

ARCSIX Collaborator Data

Platform	Dataset	Principal Investigator(s)	URL(s)
Model Output	FLEXPART (FLEXible PARTicle dispersion model) simulations via NILU/ATMO-ACCESS	Contact Nikolaos Evangeliou (ne@nilu.no) and Christine Groot Zwaaftink (cgz@nilu.no) directly for data for manuscript concentrations, speciation, and air mass history	FLEXPART: https://flexpart-request.nilu.no/data-access Black carbon aerosol: https://atmo-access.nilu.no/ARC6_BC.py Dust aerosol: https://atmo-access.nilu.no/ARC6_DUST.py
Satellite Underpasses	EarthCARE (Earth Cloud Aerosol and Radiation Explorer) G-III along-track: August 16, 2024 P-3 cross-track: July 26 and 30, 2024	N/A	Overpasses identified by Samuel LeBlanc, et al. Overview: https://earth.esa.int/eogateway/missions/earthcare https://asdc.larc.nasa.gov/wagdocuments/605/LeBlanc_sat_validation.pdf
Satellite Underpasses	ICESat-2 (Ice, cloud, and Land Elevation Satellite 2) G-III along-track: August 2, 2024	N/A	Overpasses identified by Samuel LeBlanc, et al. Overview: https://icesat-2.gsfc.nasa.gov/ https://asdc.larc.nasa.gov/wagdocuments/605/LeBlanc_sat_validation.pdf
Satellite Underpasses	MODIS (Moderate Resolution Imaging Spectroradiometer) Aqua Lear along-track: August 1, 2024 (aircraft near nadir when coincident in time with the overpass); many	N/A	Overpasses identified by Samuel LeBlanc, et al. Overview: https://modis.gsfc.nasa.gov/ https://asdc.larc.nasa.gov/wagdocuments/605/LeBlanc_sat_validation.pdf

	other relevant Aqua overpasses occurred		
Satellite Underpasses	<p>PACE (Plankton, Aerosol, Cloud, ocean Ecosystem) with SPEXone</p> <p>G-III across or near track: July 22 and 24, 2024; August 7, 9, and 16, 2024</p> <p>Lear across or near track: August 7, 2024</p>	N/A	<p>Overpasses identified by Samuel LeBlanc, et al.</p> <p>Overview: https://pace.gsfc.nasa.gov/</p> <p>https://asdc.larc.nasa.gov/wagdocuments/605/LeBlanc_sat_validation.pdf</p>
Satellite Underpasses	<p>PREFIRE (Polar Radiant Energy in the Far-InfraRed Experiment)</p> <p>Closest: G-III near track: June 10, 2024, and August 6, 2024</p> <p>Other nearby cases: G-III: May 30 and 31, 2024; June 3, 5, 6, 7, and 11, 2024; July 22, 2024</p> <p>P-3: May 28, 30, and 31, 2024; June 3, 5, 6, 7, and 11, 2024</p>	N/A	<p>Overpasses identified by Samuel LeBlanc, et al.</p> <p>Overview: https://prefire.ssec.wisc.edu/</p> <p>https://asdc.larc.nasa.gov/wagdocuments/605/LeBlanc_sat_validation.pdf</p>
Ground Sites	<p>Alert Station, Canadian Aerosol Baseline Measurement Program</p> <p>Dates of overpasses or nearby flights: G-III: May 30 and 31, 2024; June 3, 5, 6, 7, 10, and 11,</p>	<p>Contact Tak Chan (Tak.Chan@ec.gc.ca) directly for data for manuscripts</p>	<p>Data Repository: https://ebas-data.nilu.no/Default.aspx</p> <p>Canadian Aerosol Baseline Measurement Program: https://www.canada.ca/en/environment-climate-change/services/climate-change/science-research-data/greenhouse-gases-aerosols-monitoring/canadian-aerosol-baseline-measurement-program.html</p>

	<p>2024; August 8 and 15, 2024</p> <p>P-3: May 28, 30, and 31, 2024; June 3, 5, 6, 7, 11, and 13, 2024; July 25, 29, and 30, 2024; August 8 and 15, 2024</p> <p>Lear: July 25 and 30, 2024; August 8 and 15, 2024</p>		
Ground Sites	<p>Villum Research Station</p> <p>Dates of ARCSIX aircraft overpasses:</p> <p>G-III: June 13, 2024</p> <p>P-3: June 13, 2024; August 1, 2024</p>	<p>Contact Henrik Skov (hsk@envs.au.dk) directly for data for manuscripts</p>	<p>Data Repository: https://ebas-data.nilu.no/Default.aspx</p> <p>Villum Research Station: https://villumresearchstation.dk/</p> <p>Dates of CleanCloud (https://projects.au.dk/cleancloud/cleancloud-project) field campaign intensive at Villum: March 20, 2024 – April 13, 2024 and July 16, 2024 -August 18, 2024</p>
Ground Sites	<p>Thule High Arctic Atmospheric Observatory (THAAO)</p>	<p>Giovanni Muscari (giovanni.muscari@ingv.it), Alcide di Sarra (alcide.disarra@enea.it), contact instrument PIs directly for data for manuscripts; Information for each instrument is available on the website</p>	<p>THAAO: https://www.thuleatmos-it.it/</p> <p>ARCSIX Data Quicklooks (May – August 2024): https://www.thuleatmos-it.it/data/arcsix/</p>
Ship Data	<p>AERONET Maritime Aerosol Network (MAN): Kronprins Haakon</p>	<p>Pawan Gupta (Pawan.Gupta@nasa.gov) and</p>	<p>https://aeronet.gsfc.nasa.gov/new_web/cruises_v3/Kronprins_Haakon_24.html</p>

