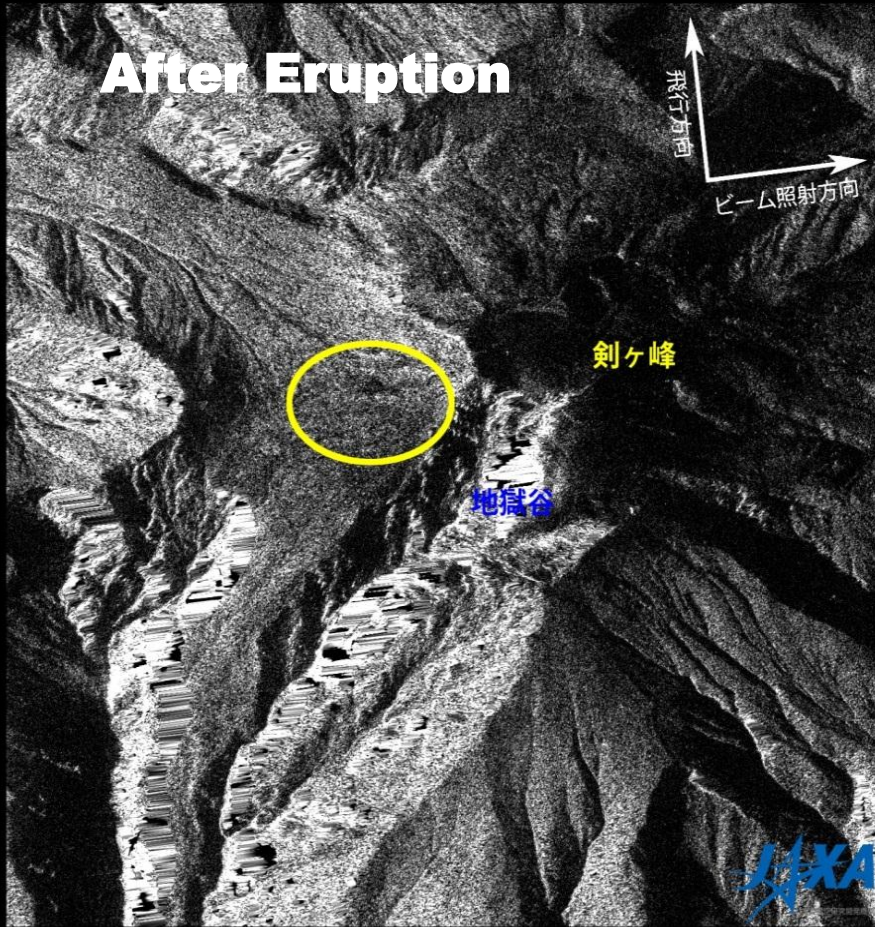


JAXA Activities in Earth Observation

Japan–EU Space Forum
October 8, 2014

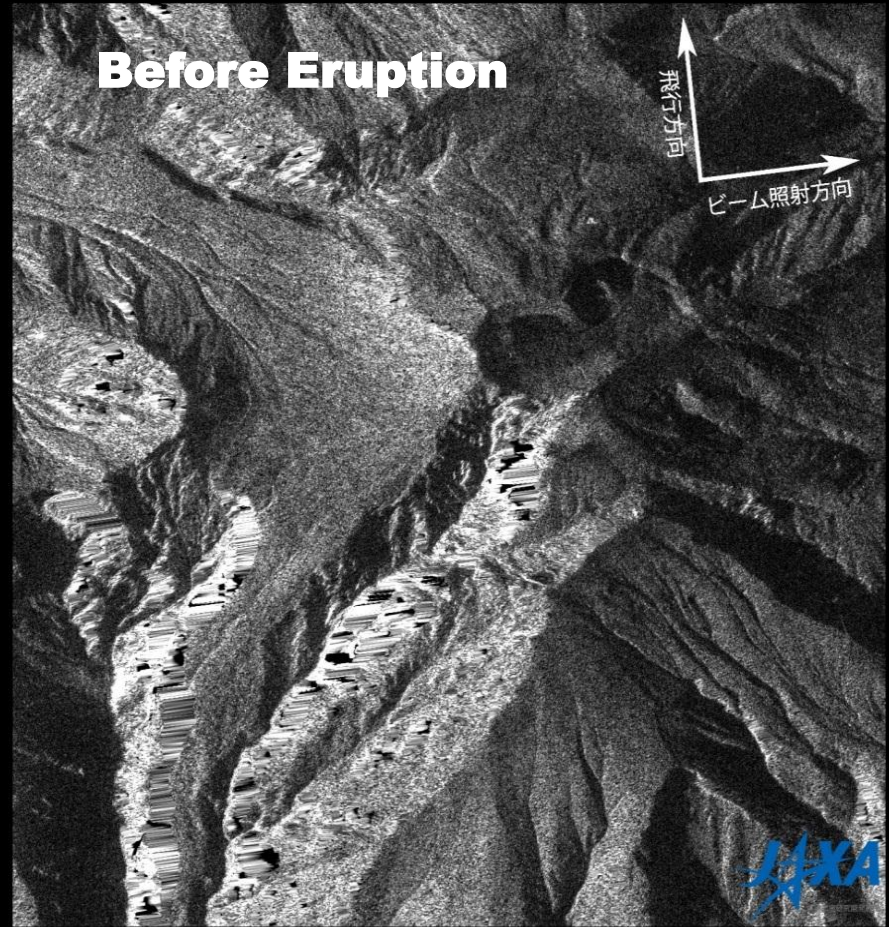
Japan Aerospace Exploration Agency

Eruption of Mt. Ontake



0 0.25 0.5[km]

