

Current Order Tool Experiences

Complaints

- Log in – unadvertised case sensitivity for email address that is used as login id
- CERES Dataset Info pages are too crowded!!
- On the Data Products Catalog page, remove old ones from view. Maybe hide via a pull-down style menu or just a link to an “Older Versions page”.
- Pop Up Windows in Java Ordering Tool are overused, such as when selecting the “File Info” option. User’s browser must be configured to allow pop ups to get the requested information.
- The Ordering Tool is too slow.

Current Order Tool Experiences

Suggestions

- Order a limited number of files without registering (to attract new users and to prompt them to register later).
- Make sure pages and tools work with latest versions of Windows and Macs with popular most recent browsers (ie Safari 3 on Mac not supported / Safari 4 is available).
- Use tabs/drop-down menus or other to hide info not currently needed by user.
- Provide more graphical mapping of drill down to data and datasets to choose prior to ordering.
- Need more of an “Introduction to CERES Data” web page to explain complexity of CERES data and good starting point for user.
- Provide “Help” links to example, definitions, publications, and FAQ/support.
- PROVIDE IMAGES!! Sample images are not available from the dataset page. A link to browse images should be provided here.
- Provide summary of order before order finalized.
- Provide complete list and easy to understand definitions for data parameters
- Links to articles with CERES data

Current Order Tool Experiences

Subset Criteria Selection Interface

- Date Range is not set for dataset collected in the Ordering Tool.
- Time Ranges are not user friendly.
- Make subsets available in NetCDF, ascii, binary

Roles and Responsibilities

(ASDC vs CERES Team)

- ASDC Web page
- CERES Dataset Info pages
- Java/HTML Ordering Tools (these require login)
- Subsetting Tools
- Browse Images
- Etc.

Something other pages do that CERES could emulate (1).

<http://coralreefwatch.noaa.gov/satellite/index.html>

The screenshot shows the NOAA Coral Reef Watch Satellite Monitoring website. The browser address bar displays <http://coralreefwatch.noaa.gov/satellite/index.html>. The page header includes the NOAA Satellite and Information Service logo and the Coral Reef Watch logo. The main content area is titled "Coral Reef Watch Satellite Monitoring" and features a satellite map of the world showing coral bleaching alert areas. The map is dated "10 Aug 2009" and includes a legend with five categories: No Stress (white), Watch (yellow), Warning (orange), Alert Level 1 (red), and Alert Level 2 (dark red). Below the map are several buttons: Alerts, HotSpot, DHW, SST, Anomaly, Outlook, and Doldrums. A red box highlights the map and its controls, with a red arrow pointing to it from the text "Provides near real-time image showing nature of data." The left sidebar contains a navigation menu with links to CRW Home, Product Overview, Near-Real-Time Data, Bleaching Alert Area, Degree Heating Weeks, HotSpots, Sea Surface Temperature, SST Anomaly, Virtual Stations, Datasets, Experimental Products, Research Activities, Outreach/Education, and About Us. The right sidebar contains an Announcements section with two entries: "July 16, 2009: Our Bleaching Outlook indicates a significant potential for high thermal stress in the Caribbean in 2009, with low level stress in the central Pacific and near Japan." and "Apr 23, 2009: Our new twice-weekly satellite global Bleaching Alert Area Product is now available." The footer includes the NOAA logo, a Privacy Policy | Disclaimer link, and a note that the file was last modified on 06 August, 2009, with a Contact Coral Reef Watch link.

Provides near real-time image showing nature of data.

Something other pages do that CERES could emulate (2).

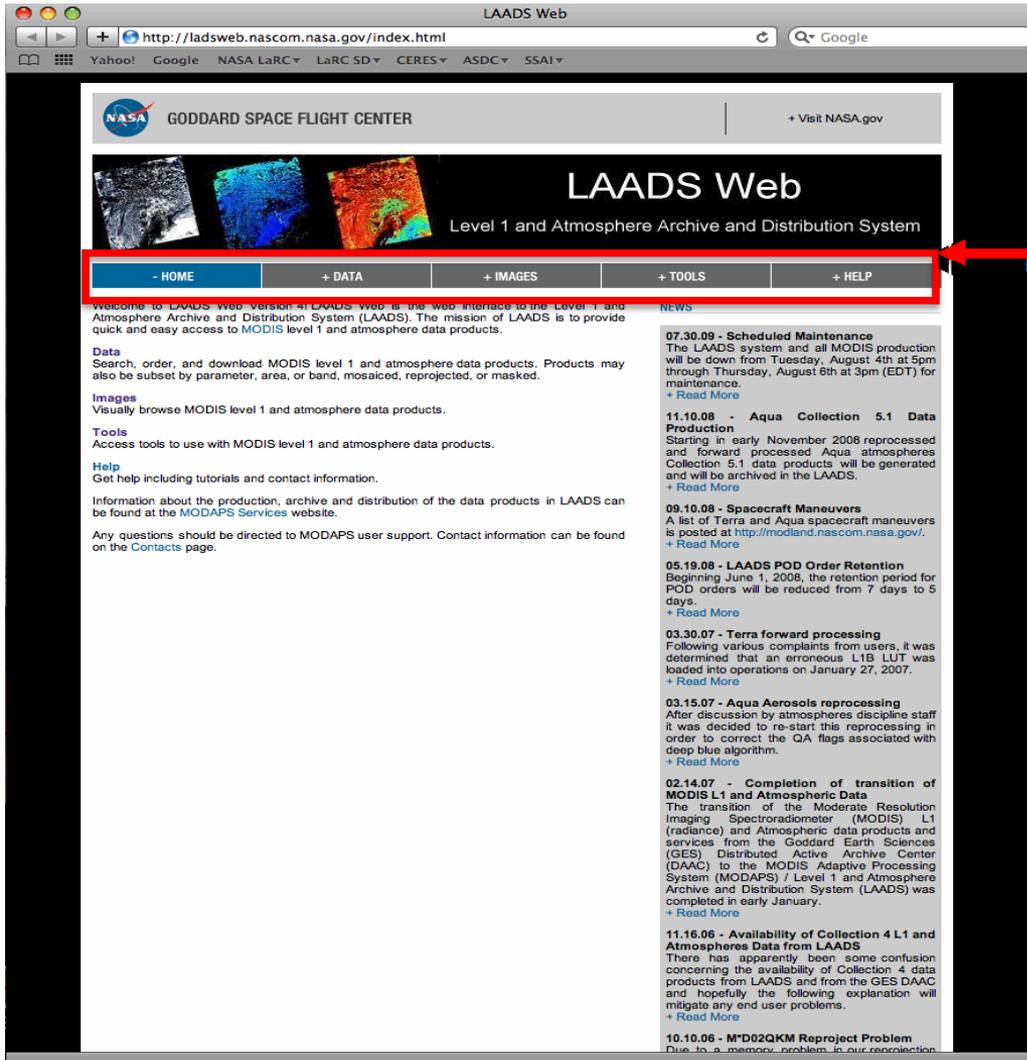
<http://www.noaa.gov/>

The screenshot shows the NOAA website homepage. At the top, the NOAA logo and name are displayed. Below the logo, there are navigation links for 'About NOAA' and 'Contacts'. A weather forecast widget is visible on the left. The main content area features a large image of an estuary, which is highlighted with a red border. Below this image is a slide show titled 'Monitoring Estuaries: Where Rivers Meet the Sea'. To the right of the slide show, there is an 'EXPLORE NOAA' section with various icons for weather, water, oceans, fisheries, and climate. Below that is a 'NOAA NEWS' section with several news items, and a 'FEATURES' section with links to NOAA Education, NOAA Corps, and AskNOAA. The footer contains links for Privacy Policy, FOIA, Information Quality, Disclaimer, USA.gov, Ready.gov, Site Map, and Contact Webmaster.

