



EARTH SYSTEM SCIENCE

Data and Services

CALIBRATED RADIANCE AND SOLAR RADIANCE *Data Set Reference Sheet*

December 2017

Calibrated Radiance

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>
Calibrated Data/Imagery from Passive Sensors Radiance, Brightness Temperature	ASDC https://eosweb.larc.nasa.gov	<ul style="list-style-type: none"> • Airborne Multi-angle Imaging SpectroRadiometer (AirMISR) data sets • AirMSPI Level 1B2 V003 New and Reprocessed Data • CALIPSO Infrared Imaging Radiometer (IIR) Level 1B radiance data • CERES SSF TOA/Surface Fluxes and Clouds, and MISR Ellipsoid and Terrain Radiances data • Chesapeake Lighthouse and Aircraft Measurements for Satellites (CLAMS) (AirMISR_CLAMS_2001, CLAMS_ER2_MAS, and CLAMS_CV580_CAR) • Cloud-Aerosol Lidar and Infrared Pathfinder Satellite Observations (CALIPSO) Wide Field Camera (WFC) Level 1B 125 m and 1 km Native Science data and 1 km Registered Science data • DSCOVR/Earth Polychromatic Imaging Camera (EPIC) Level 1 data • DSCOVR/National Institute of Standards and Technology (NIST) Advanced Radiometer (NISTAR) Level 1 data • First ISCCP Regional Experiment (FIRE) data sets • International Satellite Cloud Climatology Project (ISCCP) B3 data product • MODIS Airborne Simulator (MAS) data sets [from various field campaigns] • Tropospheric Emission Spectrometer (TES) L1B Standard and Special Observation products
	GES DISC http://disc.sci.gsfc.nasa.gov	<ul style="list-style-type: none"> • AIRS/Aqua AMSU-A Geolocated Brightness Temperatures • AIRS/Aqua Infrared Geolocated Radiances • AIRS/Aqua L2 Cloud Cleared Radiance Product • AIRS/Aqua Visible Geolocated Radiances • Calibrated, Geolocated OCO-2 Science Spectra, Retrospective Processing • MLS Level 1 Radiances from Digital Autocorrelators • MLS Level 1 Radiances from Filter Banks for GHz and THz • MLS/Aura L1 Microwave Radiances (118, 190, 240 and 640 GHz, and 2.5 THz) • OMI Level 1B UV Global and Zoom-in Geolocated Earthshine Radiances • OMI Level 1B VIS Global and Zoom-in Geolocated Earthshine Radiances • TRMM 1B11 Microwave Brightness Temperature (TMI)
	GHRC DAAC http://ghrc.nsstc.nasa.gov	<ul style="list-style-type: none"> • Advanced Microwave Sounding Unit Swath (AMSU-A) from NOAA-15, NOAA-16, and NOAA-17 • GPM Ground Validation Advance Microwave Precipitation Radiometer (AMPR) IPHEX • GPM Ground Validation Advanced Microwave Precipitation Radiometer (AMPR) MC3E • GPM Ground Validation Compact Scanning Millimeter-wave Imaging Radiometer (CoSMIR) MC3E • GPM Ground Validation Conical Scanning Millimeter-wave Imaging Radiometer (CoSMIR) GCPEX • GPM Ground Validation Conical Scanning Millimeter-wave Imaging Radiometer (CoSMIR) IPHEX • GPM Ground Validation Duke Microwave Radiometer (MWR) IPHEX • GPM Ground Validation Special Sensor Microwave Imager Sounder (SSMIS) LPVEx • NRT AMSR2 Daily L3 6.25 km 89 GHz Brightness Temperature (Tb) Polar Grids
	LAADS DAAC https://ladsweb.modaps.eosdis.nasa.gov	<ul style="list-style-type: none"> • MERIS Full Resolution Full Swath Geolocated and Calibrated TOA Radiance Product • MERIS Reduced Resolution Geolocated and Calibrated TOA Radiance Product • MODIS/Terra AERONET-based Surface Reflectance Validation Network Product • MODIS/Terra and MODIS/Aqua Atmosphere Aeronet subsetting Product • MODIS/Terra and MODIS/Aqua Atmosphere BELMANIP subsetting Product • MODIS/Terra and MODIS/Aqua Atmosphere FluxNet subsetting Product • MODIS/Terra and MODIS/Aqua Calibrated Radiances at 1 km, 500 m, and 250 m, plus subsets at 5 km spatial resolution • OLCI/SENTINEL-3A L1 Full Resolution Top of Atmosphere Reflectance Product • OLCI/SENTINEL-3A L1 Reduced Resolution Top of Atmosphere Reflectance Product • SLSTR/SENTINEL-3A L1 Full Resolution Top of Atmosphere Brightness, Temperatures, and Radiances Product

