



MERRA Data Access and Services

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GES DISC

The screenshot shows the GES DISC website interface. At the top, there is a NASA logo and the text 'National Aeronautics and Space Administration' and 'Goddard Earth Sciences Data and Information Services Center'. A search bar is located in the top right corner. Below the header, there is a navigation menu with categories: '+ ATMOS COMPOSITION', '+ HYDROLOGY', '+ A-TRAIN', '+ AIRS', '+ HURRICANES', '+ NEESPI', and '+ PRECIPITATION'. The main content area is divided into several sections. On the left, there is a 'GES DISC' sidebar with links for 'ABOUT US', 'DATA HOLDINGS', and 'SERVICES'. Below this is an 'Additional Features' section with links for 'News', 'Image Gallery', 'Science Focus', 'Technology Lab', 'Publications', 'Citing Our Data', 'FAQ', and 'Science Team Portal (Restricted Access)'. The main content area features a 'WHAT'S HOT' section with three news items: 'MERRA Meteorological Data Now Available from the GES DISC', 'Giovanni Air Quality Instance now available', and 'Hydrology DISC supports GLDAS data product'. To the right of the main content area, there is a 'EARTH MEASUREMENTS' sidebar with links for 'ATMOS COMPOSITION', 'A-TRAIN DATA DEPOT', 'HURRICANES', 'HYDROLOGY', 'OCEANS', and 'PRECIPITATION'. Below this is a 'CURRENT MISSIONS' sidebar with links for 'AIRS', 'AURA', 'SORCE', and 'TRMM'. There are also sections for 'Giovanni Online Visualization and Analysis' and 'Mirador Data Access Made Simple'. At the bottom, there is a 'LATEST NEWS' section with two news items dated 01.06.09.

The Goddard Earth Sciences Data and Information Services Center (GES DISC) is the archive for the MERRA data and provides a number of data access methods and data services.

The GES DISC supports archive and distribution of hundreds of datasets for multiple satellite sensors, ground measurements, and models, including MERRA. These include Aqua AIRS, Aura HIRDLS/MLS/OMI, GLDAS, SORCE, TOMS, TOVS, TRMM, and UARS.

Services include Mirador search and order, Giovanni online data analysis and visualization, subsetting, and support for multiple interoperability standards (OPeNDAP, GDS, OGC WMS, netCDF, Google Earth).

Through these services, the GES DISC provides users multi-sensor and model inter-comparisons via a number of projects. The A-Train Data Depot (ATDD) has been developed to process, archive, allow access to, visualize, analyze and correlate distributed atmospheric measurements from A-Train instruments including CloudSat, AIRS, ECMWF, MLS, PARASOL, ...)



MDISC

What is MDISC?

The Modeling and Assimilation Data and Information Services Center (MDISC) portal is your one-stop location for all model data and services at the GES DISC, now featuring MERRA.

Access to Data Holdings

Provides Tools to visualize And analyze the data

Links to Documentation and Resources

Provides the latest news

+ GES DISC Home

Modeling and Assimilation Data and Information Service Center (MDISC)

OVERVIEW

Welcome to the Modeling and Assimilation Data and Information Services Center (MDISC).

Atmospheric, land and ocean observations from satellites, aircrafts, ships, and other sources are grouped, modeled or assimilated into various time scales varying from hourly to multi decadal and processed for visualization and analysis for user community. Assimilated data products will be available from the GES DISC.

The Goddard Earth Observing System (GEOS) Data Assimilation System (DAS) is used to generate meteorological data assimilation products in support of NASA instrument teams, NASA's research programs, field campaigns, and as a contribution to U.S. weather and climate research. In addition to near-real-time products, the Global Modeling and Assimilation Office (GMAO) is using version 5 of the GEOS DAS (GEOS-5 DAS) for a retrospective atmospheric analysis for the satellite period (1979 - present). This product, the Modern Era Retrospective-analysis for Research and Applications (MERRA) is available online through the MDISC.

- MERRA Data Products

Sign Up for the MERRA Mailing List

Sign up for the MERRA listserv to receive announcements on the latest data information, tools and services that become available, data announcements from GMAO and more! Contact the GES DISC User Services to be added to the list.

More data will become available from the GES DISC in the future.

LATEST NEWS

12.02.08 - MERRA data now available
The Modern Era Retrospective-analysis for Research and Applications (MERRA) production is underway and multi-year segments of the meteorological analyses from each of the 3 production streams are now available online at the GES DISC.
[+ Read More](#)

09.17.08 - GES DISC Teams Receive Robert H. Goddard Honor Awards in 2008
Three teams from the Goddard Earth Sciences DISC received Robert H. Goddard Honor Awards for 2008. The awards recognized the implementation of Giovanni and Mirador, the evolution of EO5DIS, and Multi-Mission data services to facilitate use of Earth Science data.
[+ Read More](#)

+ GES MDISC News Archive [RSS](#)



Data Access Methods for MERRA

Mirador – Search and Download Mechanism

FTP Subsetter – Parameter and Spatial subsetter

GDS – GrADS Data Server

OPeNDAP - Open-source Project for a Network Data Access Protocol

Giovanni – On-line Data Visualization and Analysis Tool

FTP – Direct anonymous FTP access



Mirador - Simple Search

A drastically simplified, clean interface that employs the Google mini appliance for metadata keyword searches.

