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- Lesson Plans
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- Science Focus
- E-Notes

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..... Mentoring and inquiry using NASA Data on Atmospheric and earth science for Teachers and Amateurs .....

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- Meet the Team
- Science Glossary
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# Data Access

The Data Access link allows you to:

- Locate the Live Access Server (LAS)
- Look at the Microset descriptions.

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- + Live Access Server Tutorial
- + Live Access Server Time Coverage at a Glance

+Live Access Server Sample Images

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# Lesson Plans

This section will allow you to access a variety of lesson plans and search by:

- Grade, Time to Complete, All Lessons, Activities, Climate Change Lessons, Stand-Alone Lessons & Unit Plans
- Standards of Learning

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### MY NASA DATA Lesson Plans

**IMPORTANT NOTICE:** Please note, we have updated the Live Access Server (LAS) system with new features and interface. Currently, the lesson procedures that use the LAS have not been modified but look for similar options in the new interface. Lessons will be updated for the new system. If you are having difficulties with the new LAS, please send us an email at [mynasadata@lists.nasa.gov](mailto:mynasadata@lists.nasa.gov) and we will do our best to assist you with the changed procedures. Thank you for your patience.

The collection of MY NASA DATA lesson plans is intended to provide the educator with a variety of specific examples, incorporating a more "teacher-directed" strategy, of how authentic satellite data can be integrated into the curriculum.

The majority of MY NASA DATA lessons were developed by classroom teachers to use real NASA data in their curriculum. Other lessons were developed by the MY NASA DATA team as examples of lessons using [microsets](#) from the [Data Access](#) page.

Featured on the [Science Project Ideas](#) section of our website are examples of a more "student-directed" strategy, with an inquiry-based research approach for using authentic data.

If you are a visitor to the MY NASA DATA site, these illustrations of how other teachers have used authentic satellite data as a resource may serve as an inspiration. We invite you to use them as is or to create your own lesson from the rich data resource that the LAS provides. If you create your own lesson, please consider sharing it with other educators through this ever-growing list.

CLICK the buttons on the left of the page to see the various lessons that are available by grade level; or, SEARCH for lessons using one of the search tools below. Lessons that cross over two suggested grade-bands will appear in both applicable lesson plans lists. Please note that some lessons can be adapted to a lower or higher grade-band.

**SOL** Search by National Standards of Learning  
Search by Virginia Standards of Learning  
Search by Data Category  
Search by Environmental Science Topics



# Computer Tools

This section features many tools that make using the data sets much easier and user friendly.

There is:

- MY NASA DATA Computer Tools
- Microsoft Excel Tools
- TI-84 Calculator Tools
- GIS Tools

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Lessons by Grade  
Grades: K - 2  
Grades: 3 - 5  
Grades: 6 - 8  
Grades: 9 - 12

Lessons by Time  
All Lessons  
Activities  
Climate Change Lessons  
Stand-alone Lessons  
Unit Plans

We encourage our users to let us know which **software tools** or **computer programs** would make the MY NASA DATA **microsets** and **lesson plans** more useable. We look forward to receiving your ideas!

Example software tools for use with the MY NASA DATA **microsets** from the **Data Access** page are listed below

MY NASA DATA Computer Tools	Grade Level
Latitude-Longitude Tool	6-12
How to explore LAS Data (MS PowerPoint Document)	6-12
Creating PDF's from MY NASA DATA lessons	9-12
How to download YouTube videos	9-12
Using Image J Software to create movies of MND images (MS Word Document)	9-12
Viewing MY NASA DATA Microsets using free IDL software	9-12
Tutorial on Using GLOBE Data to Study the Earth System	6-12
Downloading and Graphing GLOBE Ozone Data	6-12
TerraLook: Satellite imagery to view a changing world	6-12
Making Vocabulary Word Searches and Puzzles by The Discovery Channel	K-12
World Wind: zoom from satellite altitude into any place on Earth	K-12

Microsoft Excel Tools	Grade Level
Snow and Land Mask Excel File (MS Excel Document)	4-12
Opening MY NASA DATA Microsets in Microsoft Excel	6-12

TI-84 Calculator Tools	Grade Level
Directions for importing data into the TI-84 Silver Plus graphing calculator (MS Word Document)	9-12
Important TI-84 Keys Diagram	9-12

GIS Tools	Grade Level
Using MY NASA DATA with GIS (MS Word Document)	9-College
Using ArcExplorer Java Edition for Education (AEJEE) with MY NASA DATA (MS Word Document)	9-College
MY NASA DATA Projection file (.prj file - see instructions above)	
MY NASA DATA World file (.gfw file - see instructions above)	



# Science Focus

The Science Focus section features links to pages that provide additional explanation and information about certain features of our website, related science concepts, and other sources of scientific data.

