

STATE OF THE CLIMATE IN 2019

RELEVANT DATASETS AND SOURCES



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8. RELEVANT DATASETS AND SOURCES

General Variable or Phenomenon	Specific dataset or variable	Source	Section
Aerosols	CAMS Reanalysis	https://atmosphere.copernicus.eu/	2g3
	GloSSAC v.1.	https://eosweb.larc.nasa.gov/project/glossac/glossac_v1.1	SB2.2
	OMPS/LP	https://ozoneaq.gsfc.nasa.gov/data/ozone/	SB2.2
Air-sea fluxes	CERES Energy Balanced and Filled	https://ceres.larc.nasa.gov/	3e4
	CERES FLASHflux	https://eosweb.larc.nasa.gov/project/ceres/ebaf_surface_table	3e1
	NCEP/DOE AMIP-II	https://www.cpc.ncep.noaa.gov/products/wesley/reanalysis2/	6g3
	Woods Hole Oceanographic Institute OAFflux	http://oaf Flux.who.i.edu	3e1, 3e2, 3e3
Albedo	MODIS	http://ladsweb.nascom.nasa.gov	2h1, 5e1
Atmospheric fluxes	MERRA-2	https://gmaw.gsfc.nasa.gov/reanalysis/MERRA-2/	SB6.1
Biomass, Greenness or Burning	GFAS v1.4	ftp://ftp.mpic.de/GFAS/sc17	2h3
	Global Inventory Modeling and Mapping Studies (GIMMS) 3gv1	https://nex.nasa.gov/nex/projects/1349/	5i
Cloud Properties	Aqua MODIS C6	https://earthdata.nasa.gov/earth-observation-data/near-real-time/download-nrt-data/modis-nrt	2d7
	CALIPSO	https://eosweb.larc.nasa.gov/project/calipso/calipso_table	2d7, 6h
	CERES MODIS	https://ceres.larc.nasa.gov/science_information.php?page=ModisCloudRetr	2d7
	CLARA-A2	https://climatedataguide.ucar.edu/climate-data/clara-a1-cloud-properties-surface-albedo-and-surface-radiation-products-based-avhrr	2d7
	CLOUD_CCI	www.esa-cloud-cci.org	2d7
	HIRS	www.ssec.wisc.edu/~donw/PAGE/CLIMATE.HTML	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	scPSDI	https://crudata.uea.ac.uk/cru/data/drought/	2d11
	CRU TS 4.03	https://crudata.uea.ac.uk/cru/data/hrg/	2d11
Evaporation, Interception, Transpiration, Sublimation	GLEAM	www.gleam.eu/	2d12
FAPAR	MERIS	http://earth.esa.int/level3/meris-level3/	2h2
	MODIS-TIP	http://ladsweb.nascom.nasa.gov/	2h2
	SeaWiFS v 2010.0	http://fapar.jrc.ec.europa.eu/	2h2

