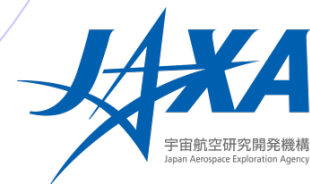


# JMA and JAXA



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(JAXA : Japan Aerospace Exploration Agency)



## ■ Current operation

- MTSAT-2 (Himawari-7) : Imaging operation at 145E since 1 Jul. 2010
- MTSAT-1R (Himawari-6) : Imaging operation standby at 140E, direct broadcast and DCS (Data Collection System) operations
  - ▣ Rapid scan observation around Japan during daytime in the summer for aviation users

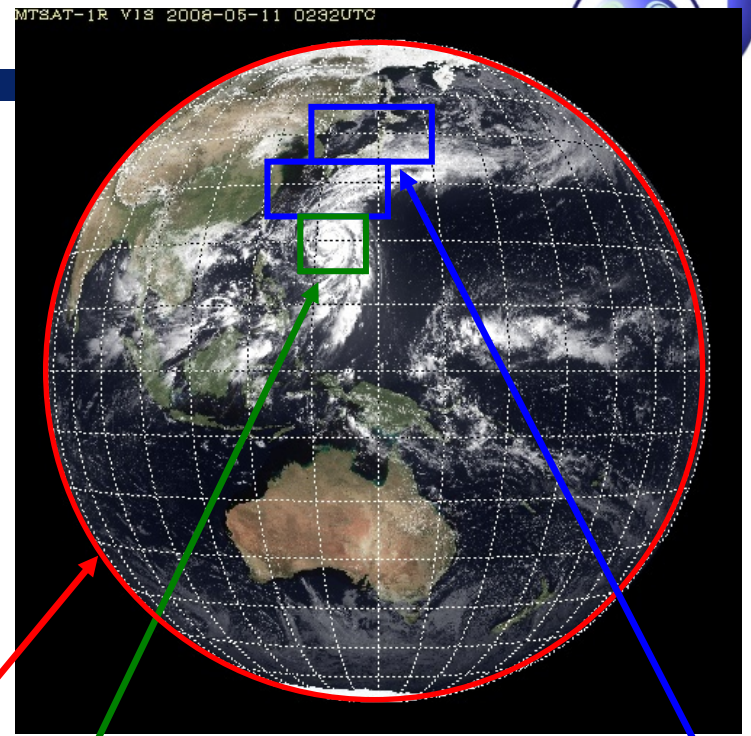
## ■ Himawari-8

- Launch in summer 2014 and start operation in summer 2015
- **Himawari-9**: launch in 2016 and start operation in 2022
- **AHI** (Advanced Himawari Imager)
  - ▣ Enhance channel number, spatial resolution and measurement frequency
  - ▣ → Improve current products and create new products
    - AMV, CSR, SST, aerosol, volcanic ash, and Instability Index
  - ▣ Simulation data is available on the JMA website
  - ▣ Data dissemination via the Internet (and a telecommunication satellite)
    - Pre-operational imagery data available in early 2015

# Himawari-8/9: Specification of Observation

Channel	Central Wavelength [μm]	Spatial Resolution
1	0.43 – 0.48	1 km
2	0.50 – 0.52	1 km
3	0.63 – 0.66	0.5 km
4	0.85 – 0.87	1 km
5	1.60 – 1.62	2 km
6	2.25 – 2.27	2 km
7	3.74 – 3.96	2 km
8	6.06 – 6.43	2 km
9	6.89 – 7.01	2 km
10	7.26 – 7.43	2 km
11	8.44 – 8.76	2 km
12	9.54 – 9.72	2 km
13	10.3 – 10.6	2 km
14	11.1 – 11.3	2 km
15	12.2 – 12.5	2 km
16	13.2 – 13.4	2 km