2014/09/29



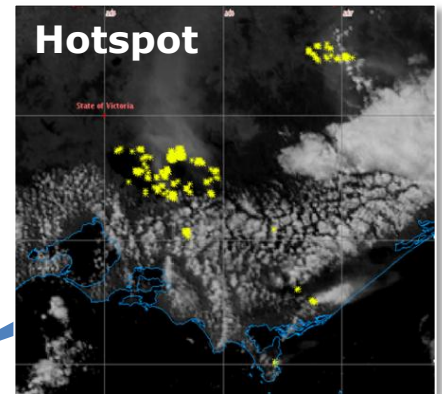
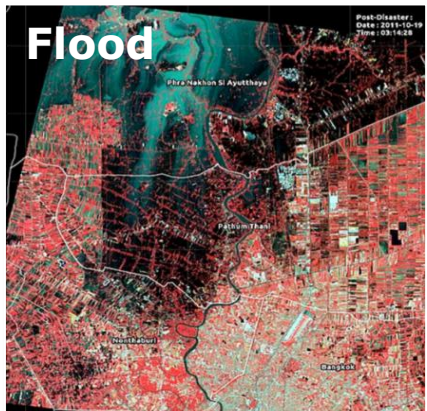
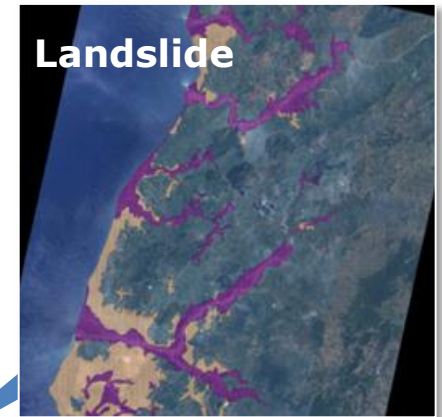
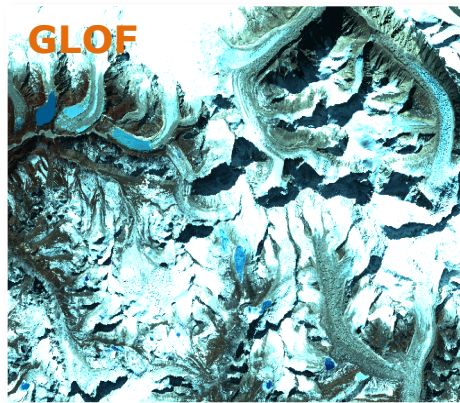
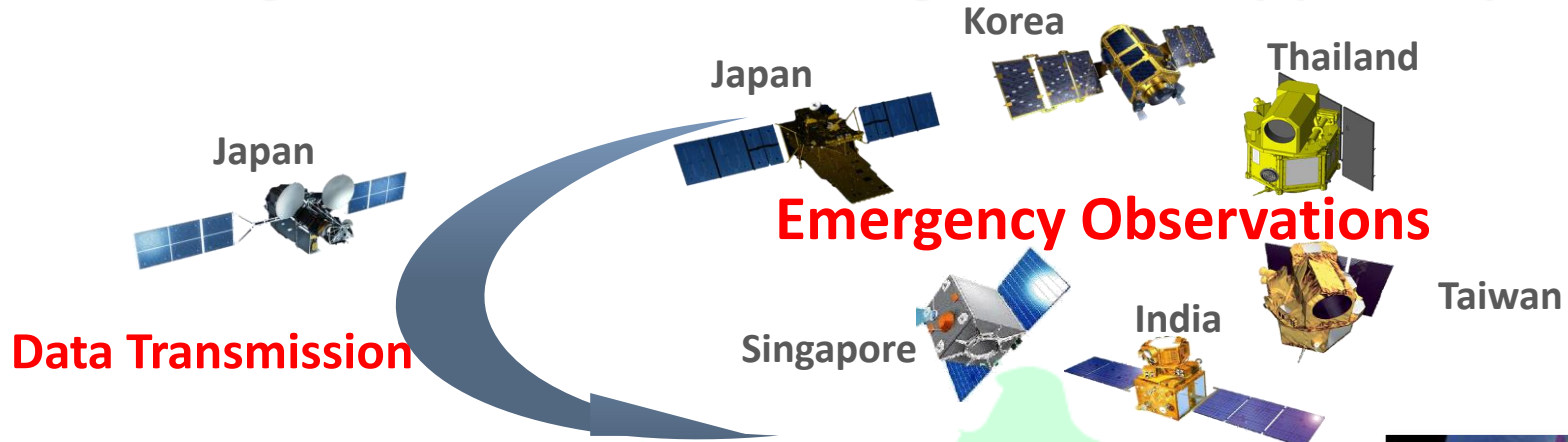
2014/08/18