(cont.) Relevant datasets and sources

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Geopotential Height	ERA5	https://www.ecmwf.int/en/forecasts/datasets/reanalysis-datasets/era5	6b
	NCEP/NCAR Reanalysis 1: Pressure	www.esrl.noaa.gov/psd/data/gridded/data.ncep.reanalysis.pressure.html	4f2, 5b2
Glacier Mass, Area or Volume	GRACE / GRACE-FO	https://gracefo.jpl.nasa.gov/data/grace-data/	5e3, 5f
	Sentinel-2, LANDSAT, ASTER	—	5e1
	World Glacier Monitoring Service	https://wgms.ch/latest-glacier-mass-balance-data/	2c3, 5f
Groundwater and terrestrial water storage	GRACE / GRACE-FO	https://gracefo.jpl.nasa.gov/data/grace-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
	JRA-55 Atmospheric Reanalysis	http://jra.kishou.go.jp/JRA-55/index_en.html	2d1
	MERRA-2	https://gmao.gsfc.nasa.gov/reanalysis/MERRA-2/	2d1
	NOAA-CIRES-DOE 20th Century Reanalysis v3	https://psl.noaa.gov/data/gridded/data.20thC_ReanV3.html	2d1
	NOCS 2.0	https://rda.ucar.edu/datasets/ds260.3/	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	http://nsidc.org/data/nsidc-0032	5e1, 6d
	ERA5	https://www.ecmwf.int/en/forecasts/datasets/reanalysis-datasets/era5	6c
	ICESat, ICESat-2	https://nsidc.org/data/icesat-2	6e
	MERRA-2	https://gmao.gsfc.nasa.gov/reanalysis/MERRA-2/	6c
	Modèle Atmosphérique Régionale surface mass	https://mar.cnrs.fr/	5e1
	PROMICE (Greenland)	www.promice.dk/home.html	5e1, 5e2
Lake Ice	—	—	SB2.1
Lake Temperature	ERA5	https://www.ecmwf.int/en/forecasts/datasets/reanalysis-datasets/era5	2b2
	Globalakes	www.globalakes.ac.uk	2b2
	Lake Vättern (Sweden)	Vättern Water Protection Association	2b2
	Lake Zurich (Switzerland)	City of Zurich Water Supply and Amt für Abfall, Wasser, Energie und Luft of the Canton of Zurich	2b2
	MetOp A & B ATSR and AVHRR	https://www.eumetsat.int/website/home/Satellites/CurrentSatellites/Metop/index.html	2b2
	Mondsee (Austria)	http://hydro.ooe.gv.at/#Startseite	2b2
	Neusiedler See (Austria)	http://wasser.bgld.gv.at/hydrographie/online-daten.html	2b2
	Polish Lakes	www.imgw.pl	2b2
	Wörther See (Austria)	https://info.ktn.gv.at/asp/hydro/daten/hydroportal/see_wt.asp	2b2
	Lake Water Levels	USDA G-REALM	https://ipad.fas.usda.gov/cropexplorer/global_reservoir/

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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/	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, SB6.1
	Southern Annular Mode (SAM, AAO)	www.cpc.ncep.noaa.gov/products/precip/CWlink/daily_ao_index/aa0/aa0.shtml	2e1
	Southern Oscillation Index (SOI)	ftp://ftp.bom.gov.au/anon/home/ncc/www/sco/soi/soiplaintext.html	2e1
Ocean Carbon	MPI-SOM-FFN	https://www.nodc.noaa.gov/ocads/oceans/SPCO2_1982_2015_ETH_SOM_FF.N.html	6g3
	pCO2	www.socat.info	3i2
	Global Ocean Ship-Based Hydrographic Investigations Program	www.go-ship.org	3i3
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	www.data.jma.go.jp/gmd/kaiyou/english/ohc/ohc_global_en.html	3c
	NCEI	www.nodc.noaa.gov/OC5/3M_HEAT_CONTENT/	3c
	UK Met Office EN4.0.2	www.metoffice.gov.uk/hadobs/en4/download-en4-0-2-109.html	3c
Ocean Mass	NASA Gravity Recovery and Climate Experiment	https://grace.jpl.nasa.gov/data/get-data/monthly-mass-grids-ocean/	3f
Ocean Salinity	Aquarius V3.0	http://podaac.jpl.nasa.gov/aquarius	3d2
	Argo	www.argo.ucsd.edu , http://argo.jcommops.org	3d2
	Blended Analysis for Surface Salinity	ftp://ftp.cpc.ncep.noaa.gov/precip/BASS	3d2
	World Ocean Atlas 2013	www.nodc.noaa.gov/OC5/woa13/	3d2, 3d3
Outgoing Longwave Radiation	AVHRR	https://www.esrl.noaa.gov/psd/data/gridded/data.interp_OLR.html	4d2, 4f2
	Daily OLR	www.ncdc.noaa.gov/cdr/atmospheric/outgoing-longwave-radiation-daily	4b2, 4b3, 4c, 4f3, 4f5, 4f6