Provides multiple images to explain what CERES is all about in a 3-5 slide show.

Something other pages do that CERES could emulate (3).

<http://ladsweb.nascom.nasa.gov/index.html>



Incorporates a tab style that may be helpful.

Something other pages do that CERES could emulate (4).

<http://ladsweb.nascom.nasa.gov/data/search.html>

LAADS Web -- Search for Level 1 and Atmosphere Products

http://ladsweb.nascom.nasa.gov/data/search.html

NASA GODDARD SPACE FLIGHT CENTER + Visit NASA.gov

LAADS Web

Level 1 and Atmosphere Archive and Distribution System

+ HOME - DATA + IMAGES + TOOLS + HELP

Search for Level 1 and Atmosphere Products

If you know the file names of the products for which you are searching, you may also [search for file names](#).

Product Selection [+ View Help](#)

Please select one or more products:

Satellite/Instrument:
 Terra MODIS Aqua MODIS Combined Terra & Aqua MODIS Ancillary Data

Group:
Terra Level 1 Products

Products:
MOD01 - Level 1A Scans of raw radiances in counts
MOD021KM - Level 1B Calibrated Radiances - 1km
MOD02HKM - Level 1B Calibrated Radiances - 500m
MOD02OBC - Level 1B Onboard Calibrator/Engineering Data
MOD02QKM - Level 1B Calibrated Radiances - 250m
MOD02SSH - MODIS/Terra Level 1B Subsampled Calibrated Radiances 5km
MOD03 - Geolocation - 1km
MODASRVN - AERONET-based Surface Reflectance Validation Network

Please read the [disclaimer](#) about the Collection 5 MOD04_L2 and MYD04_L2 products.

Temporal Selection [+ View Help](#)

Please enter the temporal information in either MM/DD/YYYY or YYYY-DDD format:

Temporal Type:
Date and Time Range

Start Date and Time: 07/01/2009 00:00:00 End Date and Time: 08/10/2009 23:59:59

Collection Selection [+ View Help](#)

Please select a collection:

Collection:
5 - Coll 5 AQUA/TERRA Forward and Reprocessing

Note: The Aqua products MYD04_L2, MYD05_L2, MYD06_L2, MYDATML2, MYD08_D3, MYD08_E3, and MYD08_M3 are only available in Collection 5.1 as of data day January 1, 2009. These products are available in Collection 5 prior to data day January 1, 2009. Please see the [Data Availability](#) page for an overview of the data availability of Collection 5 and 5.1 products

Spatial Selection [+ View Help](#)

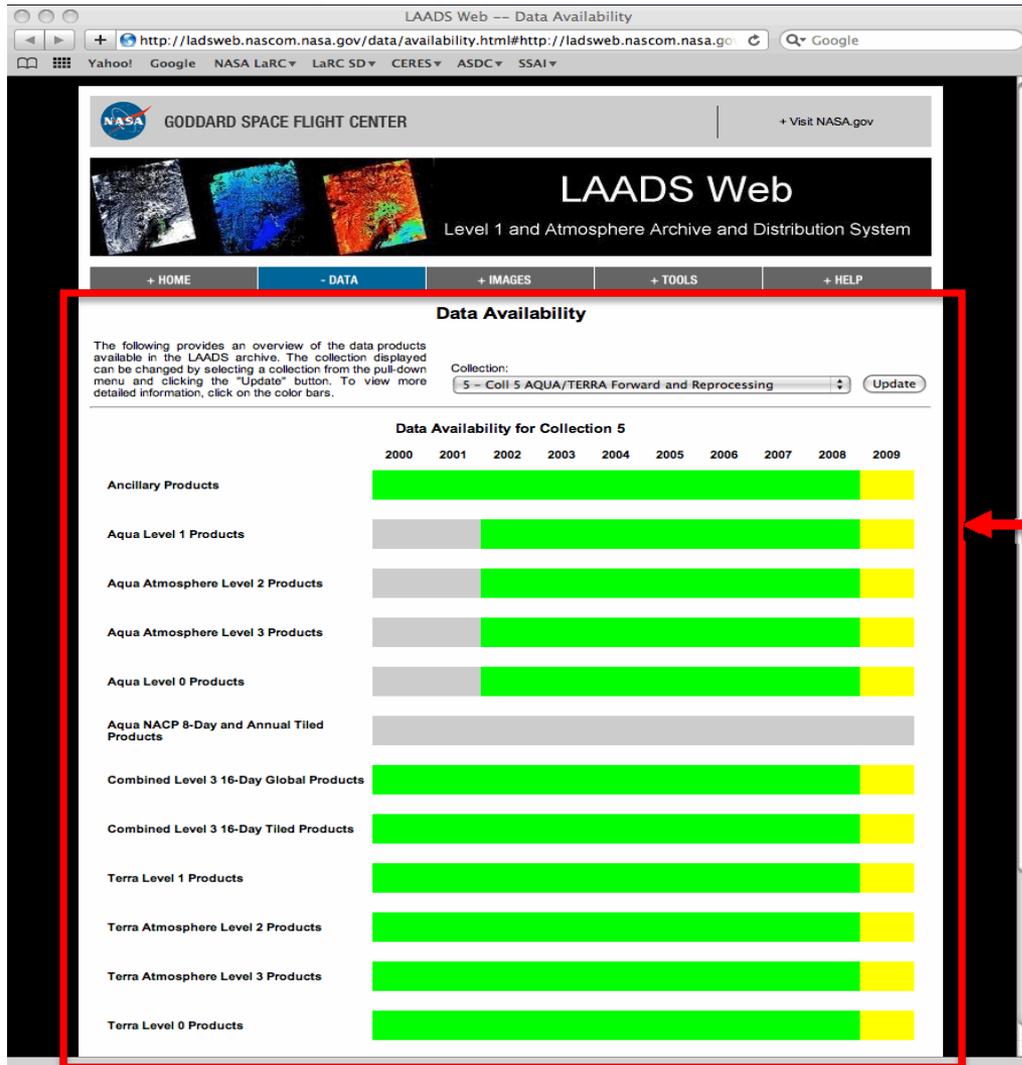
Please enter the coordinates for your area of interest.

Coordinate System:

Clean search tool page

Something other pages do that CERES could emulate (5).