**Number of Channels: 5 → 16**  
**Spatial Resolution 1, 4km → 0.5, 1, 2km**



**Full disk**  
 Interval: **10 minutes** (6 times per hour)

**Region: Japan**  
 Interval: **2.5 minutes** (4 times in 10 minutes)  
 Dimension: EW x NS: 2000 x 1000 km x 2

**Region: Typhoon**  
 Interval: **2.5 minutes** (4 times in 10 minutes)  
 Dimension: EW x NS: 1000 x 1000 km

**Interval: 30/60 min. → 10min.**

## ■ Current operation

- **PR** on TRMM : first space-borne precipitation since 1997 radar and still active!
- **GOSAT** : FTS for GHG (CO<sub>2</sub> & CH<sub>4</sub>)
- **AMSR2** on **GCOM-W** : microwave imager
  - Launched on 18 May 2012
- **DPR** on GPM core: Dual-frequency Precipitation Radar (KuPR + KaPR)
  - Launched on 28 Feb. 2014

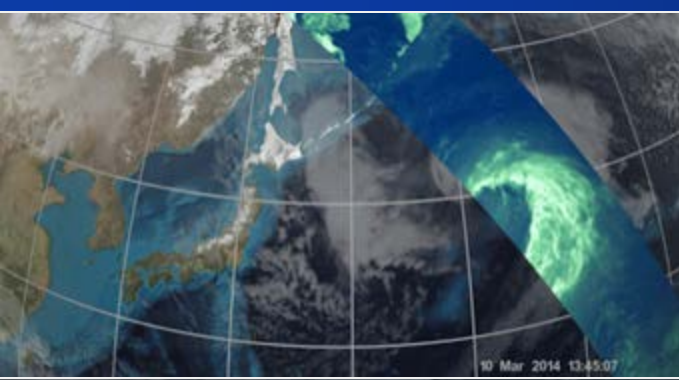
## ■ Plans

- **ALOS2** (24 May 2014): SAR
- **CPR** on EarthCARE (2016) : Cloud profiling radar
- **SGLI** on **GCOM-C** (2016): High-res. multi-ch. optical imager
- **GOSAT2** (2017)

