



## EARTH SYSTEM SCIENCE

## Data and Services

## OCEAN Data Set Reference Sheet

December 2015

Physical Properties	Data Center	<b>Selected Data Sets and Data Collections</b> <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: <a href="https://earthdata.nasa.gov">https://earthdata.nasa.gov</a></i>
<b>Gravity</b> <b>Gravity Field</b> <b>Models,</b> <b>Measurements</b>	<b>CDDIS</b> <a href="http://cddis.gsfc.nasa.gov">http://cddis.gsfc.nasa.gov</a>	<ul style="list-style-type: none"> <li>• 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</li> <li>• 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.</li> <li>• Station positions and velocities from GNSS, SLR, VLBI and DORIS ground networks</li> </ul>
	<b>PO.DAAC</b> <a href="http://podaac.jpl.nasa.gov">http://podaac.jpl.nasa.gov</a>	<ul style="list-style-type: none"> <li>• GRACE Level 2 Monthly Gravity Field Estimates</li> <li>• Surface Mass Density Changes from GRACE (monthly mass grids of water equivalent thickness)</li> </ul>
<b>Heat Flux</b>	<b>ASDC DAAC</b> <a href="https://eosweb.larc.nasa.gov">https://eosweb.larc.nasa.gov</a>	<ul style="list-style-type: none"> <li>• First ISCCP Regional Experiment (FIRE) data sets</li> </ul>
<b>Multi-Parameter</b> <b>Data Collections</b>	<b>ASDC DAAC</b> <a href="https://eosweb.larc.nasa.gov">https://eosweb.larc.nasa.gov</a>	<ul style="list-style-type: none"> <li>• CLAMS data sets</li> <li>• First ISCCP Regional Experiment (FIRE) data sets</li> <li>• Global Tropospheric Experiment (GTE) data sets</li> </ul>
	<b>GHRC DAAC</b> <a href="http://ghrc.nsstc.nasa.gov">http://ghrc.nsstc.nasa.gov</a>	<ul style="list-style-type: none"> <li>• Advanced Microwave Sounding Unit-A (AMSU-A) Swath from NOAA-15, NOAA-16, NOAA-17</li> <li>• RSS SSMI/SSMIS Ocean Product Grids Daily, 3-Day, Weekly, and Monthly netCDF from DMSP F8, F10, F11, F13, F14, F15, and F17</li> <li>• TRMM Microwave Imager (TMI) Wentz Ocean Products (Cloud liquid water, atmospheric water vapor, precipitation rate, wind speeds, and SSTs)</li> </ul>
	<b>NSIDC DAAC</b> <a href="http://nsidc.org/daac">http://nsidc.org/daac</a>	<ul style="list-style-type: none"> <li>• AMSR-E/Aqua Daily, Weekly, and Monthly L3 Global Ascending/Descending .25 x .25 deg Ocean Grids</li> <li>• AMSR-E/Aqua L2B Global Swath Ocean Products derived from Wentz Algorithm</li> <li>• GLAS/ICESat L2 Global Ocean Altimetry Data</li> </ul>
<b>Ocean Circulation</b>	<b>PO.DAAC</b> <a href="http://podaac.jpl.nasa.gov">http://podaac.jpl.nasa.gov</a>	<ul style="list-style-type: none"> <li>• OSCAR - Ocean Surface Current (1 degree and 1/3 degree spatial resolution)</li> </ul>
<b>Ocean Surface</b> <b>Topography</b> Height, waves, sea level, tide models	<b>ASDC DAAC</b> <a href="https://eosweb.larc.nasa.gov">https://eosweb.larc.nasa.gov</a>	<ul style="list-style-type: none"> <li>• First ISCCP Regional Experiment (FIRE) data sets</li> </ul>
	<b>NSIDC DAAC</b> <a href="http://nsidc.org/daac">http://nsidc.org/daac</a>	<ul style="list-style-type: none"> <li>• GLAS/ICESat L2 Global Ocean Altimetry Data</li> </ul>
