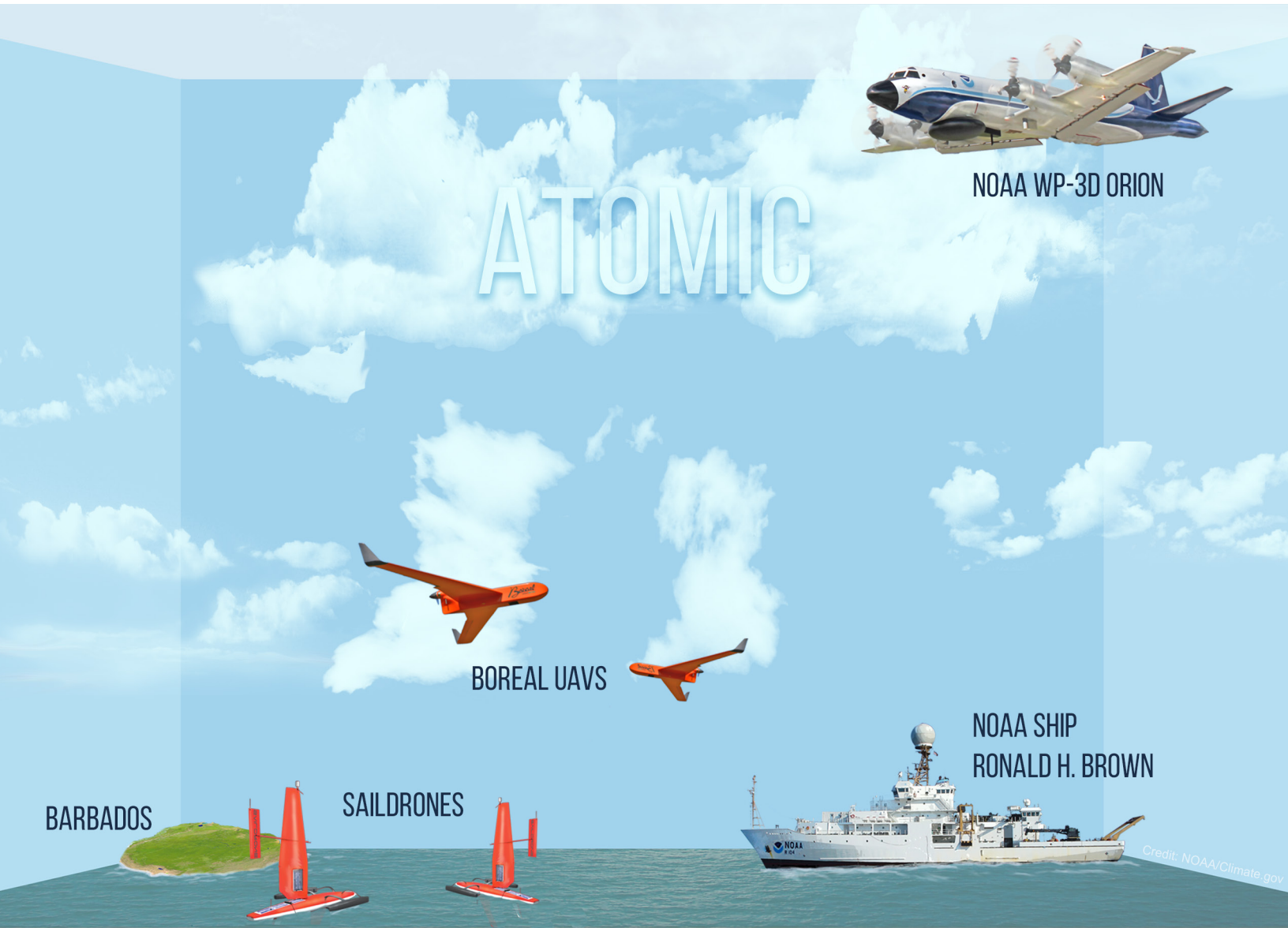


STATE OF THE CLIMATE IN 2020

RELEVANT DATASETS AND SOURCES



See Chapter 1 (Introduction) for information about the ATOMIC field campaign. Image credit: NOAA/Climate.gov

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8: RELEVANT DATASETS AND SOURCES

General Variable or Phenomenon	Specific dataset or variable	Source	Section
Aerosols	CAMS Reanalysis	https://ads.atmosphere.copernicus.eu/cdsapp#!/dataset/cams-global-radiative-forcing-auxilliary-variables?tab=overview	2g3
	MODIS Aerosol	https://modis.gsfc.nasa.gov/data/dataproduct/mod04.php	2g3
	AATSR	https://earth.esa.int/eogateway/instruments/aatsr	2g3
Air-sea fluxes	CERES Energy Balanced and Filled	https://ceres.larc.nasa.gov/data/	3e4
	CERES FLASHflux	https://ceres.larc.nasa.gov/data/	3e1
	ERA5	https://www.ecmwf.int/en/forecasts/datasets/reanalysis-datasets/era5	6g1
	Woods Hole Oceanographic Institute OAFlux	http://oaflux.whoi.edu	3e1, 3e2, 3e3
Albedo	MODIS	https://doi.org/10.5067/MODIS/MCD43C3.006	2h1
	MODIS (Greenland)	https://doi.org/10.22008/promice/data/modis_greenland_albedo	5e
Biomass, Greenness or Burning	GFAS v1.4	ftp://ftp.mpic.de/GFAS/sc17 (special reprocessing)	2h3
	Global Inventory Modeling and Mapping Studies (GIMMS) 3gy1	https://iridl.ldeo.columbia.edu/SOURCES/.NASA/.ARC/.ECOCAST/.GIMMS/.NDVI3g/.v1p0/index.html?Set-Language=en	5i
	MODIS MCD43A4	https://lpdaac.usgs.gov/products/mcd43a4v006/	5i
	MODIS fire	https://modis.gsfc.nasa.gov/data/dataproduct/mod14.php	5SB.1
	VIIRS SNPP	https://oceancolor.gsfc.nasa.gov/data/viirs-snpp/	5SB.1
Cloud Properties	Aqua MODIS C6	http://dx.doi.org/10.5067/MODIS/MYD08_M3.006	2d7, 2h3
	Terra MODIS C6	http://dx.doi.org/10.5067/MODIS/MOD08_M3.006	2d7
	MODIS 08_L3	https://modis.gsfc.nasa.gov/data/dataproduct/mod08.php	2d7
	CALIPSO	http://www-calipso.larc.nasa.gov	2d7, 6h
	CERES MODIS	https://ceres.larc.nasa.gov/data/general-product-info/	2d7
	CLARA-A2	https://www.cmsaf.eu/EN/Home/home_node.html	2d7
	CLOUD_CCI	www.esa-cloud-cci.org	2d7
	HIRS	https://www.ncei.noaa.gov/access/metadata/landing-page/bin/iso?id=gov.noaa.ncdc:C00951	2d7
	MISR	https://l0dup05.larc.nasa.gov/L3Web/	2d7
	PATMOS-x/AVHRR	www.ncdc.noaa.gov/cdr/atmospheric/avhrr-cloud-properties-patmos-x	2d7
	PATMOS-x/MODIS C6	http://ladsweb.nascom.nasa.gov	2d7
	SatCORPS	No public archive	2d7
Drought	CRU TS 4.05	https://crudata.uea.ac.uk/cru/data/hrg/cru_ts_4.05/	2d11
Land Evaporation	GLEAM	www.gleam.eu/	2d12
FAPAR	MERIS	https://earth.esa.int/eogateway/	2h2
	MODIS-TIP	http://ladsweb.nascom.nasa.gov/	2h2
	SeaWiFS FAPAR	http://fapar.jrc.ec.europa.eu/	2h2
Geopotential Height	ERA5	https://www.ecmwf.int/en/forecasts/datasets/reanalysis-datasets/era5	6b