Mirador supports Searching by:

Keyword

Time span

Location

Event

Semantic Mirador

The screenshot shows the Mirador search interface. At the top, there is a NASA logo and the text "National Aeronautics and Space Administration" and "Goddard Earth Sciences Data and Information Services Center". A search bar labeled "Search DISC" is present with a "+ 60" button and a "+ Advanced Search" link. Below this is a navigation bar with links for various data sets: + ACDISC, + AgDISC, + A-TRAIN, + AIRS, + HURRICANES, + NEESPI, + OCEAN COLOR, and + PDISC. On the left side, there is a sidebar with "Mirador" and "Data Access Made Simple" and a list of navigation options: + GES DISC Home, + OVERVIEW, + HELP CENTER, + DATA HOLDINGS, + VIEW CART, + CHECK OUT, and "Additional Features" including + News, + Restricted Data, + Feedback, and + FAQ. The main content area features a "Mirador" header with a satellite image and the text "Data Access Made Simple". Below this is a breadcrumb trail "You are here: Keyword Search". The search form is titled "SEARCH MIRADOR" and includes fields for "Keyword" (containing "MA..."), "Location" (containing "chesapeake"), "Time Span" (with "From" set to "Jan 1, 1989" and "To" set to "12-31-2007"), and "Event". A "Search" button is at the bottom of the form. Annotations with colored circles and arrows point to these fields: a green circle around the "Keyword" field points to the "Keyword" label; an orange circle around the "Time Span" fields points to the "Time span" label; a purple circle around the "Location" field points to the "Location" label; a red circle around the "Event" field points to the "Event" label; and a black circle around the "Projects" and "Keywords" tabs points to the "Semantic Mirador" label. Below the search form, there is text indicating "Available: AIRS, OMI, MLS, HIRDLS, TOMS, UARS, TRMM, GLDAS, SORCE, and Subsets from A-Train Sensors (e.g MODIS, AIRS, OMI and MLS)", "What's New: Download Files using HTTP protocol", and "Acknowledgements: Location Gazetteer data from: National GeoSpatial Information Agency, Events Gazetteer data from: Unisys, EPA and Smithsonian Global Volcanism Program". An "OpenSearch" logo is in the bottom right corner of the interface.



Mirador - Search Results

Search results lists all available MERRA data products that match criteria, along with product information and statistics.

The screenshot shows the Mirador search interface. On the left is a sidebar with navigation links: + GES DISC Home, Mirador, Keyword: MERRA cloud precipitation, Time Span: 1978-01-01 00:00:00 to 2003-12-03 23:59:59, Location: Worldwide, and Event: (empty). Below the sidebar are links for OVERVIEW, HELP CENTER, DATA HOLDINGS, VIEW CART, and CHECK OUT. The main content area displays search results for 'MERRA cloud precipitation'. It shows two data sets: 'MERRA Chem 3D IAU States Cloud Precip, Time average 3-hourly (eta coord, 1.25x1L72) (MAT3FVCHM)' and 'MERRA Chem 2D IAU Diagnostics, Fluxes and Meteorology, Time Average 3-hourly (surface, 1.25x1L1) (MAT3FXCHM)'. Both sets show approximately 3865 files found. Below the results are buttons for 'Select All', 'Reset', 'List Selected Files By Time', 'See Timeline View', and 'Add Selected Files To Cart'. At the bottom, it says 'NASA Search Results (Number of files found may not be entirely accurate)' and 'Page: 1'.

Viewable and downloadable granule lists for each product.

The screenshot shows the 'File Listing For MAT3FVCHM' page. It displays a table of granules for 'MERRA Chem 3D IAU States Cloud Precip, Time average 3-hourly (eta coord, 1.25x1L72)'. The table has columns for 'File Name' and 'Start Time'. There are four granules listed, each with a 'Download Now' link and options for 'Data' and 'Metadata'. The granules are sorted by time in descending order. The sidebar on the left is identical to the previous screenshot. At the top right of the table area, there are links for 'Descriptive File Names' and 'Sort by Time: Ascending | Descending'.

Select All	File Name	Start Time
<input checked="" type="checkbox"/>	MERRA300.prod.assim.tavg3_3d_chm_Fv.20001231.hdf (316.53 MB) Download Now: Data Metadata	2000-12-31 00:00:00
<input checked="" type="checkbox"/>	MERRA300.prod.assim.tavg3_3d_chm_Fv.20001230.hdf (317.05 MB) Download Now: Data Metadata	2000-12-30 00:00:00
<input checked="" type="checkbox"/>	MERRA300.prod.assim.tavg3_3d_chm_Fv.20001229.hdf (317.16 MB) Download Now: Data Metadata	2000-12-29 00:00:00
<input checked="" type="checkbox"/>	MERRA300.prod.assim.tavg3_3d_chm_Fv.20001228.hdf (315.74 MB)	2000-12-28 00:00:00



Mirador – Semantic Mirador

Semantic Mirador offers users a “drill down” approach to accessing the data. Users can select a dataset and then a product and view the data product statistics and granules for a selected day.

Users would select MERRA Under the Project category.

Mirador
Data Access Made Simple

The Projects tab is our new Beta release of a navigation interface for GES DISC data. [Please provide feedback.](#)

You are here: [Project](#)

