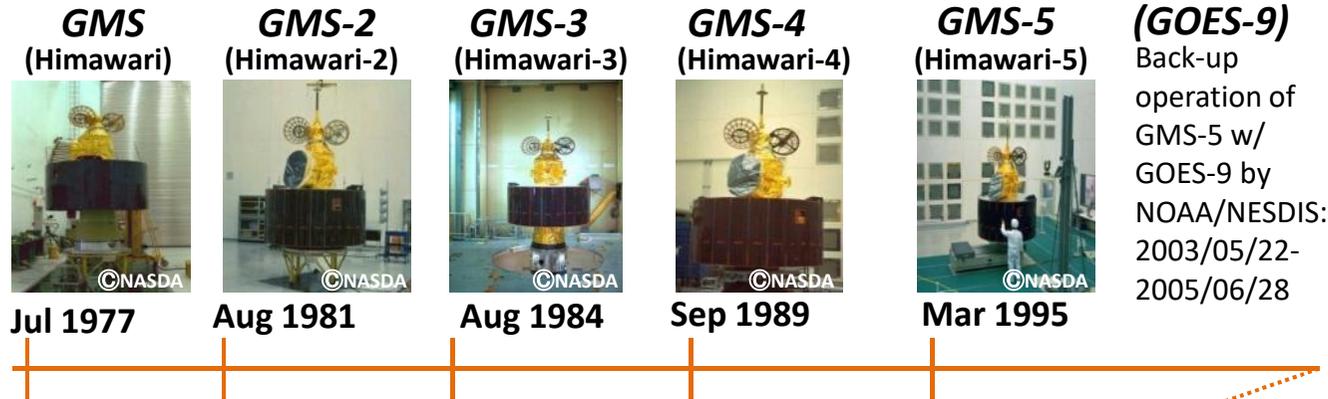


# Status report on the current and future satellite systems by JMA

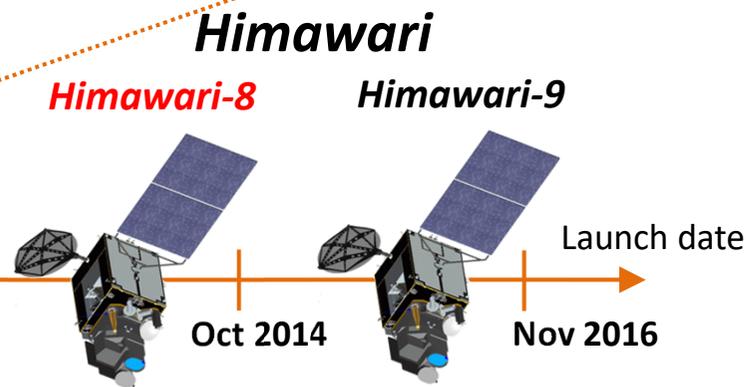
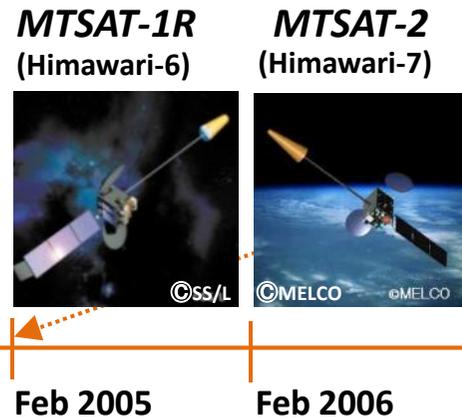
Presented to CGMS-47 plenary session, agenda item [4]