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Ozone, Total Column and Stratospheric	GOME/SCIAMACHY/GOME2 (GSG) Merged Total Ozone	www.iup.uni-bremen.de/gome/wfdoas/	2g4
	GOME/SCIAMACHY/GOME2 (GTO) Merged Total Ozone	www.esa-ozone-cci.org	2g4
	GOZCARDS ozone profiles	https://gozcards.jpl.nasa.gov/info.php	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/OMTO3d_003/summary https://disc.gsfc.nasa.gov/datasets/OMUVBd_003/summary	5j1, 6h
	Multi Sensor Reanalysis (MSR-2) of total ozone	www.temis.nl	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
	Ozone Mapping & Profiler Suite (OMPS) Ozone sonde	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. (2014)	2g4
	SWOOSH	www.esrl.noaa.gov/csd/groups/csd8/swoosh/	2g4
WOUDC Ground-based Ozone	https://woudc.org/archive/Projects-Campaigns/ZonalMeans/	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
	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	permafrance.osug.fr	2c1
	Permafrost Temperature at Norwegian sites	www.tspnorway.com www.met.no	2c1
Permafrost Temperature at Swiss sites	www.permos.ch	2c1	
Phenology	Budburst Quercus robur	https://www.usanpn.org/node/22741	2h4
	Lake chlorophyll	—	2h4
	NDVI	https://modis.gsfc.nasa.gov/data/dataproduct/mod13.php	2h4
	PhenoCam	https://www.neonscience.org/data-collection/phenocams	2h4
Phytoplankton, Ocean Color	MODIS-Aqua R2018.0	http://oceancolor.gsfc.nasa.gov/cms/reprocessing/	3h
	SeaWiFS R2018.0	http://oceancolor.gsfc.nasa.gov/cms/reprocessing/	3h

(cont.) Relevant datasets and sources

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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	2d4, 2d5
	GHCNDEX	www.climdex.org/datasets.html	2d5
	GPCP v2.3	http://precip.gsfc.nasa.gov	2d4, 3e2, 4e, 4h
	GPCP	www.dwd.de/EN/ourservices/gpcc/gpcc.html	2d4, 2d5
Precipitation (net), Freshwater Flux	MERRA-2	http://gmao.gsfc.nasa.gov/reanalysis/MERRA-2/	2d5
	GPCPv23, OAFflux	http://precip.gsfc.nasa.gov http://oafux.who.edu	3e
Pressure, Sea Level or Near-Surface	ERA5	https://www.ecmwf.int/en/forecasts/datasets/reanalysis-datasets/era5	6b
	HadSLP2r	http://hadobs.metoffice.com/hadslp2/	2e1
	NCEP/NCAR Reanalysis	www.esrl.noaa.gov/psd/data/gridded/data.ncep.reanalysis.html	4f2
River Discharge	ELSE	No public archive	2d8
Sea Ice Age	EASE-Grid v3	http://nsidc.org/data/nsidc-0611/	5d2
Sea Ice Duration	Near-Real-Time DMSP SSM/I-SSMIS Daily Polar Gridded	http://nsidc.org/data/nsidc-0081.html	6f
	Nimbus-7 SMMR and DMSP SSM/I (Bootstrap)	http://nsidc.org/data/nsidc-0079.html	6f
Sea Ice Extent/Area/Concentration	Nimbus-7 SMMR and DMSP SSM/I (Bootstrap)	http://nsidc.org/data/seaice_index/	5c, 5d, SB6.2
	OSI-401-b	http://navigator.eumetsat.int/product/EO:EUM:DAT:DMSP:OSI-401-B	SB6.2
Sea Level/Sea Surface Height	GRACE / GRACE-FO	https://gracefo.jpl.nasa.gov/data/grace-data/	3f
	NOAA/NESDIS/STAR	www.star.nesdis.noaa.gov/sod/lisa/SeaLevelRise/LSA_SLR_timeseries.php	3f
	Ssalto/Duacs Multimission Altimeter Products	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
	Tide Gauge	http://uhslc.soest.hawaii.edu/	3f
Sea Surface Current	Brazil-Malvina Region Confluence Region	www.aoml.noaa.gov/phod/altimetry/cvar/mal/BM_anm.php	3g
	Long Term Time Series of Surface Currents: Agulhas Current	www.aoml.noaa.gov/phod/altimetry/cvar/agu/	3g
	Long Term Time Series of Surface Currents: North Brazil Current	www.aoml.noaa.gov/phod/altimetry/cvar/nbc	3g
	Ocean Surface Current Analysis - Real time (OSCAR)	https://podaac.jpl.nasa.gov/dataset/OSCAR_L4_OC_third-deg	3g
	Yucatan Current	www.aoml.noaa.gov/phod/altimetry/cvar/yuc/transport.php	3g