Comparison of images of Mt. Ontake summit before and after the eruption.

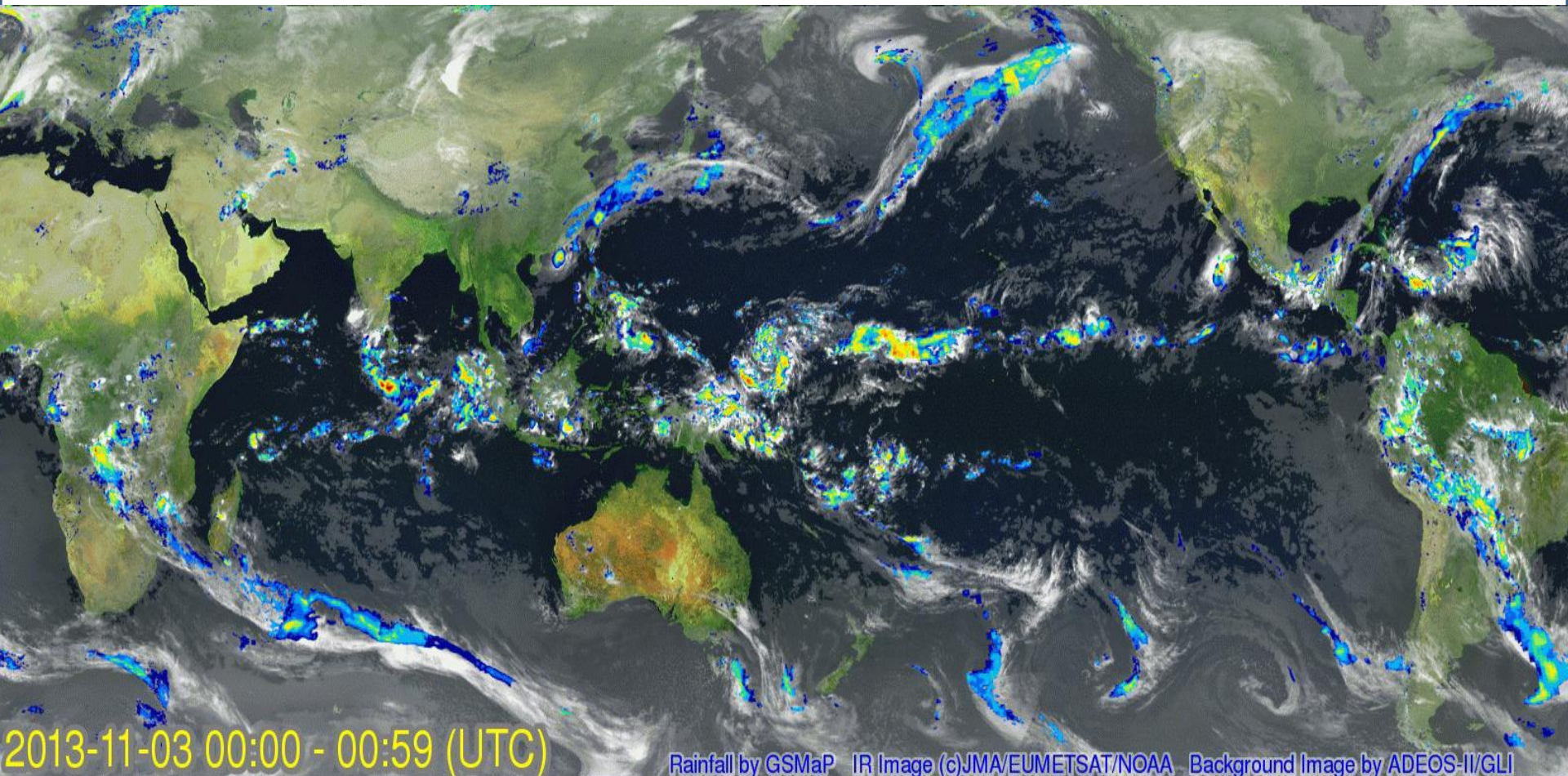
Left: Sep 29 Right: Aug 18

A low spot (270m x 70 m) is visible after the eruption.

