

# NIES GOSAT PROJECT NEWSLETTER

Independent Administrative Institution  
National Institute for Environmental Studies  
A newsletter on The Greenhouse gases Observing SATellite (GOSAT, IBUKI) project  
from the NIES GOSAT Project Office.



<http://www.gosat.nies.go.jp/>

## NIES GOSAT PROJECT NEWSLETTER

First Issue in Preparation

### Greetings from Project Leader

Hello, everyone.

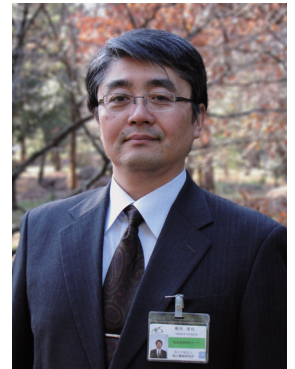
We, the National Institute for Environmental Studies (NIES), are promoting the world's first greenhouse gases observing satellite (GOSAT, a.k.a. "IBUKI") project, in cooperation with the Ministry of the Environment (MOE), and the Japan Aerospace Exploration Agency (JAXA).

"IBUKI" was launched into space on January 23, 2009 to assess the global distributions of carbon dioxide (CO<sub>2</sub>) and methane (CH<sub>4</sub>), and the geographical distribution of the emission and absorption of greenhouse gases. "IBUKI" has been in normal operation for the eleven months after the launch, and the project has generated various kinds

- Tatsuya Yokota  
NIES GOSAT Project Leader/ Satellite Remote Sensing Research Section Chief  
Center for Global Environmental Research (CGER)

of information including the maps of monthly global distributions of CO<sub>2</sub>. In addition, we have started the public release of the level 1 data products, and are planning to release the level 2 data products to the public in the coming year.

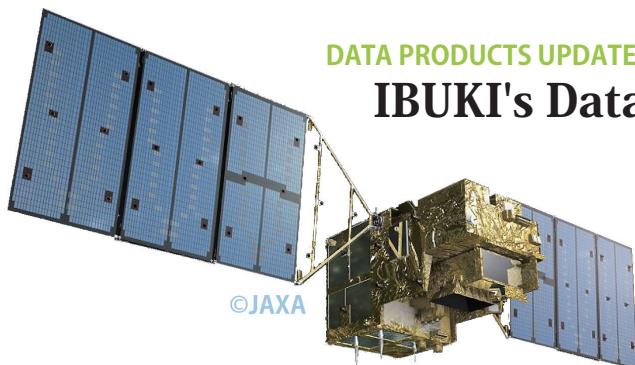
"NIES GOSAT PROJECT NEWSLETTER" is published at the one year anniversary of "IBUKI"'s launch. We hope to bring you the timely and easy-to-understand news on the activities of GOSAT project and the successful results of "IBUKI" at the NIES with this newsletter. Please stay tuned for the coming issues.



Tatsuya Yokota : Satellite Remote Sensing Research Section Chief at the Center for Global Environmental Research, National Institute for Environmental Studies. Serving as the NIES GOSAT Project leader since 2006. Specialized in the atmospheric radiative transfer calculation.

### DATA PRODUCTS UPDATE

## IBUKI's Data Product Public Release Information



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The data products acquired by "IBUKI" are now available for the public. The calibrated and validated radiance spectra observed by the Fourier Transform Spectrometer (TANSO-FTS) and the global image data observed by the Cloud and Aerosol Imager (TANSO-CAI) are available<sup>1</sup>.

You can download the data products of specific location and dates from our GOSAT webpage in the the National Institute for Environmental Studies (NIES) website. (The user registration is required.)

<sup>1</sup>The data products obtained after 2009.10.29 are available as of 2009.12.24.

"IBUKI" is a nickname for the Greenhouse gases Observing SATellite (GOSAT). The Japanese word *ibuki* means "breath, or signs of living activity." The nickname was chosen out of the 12,683 public entries because it is perfect for the satellite that observes the breath of the earth, carbon dioxide (CO<sub>2</sub>), and it also gives an impression of the bright and lively future. One of the godparents of "IBUKI", Ms. Manami Eto, was invited to the launch on January 23, 2009 at JAXA's Tanegashima Space Center to see off "IBUKI" to the space.

\* **GOSAT TANSO-FTS LEVEL 1B**  
Radiance spectra of the TANSO-FTS

\* **GOSAT TANSO-CAI LEVEL 1B**  
Global image data of the TANSO-CAI

\* **GOSAT TANSO-CAI LEVEL1B+**  
Global image data of the TANSO-CAI (the geometric correction and map projection are applied so that the top of the images indicates the north)

**The data products are available on GOSAT User Interface Gateway (GUIG) on the GOSAT webpage:**  
<http://data.gosat.nies.go.jp/>

**Please refer to the instruction manual for the step-by-step instruction on how to obtain the data products:**  
[http://data.gosat.nies.go.jp/GosatUserInterfaceGateway/guig/doc/manualForPublicUsers\\_en.pdf](http://data.gosat.nies.go.jp/GosatUserInterfaceGateway/guig/doc/manualForPublicUsers_en.pdf)

GOSAT TOPICS



NIES President Ohgaki (R) and CGER Specialist Kakinuma (L) at the NIES booth during the UNFCCC COP15/CMP5 at the Bella Center in Copenhagen, Denmark.

