

# Beija-flor User's Guide



## An Internet-based Approach for Sharing Scientific Data in LBA

LBA-Ecology Project Office  
Goddard Space Flight Center  
Oak Ridge National Laboratory  
University of New Hampshire

Beija-flor -- The Search Engine for the LBA Project - Netscape

File Edit View Go Communicator Help

Welcome to *Beija-flor*  
The Search Engine for the LBA Project  
V1.1

Other commonly used [Links](#) are available at the bottom of this page.

Where to search:  LBA

**Full Text or Fielded Search**

Search Topic: Entire Document Search For: -----Not Available----- Enter a Value: CLEAR TEXT Connector: AND

Search Topic: -----Select Search----- Search For: -----Not Available----- Enter a Value: CLEAR TEXT Connector: AND

(Ignore Location) **Spatial Search** CLEAR SPATIAL

[Spatial Search Method:](#)

Overlaps  Enclosed Within

Select Area: ---Select Area ---

Northernmost: 90 Westernmost: -180 Easternmost: 180 Southernmost: -90

(Ignore Date) **Temporal Search** CLEAR TEMPORAL

during: Jun. 19 1980 through Jun. 19 2000

Document: Done

June 2000

## *An Internet-based Approach for Sharing Scientific Data in LBA*

In cooperation with the Large Scale Biosphere-Atmosphere Experiment in Amazonia (LBA) Data and Information System (DIS) Working Group (WG), the LBA-Ecology project designed and developed the Beija-flor and LBA Metadata Editor (LME) components that are being used by the overall LBA-DIS. While LBA DIS is still in development and its' final structure is yet to be determined by INPE, it is possible that it will resemble the model used in LBA-Ecology DIS (see Figure 1). Beija-flor is the search and data-sharing component of the LBA-DIS to be used during the active data collection, sharing, and documentation development phases of the project. Currently, the LME facilitates the entry, editing, and storage of metadata in standard formats for use by Beija-flor. Metadata is the information that describes the characteristics (e.g., geographic location, parameter names, date) of the various data sets. In the near future, full data set documentation capabilities will be integrated with the LME. By using World Wide Web, or simply "Web" technology, the combined capabilities of Beija-flor and the LME allow data and documentation to be stored on, and accessed from, the networked computers of individual scientists located around the world. The roles and functions of the Beija-flor and the LME components within the overall LBA-DIS are illustrated in Figure 2.

### **Beija-flor**

Beija-flor provides the needed data search and sharing functionality by harvesting and organizing metadata that are then accessed and reviewed by the users. Data providers and scientists use the LME to provide metadata to Beija-flor by properly formatting it and saving the files of information in specified locations on Web-accessible computer systems.

Each Beija-flor system/node harvests metadata by accessing a 'locator file' that is maintained on each Web-accessible computer system. The locator file is a text file that contains a list of Uniform Resource Locators (URL's). The data provider must provide the URL of the locator file to the administration staff by telephone or email (see below). The locator file and other information must reside on a computer that is running Web-server software and is connected to the Internet. The harvested metadata are stored in a database for search and retrieval by users. Sharing of harvested information by the Beija-flor nodes enables LBA participants to access information about all registered data.

Users are able to search and review available metadata by accessing the Web-based Beija-flor and LME interfaces at any of the nodes with their Web-browser software. The Web-browsers that are recommended for use are Internet Explorer 4.0 and higher and Netscape 4.0 and higher. More detailed information about using Beija-flor to find data and example searches are contained in the following pages.

### **LBA Metadata Editor (LME)**

The LME allows users to enter metadata information by using standard pick lists and entering information in text fields. It is also possible to copy and edit existing metadata files. As noted above, full data set documentation capabilities will be integrated with the LME in the near future. When the metadata for a data set are complete, the data provider places an entry for the new file in the locator file. During its harvesting activities, Beija-flor collects metadata from only the files listed in the active locator file.

In addition to entering and updating metadata, the LME allows data providers to select which data sets and metadata/documentation files are visible to Beija-flor users. At any time, the data provider can share a metadata/documentation file, can update the file, or can stop sharing the file with Beija-flor. More detailed information about using LME to find data and example searches are contained in the following pages. Assistance in using the LME can be obtained by contacting the administration staff by telephone or email (see below).

## **References**

Beija-flor Search Page, US: <http://beija-flor.ornl.gov/lba/>  
Beija-flor Search Page, Brazil: <http://lba.cptec.inpe.br/beija-flor/>  
LBA Metadata Editor, U.S.: <http://daacl.esd.ornl.gov/cgi-bin/MDEDIT/access.pl>  
LBA Metadata Editor, Brazil: <http://lba.cptec.inpe.br/cgi-bin/LME/access.pl>  
LBA Home Page: <http://lba.cptec.inpe.br/lba/>  
LBA Ecology Project Office: <http://lba-ecology.gsfc.nasa.gov/lbaeco/>

## **Beija-flor and LME Administration Staff**

Brazil: Luiz M. Horta (55-12-560-8536), [horta@cptec.inpe.br](mailto:horta@cptec.inpe.br)  
Europe: Holger Hoff, BAHC (49-331-288-2573), [hhoff@pik-potsdam.de](mailto:hhoff@pik-potsdam.de)  
US: Marilyn Gentry (01-865-354-1902), [mgentry2@utk.edu](mailto:mgentry2@utk.edu)

Figure 1. LBA Data and Information System.