Projects Keywords

Project	Description	Start Year	End Year
A-Train	Collocated with CloudSat subsets of MODIS/Aqua, OMI/Aura, and POLDER/PARASOL.	2004	2009
AIRS	The Atmospheric Infrared Sounder (AIRS) is a facility instrument aboard the second Earth Observing System (EOS) polar-orbiting platform, EOS Aqua. In combination with the Advanced Microwave Sounding Unit (AMSU) and the Humidity Sounder for Brazil (HSB), AIRS constitutes an innovative atmospheric sounding group of visible, infrared, and microwave sensors. Global coverage will be obtained twice daily (day and night) on a 1:30pm sun synchronous orbit from a 705-km altitude. For processing convenience, the data is divided into 6-minute files for Level 1 and 2 data.	2002	2009
GLDAS	The Global Land Data Assimilation System (GLDAS) is generating a series of land surface state (e.g., soil moisture and surface temperature) and flux (e.g., evaporation and sensible heat flux) products simulated by four land surface models (CLM, Mosaic, Noah and VIC). Current data holdings include a set of 1.0 degree resolution data products from the four models, covering 1979 to the present; and a 0.25 degree data product from the Noah model, covering 2000 to the present.	1979	2008
HIRDLS	The High Resolution Dynamics Limb Sounder (HIRDLS) aboard the EOS Aura spacecraft (launched July 15, 2004) measures infrared emissions in 21 channels ranging from 6.12 to 17.76 mm. These measurements are used to derive vertical profiles of Ozone, HNO3, Water Vapor, Methane, N2O, NO2, N2O5, CFC11, CFC12, aerosols, and atmospheric temperature, as well as the locations of polar stratospheric clouds and cloud tops. At this time, only Ozone (O3), Nitric acid (HNO3), CFC-11, CFC-12, Aerosol Extinction (12.1 micron), Temperature, and Cloud Top Pressure are available	2005	2008
LIMS	The Limb Infrared Monitor of the Stratosphere (LIMS) instrument measured vertical profiles of temperature, geopotential height, and mixing ratios of ozone (O3), nitrogen dioxide (NO2), water vapor (H2O), and nitric acid (HNO3). The LIMS instrument was launched on the Nimbus-7 satellite and was operational for about seven months from 25 October 1978 until May 28, 1979.	1978	1979
MERRA	The MERRA products are generated using Version 5.2.0 of the GEOS-5 DAS with the model and analysis each at 1/2x2/3 degrees resolution. Three-dimensional analyses are generated every 6 hours, and 3- dimensional diagnostics, describing the radiative and physical properties of the atmosphere, are 3-hourly. The product suite includes analyses on the native vertical grid as well on pressure surfaces. Two-dimensional data, including surface, fluxes, and vertical integrals, are produced hourly. The product suite includes monthly and monthly diurnal files. The MERRA production is being conducted in 3 separate streams, 1979 - 1989; 1989 - 1998; 1998 - present. Data are being uploaded to the MDISC after undergoing quality assurance in the GMAO.	1979	2001



Mirador - Semantic Mirador

Data is available in **groups** based on the relevance of the products.

Mirador
Data Access Made Simple

The Projects tab is our new Beta release of a navigation interface for GES DISC data. [Please provide feedback.](#)

You are here: [Project](#) » [MERRA](#)

[Projects](#) [Keywords](#)

MERRA

The MERRA products are generated using Version 5.2.0 of the GEOS-5 DAS with the model and analysis each at 1/2x2/3 degrees resolution. Three-dimensional analyses are generated every 6 hours, and 3-dimensional diagnostics, describing the radiative and physical properties of the atmosphere, are 3-hourly. The product suite includes analyses on the native vertical grid as well on pressure surfaces. Two-dimensional data, including surface, fluxes, and vertical integrals, are produced hourly. The product suite includes monthly and monthly journal files. The MERRA production is being conducted in 3 separate streams, 1979 - 1989; 1989 - 2000; 1990 - present. Data are being uploaded to the MDISC after undergoing quality assurance in the GMAO.

Data Group	Description	Date Range
Analysis_Files	These are the fields resulting from the GSI analyses performed every 6 hours. They are produced on the native horizontal grid and on levels in the vertical. The data on model levels are the	
Chemistry_Forcing_Files	These histories are intended for forcing off-line MERRA results of the reanalysis. Like other histories, they are produced every 6 hours, and are the .corrector. segment of the IAU cycle.	
History_Files	These histories are produced from the GCM during the reanalysis cycle. All collections in this group are at reduced horizontal resolution on pressure levels.	

A list of the available **data products** is listed along with the data product statistics.

Mirador
Data Access Made Simple

The Projects tab is our new Beta release of a navigation interface for GES DISC data. [Please provide feedback.](#)

You are here: [Project](#) » [MERRA](#) » [Analysis_Files](#)

[Projects](#) [Keywords](#)

Analysis_Files

Data Set	Description	Date Range	Number of Items	Avg Size (MB)
MAI6NPANA.5.2.0	inst6_3d_anal_Np MERRA DAS 3d analyzed state on pressure surfaces	1979-01-01 to 2001-06-30	4837	278.528
MAI6NVANA.5.2.0	inst6_3d_anal_Nv MERRA DAS 3d analyzed state on pressure surfaces	1979-01-01 to 2001-06-30	4837	437.791



Mirador – Semantic Mirador

A calendar is provided with the number of granules available for that day of the year. Users select the individual month they want.

Mirador
Data Access Made Simple

The Projects tab is our new Beta release of a navigation interface for GES DISC data. [Please provide feedback.](#)

You are here: Project » MERRA » Analysis_Files » MAI6NPANA.5.2.0

Projects Keywords

MAI6NPANA.5.2.0
inst6_3d_ana_Np MERRA DAS 3d analyzed state on pressure

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	S
1979	31	28	31	30	31	30	31	31	
1980	31	29	31	30	31	30	31	31	
1981	31	28	31	30	31	30	31	31	
1982	31	28	31	30	31	30	31	31	
1983	31	28	31	30	31	30	31	31	
1989	31	28	31	30	31	30	31	31	
1990	31	28	31	30	31	30	31	31	
1991	31	28	31	30	31	30	31	31	
1992	31	29	31	30	31	30	31	31	

Or users can select a year to view the granules statistics for each month

Mirador
Data Access Made Simple

The Projects tab is our new Beta release of a navigation interface for GES DISC data. [Please provide feedback.](#)

