

Introduction of Realtime RGB images on MSC/JMA website

Meteorological Satellite Center (MSC) of JMA

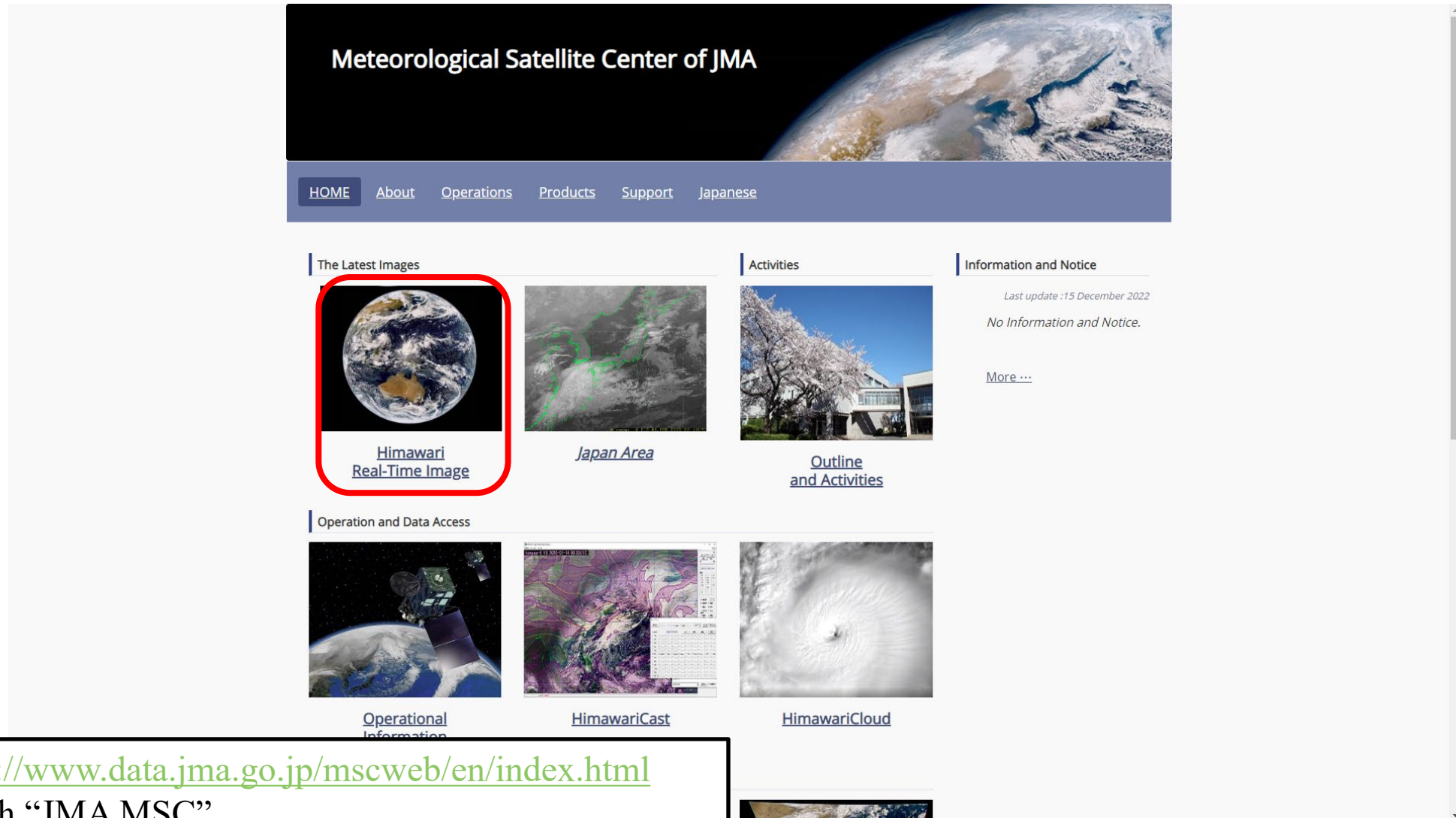


2014 HIMAWARI-8

2016 HIMAWARI-9



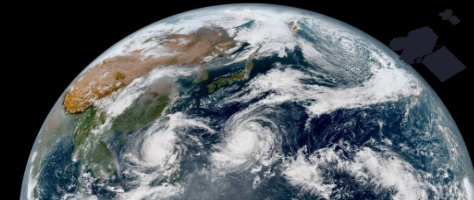
Introduction of MSC/JMA website



<https://www.data.jma.go.jp/mscweb/en/index.html>
search “JMA MSC”



