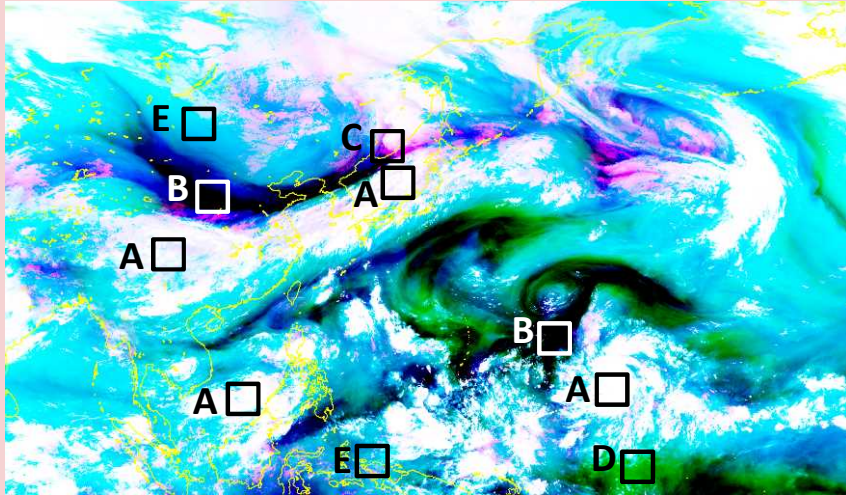


Himawari Simple Water Vapor RGB Quick Guide



Simple Water Vapor RGB imagery and related interpretation (03:00 UTC, 7 September 2018)

- A : clouds with high-level top
- B : dry or cloudless areas
- C : mid-level clouds with humid atmosphere at low-/mid-level
- D : high-level moisture
- E : mid-/high-level moisture

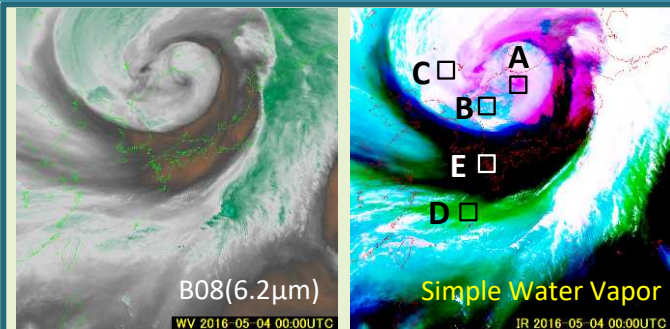
Main applications: Analysis of atmospheric water vapor distribution for individual levels excluding cloud areas

Benefits:

- Color components providing features on different atmospheric levels such as the jet stream, upper cold lows, moisture return, conveyor belts and gravity waves (mountain waves)
- Applicability day and night thanks to infrared image composition
- Display of convective initiation as pinkish-whitish cloud

Limitations:

- Lack of clarity in features such as low-level cloud/fog
- Saturation of shading for high-level clouds (whitish)
- Color shading effects from satellite viewing angle, particularly in limb areas (limb cooling effect)

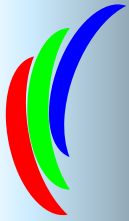


Polar vortex associated with a low-pressure system around the Sea of Japan (04:00 UTC, 4 May 2016)
Upper air flow can be seen in the water vapor image (left).
Moisture and dry-area differences are also visible in high-/mid-level areas, respectively, in RGB imagery (right).

- A : mid-level clouds with humid atmosphere at low-/mid-level
- B : mid-/high-level moisture ; C : clouds with high-level top
- D : high-level moisture ; E : dry or cloudless areas

RGB composition with recommended thresholds and related specifications for Simple Water Vapor 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	10.4	202.3K	279.0K	10.0	Cloud top temperature	Warm clouds	Cold clouds
Green	B08	6.2	214.7K	242.7K	5.5	Water vapor distribution at upper level High clouds	Dry upper levels Warm brightness temperatures	Moist upper levels Cold brightness temperatures
Blue	B10	7.3	245.1K	261.0K	5.5	Water vapor distribution at mid-level Mid-level clouds	Dry mid-levels Warm brightness temperatures	Moist Mid-levels Cold brightness temperatures