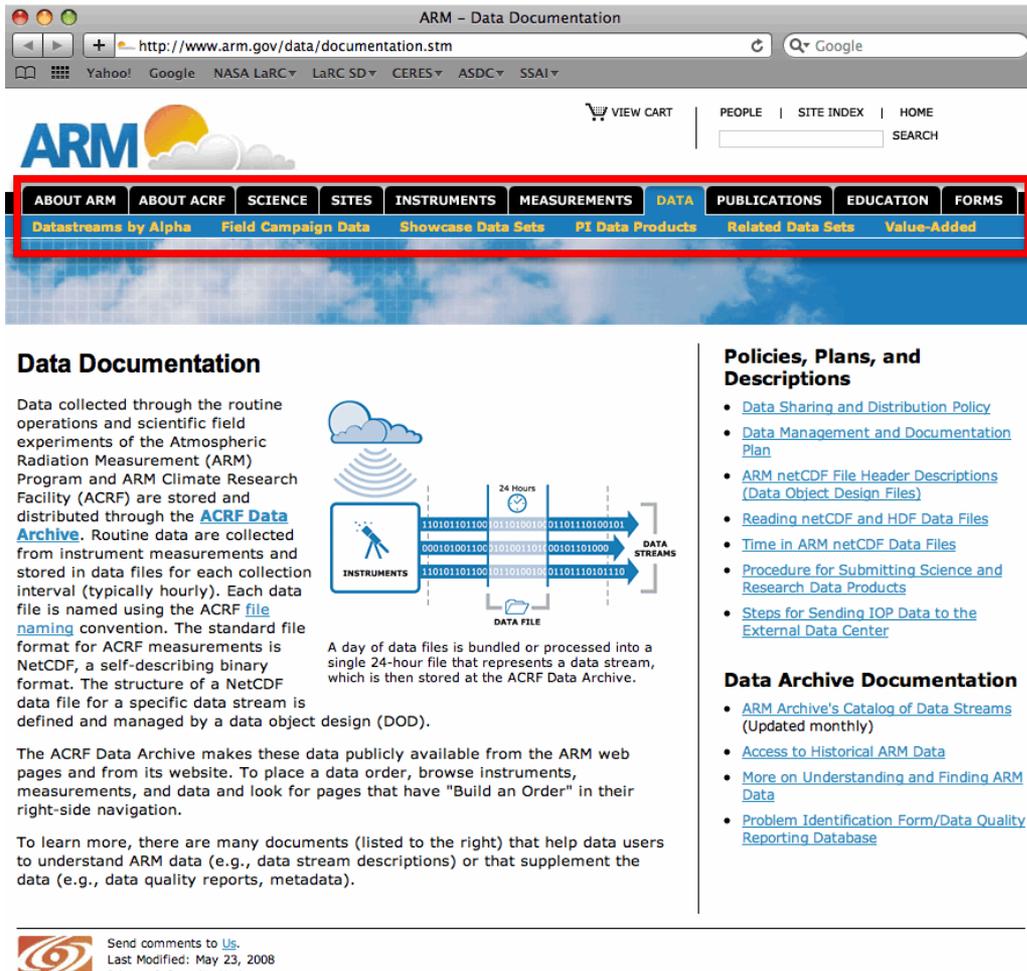
<http://ladsweb.nascom.nasa.gov/data/availability.html>



Data availability drill down is almost there.

Something other pages do that CERES could emulate (6).

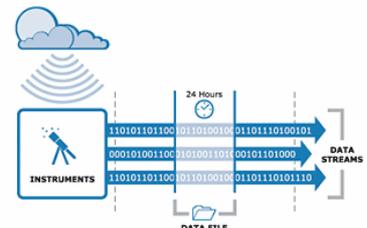
<http://www.arm.gov/data/documentation.stm>



The screenshot shows a web browser window with the URL <http://www.arm.gov/data/documentation.stm>. The page features a navigation menu with tabs for 'ABOUT ARM', 'ABOUT ACRF', 'SCIENCE', 'SITES', 'INSTRUMENTS', 'MEASUREMENTS', 'DATA', 'PUBLICATIONS', 'EDUCATION', and 'FORMS'. Below these tabs is a secondary menu with links like 'Datastreams by Alpha', 'Field Campaign Data', 'Showcase Data Sets', 'PI Data Products', 'Related Data Sets', and 'Value-Added'. A red box highlights this navigation area, and a red arrow points to it from the text 'Provides use of tab in two layers.' The main content area is titled 'Data Documentation' and includes a diagram of data flow from instruments to a data file, a list of policies and plans, and a list of data archive documentation.

Data Documentation

Data collected through the routine operations and scientific field experiments of the Atmospheric Radiation Measurement (ARM) Program and ARM Climate Research Facility (ACRF) are stored and distributed through the [ACRF Data Archive](#). Routine data are collected from instrument measurements and stored in data files for each collection interval (typically hourly). Each data file is named using the ACRF [file naming](#) convention. The standard file format for ACRF measurements is NetCDF, a self-describing binary format. The structure of a NetCDF data file for a specific data stream is defined and managed by a data object design (DOD).



The diagram illustrates the data flow process. On the left, a box labeled 'INSTRUMENTS' contains three lines of binary code: '110101101100', '000101001100', and '110101101100'. Arrows labeled 'DATA STREAMS' point from these instruments to a central box labeled '24 HOURS' containing three lines of binary code: '110101101100', '0110110100101', and '0110110100101'. From this central box, an arrow labeled 'DATA FILE' points to a final box on the right containing three lines of binary code: '110101101100', '00101101000', and '0110110101110'.

A day of data files is bundled or processed into a single 24-hour file that represents a data stream, which is then stored at the ACRF Data Archive.

Policies, Plans, and Descriptions

- [Data Sharing and Distribution Policy](#)
- [Data Management and Documentation Plan](#)
- [ARM netCDF File Header Descriptions \(Data Object Design Files\)](#)
- [Reading netCDF and HDF Data Files](#)
- [Time in ARM netCDF Data Files](#)
- [Procedure for Submitting Science and Research Data Products](#)
- [Steps for Sending IOP Data to the External Data Center](#)

Data Archive Documentation

- [ARM Archive's Catalog of Data Streams \(Updated monthly\)](#)
- [Access to Historical ARM Data](#)
- [More on Understanding and Finding ARM Data](#)
- [Problem Identification Form/Data Quality Reporting Database](#)

Send comments to [Us](#).
Last Modified: May 23, 2008

Provides use of tab in two layers.

Something other pages do that CERES could emulate (6a).

Select ARM Site

Note: You will be asked to make some selections to establish your search criteria for ordering ARM data or viewing data quick looks and quality information

Please select an ARM Site [?] from the following list

1

- Black Forest, Germany; Mobile Facility
- Eureka, Ellesmere Is., Canada; for NOAA SEARCH project
- Global Earth Coverage
- Graciosa Island, Azores, Portugal; Mobile Facility
- Niamey, Niger; Mobile Facility
- North Slope Alaska
- Point Reyes CA, USA; Mobile Facility
- SHEBA (Surface HEat Budget of the Arctic)
- Shouxian, Anhui, China; Mobile Facility
- Southern Great Plains
- Tropical Western Pacific

NEXT RESET

Reference Map

Map Satellite Hybrid Earth

MAP LEGEND

- ARM Site
- Mobile Facility
- Other sites

Click on a marker to view site details.

POWERED BY Google

Select Search Path

3

Current search criteria:

Site:	Global Earth Coverage
Start Date:	01/01/1999
End Date:	08/11/2009

ARM information (data, data quick looks and quality information) can be selected by instrument

[?] or by measurement (geophysical focus area) [?]

Please choose a selection approach:

Instruments Measurements

NEXT

[ARM Data Browser Home \(Cancel selections\)](#) [PROBLEMS?](#)

Select Date Range

2

Current search criteria:

Site: Global Earth Coverage

Please select a date range (valid date range for this site is 01/01/1999 to 08/11/2009)

Start Date: 01/01/1999 End Date: 08/11/2009

(mm/dd/yyyy)

January, 1999

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Select date

[ARM Data Browser Home](#)

Select Category

4

Current search criteria:

Site:	Global Earth Coverage
Start Date:	01/01/1999
End Date:	08/11/2009
Searchpath:	Instruments

Select one or more instrument categories for site: Global Earth Coverage
(use control - mouse click to make a specific selection or use shift - mouse click to select a range)

Atmospheric Profiling
 Satellite Observations

NEXT

[ARM Data Browser Home \(Cancel selections\)](#) [PROBLEMS?](#)

Something other pages do that CERES could emulate (6b).