Himawari Real-Time RGB Images



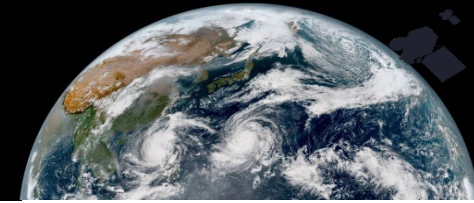
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Himawari Real-Time RGB Images



Meteorological Satellite Center of JMA

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Himawari Real-Time Image

The RGB composite imagery is produced by composing satellite images colored in red, green and blue. Details are refer to "[RGB Training Library \(JMA website\)](#)".

Select Area

Australia

Band

Dust RGB

Time

22:30 UTC 05 February 2023

Prev

Next

Animation

Last 1 Hour

Play

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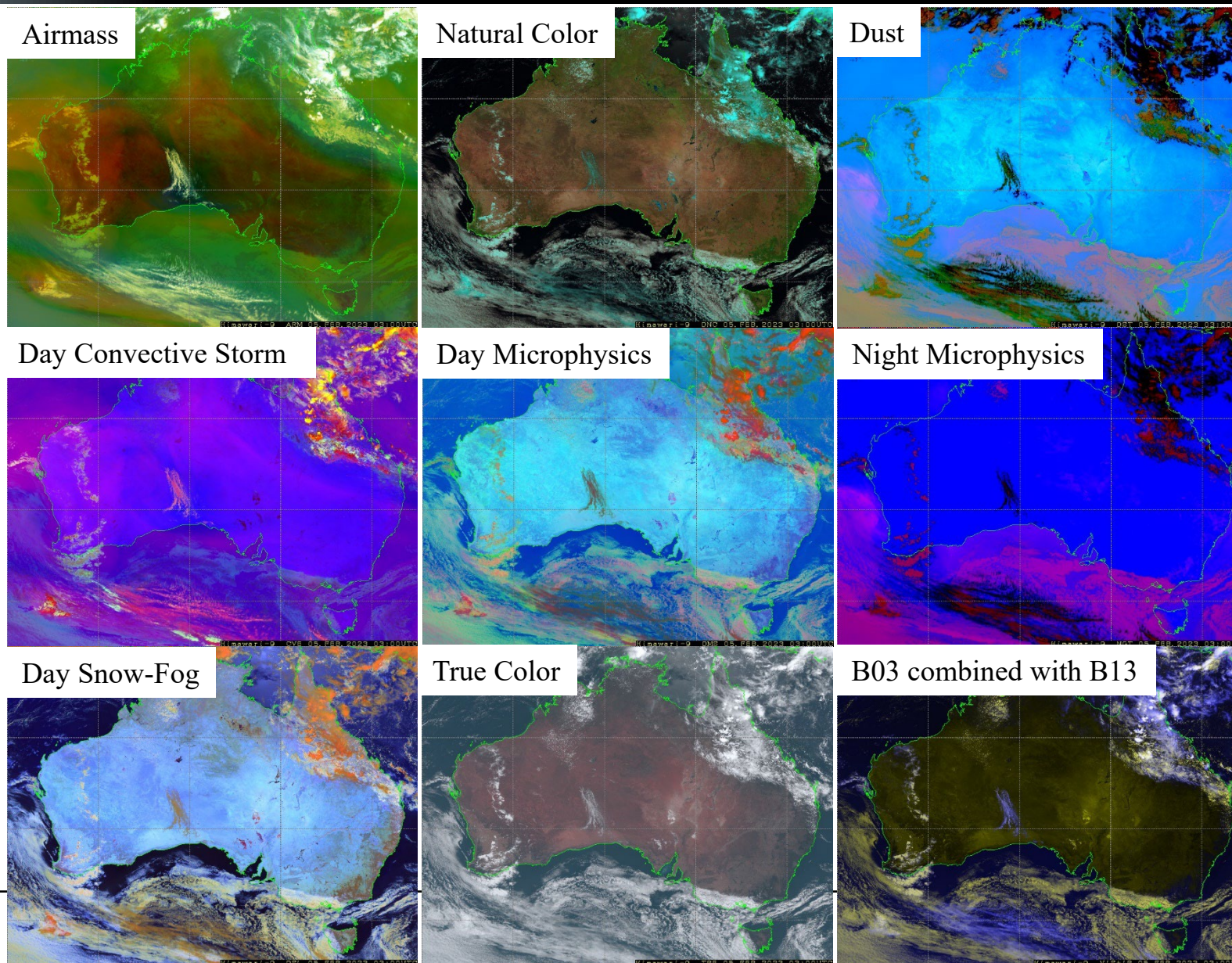
Updated every 10 minutes!

