Release Note

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

Product version 01.03

May 2020

National Institute for Environmental Studies
GOSAT-2 Project
## Revision History

<table>
<thead>
<tr>
<th>Version</th>
<th>Revised on</th>
<th>Page</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>May 2020</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
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>
<thead>
<tr>
<th>Product name</th>
<th>Product version</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOSAT-2 TANSO-CAI-2 L2 Cloud Discrimination Product</td>
<td>01.03</td>
</tr>
</tbody>
</table>

2 Difference from the previous version
Difference between the previous version (01.02) and this version (01.03) 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-GOSAT2-20191212-026-00). 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.
   · ForwardBackwardCollocation/index_BWD_pixel
   · ForwardBackwardCollocation/index_BWD_line
   · ForwardBackwardCollocation/index_FWD_pixel
   · ForwardBackwardCollocation/index_FWD_line

2.3 Change of product format
There is no change in product file format.

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: 03.11

(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>
<thead>
<tr>
<th>Product version</th>
<th>Date</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>01.01</td>
<td>Nov. 2019</td>
<td>Released to RA users</td>
</tr>
<tr>
<td>01.02</td>
<td>Dec. 2019</td>
<td>Changed input data</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Released to RA users</td>
</tr>
<tr>
<td>01.03</td>
<td>May 2020</td>
<td>Changed input data</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Released to General users</td>
</tr>
</tbody>
</table>