Sentinel Asia: Regional Disaster Management Support System



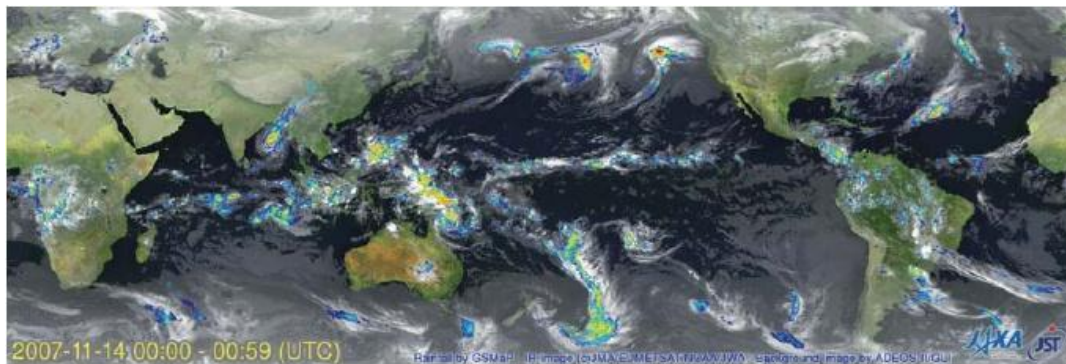
3-hourly movie from 3 to 9 November, 2013 (Typhoon No.30 case)



<http://sharaku.eorc.jaxa.jp/GSMaP/>

Flood Warning and Drought Warning in Asia

Global Satellite Mapping of Precipitation (GSMaP)