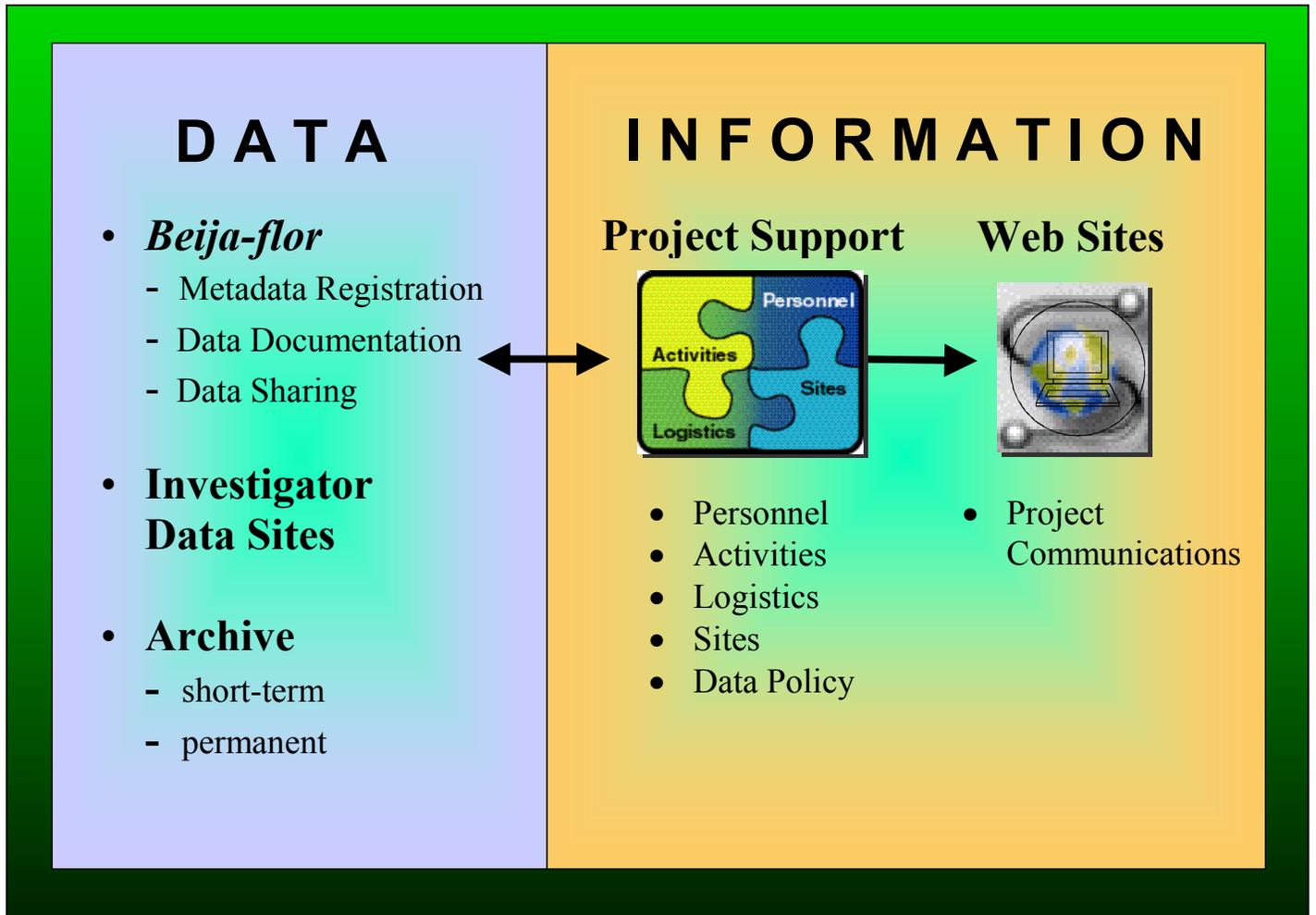
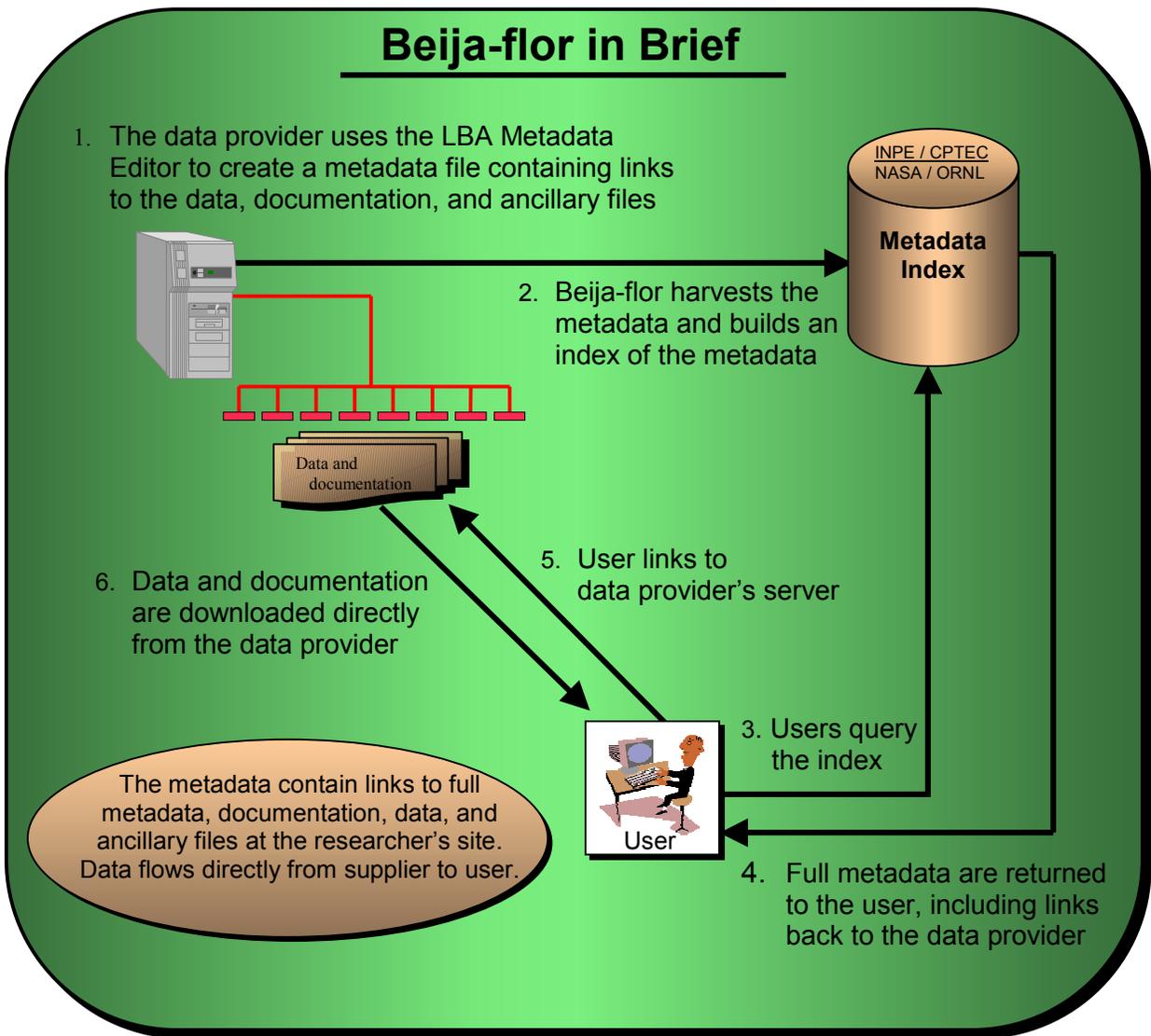


Figure 2. Roles and functions of Beija-flor and the LBA Metadata Editor.