	NCEP/NCAR Reanalysis 1: Pressure	https://psl.noaa.gov/data/gridded/data.ncep.reanalysis.pressure.html	4d2, 4f2

General Variable or Phenomenon	Specific dataset or variable	Source	Section
Glacier Mass, Area or Volume	GRACE / GRACE-FO	https://grace.jpl.nasa.gov/data/get-data/	5e, 5f, 6e
	World Glacier Monitoring Service	http://dx.doi.org/10.5904/wgms-fog-2020-08	2c3
	Glacier Front Line (Greenland)	https://doi.org/10.22008/promice/data/calving_front_lines	e3
Groundwater and terrestrial water storage	GRACE / GRACE-FO	https://grace.jpl.nasa.gov/data/get-data/	2d9
Humidity, [Near] Surface	ERA5	https://www.ecmwf.int/en/forecasts/datasets/reanalysis-datasets/era5	2d1
	HadISDH	www.metoffice.gov.uk/hadobs/hadisdh	2d1
	MERRA-2	https://gmao.gsfc.nasa.gov/reanalysis/MERRA-2/	2d1
	JRA-55 Atmospheric Reanalysis	http://jra.kishou.go.jp/JRA-55/index_en.html	2d1
Humidity, Upper Atmosphere	ERA5	https://www.ecmwf.int/en/forecasts/datasets/reanalysis-datasets/era5	2d3
	HIRS	www.ncdc.noaa.gov/cdr/fundamental/hirs-ch12-brightness-temperature	2d3
	UTH, Microwave	by email to Viju.John@eumetsat.int	2d3
Ice Sheet Characteristics	DMSP-SSMIS	https://nsidc.org/data/nsidc-0001	6d
	ERA5	https://www.ecmwf.int/en/forecasts/datasets/reanalysis-datasets/era5	6c
	ICESat, ICESat-2	https://icesat-2.gsfc.nasa.gov/	5d2, 6e
	Cryosat-2	https://earth.esa.int/eogateway/missions/cryosat	5d2
	SMOS	https://earth.esa.int/eogateway/missions/smos	5d2
	MERRA-2	https://gmao.gsfc.nasa.gov/reanalysis/MERRA-2/	6c, 6h
	Modèle Atmosphérique Régionale surface mass	https://mar.cnrs.fr/	5e
	PROMICE (Greenland)	https://doi.org/10.22008/promice/data/aws	5e
	DMI Weather Stations	http://polarportal.dk/en/weather/historisk-vejrl#:~:text=DMI%20has%20a%20number%20of,go%20back%20almost%20250%20years.&text=One%20cannot%20expect%20that%20temperature%20observations%20spanning%20centuries%20are%20homogeneous	5e
	ICE_6G_D	https://www.atmosp.physics.utoronto.ca/~peltier/data.php	5e
Ice Discharge (Greenland)	https://doi.org/10.22008/promice/data/ice_discharge/d/v02	5e	
Lake Ice	Global Lake and River Ice Phenology Database, Version 1	https://doi.org/10.7265/N5W66HP8	2c4
	Great Lakes Ice	www.glerl.noaa.gov/data/ice	2c4
	ERA5	https://www.ecmwf.int/en/forecasts/datasets/reanalysis-datasets/era5	2c4

General Variable or Phenomenon	Specific dataset or variable	Source	Section
Lake Temperature	ERA5	https://www.ecmwf.int/en/forecasts/datasets/reanalysis-datasets/era5	2b3
	NERC Globalakes, Copernicus Climate Service	https://cds.climate.copernicus.eu/cdsapp#!dataset/satellite-lake-water-temperature?tab=overview	2b3
	MetOp A & B ATSR and AVHRR	https://www.eumetsat.int/website/home/Satellites/CurrentSatellites/Metop/index.html	2b3