Flood Forecasting System

Automatic Calculation of Drought Indices

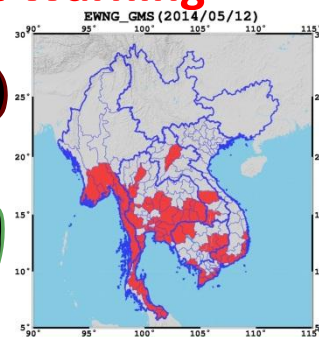
Cell Phone Short Message

Website

Flood Warning

Drought Warning

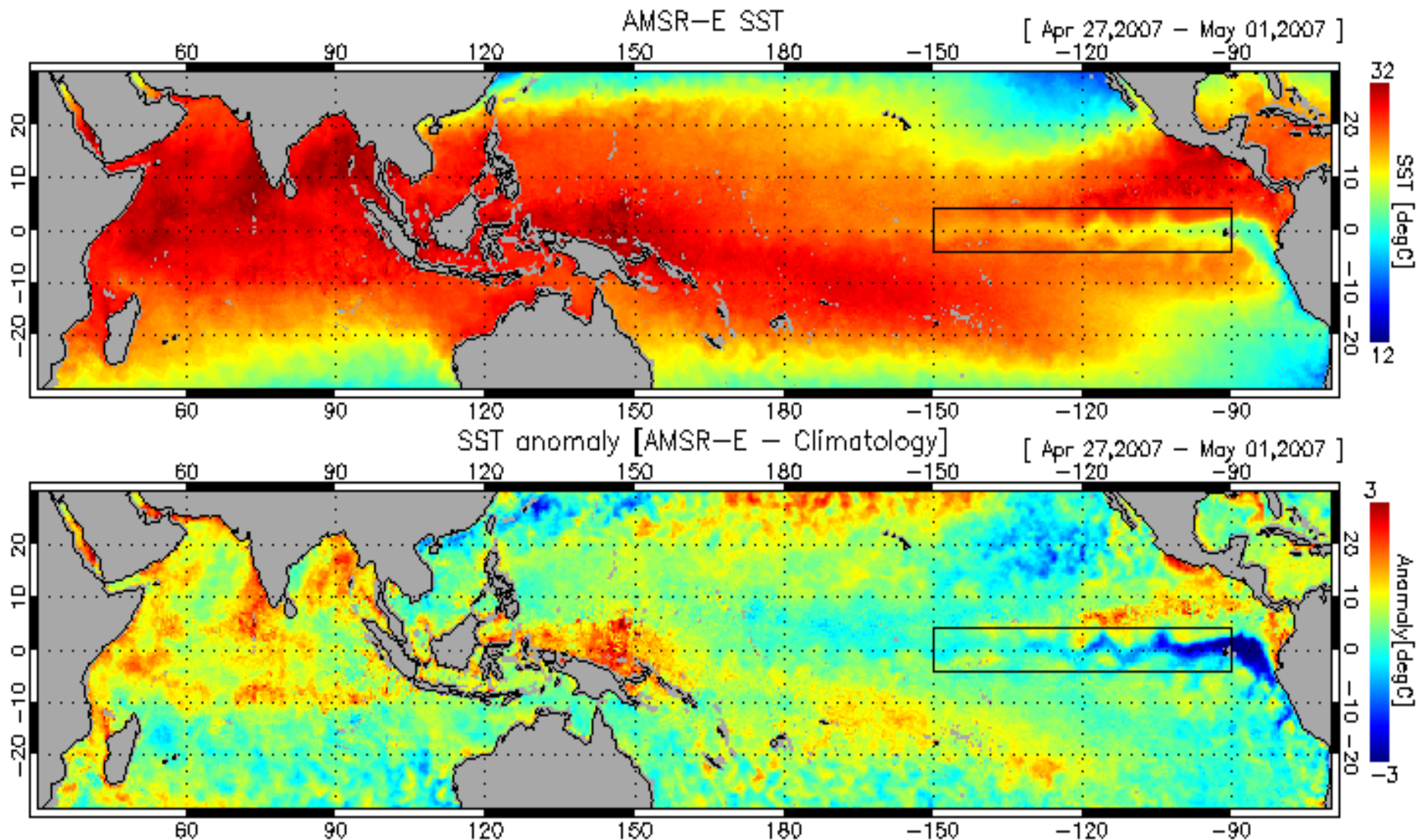
Bangladesh
Viet Nam
Philippines