Data Selection Summary

Data Selection Summary

(show/hide [search criteria](#))

Current search criteria:	
Site:	Global Earth Coverage
Start Date:	01/01/1999
End Date:	08/11/2009
Searchpath:	Instruments
Category:	1. Satellite Observations
Instruments:	1. Ozone Monitoring Instrument
Facilities:	1. X1:External Data (satellites and others)

[Print or save this page](#) [Email this page](#)

You can list the associated files [?](#), view the data quality color calendar [?](#), view data quality reports (DQR) [?](#), or view quick looks(QL) [?](#)

[More Quick Looks](#)

[List files to order](#) [Quality Color Summary](#) [DQ Reports](#) [Quick looks](#)

Summary Table

Data Stream ? Information			Estimated Archive Results (01/1999 to 08/2009)			
Data Stream Name	Data Stream Description	Full Date Range	Files	Size(MB)	DQR Days	QLs
gecomiX1.a1	Ozone Monitoring Instrument	10/01/2004 - 06/30/2009	57	1255.9003	0	0

Note:

- Results** : statistics are estimates based on monthly summaries
- Data Streams** : The highest [data level](#) data streams are selected for any given date. Multiple data streams may result
 - : Valid date range for a data stream. Data streams with different data levels or with different date ranges are possible.
- Full Date Range** : Number of days in the data selection time range that have one or more significant DQRs (red or yellow data quality limitations). Other, less critical, informational DQRs may also be available.
- DQR Days**

[ARM Data Browser Home \(Cancel selections\)](#) [PROBLEMS?](#)

Navigation

- Site
- Date Range
- Search Path
- Category
- Instruments
- Facilities
- Summary Page
- Place Order

Questions/Comments?

We would love to hear from you! Send us a note below or call 1-888-ARM-DATA.

Email Address

[SUBMIT](#)

Interface Help

- [View interface help documentation](#)

ARM Documentation

- [Data Stream](#)
- [Data Files](#)
- [Data Quality Color Calendar](#)
- [Data Quality Report \(DQR\)](#)
- [Quick Looks \(QL\)](#)

Walks user through the search process and provides an ability to manage search criteria.

Shows search criteria.

GIOVANNI - Another NASA Ordering Tool (could we implement the search capabilities?)



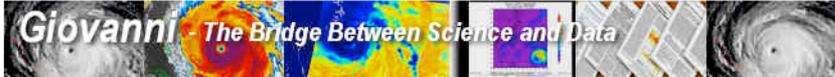
National Aeronautics
and Space Administration

Goddard Earth Sciences
Data and Information Services Center

Search DISC

+ Advanced Search

+ ATMOS COMPOSITION
+ HYDROLOGY
+ A-TRAIN
+ AIRS
+ MODELING
+ NEESPI
+ PRECIPITATION



Giovanni

You are here: [GES DISC Home](#) » Giovanni

GIOVANNI

Giovanni is a Web-based application developed by the GES DISC that provides a simple and intuitive way to visualize, analyze, and access vast amounts of Earth science remote sensing data without having to download the data.

Giovanni is comprised of a number of interfaces, called instances, each tailored to meet the needs of different Earth science research communities.

- **Atmospheric Instances:** A-Train along CloudSat Track; Aerosol Optical Thickness Measurement and Model Comparison *Daily and Monthly*; MISR *Daily and Monthly*; Aqua/AIRS Global *Daily and Monthly*; MODIS Terra and Aqua *Daily and Monthly*; Aura OMI Level 3 and Level 2G; Aura Microwave Limb Sounder (MLS); Aura High Resolution Dynamics Limb Sounder (HIRDLS); Earth Probe and Nimbus-7 TOMS; Upper Atmosphere Research Satellite (UARS) Halogen Occultation Experiment (HALOE); Modern Era Retrospective-Analysis for Research and Applications (MERRA) *3D Monthly and 2D Monthly*.
- **Environmental Instances:** Air Quality; Agriculture; Northern Eurasia Earth Science Partnership Initiative (NEESPI) *Daily and Monthly*
- **Ocean Instances:** Ocean Color; Ocean Color Radiometry (SeaWiFS, MODIS, and derived and model products in both instances)
- **Hydrology Instances:** MODIS Terra and Aqua *Daily and Monthly*; TRMM Online Visualization and Analysis System (TOVAS); Northern Eurasia Earth Science Partnership Initiative (NEESPI) *Daily and Monthly*; MERRA *3D Monthly and 2D Monthly*

A-Train	Aerosol Daily	Aerosol Monthly	Agriculture	AIRS Daily
AIRS Monthly	Air Quality	HALOE	HIRDLS	MERRA 3D
MERRA 2D	MISR Daily	MISR Monthly	MLS	MODIS Daily
MODIS Monthly	Ocean Color	Ocean Color Rad	NEESPI Daily	NEESPI Monthly
OMI	OMI L2G	TOMS	TRMM	

[MORE information for beginning Giovanni users!](#)

Giovanni

» **OVERVIEW**

- + What is Giovanni?
- + Who Uses Giovanni?
- + Giovanni Parameters
- + Giovanni Plot Types
- + How to Use Giovanni
- + How to Acknowledge Giovanni
- + Acknowledgements

Additional Features

- + News
- + Users Manual
- + Publications
- + Newsletters
- + Feedback

GIOVANNI – Another NASA Ordering Tool (could we implement the visualization capabilities?)

NASA National Aeronautics and Space Administration

Search DISC + GO
+ Advanced Search

Giovanni - The Bridge Between Data and Science

+ ABOUT GIOVANNI + NEWS + INSTANCES + FEEDBACK + RELEASE NOTES + HELP

MODIS Terra and Aqua Monthly Level-3 Data

Atmosphere Monthly Global 1X1 Degree Products

Home Results #1 Remove All

Visualization Results Download Data Product Lineage Acknowledgment Policy

MYD08_M3.005 Cloud Optical Depth - Ice (QA-w) [unitless]
(Jul2004)

90N
60N
30N
EQ
30S
60S
90S
180 120W 60W 0 60E 120E 180

0 5 10 15 20 25 30 35 40 45 50

Edit Plot Preferences Refine Constraints*

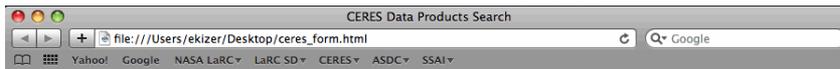
* Applies to the whole results set (all plots)

Moving Forward

Technologies Used by Others

- **HTML**
Hypertext Markup Language, is the predominant markup language for web pages.
- **Java**
Java is quite popular on web servers, used "under the hood" by many of the largest interactive websites.
- **JavaScript**
JavaScript is a simple programming language used to make web pages more interactive.
- **JSP**
A server side Java technology that allows software developers to create dynamically generated web pages, with HTML, XML, or other document types, in response to a Web client request to a Java Web Application container (server).
- **PHP**
A widely-used, general-purpose scripting language that was originally designed for web development, to produce dynamic web pages. It can be embedded into HTML.
- **KML**
Is an XML-based language schema for expressing geographic annotation and visualization on existing or future web-based, two-dimensional maps and three-dimensional Earth browsers. KML was developed for use with Google Earth.

CERES Data Product Search capability previously developed (no longer available)



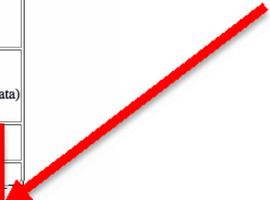
Which CERES Data Product Do I Want?

The CERES Data Products Search offers the ability to list the CERES data products selected by Product Type, Temporal Resolution, Spatial Resolution and/or an Applicable Study.

- Select the desired items
- Select "Submit" to display specific CERES data products that meet the desired search criteria.
If no products meet your search criteria, please try with fewer items selected.