# History of JMA's GEO Satellite Systems (Himawari-series)

## GMS (Geostational Meteorological Satellite)



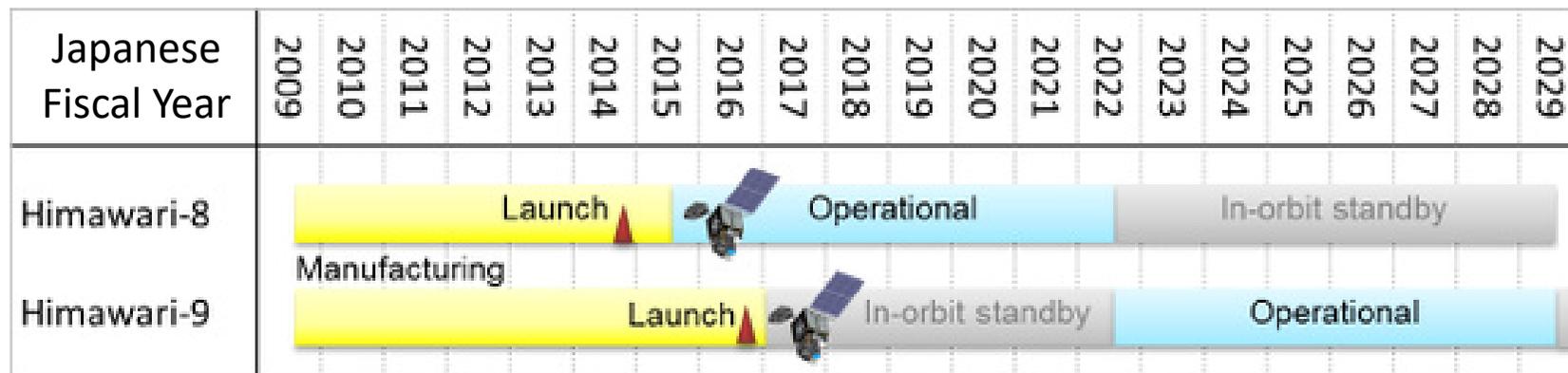
## MTSAT (Multi-functional Transport SATellite)



Satellite	Operation 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
<b>Himawari-8</b>	<b>2015 – 2022</b>
Himawari-9	2022 – 2029

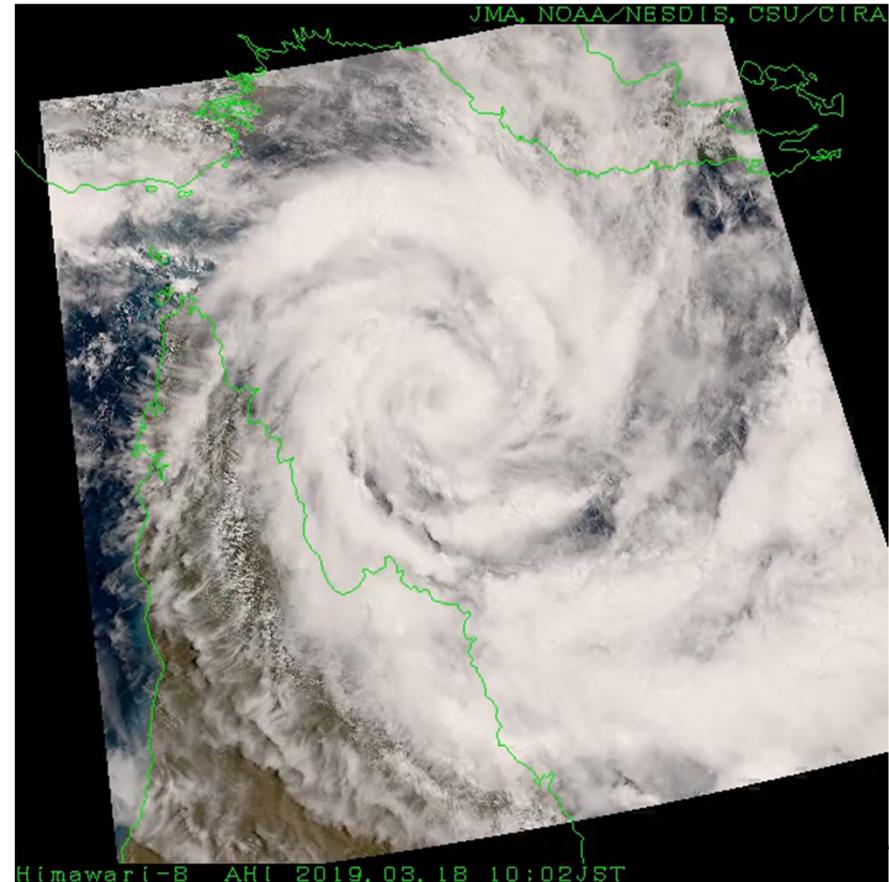
## Himawari-8/9 Mission Schedule

- Himawari-8: **stably operational** since July 2015.
- Himawari-9: back-up operation to Himawari-8 since 10 March 2017.
- This twin satellite operation will support JMA's stable provision of continuous satellite observation data for the Asia-Oceania regions until 2029.



