



Ozone_cci+

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1	1	25/04/2025	Exec. summary, Sects. 3-6	Incorporation ESA review comments
2	0	19/04/2026	New issue that only includes Phase 3 products	



Executive Summary

This Climate Research Data Package (CRDP) lists the ozone Essential Climate Variable (ECV) products that have been developed, improved, generated and/or extended by the O3_cci+ project team during the third phase of the project (2025-2026). It contains a summary of the main characteristics and the archive where the data set can be downloaded. Products released in earlier phases (2019-2025) were listed in CRDP v1.2 [RD-1].

The Climate Research Data Package includes four types of ozone ECV products

- total ozone column,
- tropospheric ozone column,
- ozone vertical profile based on nadir sensors,
- ozone vertical profile based on limb and occultation sensors.

These satellite products are disseminated at different processing levels

- level-2 : geophysical variables derived from geolocated and calibrated sensor data, at the same resolution and location as level-1 source data (single sensor, single observation),
- level-3 : geophysical variables averaged in time and mapped on a regular latitude grid or latitude-longitude grid (single and/or multiple sensors),
- level-4 : model output on a regular space-time grid derived by assimilation of observations (multiple sensors).

A description of these data products and how these can be used is given in the Product User Guide [RD-2]. The assessment of data product quality using independent, ground-based reference measurements and the verification of data product compliance with user requirements can be found in the Product Validation and Intercomparison Report [RD-3].



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1 Purpose and scope

1.1 Purpose & scope

This document describes the Ozone_cci+ Climate Research Data Package (CRDP), i.e. the ECV data products that were generated during the current phase of the project. This CRDP Release Note lists all products being released, with product specifications and the archive where data can be downloaded.

1.2 Applicable documents

- [AD-1] CCI Data Standards v2.3, ref: CCI-PRGM-EOPS-TN-13-0009, 26 July 2021. Available online at: https://climate.esa.int/documents/1284/CCI_DataStandards_v2-3.pdf
- [AD-2] CCI Data Policy v1.1, ref: CCI-PRGM-EOPS-TN-13-0019, 12 July 2013. Available online at: http://cci.esa.int/sites/default/files/CCI_Data_Policy_v1.1.pdf

1.3 Reference documents

- [RD-1] ESA Ozone_cci+ Climate Research Data Package (PUG), Ref. Ozone_cci+_D3.2_PUG_v1.2, Issue 1, Revision 2, 12/05/2025. Available at <https://climate.esa.int/en/projects/ozone/key-documents>.
- [RD-2] ESA Ozone_cci+ Product User Guide (PUG), Ref. Ozone_cci+_D4.2_PUG_v3.X, Issue 3, Revision X, XX/XX/2026. Available at <https://climate.esa.int/en/projects/ozone/key-documents>.
- [RD-3] ESA Ozone_cci+ Product Validation and Intercomparison Report (PVIR), Ref. Ozone_cci+_D4.1_PVIR_v5.X, Issue 5, Revision X, XX/XX/2026. Available at <https://climate.esa.int/en/projects/ozone/key-documents>.

1.4 Acronyms

ACE-FTS	Atmospheric Chemistry Experiment – Fourier Transform Spectrometer
ADP	Algorithm Development Plan
BIRA-IASB	Royal Belgian Institute for Space Aeronomy
C3S	Copernicus Climate Change Service
CCD	Convective Cloud Differential
CCI	Climate Change Initiative
CDR	Climate Data Record
CHORA	Cloud Height and Ozone Reference Analysis
CRDP	Climate Research Data Package
DLR	German Aerospace Centre
ECMWF	European Centre for Medium-range Weather Forecast
ECV	Essential Climate Variable



