



EARTH SYSTEM SCIENCE

Data and Services

OCEAN Data Set Reference Sheet

December 2017

Physical Properties	Data Center	Selected Data Sets and Data Collections <i>Complete data set listings available through each individual data center. For more information about NASA's Earth Observing System Data and Information System (EOSDIS) data centers, see: https://earthdata.nasa.gov</i>
Gravity Gravity Field Models, Measurements	CDDIS https://cddis.nasa.gov	<ul style="list-style-type: none"> • Ground Network/Satellite Measurements: Daily, hourly, and sub-hourly code and phase observations from GNSS ground network; Daily and hourly files of round trip time of flight from satellite laser ranging (SLR) ground network; Time-tagged range-rate measurements from DORIS ground network • Daily and weekly precision satellite orbits derived from GNSS, SLR, and DORIS ground network observations. Note: Precise satellite orbits are required for higher level products. • Station positions and velocities from GNSS, SLR, VLBI and DORIS ground networks
	PO.DAAC http://podaac.jpl.nasa.gov	<ul style="list-style-type: none"> • GRACE Level 2 Monthly Gravity Field Estimates • Surface Mass Density Changes from GRACE (monthly mass grids of water equivalent thickness)
Heat Flux	ASDC https://eosweb.larc.nasa.gov	<ul style="list-style-type: none"> • First ISCCP Regional Experiment (FIRE) data sets
Multi-Parameter Data Collections	ASDC DAAC https://eosweb.larc.nasa.gov	<ul style="list-style-type: none"> • CLAMS data sets • First ISCCP Regional Experiment (FIRE) data sets • Global Tropospheric Experiment (GTE) data sets
	GHRC DAAC http://ghrc.nsstc.nasa.gov	<ul style="list-style-type: none"> • Advanced Microwave Sounding Unit-A (AMSU-A) Swath from NOAA-15, NOAA-16, NOAA-17 • RSS SSMI/SSMIS Ocean Product Grids Daily, 3-Day, Weekly, and Monthly netCDF from DMSP F8, F10, F11, F13, F14, F15, F16, and F17 (wind speed, atmospheric water vapor, cloud liquid water, and rain rate) • TRMM Microwave Imager (TMI) Wentz Ocean Products (Cloud liquid water, atmospheric water vapor, rain rate, wind speeds, and SSTs)
	NSIDC DAAC https://nsidc.org/daac	<ul style="list-style-type: none"> • AMSR-E/Aqua Daily, Weekly, and Monthly L3 Global Ascending/Descending .25 x .25 deg Ocean Grids • AMSR-E/Aqua L2B Global Swath Ocean Products derived from Wentz Algorithm • GLAS/ICESat L2 Global Ocean Altimetry Data
Ocean Circulation	PO.DAAC http://podaac.jpl.nasa.gov	<ul style="list-style-type: none"> • OSCAR - Ocean Surface Current (1 degree and 1/3 degree spatial resolution)
Ocean Surface Topography Height, waves, sea level, tide models	ASDC https://eosweb.larc.nasa.gov	<ul style="list-style-type: none"> • First ISCCP Regional Experiment (FIRE) data sets
	ASF DAAC http://www.asf.alaska.edu	<ul style="list-style-type: none"> • Sentinel-1A, Sentinel-1B ocean (OCN) synthetic aperture radar (SAR) products from the ASF Data Pool
	NSIDC DAAC https://nsidc.org/daac	<ul style="list-style-type: none"> • GLAS/ICESat L2 Global Ocean Altimetry Data
	PO.DAAC http://podaac.jpl.nasa.gov	<ul style="list-style-type: none"> • Global Mean Sea Level Trend from Integrated Multi-Mission Ocean Altimeters TOPEX/Poseidon Jason-1 and OSTM/Jason-2 • GRACE Dynamic Ocean Topography • Integrated Multi-Mission Ocean Altimeter Data for Climate Research • Jason-1 Geophysical Data Record (GDR) • Jason-1 Sea Surface Height Anomaly Products • Jason-3 Near Real Time SSHA • JPL MEaSURES Gridded Sea Surface Height Anomalies • OSTM/Jason-2 Near Real Time SSHA • Reconstructed Sea Level • SARAL NRT Value-added Operational GDR SSHA • TOPEX/POSEIDON Altimeter Merged Geophysical Data Record (MGDR) Generation B • TOPEX/POSEIDON Sea Surface Height Anomaly Products