You are here: Project » MERRA » Analysis_Files » MAI6NPANA.5.2.0 » 1989

Projects Keywords

MAI6NPANA.5.2.0

1989

January 31 Data Granules							February 28 Data Granules							March 31 Data Granules						
Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa
1 1	2 1	3 1	4 1	5 1	6 1	7 1				1 1	2 1	3 1	4 1				1 1	2 1	3 1	4 1
8 1	9 1	10 1	11 1	12 1	13 1	14 1	5 1	6 1	7 1	8 1	9 1	10 1	11 1	5 1	6 1	7 1	8 1	9 1	10 1	11 1
15 1	16 1	17 1	18 1	19 1	20 1	21 1	12 1	13 1	14 1	15 1	16 1	17 1	18 1	12 1	13 1	14 1	15 1	16 1	17 1	18 1
22 1	23 1	24 1	25 1	26 1	27 1	28 1	19 1	20 1	21 1	22 1	23 1	24 1	25 1	19 1	20 1	21 1	22 1	23 1	24 1	25 1
29 1	30 1	31 1					26 1	27 1	28 1					26 1	27 1	28 1	29 1	30 1	31 1	
April 30 Data Granules							May 31 Data Granules							June 30 Data Granules						
Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa
						1 1		1 1	2 1	3 1	4 1	5 1	6 1					1 1	2 1	3 1
2 1	3 1	4 1	5 1	6 1	7 1	8 1	7 1	8 1	9 1	10 1	11 1	12 1	13 1	4 1	5 1	6 1	7 1	8 1	9 1	10 1
9 1	10 1	11 1	12 1	13 1	14 1	15 1	14 1	15 1	16 1	17 1	18 1	19 1	20 1	11 1	12 1	13 1	14 1	15 1	16 1	17 1



Mirador - Semantic Mirador granule list

A month is displayed showing the granule statistics for each day. From here a user can select an individual day.

Mirador
Data Access Made Simple

The **Projects** tab is our new Beta release of a navigation interface for GES DISC data. [Please provide feedback.](#)

You are here: [Project](#) > [MERRA](#) > [Analysis_Files](#) > [MAI6NPANA.5.2.0](#) > [1989](#) > [April](#)

MAI6NPANA.5.2.0

<< April 1989 >>
30 Data Granules

Su	Mo	Tu	We	Th	Fr	Sa
2 1	3 1	4 1	5 1			
9 1	10 1	11 1	12 1			
16 1	17 1	18 1	19 1			
23 1	24 1	25 1	26 1			
30 1						

A list of the granules for that day is provided. From here a user can either download the individual file or add the selected to the shopping cart.

Mirador 2.11
Data Access Made Simple

The **Projects** tab is our new Beta release of a navigation interface for GES DISC data. [Please provide feedback.](#)

You are here: [Projects](#) > [MERRA](#) > [Analysis_Files](#) > [MAI6NPANA.5.2.0](#) > [1989](#) > [April](#) > [File Listing of MAI6NPANA](#)

Projects **Keywords**

Descriptive File Names: Sort by time: Descending Day/night: All

File Listing For MAI6NPANA [info](#) Results 1 - 1 for MAI6NPANA (1 second)

MERRA 3D Analyzed State, Meteorology Instantaneous 6-hourly (p-coord, 2/3x1/2L42)

<input checked="" type="checkbox"/> Select All	File Name	Start Time
<input checked="" type="checkbox"/>	MERRA200.prod.assim.inst6_3d_ana_Np.19890412.hdf (282.37 MB) Download Now: Data Metadata	1989-04-12 00:00:00

[Select All](#) [Reset](#) [Add Selected Items To Cart](#) [Add All Files in All Pages To Cart](#)

NASA Search Results
Page: << 1



Mirador – Shopping Cart

Mirador 2.11
Data Access Made Simple

Shopping Cart - By Data Set Name You have 1853 items (17601.27 MB) in your cart

Sort By: Data Set Name
Time

Continue Shopping Checkout Empty Cart Services

- AIRS/Aqua Level 3 daily standard physical retrieval product (AIRS Only) (AIRS3STD v.005): 122 Files In Cart.
Download NetCDF Download using HTTP protocol
- MERRA 3D IAU Diagnostic, Radiation, Time average 3-hourly (1.25x1.25L42) (MAT3CPRAD v.5.2.0): 88 Files In Cart.
- MLS/Aura L2 Cloud Ice Product (ML2IWC v.002): 381 Files In Cart.
Subsetting Download using HTTP protocol
- TOMS/Earth-Probe Ozone (O3) Total Column 1-Orbit L2 Swath 50x50 km (TOMSEPL2 v.008): 1259 Files In Cart.
Download using HTTP protocol
- TRMM Microwave Imager (TMI) Level 3 Monthly 0.5 degree x 0.5 degree Profiling V6 (3A12) at GES DISC (TRMM_3A12 v.006): 3 Files In Cart.

Select All Reset Remove Selected Items From Cart

A full-featured **shopping cart** allows users to manage all GES DISC data and have access to related services, such as **subsetting**, **OPeNDAP**, and **netCDF**.



Mirador - Checkout

Checkout offers multiple ways to download the data:

JAVA-BASED DOWNLOADER

Your cart is now empty.

URL LIST FOR USE WITH DATA TRANSFER CLIENTS (WGET, CURL, ETC.)

