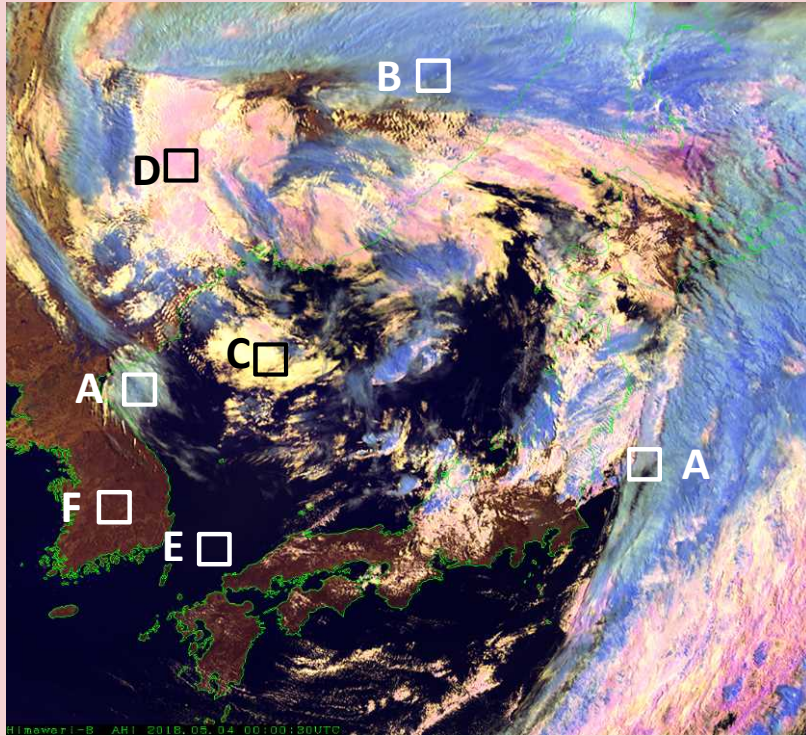
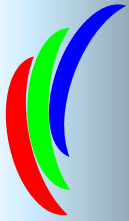


Himawari Day Cloud Phase RGB Quick Guide



Cloud area with a low-pressure (polar-low) system around the Sea of Japan (00:00 UTC, 4 May 2018)

- A ■ :thick ice clouds with small particles
- B ■ :thick ice clouds with large particles
- C ■ : thick low-level water clouds with small particles
- D ■ : thick low-level water clouds with large particles
- E ■ : sea surface
- F ■ : land surface

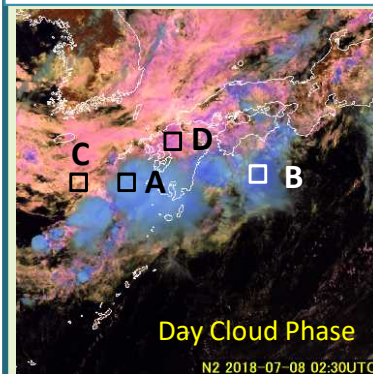
Main applications: Analysis cloud thickness, cloud phase

Benefits:

- Support for identification between ice clouds and water clouds
- B06 (2.3 μ m) provision of superior information on particle size and phase
- Applicability for identification of water clouds with large droplets

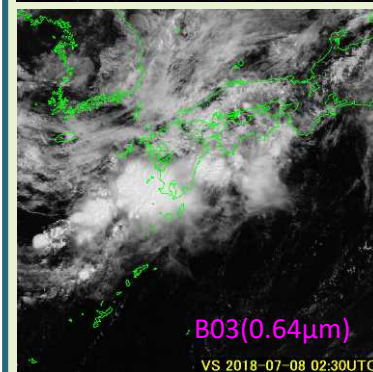
Limitations:

- Daytime availability only
- Need for combined use of other RGBs (such as Day Microphysics RGB) for detailed analysis of cloud conditions (e.g., cloud top height) due to a lack of thermal information (e.g., B13 (10.4 μ m))



Cloud area corresponding to the Baiu (Mei-yu) stationary front above Western Japan (02:30 UTC, 8 July 2018)

Cloud analysis exclusively based on visible imagery (bottom) requires estimation with reference to cloud shapes and patterns. Here, thick clouds (Cbs), low-level clouds and cloud particle phase can be identified at a glance from Day Cloud Phase RGB (top).



- A ■ :thick ice clouds with small particles
- B ■ :thick ice clouds with large particles
- C ■ :thick low-level water clouds with small particles
- D ■ :thick low-level water clouds with large particles

RGB composition with recommended thresholds and related specifications for Day Cloud Phase RGB

Color	AHI bands	Central wave length [μ m]	Min [%]	Max [%]	Gamma	Physical relation to	Smaller contribution to signal of	Larger contribution to signal of
Red	B05	1.6	0%	50%	1.0	Cloud phase	Ice clouds	Water clouds
Green	B06	2.3	0%	50%	1.0	Cloud size (and phase)	Thick clouds with large particles	Thick clouds with small particles
Blue	B01	0.47	0%	100%	1.0	Cloud optical thickness	Thin clouds	Thick clouds Snow-covered land Sea ice

