

HimawariCast Newsletter

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Japan Meteorological Agency 

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Himawari RGB Quick Guides online

RGB composite imagery provides multi-spectral satellite information in single images. The Japan Meteorological Agency (JMA) contributes to the promotion of RGB composites in various ways, including a series of typical RGB composites derived from Himawari-8 in HimawariCast Newsletters.

In recent years, handy RGB Quick Guides have been issued by satellite operators/trainers such as EU-MeTrain/EUMETSAT and NOAA/NASA. This straightforward content provides essential information to forecasters and other satellite data/imagery users for operational work.

Himawari data users have also requested useful RGB composite imagery (especially for typical cases) based on geographical characteristics in association with the Himawari observation area's wide oceanic coverage. In response, JMA carefully considered RGB Quick Guides derived from Himawari satellite imagery and began providing related data on its

website on October 1st 2020 (Figure 1). The information has a simple design enabling double-sided printing and lamination as per other satellite RGB Quick Guides (Figures 2 and 3). A total of 18 Quick Guides are provided in relation to SATAID software to facilitate daily work with focus on:

1. Major applications, benefits and limitations
2. Typical cases (e.g., Figure 4)
3. Color interpretation
4. RGB recipes (RGB composition: combinations of imagery assigned to the three primary colors with recommended thresholds) and related specifications

Quick Guides are intended to facilitate the worldwide usage of RGB composite imagery.

Himawari RGB Quick Guide website:
https://www.jma.go.jp/jma/jma-eng/satellite/VLab/RGB_QG.html

(SHIMIZU Akihiro)

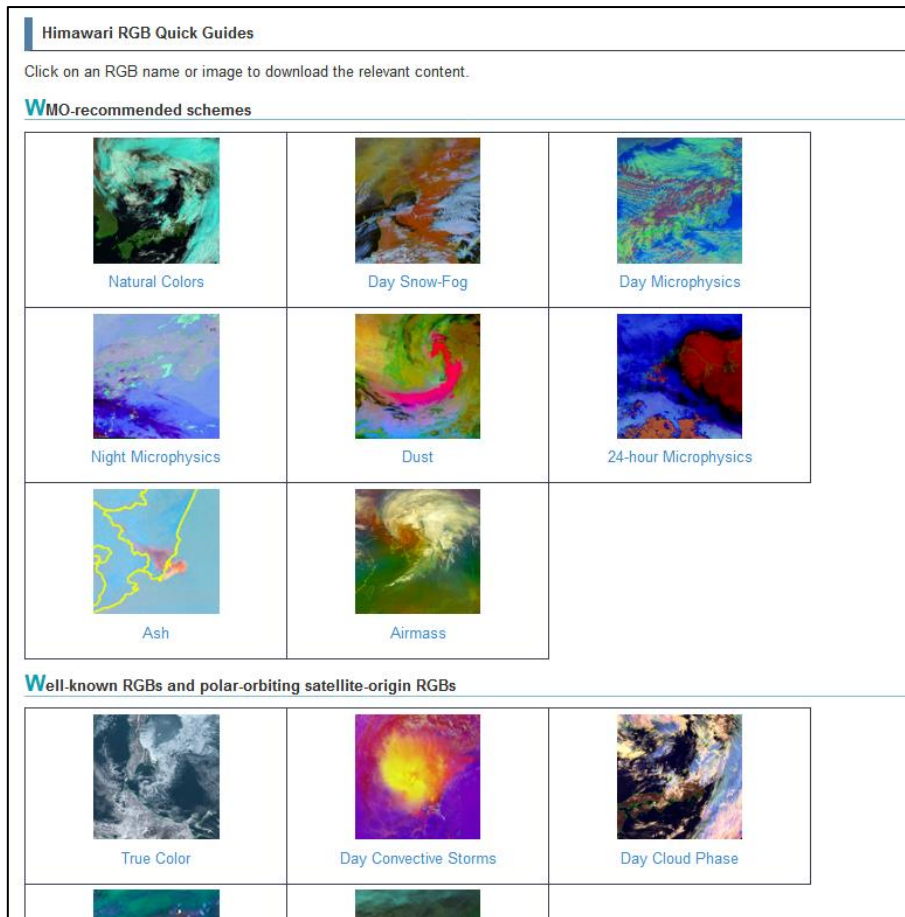


Figure 1. Himawari RGB Quick Guides web page

Typical case and its explanation.

