

## AEROSAT Working Group on Climate Data Records

List of candidate aerosol CDRs currently available:

<i>Satellite Instrument</i>	<i>Algo</i>	<i>Main Retrieved Quantities</i>	<i>Time Span</i>	<i>Provider</i>	<i>Access</i>	<i>Reference</i>
NOAA-AVHRR	2-channel	AOD ocean	1981-2009	NOAA	<a href="http://www.nsof.class.noaa.gov/saa/products/search?sub_id=0&amp;datatype_family=AERO100&amp;submit.x=20&amp;submit.y=11">http://www.nsof.class.noaa.gov/saa/products/search?</a> sub_id=0&datatype_family=AERO100&submit.x=20&submit.y=11	Heidinger et al., 2014: The Pathfinder Atmospheres–Extended AVHRR Climate Dataset. Bull. Amer. Meteor. Soc., 95, 909–922. doi: <a href="http://dx.doi.org/10.1175/BAMS-D-12-00246.1">http://dx.doi.org/10.1175/BAMS-D-12-00246.1</a>
TOMS		AOD, AAI, SSA, AAOD	1979-2001			O. Torres et al.
SAGE		Strat. vert profiles				
SEAWIFS	Land: Deep Blue  Ocean: SOAR	AOD	1997-2008?	NASA		Sayer, AM; Hsu, NC; Bettenhausen, C; Ahmad, Z; Holben, BN; Smirnov, A; Thomas, GE; Zhang, J (2012). SeaWiFS Ocean Aerosol Retrieval (SOAR): Algorithm, validation, and comparison with other data sets. JOURNAL OF GEOPHYSICAL RESEARCH-ATMOSPHERES, 117, D03206.  Sayer, AM; Hsu, NC; Bettenhausen, C; Jeong, MJ; Holben, BN; Zhang, J (2012). Global and regional evaluation of over-land spectral aerosol optical depth retrievals from SeaWiFS. ATMOSPHERIC MEASUREMENT TECHNIQUES,

						5(7), 1761-1778.
TERRA-MISR	Standard Aerosol algorithm V22	AOD, ANG, aerosol type (about a dozen classes based on size, shape, and SSA constraints)	2000-present	NASA	<a href="http://eosweb.larc.nasa.gov">http://eosweb.larc.nasa.gov</a>	<p>J. Martonchik et al. (2009) In: A. Kokhanovsky &amp; G. de Leeuw, ed., Satellite Aerosol Remote Sensing Over Land, Springer, Berlin</p> <p>Kahn, R.A., B.J. Gaitley, M.J. Garay, D.J. Diner, T. Eck, A. Smirnov, and B.N. Holben, 2010. Multiangle Imaging SpectroRadiometer global aerosol product assessment by comparison with the Aerosol Robotic Network. J. Geophys. Res. 115, D23209, doi: 10.1029/2010JD014601.</p>
AQUA-MODIS TERRA-MODIS ?	C6	AOD, fine mode (ocean)	2002-present	NASA	<a href="http://ladsweb.nascom.nasa.gov/data/search.html">http://ladsweb.nascom.nasa.gov/data/search.html</a>	<p>Levy, R. C., Mattoo, S., Munchak, L. A., Remer, L. A., Sayer, A. M., Patadia, F., and Hsu, N. C.: The Collection 6 MODIS aerosol products over land and ocean, Atmos. Meas. Tech., 6, 2989-3034, doi:10.5194/amt-6-2989-2013, 2013.</p> <p>Sayer, AM; Hsu, NC; Bettenhausen, C; Jeong, MJ (2013). Validation and uncertainty estimates for MODIS Collection 6 "Deep Blue" aerosol data. JOURNAL OF GEOPHYSICAL RESEARCH-ATMOSPHERES, 118(14), 7864-7872.</p>
OMI	OMAERO	AAI, AOD, SSA		KNMI/NASA	<a href="http://disc.sci.gsfc.nasa.gov/Aura/data-holdings/OMI/omaero_v003.shtml">http://disc.sci.gsfc.nasa.gov/Aura/data-holdings/OMI/omaero_v003.shtml</a>	<p>Stein-Zweers, D. C.; Veihelmann, B.; Veeffkind, J. P.; Stammes, P.; Levelt, P., Evaluation of spatial and temporal trends in absorbing aerosol presence using OMI OMAERO Aerosol Index data, EGU General Assembly 2009, held 19-24 April, 2009 in Vienna, Austria <a href="http://meetings.copernicus.org/egu2009">http://meetings.copernicus.org/egu2009</a>, p.9632</p>

ERS-2 GOME,  Envisat SCIAMACHY  MetOp GOME-2,  AURA OMI	AAI	Absorbing Aerosol Index	1995-2014	KNMI/TEMIS /ESA	www.temis.nl	M. de Graaf, P. Stammes, O. Torres, and R.B.A. Koelemeijer, <i>Absorbing Aerosol Index: Sensitivity analysis, application to GOME and comparison with TOMS</i> , J. Geophys. Res. 110, D010201, doi:10.1029/2004JD005178, 2005
ERS-2 ATSR-2,  Envisat AATSR	SU v4.2 ADV 1.42 ORAC 2.1	AOD, mixing fractions, Angstrom	1995-2012	U.Swansea, FMI, Oxford/RAL, Aerosol_CCI/ ESA	www.esa-aerosol-cci.org	North et al. ...??  G. de Leeuw et al., <i>Rem. Sens. Env.</i> , (2014) DOI: 10.1016/j.rse.2013.04.023  G. THomas et al. ??
Envisat MERIS	ALAMO v2.2	AOD (ocean, 550nm, 865nm), fine mode fraction, $R_{eff}$ , altitude	2002-2012	HYGEOS/ICA RE	www.icare.univ-lille1.fr	G. de Leeuw et al., <i>Rem. Sens. Env.</i> , (2014) DOI: 10.1016/j.rse.2013.04.023
Envisat GOMOS		Strat. extinction vertical profiles	2002-2012			BIRA..?
ODIN OSIRIS		Strat. extinction vertical profiles	2001- present			Bourassa et al..?

MSG SEVIRI		AOD (15 min intervals, Europe, Africa, Atlantic)	2003-present		www.eumetsat.int	
CALIPSO CALIOP		VP: extinction/backscatter, color ratio, depolarization ratio, AOD  Global curtain, land & ocean, 16-day repeat cycle.				D. Winker et al. ?
PARASOL Ocean	OC2	AOD (670nm, 865nm), Angstrom, fine and coarse mode information, SSA	2005-2013	LOA/ICARE	www.icare.univ-lille1.fr	Herman, M., J.-L. Deuzé, A. Marchand, B. Roger, and P. Lallart, 2005 : Aerosol remote sensing from POLDER/ADEOS over the ocean: Improved retrieval using a nonspherical particle model, <i>J. Geophys. Res.</i> , 110, D10S2, doi 10.1029/2004JD004798.
PARASOL Land	LS2	Fine mode AOD (865nm)	2005-2013	LOA/ICARE	www.icare.univ-lille1.fr	Deuzé J.L., F.M. Bréon, C. Devaux, P. Goloub, M. Herman, B. Lafrance, F. Maignan, A. Marchand, G. Perry, D. Tanré, 2001 : Remote Sensing of aerosols over land surfaces from POLDER/ADEOS-1 polarized measurements, <i>J. Geophys. Res.</i> , 106, 4913-4926
IceSat GLAS		Extinction/back	2002-			

		kscatter VP. Global curtain, land & ocean, 16-day repeat cycle	present (~ 3 months/yr)			