3rd. March, 2023

MSC/JMA

5

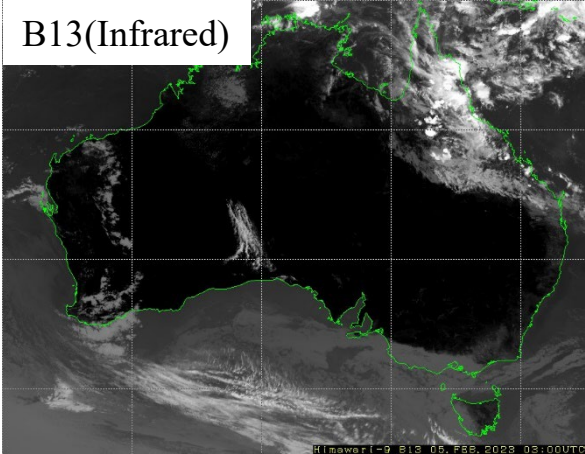
Real-time RGB images (and others) on JMA/MSC website



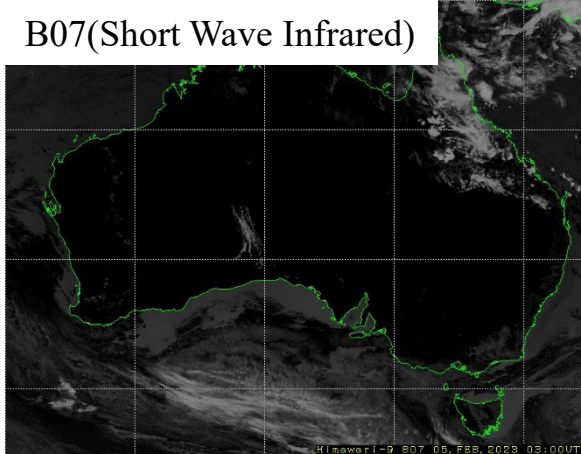
Real-time RGB images (and others) on JMA/MSC website



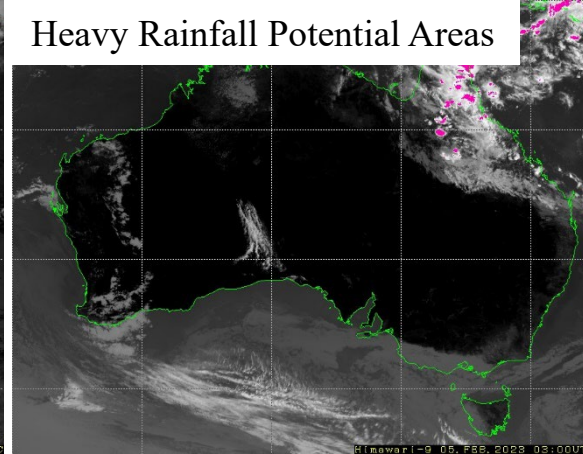
B13(Infrared)



B07(Short Wave Infrared)