Great
Mekong
Subregion

Drought_early_warning_in_province_level

SST Changes over Tropical Oceans by AMSR-E

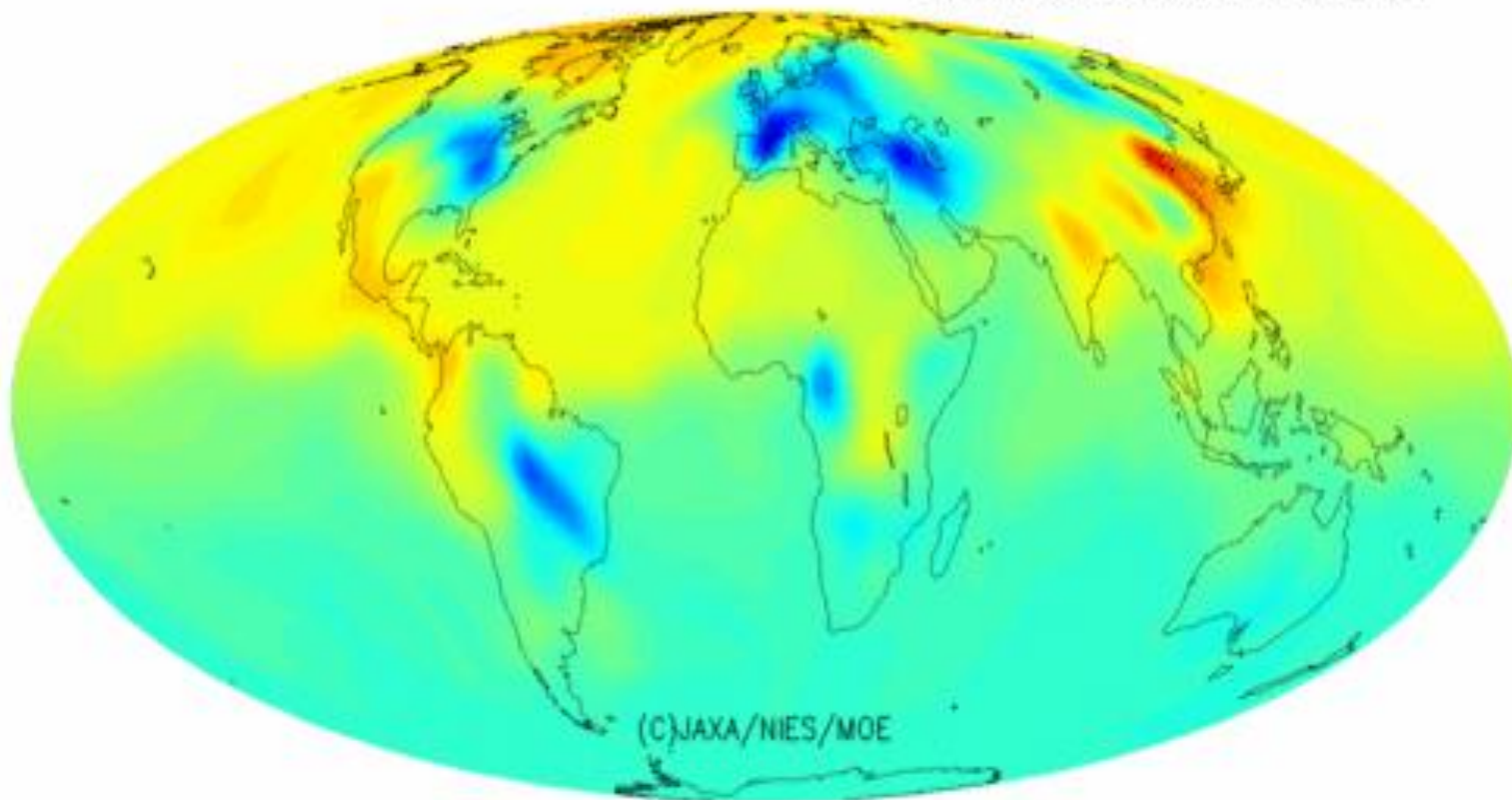


Animation of daily mean of CO₂ concentration

(June 2009 - May 2010, at 800 m altitude)

