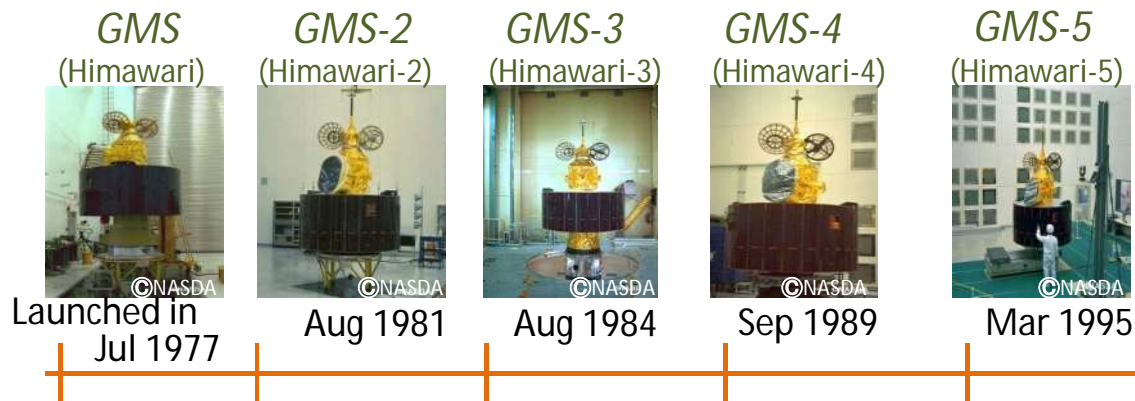


Himawari-8: JMA's Next-Generation Geostationary Meteorological Satellite

Satellite Program Division
Japan Meteorological Agency

Overview of JMA's Himawari-series satellites

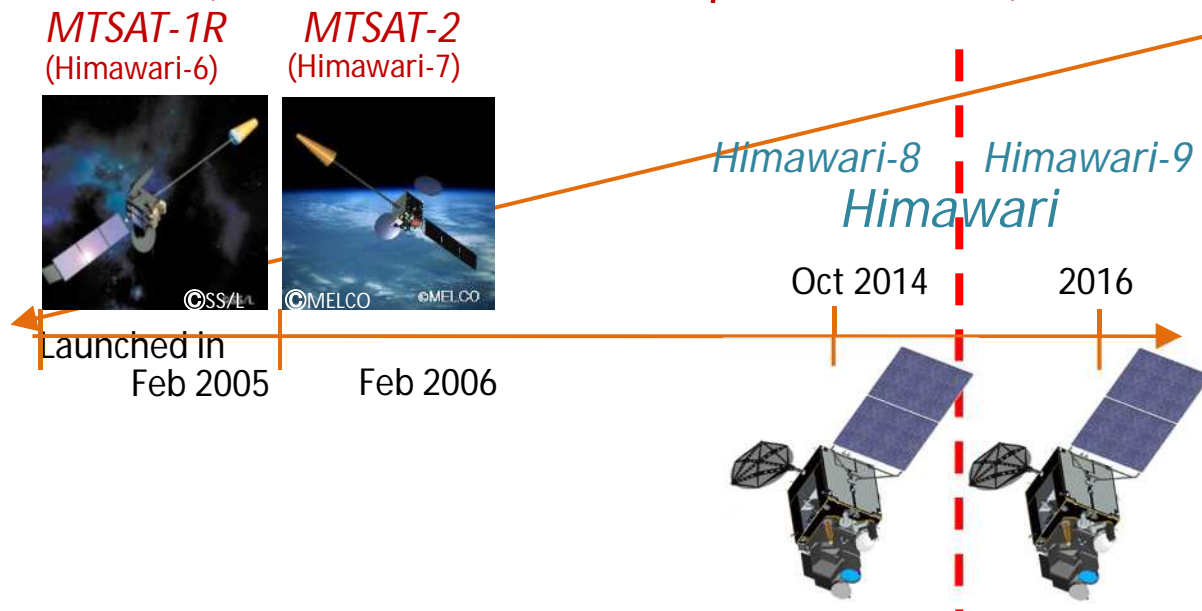
GMS (Geostationalary Meteorological Satellite)



(GOES-9)

