

JAXA's Earth Observation Program

Shizuo Yamamoto

Japan Aerospace Exploration Agency (JAXA), 2-1-1 Sengen, Tsukuba City, Ibaraki Pref., Japan 305-8505

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ABSTRACT:

Japan is formulating a new Basic Space Plan that attaches importance to applications for security and strengthening the industrial base in response to a changing environment. JAXA became Chair of the Committee on Earth Observation Satellites (CEOS) in October 2014 for one year, to help coordinate international Earth observation satellite missions and their applications through the implementation of the Global Earth Observation System of Systems (GEOSS).

For the past 30 years, JAXA has been promoting its Earth observation satellite program to develop the key technologies and promote their application to societal challenges. The program consists of a high resolution land observation mission and a global environmental monitoring mission. For the high resolution land observation mission, JAXA has been developing L-band SAR technology. JAXA launched ALOS-2 with PALSAR-2 in May 2014. For the global environmental monitoring mission, JAXA launched the Global Change Observing Mission for Water (GCOM-W) in 2012 and is developing GCOM for Climate (GCOM-C) with a target launch in JFY2016. GOSAT, launched in 2009 in cooperation with MOE and NIES, has been acquiring global CO₂/methane concentration data. JAXA and NASA launched The Global Precipitation Measurement (GPM) mission in February 2014. ESA and JAXA plan to launch EarthCARE in JFY2017 for cloud and aerosol monitoring.

For applications of Earth observation satellite data, JAXA has been promoting Sentinel Asia, a regional disaster management support project under the Asia-Pacific Regional Space Forum (APRSAF) for applications of these data. Sentinel Asia is unique in bringing together more than 90 space agencies and disaster management agencies from 25 countries of the Asia Pacific region to cooperate to utilize satellite data for disaster risk reduction. ALOS-2 provides emergency observations at times of disasters and Global Precipitation Map (GsMaP) is generated hourly by integrating GPM, GCOM-W and other satellite data which is being used for flood forecasting in Bangladesh, Vietnam and Philippines with support from the Asian Development Bank (ADB).