Product Type	<input checked="" type="radio"/> All available classes <input type="radio"/> ERBE-like (Consistent with earlier ERBE processing) <input type="radio"/> Clouds and TOA/SFC Flux (TOA and Surface) <input type="radio"/> Clouds and Computed Flux Profile (TOA, Surface, and in Atmosphere) <input type="radio"/> Instrument <input type="radio"/> Special Products
Temporal Resolution	<input checked="" type="radio"/> All available temporal averages <input type="radio"/> Instantaneous <input type="radio"/> Hourly Averages <input type="radio"/> 3 Hourly Averages <input type="radio"/> Daily Averages <input type="radio"/> Monthly Averages
Spatial Resolution	<input checked="" type="radio"/> All available spatial resolutions <input type="radio"/> CERES Field of View (FOV) <input type="radio"/> Gridded regional <input type="radio"/> Zonally averaged <input type="radio"/> Globally averaged
Processing Level	<input checked="" type="radio"/> All available processing levels <input type="radio"/> Level 1B (processed to sensor units) <input type="radio"/> Level 2 (geophysical variables at the same resolution and location as the Level 1B source data) <input type="radio"/> Level 3 (variables mapped on uniform space-time grid scales)
Applicable Studies	<input checked="" type="checkbox"/> All Available Studies TOA flux only comparison Surface flux calculation with simple transfer model Flux calculation with simple transfer model In situ Flux comparison over particular region Comparison with GCMs Cloud and aerosol properties comparison Cloud and aerosol radiative forcing estimate or comparison with other estimate Comparison of radiation, aerosol and cloud properties with model other than GCM (ie. LES, CRM) Interpretation of radiation cloud and aerosol property variability Decadal study consistent with ERBE Angular dependent of radiance Instrument study

CERES data product selector
based on “Applicable
Studies”



Current CERES Data Products Pages (1).

http://eosweb.larc.nasa.gov/PRODOCS/ceres/table_ceres.html



CERES Data Products



The Clouds and the Earth's Radiant Energy System (CERES) is a key component of the Earth Observing System (EOS) program. The CERES instruments provide radiometric measurements of the Earth's atmosphere from three broadband channels. The CERES missions are a follow-on to the successful [Earth Radiation Budget Experiment \(ERBE\)](#) mission. The first CERES instrument (PFM) was launched on November 27, 1997 as part of the Tropical Rainfall Measuring Mission (TRMM). Two CERES instruments (FM1 and FM2) were launched into polar orbit on board the EOS flagship *Terra* on December 18, 1999, and two additional CERES instruments (FM3 and FM4) were launched on board EOS *Aqua* on May 4, 2002.

Ordering Data	Documentation	Tools and Images	Relevant Links
<ul style="list-style-type: none"> ASDC Web Ordering Tool Subsetting Instructions Processing and Data Flow Diagram with temporal and spatial resolution information 	<ul style="list-style-type: none"> Data Products Catalog Collection Guides Data Quality Summaries from Data Set Tables: <ul style="list-style-type: none"> CRS FSW SYN/AVG/ZAVG SSF SEC SRBAVG ISCCP-D2like EBAF ES-4 ES-8 ES-9 BDS Instrument Operations Examples of Spatial Extent and Scan Modes 	<ul style="list-style-type: none"> Data Visualization Software (view_hdf) Information on HDF MATLAB Bug Fixes <ul style="list-style-type: none"> AVG/ZAVG; 0-length Vdata R2007b fix CERES Imagery 	<ul style="list-style-type: none"> Join CERES News List CERES Main Home Page Aqua Terra TRMM CERES ARM Validation Experiment (CAVE) CERES/ARM Radiation Experiment (CARE) CERES Surface and Atmospheric Radiation Budget (SARB) Properties Chesapeake Lighthouse and Aircraft Measurements for Satellites (CLAMS) CLAMS Data Fast Longwave And Shortwave Radiative Fluxes (FLASHFlux)

Data Products: Includes Data Quality Summary, Description/Abstract, and Sample Software

Data Products	Data Sets	Processing Level (details)
Clouds and Computed Flux Profile Data Sets Focus on Top-of-Atmosphere (TOA), within-atmosphere and surface fluxes from radiative transfer model calculations with inputs from several sources.	SYN/AVG/ZAVG: <ul style="list-style-type: none"> Synoptic Radiative Fluxes and Clouds (SYN) Monthly Regional Radiative Fluxes and Clouds (AVG) Monthly Zonal and Global Radiative Fluxes and Clouds (ZAVG) 	Level 3
	AVG/ZAVG: 0-length Vdata MATLAB Bug Fix	Level 3
	Gridded Radiative Fluxes and Clouds (FSW)	Level 2
Clouds and TOA/SFC Flux Data Sets Focus on TOA and surface radiation derived directly from CERES and imager measurements.	Clouds and Radiative Swath (CRS) Subsetting Available	Level 4
	Energy Balanced and Filled (EBAF)	Level 3
	Monthly Cloud Averages (ISCCP-D2like)	Level 3
	Gridded TOA/Surface Averages (SRBAVG)	Level 3
	Gridded TOA/Surface Fluxes and Clouds (SFC)	Level 2
ERBE-like Data Sets Consistent with earlier ERBE processing.	TOA/Surface Fluxes and Clouds (SSF) Subsetting Available	Level 3
	ERBE-like Geographical Averages (ES-4)	Level 3
	ERBE-like Regional Averages (ES-9)	Level 3
Instrument Data Integrates measurements from CERES, MISR, and MODIS.	ERBE-like TOA Estimates (ES-8) Subsetting Available	Level 2
	Instrument data (BDS)	Level 1B
	CERES-MISR-MODIS (SSF-SSFM)	Level 2

Current CERES Data Products Pages (2).

http://eosweb.larc.nasa.gov/PRODOCS/ceres/level2_ssf_table.html



CERES SSF Data Sets



[CERES Data Products](#) | [Simple Processing](#) | [Processing Level Details](#)

The CERES data products are written in HDF format. ([Information on HDF](#))

For convenience in ordering a specific CERES data product, select the Data Set Name in the table below.