	<b>PO.DAAC</b> <a href="http://podaac.jpl.nasa.gov">http://podaac.jpl.nasa.gov</a>	<ul style="list-style-type: none"> <li>• Global Mean Sea Level Trend from Integrated Multi-Mission Ocean Altimeters TOPEX/Poseidon Jason-1 and OSTM/Jason-2</li> <li>• GRACE Dynamic Ocean Topography</li> <li>• Integrated Multi-Mission Ocean Altimeter Data for Climate Research</li> <li>• Jason-1 Geophysical Data Record (GDR)</li> <li>• Jason-1 Sea Surface Height Anomaly Products</li> <li>• OSTM/Jason-2 Near Real Time SSHA</li> <li>• Reconstructed Sea Level</li> <li>• SARAL NRT Value-added Operational GDR SSHA</li> <li>• TOPEX/POSEIDON Altimeter Merged Geophysical Data Record (MGDR) Generation B</li> <li>• TOPEX/POSEIDON Sea Surface Height Anomaly Products</li> </ul>
<b>Phytoplankton &amp;</b> <b>Dissolved Organic</b> <b>Matter</b>	<b>GES DISC</b> <a href="http://disc.sci.gsfc.nasa.gov">http://disc.sci.gsfc.nasa.gov</a>	<ul style="list-style-type: none"> <li>• 8-day Data Product Visualization, NOBM Assimilated Monthly and Daily Global Data, through Giovanni tool</li> <li>• Ocean Color Radiometry Visualization and Analysis, through Giovanni tool</li> </ul>

<b>Phytoplankton &amp; Dissolved Organic Matter</b> (continued)	<b>OB.DAAC</b> <a href="http://oceancolor.gsfc.nasa.gov">http://oceancolor.gsfc.nasa.gov</a>	<ul style="list-style-type: none"> <li>• CZCS Level-2 Standard Ocean Color Product [chlorophyll-a concentration, diffuse attenuation coefficient, aerosol optical thickness, and reflectance at four visible wavelengths]</li> <li>• MODIS/Aqua Level-2 Standard Ocean Color Product [chlorophyll-a concentration, diffuse attenuation coefficient plus parameters related to aerosol corrections]</li> <li>• MODIS/Aqua Merged Chlorophyll (Combined MODIS-SeaWiFS data daily, 8-day, monthly, seasonal, and yearly products, plus a rolling 32-day composite)</li> <li>• 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]</li> <li>• 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]</li> <li>• MODIS/Terra Level-3 Ocean Color Products [A limited set starting from January 2007 of Level-3 Binned and Mapped Image Products]</li> <li>• 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]</li> <li>• SeaWiFS Level-2 Standard Ocean Color Product [remote-sensing reflectances, particulate inorganic carbon (PIC), particulate organic carbon (POC)]</li> <li>• 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]</li> </ul>
<b>Precipitable Water</b>	<b>GHRC DAAC</b> <a href="http://ghrc.nsstc.nasa.gov">http://ghrc.nsstc.nasa.gov</a>	<ul style="list-style-type: none"> <li>• RSS Monthly 1-deg Microwave Total Precipitable Water netCDF</li> </ul>
<b>Salinity</b> Remotely sensed salinity from Aquarius, SPURS-1 in situ data	<b>PO.DAAC</b> <a href="http://podaac.jpl.nasa.gov">http://podaac.jpl.nasa.gov</a>	<b>Sea Surface Salinity (Global Ocean &amp; SPURS-1 N. Atlantic salinity maximum region)</b> <ul style="list-style-type: none"> <li>• Aquarius Level 2 Sea Surface Salinity &amp; Wind Speed</li> <li>• Aquarius Level 3 Sea Surface Salinity, Density &amp; Wind Speed 7 Day and rolling-7 Day Mapped</li> <li>• Aquarius