# LBA Metadata Editor FAQs

(Frequently Asked Questions)

## What is metadata?

Metadata is descriptive information about the content, quality, condition, and other characteristics of a data set. Metadata can have 2 purposes:

- (1) To facilitate the search and retrieval, or identify the location of data that meet a user's selection criteria, e.g. the "card catalog" type of descriptive information about a data set, and
- (2) To help a user fully understand the data content and evaluate the usefulness of the data for his or her purposes, i.e. [data set documentation](#).

## What is the LBA Metadata Editor?

The LBA Metadata Editor is a Web-based tool that helps researchers create and maintain Web page files with key information, or [metadata](#), about their research. The Metadata Editor offers researchers a convenient form to enter the information. From that information, the Metadata Editor generates a Web page file.

## Why do I need the LBA Metadata Editor?

The LBA Metadata Editor is needed to assist in standardization and automation that will keep the costs of data management low. It will also describe data sets in a consistent manner that will help to store and retrieve metadata in a readily usable Web format. It prompts you to provide standardized information that is useful to researchers in similar projects. The Metadata Editor saves you the trouble of manipulating Web code for the file.

## Why do my Web pages need metadata?

The metadata constitute key information about your data. In addition, the metadata provide the search terms by which other researchers can find out about your data through Internet search engines such as Beija-flor. To understand more about metadata, click [here](#).

## What if I don't want my pages to be searched?

Your pages, or files, will remain "invisible" to the search engine unless you declare them to be "Searchable". You can have some files searchable and other files not searchable. You have to set the option for each file. After you save metadata in a file, radio buttons will appear at the top of the Web form to let you set the "Searchable" option. If you make the file searchable, the search engine will collect the metadata from your file and enter the metadata in its database so that other researchers can learn about your research by querying the search engine. If you later change your mind and turn off the "Searchable" option, the metadata from your file will be removed from the search engine's database, but the metadata file itself will remain on the server for your private use.

### **What if I have little or no metadata information?**

You can use the LBA Metadata Editor to create Web page files with metadata at any stage of your project. The Web form allows you to add, delete, or revise metadata at any time. You can leave portions of the Web form blank until you have the necessary information. Thus, the LBA Metadata Editor is a convenient tool for developing metadata as your project progresses.

### **Do I have to type in every bit of metadata individually?**

You don't need to type in information that already exists elsewhere as text in standard electronic form. The LBA Metadata Editor allows you to import whole metadata from other files and to copy and paste pieces of information from other sources, including XML files and the displayed portion of Web pages. In addition, for some types of information, the LBA Metadata Editor allows you to select text from a pick list on the Web form.

### **What if I already have a perfectly good Web page without any metadata?**

You can use the LBA Metadata Editor to append a neatly formatted metadata report to the bottom of your existing Web page without altering the other portions of the page. You can also use the LBA Metadata Editor to update the metadata report as needed.

### **What if I have some metadata but no Web pages?**

That's fine. The LBA Metadata Editor allows you to enter metadata into a Web form, and from that form it generates a Web page file. Later you can insert other information and data above the metadata portion of the Web page file by using any HTML editor that preserves the header of the file.

### **I already have a home page on a Web host (e.g., America Online). Can I just put my metadata there?**

Yes, but we don't recommend it because the LBA Metadata Editor most likely is not installed on the external Web host. Thus you would not have the advantage of the automated features of the Metadata Editor. It much easier to create and maintain your metadata files on the ORNL DAAC server (where the Metadata Editor is installed). Or, if you know someone who has installed a copy of the LBA Metadata Editor on his/her server, you could ask that person whether you may use his/her server to create and maintain files.

### **What is ultimately going to happen to my data?**

This tool does not maintain data sets. You should accumulate your data in a way that is convenient for you. Ultimately, perhaps after your data have been published, you will be encouraged by your sponsors to submit your data to an online archive and to provide formal documentation. The metadata that you record using this tool will be useful in composing your publications and documentation.

# LBA Metadata Editor Tutorial

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  - [Modifying metadata in an existing file](#)
  - [Making a Web page searchable by Beija-flor](#)
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## Introduction

The LBA Metadata Editor is a Web-based tool that allows you to create and maintain Web page files (i.e., HTML files) containing key information, or [metadata](#), about your research. Metadata include information about the specific projects, parameters, time periods, and locations associated with the data. Such information helps put your research findings in context. In addition, the metadata can allow other researchers to find out about your research through the [Beija-flor](#) search engine.

You simply use the LBA Metadata Editor to enter relevant metadata into boxes on a Web form. From the information on the form, the Metadata Editor will create a Web file containing a [header](#) and a metadata report at the end of the file.

You can use the Metadata Editor to modify existing Web pages or to create new ones. Even if your File contains no other data, the report created by the Metadata Editor can serve as the Web page.

As you enter information into the Metadata Editor's form, the metadata will also appear on the left side of the screen so you can easily verify that the system has entered your information correctly. If you'd like to see how your Web page would look to viewers using a Web browser, you can select **View** from the **File** menu. (The Metadata Editor requires that your browser have these [browser settings](#)).

To allow other people to find your Web page through [Beija-flor](#), you must turn on the **Make Searchable** feature for the individual file. The feature is controlled through a special toggle button that appears at the top right of the Web form after the metadata file is saved. The button says **Make Searchable** if your file is currently not searchable, or it says **Make Unsearchable** if your file is currently searchable. You can make the file searchable or unsearchable at any time by opening the file in the Metadata Editor and then clicking on the button.

Note that you are responsible for limiting access to your data. If you want to restrict your data to other members of your science team, you should either not put it on the web or else you should require a password to access it. Study your web server documentation to learn how to set up passwords. Please do not confuse access to your data with access to your metadata. Your metadata consist of names of investigators, the location of your experiment, etc. This information can and should be made widely available using the LBA Metadata Editor even if your data is not yet ready for the public.

The LBA Metadata Editor form provides a place to put one or more URLs for accessing your data. Please be considerate and provide a very specific URL when possible, rather than just linking the user to your institution's home page.

## Examples

The following examples explain how to use the LBA Metadata Editor to create and edit metadata files and how to make the Web page files searchable or unsearchable by Beija-flor.

### Creating a new Web page

1. Select **New** from the dropdown menu under **File**.
2. A blue Web form will appear on the right half of the screen. Fill in the appropriate fields. You don't have to complete the form all at once--you can save the file and open it later, if you like.
3. Select **Save** from the **File** dropdown menu. Enter a file name for the new file.
4. Click **OK**.

Congratulations! You have created a Web page file with embedded metadata! You can see the file by selecting **View** under the **File** dropdown menu.

**Note:** A Web page is stored on a computer's disk as an HTML file with the filename extension ".htm" (on a PC) or ".html" (on UNIX). When you use the LBA Metadata Editor, your files will be created and maintained on the computer on which the Metadata Editor is installed. For example, if the Metadata Editor is installed on your own computer, your files will be stored on your computer. If you use a Web browser to connect to a copy of the LBA Metadata Editor installed on someone else's computer, your files will be stored on that computer.

