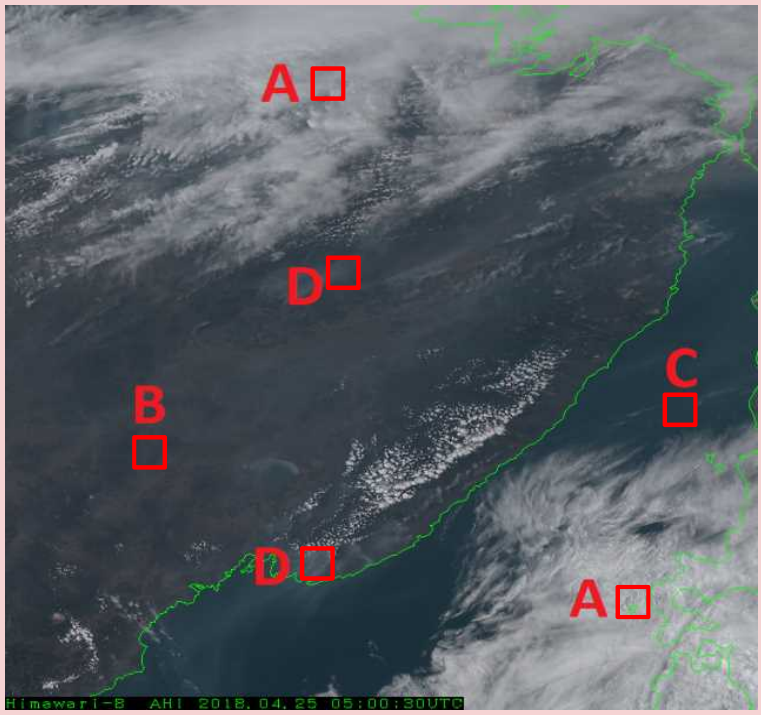
Meteorological Satellite Center (MSC) of JMA

Ver.1.0

Himawari True Color RGB Quick Guide



Smoke from a forest fire around Siberia (05:00 UTC, 25 April 2018)

A □ : cloud
B ■ : land surface
C ■ : sea surface
D ■ : smoke

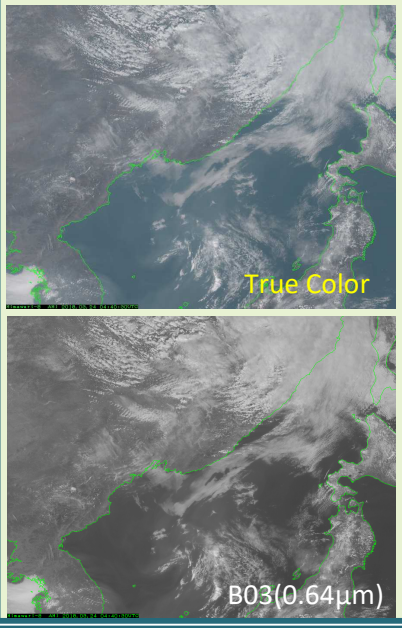
Main applications: Identification of aerosols (e.g., dust, volcanic ash, haze, yellow sand and smog)

Benefits:

- Color shading similar to the visual perception of the naked eye
- Favorable sensitivity for aerosols such as smoke, dust and volcanic ash

Limitations:

- Available during the daytime only
- Cloud colors similar to those of snow-/ice-covered surfaces
- Overall blurring due to Rayleigh scattering associated with atmospheric molecules
- Lower suitability than single-band imagery and other RGB composites (e.g., Day Microphysics, Night Microphysics and 24-hour Microphysics) for detailed cloud analysis
- Unsuitable for identifying vegetation due to the characteristics of the green B02 component (0.51 µm)



Haze around the Sea of Japan (04:40 UTC, 24 March 2018)

The dark-greyish hazy area seen around the sea in the visible image (bottom) is clearer in the True Color RGB image (top). Both are emphasized via 1.7 gamma correction.

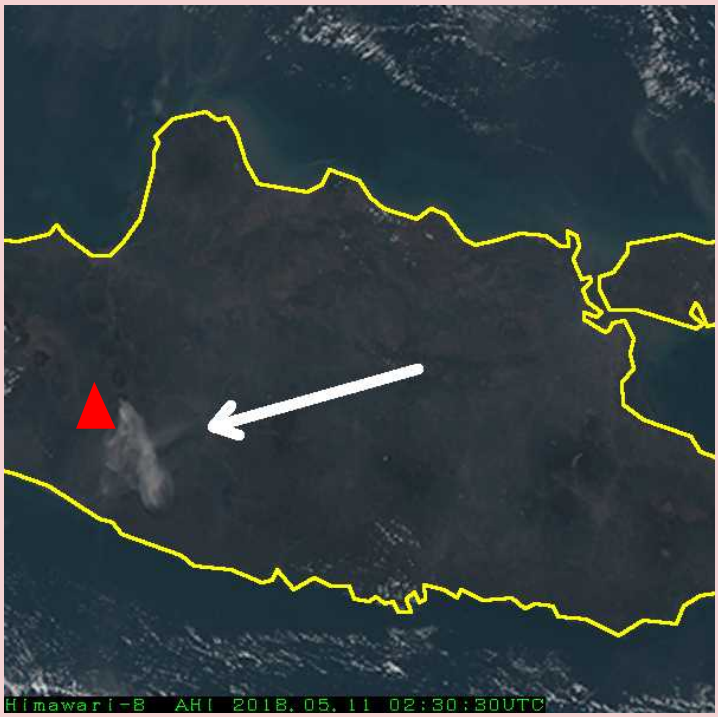
RGB composition with recommended thresholds and related specifications for True Color RGB