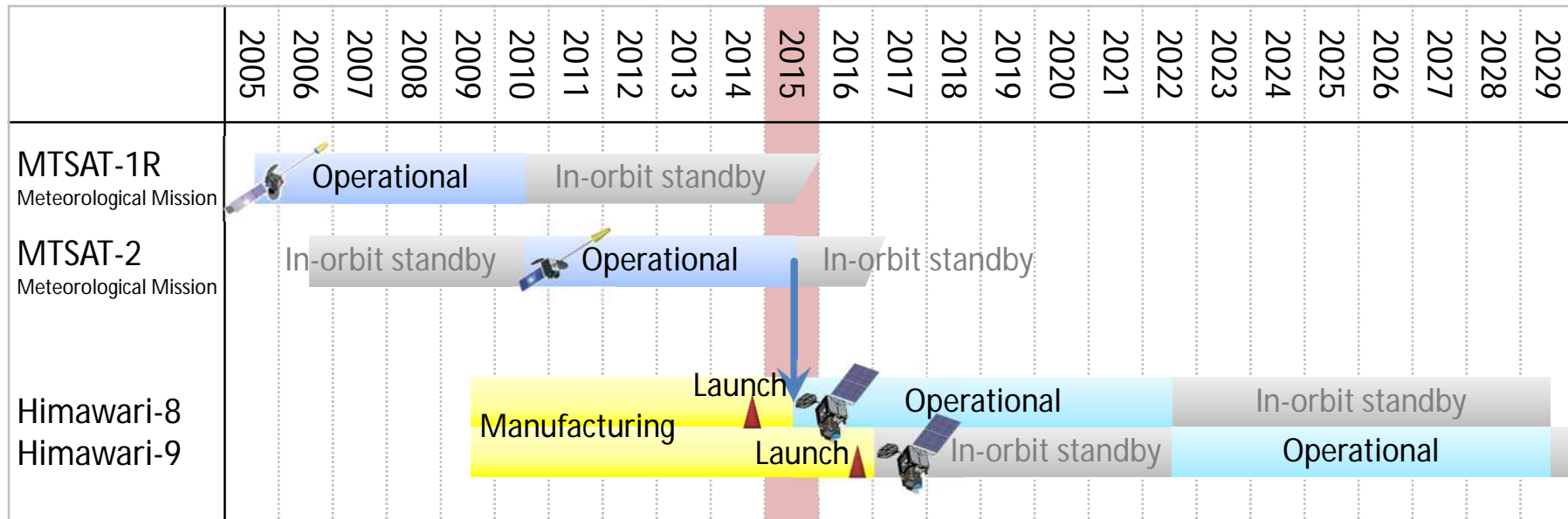
Back-up operation of GMS-5 with GOES-9 by NOAA/NESDIS from May 22, 2003 to June 28, 2005

MTSAT (Multi-functional Transport SATellite)



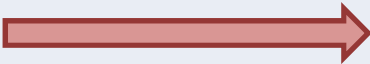
Satellite	Observation period
GMS	1978 – 1981
GMS-2	1981 – 1984
GMS-3	1984 – 1989
GMS-4	1989 – 1995
GMS-5	1995 – 2003
GOES-9	2003 – 2005
MTSAT-1R	2005 – 2010
MTSAT-2	2010 – 2015
Himawari-8	2015 – 2022
Himawari-9	2022 – 2029

Schedule



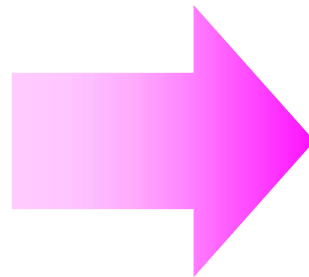
- **Himawari-8** was successfully launched on 7 October 2014.
- JMA plans to start its operation on 7 July 2015 as a replacement for **MTSAT-2**.
- **Himawari-8** will observe the East Asia and Western Pacific regions for a period of 15 years with **Himawari-9**.

Enhanced Performance

	MTSAT-1R/2	Himawari-8
Number of bands	5	16
Interval	30/60 min.	10 min.
Resolution	VIS: 1 km IR: 4 km	VIS: 0.5 km IR: 2 km
Data size	 50 times!!	