Single Scanner Footprint TOA/Surface Fluxes and Clouds (SSF): One hour of instantaneous CERES data for a single scanner instrument.				
Select Parameters: Cloud Properties, TOA Fluxes, Surface (Radiative) Fluxes, Unfiltered Radiances, Filtered Radiances, OLR, Surface Types				
Documents: Description/Abstract Collection Guide (PDF) Subsetting Instructions .				
Spacecraft	Data Set Name (Select name to order) <small>(subsetting is available)</small>	Data Products Catalog (PDF or PS)	Sample Software	Temporal Coverage (Hourly)
TRMM (covers opened 12/27/1997)	CER_SSF_TRMM-PFM-VIRS_Edition2B . Quality Summary TRMM Edition2B .	DPC_SSF-Ed2_R4V3	Readme edition2a Read Package (C) .	01/01/1998 - 08/31/1998, 03/01/2000 - 03/31/2000
	CER_SSF_TRMM-PFM-VIRS_Edition2B-TransOps . Quality Summary TRMM Ed2B-TransOps .			01/19/1999 - 07/17/1999 (Non-continuous hours within this period)
	CER_SSF_TRMM-PFM-VIRS_Edition2A . Quality Summary TRMM Edition2A .	DPC_SSF_013010		01/01/1998 - 08/31/1998, 03/01/2000 - 03/31/2000
	CER_SSF_TRMM-PFM-VIRS_Edition2A-TransOps . Quality Summary TRMM Ed2A-TransOps .			01/01/1999 - 07/17/1999 (Non-continuous hours within this period)
	CER_SSF_TRMM-SIM-VIRS_Edition2-VIRSonly . Quality Summary TRMM Edition2-VIRSonly .			09/01/1998 - 02/29/2000, 04/01/2000 - 07/31/2001
	CER_SSF_TRMM-PFM-VIRS_Edition1 . CER_SSF_TRMM-PFM-VIRS_Subset-Edition1 . Quality Summary TRMM_Edition1 .			DPC_SSF_010008
Terra (covers opened 02/25/2000)	CER_SSF_Terra-FM1-MODIS_Edition2F . CER_SSF_Terra-FM2-MODIS_Edition2F . Quality Summary Terra Edition2B .	DPC_SSF-Ed2_R4V3	Readme R4-699 Read Package (C) .	01/2006, 05/2006 - 07/2007
	CER_SSF_Terra-FM1-MODIS_Edition2B . CER_SSF_Terra-FM2-MODIS_Edition2B . Quality Summary Terra Edition2B .			02/25/2000 hour 22 - 08/01/2006
	CER_SSF_Terra-FM1-MODIS_Edition2A . CER_SSF_Terra-FM2-MODIS_Edition2A . Quality Summary Terra Edition2A .	DPC_SSF_R3V4		02/25/2000 hour 22 - 12/31/2003 hour 23
	CER_SSF_Terra-FM1-MODIS_Edition1A . CER_SSF_Terra-FM2-MODIS_Edition1A . Quality Summary Terra Edition1A .	DPC_SSF_R3V3		03/01/2000 - 08/31/2000, 11/01/2000 - 10/31/2002
Aqua (covers opened 06/18/2002)	CER_SSF_Aqua-FM3-MODIS_Ed2C-MOD-C4-Land-IGBP . CER_SSF_Aqua-FM4-MODIS_Ed2C-MOD-C4-Land-IGBP . Quality Summary Aqua Edition2C .	DPC_SSF-Ed2_R4V3	Readme R4-699 Read Package (C) .	01/01/2004 - 12/31/2005
	CER_SSF_Aqua-FM3-MODIS_Edition2C . CER_SSF_Aqua-FM4-MODIS_Ed2C-NoSW . Quality Summary Aqua Edition2C .			01/2006, 05/2006 - 08/2007
	CER_SSF_Aqua-FM3-MODIS_Edition2B . CER_SSF_Aqua-FM4-MODIS_Edition2B . CER_SSF_Aqua-FM4-MODIS_Ed2B-NoSW . Quality Summary Aqua Edition2A .			07/2002 - 04/2006

Current CERES Data Products Pages (2).

http://eosweb.larc.nasa.gov/PRODOCS/ceres/level2_ssfc_table.html

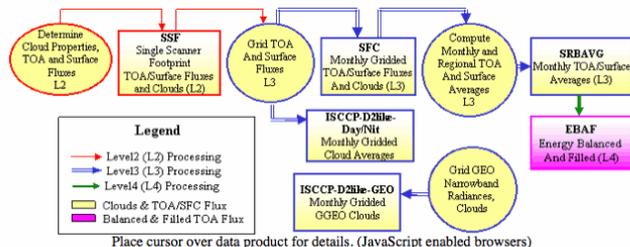


CERES Clouds and TOA/SFC Flux Processing Data Sets



[CERES Data Products](#) | [ERBE-like Processing](#) | [Clouds and Computed Flux Profile Processing](#) | [Processing Level Details](#)

CERES Clouds and TOA/SFC Flux processing focus on Top-of-Atmosphere (TOA) radiation, includes parameterized models for surface radiation estimation. Cloud detection using multi-spectral VIRS/MODIS imager. Vastly improved angular directional models allowing cloud property dependent anisotropy. Time-space averaging includes 1hourly geostationary radiance data to improve diurnal cycle modeling between CERES Flux measurements.



The complete [CERES processing and data flow diagram](#).

More details on CERES Clouds and TOA/SFC Flux Processing Data Sets: [SSF](#) | [SFC](#) | [SRBAVG](#) | [ISCCP-D2like-Day/Nit](#) | [ISCCP-D2like-GEO](#) | [EBAF](#)

Single Scanner Footprint TOA/Surface Fluxes and Clouds (SSF)

The Single Scanner Footprint TOA/Surface Fluxes and Clouds (SSF) product contains one hour of instantaneous Clouds and the Earth's Radiant Energy System (CERES) data for a single scanner instrument. The SSF combines instantaneous CERES data with scene information from a higher resolution imager such as Visible/Infrared Scanner (VIRS) on TRMM or Moderate-Resolution Imaging Spectroradiometer (MODIS) on Terra and Aqua. Scene identification and cloud properties are defined at the higher imager resolution and these data are averaged over the larger CERES footprint. For each CERES footprint, the SSF contains the number of cloud layers and for each layer the cloud amount, height, temperature, pressure, optical depth, emissivity, ice and liquid water path, and water particle size. The SSF also contains the CERES filtered radiances for the total, shortwave (SW), and window (WN) channels and the unfiltered SW, longwave (LW), and WN radiances. The SW, LW, and WN radiances at spacecraft altitude are converted to Top-of-the-Atmosphere (TOA) fluxes based on the imager defined scene. These TOA fluxes are used to estimate surface fluxes.

File Temporal Coverage: Instantaneous

File Spatial Coverage: CERES FOV

Product Type: Clouds and TOA/SFC Flux

Product Level: 2

File Frequency: 1/hour

Nominal Size/File: 60 MB

Applicable Studies: Angular dependent of radiance

Cloud and aerosol properties comparison

Cloud and aerosol radiative forcing estimate or comparison with other estimate

Comparison of radiation, aerosol and cloud properties with model other than GCM (ie. LES, CRM)

Interpretation of radiation cloud and aerosol property variability

Surface flux calculation with simple transfer model

TOA flux only comparison

Documents: [SSF Description/Abstract](#)

[more details](#) | [order data](#)

Current CERES Data Products Pages (1).

ARM - Data Documentation

http://www.arm.gov/data/documentation.stm

Yahool Google NASA LaRC LaRC SD CERES ASDC SSAI

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[Datastreams by Alpha](#)
[Field Campaign Data](#)
[Showcase Data Sets](#)
[PI Data Products](#)
[Related Data Sets](#)
[Value-Added](#)

Data Documentation

Data collected through the routine operations and scientific field experiments of the Atmospheric Radiation Measurement (ARM) Program and ARM Climate Research Facility (ACRF) are stored and distributed through the [ACRF Data Archive](#). Routine data are collected from instrument measurements and stored in data files for each collection interval (typically hourly). Each data file is named using the ACRF file naming convention. The standard file format for ACRF measurements is NetCDF, a self-describing binary format. The structure of a NetCDF data file for a specific data stream is defined and managed by a data object design (DOD).

To learn more, there are many documents (listed to the right) that help data users to understand ARM data (e.g., data stream descriptions) or that supplement the data (e.g., data quality reports, metadata).

A day of data files is bundled or processed into a single 24-hour file that represents a data stream, which is then stored at the ACRF Data Archive.

Policies, Plans, and Descriptions

- [Data Sharing and Distribution Policy](#)
- [Data Management and Documentation Plan](#)
- [ARM netCDF File Header Descriptions \(Data Object Design Files\)](#)
- [Reading netCDF and HDF Data Files](#)
- [Time in ARM netCDF Data Files](#)
- [Procedure for Submitting Science and Research Data Products](#)
- [Steps for Sending IOP Data to the External Data Center](#)

Data Archive Documentation

- [ARM Archive's Catalog of Data Streams \(Updated monthly\)](#)
- [Access to Historical ARM Data](#)
- [More on Understanding and Finding ARM Data](#)
- [Problem Identification Form/Data Quality Reporting Database](#)

Send comments to: [mailto:arm_data@arm.gov](#)

Last Modified: May 23, 2008

ATMOSPHERIC SCIENCE DATA CENTER

CERES Data Products

The Clouds and the Earth's Radiant Energy System (CERES) is a key component of the Earth Observing System (EOS) program. The CERES instruments provide radiometric measurements of the Earth's atmosphere from three broadband channels. The CERES missions are a follow-on to the successful Earth Radiation Budget Experiment (ERBE) mission. The first CERES instrument (FPM) was launched on November 27, 1997 as part of the Tropical Rainfall Measuring Mission (TRMM). Two CERES instruments (FM1 and FM2) were launched into polar orbit on board the EOS flagship Terra on December 18, 1999, and two additional CERES instruments (FM3 and FM4) were launched on board EOS Aqua on May 4, 2002.