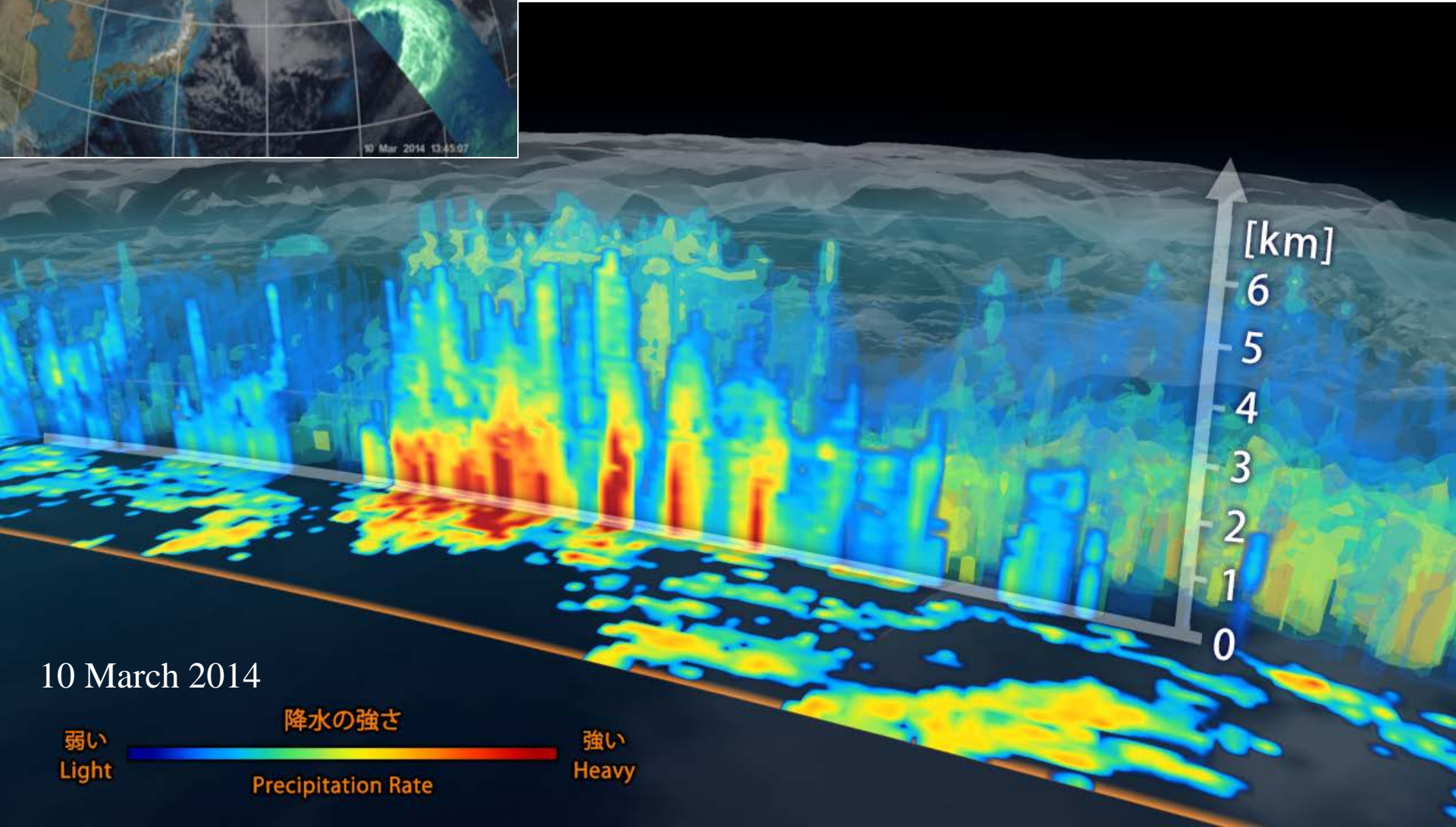
## ■ Under discussion

- GCOM-W2/AMSR3
- ,,,

# GPM/DPR first image released on 25 March



[http://www.jaxa.jp/press/2014/03/20140325\\_gpm\\_j.html](http://www.jaxa.jp/press/2014/03/20140325_gpm_j.html),  
Image credit JAXA/NASA



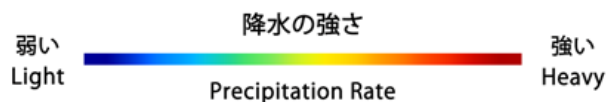
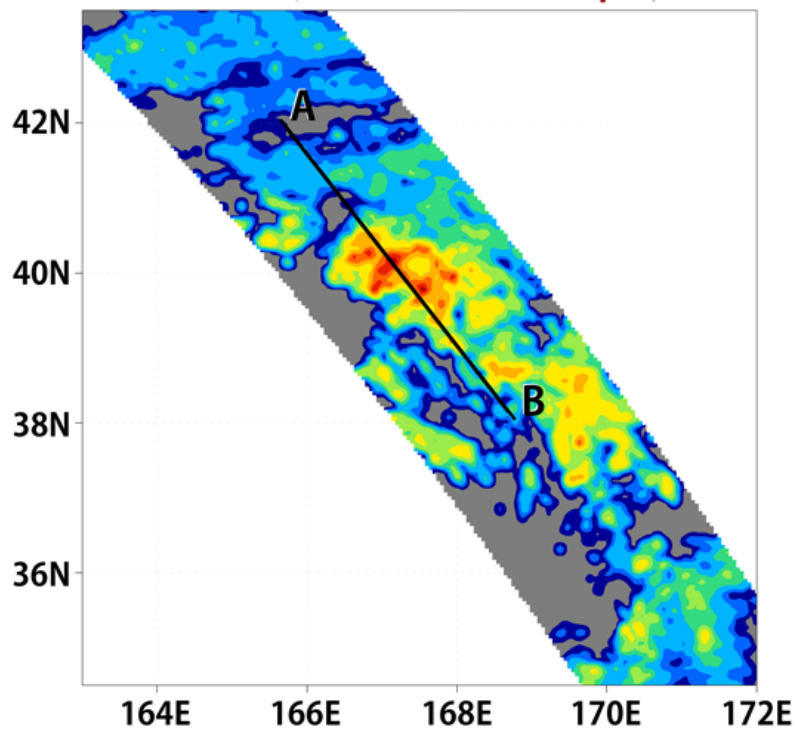
10 March 2014