B/W TV



HD TV

Multi-band Observation

Bands of Himawari-8/9

Bands of MTSAT

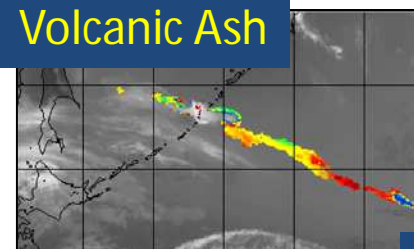
	Band	Wavelength [μm]	Spatial Resolution
VIS	1	0.47	1 km
	2	0.51	1 km
	3	0.64	0.5 km
IR4	4	0.86	1 km
	5	1.6	2 km
	6	2.3	2 km
	7	3.9	2 km
IR3	8	6.2	2 km
	9	6.9	2 km
	10	7.3	2 km
IR1	11	8.6	2 km
	12	9.6	2 km
	13	10.4	2 km
IR2	14	11.2	2 km
	15	12.4	2 km
	16	13.3	2 km

RGB
Composited
True Color Image

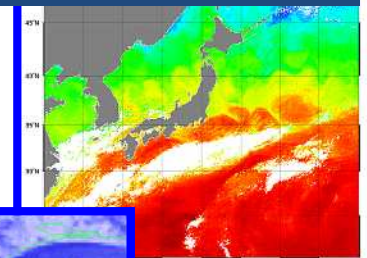


Improvement of Satellite Products

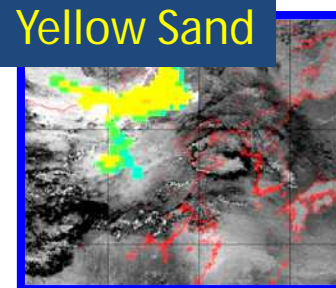
Volcanic Ash



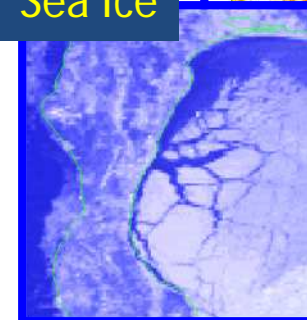
Sea Surface Temp.