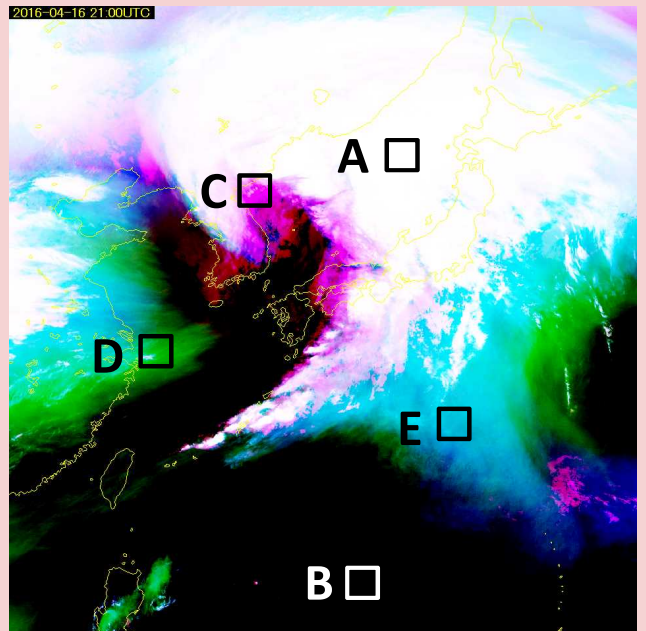
Himawari Simple Water Vapor RGB Quick Guide



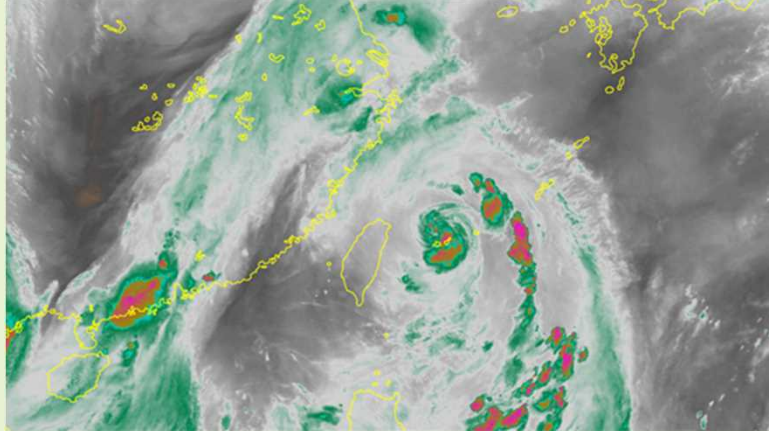
Developing low around the Korean Peninsula
(21:00 UTC, 16 April 2016)

- A □ : clouds with high-level top
- B ■ : dry or cloudless areas
- C ■ : mid-level clouds with humid atmosphere at low-/mid-level
- D ■ : high-level moisture
- E ■ : mid-/high-level moisture

This RGB supports observation of mid-/high-level water vapor distribution.



Himawari-8 WV 02/07/2017 17:53UTC

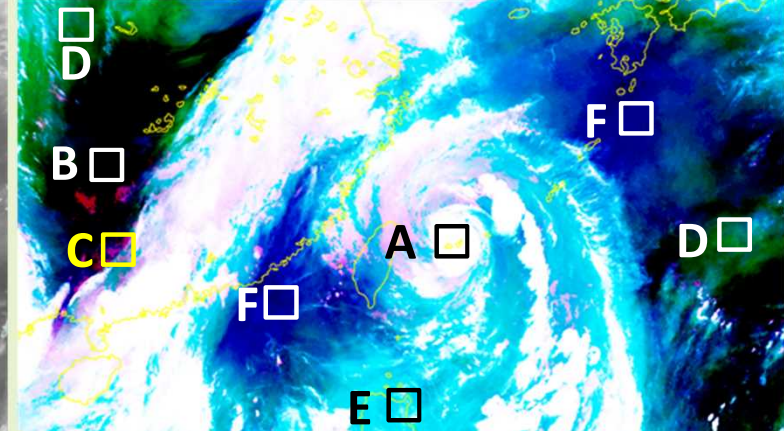


163K 321K

Typhoon (T1703 Nanmadol) around Japan's Sakishima Islands and Taiwan (17:50 UTC, 2 July 2017)

The image on the left is B08 (6.2 μm), and that on the right is Simple Water Vapor RGB.

Himawari-8 IR 02/07/2017 17:53UTC



- A □ : clouds with high-level top
- B ■ : dry or cloudless areas
- C ■ : mid-level clouds with humid atmosphere at low/mid levels
- D ■ : high-level moisture
- E ■ : mid-/high-level moisture
- F ■ : mid-level moisture

Color interpretation for Simple Water Vapor RGB

Color	Interpretation
White	Clouds with high-level top
Black	Dry, cloudless
Red	Low-/mid-level clouds with dry atmosphere
Magenta	Mid-level clouds with humid atmosphere at low/mid levels
Green	High-level moisture
Blue	Mid-level moisture
Cyan	Mid-/high-level moisture