Surface

Himawari Dust RGB Quick Guide

Extensive dust cloud (yellow sand) around the Bohai Sea, northeastern China and the Korean Peninsula with green beam – BTD₂₁₃₋₈₁₃ Version (19:30 UTC, 26 November 2018)

The zonal magenta area (A₁, A₂, A₃) indicates distinct dust clouds.

A₁ : yellow sand (dust)
 B : thick mid-level cloud
 C : thick high-level cloud
 D : thin high-level (cirrus) cloud

RGB recipe with recommended thresholds and related specifications.

Color	AHI bands	Contrast (wint. length)	Min. [T]	Max. [T]	Gamma	Physical relation to	Smaller contribution to signal of	Larger contribution to signal of
Red	813-815	10-12.4	-13.8	7.18	1.5	Cloud optical thickness	Thin ice/clouds	Thick clouds
Green	813-813	8.6-10.4	-0.16	12.14	2.1	Dust	Water clouds	Dust
Blue	811-814	7.6-11.2	-0.14	15.04	2.1	Cloud phase	Dust	Deposits
Blue	813 (circus)	10.4	261.54	289.24	1.9	Cloud temperature/surface temperature	Cold clouds	Warm clouds

Reverse

Himawari Dust RGB Quick Guide

Dust storm around southeastern Australia (20:40 UTC, 21st November 2018) with clouds relating to a low-pressure system

A : dust storm
 B : thick mid-level cloud
 C : thick high-level cloud
 D : thin high-level (cirrus) cloud

Typical case and its explanation.

Differences in surface color shading between daytime (left: 03:00 UTC) and nighttime (right: 12:00 UTC) (30 April 2017)

A : desert (left: warm; right: cold)
 B : land (left : warm/ right : cold)

Color interpretation.

Color	Interpretation
Black	Cold, thick, high-level clouds
Dark Blue	Thin cirrus clouds, Contrails
Blue	Thin, mid-level cloud
Light Blue	Thin, mid-level cloud
Green	Low-level cloud (cold atmosphere, high latitude)
Yellow	Low-level cloud (warm atmosphere, low latitude)
Orange	Dust (yellow sand)/volcanic ash
Red	Clouds
Light Green	Warm desert
Dark Green	Cold desert
Light Yellow	Warm sand
Dark Yellow	Cold sand