弱い Light      降水の強さ      強い Heavy  
Precipitation Rate

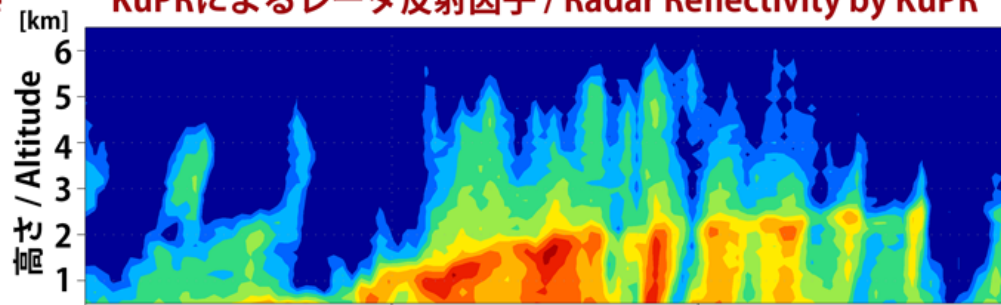
Image credit : JAXA/NASA

[http://www.nasa.gov/press/2014/march/first-images-available-from-nasa-jaxa-global-rain-and-snowfall-satellite/index.html#.UzHrHPI\\_sbPs](http://www.nasa.gov/press/2014/march/first-images-available-from-nasa-jaxa-global-rain-and-snowfall-satellite/index.html#.UzHrHPI_sbPs)

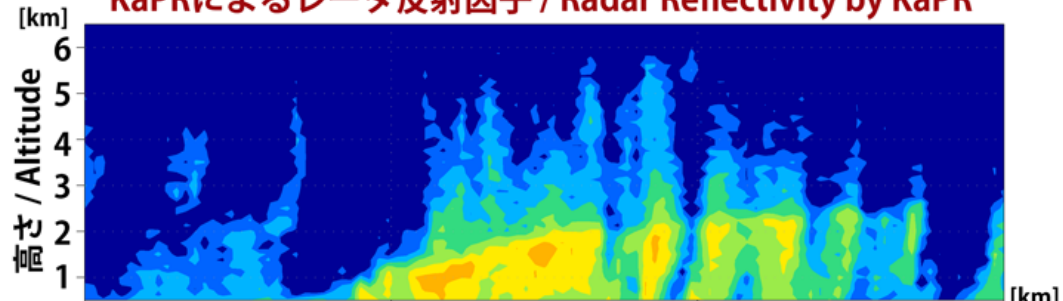
地表付近の降水の強さ / Surface Precipitation Rate



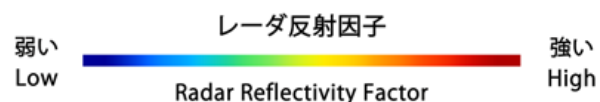
KuPRによるレーダ反射因子 / Radar Reflectivity by KuPR