	Sentinel 3 SLSTR	https://sentinel.esa.int/web/sentinel/user-guides/sentinel-3-slstr/overview	2b3
Lake Water Levels	Hydroweb	http://hydroweb.theia-land.fr/	2b3
Modes of Variability	Arctic Oscillation (AO)	www.cpc.ncep.noaa.gov/products/precip/CWlink/daily_ao_index/teleconnections.shtml	2e1
	Indian Ocean Dipole Mode Index	https://psl.noaa.gov/gcos_wgsp/Timeseries/DMI/	4f, 4h
	Madden-Julian Oscillation (MJO) - Real-time Multivariate MJO	www.bom.gov.au/climate/mjo/graphics/rmm.74toRealtime.txt	4c
	North Atlantic Oscillation (NAO)	https://climatedataguide.ucar.edu/climate-data/hurrell-north-atlantic-oscillation-nao-index-station-based	2e1
	Oceanic Nino Index (ONI)	www.cpc.ncep.noaa.gov/products/analysis_monitoring/ensostuff/ensoyears.shtml	4b
	Southern Annular Mode (SAM)	www.antarctica.ac.uk/met/gjma/sam.html	6b
	Southern Annular Mode (SAM, AAO)	www.cpc.ncep.noaa.gov/products/precip/CWlink/daily_ao_index/aa0/aa0.shtml	2e1
	Multivariate El Nino Index (MEI)	https://psl.noaa.gov/enso/mei/	3i
Southern Oscillation Index (SOI)	ftp://ftp.bom.gov.au/anon/home/ncc/www/sco/soi/soiplaintext.html	2e1	
Rock Glacier Kinematics	Austria: V. Kaufmann and A. Kellerer-Pirklbauer, France: X. Bodin and E. Thibert, Switzerland: R. Delaloye, J. Noetzli and C. Pellet	available from authors upon request	2SB.2
Ocean Carbon	fCO_2	www.socat.info	3j2
	Takahashi LDEO fCO_2	https://www.ncei.noaa.gov/access/ocean-carbon-data-system/oceans/LDEO_Underway_Database/	3j2
	Global Ocean Ship-Based Hydrographic Investigations Program	www.go-ship.org	3j3
	Saildrone	https://data.saildrone.com/	6g3
	SOCOM profiling float	https://socom.princeton.edu/content/data-access	6g3

General Variable or Phenomenon	Specific dataset or variable	Source	Section
Ocean Heat Content	CLIVAR and Carbon Hydrographic Data Office	https://cchdo.ucsd.edu/	3c
	CSIRO/ACE CRC/IMAS-UTAS estimate	www.cmar.csiro.au/sealevel/thermal_expansion_ocean_heat_timeseries.html	3c
	IAP/CAS	https://climatedataguide.ucar.edu/climate-data/ocean-temperature-analysis-and-heat-content-estimate-institute-atmospheric-physics	3c
	PMEL/JPL/JIMAR	http://oceans.pmel.noaa.gov	3c
	MRI/JMA	https://www.data.jma.go.jp/gmd/kaiyou/english/ohc/ohc_data_en.html	3c
	NCEI	https://www.ncei.noaa.gov/access/global-ocean-heat-content/	3c
	UK Met Office EN4.0.2	www.metoffice.gov.uk/hadobs/en4/download-en4-0-2-109.html	3c
	Argo monthly climatology	https://sio-argo.ucsd.edu/RG_Climatology.html	3SB1, 6g2
Argo	https://usgodae.org/argo/argo.html	3c	
Ocean Mass	GRACE	https://grace.jpl.nasa.gov/data/get-data	3f
Ocean Salinity	Aquarius V3.0	http://podaac.jpl.nasa.gov/aquarius	3d2
	Argo	https://usgodae.org/argo/argo.html	3d2
	Blended Analysis for Surface Salinity	ftp://ftp.cpc.ncep.noaa.gov/precip/BASS	3d2