**Hint:** Your new Web page can also be viewed with your Web browser. The URL of your file will have the form:

http://<computer's Web name>/<Web filepath>/<new filename>.htm [or .html, on UNIX]

### Modifying metadata in an existing file

1. Select **Open** from the **File** dropdown menu. You will see a list of the Web files that you have created or modified in the Metadata Editor. Highlight the file you want to work on, and click the **Open** button. If you want to work on a file that is not listed, you can enter the file name into the box marked **File to Open**.
2. Edit the metadata in the blue frame. You can use the **show** and **hide** buttons to collapse or expand sections as you work, if you like.
3. Select **Save** from the **File** dropdown menu.

**Hint:** You can use the **Save** function as often as you wish to incrementally save your changes.

### Making a Web page searchable by Beija-flor

1. Open the file that you wish to make searchable (select **File** from the dropdown menu, highlight the file name, and click on **Open**).

1. A special toggle button will appear at the top of the right-hand frame (to the right of the **File**, **Metadata**, and **Information** buttons). If the file is not currently searchable, the button marked "**No**" will be selected and you need to click the "**Yes**" button to make the file searchable. If the file is already searchable, the button marked "**Yes**" will be selected.

**Hint:** To make sure you have opened the correct file, you can view it by selecting **View** in the **File** menu.

**Hint:** You can click the **Searchable "Yes"** button anytime you want to make the file searchable.

**Note:** The URL for your Web page will not appear in Beija-flor search results until after the next periodic refresh. (We anticipate that the search engine will refresh, or rebuild, its database nightly.) However, people who know the URL of the file can view the Web page immediately if they have access to the server on which your file is stored!

### Making a Web page unsearchable by Beija-flor

1. Open the file that you wish to make unsearchable (select **File** from the dropdown menu, highlight the file name, and click on **Open**).
2. A special toggle button will appear at the top of the right-hand frame (to the right of the **File**, **Metadata**, and **Information** buttons). If the file is currently searchable, the button marked "**Yes**" will be selected and you need to click the "**No**" button to make the file unsearchable. If the file is already unsearchable, the "**No**" button will be selected, and you should NOT click it unless you want to make the file searchable.

**Hint:** You can click the **Searchable "No"** button anytime you want to make the file unsearchable.

**Hint:** To make sure you have opened the correct file, you can view the file by selecting **View** in the **File** menu.

**Note:** The Beija-flor search engine will continue to show the URL for your Web page until after the next periodic refresh. (We anticipate that the search engine will refresh, or rebuild, its database nightly.) Even though the Web page is "unsearchable" by Beija-flor, people who know the URL of your file can view the Web page if they have access to the server on which your file is stored! You may wish to rename, delete, or move files that you don't want anyone to see. Or you may want to set up password protection (if you need help with password protection, please consult your server administrator).

## Advanced Techniques

### Creating multiple pages from a single master page

1. Open (or create and save) a file that is to be the master file.
2. Revise the metadata as necessary for the second version of the file.
3. Select **Save As** from the **File** dropdown menu, and give the file a new name. The revised metadata will be saved in a file separate from the master file.

**Hint:** You can repeat this process as often as you wish to create as many variations of the original file as needed. This process is useful when the metadata of a set of files have minimal differences.

## Copying metadata into an existing Web page

1. Open an existing HTML file.
2. Select **Copy From...** from the **Metadata** dropdown menu, and highlight the file from which you want to obtain metadata.
3. Select **Save** from the **File** dropdown menu. The copied metadata will be saved in the file.

**Hint:** If you want to work on a file that is not listed in the Metadata Editor, you must enter the complete file path and file name in the box labeled **File to Open**.

# Using the Beija-flor Metadata Search and Data Retrieval System

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## Free Text Searches

To search all the metadata and documentation we have for a data file, choose '**Entire Document**' from the '**Search Topic**' pick list. There will be no pick list in the '**Search For**' window for this search topic. Enter a word or phrase in the '**Enter a Value**' box. Phrases should be in double quotes, else **Beija-flor** will find records that have any of the words entered.

Example: Searching for "**John Paul Jones**" will find only those records with that exact phrase. Searching for John Paul Jones will find any record that has either John or Paul or Jones in it..

**Note:** The text search is case insensitive. That is, if you search for "CARBON DIOXIDE", you will get the same results as if you searched for "Carbon Dioxide" or "carbon dioxide". You will not get CO2.

**Hint:** You can retrieve the metadata for all data sets in the database by choosing '**Entire Document**' and entering an asterisk \* in the '**Search For**' window.

## Fielded Searches

If you want to narrow down where in the metadata documents **Beija-flor** searches in, use **Fielded Searches**. Pick a topic to search on from the '**Search Topic**' pick list (see below for definitions of the pick list terms). Once picked, the '**Search For**' pick list becomes active, populated with possible values for the field being searched. For example, if one picks '**Keywords**' as the Topic, then a list of possible keywords (e.g., **ABRACOS**, **CO2 Concentration**) are available for selection. Click on one to move it to the '**Enter a Value**' box.

You can also do a free text search within a fielded search. Pick a topic from the ‘**Search Topic**’ pick list, enter a word or phrase (enclose the phrase in double quotes) in the ‘**Enter a Value**’ box. The search will yield only records that contain that word or phrase *in that selected field*.

**Note:** As noted above, the text search is case insensitive. That is, if you search for "CARBON DIOXIDE" you will get the same results as if you searched for "Carbon Dioxide" or "carbon dioxide". You will not get CO<sub>2</sub>.

## Spatial Searches

You may search for data sets on the basis of spatial coverage. If you do not select coordinates for the search, Beija-flor will include all coordinates in its query by default. In effect, location will be ignored.

### Spatial Coordinates

You have three options for selecting coordinates.

- Select a known site or region from the “Select Area” pick list. The coordinates will automatically be entered into the bounding box.
- Type in the northernmost and southernmost latitudes and the easternmost and westernmost longitudes for the area in which you are interested. Note: even the “northernmost” latitude for an LBA study area can be “S” (or “-”) and an “easternmost” longitude can still be “W” (or “-”).
- Choose the coordinates from a mapping Java Applet. To use this method, you can either click on “From Map” in the “Select Area” pick list, or you can click on “Map” in the middle of the coordinate boxes. A new browser window will then open for the map applet. You can draw a box on the map by clicking on a point and dragging your cursor to another point. The coordinates for that box will automatically appear in the boxes on the right side of the map window. You can also drag the box around on the map or extend it in any direction, enlarging it or shrinking it. If you click on any other point on the map, the lines of the box will disappear, and you will have a single point marked again. After you have decided on an area with coordinates, click on “return coordinates” at the bottom of the map window. The selected coordinates will be automatically transferred to the Spatial Search section of the main search page, and the “From Map” Select Area option will be selected. **Note:** The map window will remain open, but minimized at the bottom of your screen.

