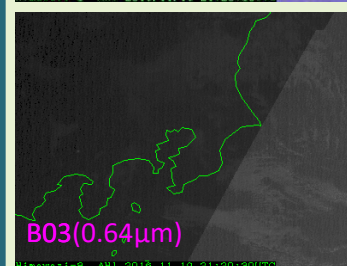
Limitations:

- Limited support for identification of fog/low cloud over low-emissivity surfaces (e.g., deserts)
- Recommended use in combination with Natural Color RGB (daytime) and Night Microphysics RGB (nighttime)
- Effects from cloud/surface colors in association with thermal conditions (i.e., latitudinal, seasonal and diurnal variations)



Fog and low-level clouds around the Kanto Plain, Japan (21:20 UTC, 19 November 2019)

Fog/low-level clouds can be seen in 24-hour Microphysics imagery through day and night.



Fog/low-level clouds are not visible in the area outside direct sunlight in visible imagery (bottom).

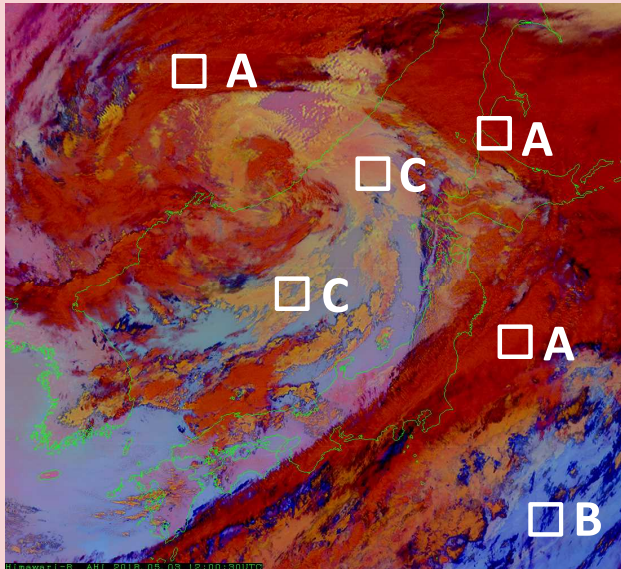
Night Microphysics RGB (not shown) is appropriate for non-sunlight areas.

A ■ : (thick) low-level cloud/ fog

RGB composition with recommended thresholds and related specifications for 24-hour Microphysics RGB

Color	AHI bands	Central wave length [μm]	Min [K]	Max [K]	Gamma	Physical relation to	Smaller contribution to signal of	Larger contribution to signal of
Red	B13-B15	10.4-12.4	-3.0K	7.5K	1.0	Cloud optical thickness	Thin ice clouds	Thick clouds
Green	B11-B13 /B11-B14	8.6-10.4 /8.6-11.2	0.8K /-0.4K	5.8K /6.1K	1.3 /1.1	Cloud phase	Ice clouds	Water clouds
Blue	B13 (inverse)	10.4	248.6K	303.2K	1.0	Cloud top temperature /Surface temperature	Cold clouds /Cold surface	Warm clouds /Warm surface

Himawari 24-hour Microphysics RGB Quick Guide

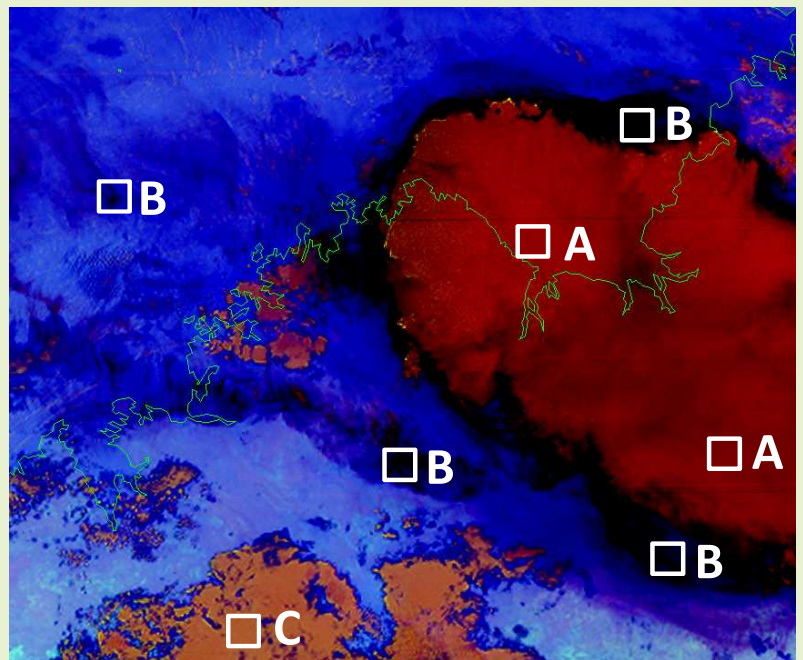


Cloud area with a low pressure system around the Sea of Japan (12:00 UTC, 3 May 2018)

- A ■: thick cloud with high-level top (Cb)
- B ■: thin high-level cloud
- C ■: thick mid-level water cloud

Developed Cb clouds and peripheral cirrus clouds around Northwestern Australia (20:30 UTC, 14 December 2017)

- A ■: thick cloud with high-level top (Cb)
- B ■: thin high-level cloud
- C ■: thick mid-level water cloud



Color Interpretation for 24-hour Microphysics RGB

Color	Interpretation
■	Thick, high and cold ice clouds
■	Thick water clouds
■	Clouds with small particles
■	Thin cirrus clouds
■	Dust (yellow sand)
■	Sands with quartz mineral