Ordering Data	Documentation	Tools and Images	Relevant Links
<ul style="list-style-type: none"> ASDC Web Ordering Tool Subsetting Instructions Processing and Data Flow Diagram 	<ul style="list-style-type: none"> Data Products Catalog Collection Guides Data Quality Summaries from Data Set Tables: <ul style="list-style-type: none"> CRS (FM1) SYN/AVG/ZAVG SYN (SYN) (ERBE) ISCCP-D2like (ERBE) ES-4 (ES-4) (ERBE) ES-9 Instrument Operations Examples of Spatial Extent and Scan Modes 	<ul style="list-style-type: none"> Data Visualization Software (view_jsp) Information on HDF MATLAB Bug Fixes <ul style="list-style-type: none"> AVG/ZAVG: 0-length Vdata R2007b fix CERES Imagery 	<ul style="list-style-type: none"> Join CERES News List CERES Main Home Page / Aqua / Terra / TRMM CERES ARM Validation Experiment (CAVE) CERES ARM Radiation Experiment (CARE) CERES Surface and Atmospheric Radiation Budget (SARB) Properties Chesapeake LightHouse and Aircraft Measurements for Satellites (CLAMS) CLAMS Data Fast Longwave And Shortwave Radiative Fluxes (FLASHPix)

Data Products: Includes Data Quality Summary, Description/Abstract, and Sample Software

Data Products	Data Sets	Processing Level (details)
Clouds and Computed Flux Profile Data Sets Focus on Top-of-Atmosphere (TOA), within-atmosphere and surface fluxes from radiative transfer model calculations with inputs from several sources.	SYN/AVG/ZAVG: <ul style="list-style-type: none"> Synoptic Radiative Fluxes and Clouds (SYN) Monthly Regional Radiative Fluxes and Clouds (AVG) Monthly Zonal and Global Radiative Fluxes and Clouds (ZAVG) 	Level 3
	AVG/ZAVG: 0-length Vdata MATLAB Bug Fix	
	Gridded Radiative Fluxes and Clouds (FSW)	Level 3
	Clouds and Radiative Swath (CRS) Subsetting Available	Level 2
Clouds and TOA/SFC Flux Data Sets Focus on TOA and surface radiation derived directly from CERES and imager measurements.	Energy Balanced and Filled (EBAF)	Level 4
	Monthly Cloud Averages (ISCCP-D2like)	Level 3
	Gridded TOA/Surface Averages (SRBAVG)	Level 3
	Gridded TOA/Surface Fluxes and Clouds (SECF)	Level 3
ERBE-like Data Sets Consistent with earlier ERBE processing.	TOA/Surface Fluxes and Clouds (SSP) Subsetting Available	Level 2
	ERBE-like Geographical Averages (ES-4)	Level 3
	ERBE-like Regional Averages (ES-9)	Level 3
	ERBE-like TOA Estimates (ES-8) Subsetting Available	Level 2
Instrument Data Integrates measurements from CERES, MISR, and MODIS.	Instrument data (IDS)	Level 1B
	CERES-MISR-MODIS (SSF-SSFM)	Level 2

Current CERES Data Products Pages (2).

<http://eosweb.larc.nasa.gov/cgi-bin/searchTool.cgi?Dataset=>

ASDC Java Order Tool

[Help](#) | [Questions/Comments/Feedback](#)

Welcome guest

Keywords Search | **Geographic Area** | **Data Set Info** | **Reset All**

Press <Apply> button or double click mouse to filter the Parameters and Data Sets

Project: (39)

- CAMEX-4
- CERES
- CERES-
- CLAMS

Parameters: (80)

- AEROSOL BASE HEIGHT
- AEROSOL EXTINCTION
- AEROSOL OPTICAL DEPTH
- AEROSOL OPTICAL THICKNESS
- AEROSOL TOP HEIGHT

Data Sets (172)

- CER_AVG_Aqua-FM3-MODIS_Edition2B (14 files)
- CER_AVG_Aqua-FM4-MODIS_Edition2B (26 files)
- CER_AVG_Terra-FM1-MODIS_Edition2C (57 files)
- CER_AVG_Terra-FM2-MODIS_Edition2C (10 files)
- CER_PDS_Aqua-FM2_Edition1 (1220 files)

[**Advanced Search (Option)**]

Geographic Area:

Time Range: Start: End:

Name Matches (optional):

Day/Night Flag: Both Day Night

Search Files

Search Result (120 files)

File Name	Start Date	End Date
CER_SRBVAVG1_Aqua-FM3-MODIS_Edition2A_016031.200207	2002-07-01 00:00:	2002-07-01 00:00:
CER_SRBVAVG1_Aqua-FM3-MODIS_Edition2A_016031.200208	2002-08-01 00:00:	2002-08-01 00:00:
CER_SRBVAVG1_Aqua-FM3-MODIS_Edition2A_016031.200209	2002-09-01 00:00:	2002-09-01 00:00:
CER_SRBVAVG1_Aqua-FM3-MODIS_Edition2A_016031.200210	2002-10-01 00:00:	2002-10-01 00:00:
CER_SRBVAVG1_Aqua-FM3-MODIS_Edition2A_016031.200211	2002-11-01 00:00:	2002-11-01 00:00:
CER_SRBVAVG1_Aqua-FM3-MODIS_Edition2A_016031.200212	2002-12-01 00:00:	2002-12-01 00:00:
CER_SRBVAVG1_Aqua-FM3-MODIS_Edition2A_016031.200301	2003-01-01 00:00:	2003-01-01 00:00:
CER_SRBVAVG1_Aqua-FM3-MODIS_Edition2A_016031.200302	2003-02-01 00:00:	2003-02-01 00:00:
CER_SRBVAVG1_Aqua-FM3-MODIS_Edition2A_016031.200303	2003-03-01 00:00:	2003-03-01 00:00:
CER_SRBVAVG1_Aqua-FM3-MODIS_Edition2A_016031.200304	2003-04-01 00:00:	2003-04-01 00:00:
CER_SRBVAVG1_Aqua-FM3-MODIS_Edition2A_016031.200305	2003-05-01 00:00:	2003-05-01 00:00:

Current CERES Data Products Pages (2).

ASDC Java Order Tool

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welcome guest

Keywords Search Geographic Area Data Set Info Reset All

Press <Apply> button or double click mouse to filter the Parameters at

Project: (39)

CAMEX-4
CERES
CERES-
CLAMS

Apply

Parameters (80)

AEROSOL BASE HEIGHT
AEROSOL EXTINCTION
AEROSOL OPTICAL DEPTH
AEROSOL OPTICAL THICKNESS
AEROSOL TOP HEIGHT

Apply

Data Sets (172)

CER_AVG_Aqua-FM3-MODIS_Edition2B (14 files)
CER_AVG_Aqua-FM4-MODIS_Edition2B (26 files)
CER_AVG_Terra-FM1-MODIS_Edition2C (57 files)
CER_AVG_Terra-FM2-MODIS_Edition2C (10 files)
CER_BDS_Aqua-FM2_Edition1 (1220 files)

[Advanced Search (Option

Geographic Area

Time Range

Name Matches (optional) e.g.