Phytoplankton & Dissolved Organic Matter	GES DISC http://disc.sci.gsfc.nasa.gov	<ul style="list-style-type: none"> • 8-day Data Product Visualization, NOBM Assimilated Monthly and Daily Global Data, through Giovanni tool • Ocean Color Radiometry Visualization and Analysis, through Giovanni tool
	OB.DAAC https://oceancolor.gsfc.nasa.gov	<ul style="list-style-type: none"> • CZCS Level-2 Standard Ocean Color Product [chlorophyll-a concentration, diffuse attenuation coefficient, aerosol optical thickness, and reflectance at four visible wavelengths] • MODIS/Aqua Level-2 Standard Ocean Color Product [chlorophyll-a concentration, diffuse attenuation coefficient plus parameters related to aerosol corrections] • MODIS/Aqua Merged Chlorophyll (Combined MODIS-SeaWiFS data daily, 8-day, monthly, seasonal, and yearly products, plus a rolling 32-day composite) • MODIS/Aqua, SeaWiFS, OCTS, and CZCS Level-3 Binned Ocean Color Products [All Level-2 parameters in daily, 8-day, monthly, monthly climatology, seasonal, and yearly products, plus seasonal climatology for MODIS/Aqua] • MODIS/Aqua, SeaWiFS, OCTS, and CZCS Level-3 Standard Mapped Image Ocean Color Products [chlorophyll-a, diffuse attenuation coefficient, aerosol optical thickness, and Ångstrom coefficient (except for CZCS), separately available for all temporal resolutions corresponding to the Level-3 Binned Products, plus 32-day rolling products for MODIS/Aqua and SeaWiFS] • MODIS/Terra Level-3 Ocean Color Products [A limited set starting from January 2007 of Level-3 Binned and Mapped Image Products] • OCTS Level-2 Standard Ocean Color Product [chlorophyll, gelbstoff, calcite, and Particulate Organic Carbon concentrations; diffuse attenuation coefficient plus aerosol optical thickness, aerosol Ångstrom exponent and other parameters related to aerosol corrections] • SeaWiFS Level-2 Standard Ocean Color Product [remote-sensing reflectances, particulate inorganic carbon (PIC), particulate organic carbon (POC)] • SeaWiFS Level-3 PAR Binned and Mapped Image Products [Photosynthetically Active Radiation reaching the ocean surface, available in daily, 8-day, monthly, seasonal, and yearly files]
Precipitable Water	GHRC DAAC http://ghrc.nsstc.nasa.gov	<ul style="list-style-type: none"> • RSS Monthly 1-deg Microwave Total Precipitable Water netCDF
Salinity Remotely sensed salinity from Aquarius, SPURS-1 in situ data	NSIDC DAAC https://nsidc.org/daac	<ul style="list-style-type: none"> • Aquarius L3 Weekly Polar-Gridded Sea Surface Salinity
	PO.DAAC http://podaac.jpl.nasa.gov	Sea Surface Salinity (Global Ocean & SPURS-1 N. Atlantic salinity maximum region) <ul style="list-style-type: none"> • Aquarius Level 2 Sea Surface Salinity & Wind Speed • Aquarius Level 3 Sea Surface Salinity, Density & Wind Speed Mapped products: Daily, 7 Day and rolling-7 Day, Monthly, Seasonal, Annual, Cumulative, Monthly and Seasonal Climatologies • CAP Level 2 Sea Surface Salinity and Wind Speed • CAP Level 3 Sea Surface Salinity, Wind Speed & rain-corrected Sea Surface Salinity Mapped products: Monthly, rolling-7 Day Mapped • SMAP Sea Surface Salinity L2 and L3 products (8day, monthly) from both RSS and JPL/CAP • SPURS-1 field campaign datasets: CTD, Underway-CTD, ADCP, Thermosalinograph, Underway Meteorology, Drifter, Argo, Neutrally Buoyant Float, SPURS Central Mooring, PICO moorings, Seaglider, Seasoar, Tenuse Glider, Wave Glider, Ecomapper. • IPRC/SOEST L4 Optimally Interpolated Sea Surface Salinity, 7-day product from Aquarius
Sea Ice See also the "Cryosphere Data Set Reference Sheet"	ASDC https://eosweb.larc.nasa.gov	<ul style="list-style-type: none"> • First ISCCP Regional Experiment (FIRE) data sets • International Satellite Cloud Climatology Project (ISCCP) D1, D2, and ICESNOW data products • Multi-angle Imaging SpectroRadiometer (MISR) Level 1B2 Ellipsoid Data
	ASF DAAC http://www.asf.alaska.edu	<ul style="list-style-type: none"> • AMM-1 and MAMM SAR Image Mosaics of Antarctica 100 m (RADARSAT-1) • Arctic MEaSURES sea ice dynamics products (RADARSAT-1) • ASF Data Pool of processed SAR data and images (Sentinel-1A, Sentinel-1B, SMAP, Seasat, ALOS PALSAR, JERS-1, RADARSAT-1, ERS-1, ERS-2, UAVSAR, AIRSAR) • International Polar Year SAR Datasets
	GHRC DAAC http://ghrc.nsstc.nasa.gov	<ul style="list-style-type: none"> • NRT AMSR2 Daily L3 12.5 km TB and Sea Ice Concentration Polar Grids • NRT AMSR2 Daily L3 25 km TB and Sea Ice Concentration Polar Grids
	NSIDC DAAC https://nsidc.org/daac	<ul style="list-style-type: none"> • AMSR-E/Aqua Daily L3 12.5 km Brightness Temperatures, Sea Ice Concentration, and Snow Depth Polar Grids • AMSR-E/Aqua Daily L3 25 km Brightness Temperatures & Sea Ice Concentration Polar Grids • AMSR-E/Aqua Daily L3 6.25 km Sea Ice Drift Polar Grids • Bootstrap Sea Ice Concentrations from Nimbus-7 SMMR and DMSP SSM/I • GLAS/ICESat L2 Sea Ice Altimetry Data • IceBridge Aircraft Data Sets (a large collection of data sets bridging the ICESat-1 and ICESat-2 missions) • Icebridge Sea Ice Freeboard, Snow Depth and Thickness • MODIS/Aqua Sea Ice Extent 5-Min L2 Swath 1 km Data • MODIS/Aqua Sea Ice Extent and IST Daily L3 Global 1 km & 4 km EASE-Grid Data for Day and Night • MODIS/Terra Sea Ice Extent 5-Min L2 Swath 1 km Data • MODIS/Terra Sea Ice Extent and IST Daily L3 Global 1 km & 4 km EASE-Grid Data for Day and Night