At any time, you can click on “CLEAR SPATIAL” to remove spatial coordinates you have selected and to restore the default values. If you click on “CLEAR SPATIAL,” your other search criteria (e.g., topic, temporal criteria) will remain unchanged.

## Spatial Search Methods

If you choose spatial search criteria, you must select one of two search methods.

“**Enclosed within**” – this is the simpler, more straightforward method of search. Consider that each data set has four bounding coordinates that draw a “box” around the data set coverage area: a northernmost boundary (or latitude), a southernmost boundary (latitude), an easternmost boundary (or longitude) and a westernmost boundary (longitude). When you select “Enclosed within,” you are telling the search mechanism, “I will draw a box on the map, and I want all data sets for which all four boundaries fall within the box that I draw.” The search will return only those data sets whose bounding coordinates are completely contained within your search criteria box.

“**Overlaps**” – this is a more sophisticated method of search and yields a wider set of results. When you select “Overlaps” as your search option, you are saying, “I will draw a box on the map, and I want all data sets for which any of the four boundaries fall within this box.” That is, the boxes of the data sets and the box that you specify can overlap to any degree.

**Note:** You need to specify “AND IN,” “OR IN,” or “AND NOT IN” (Boolean operators) from the pull down menu to the upper left of the Spatial Search section if you wish to search on the basis of spatial criteria in relationship to the other criteria (e.g., topic, temporal criteria).

### **Potential Confusing Search Results**

Searching with the “Overlaps” method may yield confusing results because it queries data sets on the basis of their bounding box rather than the exact location of individual data points. The coordinates of the boundary boxes are assigned at the data set level; that is, they indicate the farthestmost north, south, east, and west coordinates whether or not those coordinates correspond with individual data points.

Imagine, for example, that Data Set A contains only two data points: one in Belem at 1.2° N, 48.5° W and the other in Cuiba at 15° S, 56° W. The bounding coordinates for Data Set A would be 1.2° N (northernmost latitude), 15° S (southernmost latitude), 48.5° W (easternmost longitude), and –56° W (westernmost longitude). Thus, the bounding box for the data set would be quite large even though the data set would contain only two points. Then imagine that you want to search for data collected near Santarem. You might draw a box on the map that includes 2° N, 2° S, 53.5° W, and 56° W as the bounding coordinates. If you select “Overlaps” as your search method, the search results would include Data Set A *even though the data points in Data Set A do not fall within your search box*. The northernmost boundary of the Data Set A, however, would fall within the southernmost boundary of your search box (i.e., the outer boundaries of the two boxes would overlap).

## Temporal Searches

You may search for data sets on the basis of their temporal coverage. If you do not specify temporal search criteria, Beija-flor will include all dates in its database by default. In effect, it will ignore date in its search.

You have three options for selecting temporal search criteria.

- **Before:** Enter one date. Data sets with data before that date will be returned.
- **During:** Enter a date range (two dates). Data sets with data during that range will be returned.
- **After:** Enter one date. Data sets with data after that date will be returned.

At any time, you can select “CLEAR TEMPORAL” to remove all temporal criteria you have selected and to restore the default values. If you click on “CLEAR TEMPORAL,” your other search criteria (e.g., topic, spatial criteria) will remain unchanged.

**Note:** You need to specify “AND IN,” “OR IN,” or “AND NOT IN” (Boolean operators) from the pull-down menu to the upper left of the Temporal Search section if you wish to search on the basis of temporal criteria in relationship to the other criteria (e.g., topic, spatial criteria).

## Boolean Searches

To do a search using two words or phrases, use the ‘**Connector**’ pull down menu to select **AND**, **OR**, **NOT** and repeat the selection process in the second row of **Beija-flor**.

## Advanced (Boolean) Searches

You can conduct advanced searches by either combining or excluding topics and other search criteria. To combine or exclude topics, use the “Connector” pull-down menu to the right of Full Text or Fielded Search section of the search page. Select AND, OR, NOT (Boolean operators), and enter the topics in the two rows of boxes as appropriate.

To combine or exclude spatial or temporal criteria from the search, use the pull-down menus at the top left of the Spatial Search section and the Temporal Search section. Select “AND IN,” “OR IN,” or “AND NOT IN” (Boolean operators) and enter criteria in the other boxes as appropriate.

## Search Results

After clicking the '**Submit**' button a new window is opened and a search in progress screen appears. It lets you know what databases you are searching (future version will allow more than one), the progress of the search, and when completed, the number of records returned. Clicking on a **Database Name** or '**See Results from all**' will bring back a listing of files with an abbreviated related set of metadata (**Data Set Title** and **Abstract**). Clicking on '**Access data and documentation...**' brings up the full metadata record for the data. At the bottom of the full metadata record is a '**Additional Documentation**' link. Clicking on it takes you to the full documentation at the data supplier's site, which may contain more information than the metadata record does.

One must close this new search results window to get back to the search window; the **'Back'** button on the browser will not work.

## Obtaining Data

The full documentation at the data supplier's site will also contain a link(s) to the data files themselves, or to ftp areas where you can download data sets directly from the data supplier. If your browser understands the format of the file (e.g., a GIF file) it will open it, and you can save it. If the browser does not know the format of the file (a SAS(R) file) you can save it directly without opening it.

If the supplier's machine is down, you will have to wait to retrieve the data set(s).

# LBA Metadata Editor Glossary

[A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

## A

### activity

Activity or campaign with which this data set is associated and which will link data sets that are related thematically, spatially, or temporally. This could be the title of the grant under which the activity was funded (e.g. "Pre-LBA Data Sets Initiative") or an intensive field campaign during which the data were collected (e.g. "Claire 1998", "Rondonia Wet Season Campaign 1999"). If no other phrase better describes your data, then use the program name with which the data set is associated, e.g. "LBA-Ecology", "LBA-Hydrology", "Webster", "HydroNET".

## B

### body

The portion of a Web page that is visible when the Web page is viewed in a browser, such as Netscape or Internet Explorer.

### browser

A software application program for locating, viewing, interacting with, and navigating World Wide Web pages. The most popular browsers are Netscape and Internet Explorer. Both are available at no cost.

## C

### close

A function in the LBA Metadata Editor that allows users to exit an open Web page file.

### contact person

Person to contact for more information about a data set.

### copy from

A function in the LBA Metadata Editor that allows users to copy all of the [metadata](#) from an existing Web page file on the same system into an open Web page file.