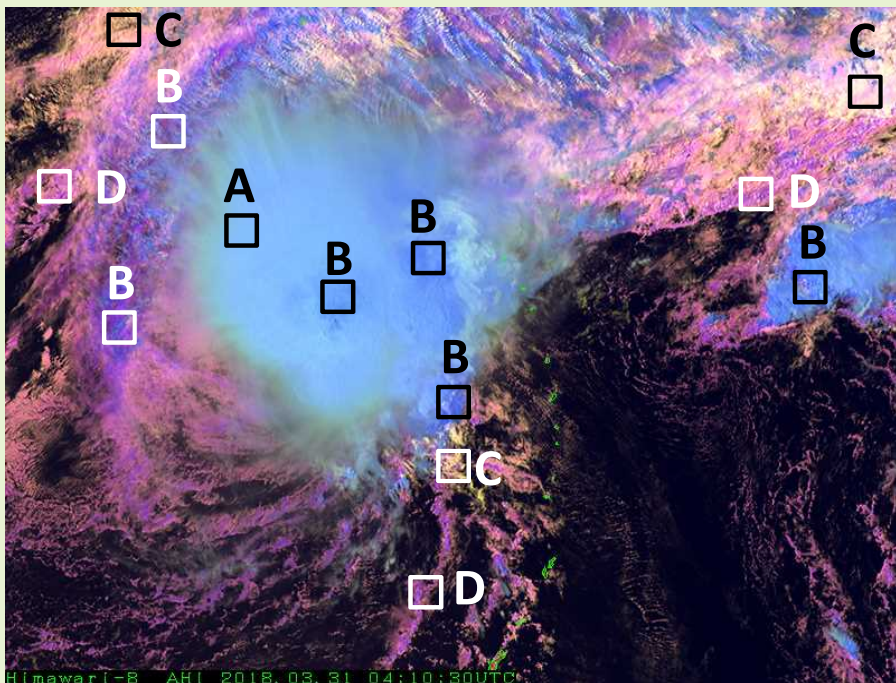
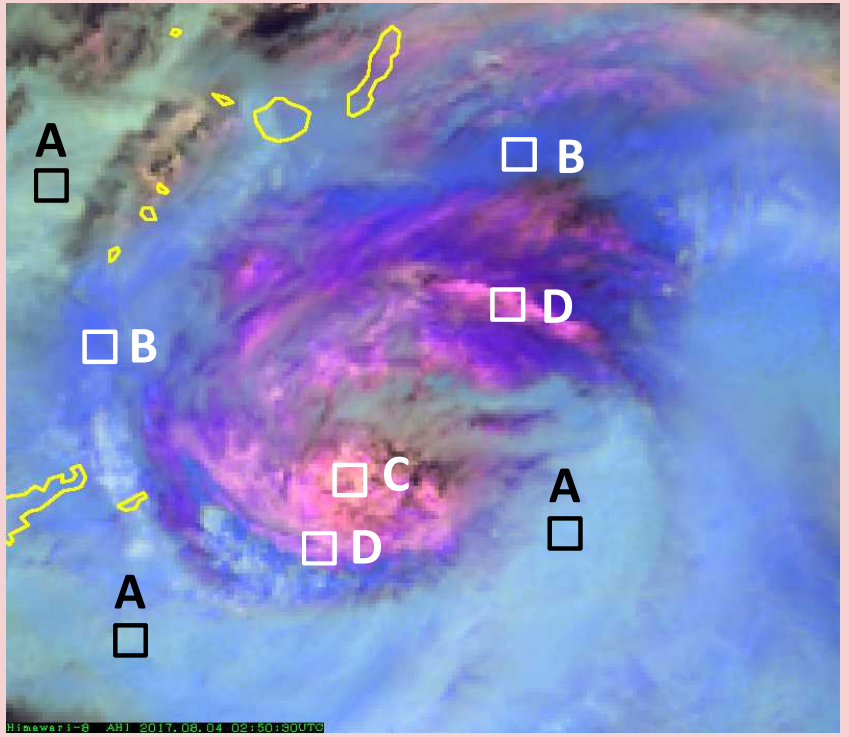
Himawari Day Cloud Phase RGB Quick Guide



Typhoon Noru based on Cloud Phase Distinction RGB (02:50 UTC, 4 August 2017)

A detailed structure and particle phase consisting of purplish low-level clouds with water particles (marked "D") is seen inside the eyewall.

- A ■ : thick ice clouds with small particles
- B ■ : thick ice clouds with large particles
- C ■ : thick low-level water clouds with small particles
- D ■ : thick low-level water clouds with large particles



Typhoon Jelawat (T1803) around the Mariana Islands (04:10 UTC, 31 March 2018)

- A ■ : thick ice clouds with small particles
- B ■ : thick ice clouds with large particles
- C ■ : thick low-level water clouds with small particles
- D ■ : thick low-level water clouds with large particles

Color interpretation for Day Cloud Phase RGB

Color	Interpretation
■	Ice clouds with small particles
■	Ice clouds with large particles
■	Water clouds with small particles
■	Water clouds with large particles

Color interpretation may be developed in future work to enhance distinguishability.