Figure 2. Appearance and structure of RGB Quick Guides

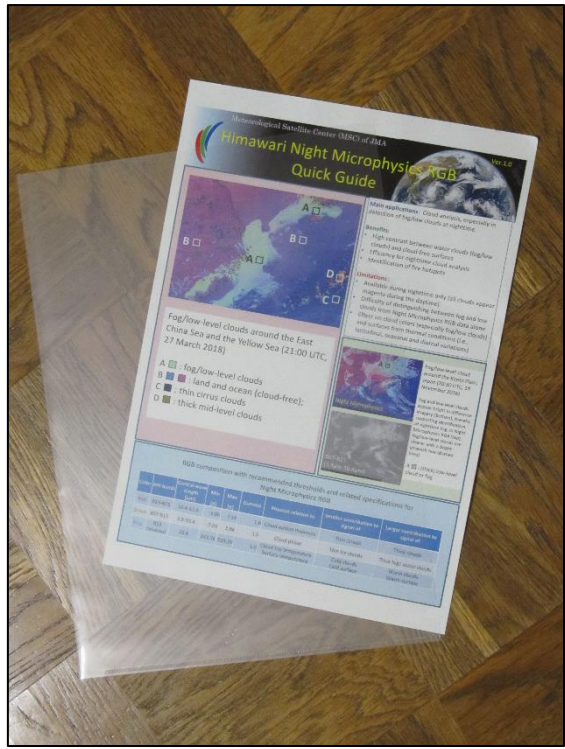


Figure 3. RGB Quick Guide with clear plastic folder

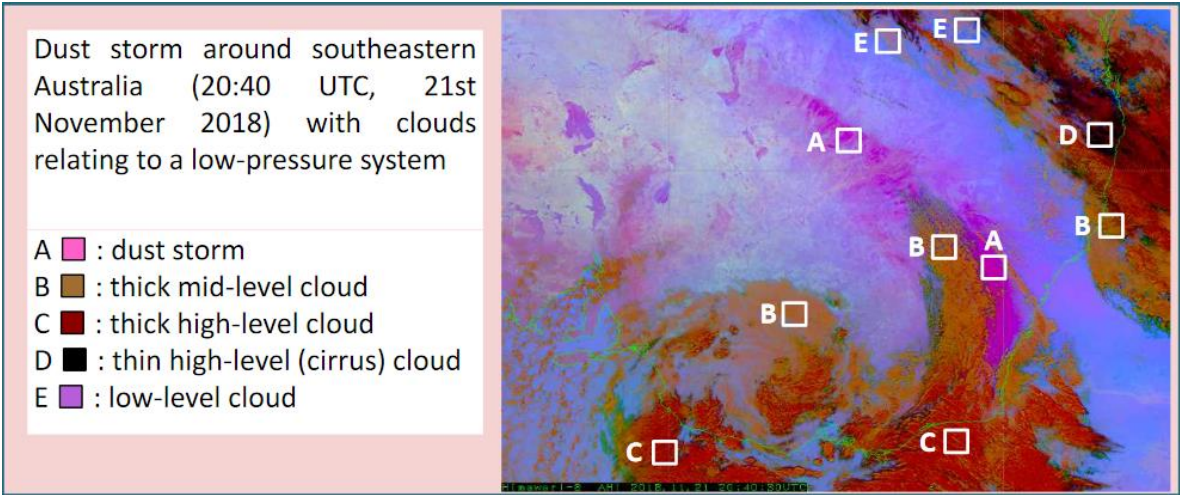


Figure 4. Typical case of a Dust RGB image

JMA online satellite imagery update (previous announcement)

JMA is planning to update its online satellite imagery (<https://www.jma.go.jp/en/gms/>) around February 2021 to enhance scrolling and zooming capacity with a new URL. The new content is currently being produced, with details to be provided in the next HimawariCast newsletter.

There will be no changes in real-time imagery on MSC Web (<https://www.data.jma.go.jp/mscweb/data/himawari/index.html>).

(SAKASHITA Takuya)

Termination of Himawari JDDS FTP service and commencement of HTTPS service

Himawari-8/9 imagery and related geophysical products are provided to National Meteorological and Hydrological Services (NMHSs) via the JMA Data Dissemination System (Himawari JDDS). As per HimawariCast newsletter No. 12, JMA terminated FTP-based provision on 30 September 2020 in favor of an HTTPS service commenced in July 2019. Table 1 shows products provided via Himawari JDDS.

(SAKASHITA Takuya)

Table 1 Satellite data disseminated through JDDS via HTTPS

	File format	Periodicity
High-resolution Cloud Analysis Information (HCAI)	GRIB2	Every 10 minutes
HRIT satellite imagery	HRIT	Every 30 minutes
JPEG satellite imagery	JPEG	Every 30/60 minutes Without user ID/password
ASWind from Target Area Observation	SATAID wind format	Every 10 minutes
ASWind from Full-disk Observation		Every 30 minutes

Comments and Inquiries

Comments and inquiries on this newsletter and/or the HimawariCast Web Page are welcomed.

Back numbers of HimawariCast Newsletters:

https://www.data.jma.go.jp/mscweb/en/himawari89/himawari_cast/himawari_cast.php

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Registration for Himawari JDDS

To register for Himawari JDDS access, please use the application form at:

<https://www.jma.go.jp/jma/jma-eng/satellite/jdds.html#terms>

Registered users can access satellite products online using an HTTP 1.1 client such as a Web browser or Wget.

Please note again that Himawari JDDS services are dedicated for NMHSs.

(SAKASHITA Takuya)

Feedback

JMA welcomes feedback from users on HimawariCast data usage, and particularly invites articles to be posted in this newsletter. Such input will help other users consider new ideas for their services.

The Agency also invites questions on HimawariCast services. These may relate to the functions of the SATAID program, interpretation/analysis of multi-band imagery or other areas of interest. Feel free to send queries to be answered in this newsletter.

All articles and questions are welcomed. Your contributions are greatly appreciated.