Level 3 Sea Surface Salinity, Density &amp; Wind Speed Annual Mapped</li> <li>• Aquarius Level 3 Sea Surface Salinity, Density &amp; Wind Speed Daily Mapped</li> <li>• Aquarius Level 3 Sea Surface Salinity, Density &amp; Wind Speed Monthly Mapped</li> <li>• Aquarius Level 3 Sea Surface Salinity, Density &amp; Wind Speed Seasonally Mapped</li> <li>• Aquarius Level 3 Sea Surface Salinity, Density &amp; Wind Speed Monthly and Seasonal climatologies Mapped</li> <li>• Aquarius Level 3 Sea Surface Salinity, Density &amp; Wind Speed Mission cumulative Mapped</li> <li>• CAP Level 2 Sea Surface Salinity and Wind Speed</li> <li>• CAP Level 3 Sea Surface Salinity &amp; rain-corrected Sea Surface Salinity Monthly Mapped</li> <li>• CAP Level 3 Sea Surface Salinity &amp; rain-corrected Sea Surface Salinity rolling-7 Day Mapped</li> <li>• CAP Level 3 Wind Speed rolling 7 Day Mapped</li> <li>• CAP Level 3 Wind Speed rolling Monthly Mapped</li> <li>• 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.</li> </ul>
<b>Sea Ice</b> See also the "Cryosphere Data Set Reference Sheet"	<b>ASDC DAAC</b> <a href="https://eosweb.larc.nasa.gov">https://eosweb.larc.nasa.gov</a>	<ul style="list-style-type: none"> <li>• First ISCCP Regional Experiment (FIRE) data sets</li> <li>• International Satellite Cloud Climatology Project (ISCCP) D1, D2, and ICESNOW data products</li> <li>• Multi-angle Imaging SpectroRadiometer (MISR) Level 1B2 Ellipsoid Data</li> </ul>
	<b>ASF DAAC</b> <a href="http://www.asf.alaska.edu">http://www.asf.alaska.edu</a>	<ul style="list-style-type: none"> <li>• AMM-1 and MAMM SAR Image Mosaics of Antarctica 100m (RADARSAT-1)</li> <li>• Arctic MEaSURES sea ice dynamics products (RADARSAT-1)</li> <li>• ASF Data Pool of processed SAR data and images (Sentinel-1A, SMAP, Seasat, ALOS-1 PALSAR, JERS-1, RADARSAT-1, ERS-1, ERS-2, UAVSAR, AIRSAR, AirMOSS)</li> <li>• International Polar Year SAR Datasets</li> </ul>
	<b>NSIDC DAAC</b> <a href="http://nsidc.org/daac">http://nsidc.org/daac</a>	<ul style="list-style-type: none"> <li>• AMSR-E/Aqua Daily L3 12.5 km Brightness Temperatures, Sea Ice Concentration, and Snow Depth Polar Grids</li> <li>• AMSR-E/Aqua Daily L3 25 km Brightness Temperatures &amp; Sea Ice Concentration Polar Grids</li> <li>• AMSR-E/Aqua Daily L3 6.25 km Sea Ice Drift Polar Grids</li> <li>• Bootstrap Sea Ice Concentrations from Nimbus-7 SMMR and DMSP SSM/I</li> <li>• DMSP SSM/I Daily and Monthly Polar Gridded Sea Ice Concentrations</li> <li>• GLAS/ICESat L2 Sea Ice Altimetry Data</li> <li>• IceBridge Aircraft Data Sets (a large collection of data sets bridging the ICESat-1 and ICESat-2 missions)</li> <li>• Icebridge Sea Ice Freeboard, Snow Depth and Thickness</li> <li>• MODIS/Aqua Sea Ice Extent 5-Min L2 Swath 1km Data</li> <li>• MODIS/Aqua Sea Ice Extent and IST Daily L3 Global 1km &amp; 4km EASE-Grid Data for Day and Night</li> <li>• MODIS/Terra Sea Ice Extent 5-Min L2 Swath 1km Data</li> <li>• MODIS/Terra Sea Ice Extent and IST Daily L3 Global 1km &amp; 4km EASE-Grid Data for Day and Night</li> <li>• Near Real-Time DMSP SSM/I Daily Polar Gridded Sea Ice Concentrations</li> <li>• Near Real-Time SSM/I EASE-Grid Daily Global Ice Concentration and Snow Extent</li> </ul>