	SMAP	https://podaac.jpl.nasa.gov/SMAP	3d2
	SMOS	https://earth.esa.int/eogateway/missions/smos	3d2
	World Ocean Atlas 2013	www.nodc.noaa.gov/OC5/woa13/	3d2, 3d3
	World Ocean Atlas 2018	https://www.ncei.noaa.gov/products/world-ocean-atlas	2d8
NCEI	https://www.ncei.noaa.gov/access/global-ocean-heat-content/	3d3	
Outgoing Longwave Radiation	AVHRR	https://psl.noaa.gov/data/gridded/data.interp_OLR.html	4d2, 4g2
	Daily OLR	www.ncdc.noaa.gov/cdr/atmospheric/outgoing-longwave-radiation-daily	4b2, 4b3, 4c, 4g3, 4g5, 4g6

General Variable or Phenomenon	Specific dataset or variable	Source	Section
Ozone, Total Column and Stratospheric	GOME/SCIAMACHY/GOME2 (GSG) Merged Total Ozone	http://www.iup.uni-bremen.de/UVSAT/datasets/merged-wfdoas-total-ozone	2g4
	GOME/SCIAMACHY/GOME2 (GTO) Merged Total Ozone	https://atmos.eoc.dlr.de/gto-ecv	2g4
	GOZCARDS ozone profiles	https://gozcards.jpl.nasa.gov	2g4
	Aura OMI/MLS	https://disc.sci.gsfc.nasa.gov/Aura/data-holdings/MLS ftp://toms.gsfc.nasa.gov/pub/omi/data/ozone/ (for years 2013-2017) https://disc.gsfc.nasa.gov/datasets/OMT03d_003/summary https://disc.gsfc.nasa.gov/datasets/OMUVBd_003/summary	5j1, 6h
	Multi Sensor Reanalysis (MSR-2) of total ozone	http://www.temis.nl/protocols/O3global.html	2g4
	NASA BUV/SBUV v8.6 (MOD v8.6) Merged Ozone	http://acdb-ext.gsfc.nasa.gov/Data_services/merged	2g4
	NOAA BUV/SBUV v8.6 (MOD v8.6) Merged Ozone	ftp://ftp.cpc.ncep.noaa.gov/SBUV_CDR	2g4
	Bodeker Scientific	http://www.bodekerscientific.com/data/total-column-ozone	5j1
	Ozone Mapping & Profiler Suite (OMPS) Ozonesonde	https://ozoneaq.gsfc.nasa.gov/omps/ www.esrl.noaa.gov/gmd/dv/spo_oz	6h 6h
	SAGE II/OSIRIS	dataset linked to Bourassa et al. (2018) doi:10.5194/amt-11-489-2018	2g4
	SAGE-SCIA-OMPS	dataset linked to Arosio et al., (2018) doi:10.5194/amt-2018-275	2g4
	SWOOSH	www.esrl.noaa.gov/csd/groups/csd8/swoosh/	2g4
	WOUDC Ground-based Ozone	ftp://tor.ec.gc.ca cd/pub/woudc/Projects/Campaigns/ZonalMeans	2g4
Antarctic UV monitoring network	https://gml.noaa.gov/grad/antuv/	6h	
NDACC lidar, microwave and FTIR	ftp://ftp.cpc.ncep.noaa.gov/ndacc	2g4	
Ozone, Tropospheric	Aura OMI/MLS	http://acd-ext.gsfc.nasa.gov/Data_services/cloud_slice/new_data.html	2g6
	NOAA Observatory Data	ftp://aftp.cmdl.noaa.gov/data/ozwv/SurfaceOzone/	2g6
Permafrost	Active Layer Thickness	www2.gwu.edu/~calm/	2c1, 5h2
	GTN-P global mean annual ground temperature data for permafrost	https://doi.org/10.1594/PANGAEA.884711	2c1
	Global Terrestrial Network for Permafrost (GTN-P)	http://gtnpdatabase.org/	2c1, 5h1
	Permafrost Temperature	http://permafrost.gi.alaska.edu/sites_map	5h1
	Permafrost Temperature at Chinese (QTP) sites	https://nsidc.org/data/GGD700/versions/1	2c1
