



Greenhouse Gas Data Sets and Associated Services at the GES DISC

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User Community

Mirador

- Data Search
- Batch Download
- Event Data Search
- Subset Data
- Gazetteers
- Embedded Tools: DQSS, SSW

Water Vapor (H₂O)

TOVS/TRMM/AIRS/MLS/MERRA

Accumulated Rainfall Tracks of Hurricanes Katrina and Rita

Carbon Dioxide (CO₂)

AIRS/ACOS/OCO2

Northern Hemisphere, Global, Southern Hemisphere

OPeNDAP

- Remote Access
- Subset Data
- Format Conversion

DATA AVAILABLE VIA OPeNDAP (ODDS)

The Open Source Project for a Network Data Access Protocol (OPeNDAP) provides remote access to individual variables within datasets in a form usable by many tools...

Data Quality Screening Service (DQSS)

Initial settings are based on Science Team recommendation. (Note: "Good" retains retrievals that are Good or better. You can choose settings for all parameters at once...)

Apply To All Parameters: (Select "Good" to screen all parameters following Science Team criteria)

Best * Good ** NoScreening

For data assimilation, use of Best quality data only is recommended. ** Using only Good quality (or better) data is recommended for most uses.

Temperature Parameters

TSurfStd Visualize Best * Good ** NoScreening

TAIRStd Visualize Best * Good ** NoScreening

TAIRWOnlyStd Visualize Best * Good ** NoScreening

TSurfAir Visualize Best * Good ** NoScreening

Original data array (Total column precipitable water)

Mask based on user criteria (Quality level < 1*)

Good quality data pixels retained

GES DISC GHG Data/Mission

Ozone (O₃)

SBVU/AIRS/OMI/HIRDLS/MLS

Methane (CH₄)/Nitrous Oxide (N₂O)

AIRS/HIRDLS/MLS

Methane SCHMIDT/EMISAT

Missions	Water Vapor (H ₂ O)	Carbon Dioxide (CO ₂)	Methane (CH ₄)	Nitrous Oxide (N ₂ O)	Ozone (O ₃)
NOAA TOVS	✓				
TRMM	✓				
Nimbus4/BUV	✓				✓
Nimbus7/SBUV	✓				✓
Nimbus7/MLS	✓				✓
CLAES	✓				✓
HALOE	✓				✓
ISAMS	✓				✓
UARS	✓				✓
Aqua/AIRS	✓	✓			✓
OMI	✓				✓
Aura/HIRDLS	✓				✓
MLS	✓				✓
TANSO/GOSAT/ACOS	✓	✓			✓
MERRA	✓				✓

Service	Mirador	OPeNDAP	DQSS	SSW	NetCDF conversion	GrADS Data Server	Giovanni
NOAA TOVS	✓						
TRMM	✓						
Nimbus4/BUV	✓						
Nimbus7/SBUV	✓						
Nimbus7/MLS	✓						
CLAES	✓						
HALOE	✓						
ISAMS	✓						
UARS	✓						
Aqua/AIRS	✓	✓	✓	✓	✓	✓	✓
OMI	✓						✓
Aura/HIRDLS	✓						✓
MLS	✓						✓
TANSO/GOSAT/ACOS	✓	✓	✓	✓	✓	✓	✓
MERRA	✓						✓

GrADS Data Server

- GrADS-based subsetter & analysis

GrADS Data Server (GrADS) is a stable, secure data server that provides subsetting and analysis services across the Internet. The core of the GrADS is OPeNDAP (also known as ODDS), a software framework used for data networking that makes local data accessible to remote locations.

TRMM Level-3 Data Products, TRMM Analysis and Other Precipitation Products

The Tropical Rainfall Measuring Mission (TRMM) is a joint space project with Japan. TRMM is designed to measure tropical precipitation and its variation from a low-inclination orbit combining a suite of sensors to overcome many of the limitations of remote sensors previously used for such measurements from space. The TRMM GrADS service provides several popular TRMM Level-3 products, near-estimation products and other precipitation products.