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**Science Basics**

- Earth Science Glossary
- MY NASA DATA Science Project Ideas
- Metric System
- Understanding Scientific Units of Measurement
- MY NASA DATA on the Scientific Method
- Data Volume Units
- MY NASA DATA YouTube Tutorials
- GRACE Poster
- GRACE Mission Science Activity
- MY NASA DATA featured on the NASA Explorer Schools Virtual Campus

**Learn more about our Data**

- Radiation and Energy Transfer
- Education
- Orbits
- More about the Project
- Weather/Climate
- Links to other Online Data

**FEATURES**

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Watch a video of the Atmospheric Science Data Center being built.

Preston Lewis, education specialist, provides this introduction to the LAS.

The Magic Globe being showcased at the 2007 MY NASA DATA summer workshop

Ozone - Click to explore

Water Vapor - Click to explore

Carbon Monoxide - Click to explore

# How to access data



- From home page, click on *The Data Access* icon.

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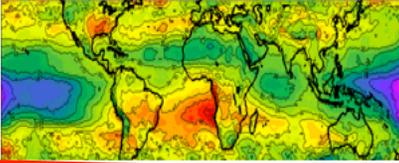
# How to access data

- From the Data Access page, choose one of the *Live Access Server* options
- Basic - simplest and fewer parameters
- Intermediate - data organized by “spheres”
- Advanced - more options and all available parameters

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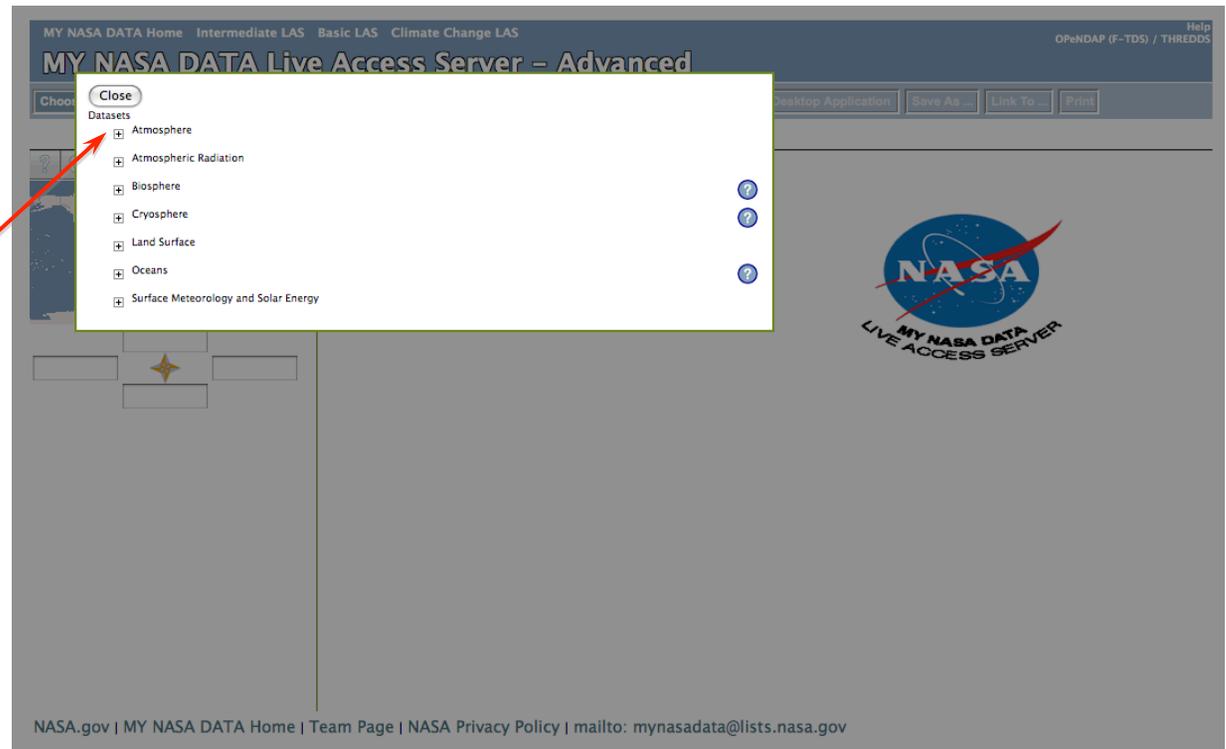
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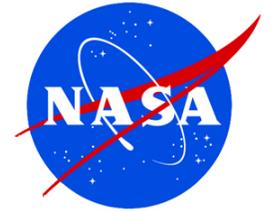


