

NIES-GOSAT2-SYS-20210610-005-00

Release Note

GOSAT-2 TANSO-CAI-2 L2 Cloud Discrimination Product

Product version 01.04

June 2021

National Institute for Environmental Studies
GOSAT-2 Project

Revision History

Version	Revised on	Page	Description
00	Jun. 2021	-	-

1 Introduction

The purpose of this document is to provide considerations for the Greenhouse gases Observing SATellite-2 (hereinafter referred to as “GOSAT-2”) products generated by the National Institute for Environmental Studies, Japan (hereinafter referred to as “NIES”).

Table 1-1 shows the product and its version described in this document.

Table 1-1 Product and version explained in the document

Product name	Product version
GOSAT-2 TANSO-CAI-2 L2 Cloud Discrimination Product	01.04

2 Difference from the previous version

Difference between the previous version (01.03) and this version (01.04) is shown below.

2.1 Change of algorithm

There is no change in the processing algorithm for generating this product.

2.2 Change of input data

The change of input data is shown below.

- (1) The processing algorithm for generating GOSAT-2 TANSO-CAI-2 L1B Product as the input product is modified. For more information, refer to the release note of GOSAT-2 TANSO-CAI-2 L1B Product (NIES-GOSAT2-SYS-20200826-006-00).

For GOSAT-2 TANSO-CAI-2 L2 Cloud Discrimination Product, the datasets that the stored value could be changed due to this modification are shown below.

- CloudDiscrimination/cloudDiscrimination_FWD
- CloudDiscrimination/cloudDiscrimination_BWD
- CloudDiscrimination/confidenceLevel_FWD
- CloudDiscrimination/confidenceLevel_BWD
- ForwardBackwardCollocation/index_BWD_pixel
- ForwardBackwardCollocation/index_BWD_line
- ForwardBackwardCollocation/index_FWD_pixel
- ForwardBackwardCollocation/index_FWD_line

2.3 Change of product format

The change of product format is shown below.

- (1) Changed “Group / Dataset” of the following datasets.
 - (Before) LineAttribute/PreAmpTempQuality_FWD
 - (After) LineAttribute/preAmpTempQuality_FWD
 - (Before) LineAttribute/PreAmpTempQuality_BWD
 - (After) LineAttribute/preAmpTempQuality_BWD

3 Important information

The important information for this product version is shown below.

- (1) The L1 product version corresponding to this product version is shown below.
 - GOSAT-2 TANSO-CAI-2 L1B Product: 03.12
- (2) The following datasets store cloud discrimination by the CLAUDIA1* algorithm.
 - CloudDiscrimination/cloudDiscrimination_FWD
 - CloudDiscrimination/cloudDiscrimination_BWD

- CloudDiscrimination/confidenceLevel_FWD
- CloudDiscrimination/confidenceLevel_BWD

* Although the description is different from the ATBD (NIES-GOSAT2-ALG-20191008-009-00), the CLAUDIA1 algorithm is used in this version.

- (3) Usage of integrated-CCL (clear-sky confidence level) is shown as follows.
 In the CLAUDIA1 algorithm, the integrated-CCL expresses the cloudy area with 0, the clear area with 1, and the ambiguous area with a numerical value between 0 and 1. Users can set an arbitrary numerical value between 0 and 1 as a boundary between cloudy and clear areas, and can discriminate the areas with smaller than the preset value as cloudy areas and the areas with larger than the preset value as clear areas. The recommended threshold value of integrated-CCL is 0.33, and 0.33 or more is treated as clear area in GOSAT-2 routine processing.

4 Version-upgrade history

Table 4-1 shows the version-upgrade history of this product.

Table 4-1 Version-upgrade history

Product version	Date	Remarks
01.01	Nov. 2019	Released to RA users
01.02	Dec. 2019	Changed input data Released to RA users
01.03	May 2020	Changed input data Released to General users
01.04	Jun. 2021	Changed input data Changed product format Released to General users