North

90.00

Start

1997-12-26

West

-180.00

180.00

East

YYYY-MM-DD

-90.00

South

End

2009-08-02

Day/Night Flag

Botl Day Night

Search Files

Search Result (120 files)

File Name

Start Date End Date

CER_SRBVGI_Aqua-FM3-MODIS_Edition2A_016031.200207	2002-07-01	00:00:00
CER_SRBVGI_Aqua-FM3-MODIS_Edition2A_016031.200208	2002-08-01	00:00:00
CER_SRBVGI_Aqua-FM3-MODIS_Edition2A_016031.200209	2002-09-01	00:00:00
CER_SRBVGI_Aqua-FM3-MODIS_Edition2A_016031.200210	2002-10-01	00:00:00
CER_SRBVGI_Aqua-FM3-MODIS_Edition2A_016031.200211	2002-11-01	00:00:00
CER_SRBVGI_Aqua-FM3-MODIS_Edition2A_016031.200212	2002-12-01	00:00:00
CER_SRBVGI_Aqua-FM3-MODIS_Edition2A_016031.200301	2003-01-01	00:00:00
CER_SRBVGI_Aqua-FM3-MODIS_Edition2A_016031.200302	2003-02-01	00:00:00
CER_SRBVGI_Aqua-FM3-MODIS_Edition2A_016031.200303	2003-03-01	00:00:00
CER_SRBVGI_Aqua-FM3-MODIS_Edition2A_016031.200304	2003-04-01	00:00:00
CER_SRBVGI_Aqua-FM3-MODIS_Edition2A_016031.200305	2003-05-01	00:00:00



ARM Data Browser

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Home Site Date Range Search Path Category Measurements Facilities

Data Selection Summary

Data Selection Summary

(show/hide search criteria)

Current search criteria:	
Site:	Global Earth Coverage
Start Date:	01/01/1996
End Date:	08/08/2009
Searchpath:	Measurements
Category:	1. Surface Properties
Measurements:	1. Daily values of reflectivity on each grid cell
Facilities:	1. X1:External Data (satellites and others)

Print or save this page Email this page

You can list the associated files, view the data quality color calendar, view data quality reports (DQR), or view quick looks (QL).

More Quick Looks

List files to order Quality Color Summary DQ Reports Quick looks

Summary Table

Data Stream Information		Estimated Archive Results (01/1996 to 08/2009)				
Data Stream Name	Data Stream Description	Full Date Range	Files	Size(MB)	DQR Days	QLs
gecomiX1.a1	Ozone Monitoring Instrument	10/01/2004 - 06/30/2009	57	1255.9003	0	0
gectomsX1.a1	Total Ozone Mapping Experiment Spectrometer	07/25/1996 - 12/31/2005	115	2013.7015	1461	0

Notes:

- Results** : statistics are estimates based on monthly summaries
- Data Streams** : The highest data level data streams are selected for any given date. Multiple data streams may result
- Full Date Range** : Valid date range for a data stream. Data streams with different data levels or with different date ranges are possible.
- DQR Days** : Number of days in the data selection time range that have one or more significant DQRs (red or yellow data quality limitations). Other, less critical, informational DQRs may also

Navigation

- [Site](#)
- [Date Range](#)
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- [Category](#)
- [Measurements](#)
- [Facilities](#)
- [Summary Page](#)
- [Place Order](#)

Questions/Comments?

We would love to hear from you! Send us a note below or call 1-888-ARM-DATA.

Email Address

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ARM Documentation

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- [Data Files](#)
- [Data Quality Color Calendar](#)
- [Data Quality Report \(DQR\)](#)
- [Quick Looks \(QL\)](#)

SRBAVG Subsetting Web Tool(1)

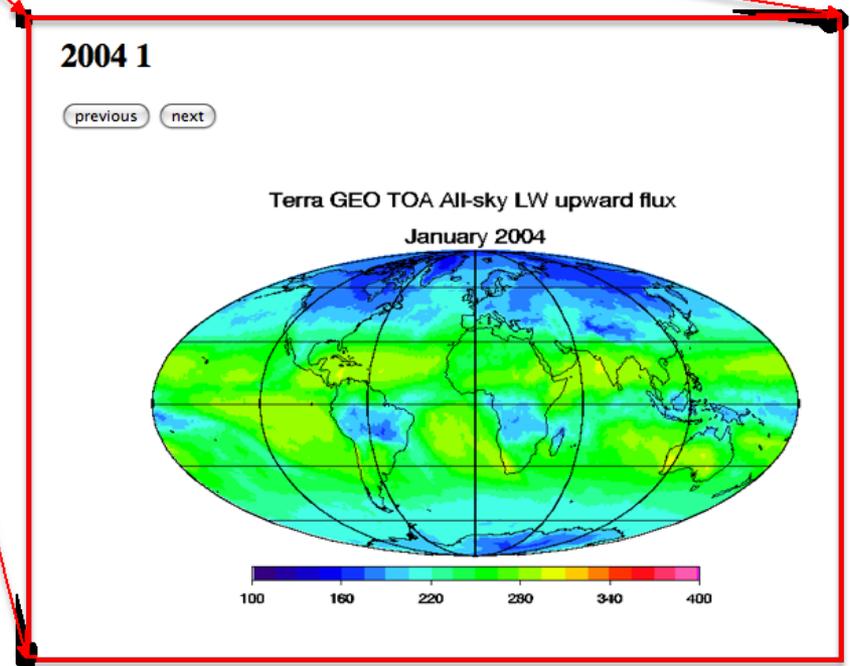
[Tool developed by CERES Team]

email address	<input type="text"/>
Data Type	<input checked="" type="radio"/> GEO <input type="radio"/> Non GEO
Temporal Resolution	<input checked="" type="radio"/> Monthly Mean <input type="radio"/> Daily <input type="radio"/> Monthly-hourly
Spatial Resolution	<input type="radio"/> Selected regions Please specify search area: Top <input type="text" value="90.00"/> Left <input type="text" value="-180.00"/> <input type="text" value="180.00"/> Right <input type="text" value="-90.00"/> Bottom <input checked="" type="radio"/> Regional (1° latitude by 1° longitude global grid) <input type="radio"/> Zonal mean <input type="radio"/> Global mean
Satellite	<input checked="" type="radio"/> Terra (3/2000 - 10/2005) <input type="radio"/> Aqua (7/2002 to 10/2005)
Time Range	From: <input type="text" value="3"/> - <input type="text" value="20"/> (MM-YYYY) To: <input type="text" value="10"/> - <input type="text" value="20"/> (MM-YYYY)
Parameters	<input checked="" type="checkbox"/> TOA Flux <input type="checkbox"/> Surface FLux <input type="checkbox"/> Cloud Properties
	<input type="button" value="submit"/> <input type="button" value="reset"/>

SRBAVG Subsetting Web Tool(2)

Please click on the following parameters to download the file:

- [ClearSky TOA WN Flux GEO Interpolation](#)
- [AllSky TOA WN Flux GEO Interpolation](#)
- [AllSky TOA Net Flux GEO Interpolation](#)
- [AllSky TOA LW Flux GEO Interpolation](#)
- [ClearSky TOA Albedo GEO Interpolation](#)
- [ClearSky TOA Net Flux GEO Interpolation](#)
- [ClearSky TOA SW Flux GEO Interpolation](#)
- [AllSky TOA SW Flux GEO Interpolation](#)
- [ClearSky TOA LW Flux GEO Interpolation](#)
- [AllSky TOA Albedo GEO Interpolation](#)



Additional Ideas?

Where can we go from here?