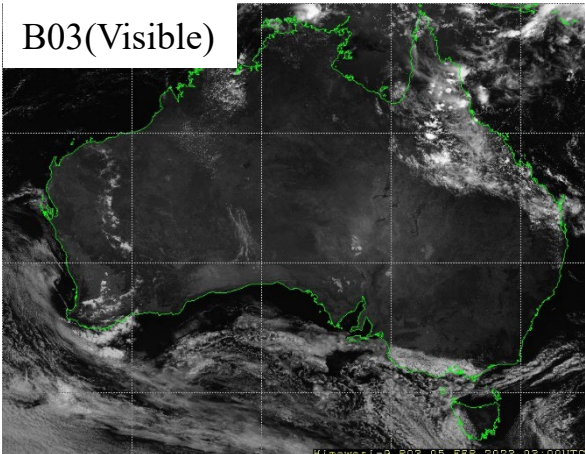
Heavy Rainfall Potential Areas



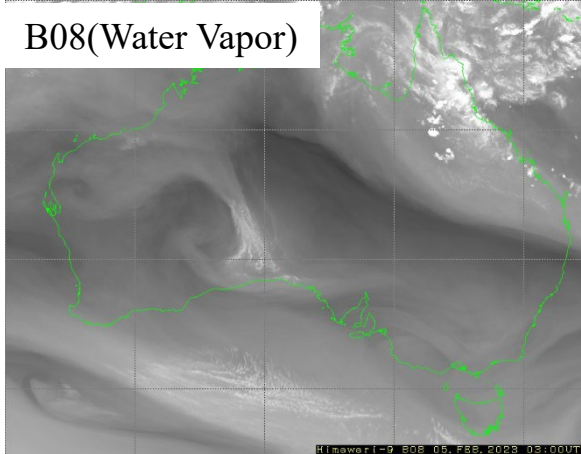
True Color Reproduction Image



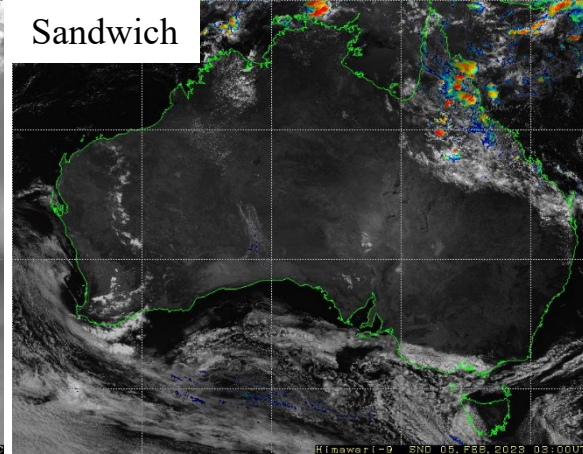
B03(Visible)



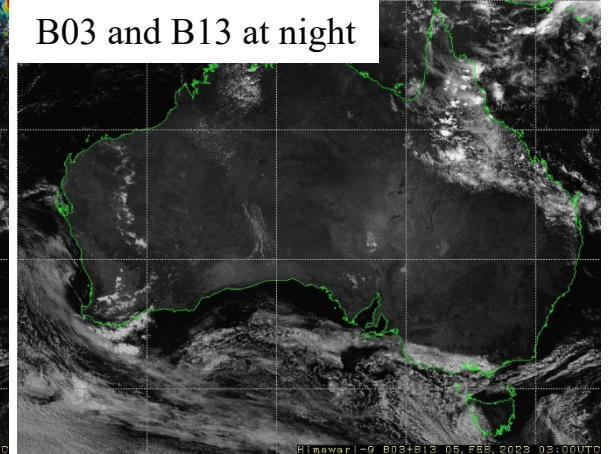
B08(Water Vapor)



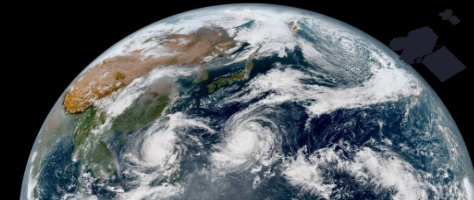
Sandwich
































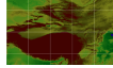





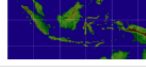





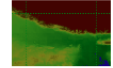








B03 and B13 at night


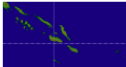






Real-time JPEG Imagery Service on JMA/MSC Website for Asia-Oceania Region



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Oceania , Pacific Islands			
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New Zealand (155 E, 25 S - 170 W, 60 S)			Filelist
Pacific Islands 1 (130 E, 25 N - 65 E, 5 S)			Filelist
Pacific Islands 2 (155 E, 20 N - 175 W, 5 S)			Filelist
Pacific Islands 3 (140 E, 0 - 160 W, 25 S)			Filelist
Pacific Islands 4 (172 E, 9 S - 167 W, 26 S)			Filelist
Pacific Islands 5 (156 E, 9 S - 178 E, 26 S)			Filelist
Pacific Islands 6 (149 E, 1 S - 178 E, 26 S)			Filelist
Pacific Islands 7 (168 E, 1 N - 170 W, 17 S)			Filelist
Pacific Islands 8 (172 W, 6 S - 153.5 W, 24.5 S)			Filelist
Pacific Islands 9 (170 E, 10 N - 153 W, 10.0 S)			Filelist
Pacific Islands 10 (138 E, 3 N - 156.5 W, 15.5 S)			Filelist

