



# HimawariCast Newsletter

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Japan Meteorological Agency 

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## Successful launch of Himawari-9 on 2 November 2016

The Japan Meteorological Agency (JMA) successfully launched the new-generation Himawari-9 satellite (with the same specifications as its Himawari-8 predecessor) using H-IIA Launch Vehicle No. 31 at 06:20 UTC on 2 November 2016 from the Tanegashima Space Center in Kagoshima, Japan.



Figure 1. Launch of Himawari-9 from the Tanegashima Space Center (Photo provided by MHI/JAXA)

The satellite successfully separated from the launch vehicle approximately 28 minutes after lift-off, and will fly unaided for around 10 days before settling into geostationary orbit.

After in-orbit testing, Himawari-9 will stand by till 2022 as backup for the currently operational Himawari-8 geostationary satellite. HimawariCast users will not need to modify receiving system settings to continue data service usage even after the start of Himawari-9's operation. The combination of these two new-generation geostationary satellites will allow JMA to provide stable ongoing observation of the Asia and Pacific regions until 2029.

## Report of HimawariCast training conducted by JMA

### 1. Bhutan

With the support of the Japan International Cooperation Agency (JICA), the HimawariCast receiving system was installed in Thimphu, Bhutan, in March 2016, enabling the Bhutan Department of Hydro Met Services (DHMS) to receive Himawari-8 data. JMA staff members were dispatched to Bhutan to provide technical training on meteorological satellite imagery analysis in the Meteorological Division of DHMS from 7 to 9 June 2016. All trainees were keen to learn about satellite image analysis and operational usage of the SATAID (Satellite Animation and Interactive Diagnosis) program. The JMA presenters were pleased to have the opportunity to enhance related understanding through their presentations and subsequent discussions.



Figure 2. 3.4m-diameter antenna at DHMS

Heavy rain hit Bhutan after the training in July. JMA learned that DHMS had actively submitted weather information to the office of Butan's prime minister in a timely manner using satellite images received via the HimawariCast service, and were pleased to know that the HimawariCast Service supported such severe-weather operation.

The warm hospitality provided by Bhutan hosts was very much appreciated.

(Hiroshi Ishihara, Kouki Mouri)



Figure 3. DHMS seminar

## 2. Fiji and Vanuatu

Following the installation work conducted in Bhutan, the HimawariCast receiving system was set up at the Fiji Meteorological Service (FMS) and at the Vanuatu Meteorology and Geo-Hazards Department (VMGD), and two related training seminars were held in collaboration with JICA. JMA staff members were

warmly received at both seminars, with attendees engaging in lively discussions and providing informative comments that made the sessions even more fruitful. Their hospitality and active efforts to ensure the success of the event were very much appreciated.

The first seminar was held at FMS in Nadi, Fiji, from 12 to 16 September 2016 as a part of the Third Country Training Program sponsored by JICA with the attendance of trainees from 10 Oceanic countries (the Cook Islands, Fiji, Kiribati, Nauru, Niue, Samoa, the Solomon Islands, Tonga, Tuvalu and Vanuatu). As tropical cyclones (TCs) are serious events for forecasters in this region, TC analysis was a major focus of the seminar's presentations and exercises.

The second seminar was held at VMGD in Port Vila, Vanuatu, from 20 to 22 September 2016. VMGD has utilized SATAID for analysis and forecasting for several years, and its feedback has been quite beneficial to JMA. On the last day in Vanuatu, the visiting JMA staff observed a village on Efate Island that had been stricken by Cyclone Pam which devastated numerous Southern Pacific countries in March 2015. Although recovery efforts were underway there, damage was still evident. The HimawariCast receiving system is expected to support VMGD meteorological services toward the mitigation of such cyclonic damage.

(Naohisa Koide, Junya Fukuda, Arata Okuyama)



Figure 4. Seminar at FMS (top) and VMGD (bottom)



Figure 5. A SATAID analysis presentation

### Change to dataset disseminated via HimawariCast service

As previously announced to HimawariCast users, JMA plans to expand the dataset disseminated via the HimawariCast service at 02 UTC on 10 November as outlined below.

- (1) Expanded coverage of JMA Numerical Weather Prediction (NWP) data, in-situ observation (SYNOP, TEMP, SHIP) and ASCAT ocean surface wind data
- (2) Addition of 100 hPa as the top layer of NWP data

#### NWP data

|                   | Before<br>(Current service) | After<br>(Improved service) |
|-------------------|-----------------------------|-----------------------------|
| Coverage          | 80°E – 160°W<br>(longitude) | 70°E – 150°W<br>(longitude) |
| Top layer         | 150 hPa                     | 100 hPa                     |
| Maximum file size | 12 MB                       | 15 MB                       |

#### In-situ observation data (SYNOP, TEMP, SHIP) and ASCAT ocean surface wind data

|                   | Before<br>(Current service) | After<br>(Improved service) |
|-------------------|-----------------------------|-----------------------------|
| Coverage          | 80°E – 160°W<br>(longitude) | 70°E – 150°W<br>(longitude) |
| Maximum file size | 13 MB                       | 15 MB                       |

### Three years of Regional Focus Group meetings at the Australian VLab Centre of Excellence

The Australian VLab Centre of Excellence celebrated three years of Regional Focus Group meetings during the session conducted on the 11th October 2016.

