

IN-61-TM

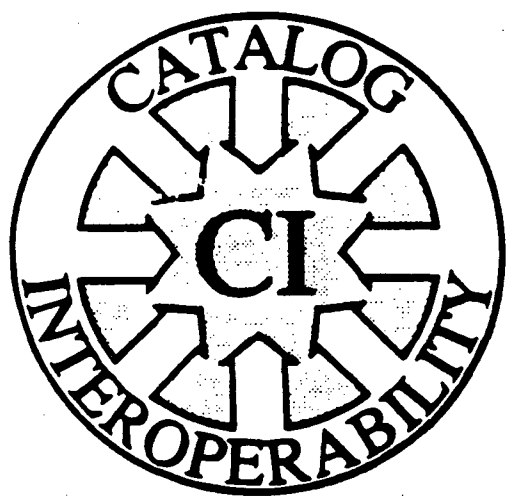


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P.13

WORLD DATA CENTER A for ROCKETS AND SATELLITES 89-19

The NASA Master Directory



Quick Reference Guide

November 1989



Goddard Space Flight Center

(NASA-TM-105070) THE NASA MASTER DIRECTORY: QUICK REFERENCE GUIDE (NASA) 13 p CSCL 09B	N91-30742
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NASA MASTER DIRECTORY QUICK REFERENCE GUIDE

1. INTRODUCTION TO THE MD

The NASA Master Directory (MD) is a free, online, multidisciplinary directory of space and Earth science data sets (NASA and non-NASA data) that are of potential interest to the NASA-sponsored research community. The MD contains high-level descriptions of data sets, other data systems and archives, and campaigns and projects. It provides mechanisms for searching for data sets by important criteria such as geophysical parameters, time, and spatial coverage. The MD also provides information on ordering the data.

The MD is more than just a directory, however. In order to simplify the process of finding more detailed information or accessing online data, the MD provides automatic connections to a number of data systems such as the NASA Climate Data System, the Planetary Data System, the NASA Ocean Data System, the Pilot Land Data System, and others. The MD also provides general information about many data systems, data centers, and coordinated data analysis projects. It represents the first major step in the Catalog Interoperability project, whose objective is to enable researchers to quickly and efficiently identify, obtain information about, and get access to space and Earth science data.

To learn how to get to the MD, see section 2. If you have trouble accessing the MD, or if you have questions regarding the NASA Master Directory or Catalog Interoperability, please contact Jim Thieman at (301) 286-9790 or Mary James at (301) 794-5316.

Features of the MD include:

- Capability of searching for data sets by any combination of keywords (discipline, location, geophysical parameter), start and stop dates, spacecraft or data source, sensor, geographic coverage, scientific project, and investigator;
- Easy-to-use menu, command, and screen-form interface that can be used with most terminal types (including smart and dumb terminals);
- Displays of data set information including title, summary, keywords, temporal and spatial coverage, archive information, data set personnel, and bibliographic references;
- Displays of data center information including data center services, contacts, access procedures, available distribution media, and costs;
- Displays of science project information such as scientific objectives, data characteristics, and contacts;
- Automatic connections to selected data systems or catalogs through a simple LINK command; and
- HELP from every MD screen.

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2. ACCESSING THE MD

LOG ONTO THE NSSDC VAX 8650

Via SPAN

From SPAN nodes, enter **SET HOST NSSDCA** from the **\$** prompt and enter **NSSDC** at the **Username:** prompt (there is no password).

Via Direct Dial

Set your terminal to full duplex, eight bits, no parity, one stop bit, and 300, 1200, or 2400 baud. Dial 301-286-9000. When the system responds with **CONNECT 1200** (or 300 or 2400), press return twice. At the **ENTER NUMBER:** prompt enter **MD** for the MD system. When you see the message **CALL COMPLETE**, press return for the **Username:** prompt. At the **Username:** prompt enter **NSSDC** (there is no password).

Via Telnet

From a Telnet node, enter **TELNET NSSDCA.GSFC.NASA.GOV** or **TELNET 128.183.10.4** at the system prompt. Enter **NSSDC** at the **Username:** prompt (there is no password).

Via Telenet

Enter **ID ;32107035/GSFC** at the **@** prompt within Telenet. Enter **036156** when prompted for a password. At the **Username:** prompt, enter **NSSDC** (there is no password).

SELECT THE NASA MASTER DIRECTORY OPTION FROM THE NSSDC MENU (Option #1)

The MD main menu will be displayed. From this menu you can select options to search for data set, data center, or project information (see the menu tree diagram at the end of the guide).

SELECT A SEARCH OPTION FROM THE MD MAIN MENU

Enter the number corresponding to the desired search option (data set, data center, or project information searching).