ENVISAT	Environmental Satellite (ESA)
EO	Earth Observation
ESA	European Space Agency
EU	European Union
EUMETSAT	European Organisation for the Exploitation of Meteorological Satellites
FMI	Finnish Meteorological Institute
GAW	Global Atmosphere Watch
GCOS	Global Climate Observation System
GOME	Global Ozone Monitoring Experiment
GOME-2	Global Ozone Monitoring Experiment – 2
GOMOS	Global Ozone Monitoring by Occultation of Stars
GOP	GOME-type Ozone Profile
GTO	GOME-type Total Ozone
GTTO	GOME-type Tropical Tropospheric Ozone
IASI	Infrared Atmospheric Sounding Interferometer
IR	Infrared
IUP-UB	Institute of Environmental Physics, University of Bremen
JPSS	Joint Polar Satellite System
KNMI	Royal Netherlands Meteorological Institute
MetOp	Meteorological Operational Platform (EUMETSAT)
MIPAS	Michelson Interferometer for Passive Atmospheric Sounding
MLS	Microwave Limb Sounder
NASA	National Aeronautics and Space Administration
NDACC	Network for the Detection of Atmospheric Composition Change
OMI	Ozone Monitoring Instrument
OMPS	Ozone Mapping and Profiler Suite
OSIRIS	Optical and Spectroscopic Remote Imaging System
PSD	Product Specifications Document
RAL	Rutherford Appleton Laboratory
R&D	Research & Development
S5P	Sentinel-5 Precursor
SCIAMACHY	Scanning Imaging Absorption Spectrometer for Atmospheric Cartography
Suomi-NPP	Suomi National Polar-orbiting Partnership
TOMS	Total Ozone Mapping Spectrometer
TROPOMI	Tropospheric Ozone Monitoring Instrument
ULB	Université Libre de Bruxelles
URD	User Requirements Document
UV	Ultraviolet



2 Data archives

Ozone_cci+ data products are disseminated to the public via different archives. These are listed below and linked from the tables in the following sections.

BIRA-IASB archive

Recommended method: connect via a WebDAV client (Windows: WinSCP; Mac: CyberDuck; Linux: davix, curl, ...).

- host : webdav.aeronomie.be
- port : 443
- user : [o3_cci_public](#)
- password : not required (*leave empty*)
- remote directory : [/guest/o3_cci/webdata](#)
(*important: don't forget to specify this directory, otherwise you will encounter a connection error*)

Alternative method: direct link (browser)

https://o3_cci_public:@webdav.aeronomie.be/guest/o3_cci/webdata

CEDA archive

<https://archive.ceda.ac.uk>



3 Total ozone column data records

Table 3.1: List of level-2 total ozone column products. Horizontal resolution is expressed as along-track x across-track. Products that include data from operational missions have no specified end time since the time coverage will be extended.

Sensor	Product version	Data provider	Time coverage	Time resolution	Horizontal coverage	Horizontal resolution (km)	Data archive
OMI	fv0403 (L1: NASA Coll. 4, L2: GODFIT v4)	BIRA	2004-	orbits	global	24 x 13	BIRA

Table 3.2: List of level-3 total ozone column products. Horizontal resolution is expressed as latitude x longitude. Products that include data from operational missions have no specified end time since the time coverage will be extended.

Product / version	Sensor(s)	Data provider	Time coverage	Time resolution	Horizontal coverage	Horizontal resolution	Data archive
GTO-ECV fv4100	GOME, SCIAMACHY, OMI, GOME-2A, GOME-2B, GOME-2C, TROPOMI	DLR / BIRA	1995-	monthly	global	1° x 1°	planned Q4 2026



4 Tropospheric ozone column data records

Table 4.1: List of level-3 tropospheric ozone column products. Horizontal resolution is expressed as latitude x longitude. Products that include data from operational missions have no specified end time since the time coverage will be extended.

Product / version	Sensor(s)	Data provider	Time coverage	Time resol.	Horiz. coverage	Horiz. resol.	Vertical coverage†	Data archive
GTTO-ECV	GOME, SCIAMACHY, OMI, GOME-2A, GOME-2B, GOME-2C, TROPOMI	DLR / BIRA	1995-	monthly	20°S – 20°N	1° x 1°	sfc – 270 hPa, sfc – 200 hPa	planned Q4 2026
CHORA-CCD		UBR		monthly				planned Q4 2026
GTO-LIMB	GTO-ECV, LIMB-HIRES	FMI / DLR	2004-	monthly	global	1° x 1°	sfc – lrt	planned Q4 2026

† sfc : surface; lrt : lapse-rate (thermal) tropopause.