	Permafrost Temperature at French sites	permafrost.osug.fr	2c1
	Permafrost Temperature at Norwegian sites	www.tspnorway.com	2c1
Permafrost Temperature at Swiss sites (PERMOS)	www.permos.ch	2c1	

General Variable or Phenomenon	Specific dataset or variable	Source	Section
Phenology	NDVI	https://modis.gsfc.nasa.gov/data/dataproduct/mod13.php	2h4
	PhenoCam	http://phenocam.sr.unh.edu	2h4
	Harvard Forest	https://harvardforest1.fas.harvard.edu/exist/apps/datasets/showData.html?id=hf003	2h4
	Natures Calendar	https://naturescalendar.woodlandtrust.org.uk/	2h4
Vegetation Optical Depth	VODCA	https://zenodo.org/record/2575599	2SB.3
	ESA CCI Biomass	https://catalogue.ceda.ac.uk/uuid/bedc59f37c9545c981a839eb552e4084	2SB.3
	MODIS MOD15A2H LAI	https://earthexplorer.usgs.gov/	2SB.3
Phytoplankton, Ocean Color	MODIS-Aqua	https://oceancolor.gsfc.nasa.gov/data/aqua/	3i
	SeaWiFS	https://oceancolor.gsfc.nasa.gov/data/seawifs/	3i
Precipitation	Climate Extremes Index	https://www.ncdc.noaa.gov/extremes/cei/	2d5
	CMORPH	www.cpc.ncep.noaa.gov/products/janowiak/cmorph_description.html	4d1
	ERA5	https://www.ecmwf.int/en/forecasts/datasets/reanalysis-datasets/era5	2d5
	GHCN v4	www.ncdc.noaa.gov/temp-and-precip/ghcn-gridded-products/precipitation	2d5
	GHCNDEX	www.climdex.org/datasets.html	2d5
	GPCP v2.3	https://psl.noaa.gov/data/gridded/data.gpcp.html	3e2, 4e, 4f, 4h
	GPCC	www.dwd.de/EN/ourservices/gpcc/gpcc.html	2d5
	MERRA-2	http://gmao.gsfc.nasa.gov/reanalysis/MERRA-2/	2d5
Pressure, Sea Level or Near-Surface	ERA5	https://www.ecmwf.int/en/forecasts/datasets/reanalysis-datasets/era5	5b2, 6b, 6SB.1
	HadSLP2r	http://hadobs.metoffice.com/hadslp2/	2e1
	NCEP/NCAR Reanalysis	www.esrl.noaa.gov/psd/data/gridded/data.ncep.reanalysis.html	4f2
	ERA5	https://www.ecmwf.int/en/forecasts/datasets/reanalysis-datasets/era5	5f
River Discharge	CaMA Flood	http://hydro.iis.u-tokyo.ac.jp/~yamada/cama-flood/	
	ELSE	offline	
	DDM30	https://www.uni-frankfurt.de/45218101/DDM30	
Sea Ice Age	EASE-Grid v3	http://nsidc.org/data/nsidc-0611/	5d3
Sea Ice Duration	Near-Real-Time DMSP SSM/I-SSMIS Daily Polar Gridded	http://nsidc.org/data/nsidc-0081.html	5d3, 6f
	Nimbus-7 SMMR and DMSP SSM/I (Bootstrap)	http://nsidc.org/data/nsidc-0079.html	6f

General Variable or Phenomenon	Specific dataset or variable	Source	Section
Sea Ice Extent / Area / Concentration	Nimbus-7 SMMR and DMSP SSM/I (Bootstrap)	http://nsidc.org/data/seaice_index/	5c, 5d1, SB6.2
	Nimbus-7 SMMR Sea Ice Concentration	https://nsidc.org/data/nsidc-0007	6d
	NSIDC Passive Microwave Sea Ice Concentration	https://nsidc.org/data/G02202	5c
	Passive Microwave melt data (Greenland)	https://nsidc.org/greenland-today/	5e
	NSIDC Sea Ice Extent	https://nsidc.org/data/g02135	5c, 5d1