Sea Ice (continued)	NSIDC DAAC https://nsidc.org/daac (continued)	<ul style="list-style-type: none"> Near Real-Time DMSP SSM/I Daily Polar Gridded Sea Ice Concentrations Near Real-Time SSM/I EASE-Grid Daily Global Ice Concentration and Snow Extent Polar Pathfinder Daily 25 km EASE-Grid Sea Ice Motion Vectors Sea Ice Concentrations from Nimbus-7 SMMR and DMSP SSM/I Passive Microwave Data Sea Ice Trends and Climatologies from SMMR and SSM/I Snow Melt Onset Over Arctic Sea Ice from SMMR and SSM/I Brightness Temperatures
	PO.DAAC http://podaac.jpl.nasa.gov	<ul style="list-style-type: none"> BYU Daily and Local-Time-of-Day Browse Images of SeaWinds on QuikSCAT and ADEOS-II Sigma-0 Measurements BYU Daily Browse Images of NSCAT Sigma-0 Measurements BYU Enhanced Resolution Images of ERS, NSCAT, and Seasat Sigma-0 Measurements BYU Enhanced Resolution Images of SeaWinds on QuikSCAT and ADEOS-II Sigma-0 Measurements SeaWinds on QuikSCAT Arctic Sea Ice Age Classification (BYU/SCP)
Sea Surface Temperature SST	ASDC https://eosweb.larc.nasa.gov	<ul style="list-style-type: none"> First ISCCP Regional Experiment (FIRE) data sets
	GES DISC http://disc.sci.gsfc.nasa.gov	<ul style="list-style-type: none"> Ocean Color Radiometry Visualization and Analysis through Giovanni tool
	GHRC DAAC http://ghrc.nsstc.nasa.gov	<ul style="list-style-type: none"> Advanced Microwave Sounding Unit-A (AMSU-A) Swath from NOAA-15, NOAA-16, NOAA-17 TRMM Microwave Imager (TMI) Wentz Ocean Products (SST under all cloud conditions, plus surface wind speed and other atmospheric parameters)
	NSIDC DAAC https://nsidc.org/daac	<ul style="list-style-type: none"> AMSR-E/Aqua Daily, Weekly, and Monthly L3 Global Ascending/Descending .25 x .25 deg Ocean Grids AMSR-E/Aqua L2B Global Swath Ocean Products derived from Wentz Algorithm IPAB Antarctic Drifting Buoy Data
	OB.DAAC https://oceancolor.gsfc.nasa.gov	<ul style="list-style-type: none"> MODIS/Terra and MODIS/Aqua Level-2 Standard SST Product MODIS/Terra and MODIS/Aqua Level-3 Binned SST Products [daily, 8-day, monthly, monthly climatology, seasonal, seasonal climatology, and yearly files] MODIS/Terra and MODIS/Aqua Level-3 Standard Mapped SST Products [daily, 8-day, monthly, monthly climatology, seasonal, seasonal climatology, and yearly files]
	PO.DAAC http://podaac.jpl.nasa.gov	<ul style="list-style-type: none"> Group for High Resolution Sea Surface Temperature (GHRSSST) L2P, L3 and L4 SST datasets from VIIRS, AMSR-E, AMSR2, MODIS, AVHRR, AATSR, IASI, TMI, GMI, GOES, SEVIRI, MTSAT-1R, MTSAT-2 and WindSat MEaSURES/GHRSSST Global 1 km Level 4 Multiscale Ultrahigh Resolution (MUR) SST MODIS Aqua and Terra Global Level 3 Mapped Thermal and Mid-IR SST AVHRR Oceans Pathfinder 4 km Global SST (NOAA NCEI) GOES L3 6km Near-Real-Time SST (NOAA NESDIS) Extended Reconstructed SST and Optimum Interpolation SST (NOAA NCEI)