**Note:** The metadata in the open Web page file will be totally overwritten through the "copy from" function. If there are blank fields in the file from which metadata are copied, those blank fields will also be copied into the open Web page file.

## copy to

A function in the LBA Metadata Editor that allows users to copy all of the metadata from an open Web page file into another Web page file on the same system.

**Note:** If the other Web page file already exists, it will be totally overwritten through the "copy to" function. If the open Web page file has blank fields, those blank fields will also be copied into the other Web page file.

## D

### data access information

Details about how to gain access to a data set, either to view it or to obtain copies of it.

### data center

The institution or computer system where a data set is maintained. The system can be a computer, workstation, or server in the care of an investigator or someone else.

### data center contact

Name of person to contact at the data center with questions regarding this data set. Email and phone number of the data center contact person can be provided in this field as well.

### data center url

The Web address, or Uniform Resource Locator (URL), for the main Web page of the institution or computer system that is currently maintaining a data set. The URL can be for a computer, workstation, or server in the care of an investigator or someone else.

### data last modified

The date of last modification of the **data**. This is not necessarily the date when you modify your **metadata** using this form. Please remember to come back and change this date when you want people to download your revised data.

### data set

A collection of related data.

## data set citation

The complete bibliographic reference that identifies an individual data set and its origin. Citations should contain author names, date of publication, data set title, medium of transmission, publishing organization, and place of publication. Citations should be formatted as follows:

**Example:** Surname, A., and B. Surname. 1999. Unfamiliar American West Coast Data. 2nd ed. Data package 678. National Data Organization, Oak Ridge, Tennessee, U.S.A. Also available on-line at <http://www.data.ornl.gov>.

## data set documentation

Data set documentation includes fully descriptive information about a data set: the premise behind the collection activity, abstract, data collection instruments, analysis methods, quality control procedures, calibration information, known problems with the data, file structure and format information, column names and descriptions, measurement units, requested citation, data contacts, and related data sets. The data set documentation should provide enough information that a user who is completely removed from the original data collection activity in space and time can read the documentation, understand the data, and evaluate the usefulness of the data for his or her current purposes.

## data set information

Details about the contents of a data set and the characteristics of the data in it.

## data set link

The URL and label that together in a Web document will direct the user to an online data set, data file(s), accompanying documentation or readme files, or other ancillary information. By clicking on the data set link, the user can view the data set, data file, or documentation file online and choose whether to download the file(s).

## data set location

Details about the place where a data set resides (or will reside).

## data set restrictions

Restrictions to access of actual data, as opposed to metadata. Metadata is public information once it is put on the web, but the holder of the corresponding data may choose to limit access to the data to certain groups of people. This is normally done by configuring the web server at the data-holding site to require passwords. **Note: selecting a certain level of restriction using this metadata editor does not enforce those restrictions!** The metadata merely informs prospective data users about possible restrictions to data access.

## data set status

The current condition of the data set, whether it is proposed, preliminary, or final. When entering the data set status in the LBA Metadata Editor, users should select a standard expression from the pick list for data set status if at all possible.

## data set title

The formal name given to a [data set](#). The data set title should be descriptive enough to uniquely identify the data set. It can include any or all of the following information as appropriate: the associated project, type of data collected, geographic location, temporal coverage, team ID, sampling frequency. An example would be "Daily Precipitation across the Amazon Basin in Brazil from 1998-1999 (LBA)". We recommend limiting the length of the title to 80 characters to be compatible with conventions followed in [EOSDIS](#) and [GCMD](#).

## delete

A function in the LBA Metadata Editor that allows users to completely remove a file from the computer file system.

## description

A brief description of the experiment and/or data. This will frequently look like an abstract, but the format may vary depending on the situation. It may also give helpful information about availability of the data.

**Hint:** A convenient way to develop a description in the LBA Metadata Editor is to copy and paste text from elsewhere.

## documentation tool

The Documentation Tool will provide the opportunity for the data producer to record more detailed information about the [data content](#) that will help a user understand and use the data. This information will then be harvested by Beija-flor and will be included in the indexed information that is accessible for character-string searches via the "Entire Document" search mechanism in Beija-flor.

## dtd

Abbreviation for "Document Type Definition." The set of rules (or grammar) that accompanies a document in a markup language and specifies how the codes for the structural elements in the document are to be processed to display and print and document. The DTD defines document types in markup languages such as SGML and XML.

## E

### EOSDIS

Earth Observing System Data and Information System

#### easternmost longitude

The most-eastern location of data collection, expressed in positive (+) degrees and fractions of degrees longitude east of the prime meridian and negative (-) degrees and fractions of degrees longitude west of the prime meridian (e.g., -5.040°).

#### email

Short form for "electronic mail." In using the LBA Metadata Editor, users should include a full e-mail address. E-mail addresses have three parts: (1) a user ID followed by "@" (the "at" sign), (2) a place ID followed by a period, and (3) the domain ID. For example, the address **smithf@tuniv.edu** has "smithf" for the user named Fred Smith, "tuniv" for the place where he works, and "edu" for the domain ID. If you are unsure of your e-mail address, please contact your system administrator.

#### end date

The date on which data-gathering instruments stopped collecting data or the date on which the research effort officially ceased. In the case where different parameters in the data set were measured at different times, the `end_date` is the last date on which any of the data parameters included in this data set were collected or measured. When using the LBA Metadata Editor, users should enter the start date in the 8-character format YYYYMMDD, with four numerals for the year (YYYY), two numerals for the month (MM), and two numerals for the day (DD). Single-digit numbers for months and days should be preceded by a zero (e.g., 01).

#### exclude

A function in the LBA Metadata Editor that allows users to retract the metadata of one or more Web page files from the search engine database. Equivalent to [make unsearchable](#).

#### export

A function in the LBA Metadata Editor that allows users to copy all of the [metadata](#) of an open Web page file into an [XML](#) or DIF file.

**Note:** If the XML or DIF file already exists, it will be totally overwritten through the "export" function. If the current open file has blank fields, those blank fields will also be exported into the XML or DIF file.

## F

## G

### GCMD

Abbreviation for "[Global Change Master Directory](#)." A comprehensive directory of global change information maintained by the National Aeronautics and Space Administration (NASA). The directory contains Earth science data, including broad coverage of the oceans, atmosphere, hydrosphere, solid earth, biosphere, and human dimensions of global change.

### geodetic datum

Georeference system on which the bounding coordinates were based. Geodetic datums define the size and shape of the Earth and the origin and orientation of the coordinate systems used to map the Earth.

## H

### header

The top portion of a Web page file that precedes the body and is marked by special codes. The header is not visible on the screen when the Web page is viewed in a browser such as Netscape or Internet Explorer.