	OSI SAF CCI : OSI-401-b	http://osisaf.met.no/p/ice/ice_conc_reprocessed.html	5d1
	GRACE technical notes T13, T14	TN-13: https://podaac-tools.jpl.nasa.gov/drive/files/allData/gracefo/docs/TN-13_GEOC_JPL_RL06.txt TN-14: https://podaac-tools.jpl.nasa.gov/drive/files/allData/gracefo/docs/TN-14_C30_C20_GSFC_SLR.txt	5e
AMSR-E	https://soccom.princeton.edu/content/data-access	6g3	
Sea Level / Sea Surface Height	GRACE / GRACE-FO	https://grace.jpl.nasa.gov/data/get-data/	3f
	NOAA/NESDIS/STAR	www.star.nesdis.noaa.gov/sod/lisa/SeaLevelRise/LSA_SLR_timeseries.php	3f
	CMEMS	http://marine.copernicus.eu/services-portfolio/access-to-products/?option=com_csw&view=details&product_id=SEALEVEL_GLO_PHY_L4_NRT_OBSERVATIONS_008_046	3f
	Argo	https://usgodae.org/argo/argo.html	3f
	Tide Gauge	http://uhslc.soest.hawaii.edu/	3f
	AVISO	https://www.aviso.altimetry.fr/en/data.html	3g, 3h
ocean currents	AOML climate indices	https://www.aoml.noaa.gov/phod/indexes/index.php	3g
	Ocean Surface Current Analysis - Real time (OSCAR)	https://podaac.jpl.nasa.gov/dataset/OSCAR_L4_OC_third-deg	3g
	Global Drifter Program	https://www.aoml.noaa.gov/phod/gdp/	3g
	Atlantic Ship of Opportunity XBT	https://www.aoml.noaa.gov/phod/goos/xbt_network/	3h
	RAPID array	https://rapid.ac.uk/rapidmoc/	3h
	MOVE array	http://www.oceansites.org/tma/move.html	3h
	OSNAP	https://www.o-snap.org/	3h
	SAMBA	http://www.oceansites.org/tma/samba.html	3h
Florida Current transport	https://www.aoml.noaa.gov/phod/floridacurrent/data_access.php	3h	
Sea Surface Temperature	ERSSTv5	https://doi.org/10.7289/V5T72FNM	3b, 4b, 4e, 4g2
	HadSST3.1.1	www.metoffice.gov.uk/hadobs/hadsst3	3b, 4e
	HadSST4	https://www.metoffice.gov.uk/hadobs/hadsst4/	2SB.1, 3b
	NOAA Optimum Interpolation SST (OISST) v2	http://apdrc.soest.hawaii.edu/dods/public_data/NOAA_SST/OISST/monthly	4b1, 4d2, 4f
	NOAA Optimum Interpolation SST (OISST) v2	https://www.ncdc.noaa.gov/oisst	2b3, 3b, 4g3, 4g5, 4g6, 4h, 5c

General Variable or Phenomenon	Specific dataset or variable	Source	Section
Snow Properties	Canadian Meteorological Centre Daily Snow Depth Analysis v1	https://nsidc.org/data/NSIDC-0447	5f
	Crocus Snowpack Model	http://www.umr-cnrm.fr/spip.php?article265	5f
	GlobSnow 2	https://nsidc.org/data/NSIDC-0595/versions/2	5f
	NOAA Interactive Multi-sensor Snow and Ice Mapping System (Snow Cover Duration)	https://usicecenter.gov/Products/lmsHome	5f
	NOAA Snow Chart Data Record (Snow Cover Extent)	www.snowcover.org	2c2, 5f
	Northern Hemisphere (NH) Snow Cover Extent (SCE), Version 1	doi:10.7289/V5N014G9	2c2, 5f
	MERRA-2	http://gmao.gsfc.nasa.gov/reanalysis/MERRA-2/	5f
Soil Moisture	ESA CCI SM	www.esa-soilmoisture-cci.org/index.php	2d10
Temperature, [Near] Surface	Antarctic Meteorological Research Center (AMRC) AWS	http://amrc.ssec.wisc.edu/data	6b