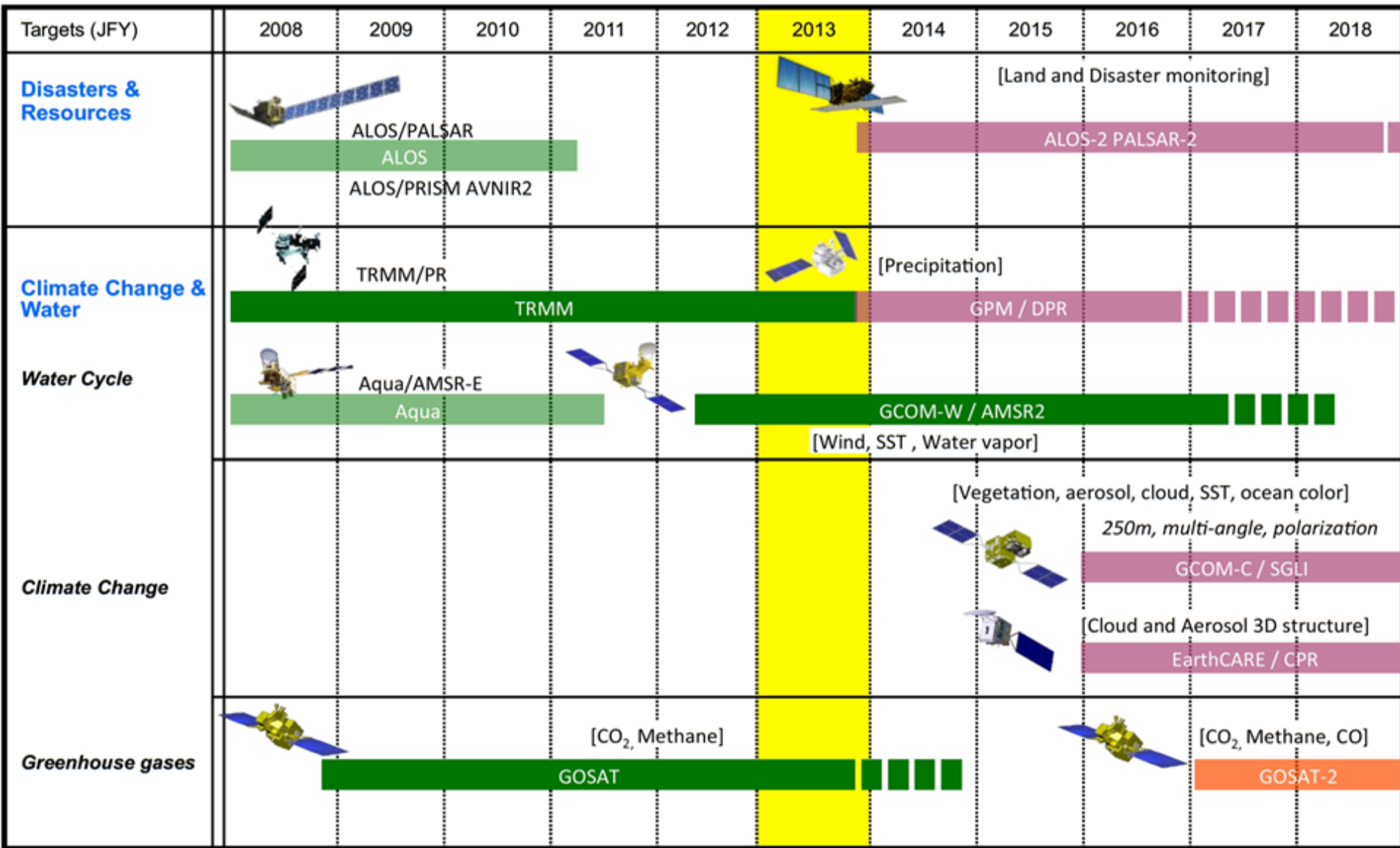
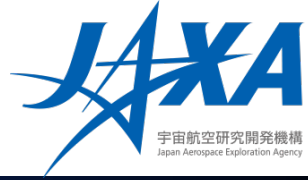
KaPRによるレーダ反射因子 / Radar Reflectivity by KaPR



A B  
A点からの距離 / Distance from A



# JAXA Earth Observation Satellite Lineup



Mission status    ■ On orbit    ■ Phase C/D    ■ Phase A/B