Yellow Sand



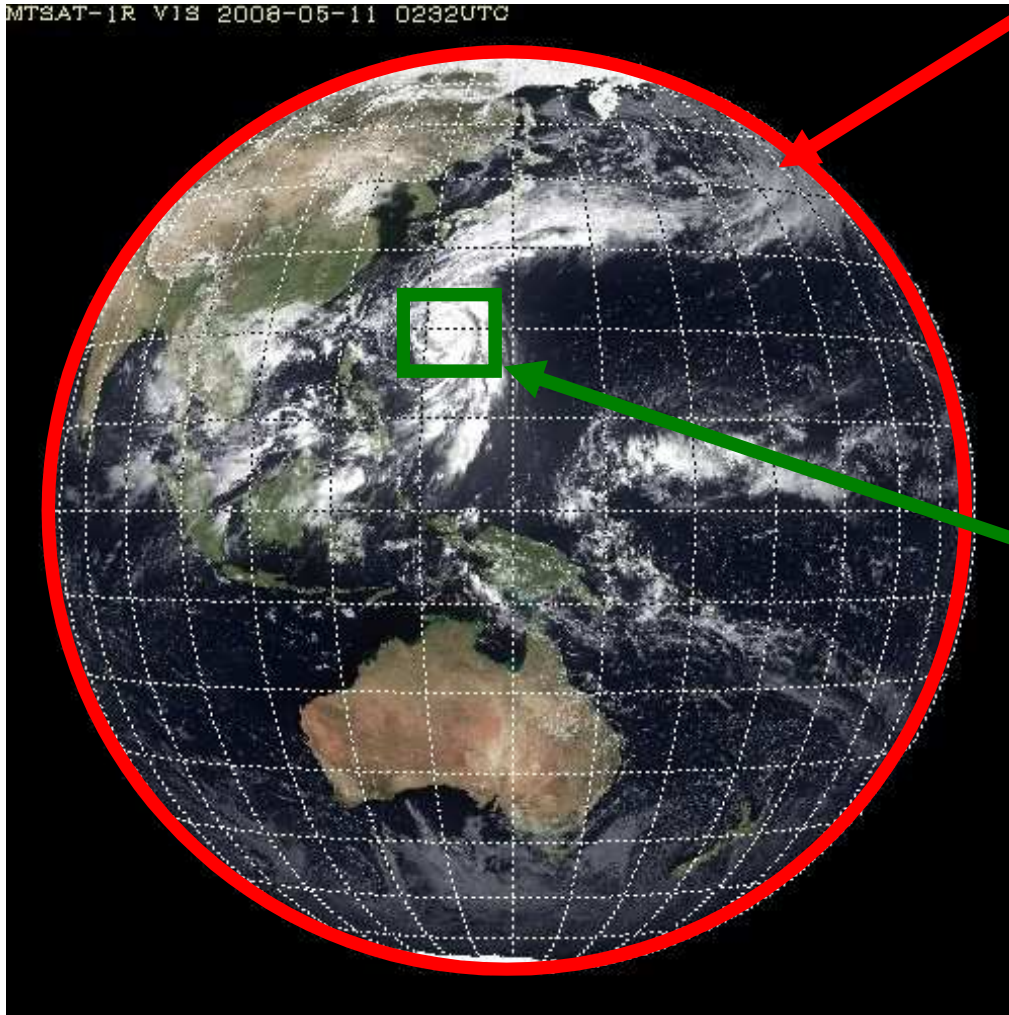
Sea Ice



Number of Bands: 5 → 16

Observation Area and Interval

MTSAT-1R VIS 2008-05-11 0232UTC



Full disk
Interval: 10 minutes

Interval: 60 min.  10 min.

MTSAT Himawari-8

New function!

Target Area

Interval: 2.5 minutes

Dimension: 1000 x 1000 km

Example of targets:

- Typhoon
- Volcanic Eruption
- Forest Fire
- ...

Dawn of a “New Era”