FTP BATCH SCRIPT

ON THE FLY TAR

DOWNTHEMALL

Java-based Downloader

URL List

FTP Batch Script

On The Fly Tar

DownThemAll



GDS and OPeNDAP

Data is available through the **OPeNDAP** protocol

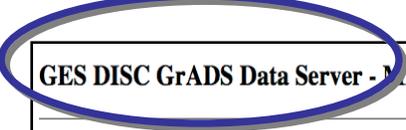


Contents of /MERRA/MAI6NPANA.5.2.0/1983

Name	Last Modified	Size	Response Links
<u>Parent Directory/</u>			
<u>01/</u>	2008-11-26 22:00:25	-	- - - - -
<u>02/</u>	2008-11-28 20:15:56	-	- - - - -
<u>03/</u>	2008-11-30 17:12:27	-	- - - - -
<u>04/</u>	2008-11-30 18:54:10	-	- - - - -
<u>05/</u>	2008-12-01 23:04:14	-	- - - - -
<u>06/</u>	2008-12-02 18:03:46	-	- - - - -

THREDDS Catalog [HTML](#) [XML](#) Hyrax development sponsored by [NSF](#), [NASA](#), and [NOAA](#)

OPeNDAP Hyrax (1.4.0)
[Documentation](#)



GES DISC GrADS Data Server - MERRA products - directory for / : 29 entries

- MAI1NXINT:** inst1_2d_int_Nx: MERRA 2D IAU Diagnostic, Vertical Integrals and Budget Terms, Time Average 1-hourly (2/3x1/2L1) [info](#) [dds](#) [das](#)
- MAI3CPASM:** inst3_3d_asm_Cp: MERRA 3D IAU State, Meteorology Instantaneous 3-hourly (p-coord, 1.25x1.25L42) [info](#) [dds](#) [das](#)
- MAI6NPANA:** inst6_3d_ana_Np: MERRA 3D Analyzed State, Meteorology Instantaneous 6-hourly (p-coord, 2/3x1/2L42) [info](#) [dds](#) [das](#)
- MAI6NVANA:** inst6_3d_ana_Nv: MERRA 3D Analyzed State, Meteorology Instantaneous 6-hourly (eta-coord, 2/3x1/2L72) [info](#) [dds](#) [das](#)
- MAIMCPASM:** instM_3d_asm_Cp: MERRA 3D IAU State, Meteorology Monthly Mean (p-coord, 1.25x1.25L42) [info](#) [dds](#) [das](#)
- MAIMNPANA:** instM_3d_ana_Np: MERRA 3D Analyzed State, Meteorology Monthly Mean (p-coord, 2/3x1/2L42) [info](#) [dds](#) [das](#)
- MAT1NXFLX:** tavg1_2d_flux_Nx: MERRA 2D IAU Diagnostic, Surface Fluxes, Time Average 1-hourly (2/3x1/2L1) [info](#) [dds](#) [das](#)

Data is available through the **Grads-DODS** server. Grads scripts will be available soon to users through the MDISC interface.



Subset MERRA Data Using FTP Subsetter

The online MERRA FTP Subsetter is a special service for MERRA data users.

Users select: **A Data Product**, **Spatial Region**, **A Time Span**, and **Parameters**

The subsetted MERRA data are available in native HDF4 or (soon!) in netCDF. Batch download is available for bulk downloads.

MDISC FTP Subset

Data Product

First Select Data Product:
IAU 3d Chem On Layer Edges (tavg3_3d_chm_Ne)

Spatial Search

North latitude: 15.0 N
West: 4.0 E East: 92.0 E
South latitude: 50.0 S
Zoom In Zoom Out

Temporal Order Option

You may order data from a range of days. The selection boxes below. Please refer to the calendar to identify days with available data. An excessive number of days may cause processing delays or exceed the amount of data that may be ordered.

Start Yr: 1990 Start Mon: JAN Start Day: 01
End Yr: 2000 End Mon: DEC End Day: 31

Parameters

MFC = Upward mass flux on C-Grid
 CMFMC = Upward moist convective mass flux
 KH = Total scalar diffusivity
Start Search Reset

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FTP Subset Results

Subsetted Data Download Instructions:

Output_format: HDF

- Multiple file download:**
 - Download the FTP_script: [order_2319.txt](#)
 - On SGI or Linux machine, run: `ftp -p -n goldsmr3.sci.gsfc.nasa.gov < order_2319.txt`
 - On DOS, SunOS or Windows/Mac platforms, run: `ftp -n goldsmr3.sci.gsfc.nasa.gov < order_2319.txt`
- Single file download:** right click on the file:
 - [Subset-MERRA200.prod.assim.tavg3_3d_chm_Ne.19900731.hdf](#)
 - [Subset-MERRA200.prod.assim.tavg3_3d_chm_Ne.19900320.hdf](#)
 - [Subset-MERRA200.prod.assim.tavg3_3d_chm_Ne.19900412.hdf](#)
 - [Subset-MERRA200.prod.assim.tavg3_3d_chm_Ne.19900529.hdf](#)
 - [Subset-MERRA200.prod.assim.tavg3_3d_chm_Ne.19900825.hdf](#)
 - [Subset-MERRA200.prod.assim.tavg3_3d_chm_Ne.19900327.hdf](#)
 - [Subset-MERRA200.prod.assim.tavg3_3d_chm_Ne.19900504.hdf](#)
 - [Subset-MERRA200.prod.assim.tavg3_3d_chm_Ne.19901123.hdf](#)
 - [Subset-MERRA200.prod.assim.tavg3_3d_chm_Ne.19900307.hdf](#)
 - [Subset-MERRA200.prod.assim.tavg3_3d_chm_Ne.19900510.hdf](#)
 - [Subset-MERRA200.prod.assim.tavg3_3d_chm_Ne.19901024.hdf](#)

(Currently, Daily products are only available with Monthly and Diurnal products coming soon)



What is Giovanni?

Giovanni is a Web-based application developed by the GES DISC that provides a simple and easy way to visualize, analyze, and access vast amounts of Earth science remote sensing and model data.