<b>Sea Ice</b> (continued)	<b>NSIDC DAAC</b> <a href="http://nsidc.org/daac">http://nsidc.org/daac</a> (continued)	<ul style="list-style-type: none"> <li>• Polar Pathfinder Daily 25 km EASE-Grid Sea Ice Motion Vectors</li> <li>• Sea Ice Concentrations from Nimbus-7 SMMR and DMSP SSM/I Passive Microwave Data</li> <li>• Sea Ice Trends and Climatologies from SMMR and SSM/I</li> <li>• Snow Melt Onset Over Arctic Sea Ice from SMMR and SSM/I Brightness Temperatures</li> </ul>
	<b>PO.DAAC</b> <a href="http://podaac.jpl.nasa.gov">http://podaac.jpl.nasa.gov</a>	<ul style="list-style-type: none"> <li>• BYU Daily and Local-Time-of-Day Browse Images of SeaWinds on QuikSCAT and ADEOS-II Sigma-0 Measurements</li> <li>• BYU Daily Browse Images of NSCAT Sigma-0 Measurements</li> <li>• BYU Enhanced Resolution Images of ERS, NSCAT, and Seasat Sigma-0 Measurements</li> <li>• BYU Enhanced Resolution Images of SeaWinds on QuikSCAT and ADEOS-II Sigma-0 Measurements</li> <li>• SeaWinds on QuikSCAT Arctic Sea Ice Age Classification (BYU/SCP)</li> </ul>
<b>Sea Surface Temperature</b> SST	<b>ASDC DAAC</b> <a href="https://eosweb.larc.nasa.gov">https://eosweb.larc.nasa.gov</a>	<ul style="list-style-type: none"> <li>• First ISCCP Regional Experiment (FIRE) data sets</li> </ul>
	<b>GES DISC</b> <a href="http://disc.sci.gsfc.nasa.gov">http://disc.sci.gsfc.nasa.gov</a>	<ul style="list-style-type: none"> <li>• Ocean Color Radiometry Visualization and Analysis through Giovanni tool</li> </ul>
	<b>GHRC DAAC</b> <a href="http://ghrc.nsstc.nasa.gov">http://ghrc.nsstc.nasa.gov</a>	<ul style="list-style-type: none"> <li>• Advanced Microwave Sounding Unit-A (AMSU-A) Swath from NOAA-15, NOAA-16, NOAA-17</li> <li>• TRMM Microwave Imager (TMI) Wentz Ocean Products (SST under all cloud conditions, plus surface wind speed and other atmospheric parameters)</li> </ul>
	<b>NSIDC DAAC</b> <a href="http://nsidc.org/daac">http://nsidc.org/daac</a>	<ul style="list-style-type: none"> <li>• AMSR-E/Aqua Daily, Weekly, and Monthly L3 Global Ascending/Descending .25 x .25 deg Ocean Grids</li> <li>• AMSR-E/Aqua L2B Global Swath Ocean Products derived from Wentz Algorithm</li> <li>• IPAB Antarctic Drifting Buoy Data</li> </ul>
	<b>OB.DAAC</b> <a href="http://oceancolor.gsfc.nasa.gov">http://oceancolor.gsfc.nasa.gov</a>	<ul style="list-style-type: none"> <li>• MODIS/Terra and MODIS/Aqua Level-2 Standard SST Product</li> <li>• MODIS/Terra and MODIS/Aqua Level-3 Binned SST Products [daily, 8-day, monthly, monthly climatology, seasonal, seasonal climatology, and yearly files]</li> <li>• MODIS/Terra and MODIS/Aqua Level-3 Standard Mapped SST Products [daily, 8-day, monthly, monthly climatology, seasonal, seasonal climatology, and yearly files]</li> </ul>