MTSAT-2

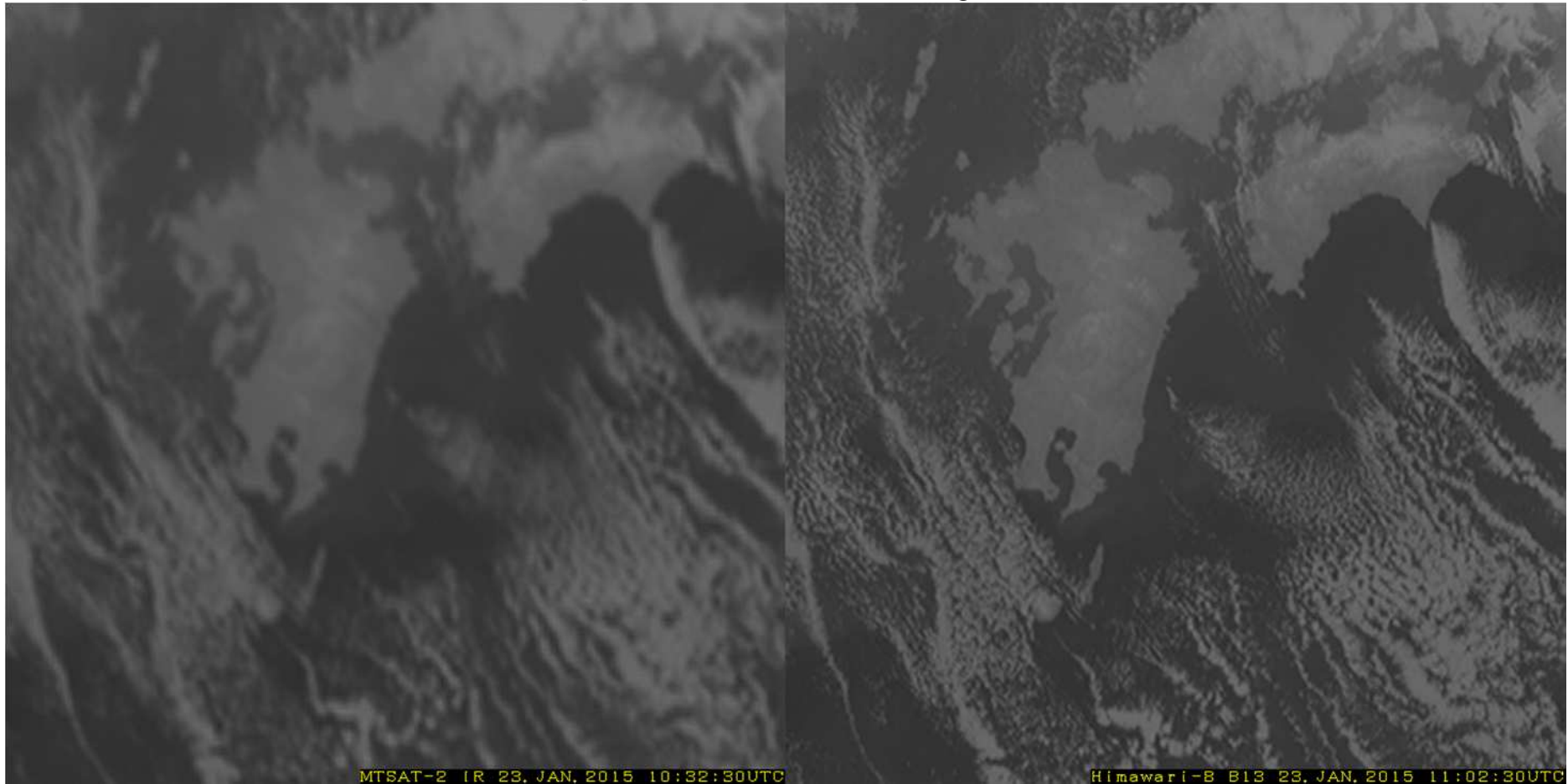
Every 60 minutes in Monochrome

Himawari-8

Every 10 minutes in Full-Color

Volcanic Ash in Clear Image

Eruption of Sakurajima



MTSAT-2 (IR)

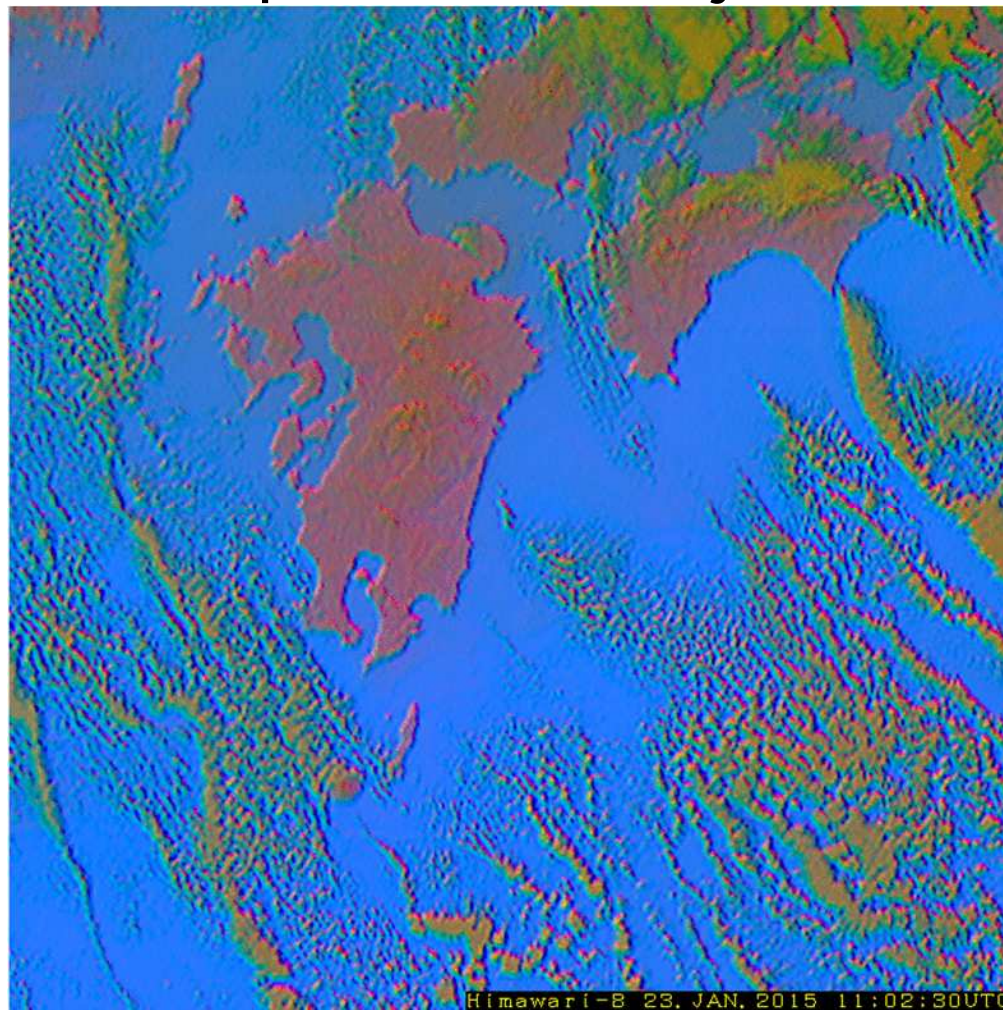
Every 30 minutes, 4 km grid

Himawari-8 (IR)