The first Regional Focus Group meeting commenced during the Training Workshop associated with the Asia-Oceania Meteorological Satellite Users Conference 4 (AOMSUC-4) during October 2013. Since that time we have conducted 36 monthly sessions to a predominantly remote audience using the Webinar Remote Conferencing Software. A total of 1132 attendees logged into these sessions with an average of 31 attendees per session. There were strong contributions from Australia, Indonesia, New Zealand, South Korea, China, Singapore, the Philippines, Vanuatu, Hawaii and also from our Principal Sponsoring Satellite Operator, the Japan Meteorological Agency. From time to time there were attendees from Fiji, the Solomon Islands, Tonga, Germany, the United Kingdom and Myanmar in the audience. As a part of their training the Graduate Diploma of Meteorology students of the Bureau of Meteorology Training Centre contributed to some of the sessions. The interactive style of these remote presentations was very popular with the students and this feedback demonstrated the effectiveness of "remote classroom" training.

Recordings of the sessions are edited and posted on the Australian VLab Centre of Excellence web page at <http://www.virtuallab.bom.gov.au/archive/regional-focus-group-recordings/> for wider circulation.

Topics of discussion included the preparation for Himawari-8 as well as the effective use of Himawari-8 satellite data. Other topics included discussions on meteorology and climatology to assist stakeholders in the deeper understanding of various meteorological phenomena. The meetings were also useful platforms for advertising training events such as the Bureau of Meteorology Science Week and CALMET Online etc. Regional Focus Group meetings also served to disseminate information and resources obtained at conference, eg. AOMSUC-6, the 1<sup>st</sup> KMA International Satellite Conference. To keep the content of the

meetings relevant we initiated regular surveys that were distributed to participants. It was refreshing to have regular contributions by invited speakers from Australia, Indonesia, New Zealand, South Korea and from our Principal Sponsoring Satellite Operator, the Japan Meteorological Agency.

In the future it is proposed to have joint Regional Focus Group meetings between Centres of Excellence. This has already been trialled with BMKG Indonesia during the "Afternoon of Meteorology" during June 2016. The Korea VLab Centre of Excellence is also keen to collaborate with us in this venture, which is very much in the spirit of the WMO Global Campus. We are keen to collaborate with other Centres of Excellence in this initiative for the coming year 2016/2017.

In summary, as the coordinator of the Australian VLab Centre of Excellence Regional Focus Group meetings, these past three years have been an exhilarating experience. We have established strong national and international relationships within this endeavour and the meetings serve as a useful means of sharing ideas and resources pertaining to the dynamic changes that are currently occurring within the field of Satellite Meteorology.

A big thank-you to my Supervisors, Mr Roger Deslandes and Mr Peter Davidson and other staff within the Australian Bureau of Meteorology for giving me the time and the resources to develop these sessions. Appreciation also to the many national and international supporters, including our Principal Sponsoring Satellite Operator the Japan Meteorological Agency, who have enriched the content

with their contributions and who through their participation ensured that the Australian VLab Centre of Excellence Regional Focus Group meetings have developed into truly international events.

(Bodo Zeschke: Australian VLab Centre of Excellence Point of Contact)

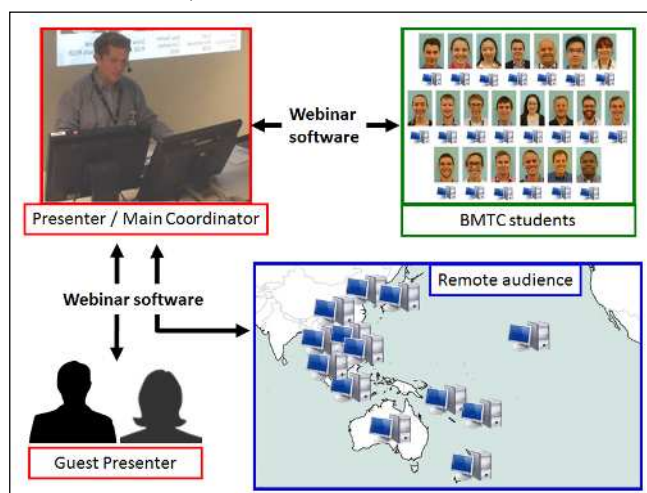


Figure 6. The arrangement of the Australian VLab Centre of Excellence Regional Focus Group meetings

## Feedback

JMA welcomes feedback from users on HimawariCast data usage, and particularly invites articles to be posted in this newsletter. Such input will help other users consider new ideas for their services.

The Agency also invites questions on HimawariCast services. These may relate to the functions of the SATAID program, JMA's interpretation/analysis of multi-band imagery or other areas of interest. Feel free to send queries to be answered in this newsletter.

All articles and questions are welcomed. Your contributions are greatly appreciated.

### Editorials and Inquiries

Any comments or inquiries on this newsletter and/or the HimawariCast Web Page are much appreciated!

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