### html

Abbreviation for "hypertext markup language." A machine-readable language that uses special codes, or tags, to embed formatting instructions within plain text. HTML is an application of [SGML](#) and is used in creating Web documents. The Web browser displays Web documents according to the formatting instructions in the embedded HTML. The LBA Metadata Editor uses HTML along with XML.

## I

### import

A function in the LBA Metadata Editor that allows users to insert all of the [metadata](#) from an [XML](#) file or a [DIF](#) file into an open Web page file.

**Note:** The open Web page file will be totally overwritten through the "import" function. If there are blank fields in the file from which metadata are imported, those blank fields will also be imported into the open Web page file.

## investigation team

An officially approved investigator team from the pick list. If the pick list does not contain the appropriate information, requests for changes should be made through the [appropriate LBA Project Office](#).

## investigator

A scientist or researcher involved in an experiment or investigation. The investigator has responsibility for the outcome of the effort.

## J

## K

## keywords

A list of words that indicate the main content of a data set or document. Keywords can include distinguishing aspects of data collection, such as location(s) and time(s), as well as subject matter. By providing as many descriptive keywords as possible that are relevant to your data set, you will increase the chances that your data set will be identified by a user's search query via Beija-flor. Also, this is a good place to put those entries that you wanted to put in Site, Region, Source, Sensor, and Parameter, but couldn't because those are controlled fields!

## L

### LBA

Large Scale Biosphere-Atmosphere Experiment in Amazonia

### LBA DIS

LBA DIS: Large Scale Biosphere-Atmosphere Experiment in Amazonia (LBA) Data and Information System (DIS)

### LBA science component

An official LBA Science Component to which the research team belongs. Science Component is based on disciplinary theme, e.g. Atmospheric Chemistry (AC), Carbon Dynamics (CD), Human Dimensions (HD), Land Surface Hydrology (SH), Land Use and Land Cover (LC), Nutrient Dynamics (ND), Physical Climate (PC), and Trace Gas and Aerosol Fluxes (TG).

## label

The text part of a Web link that the user sees on-screen in a Web page and clicks to view the linked file or portion of a document. The label can match the URL of the linked file, or it can be a title, word, or phrase.

## latitude

Angular distance north or south from the equator.

## **longitude**

Angular distance between an east or west meridian and the prime meridian (as in Greenwich, England).

## **M**

### **metadata**

Information about the content, quality, condition, and other characteristics of a data set. Metadata include the names of the investigators, the title of the data set, keywords, and descriptive information related to the project for which the data are collected. Note that these metadata are intentionally general in content and are, in effect, a "least common denominator" designed to help a user search for and locate data sets that are similar in content but are located in many geographically distributed sources. These metadata fields are not detailed enough to fully document your data set. To document your data set, you will need to access the Documentation Tool that is currently under development and, when completed, will be incorporated into the LBA Metadata Editor.

### **metadata author**

The person entering the metadata. This is probably you.

## **N**

### **name**

The full name and title of an investigator associated with a data set. When entering as name in the LBA Metadata Editor, users should adopt the following format: Surname [comma] + personal title + additional name and initial(s) [comma] + additional name abbreviation (if any). For example, Professor Reginald van Poodle III would be entered as "van Poodle, Prof. Reginald, III" on the Web form, and Dr. Ralph M. Smith would be entered as "Smith, Dr. Ralph M."

### **new**

A function in the LBA Metadata Editor that allows users to start a new Web page file containing metadata. This function assumes that the user either does not have an existing Web page file or does not wish to work on an existing one.

### **northernmost latitude**

The most-northern location of data collection, expressed in positive (+) degrees and fractions of degrees latitude above the equator and negative (-) degrees and fractions of degrees latitude below the equator (e.g., -5.040°).

## **O**

### **open**

A function in the LBA Metadata Editor that allows users to select an existing Web page file for editing. The user can select a file from a list of files stored within in the LBA Metadata Editor system, or the user can type in the path of a Web page file saved elsewhere on a computer, workstation, or server that the user can access.

## P

### parameter

A descriptive class of variables that are included in the data set. This field is intended to help a user query the Beija-flor system to identify a group of data sets that contain similar variables; it is not intended to be used as a means of documenting the specific variable names or columns in the data set. When entering a parameter in the LBA Metadata Editor, users should select a standard expression from the pick list for parameters if at all possible.

### parameter description

Classification information about a parameter, including the name of the parameter and the instrument that measured it. Many of the LBA data sets will eventually become indexed in the [Global Change Master Directory](#) (GCMD) and the [EOSDIS](#), as well as the [LBA DIS](#). To this end, the metadata fields in this section help us to classify the data set according to GCMD and EOSDIS conventions and facilitate the registration of your data sets into these other systems. The metadata fields [Topic](#), [Term](#), and [Parameter](#) provide a hierarchy of classification of the parameter along a science discipline schema, consistent with GCMD conventions. Another way of classifying the parameter is by using the EOSDIS schema, i.e. classification according to the [Source](#) (platform) and [Sensor](#) (instrument) that produced the [Parameter](#). By using the available selections in the respective pick lists, you will ensure that the metadata describing your data will be consistent with that of other data sets that are part of LBA DIS. In addition, when the data become available to the public, you will have ensured that your metadata are consistent with the standards adopted by, and therefore will be accessible by, many other international data access and retrieval systems for future global research endeavors.

### phone

"Complete" telephone number. May have spaces or dashes embedded.

### pick list

A list of names or expressions from which the user can select, or pick, one item. When editing a Web file in the LBA Metadata Editor, users must click the arrow on the right of the pick list box if they want to see the list displayed.

### plain text

Characters that represent words and symbols in a natural language as opposed to code in a computer markup language such as HTML, SGML, or XML. The plain text is visible when the Web page is viewed by means of a Web browser.

### project

The authorized name of a research effort for which data is collected. This name is often reduced to a convenient abbreviation or acronym. All investigators involved in a project should use a common, agreed-upon name. For all data registered through the LBA Metadata Editor, the project should be "LBA (Large-Scale Biosphere-Atmosphere Experiment in the Amazon)".

## Q

## R

### region

An official standard region name assigned by the project. If the pick list does not contain the appropriate selection, requests for changes should be made through the [appropriate LBA Project Office](#).

### remove

A function in the LBA Metadata Editor that allows users to eliminate all of the [metadata](#) from the current open file.

**Note:** The remove function should be used with caution. After the metadata have been removed, they cannot be automatically restored. The metadata must be recreated or reimported.

## S

### save

A function in the LBA Metadata Editor that allows users to preserve an open Web page file with its current information. If the file is new, a message window will pop up, asking the user to give the file a permanent path and name. After the file has been saved, it will be stored in the central system of the LBA Metadata Editor, and the Save function will automatically overwrite that file each time the Save function is selected.