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Sea Surface Temperature	ERSSTv5	https://doi.org/10.7289/V5T72FNM	3b, 4b, 4f2
	HadSST3.1.1	www.metoffice.gov.uk/hadobs/hadsst3	3b
	HadSST4	https://www.metoffice.gov.uk/hadobs/hadsst4/	3b
	NOAA Optimum Interpolation SST (OISST) v2	http://apdr.csoest.hawaii.edu/dods/public_data/NOAA_SST/OISST/monthly	4b1, 4d2, 4f
	NOAA Optimum Interpolation SST (OISST) v2	www.ncei.noaa.gov/data/sea-surface-temperature-optimum-interpolation/access/	2b3, 3b, 4f3, 4f5, 4f6, 4h, 5c
Snow Properties	Canadian Meteorological Centre Daily Snow Depth Analysis v1	https://nsidc.org/data/NSIDC-0447	5g
	Crocus Snowpack Model	http://www.umr-cnrm.fr/spip.php?article265	5g
	GlobSnow 2	https://nsidc.org/data/NSIDC-0595/versions/2	5g
	MERRA-2	http://gmao.gsfc.nasa.gov/reanalysis/MERRA-2/	5g
	NOAA Interactive Multi-sensor Snow and Ice Mapping System (Snow Cover Duration)	www.natice.noaa.gov/ims/index.html	5g
	NOAA Snow Chart Data Record (Snow Cover Extent)	www.snowcover.org	2c2, 5g
	MERRA-2	http://gmao.gsfc.nasa.gov/reanalysis/MERRA-2/	5g
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 http://www.cru.uea.ac.uk/cru/data/temperature	5b1
	ERA5	https://www.ecmwf.int/en/forecasts/datasets/reanalysis-datasets/era5	2b1, 2b3, 6b
	GHCNDEX	www.climdex.org/datasets.html	2b3
	HadCRUT4 Global Temperature	www.metoffice.gov.uk/hadobs/hadcrut4/	2b1
	JRA-55 Atmospheric Reanalysis	http://jra.kishou.go.jp/JRA-55/index_en.html	2b1
	MERRA-2	http://gmao.gsfc.nasa.gov/reanalysis/MERRA-2/	2b1, SB6.1
	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
	NOAA/NCEI NOAA GlobalTemp	www.ncdc.noaa.gov/data-access/marineocean-data/noaa-global-surface-temperature-noaaglobaltemp	2b1