Surface Wind Fields	ASDC https://eosweb.larc.nasa.gov	<ul style="list-style-type: none"> First ISCCP Regional Experiment (FIRE) data sets Surface meteorology and Solar Energy (SSE) data set
	ASF DAAC http://www.asf.alaska.edu	<ul style="list-style-type: none"> ASF Data Pool of processed SAR data and images (Sentinel-1A, Sentinel-1B, SMAP, Seasat, ALOS PALSAR, JERS-1, RADARSAT-1, ERS-1, ERS-2, UAVSAR, AIRSAR)
	GHRC DAAC http://ghrc.nsstc.nasa.gov	<ul style="list-style-type: none"> RSS Monthly 1-deg Merged Wind Climatology TRMM Microwave Imager (TMI) Wentz Ocean Products (with other atmospheric parameters plus SST under all cloud conditions)
	NSIDC DAAC https://nsidc.org/daac	<ul style="list-style-type: none"> AMSR-E/Aqua Daily, Weekly, and Monthly L3 Global Ascending/Descending .25 x .25 deg Ocean Grids AMSR-E/Aqua L2B Global Swath Ocean Products derived from Wentz Algorithm Polar Pathfinder Daily 25 km EASE-Grid Sea Ice Motion Vectors
	PO.DAAC http://podaac.jpl.nasa.gov	<ul style="list-style-type: none"> Advanced Scatterometer (ASCAT) on MetOp-A and MetOp-B Level 2 Near-Real-Time Ocean Vector Winds (at 12.5 and 25 km pixel resolution) AMSR-E, SSM/I, and TMI Derived Global Ocean Wind Vectors BYU Daily Browse Images of NSCAT, QuikSCAT, and SeaWinds Sigma-0 Measurements Cross-Calibrated Multi-Platform (CCMP) Ocean Surface Wind Vector Analyses ISS-RapidScat Level 2B Wind Vectors at 12.5 km pixel resolution NSCAT Global 25km Sigma-0 and Ocean Winds NSCAT Science Product, Levels 1.7, 2, 3 Oceansat-2 Scatterometer (OSCAT) Level 2B Wind Vectors at 12.5 km resolution QuikSCAT Coastal High Resolution Wind Vectors for the U.S. West Coast Region QuikSCAT Level 1C Averaged Sigma-0 and Winds from Non-spinning Antenna RapidScat Level 2B Data RapidScat Level 2B Climate Ocean Wind Vectors Seasat Scatterometer Products SeaWinds on ADEOS-II and QuikSCAT Level 2B Wind Vectors (at 12.5 and 25 km pixel resolution) SeaWinds on ADEOS-II and QuikSCAT Level 3 Wind Vectors WindSat Level 3 Global Ocean Wind Vectors

- ASDC** Atmospheric Science Data Center (ASDC)
- ASF DAAC** Alaska Satellite Facility DAAC
- CDDIS** Crustal Dynamics Data Information System
- GES DISC** Goddard Earth Sciences Data and Information Services Center
- GHRC DAAC** Global Hydrology Resource Center DAAC
- NSIDC DAAC** National Snow and Ice Data Center DAAC
- OB.DAAC** Ocean Biology DAAC
- PO.DAAC** Physical Oceanography DAAC

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