Calibrated Data/ Imagery from Passive Sensors Radiance, Brightness Temperature (continued)	LAADS DAAC https://ladsweb.modaps.eosdis.nasa.gov (continued)	<ul style="list-style-type: none"> • VIIRS/NPP Day/Night Band 6-Min L1 Swath SDR 375 m • VIIRS/NPP Imagery Resolution 6-Min L1 Swath SDR 375 m • VIIRS/NPP Moderate Resolution 6-Min L1 Swath SDR and GEO 750 m
	LP DAAC https://lpdaac.usgs.gov	<ul style="list-style-type: none"> • ASTER L1B Registered Radiance at the Sensor • ASTER Level 1 Precision Terrain Corrected Registered At-Sensor Radiance • ASTER Level 2 Surface Reflectance SWIR Crosstalk-Corrected • ASTER On-Demand L2 Surface Radiance
	NSIDC DAAC https://nsidc.org/daac	<ul style="list-style-type: none"> • AMSR-E/Aqua Daily EASE-Grid Brightness Temperatures • AMSR-E/Aqua Global Quarter-Degree Gridded Brightness Temperatures • AMSR-E/Aqua L2A Global Swath Spatially-Resampled Brightness Temperatures (Tb) • AMSR/ADEOS II L2A Global Swath Spatially-Resampled Brightness Temperatures • Aquarius L3 Weekly Polar-Gridded Brightness Temperature and Sea Surface Salinity • DMSP SSM/I-SSMIS Pathfinder Daily Polar Gridded Brightness Temperatures • DMSP SSM/I-SSMIS Pathfinder Near Real Time and Daily EASE-Grid Brightness Temperatures • MEaSUREs Calibrated Enhanced-Resolution Passive Microwave Daily EASE-Grid 2.0 Brightness Temperature ESDR • Nimbus High Resolution Infrared Radiometer Digital Swath Data Level 1 • SMAP Enhanced L1C Radiometer Half-Orbit 9 km EASE-Grid Brightness Temperatures • SMAP L1B Radiometer Half-Orbit Time-Ordered Brightness Temperatures • SMAP L1C Radiometer Half-Orbit 36 km EASE-Grid Brightness Temperatures
	ORNL DAAC http://daac.ornl.gov	<ul style="list-style-type: none"> • BOREAS Level-3B AVHRR-LAC Imagery: Scaled at-Sensor Radiance in LGSOWG Format • BOREAS RSS-14 GOES-7 Level-1A Visible, Infrared, and Water Vapor Images • LBA: Radiance data 1998-2001, and gridded surface radiation and rain rates 1999 for Amazonia. • SAFARI 2000: Solar Spectral Flux Radiometer Data, Southern Africa
Sigma-0 / Backscatter	ASDC https://eosweb.larc.nasa.gov	<ul style="list-style-type: none"> • CALIPSO Level 1B data • Cloud-Aerosol Transport System (CATS) Level 1B Data
	ASF DAAC http://www.asf.alaska.edu	<ul style="list-style-type: none"> • AMM-1 and MAMM SAR Image Mosaics of Antarctica 100m (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) • UAVSAR Repeat Pass Interferometric products
	NSIDC DAAC https://nsidc.org/daac	<ul style="list-style-type: none"> • Co-Registered AMSR-E, QuikSCAT, and WMO Data • MEaSUREs Greenland Ice Sheet Mosaics from SAR Data • MEaSUREs Greenland Image Mosaics from Sentinel-1A and -1B • SMAP L2 Radar Half-Orbit 3 km EASE-Grid Soil Moisture • SMAP L2 Radar/Radiometer Half-Orbit 9 km EASE-Grid Soil Moisture • SMAP L3 Radar Global Daily 3 km EASE-Grid Soil Moisture • SMAP L3 Radar Northern Hemisphere Daily 3 km EASE-Grid Freeze/Thaw State • SMAP L3 Radar/Radiometer Global Daily 9 km EASE-Grid Soil Moisture
	PO.DAAC http://podaac.jpl.nasa.gov	<ul style="list-style-type: none"> • BYU Daily Browse Images of NSCAT, QuikSCAT, and SeaWinds Sigma-0 Measurements • BYU Enhanced Resolution Images of Seasat, ERS, and NSCAT Sigma-0 Measurements • BYU Enhanced Resolution Images of SeaWinds on QuikSCAT and ADEOS-II Sigma-0 Measurements • BYU Local-Time-of-Day Browse Images of SeaWinds on QuikSCAT and ADEOS-II Sigma-0 Measurements • QuikSCAT Level 1C Averaged Sigma-0 and Winds from Non-spinning Antenna • Rapidscat Level 1B and 2A
Solar Radiance		