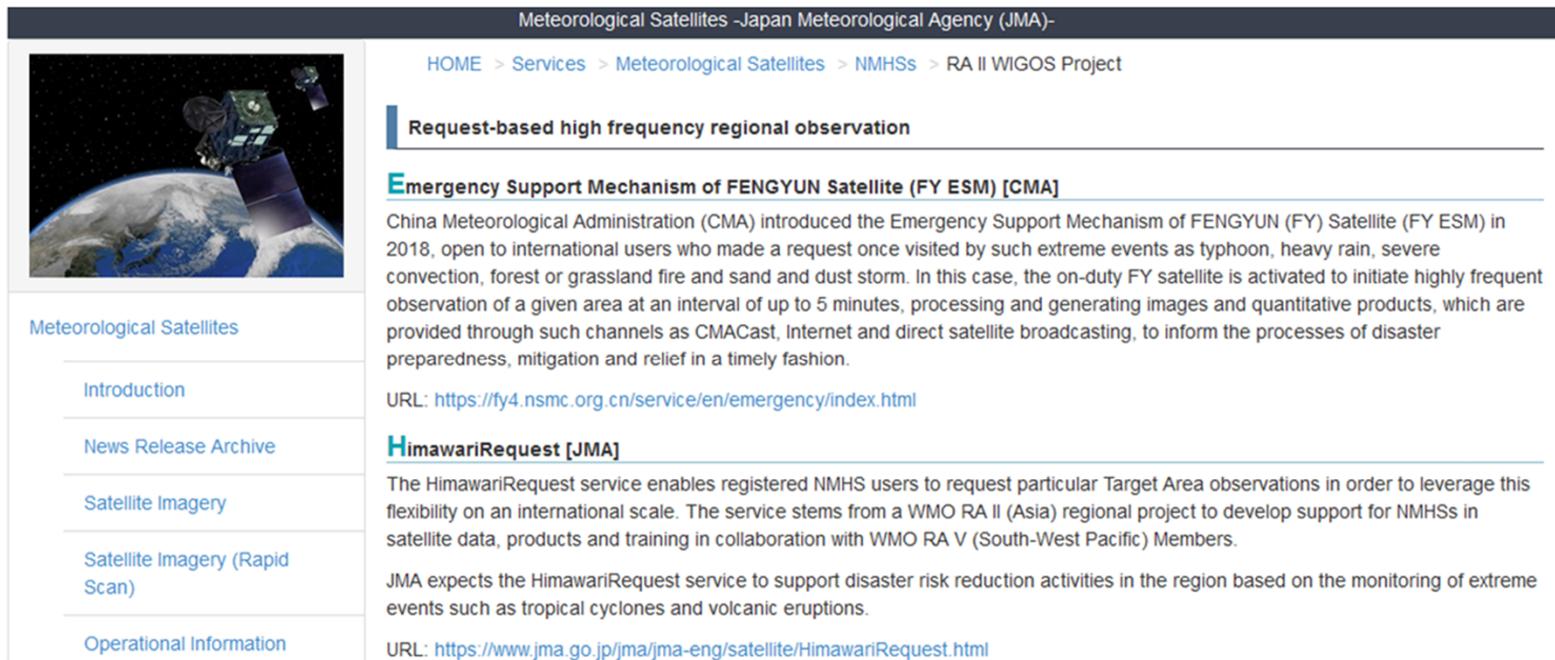
## HimawariRequest (started in Jan. 2018)

- International service for NMHSs in Himawari-8/-9 coverage area to request Target Area observation (1,000 x 1,000 km area every 2.5 minutes).
- HimawariRequest: expected to support NMHSs' DRR activities.
- Status as of 2019-04-09
  - Registration: 18 NMHSs
  - 11 requests for TC, volcanic eruption, wild fires, etc.



# Portal on Request-based High Frequency Regional Observation

- In response to CGMS R46.12, portal resource on the RA II WIGOS Project website was launched by CMA/JMA/KMA.
- R46.12: CMA, JMA, KMA to jointly **build a portal** in the Project website for their operational **information regarding rapid-scanning observations on demand** from geostationary meteorological satellites in the regions.



Meteorological Satellites -Japan Meteorological Agency (JMA)-

HOME > Services > Meteorological Satellites > NMHSS > RA II WIGOS Project

### Request-based high frequency regional observation

#### Emergency Support Mechanism of FENGYUN Satellite (FY ESM) [CMA]

China Meteorological Administration (CMA) introduced the Emergency Support Mechanism of FENGYUN (FY) Satellite (FY ESM) in 2018, open to international users who made a request once visited by such extreme events as typhoon, heavy rain, severe convection, forest or grassland fire and sand and dust storm. In this case, the on-duty FY satellite is activated to initiate highly frequent observation of a given area at an interval of up to 5 minutes, processing and generating images and quantitative products, which are provided through such channels as CMACast, Internet and direct satellite broadcasting, to inform the processes of disaster preparedness, mitigation and relief in a timely fashion.

