

Status of Next Generation Japanese Geostationary Meteorological Satellites Himawari-8/9 and Their Products

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This report presents plans for Himawari-8 and Himawari-9, which are the next generation Japanese geostationary meteorological satellites following to the currently operational satellite MTSAT-2 (Himawari-7).

JMA plans to launch Himawari-8 in summer 2014 and commence its operation in 2015, when MTSAT-2 is scheduled to complete its period of operation. The Agency also plans to launch Himawari-9 in 2016.

In July 2009, JMA completed contract arrangements for the manufacture of Himawari-8 and -9, which have identical specifications. Then, the preliminary design review (PDR) was conducted in January 2011, and the critical design review (CDR) was conducted in January 2012. Currently, the satellites are in the production phase. Himawari-8 and -9 carry Advanced Himawari Imager (AHI) units comparable to the Advanced Baseline Imager (ABI) on board GOES-R to enable enhanced nowcasting, NWP and climate/environment monitoring. The difference of AHI from ABI is in an observing band. AHI has 0.51 μm observing band instead of ABI's 1.38 μm one. Using AHI, JMA plans to capture full disk images every 10 minutes and regional images around Japan every 2.5 minutes.

JMA plans to use two ground stations in Saitama and Hokkaido to establish site diversity in the interests of mitigating the rain attenuation effect on the Ka-band to be used for the imagery data downlink. Downlinked data will be delivered to the Meteorological Satellite Center, which generates satellite products and delivers them to users.

The development of products for Himawari-8 and -9 is ongoing. JMA makes a strong effort to upgrade Atmospheric Motion Vectors (AMV) and develop volcanic ash/yellow sand analysis product and nowcast product for aviation users and weather forecasters.