		Elena Lind (Elena.Lind@nasa.gov)	Includes July 21, 2024 – August 3, 2024
Ship Data	AERONET Maritime Aerosol Network (MAN): Oden	Elena Lind (Elena.Lind@nasa.gov), Pawan Gupta (Pawan.Gupta@nasa.gov), and John Prytherch (john.prytherch@geo.uu.se)	https://aeronet.gsfc.nasa.gov/new_web/cruises_v3/Oden_24_0.html Includes August 8, 2024 – September 15, 2024
Ship Data	AERONET Maritime Aerosol Network (MAN): Polarstern	Pawan Gupta (Pawan.Gupta@nasa.gov), Elena Lind (Elena.Lind@nasa.gov), and Mario Mech (mario.mech@uni-koeln.de)	https://aeronet.gsfc.nasa.gov/new_web/cruises_v3/Polarstern_24_0.html Includes August 10, 2024 – October 8, 2024
Ship Data	AERONET Maritime Aerosol Network (MAN): Oceania	Pawan Gupta (Pawan.Gupta@nasa.gov), Elena Lind (Elena.Lind@nasa.gov), and Przemyslaw Makuch (makuch@iopan.pl)	https://aeronet.gsfc.nasa.gov/new_web/cruises_v3/Oceania_24_4.html Includes June 2024 – August 2024
Ship Data	GEOEO (North Greenland Earth-Ocean-Ecosystem Observatory) – North of Greenland 2024 Expedition (Oden) Dates of Overpasses: G-III: nearby on August 15, 2024 P-3: August 7 and 8, 2024; nearby on August 15, 2024 Lear: August 15, 2024	See URL Section for specific details	Expedition Report: https://doi.org/10.23703/e0p8-8r10 For Meteorological Data: 12-hr radiosondes, surface radiative fluxes, surface turbulent fluxes, surface meteorology, ceilometer, visibility, W-Band radar, microwave radiometer; contact: John Prytherch (john.prytherch@geo.uu.se), and Michael Tjernström (michaelt@misu.su.se) Infrastructure data (fluxes, ceilometer, visibility, radar, microwave radiometer, etc.) data forthcoming at: https://bolin.su.se/data/

			<p>For other meteorological, oceanographic and ship data: Contact marine@polar.se</p> <p>URL: https://doi.org/10.48515/14c4-nn87</p>
Ship Data	<p>Norwegian Polar Institute Arctic Ocean 2024 Cruise #2024007009 (Kronprins Haakon)</p> <p>Closest sampling date: G-III and P-3 on June 13, 2024</p>	<p>Cruise Leader: Paul A. Dodd, Norwegian Polar Institute, Tromsø, Norway</p>	<p>Expedition Report: https://brage.npolar.no/npolar-xmlui/handle/11250/3145717</p> <p>URL: Data will be published at the Norwegian Polar Data Centre: https://data.npolar.no/dataset?q=ao2024</p>
Ship Data	<p>Polarstern Expedition PS144 (Polarstern)</p>	<p>For meteorological data contact Mario Mech: mario.mech@uni-koeln.de</p>	<p>Expedition Report: https://doi.org/10.57738/BzPM_0794_2025</p>
Aircraft Data	<p>IceBird 2024 Date of overlap in IceBird and ARCSIX flight tracks: June 13, 2024</p>	<p>PI: Jack Landy (jack.c.landy@uit.no)</p>	<p>IceBird sea ice thickness measurements: https://doi.org/10.21334/NPOLAR.2026.59F95D2E</p> <p>Expedition Report: https://epic.awi.de/id/eprint/59013/1/CampaignReport_IceBirdSummer2024.pdf</p> <p>URL: https://www.awi.de/en/science/climate-sciences/sea-ice-physics/projects/ice-bird.html</p>
Buoys	<p>Ice Mass Balance Buoys 2024 (Buoys 2024J through 2024R associated with ARCSIX)</p>	<p>Christopher Polashenski (christopher.m.polashenski@dartmouth.edu), Donald Perovich (donald.k.perovich@dartmouth.edu)</p>	<p>URL: https://doi.org/10.18739/A2T14TR46</p>

		th.edu), Ian Raphael (ian.a.raphael.th@dartmouth.edu), and Cameron Planck	
SnoTATOS	Snow Thickness and Temperature Observation System (SnoTATOS) snow depth and surface melt observations from the 2024 ARCSIX Campaign, Lincoln Sea	Ian Raphael (ian.a.raphael.th@dartmouth.edu), Donald Perovich (donald.k.perovich@dartmouth.edu), and Christopher Polashenski (christopher.m.polashenski@dartmouth.edu)	URL: https://doi.org/10.18739/A2FJ29F6X