Every 2.5 minutes, 2 km grid

Volcanic Ash Highlighted in Bright Pink

Eruption of Sakurajima



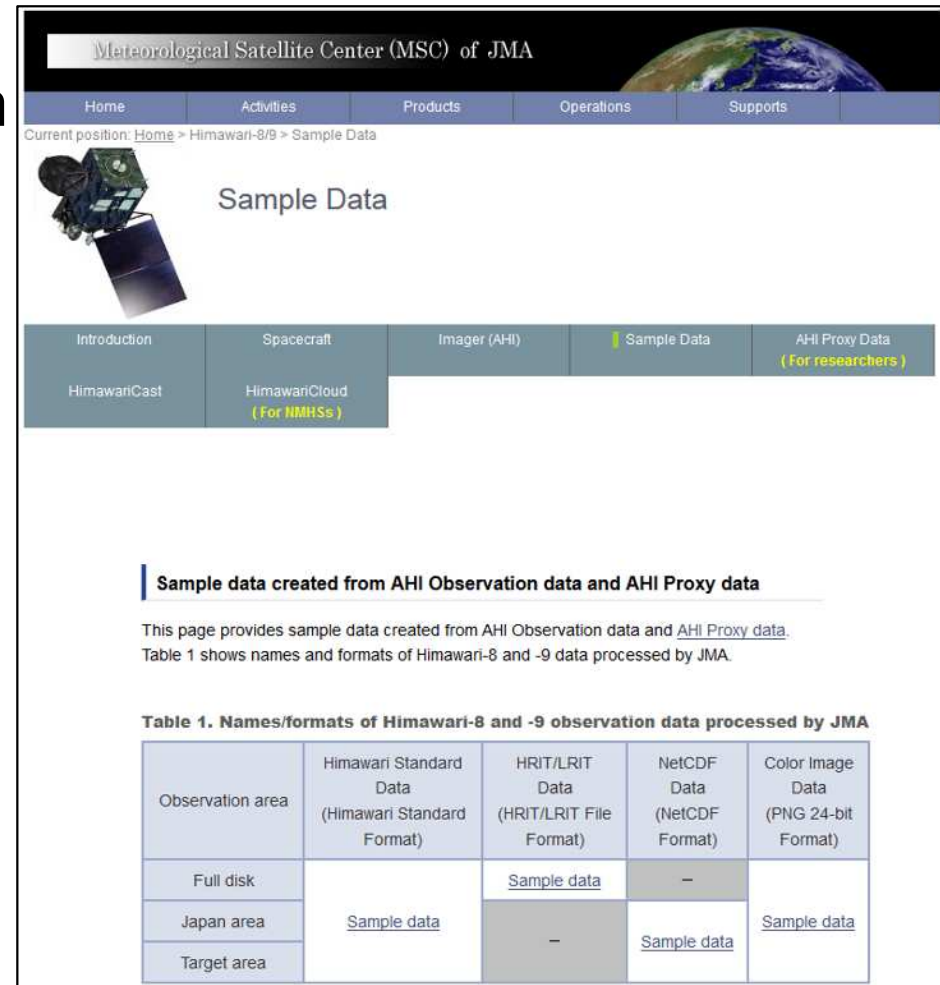
Himawari-8 (RGB composite made with 3 IR bands)

Every 2.5 minutes

Get the detail information on Himawari-8

Contents:

- Overview of satellite observation
- Overview of data dissemination
- Imager (AHI) specifications
- [Sample data](#)
 - Himawari Standard Data (HSD)
 - HRIT/LRIT files
 - NetCDF
 - PNG
- [Sample source code](#) to read HSD and convert into other formats



Meteorological Satellite Center (MSC) of JMA

Home Activities Products Operations Supports

Current position: [Home](#) > [Himawari-8/9](#) > [Sample Data](#)

Sample Data

Introduction Spacecraft Imager (AHI) **Sample Data** AHI Proxy Data (For researchers)

HimawariCast HimawariCloud (For NMHSs)

Sample data created from AHI Observation data and AHI Proxy data

This page provides sample data created from AHI Observation data and [AHI Proxy data](#). Table 1 shows names and formats of Himawari-8 and -9 data processed by JMA.

Table 1. Names/formats of Himawari-8 and -9 observation data processed by JMA

Observation area	Himawari Standard Data (Himawari Standard Format)	HRIT/LRIT Data (HRIT/LRIT File Format)	NetCDF Data (NetCDF Format)	Color Image Data (PNG 24-bit Format)
Full disk		Sample data	—	
Japan area	Sample data	—	Sample data	Sample data
Target area				

See <http://www.data.jma.go.jp/mscweb/en/himawari89/>