GOSAT L4B V02.01 CO₂ (2009/06/01) ETA:925

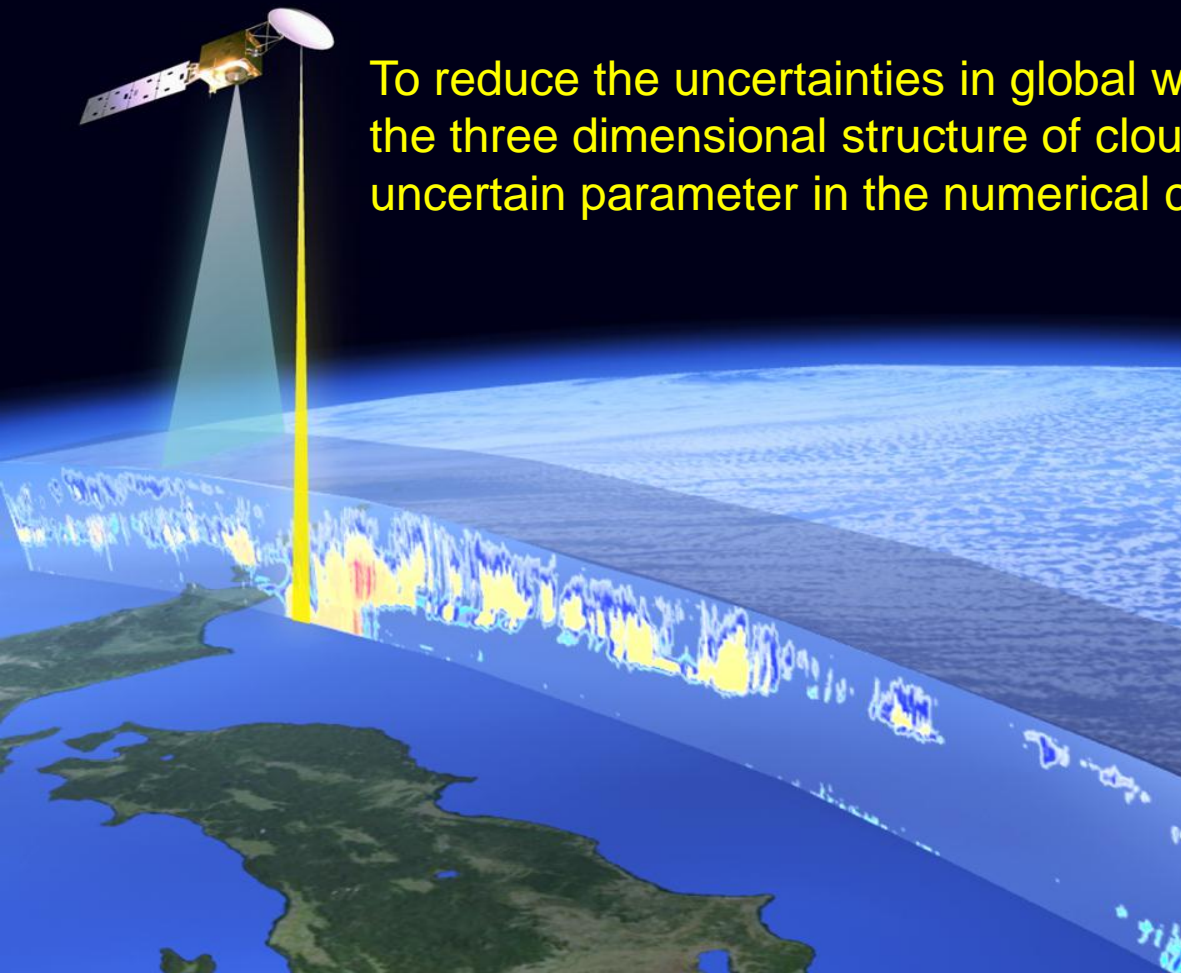
Simulated Concentration



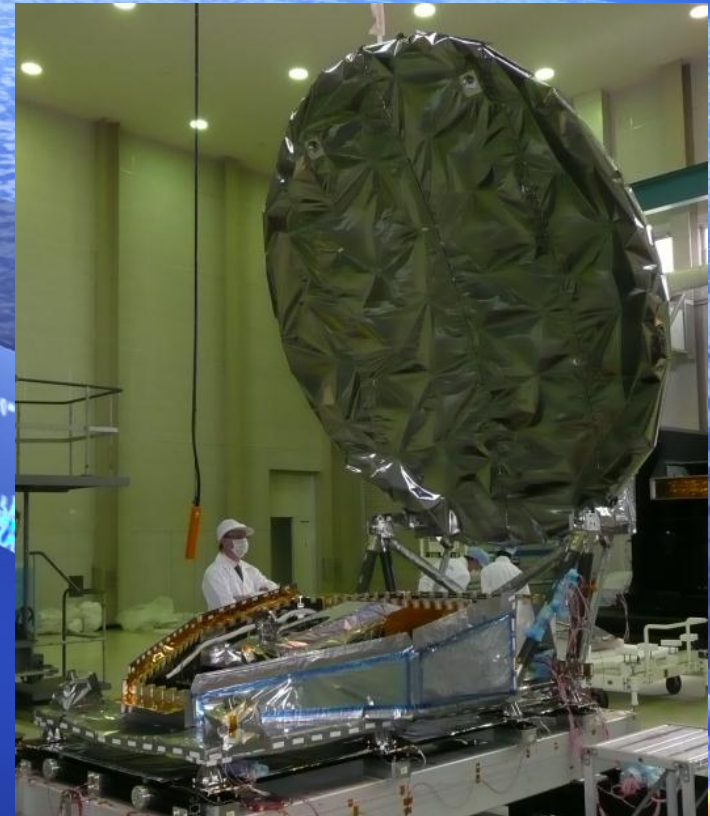
From NIES GOSAT User Interface Gateway (GUIG)₇

Earth Cloud, Aerosol and Radiation Explorer (EarthCARE)

To reduce the uncertainties in global warming prediction by measuring the three dimensional structure of clouds and aerosols, which are most uncertain parameter in the numerical climate models.



- Joint Mission by Europe and Japan
- Launch in 2017
- 3 years lifetime
- 400 km altitude
- Sun-synchronous orbit (Local time: 14:00)

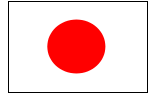


CPR (Cloud Profile Radar)

