

Release Note

GOSAT-2 TANSO-FTS-2 SWIR L2
Chlorophyll Fluorescence and Proxy-method Product

Product version 02.30

August 2026

National Institute for Environmental Studies
GOSAT-2 Project

Revision History

Version	Revised	Page	Description
00	Mar. 2026	-	-
01	Aug. 2026	p.2	Added part of the important information
		p.3	Added that released to General users

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.

The product and its version described in this document are listed in Table 1-1.

Table 1-1 Product and version

Product name	Product version
GOSAT-2 TANSO-FTS-2 SWIR L2 Chlorophyll Fluorescence and Proxy-method Product	02.30

2 Difference from previous version

The difference between the previous version (02.21) and this version (02.30) is shown as follows:

2.1 Change of processing algorithm

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

2.2 Change of input data

The change in the input data is shown as follows:

- (1) TANSO-CAI-2 L2 Cloud Discrimination Product referred in the retrieval processing was updated (V01.30/V01.31).

2.3 Change of file format

There is no change in the file format of the product.

3 Important information

The important information for this version is shown as follows:

- (1) The L1 product version corresponding to this version is shown below.
 - TANSO-FTS-2 L1B Product: 220.221
- (2) The ground surface was treated as Lambertian surface in all cases in the retrieval processing of this version.
- (3) The following TANSO-FTS-2 Instrument characteristic information was used in the retrieval processing of this version.
 - Instrument line shape function (ILSF) date version: May 25, 2020
 - Radiance conversion coefficient (RAD_CNV) date version: Jan. 11, 2022
 - Time-dependent radiance correction coefficient (RAD_Time_Wave_Deg) date version: Mar. 27, 2024
 - Complex refractive index of the scanner mirror (SCANNER_REFRACTION) date version: Oct. 10, 2018
- (4) The following datasets store invalid value.
 - CloudInformation/FTS-2_TIR
 - RetrievalResult_*/wind_speed_*
 - RetrievalResult_B1_Psrf/fluorescence_*
- (5) Only each data of “Good” quality flag should be used, although XCH₄_proxy_quality_flag, XCO_proxy_quality_flag under GasColumn_Proxy and SIF_quality_flag under SolarInducedFluorescence store four-level quality flags: “Good”, “Fair”, “Poor”, and “NG”.
- (6) Since the XCO₂ model calculations used in the proxy-method are outputs from a model that has not been optimized for CO₂ fluxes, they do not reproduce phenomena such as the significant increase in atmospheric CO₂ concentrations observed from 2023 to 2024. Therefore, note that XCH₄ and XCO obtained using the proxy-method contain biases derived XCO₂ model calculations. If users have access to more accurate XCO₂ model calculations, it is recommended that the following corrections be applied.

$$X_{gas_proxy_corr} = (X_{gas_proxy} / X_{CO_2_model_SWPR}) \cdot X_{CO_2_model_user}$$

X_{gas_proxy}: GasColumn_Proxy/XCH₄_proxy or XCO_proxy

X_{CO₂_model_SWPR}: GasColumn_Proxy/XCO₂_model

01

4 Version upgrade history

The version upgrade history of the product described in this document is shown in Table 4-1.

Table 4-1 Version upgrade history

Product version	Date	Remarks
01.02	Dec. 2019	Released to RA users
01.03	Apr. 2020	Changed processing algorithm Changed file format Released to RA users
	Nov. 2020	Released to General users
01.04	Jul. 2021	Changed processing algorithm Changed input data Changed important information Released to RA users
	Dec. 2021	Released to General users
01.07	Oct. 2021	Changed input data Changed important information Released to RA users
	Dec. 2021	Released to General users
02.00	Apr. 2023	Changed processing algorithm Changed input data Changed important information Released to RA users
	Jul. 2023	Released to General users
02.10	Feb. 2025	Changed processing algorithm Changed input data Released to General users
02.20	Mar. 2025	Changed input data Released to RA users
	Jun. 2025	Released to General users
02.21	Mar. 2025	Changed input data Released to RA users
	Jun. 2025	Released to General users
02.30	Mar. 2026	Changed input data Released to RA users
	Aug. 2026	Changed important information Released to General users