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>
Total Solar Irradiance	ASDC https://eosweb.larc.nasa.gov	<ul style="list-style-type: none"> • Activity Cavity Radiometer Irradiance Monitor (ACRIM) II and III daily data sets • Clouds and the Earth's Radiant Energy System (CERES) ERBE-like Monthly Geographic Averages (ES-4) • Earth Radiation Budget Experiment (ERBE) Total Solar Irradiance and Solar Constants • ERBE-like Instantaneous TOA Estimates (ES-8) • ERBE-like Monthly Regional Averages (ES-9)
	GES DISC http://disc.sci.gsfc.nasa.gov	<ul style="list-style-type: none"> • SORCE Level 3 Total Solar Irradiance Daily Means • SORCE Level 3 Total Solar Irradiance 6-Hour Means • SORCE Level 3 and Level 4 Total Solar Irradiance (TSI) products • TCTE Level 3 Total Solar Irradiance Daily Means • TCTE Level 3 Total Solar Irradiance 6-Hour Means
	ORNL DAAC http://daac.ornl.gov	<ul style="list-style-type: none"> • LBA: CD-07 GOES-8 L1 Radiance Data for Amazonia 1998-2001 and L3 Gridded Surface Radiation and Rain Rate for Amazonia: 1999 • Safari 2000: MOPITT Tropospheric Carbon Monoxide, Southern Africa, Dry Season 2000
Ultraviolet Spectral Irradiance	ASDC https://eosweb.larc.nasa.gov	<ul style="list-style-type: none"> • CERES Synoptic Radiative Fluxes and Clouds (SYN1deg) Products [from Terra, Aqua] (1deg Regional, Zonal, and Global Spatial; and 3 Hour, Monthly 3 Hour, and Monthly Temporal Resolutions)
	GES DISC http://disc.sci.gsfc.nasa.gov	<ul style="list-style-type: none"> • OMI/Aura Surface UV Irradiance Daily L3 Global 1.0 x 1.0 deg Grid • OMI/Aura Surface UV Irradiances 1-orbit L2 Swath 13 x 24 km • SORCE Level 3 Solar Spectral Irradiance Daily Means • UARS SOLSTICE Level 3BS Daily Solar Data (Daily mean solar spectra corrected for instrument degradation, plus additional solar parameters) • UARS SUSIM Level 3BS Daily Solar Data (Daily mean solar spectra corrected for instrument degradation, plus additional solar parameters)
	ORNL DAAC http://daac.ornl.gov	<ul style="list-style-type: none"> • FIFE: Satellite Atmospheric Correction Coefficients 1987-1999

ASDC Atmospheric Science Data Center (ASDC)

ASF DAAC Alaska Satellite Facility DAAC

GES DISC Goddard Earth Sciences Data and Information Services Center

GHRC DAAC Global Hydrology Resource Center DAAC

LAADS DAAC Level 1 and Atmosphere Archive and Distribution System DAAC

LP DAAC Land Processes DAAC

NSIDC DAAC National Snow and Ice Data Center DAAC

ORNL DAAC Oak Ridge National Laboratory DAAC

PO.DAAC Physical Oceanography DAAC

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