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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 Extended SSU v3	https://www.star.nesdis.noaa.gov/smcd/emb/mscat/	2b5
	RAOBCORE, RICH	www.univie.ac.at/theoret-met/research/raobcore	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	www.star.nesdis.noaa.gov/smcd/emb/mscat/	2b5
	UAH MSU v6.0	http://vortex.nsstc.uah.edu/public/msu	2b4, 2b5
UCAR SSU+MLS+SABER	https://data.ucar.edu/en/dataset/stratospheric-temperature-trends-over-1979-2015-derived-from-combined-ssu-mls-and-saber-satelli	2b5	
TOA Earth Radiation Budget	CERES EBAF Ed4.1	https://eosweb.larc.nasa.gov/project/ceres/ebaf-toa_ed4.1	2f1
	CERES FLASHFlux	https://ceres-tool.larc.nasa.gov/ord-tool/jsp/FLASH_TISASelection.jsp	2f1
Solar Transmission, Apparent	Mauna Loa Observatory	https://www.esrl.noaa.gov/gmd/grad/mloapt.html	2f2
Trace Gases	Atmospheric Greenhouse Gas Index (AGGI)	www.esrl.noaa.gov/gmd/aggi	2g1
	Carbon Dioxide (CO ₂)	www.esrl.noaa.gov/gmd/dv/iadv	2g1
	Carbon Monoxide (CO)	https://atmosphere.copernicus.eu/	2g7
	Carbon Monoxide (CO) - WMO World Data Centre for GHGs	https://gaw.kishou.go.jp	2g7
	Chlorine Monoxide (ClO) - Aura MLS	http://mls.jpl.nasa.gov/products/clo_product.php	6h
	Halocarbons (CFCs, HFCs, HCFCs)	www.esrl.noaa.gov/gmd/hats/data.html	2g1, 2g2
	Methane	www.esrl.noaa.gov/gmd/dv/iadv	2g1
	Nitrous Oxide	www.esrl.noaa.gov/gmd/hats/combined/N2O.html	2g1
	Ozone-Depleting Gas Index (ODGI)	www.esrl.noaa.gov/gmd/odgi	2g2
	Perfluorocarbons	http://agage.eas.gatech.edu	2g1
Sulfur Hexafluoride	www.esrl.noaa.gov/gmd/hats/combined/SF6.html	2g1	
Tropical Cyclone Data	HURDAT2	www.aoml.noaa.gov/hrd/hurdat/Data_Storm.html	4f2
	International Best Track Archive for Climate Stewardship (IBTrACS)	www.ncdc.noaa.gov/ibtracs/	4f1, 4f3, 4f5, 4f6, 4f7
	JTWC Best-track Dataset (2011 preliminary)	www.usno.navy.mil/NOOC/nmfc-ph/RSS/jtwc/best_tracks	4f4, 4f5
	RSMC-Tokyo, JMA best-track data	www.jma.go.jp/jma/jma-eng/jma-center/rsmc-hp-pub-eg/besttrack.html	4f4
	Southwest Pacific Enhanced Archive of Tropical Cyclones (SPEARTC)	http://apdr.c.soest.hawaii.edu/projects/speartc	4f8

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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
	Finnish sites	http://litdb.fmi.fi/soundingst_uvradiation.php http://uv.fmi.fi/uvdb/	5j2
	Norwegian sites	https://github.com/uvnrpa/Minute_Data	5j2
	OMI	https://disc.gsfc.nasa.gov/datasets?page=1&source=AURA%20OMI	5j2
Water Vapor, Stratosphere	Frost Point Hygrometer Data (Boulder, Hilo, Lauder)	ftp://aftp.cmdl.noaa.gov/data/ozwv/WaterVapor	2g5
	Frost Point Hygrometer Data (San Jose, Costa Rica)	http://physics.valpo.edu/ozone/ticosonde.html	2g5
	Frost Point Hygrometer (Lindenberg, Germany)	https://www.dwd.de/EN/research/observing_atmosphere/lindenberg_column/in_situ/in_situ_node.html	2g5
	NASA Aura Microwave Limb Sounder	https://mls.jpl.nasa.gov/products/h2o_product.php	2g5
Water Vapor, Total Column	COSMIC GPS-RO	http://cdaac-www.cosmic.ucar.edu/cdaac/products.html	2d2
	ERA5	https://www.ecmwf.int/en/forecasts/datasets/reanalysis-datasets/era5	2d2
	GNSS Ground-Based Total Column Water Vapor	https://rda.ucar.edu/datasets/ds721.1/	2d2
	JRA-55 Atmospheric Reanalysis	http://jra.kishou.go.jp/JRA-55/index_en.html	2d2
	MERRA-2	http://gmao.gsfc.nasa.gov/reanalysis/MERRA-2/	2d2
	RSS SSM/I -AMSR-E Ocean Total Column Water Vapor	www.remss.com	2d2
Wind, [Near] Surface	NOAA-CIRES-DOE 20th Century Reanalysis v3	https://psl.noaa.gov/data/gridded/data.20thC_ReanV3.html	2e2
	Australian (McVicar)	http://doi.org/10.4225/08/56A85491DDED2	200
	ERA5	https://www.ecmwf.int/en/forecasts/datasets/reanalysis-datasets/era5	2e2
	HadISD3	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 SSM/I Ocean 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	4f3, 4f5, 4f6
	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/	2e3, SB6.1
	NCEP/NCAR Reanalysis	www.esrl.noaa.gov/psd/data/gridded/data.ncep.reanalysis.html	4b2, 4b3, 4c, 4f2