Only a Web browser is needed. There is no need to learn data formats, programming, or download large amounts of data.

Visualizations for MERRA data include latitude-longitude maps, **time series diagrams**, latitude-time and longitude-time Hovmöller diagrams, and animations. New visualizations will be introduced over time.



Giovanni is Easy to Use

Users simply make selection criteria:

Spatial Area

Parameters

Time Range

Visualization

Vertical Levels for 3D

MERRA Monthly 2D Data Collection

The MERRA is a NASA reanalysis for the satellite era using a major new version (V5) of the Data Assimilation System (DAS). The MERRA focuses on historical analyses of the hydrological cycle on a broad range of weather and climate time scales. This MERRA instance of Giovanni focuses on visualizing and analyzing the MERRA collections. All data collections used here are at GEOS-5 native resolution of 2/3 longitude by 1/2 latitude.

Select Constraints:

Spatial

Vertical Profile

Upper Level: 900 hPa
Lower Level: 500 hPa

Parameters

Parameter	Data Product Info	Units
<input type="checkbox"/> Land surface diagnostics (2/3 X 1/2 horizontal grids)	MATMKNLND.S.2.0	MERRA
<input type="checkbox"/> Bare soil evaporation	MATMKNLND.S.2.0	MERRA
<input type="checkbox"/> Baseflow	MATMKNLND.S.2.0	MERRA
<input checked="" type="checkbox"/> Downward heat flux of top soil layer	MATMKNLND.S.2.0	MERRA
<input type="checkbox"/> Energy storage reservoirs	MATMKNLND.S.2.0	MERRA
<input type="checkbox"/> Evaporation from land	MATMKNLND.S.2.0	MERRA
<input type="checkbox"/> Absorbed solar radiation diagnostics (2/3 X 1/2 horizontal grids)	MATMKNLSV.S.2.0	MERRA
<input type="checkbox"/> Cloud-top pressure	MATMKNLSV.S.2.0	MERRA
<input type="checkbox"/> Cloud-top temperature	MATMKNLSV.S.2.0	MERRA
<input type="checkbox"/> Cloud-top humidity	MATMKNLSV.S.2.0	MERRA
<input type="checkbox"/> Downward longwave radiation flux (1.25 X 1.25 horizontal grids)	MATMKNLSV.S.2.0	MERRA
<input type="checkbox"/> Surface turbulent heat fluxes (2/3 X 1/2 horizontal grids)	MATMKNLSV.S.2.0	MERRA
<input type="checkbox"/> Surface and TOA radiation fluxes (2/3 X 1/2 horizontal grids)	MATMKNLSV.S.2.0	MERRA
<input type="checkbox"/> Selected Parameters: None		
<input type="checkbox"/> Vertical profile of tendencies (2/3 X 1/2 horizontal grids)		
<input type="checkbox"/> Selected Parameters: None		
<input type="checkbox"/> Vertical profile of		
<input type="checkbox"/> Selected Parameters: None		

Temporal

Begin Date: Year 1980 Month Dec Date begin: 1979
End Date: Year 1999 Month Dec Date end: 1999

Select Visualization:

Time series

Generate Visualization (F5) Visualization Help

MERRA Monthly 3D Data Collections

The MERRA is a NASA reanalysis for the satellite era using a major new version (V5) of the Goddard Earth Observing System (GEOS) Data Assimilation System (DAS). The MERRA focuses on historical analyses of the hydrological cycle on a broad range of weather and climate time scales. This MERRA instance of Giovanni focuses on visualizing and analyzing the MERRA 3D monthly data from 10 standard 3D data collections.

Select Constraints:

Spatial

Vertical Profile

Upper Level: 900 hPa
Lower Level: 500 hPa

Parameters

Parameter	Data Product Info	Units
<input type="checkbox"/> Absorbed solar tendencies by process (1.25 X 1.25 horizontal grids with 42 vertical levels)	MATMCPQDT.S.2.0	MERRA
<input type="checkbox"/> Ozone tendency from analysis	MATMCPQDT.S.2.0	MERRA
<input checked="" type="checkbox"/> Ozone tendency from chemistry	MATMCPQDT.S.2.0	MERRA
<input checked="" type="checkbox"/> Ozone tendency from dynamics	MATMCPQDT.S.2.0	MERRA
<input checked="" type="checkbox"/> Ozone tendency from moist physics	MATMCPQDT.S.2.0	MERRA
<input type="checkbox"/> Ozone tendency from turbulence	MATMCPQDT.S.2.0	MERRA
<input type="checkbox"/> Upper-air humidity tendencies by process (1.25 X 1.25 horizontal grids with 42 vertical levels)	MATMCPQDT.S.2.0	MERRA
<input type="checkbox"/> Ice tendency from dynamics	MATMCPQDT.S.2.0	MERRA
<input type="checkbox"/> Ice tendency from moist physics	MATMCPQDT.S.2.0	MERRA
<input type="checkbox"/> Ice tendency from turbulence	MATMCPQDT.S.2.0	MERRA
<input type="checkbox"/> Liquid water tendency from dynamics	MATMCPQDT.S.2.0	MERRA
<input type="checkbox"/> Liquid water tendency from turbulence	MATMCPQDT.S.2.0	MERRA
<input type="checkbox"/> Upper-air temperature tendencies by process (1.25 X 1.25 horizontal grids with 42 vertical levels)	MATMCPQDT.S.2.0	MERRA
<input type="checkbox"/> Selected Parameters: None		
<input type="checkbox"/> Upper-air diagnostics from turbulence (1.25 X 1.25 horizontal grids with 42 vertical levels)		
<input type="checkbox"/> Selected Parameters: None		
<input type="checkbox"/> Upper-air cloud related diagnostics (1.25 X 1.25 horizontal grids with 42 vertical levels)		
<input type="checkbox"/> Selected Parameters: None		
<input type="checkbox"/> Upper-air diagnostics from moist processes (1.25 X 1.25 horizontal grids with 42 vertical levels)		
<input type="checkbox"/> Selected Parameters: None		
<input type="checkbox"/> Upper-air diagnostics from radiation (1.25 X 1.25 horizontal grids with 42 vertical levels)		
<input type="checkbox"/> Selected Parameters: None		
<input type="checkbox"/> Basic assimilated fields from IAU corrector (1.25 X 1.25 horizontal grids with 42 vertical levels)		
<input type="checkbox"/> Selected Parameters: None		
<input type="checkbox"/> Analyzed fields from IAU corrector (1.25 X 1.25 horizontal grids with 42 vertical levels)		
<input type="checkbox"/> Selected Parameters: None		