- Choose the type of data you would like to explore by topic area
- For example, Atmosphere

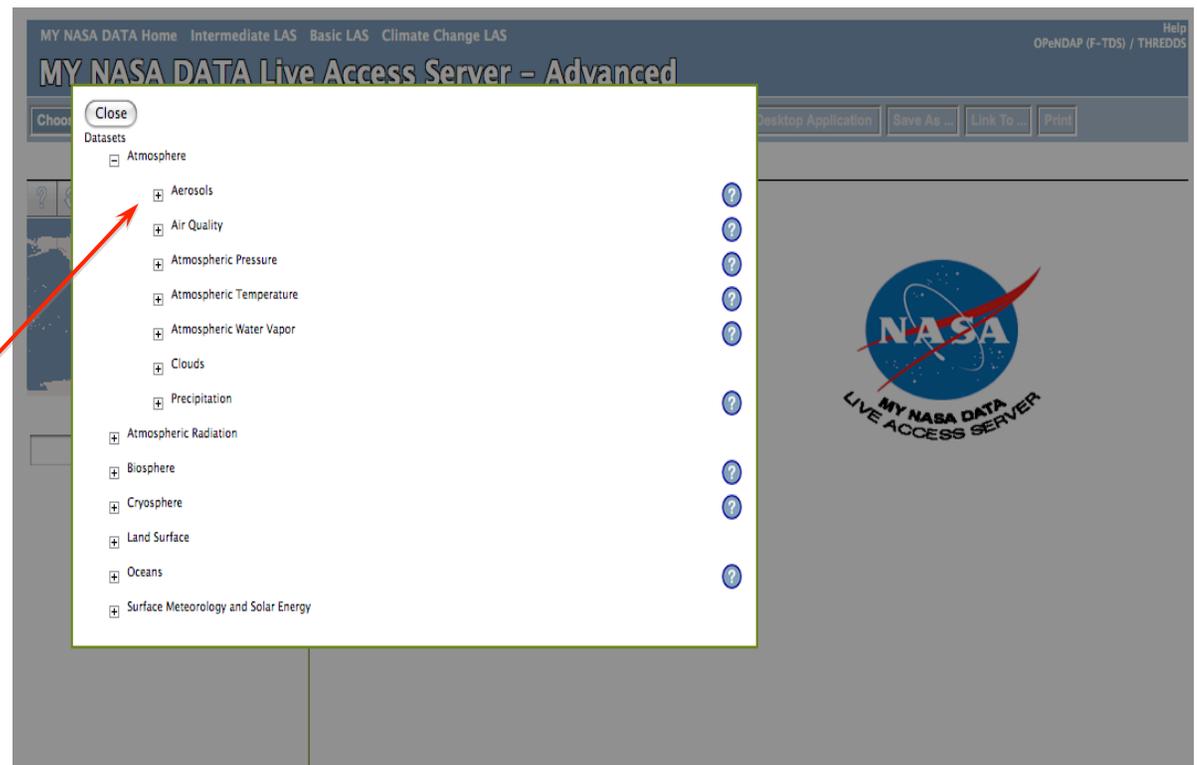


*NOTE: This is the Advanced Edition interface. The others are similar (but simpler).*

# How to access data



- Now we choose the specific kind of atmospheric data we want to explore



- For example we choose *Aerosols*



# How to access data

- We now select the name of the variable(s) we want to explore;
- To select the variable, check the box(es) of the variable(s) you want
- Note-for this data type there is only one option available