5 Nadir ozone profile data records

Table 5.1: List of level-2 nadir ozone profile products. Horizontal resolution is expressed as along-track x across-track. Products that include data from operational missions have no specified end time since the time coverage will be extended.

Sensor	Product / version	Data provider	Time coverage	Time resol.	Horiz. coverage	Horizontal resol. (km)	Vertical coverage	Vertical resolution	Data archive
GOME	RAL	RAL	1995-2011	orbits	global	320 x 40	0-80 km	4-6 km	planned Q4 2026
OMI	RAL v4.10	RAL	2004-	orbits	global	50 x 50	0-80 km	4-6 km	CEDA
GOME-2A	RAL v4.10	RAL	2007-2021	orbits	global	160 x 160	0-80 km	4-6 km	CEDA
GOME-2B	RAL v4.10	RAL	2013-	orbits	global	160 x 160	0-80 km	4-6 km	CEDA
GOME-2C	RAL v4.10	RAL	2020-	orbits	global	160 x 160	0-80 km	4-6 km	CEDA
TROPOMI	RAL v4.10	RAL	2018-	orbits	global	15 x 38	0-80 km	4-6 km	CEDA

Table 5.2: List of level-3 nadir ozone profile products. Horizontal resolution is expressed as latitude x longitude. Products that include data from operational missions have no specified end time since the time coverage will be extended.

Product / version	Sensor(s)	Data provider	Time coverage	Time resol.	Horiz. coverage	Horizontal resol.	Vertical coverage	Vertical resolution	Data archive
GOP-ECV	GOME, SCIAMACHY, OMI, GOME-2A, GOME-2B, GOME-2C, TROPOMI	DLR / RAL	1995-	monthly	global	5° x 5°	0-80 km	4-6 km	planned Q4 2026
IASI MG-FORLI	IASI-A, IASI-B, IASI-C	ULB / LATMOS	2008-	daily	global	1° x 1°	0-40 km	1 km	planned Q4 2026



6 Limb ozone profile data records

Table 6.1: List of level-2 limb ozone profile products. Products that include data from operational missions have no specified end time since the time coverage will be extended.

Sensor	Product / version	Data provider	Time coverage	Time resol.	Horiz. coverage	Vertical coverage	Vertical resolution	Data archive
OMPS-LP / N21	UBR v1.1	UBR	2023-	orbits	global	9-61 km	1 km	planned Q4 2026

Table 6.2: List of level-3 limb ozone profile products. Products that include data from operational missions have no specified end time since the time coverage will be extended.

Product / version	Sensor(s)	Data provider	Time coverage	Time resol.	Horiz. cover.	Horiz. resol.	Vertical coverage	Vertical resol.	Data archive
SAGE-CCI-OMPS+ fv11	SAGE II, POAM III, OSIRIS, GOMOS, MIPAS, SCIAMACHY, ACE-FTS, OMPS/SNPP, SAGE III/ISS	FMI	1984-	monthly	global	10° lat	10-50 km	1 km	BIRA
MEGRIDOP fv7	OSIRIS, GOMOS, MIPAS, SCIAMACHY, OMPS/SNPP, Aura MLS	FMI	2001-	monthly	global	10° x 20°	10-50 km	1 km	BIRA
LIMB-HIRES	OSIRIS, GOMOS, MIPAS, SCIAMACHY, ACE-FTS, Aura MLS, OMPS/SNPP, SAGE III/ISS	FMI	2004-	daily	global	1° x 1°			planned Q4 2026



Product / version	Sensor(s)	Data provider	Time coverage	Time resol.	Horiz. cover.	Horiz. resol.	Vertical coverage	Vertical resol.	Data archive
LIMB-UTLS	SAGE II, POAM III, OSIRIS, GOMOS, MIPAS, SCIAMACHY, ACE-FTS, OMPS/SNPP, SAGE III/ISS	FMI	1984-	monthly	global				planned Q4 2026
OMPS SNPP-N21	OMPS/SNPP, OMPS/N21	UBR	2012-	monthly					planned Q4 2026