	CRUTEM4	www.metoffice.gov.uk/hadobs/crutem4	5b1
	ERA5	https://www.ecmwf.int/en/forecasts/datasets/reanalysis-datasets/era5	2b1, 2b3, 2SB.1, 5SB.1, 6b
	GHCNDEX	www.climdex.org/	2b3
	HadCRUT5 Global Temperature	https://www.metoffice.gov.uk/hadobs/hadcrut5/	2b1
	JRA-55 Atmospheric Reanalysis	http://jra.kishou.go.jp/JRA-55/index_en.html	2b1, 4f
	MERRA-2	http://gmao.gsfc.nasa.gov/reanalysis/MERRA-2/	2b3
	MERRA-2 monthly	https://goldsmr4.gesdisc.eosdis.nasa.gov/data/MERRA2_MONTHLY/M2TMNXLND.5.12.4	2h4
	NASA/GISS Global Temperature	https://data.giss.nasa.gov/gistemp/	2b1
	NCEP/NCAR Reanalysis	https://psl.noaa.gov/data/gridded/data.ncep.reanalysis.html	5b2, 5f
	ERA-Interim	www.ecmwf.int/en/research/climate-reanalysis/era-interim	5f
NOAA/NCEI NOAAGlobalTemp	www.ncdc.noaa.gov/data-access/marineocean-data/noaa-global-surface-temperature-noaaglobaltemp	2b1	

General Variable or Phenomenon	Specific dataset or variable	Source	Section
Temperature, Upper Atmosphere	ERA5	https://www.ecmwf.int/en/forecasts/datasets/reanalysis-datasets/era5	2b4, 2b5, 6b, 6h
	JRA-55 Atmospheric Reanalysis	http://jra.kishou.go.jp/JRA-55/index_en.html	2b4, 2b5
	MERRA-2	http://gmao.gsfc.nasa.gov/reanalysis/MERRA-2/	2b4, 2b5, 6h
	NOAA merged SSU+AMSU satellite data	https://www.star.nesdis.noaa.gov/smcd/emb/mscat/index.php	2b5
	RAOBCORE, RICH	www.univie.ac.at/theoret-met/research/raobcore (get version 1.7 fro Leo Haimberger)	2b4,2b5
	RATPAC A2	www.ncdc.noaa.gov/data-access/weather-balloon/radiosonde-atmospheric-temperature-products-accessing-climate/ratpac-a	2b4
	RSS v4.0	www.remss.com	2b4, 2b5
	NOAA/NESDIS/STAR MSU v4.1	ftp://ftp.star.nesdis.noaa.gov/pub/smcd/emb/mscat/data/MSU_AMSU_v4.1	2b4
	UW MSU v1.0	https://pochedls.github.io/#!data.md	2b4
	UAH MSU v6.0	https://www.nsstc.uah.edu/public/msu/	2b4, 2b5
	NCAR merged SSU+MLS satellite data	ftp://ftp.acom.ucar.edu/user/randel/SSUdata	2b5
	Stratospheric QBO data	https://acd-ext.gsfc.nasa.gov/Data_services/met/qbo/qbo.html	2b5
	CLASSmat	https://catalogue.ceda.ac.uk/uuid/9058edd550624de69a8b2a882d11b65c	2SB.1
UAHNMAT	https://www.nsstc.uah.edu/climate/	2SB.1	
TOA Earth Radiation Budget	CERES EBAF Ed4.1	https://ceres-tool.larc.nasa.gov/ord-tool/jsp/EBAF41Selection.jsp	2f1
	TSIS TIM Level 3 Total Solar Irradiance 24-hour Means	doi:10.5067/TSIS/TIM/DATA306	2f1
Solar Transmission, Apparent	Mauna Loa Observatory	https://www.esrl.noaa.gov/gmd/webdata/grad/mloapt/mauna_loa_transmission.dat	2f2
Trace Gases	Atmospheric Greenhouse Gas Index (AGGI)	www.esrl.noaa.gov/gmd/aggi	2g1
	Atmospheric Gas trends	www.esrl.noaa.gov/gmd/ccgg/trends	2g1
	CAMS Reanalysis (Carbon Monoxide)	https://ads.atmosphere.copernicus.eu/cdsapp#!/dataset/cams-global-radiative-forcing-auxilliary-variables?tab=overview	2g7