• Future cooperation with Europe in marine sector



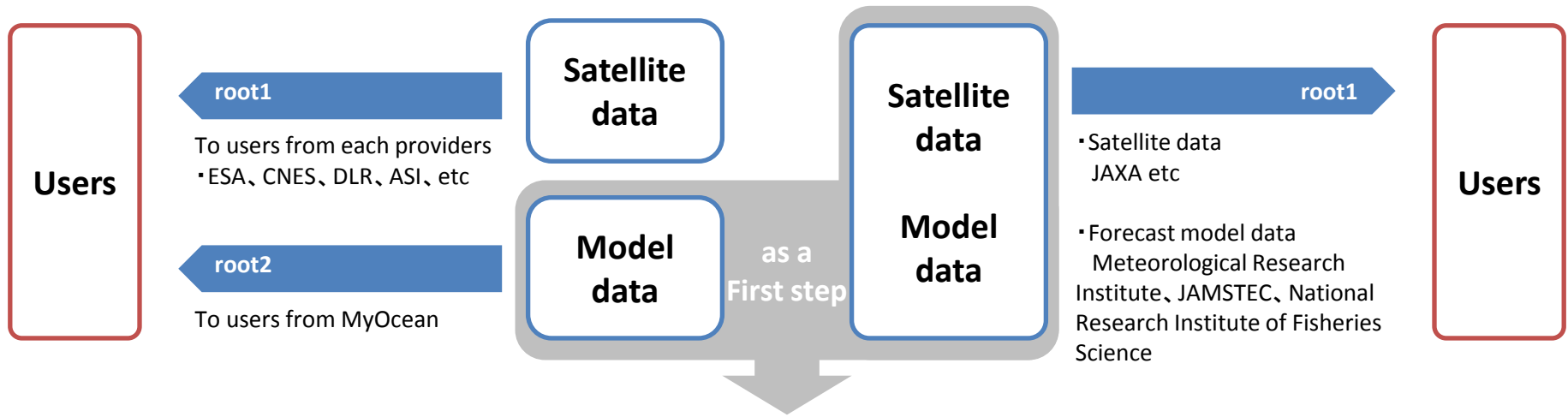
Europe COPERNICUS/MyOcean



Japan

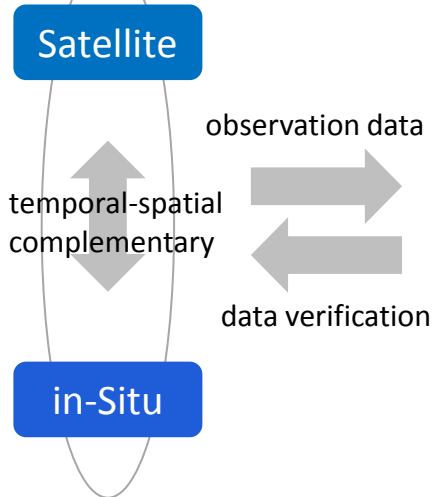
Provision according to user level

Integration of ocean data

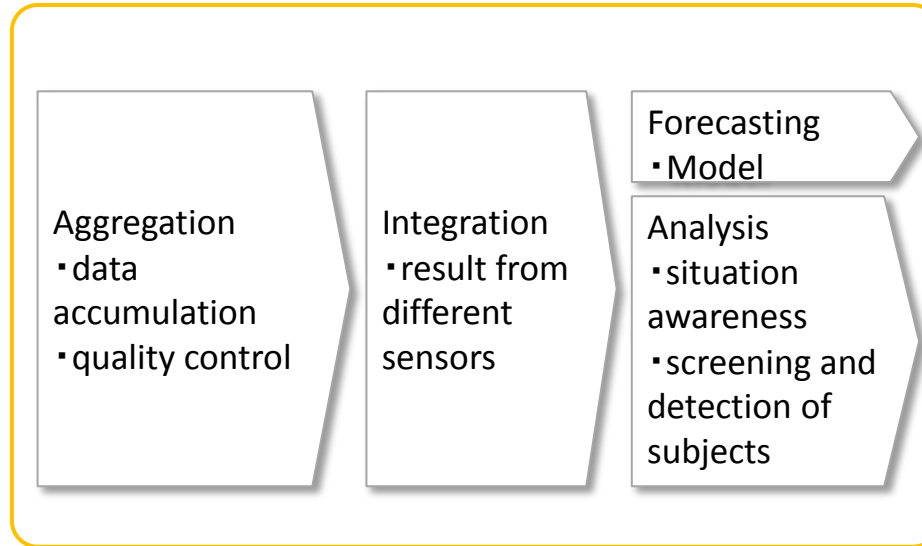


- June : Start a discussion about COPERNICUS with ESA
- September : Video-conference with MercatorOcean
- November : Planning a meeting with MercatorOcean in France

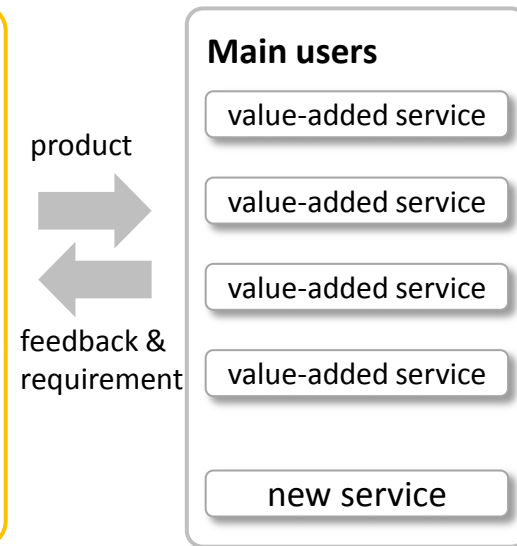
Observation network



Core service



Downstream service



- | | |
|--------------------------|---|
| 1. Visible | Easily available integrated information for users |
| 2. Accessible | Available data with standardized tools |
| 3. Understandable | User-friendly and easy-to-understand |
| 4. Interoperable | Simplicity of comparison, composition, and interaction with other information |
| 5. Responsible | Requirement-based data and feedback system |
| 6. Trusted | Information source with reliability |

- **Initial phase of JAXA EO mission is being complete, contributing wide areas of societal benefits including science.**
- **JAXA intends to strengthen services to end-users in close cooperation with service providers.**
- **JAXA hopes to promote cooperation with EU/ESA in data exchange, future mission development, and service development.**



Thank you for your attention.