Region			File Index
Japan, Central Asia, Southeast Asia, South Asia			
Japan (115 E, 48 N - 155 E, 22 N)			Filelist
Central Asia (70 E, 55 N - 120 E, 25 N)			Filelist
Southeast Asia 1 (80 E, 30 N - 115 E, 0 N)			Filelist
Southeast Asia 2 (105 E, 30 N - 140 E, 0 N)			Filelist
Southeast Asia 3 (90 E, 10 N - 145 E, 15 S)			Filelist
South Asia (70 E, 30 N - 100 E, 0 N)			Filelist
Region			File Index
High-Resolution Asia			
High-Resolution Asia 1 (99 E, 16 N - 110E, 7 N)			Filelist
High-Resolution Asia 2 (78 E, 32 N - 92 E, 22 N)			Filelist
High-Resolution Asia 3 (84 E, 27 N - 95 E, 18 N)			Filelist
High-Resolution Asia 4 (97.5 E, 4.5 N - 107.2 E, 3 S)			Filelist
High-Resolution Asia 5 (75 E, 12 N - 86 E, 3.2 N) (Sri Lanka)			Filelist
High-Resolution Asia 6 (120 E, 6 S - 129 E, 13.5 S) (Timor-Leste)			Filelist

Region		File Index	
High-Resolution Pacific Islands			
High-Resolution Pacific Islands 1 (155.3 E, 6.2 S - 167.5 E, 12.2 S) (Solomon Islands)			Filelist
High-Resolution Pacific Islands 2 (164.5 E, 12.5 S - 172 E, 21.5 S) (Vanuatu)			Filelist
High-Resolution Pacific Islands 3 (175 E, 14.0 S - 176 W, 21.5 S) (Fiji)			Filelist

Resolution
2.4degree
Full Disk

Resolution
0.05degree
Central Asia
Japan
South Asia
Southeast Asia 1-3
Pacific Islands 1-3
Australia
New Zealand

Resolution
0.037degree
Pacific Islands 4-10

Resolution
0.02degree
High Resolution Asia 1-3

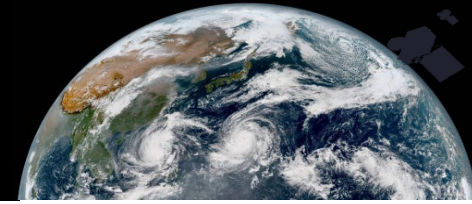
Resolution
0.015degree
High Resolution Asia 4-6
High Resolution Pacific
Islands 1-3



Himawari Real-Time RGB Images



RGB Training Library



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Himawari Real-Time Image

The RGB composite imagery is produced by composing satellite images colored in red, green and blue. Details are refer to "["RGB Training Library \(JMA website\)"](#)".

Select Area
Australia

Band
Airmass RGB

Time
22:30 UTC 05 February 2023

Animation
Last 1 Hour

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RGB Training Library





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RGB Training Library

Satellite imagery contains much of the physical information needed for nephanalysis. However, such analysis requires skills and experience to enable interpretation and extraction of the necessary information from imagery. Red-green-blue (RGB) composite imagery can be easily created by overlapping and displaying color satellite images to present information from several satellite channels.

Note: As work on color interpretation for Himawari-8 remains ongoing, the content of this site may change in the future.

RGB Training Materials

RGB Outline

- Outline of RGB Composite Imagery (PDF version)[approx. 13MB]

WMO recommended schemes

- Natural Color RGB - Detection of snow/ice, vegetation and clouds – (PDF [approx. 5MB])
- Day Microphysics RGB - Nephanalysis in daytime - (PDF [approx. 4MB])
- Day Snow-Fog RGB - Detection of low-level clouds and snow/ice covered area - (PDF [approx. 3MB])
- Night Microphysics RGB - Nephanalysis in night time - (PDF [approx. 3MB])
- Day Convective Storm RGB - Detection of Cumulonimbus Cloud - (PDF [approx. 3MB])
- Dust RGB - Detection of Yellow Sand (Asian Dust) - (PDF [approx. 3MB])
- Airmass RGB - Analysis of air mass and jet stream - (PDF version [approx. 2MB])

RGB recipes for other applications

- Ash RGB - Detection of Volcanic Ash (PDF [approx. 3MB])
- True Color RGB by Himawari-8 and -9 (PDF [approx. 3MB])

Himawari RGB quick guides

- Outline and list of RGB quick guide
- List of RGB quick guide "by-purpose"