## save as

A function in the LBA Metadata Editor that allows users to preserve the information of an open Web page file in a second file. Through the Save As function, users can give the second file a different name, and/or they can change the directory in which the second file is located.

## science component

An official LBA Science Component from the pick list.

## science team information

Details about the LBA science team that collected the data, including the [LBA science component](#), [team ID](#), investigators involved in the data collection or data processing and their email addresses, and contact information in the event you have questions about the data.

## search engine

A computer resource that collects information from Web pages that are declared searchable, catalogues the information in a central database, and provides information about the Web pages to users who submit requests.

## searchable

When a file is made searchable, the search engine can "harvest" the metadata for its database, and then users can find out about the Web page file by querying the search engine.

**Note:** The URL for a new Web page will not appear in the search results until after the next periodic refresh. (Normally, the search engine refreshes its database nightly.) However, people who know the URL of the file can view the Web page immediately if they have access to the server on which the file is stored! When a file is made unsearchable, the search engine will continue to show the URL for the Web page until after the next periodic refresh. Even though a Web page file is "unsearchable" by the search engine, people who know the URL of the file can view the Web page if they have access to the server on which the file is stored! To keep the files strictly private, the person who created the file can rename, delete, or move the files to a private area or set up password protection through their server administrator.

## sensor

Also called "instrument." A device that is used for collecting data for a [data set](#). When entering a sensor in the LBA Metadata Editor, users should select a standard expression from the pick list for sensors if at all possible.

## sgml

The abbreviation for "Standard Generalized Markup Language." A standard that describes how to specify a machine-readable language, or tag set, to identify structural elements and semantic attributes of documents. SGML embeds coding tags within plain text. Documents based on SGML can be created in terms of document structure rather than appearance characteristics.

## site

The official name assigned by the project for the physical location where the data were collected. If the appropriate selection is not provided in the pick list, requests for changes should be made through the [appropriate LBA Project Office](#).

## site information

Information about the site name and location.

## source

Also called "platform." The mechanism used to support the sensor or instrument that gathers data for a data set. When entering a source in the LBA Metadata Editor, users should select a standard expression from the pick list for sources if at all possible. Note that for the LBA project, common sources are "TOWER", "LABORATORY", "MODELS", some type of aircraft (check pick list for specific models), or generically "FIELD INVESTIGATION" or "FIXED OBSERVATION STATIONS" when no other selections apply.

## southernmost latitude

The most-southern location of data collection, expressed in positive (+) degrees and fractions of degrees latitude above the equator and negative (-) degrees and fractions of degrees latitude below the equator (e.g., -5.040°).

## start date

The date on which data-gathering instruments began collecting data or the date on which the research effort officially began. In the case where different parameters in the data set were measured at different times, the start\_date is the first date on which any of the data parameters included in this data set were collected or measured. When using the LBA Metadata Editor, users should enter the start date in the 8-character format YYYYMMDD, with four numerals for the year (YYYY), two numerals for the month (MM), and two numerals for the day (DD). Single-digit numbers for months and days should be preceded by a zero (e.g., 01).

## T

### team id

ID assigned to the LBA investigation team, indicating a code for the general science theme ([LBA science component](#)) and a team number, e.g. CD-99 (Carbon Dynamics, team # 99). Team numbers are assigned based on the following classification system: 1-199 are NASA funded collaborations, 200-399 are European funded projects, and 400-599 are Brazilian funded investigations.

### team information

Information about the investigation team, its members, and support staff.

### temporal coverage

The inclusive starting and ending dates that define the period over which the data in the data set were collected.

### temporal resolution

The frequency of the data sampling during which the data of a data set were collected. When entering a temporal resolution in the LBA Metadata Editor, users should select a standard expression from the pick list for temporal resolution if at all possible.

### term

A secondary subject area within which earth science parameters can be categorized in the [topic term parameter](#) hierarchy. Example terms include "agricultural chemicals" and "atmospheric chemistry," among many others. When entering a term in the LBA Metadata Editor, users should select a standard expression from the pick list for terms if at all possible.

### time period

Details about the time when the data in a data set were collected, including temporal coverage and the frequency of collection.

### topic

The most general subject area within which an earth science parameter is categorized in the [topic term parameter](#) hierarchy. Example topics include "agriculture," "atmosphere," and "hydrosphere," among others. When entering a topic in the LBA Metadata Editor, users should select a standard expression from the pick list for topics if at all possible.

## U

### url

Abbreviation for "Uniform Resource Locator." The electronic address of a Web page on the Internet. Please be considerate and enter a specific URL when possible, rather than a home page URL that is several steps away from the relevant information.

## V

### view

A function in the LBA Metadata Editor that allows users to look at the saved portion of an open Web page file as other users will see it in a browser.

## W

### westernmost longitude

The most-western location of data collection, expressed in positive (+) degrees and fractions of degrees longitude east of the prime meridian and negative (-) degrees and fractions of degrees longitude west of the prime meridian (e.g., -5.040°).

## X

### xml

Abbreviation for "extensible markup language." A proposed standard that describes how to specify a machine-readable language, or tag set, to identify the structural elements and semantic attributes of documents. XML is a simplified version of [SGML](#), which embeds coding tags within plain text. XML is a proposed standard for creating Web documents. Documents based on XML can be created in terms of document structure rather than appearance characteristics. The LBA Metadata Editor uses XML along with HTML.

## Y

## Z

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# Browser Settings

To update Web pages automatically, the computer browser you are using must have its parameters set correctly. The following instructions can help you determine the browser settings. Choose the instructions that are appropriate for your type of browser.

## Netscape 4.x

1. Open Netscape.
2. Click on **Edit** in the toolbar near the top of the screen.
3. Select **Preferences...** .
4. Click on **[+]** next to **Advanced**.
5. Click on **Cache**.
6. Select **Every time**.
7. Click **OK**.

## Internet Explorer 4.x

1. Open Internet Explorer.
2. Click on **View** in the toolbar.
3. Select **Internet Options...**
4. Click on the **General** tab.
5. Click on **Settings...** in the **Temporary Internet files** block.
6. Select **Every visit to the page**.
7. Click **OK**.
8. Click **Apply**.
9. Click **OK**.

## Internet Explorer 5.x

1. Open Internet Explorer.
  2. Click on **Tools** in the toolbar.
  3. Select **Internet Options...**
  4. Click on the **General** tab.
  5. Click on **Settings...** in the **Temporary Internet files** block.
  6. Select **Every visit to the page**.
  7. Click **OK**.
  8. Click **Apply**.
  9. Click **OK**.
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