North America Land Data Assimilation System Phase 2 (NLDAS-2) Data Products

NLDAS-2 products are a 20-year data set (1979-present) in near real-time of hourly 1/8° spatial meteorology and hydrology data over the contiguous United States and parts of Canada and Mexico. NLDAS-2 combines observations from many different sources (rain gauges, radar, satellite modernizations) to generate a surface forcing dataset, which is used to drive several different land-surface models.

Global Land Data Assimilation System (GLDAS) Data Products

GLDAS is generating a series of land surface state and flux products simulated by four land surface models (CLM, MoKam, Noah and VIC). Current products include a set of 1.0 degree resolution data products from the four models (1979 to present) and a 0.25 degree data product from the Noah model (2000 to present).

Simple Subset Wizard (SSW)

Available Data Sets

Data sets are sorted by the data archive center and projection.

- Alaska Satellite Facility Synthetic Aperture Radar Data Center
- Global Hydrology Resource Center
- Goddard Earth Sciences Data and Information Services Center
- Aqua AIRS
- Aura HIRDLS
- Aura MLS
- Aura OMI
- GLDAS Models
- MERRA
- NLDAS Models
- TOMS Earth Probe
- TOMS METEOR-3
- TOMS NIMBUS-7
- TRMM TMI
- TRMM and Other Data
- MODIS Level 1 and Atmosphere Archive and Distribution System
- Langley Atmospheric Science Data Center
- Land Processes DAAC
- NSIDC V0
- Oak Ridge National Laboratory DAAC for Biogeochemical Dynamics

Simple Data Search

Access Other DAACs

Subset Data

Format Conversion

GIOVANNI

GES DISC Interactive Online Visualization AND aNalysis Interface

The Bridge Between Data and Science

GES DISC Services

Giovanni Portals

- Atmospheric Portals (scroll down to view complete list)
 - A-Train along CloudSat Track
 - Aerosol Optical Thickness Measurement and Model Comparison: Daily
 - Aerosol Optical Thickness Measurement and Model Comparison: Monthly
 - MISR Daily
 - MISR Monthly
 - Aqua/AIRS Global: Daily
 - Aqua/AIRS Global: Monthly
 - Terra and Aqua MODIS: Daily
 - Terra and Aqua MODIS: Monthly
 - Aura OMI Level 3
- Application and Education Portals
- Meteorological Portals
- Ocean Portals
- Hydrology Portals

Multi-Sensors Colocations

Simple Statistics

Web Map Service (WMS)

The GES DISC provides the following data through the WMS interface:

- Atmospheric Infrared Sounder (AIRS) Near-Real-Time
 - BT_diff_CO2 (an indicator of volcanic SO₂), False-color RGB, Precipitation Estimate, CO, and SO₂ amounts images are available for the near-real-time AIRS Calibrated Radiance data. WMS GetCapabilities...
- Atmospheric Infrared Sounder (AIRS) Data Products
 - Visible, infrared and microwave sensors provide daily global atmospheric temperature moisture and trace gases throughout the atmosphere. AIRS WMS layers include surface temperature, total column ozone, CO and water vapor, cloud fraction, and other atmospheric dynamic parameters. WMS GetCapabilities...
- Tropical Rainfall Measuring Mission (TRMM) Gridded Rainfall Data
 - The TRMM is the first mission dedicated to measuring tropical and subtropical rainfall through microwave and visible infrared sensors, and includes the first spaceborne rain radar. WMS GetCapabilities...
- Ozone Monitoring Instrument (OMI) Data Products
 - The OMI employs hyperspectral imaging to observe solar backscatter radiation in the visible and ultraviolet. OMI WMS layers include total ozone and other atmospheric parameters related to ozone chemistry and climate. WMS GetCapabilities...

ACOS CO₂ Monthly in April