



aerosol_cci2
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CRDP Documentation

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ESA Climate Change Initiative
aerosol_cci

CRDP Documentation

Version 2.3

Document reference:
Aerosol_cci2_TN_CRDP_v2.3.doc

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DOCUMENT STATUS SHEET

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ISSUED BY				




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DOCUMENT CHANGE RECORD

Issue	Date	Modified Items / Reason for Change
1.0	25.10.2013	Issue of this technical note
1.1	18.11.2013	Add product sheets (updated) Add statement to BAER
1.2	20.02.2014	Updates based on RIDS of 17/12/2013 Harmonization with PVIR
1.3	13.03.2014	Corrections to product sheets as requested by RIDs of 06.03.2014
Phase 2		
1.0	05.05.2015	Issue of first version
2.0	30.09.2016	Issue of new version
2.1	27.10.2016	Complete table on page 5 (AATSR ensemble and GRASP)
2.2	22.11.2016	Updates on POLDER product in introduction
2.3	12.09.2017	Update for end of 2017 (validation completed, experimental datasets listed)

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INTRODUCTION

Within ESA's Climate Change Initiative (CCI), the Aerosol_cci projects (2010-2017) have produced several dataset versions of various aerosol records, which now extend over full mission time series of the exploited Earth Observation instruments. This short *Technical Note on the Climate Research Data Package (CRDP) of Aerosol_cci2* briefly summarizes the latest versions of all datasets produced in Aerosol_cci2 at the end of the second Phase project (2014-2017). It includes 3 ATSR time series (AOD / FM-AOD), 1 GOMOS time series (stratospheric extinction and size parameter) and 4 IASI time series (dust AOD); additionally, a POLDER time series (AOD, SSA) over 4 selected regions and 1 year over Africa (12/2007-11/2008) is included.

Further experimental / test datasets are also becoming available, which are not yet proven in their maturity and therefore not contained in the CRDP; they are listed in a separate table at the end of this technical note for information (initial MERIS datasets with 2 algorithms, SEVIRI hourly AOD, SYNAER AATSR / SCIAMACHY dataset). Additionally, new variables are tested with various algorithms for a small set of episodes (aerosol absorption, aerosol layer height,).

This mature datasets of the CRDP have been made openly available at <http://www.icare.univ-lille1.fr/archive/?dir=CCI-Aerosols> (unrestricted online access: account: cci; password: cci) together with its validation Product Validation and Intercomparison Report, published at [http://www.esa-aerosol-cci.org/resources -> documents -> CCI_phase 2 -> Accepted_deliverables -> PVIR](http://www.esa-aerosol-cci.org/resources->documents->CCI_phase_2->Accepted_deliverables->PVIR)). All datasets are available together with all earlier test versions of mature datasets and additional experimental (i.e. not yet mature or for test purposes only) datasets internally at the ICARE ftp site of Aerosol_cci http://www.icare.univ-lille1.fr/archive/?dir=CCI-Aerosols_internal (restricted access for project partners). Analysis of all datasets is furthermore openly available at the AEROCOM website aerocom.met.no/cgi-bin/aerocom.

ATBDs for the algorithms in Aerosol_cci2 are provided at [http://www.esa-aerosol-cci.org -> resources -> documents -> CCI_phase 2 -> Accepted_deliverables -> ATBD](http://www.esa-aerosol-cci.org/resources->documents->CCI_phase_2->Accepted_deliverables->ATBD). Also the Product User Guide and the Product Validation and Intercomparison Report are available at this site.



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Aerosol_cci CRDP datasets (Sept. 2017)

algorithm	version	sensor(s)	responsible provider	Main aerosol parameters	Resolution coverage	period(s)
ADV / ASV	2.31 (also 2.30_plume)	AATSR	FMI	AOD, FMAOD	10km, 1° global	2002-2012
	2.31 (also 2.30_plume)	ATSR-2	FMI	AOD, FMAOD	10km, 1° global	1995-2003
ORAC	4.01	AATSR	UOxford / RAL	AOD, FMAOD	10km, 1° global	2002-2012
	4.01	ATSR-2	UOxford / RAL	AOD, FMAOD	10km, 1° global	1995-2003
SU	4.3	AATSR	USwansea	AOD, FMAOD	10km, 1° global	2002-2012
	4.3	ATSR-2	USwansea	AOD, FMAOD	10km, 1° global	1995-2003
ensemble	2.6	AATSR	DLR	AOD	10km, 1° global	2002-2012
ensemble	2.6	ATSR-2	DLR	AOD	10km, 1° global	1995-2001
AERGOM	3.00	GOMOS	BIRA	stratospheric extinction profiles + AOD size parameter	10x2,5° global	2002-2012
IMARS	5.2	IASI	DLR	Dust AOD	12km, 1° global	2007-2015
MAPIR	3.51 (also 3.2-3.4-3.5 merged)	IASI	BIRA	Dust AOD	12km, 1° "Greater Sahara"	2007-2015
ULB	7	IASI	ULB	Dust AOD	12km, 1° global	2007-2015
LMD	1.3	IASI	LMD	Dust AOD	12, 1° 60S – 60N	2007-2015
GRASP	0.07.00	POLDER	LOA	AOD, SSA	4 regions of 10x10 deg Africa	2005-2013 12/2007-11/2008

For all products their main characteristics are summarized in tables (one per algorithm) of the Product User Guide.

The validation of all products is published at the project website <http://www.esa-aerosol-cci.org/CCI-Aerosols>. Analysis of all datasets is furthermore openly available at the AEROCOM website aerocom.met.no/cgi-bin/aerocom.

Further experimental datasets (not yet proven in their maturity) are becoming available in the internal website [http://www.esa-aerosol-cci.org/CCI-Aerosols Internal](http://www.esa-aerosol-cci.org/CCI-Aerosols_Internal) (restricted access).



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algorithm	version	sensor(s)	responsible provider	main aerosol parameters	resolution coverage	period(s)	status
SYNAER	V4.1i	AATSR / SCIAMACHY	DLR	AOD, composition	60x30 km ² , 1°, global except deserts	2002 - 2012	completed
SeaWIFS4MERIS	V2.5	MERIS	DLR	AOD	10km, 1°, global	2008	Planned for 10/2017
XBAER	V1.7	MERIS	Univ. Bremen	AOD	10km, 1°, global	2008	Planned for 10/2017
CISAR	V1.1	SEVIRI	rayference	AOD	10km, 1°, MSG disc, hourly	2008, selected areas	Planned for 10/2017