Color	AHI bands	Central wave length [µm]	Min [%]	Max [%]	Gamma	Physical relation to	Smaller contribution to signal of	Larger contribution to signal of
Red	B03	0.64	0%	100%	1.0	Cloud optical thickness Snow and ice	Thin clouds	Thick clouds Snow-covered land Sea ice
Green	B02	0.51	0%	100%	1.0	Cloud optical thickness Snow and ice	Thin clouds	Thick clouds Snow-covered land Sea ice
Blue	B01	0.47	0%	100%	1.0	Cloud optical thickness Snow and ice	Thin clouds	Thick clouds Snow-covered land Sea ice

Note: Higher gamma values (e.g., 2.0) are preferable in some cases.

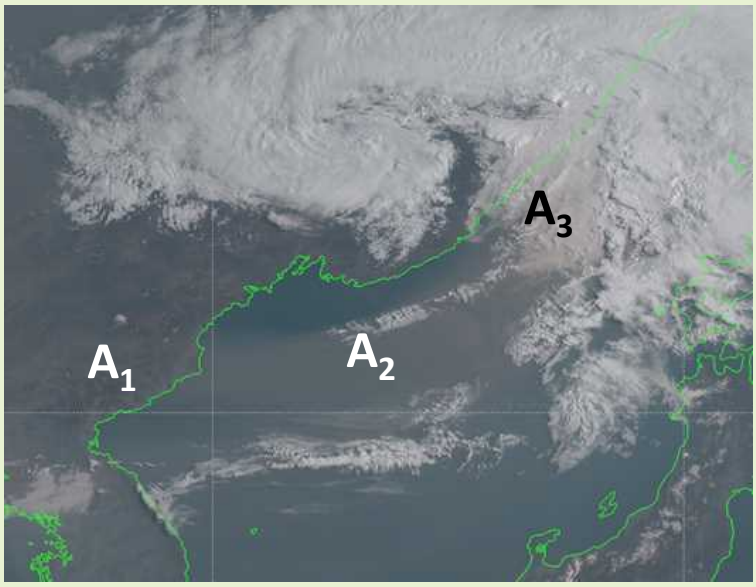
Meteorological Satellite Center (MSC) of JMA

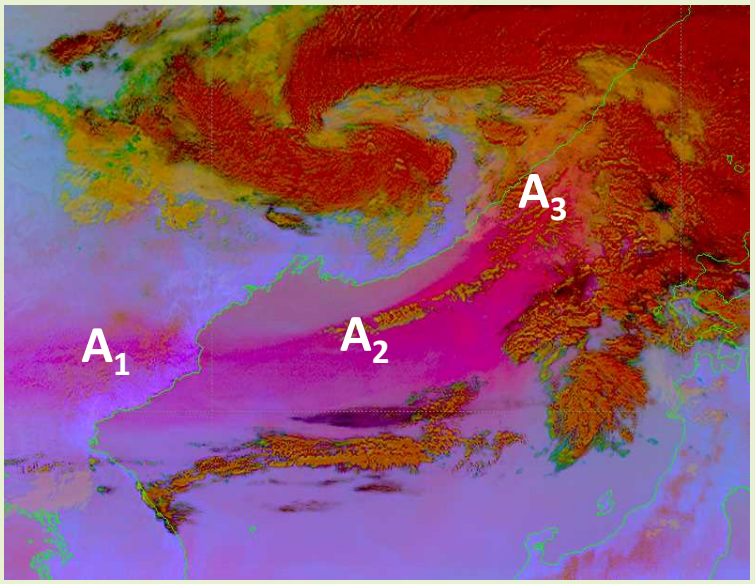
Himawari True Color RGB Quick Guide



Eruption of Mt. Merapi, Indonesia (02:30 UTC, 11 May 2018)

The white arrow indicates a volcanic ash plume.





Dust cloud (yellow sand) around the Sea of Japan (22:50 UTC, 29 April 2017).

Left: True Color RGB; right: Dust RGB.
The zonal brownish (left) and magenta (right) areas (A_1-A_2-A_3) indicate distinct dust clouds.