URL: <https://fy4.nsmc.org.cn/service/en/emergency/index.html>

#### HimawariRequest [JMA]

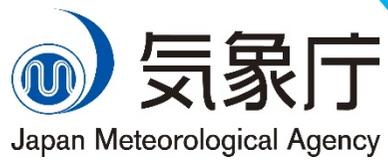
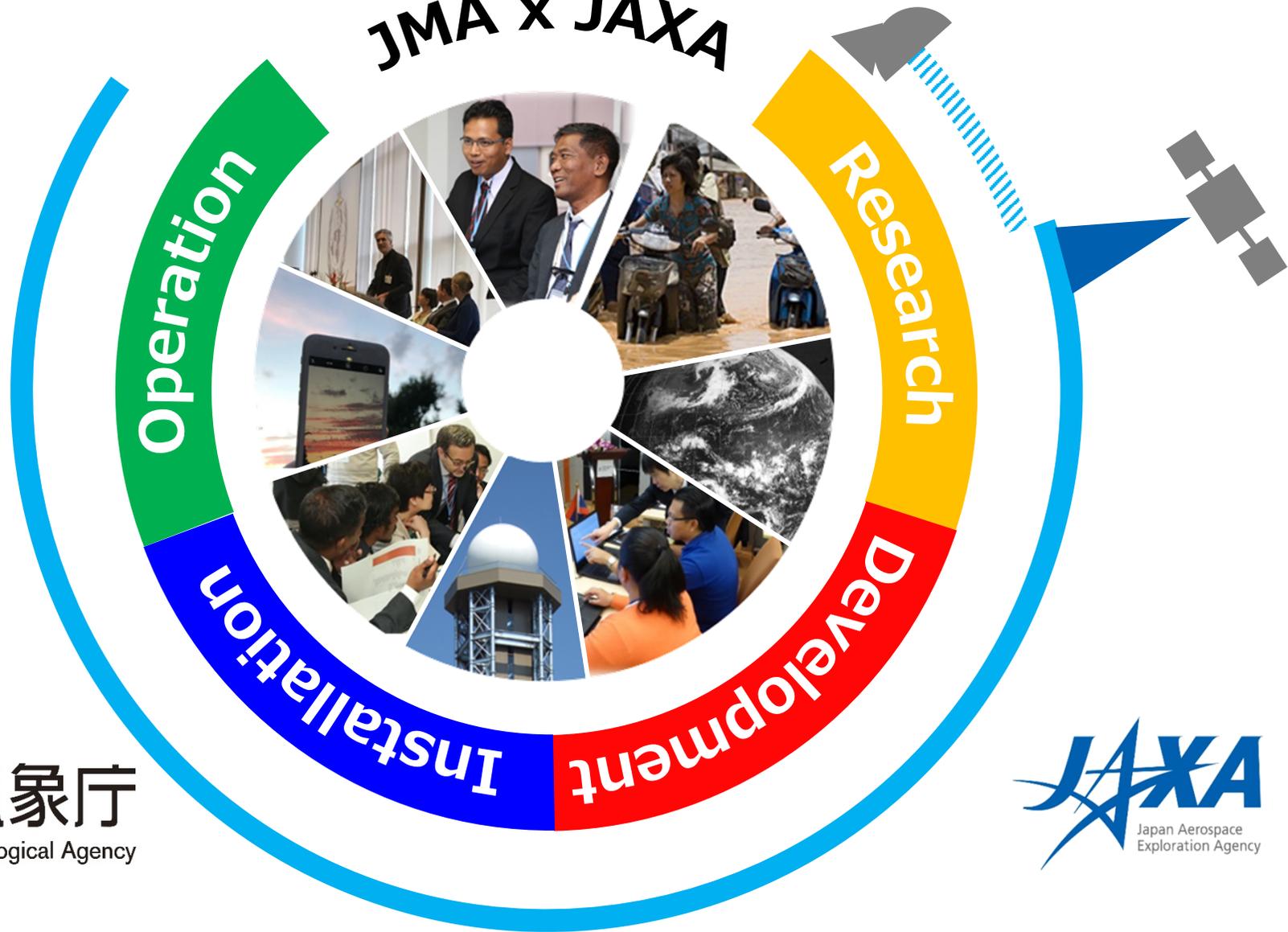
The HimawariRequest service enables registered NMHS users to request particular Target Area observations in order to leverage this flexibility on an international scale. The service stems from a WMO RA II (Asia) regional project to develop support for NMHSS in satellite data, products and training in collaboration with WMO RA V (South-West Pacific) Members.