	<b>PO.DAAC</b> <a href="http://podaac.jpl.nasa.gov">http://podaac.jpl.nasa.gov</a>	<ul style="list-style-type: none"> <li>• Group for High Resolution Sea Surface Temperature (GHRSSST) L2P, L3 and L4 SST datasets from VIIRS, AMSR-E, AMSR2, MODIS, AVHRR, AATSR, IASI, TMI, GOES, SEVIRI, MTSAT-1R, MTSAT-2 and WindSat</li> <li>• MODIS Aqua and Terra Global Level 3 Mapped Thermal and Mid-IR SST</li> <li>• MEaSUREs/GHRSSST Global 1 km Level 4 Multiscale Ultrahigh Resolution (MUR) SST</li> <li>• AVHRR Oceans Pathfinder 4km Global SST</li> <li>• GOES L3 6km Near-Real-Time SST (NOAA/NESDIS)</li> <li>• NAVOCEANO AVHRR MCSST Level 2 9km Global Data</li> <li>• NAVOCEANO AVHRR MCSST Level 2 HRPT/LAC Data</li> <li>• NCEP Reynolds Extended Reconstructed Sea Surface Temperatures SST</li> <li>• NCEP Reynolds Optimally Interpolated SST</li> </ul>
<b>Surface Wind Fields</b>	<b>ASDC DAAC</b> <a href="https://eosweb.larc.nasa.gov">https://eosweb.larc.nasa.gov</a>	<ul style="list-style-type: none"> <li>• First ISCCP Regional Experiment (FIRE) data sets</li> <li>• Surface meteorology and Solar Energy (SSE) data set</li> </ul>
	<b>ASF DAAC</b> <a href="http://www.asf.alaska.edu">http://www.asf.alaska.edu</a>	<ul style="list-style-type: none"> <li>• ASF Data Pool of processed SAR data and images (Sentinel-1A, SMAP, Seasat, ALOS-1 PALSAR, JERS-1, RADARSAT-1, ERS-1, ERS-2, UAVSAR, AIRSAR, AirMOSS)</li> </ul>
	<b>GHRC DAAC</b> <a href="http://ghrc.nsstc.nasa.gov">http://ghrc.nsstc.nasa.gov</a>	<ul style="list-style-type: none"> <li>• TRMM Microwave Imager (TMI) Wentz Ocean Products (with other atmospheric parameters plus SST under all cloud conditions)</li> </ul>
	<b>NSIDC DAAC</b> <a href="http://nsidc.org/daac">http://nsidc.org/daac</a>	<ul style="list-style-type: none"> <li>• AMSR-E/Aqua Daily, Weekly, and Monthly L3 Global Ascending/Descending .25 x .25 deg Ocean Grids</li> <li>• AMSR-E/Aqua L2B Global Swath Ocean Products derived from Wentz Algorithm</li> <li>• Polar Pathfinder Daily 25 km EASE-Grid Sea Ice Motion Vectors</li> </ul>
	<b>PO.DAAC</b> <a href="http://podaac.jpl.nasa.gov">http://podaac.jpl.nasa.gov</a>	<ul style="list-style-type: none"> <li>• 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)</li> <li>• AMSR-E, SSM/I, and TMI Derived Global Ocean Wind Vectors</li> <li>• BYU Daily Browse Images of NSCAT, QuikSCAT, and SeaWinds Sigma-0 Measurements</li> <li>• Cross-Calibrated Multi-Platform (CCMP) Ocean Surface Wind Vector Analyses</li> <li>• ISS-RapidScat Level 2B Wind Vectors at 12.5 km pixel resolution</li> <li>• NSCAT Global 25km Sigma-0 and Ocean Winds</li> <li>• NSCAT Science Product, Levels 1.7, 2, 3</li> <li>• Oceansat-2 Scatterometer (OSCAT) Level 2B Wind Vectors at 12.5 km resolution</li> <li>• QuikSCAT Coastal High Resolution Wind Vectors for the U.S. West Coast Region</li> <li>• Seasat Scatterometer Products</li> <li>• SeaWinds on ADEOS-II and QuikSCAT Level 2B Wind Vectors (at 12.5 and 25 km pixel resolution)</li> <li>• SeaWinds on ADEOS-II and QuikSCAT Level 3 Wind Vectors</li> <li>• WindSat Level 3 Global Ocean Wind Vectors</li> </ul>

- ASDC DAAC** Atmospheric Science Data Center DAAC (ASDC DAAC) at NASA Langley Research Center
- 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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