UNFCCC  
COP15/CMP5

NIES exhibited a booth at the Bella Center in Copenhagen, Denmark, where the 15th Conference of the Parties (COP 15) to the United Nations Framework Convention on Climate Change (UNFCCS) and the 5th Meeting of the Parties to the Kyoto Protocol (CMP5) were being held. The exhibit introduced the research activities at NIES, including GOSAT Project, to the representatives from governments, NGOs, and the media.

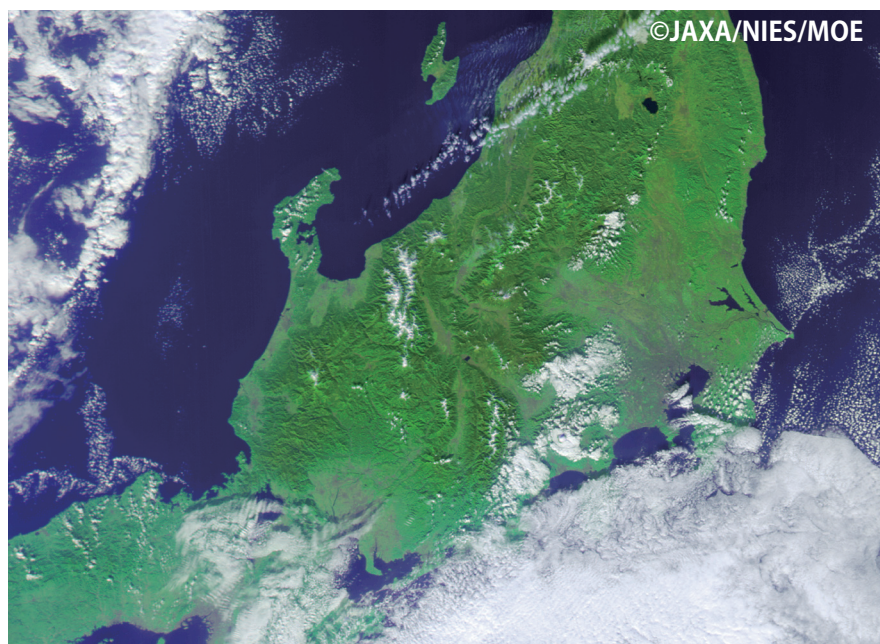
GOSAT PROJECT IN THE MEDIA  
ON TV-NHK World

2009/12/12 A news program "Newline" on NHK World reported us at UNFCCC.



Leader Yokota explaining GOSAT to a representative from the Republic of Zambia (L).

(Image : NHK World Website)



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CAI L1B+ Data Product from 2009/12/01. Blue = Band 1, Green = Band 3, Red = Band 2

IMAGE OF THE MONTH

December 1st.  
One Fine Winter Day in Japan  
Snow-covered Japanese Northern Alps

In this "IMAGE OF THE MONTH" section, we will introduce you one image selected from a variety of data products observed by IBUKI during the previous month.

For this month, we have an image (CAI L1B+ data product) of Japan, including the area ranging from Eastern Japan to Kansai, photographed by the Cloud and Aerosol Imager (CAI) on December 1st, 2009.

The CAI acquires images of almost every place on the earth in about three days. In many cases, the clouds can cover the land surface in those images, but this data product from December 1st shows a clear image of a large land area including Tohoku, Kanto, Cyubu, and Hokuriku. A snowfall can be seen along the Hida Mountain Range. On the other hand, a thick cloud covers the south of Kanto and Chubu shores, and there are thin clouds over some parts of inland area. The vegetation appears as vivid green in this image because the image uses the near infrared range, a kind of wave range the plants have a high reflectance.

CALENDAR

January 26-27, 2010

Hosting the Sixth International Workshop on Greenhouse Gas Measurements from Space held at the Kyoto International Conference Center in Kyoto, Japan.

February 18-22, 2010

Supporting an exhibition of the University of Tokyo's Integrated Research System for Sustainability Science (IR3S) at the Annual Meeting of the American Association for the Advancement of Science held at the San Diego Convention Center in San Diego, CA, USA.

The further details will be announced on the next issue.

INFORMATION

Announcement of  
the Sixth International Workshop on  
Greenhouse Gas Measurements from Space  
(IWGMS-6)

NIES and JAXA will host the Sixth International Workshop on Greenhouse Gas Measurements from Space on January 26-27 at the Kyoto International Conference Center in Kyoto, Japan.

The workshop aims to assess the latest science and technologies in spaceborne measurement of greenhouse gases, and will address new scientific findings obtained from the current satellite missions (GOSAT, AIRS, SCIAMACHY, TES, and IASI) as well as the concepts of the next-generation

remote-sensing missions which are under preparation (OCO reflight, A-SCOPE, ASCENDS, etc.).

The oral presentation and poster sessions from the research fields such as instrument calibration, data validation, and algorithm development are scheduled. There are no registration charges. The participants are asked to register before mid-January. Please notify us by email : iwggms@nies.go.jp.

The further details on the workshop agenda will be announced in the next issue.