JMA expects the HimawariRequest service to support disaster risk reduction activities in the region based on the monitoring of extreme events such as tropical cyclones and volcanic eruptions.

URL: <https://www.jma.go.jp/jma/jma-eng/satellite/HimawariRequest.html>

[https://www.jma.go.jp/jma/jma-eng/satellite/ra2wigosproject/ra2wigosproject-intro\\_en\\_jma.html#request](https://www.jma.go.jp/jma/jma-eng/satellite/ra2wigosproject/ra2wigosproject-intro_en_jma.html#request)

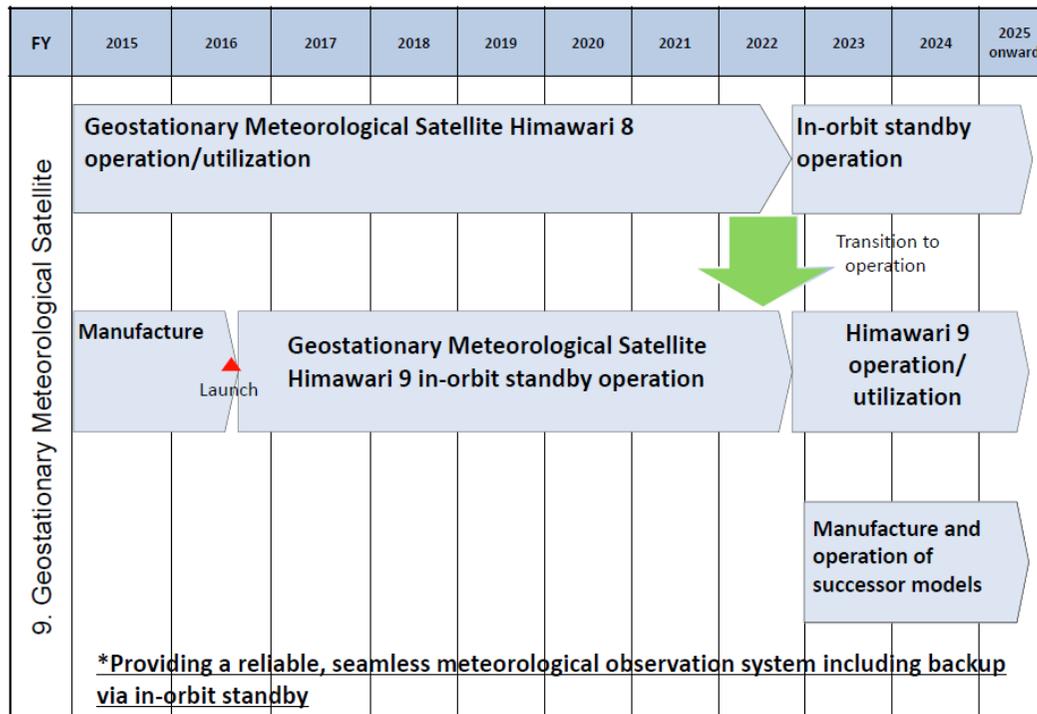
JMA-JAXA Collaboration  
**Ground x Space**  
**JMA x JAXA**



# Himawari-8/9 follow-on program (1/2)

- In 2018, JMA started considering the next GEO satellite program.

4. (2)①ii) Satellite remote sensing



\*All of the above: MLIT

20

The Implementation Plan of the Basic Plan on Space Policy:

*“By **FY2023** Japan will start manufacturing the Geostationary Meteorological Satellites that will be the successors to Himawari-8 and -9, aiming to **put them into operation in around FY2029**”.*

[Description of Japan’s geostationary meteorological satellites in the Implementation Plan revised in FY2017](#)

## Himawari-8/9 follow-on program (2/2)

- JMA will pursue seamless GEO satellite system by considering CGMS baseline and Vision for WIGOS in 2040.
  - E.g., [hyperspectral IR sounder](#) and [lightning mapper](#)
- In (JFY) 2019, JMA will be conducting a worldwide technology trends survey on future satellites/instruments.
- CGMS agencies would benefit from impact studies (e.g. OSSE/OSE) on meteorological services such as weather monitoring and forecasting.
  - OSSE/OSE of hyperspectral IR sounder on JMA NWP systems are underway.
  - Such studies are expected to be documented in the Vision or other relevant documents.

Thank you