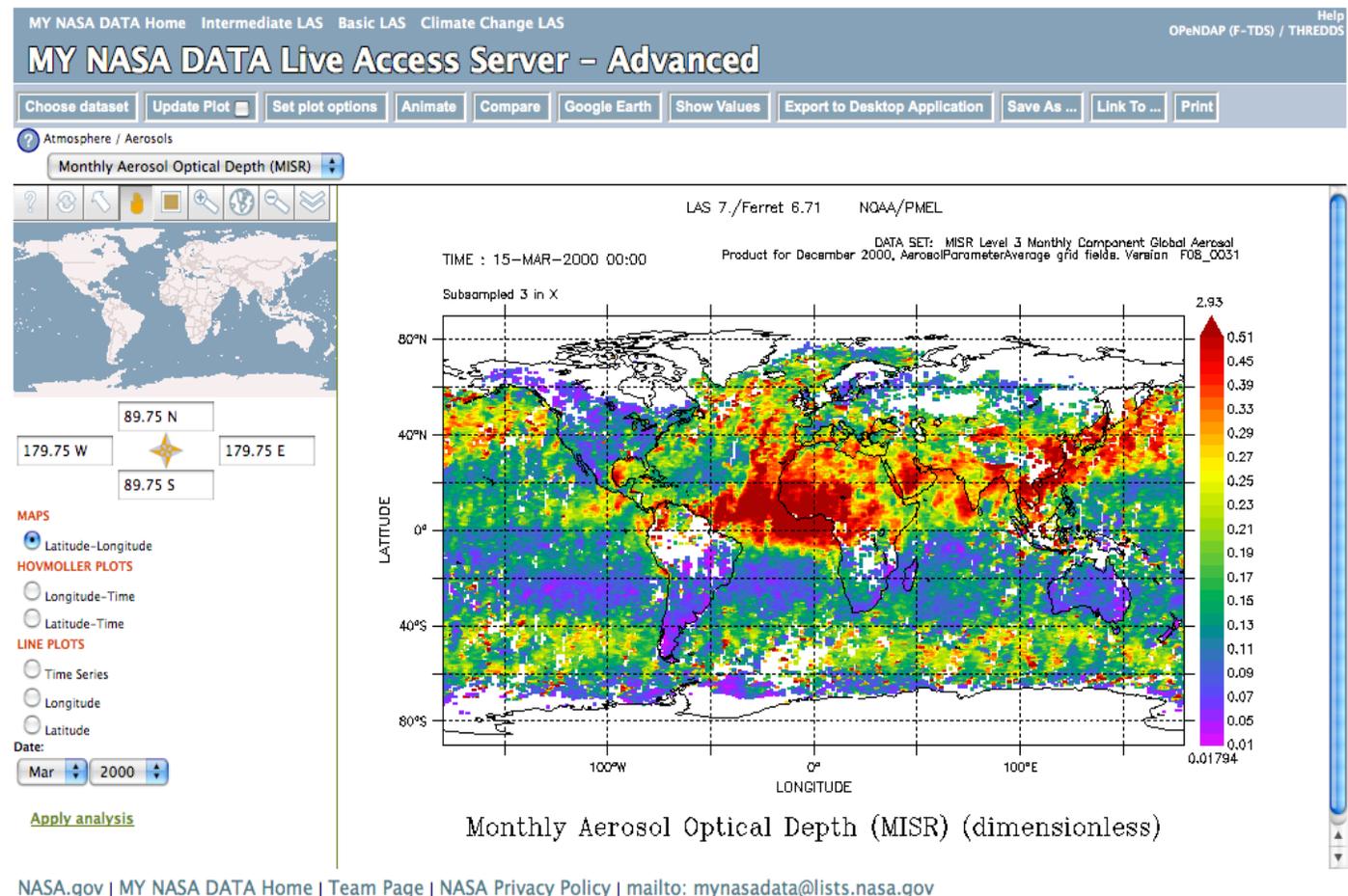
The screenshot displays the 'MY NASA DATA Live Access Server - Advanced' interface. A 'Datasets' menu is open, listing various categories with expandable options. A red arrow points to the 'Monthly Aerosol Optical Depth (MISR)' option under the 'Aerosols' category. The interface includes a navigation bar at the top with links for 'MY NASA DATA Home', 'Intermediate LAS', 'Basic LAS', and 'Climate Change LAS'. On the right side of the menu, there are several question mark icons. The background shows a map and the NASA logo with the text 'MY NASA DATA LIVE ACCESS SERVER'.

# Resulting Plot:



## Aerosols

The **Multi-angle Imaging Spectro-Radiometer (MISR)** provides high quality aerosol optical depth (AOD) at various spatial and temporal resolutions. Shown is global monthly average of optical depth as shown in the MY NASA DATA LAS for June 2004.



*Note: White areas in this plot are missing data due to persistent clouds, or lack of sunlight (South Pole) to detect the aerosols*

# How to access data



- Now you choose your plot options:

- Animation
- Plot Comparison
- Plot to Google Earth
- Show plot Values
- Location Via Latitude and longitude.
- Hovmoller plots
- Line Plote and date

- For example, we choose *Longitude-Latitude map* and *March 2000*
- Click “Update Plot” on the top menu next to “Choose dataset”.