Temporal

Begin Date: Year 1980 Month Jan Date begin: 1979
End Date: Year 1997 Month Dec Date end: 1999

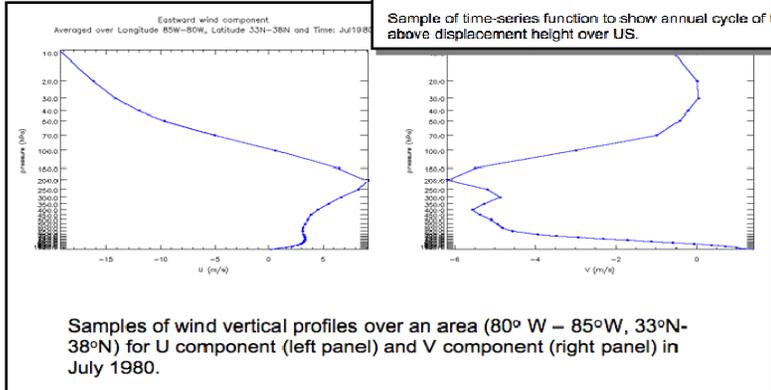
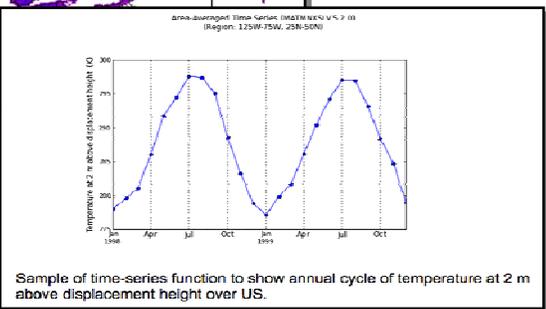
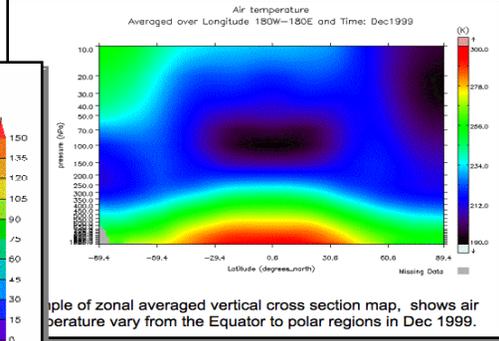
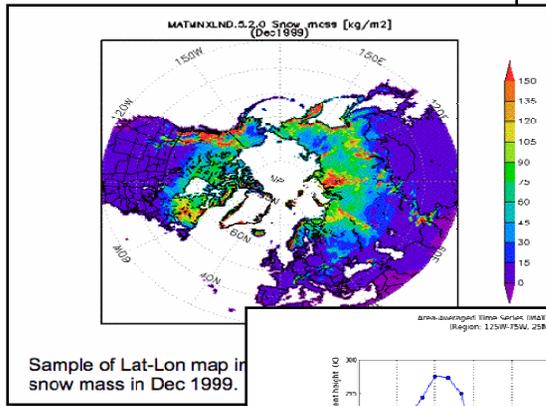
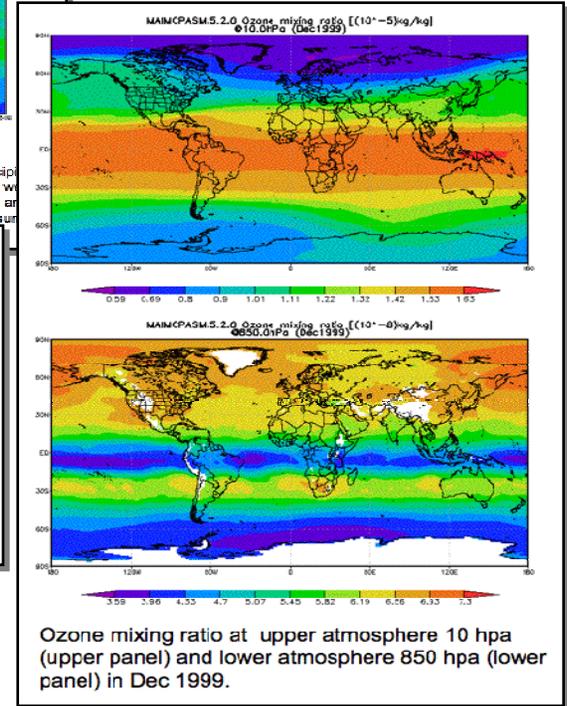
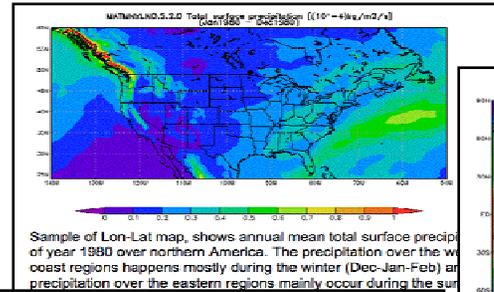
Select Visualization:

Time series

Generate Visualization (F5) Visualization Help



Visualize and analyze large volumes of data ...