Useful Links

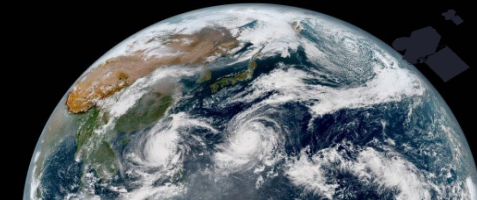
- HIMAWARI Real-Time Image
- EUMETSAT RGB Colour Interpretation Guid
- EUMeTrain ePort (External link)
- GOES-R RGB Products Explained (External link)
- Australian BoM VLab National Himawari-8 Training Campaign (External link)

URL:


https://www.jma.go.jp/jma/jma-eng/satellite/RGB_TL.html



RGB Quick Guide



Meteorological Satellites -Japan Meteorological Agency (JMA)-



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Himawari RGB Quick Guides

Outline

Himawari RGB Quick Guides provide basic summaries on the use of RGB composite imagery.

They are designed simply with front and reverse sides for ease of printing and lamination. A total of 18 Quick Guides are provided in relation to SATAID software to facilitate daily work.

Guides contain information on:

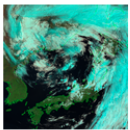

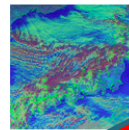
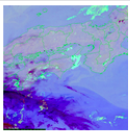
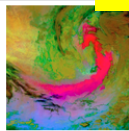
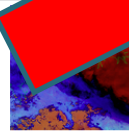
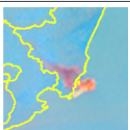
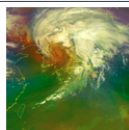
1. Main application(s), benefits and limitations
2. Typical cases
3. Color interpretation
4. RGB recipe (RGB composition: combinations of imagery assigned to the three primary colors with recommended thresholds) and related specifications

Himawari RGB Quick Guides

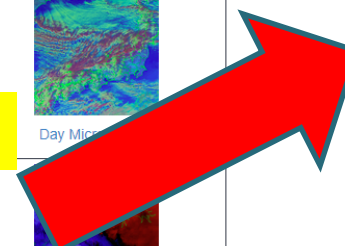
Click on an RGB name or image to download the relevant content.

[* Print list \(.pdf\)](#)
[Download all \(.zip\)](#)


WMO-recommended schemes

		
Natural Colors	Day Snow-ice	Day Microphysics
		
Night Microphysics	Dust	24-hour Microphysics
		
Ash	Airmass	

Click

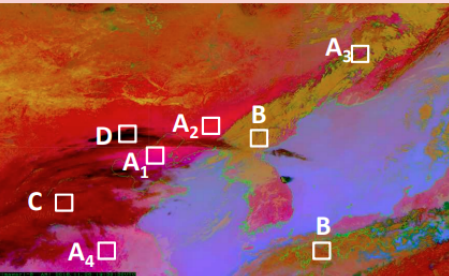


Meteorological Satellite Center (MSC) of JMA



Himawari Dust RGB Quick Guide

Ver.1.0



Extensive dust cloud (yellow sand) around the Bohai Sea, northeastern China and the Korean Peninsula with green beam – BTD_{B11-B13} 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

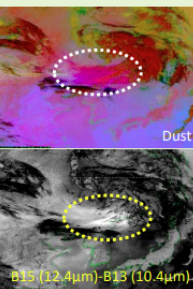
Main applications: Detection of Aeolian dust during day and night, cloud analysis

Benefits:

- Daytime/nighttime applicability thanks to infrared image composition
- Support for all-day monitoring of dust plume generation and dissipation on an ongoing basis
- Support for identification of cirrus clouds
- Support for identification of moisture boundaries in dry cloud-free areas

Limitations:

- Inability to estimate dust cloud height and thickness from Dust RGB data alone
- Difficulty of identifying very thin dust clouds
- Difficulty of identifying thin or low-level dust clouds over sea areas
- Disturbance from high-level clouds over dust clouds
- Poor display of low-level clouds (with dust cloud shading similar to that of low-level clouds)



Yellow sand around northeastern China and the Korean Peninsula with green beam – BTD_{B11-B13} version (15:20 UTC, 29 April 2017)

A bright area indicating yellow sand is seen in the difference image (bottom). The yellow sand area is more clearly visible in magenta in the RGB image (top).

RGB composition with recommended thresholds and related specifications for Dust 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	8.6-10.4	0.9K	12.5K	2.5	Dust	Thin ice clouds	Water clouds

