Coordination Group for Meteorological Satellites - CGMS



JMA report on the status of current and future satellite systems

Presented to CGMS-45 Plenary session, agenda item D.8

Japan Meteorological Agency



Coordination Group for Meteorological Satellites

Japan Meteorological Agency, June 2017

Overview – Planning of JMA satellite systems (Himawari-series)

GMS (<u>G</u>eostationary <u>M</u>eteorological <u>S</u>atellite)



| | uni-junctio | nui <u>n</u> uisport <u>sai</u> ente j | |
|--------------|-----------------|--|---|
| MTSAT-1R | MTSAT-2 | | G |
| (Himawari-6) | (Himawari-7) | | G |
| South 1 | | Himawari-8 Himawari-9 | G |
| Occita | CIMAELCO BMELCO | Himawari | G |
| | | Oct 2014 2016 | G |
| Launched in | | | G |
| Feb 2005 | Feb 2006 | | M |
| | | | Μ |
| Coordination | Group for | | Н |
| Meteorologic | al Satellites | | Н |

| Satellite | 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 | | |

Himawari-8/9 Mission Schedule

- Himawari-8 has stably been operational since July 2015.
- Himawari-9, which was launched in November 2016, began serving as back-up to Himawari-8 on 10 March 2017.
- This dual combination of new-generation satellites will support JMA's stable provision of continuous satellite observation data for the Asia-Oceania regions until 2029.



Himawari-8/9 Mission Consistency

- Himawari-8 and -9 are located in close proximity at around 140.7 degE, separated by only 0.1 deg.
- Their spectral response characteristics are also quite similar.
- <u>JMA ensures consistent and contiguous observation over</u> <u>14 years by those two satellites.</u>



Himawari-8 Himawari-9



Band13(10.4um), 2 February 2017 Coordination Group for Meteorological Satellites



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HimawariCast service

- The HimawariCast service was transferred from the JCSAT-2A satellite to the JCSAT-2B satellite in July 2016.
- As JMA informed users of the requirement and provided instructions several months in advance, the transfer was smooth.





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Himawari's 36 NMHS users



Himawari-8/9 Data Collection System

- Himawari-8 and -9 are both equipped with Data Collection System (DCS) functionality. Himawari-8 currently supports the Data Collection Service with Himawari-9 in standby as back-up.
- In recent years, the number of **tidal/tsunami stations** using Himawari-DCS has rapidly increased. In addition, the high-frequent **<u>collection</u>** (6-minute intervals) is implemented.





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New tidal/tsunami stations using Himawari-DCS

Support for User Readiness: Webpage

Contents:

- Overview of satellite observation
- Overview of data dissemination
- Imager (AHI) specifications

<u>Sample data</u>

- Himawari Standard Data (HSD)
- ➤ HRIT/LRIT files
- NetCDF
- PNG

Sample source code to read HSD and convert into other formats



Sample data created from AHI Observation data and AHI Proxy data

This page provides sample data created from AHI Observation data and <u>AHI Proxy data</u>. 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 | - | Sample data |
| Japan area | Sample data | - | Sample data | |
| Target area | | | | |

See http://www.jma-net.go.jp/msc/en/support/index.html

Thank you



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