... with only a few mouse clicks.



Giovanni – Data Access

The output is available for download in gif format, the original data files are available for download in **HDF**, **NetCDF** and **ASCII** formats.

Download source data products and data products derived from Giovanni processing stages. For simplicity purposes, only the initial retrieval and final rendering phases are currently accessible for downloading. Supported download formats are HDF, NetCDF(NCD), ASCII, and KMZ. To **download multiple files** at once, select the desired files (from any section) by clicking on their associated checkboxes, and then click 'Download in Batch'. **Note:** that 'n/a' means that a file size or other column value is not available; 'saa' means that a file is exactly the same as the previous one in the list. Also, not all services and data products support all download file formats.

Initial Data Retrieval			
Data Product	Start Time	File Size (b)	Download Files
MATMNXSLV.5.2.0 (CLDPRS)	2001-04-01T00:30:00Z	13433498	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Two Dimensional Map Plot			
Input Files	Start Time	File Size (b)	Download Files
MATMNXSLV.5.2.0 (CLDPRS)	2001-04-01T00:30:00Z	39065	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Output Files			KMZ
CLDPRS.MATMNXSLV.5.2.0.AreaMap.2001-04.gif		55149	<input type="checkbox"/>

Data product lineage is available so users know what data processing methods are used in the visualization.

MERRA Monthly 2D Data Collections

Lineage Acknowledgment Policy

me-averaged visualization service.

Fetches data file(s) using and temporal constraints of 2001-04-01T00:00:00Z to 2001-04-30T00:00:00Z , then extracted parameter(s): Cloud-top pressure from MATMNXSLV.5.2.0

Parameter Masking
No masking was performed, as specified by the inputs.

Grid Subsetter
Extracted spatial subset of each parameter in previous step using spatial constraint of South: 20.15625 North: 48.75 East: -37.96875 West: -112.5

Time Averaging
Averaged all parameters at each grid point over a time period of 2001-04-01T00:00:00Z to 2001-04-30T00:00:00Z

Dimension Averaging
Averaged parameter(s) over the selected spstial area of South: 20.15625 North: 48.75 East: -37.96875 West: -112.5 for collapse with area averaging method: Area Weighting = 1

Two Dimensional Map Plot
Generated image(s) with options:
Map Projection = latlon
Smooth Type = 3

Responsible NASA Official: Steven J. Kempler@nasa.gov
Web Curator: Stephen W. Berrick <web-contact-disc@listserv.gsfc.nasa.gov>

+ Contact Us

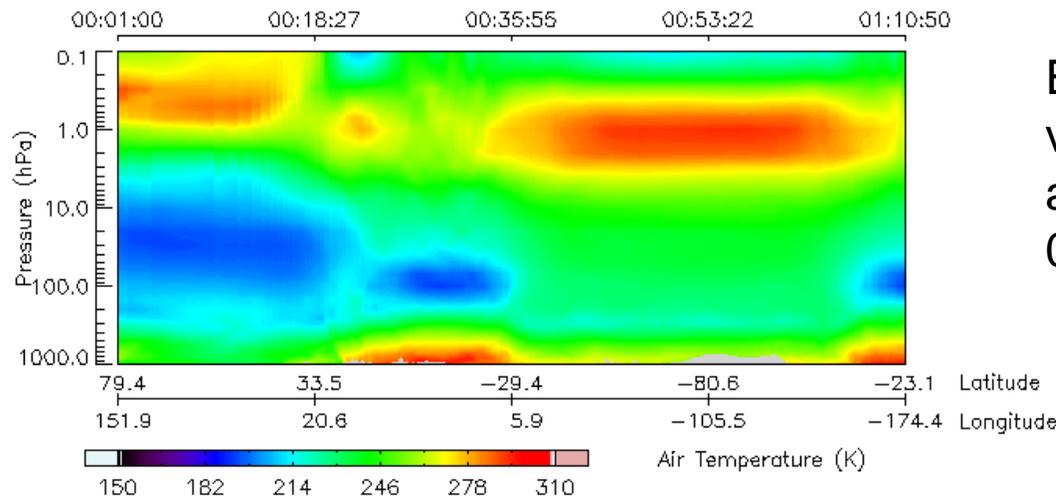
+ Privacy Policy and Important Notices



What's to Come.....

Subsetting MERRA along Cloudsat track

Air Temperature (MERRA Model)
01-Jan-2007 00:01:00 - 01:10:50 GMT



Example shows plotting of the vertical profile for air temperature along a CloudSat track from 00:00am - 1:00am

The MERRA data are but the newest additions to Giovanni. Giovanni already provides access to many **atmospheric, hydrological, environmental, oceans,** and other datasets from multiple satellites, *in situ* observations, and models with well over **1000 parameters**.

Try Giovanni at:
<http://giovanni.gsfc.nasa.gov>



User Support

*U*Users can join a mailing list for the latest news and updates. Send request to help-disc@listserv.gsfc.nasa.gov and you will be added to the list.

*U*Users can submit questions on science data questions and data processing. Send questions to merra-questions@listerserv.gsfc.nasa.gov.

*H*elp desk is available at the GES DISC for data access and tools questions. Send queries to help-disc@listserv.gsfc.nasa.gov and you will be contacted.



Questions???

<http://disc.gsfc.nasa.gov/mdisc/>

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