	Nitrous Oxide	www.esrl.noaa.gov/gmd/hats/combined/N2O.html	2g1
	Ozone-Depleting Gas Index (ODGI)	www.esrl.noaa.gov/gmd/odgi	2g2
Tropical Cyclone Data	HURDAT2	www.aoml.noaa.gov/hrd/hurdat/Data_Storm.html	4g2
	International Best Track Archive for Climate Stewardship (IBTrACS)	www.ncdc.noaa.gov/ibtracs/	4g1, 4g3, 4g5, 4g6, 4g7
	JTWC Best-track Dataset	https://www.metoc.navy.mil/jtwc/jtwc.html?best-tracks	4g4,4g5
	RSMC-Tokyo, JMA best-track data	www.jma.go.jp/jma/jma-eng/jma-center/rsmc-hp-pub-eg/besttrack.html	4g4
	Southwest Pacific Enhanced Archive of Tropical Cyclones (SPEARtc)	http://apdrc.soest.hawaii.edu/projects/speartc	4g8
	HURDAT US Hurricanes	http://www.aoml.noaa.gov/hrd/hurdat/All_U.S._Hurricanes.html	4SB.1

General Variable or Phenomenon	Specific dataset or variable	Source	Section
UV Radiation Data	Canadian sites	ftp://exp-studies.tor.ec.gc.ca/pub/uvdata/Preliminary/MSC	5j2
	Greenland site	http://uv.biospherical.com/Version2/data.asp	5j2
	Norwegian sites	https://github.com/uvnrpa/Minute_Data	5j2
	OMI	https://disc.gsfc.nasa.gov/datasets?page=1&source=AURA%20OMI	5j2
	NASA Aura Microwave Limb Sounder	https://mls.jpl.nasa.gov/products/h2o_product.php	2g5
Water Vapor, Total Column	COSMIC	https://cdaac-www.cosmic.ucar.edu/	2d2
	ERA5	https://www.ecmwf.int/en/forecasts/datasets/reanalysis-datasets/era5	2d2, 6SB.1
	GNSS Ground-Based Total Column Water Vapor	https://doi.org/10.25326/18	2d2
	JRA-55 Atmospheric Reanalysis	http://jra.kishou.go.jp/JRA-55/index_en.html	2d2
	METOP A B C	https://www.eumetsat.int/our-satellites/metop-series	2d2
	RSS SSM/I -AMSR-E Ocean Total Column Water Vapor	www.remss.com	2d2
Wind, [Near] Surface	ERA5	https://www.ecmwf.int/en/forecasts/datasets/reanalysis-datasets/era5	2e2, 4g4
	HadISD3.1.1	www.metoffice.gov.uk/hadobs/hadisd/	2e2
	JRA-55 Atmospheric Reanalysis	http://jra.kishou.go.jp/JRA-55/index_en.html	4h
	MERRA-2	http://gmao.gsfc.nasa.gov/reanalysis/MERRA-2/	2e2
	RSS Radiometer winds	www.remss.com/measurements/wind	2e2
Wind, Upper Atmosphere	Climate Forecast System Reanalysis	www.ncdc.noaa.gov/data-access/model-data/model-datasets/climate-forecast-system-version2-cfsv2	4g3, 4g5, 4g6
	ERA5	https://www.ecmwf.int/en/forecasts/datasets/reanalysis-datasets/era5	2e3, 4e, 6b
	ERA-Interim	www.ecmwf.int/en/research/climate-reanalysis/era-interim	2e3
	JRA-55 Atmospheric Reanalysis	http://jra.kishou.go.jp/JRA-55/index_en.html	2e3
	MERRA-2	http://gmao.gsfc.nasa.gov/reanalysis/MERRA-2/	2 e3
	NCEP/NCAR Reanalysis	https://psl.noaa.gov/data/gridded/data.ncep.reanalysis.html	4b2, 4b3, 4c, 4g2, 4g3
	QBO	https://www.geo.fu-berlin.de/met/ag/strat/produkte/qbo/index.html	2 e3