3. DATA SET SEARCHING

Data Set Information

CHOOSE YOUR DESIRED SEARCH CRITERIA

A search selection menu displays the available search criteria. Select the criteria that will identify data of interest (e.g., if specific geographic coverage is an important constraint to your data need, that would be one of the options you enter). It is usually better to begin a search with a minimum of criteria and then later use more as necessary. When using a combination of criteria (e.g., combining parameter keywords, sensors, sources, and temporal and spatial coverage), it is strongly recommended that you include discipline (space physics, Earth science, etc.) as one of your criteria. This inclusion may help focus the results of your search.

If temporal or spatial coverage or investigator is not critical to your research needs, you may want to use the multiple keyword option, which allows you to search all keyword fields (discipline, parameter, etc.) using several keywords. An AND or OR may be used in the query. There are no valid lists available with the multiple keyword search option; so searching with the discipline, parameter, and location keywords might be better if you are unfamiliar with the MD. It is usually better to specify a few simple keywords or even parts of words (e.g., MAG rather than MAGNETOMETER) rather than several compound keywords when using the word search option, which is not a full-text search system.

After entering the desired search keys, the keyword entry form will be displayed.

ENTER THE DESIRED VALUES

With smart terminals, your cursor will be positioned in the entry field; with line mode terminals, you will be prompted for the field value. Enter the value and press return. The cursor or prompt will then move to the next field. Entering a ? will give a list of valid values from which a choice may be made. Once all values are entered, the cursor or prompt will move to the COMMAND prompt. You can then enter SEARCH to start the search, or you can return to the fields to change a value by entering a period or by pressing return.

NOTE: The MD will return any values that match the characters entered. For example, if you enter NITR, values such as nitrogen, nitrogen dioxide, nitric acid, etc., will be considered to match the specified criteria.

Search Criteria Form

Lists of valid values are available for the following fields:

Discipline	Subdiscipline
Parameter group	Parameter
Sensor (instrument)	Source (e.g., spacecraft)
Location	Project

When entering values in these fields, the MD will automatically check to see if the value entered is valid. If it is not, a list of available values will be displayed, and you can select the number corresponding to the value of interest. If you do not want to select any of the values, enter EXIT to return to the entry form. Valid values for some criteria (discipline and parameter keywords, and discipline and location keywords) are cross-validated so that only combinations for which data set descriptions exist are displayed. When these criteria are combined with others such as sensor, source, or space and time coverage,

however, the use of valid lists does not guarantee that data set descriptions matching the search criteria will be found in the MD.

ENTER "SEARCH" TO SELECT DATA SETS

Once you are satisfied with the criteria entered, move to the command line (either using carriage returns or a period) and enter **SEARCH** to retrieve data set information.

Multiple Keyword Form

If you choose to search using the multiple keyword option, you can enter up to four keywords of any type (e.g., sensor names, geophysical parameters, discipline keywords, spacecraft names). **THERE ARE NO VALID LISTS AVAILABLE FROM THE MULTIPLE KEYWORD ENTRY FORM.** The multiple word search defaults to searching for data sets with *any* of the keywords entered (a Boolean **OR**, e.g., **Wind OR Nimbus OR Ocean**). You can change the **OR** value to an **AND** if you want to search for data sets containing a specific combination of keywords (e.g., **Temperature AND Cloud AND Aerosols**).

Once you are satisfied with the criteria entered, move to the command line (either using carriage returns or a period) and enter **SEARCH** to retrieve data set information.

ENTER "SEARCH" TO SELECT DATA SETS

The system will search the data base for data set descriptions as soon as the search command is entered. A list of data set titles that match the keywords and/or criteria specified will be displayed. The total number of titles found will be displayed at the top of the screen. You can page through the titles by entering **NEXT** (or carriage returns); the current page and total number of pages will be displayed in the upper right-hand corner.

SELECT A TITLE OF INTEREST

After looking at the titles, enter the number that corresponds to a data set of interest. To modify your search, enter **EXIT** to return to the previous level.

PRESS RETURN TO PAGE THROUGH THE INFORMATION OR ENTER DISPLAY FOR A MENU OF AVAILABLE DISPLAY SCREENS

After you select a title of interest, a brief description of the data set will be displayed. You can continue to enter carriage returns to page through the data set information. Available information is displayed in the following sections:

- Brief Description
- Data Set Attributes (keywords, coverage, spacecraft)
- Archive Information
- Data Set Personnel
- Bibliographic References

You can use the **DISPLAY** command to display any of these sections or to see a menu of available screen display options. In some cases you can use the **SUPPLEMENT** command to display related data center or project information.

If the **LINK** command is displayed at the end of the command line, you can enter **LINK** to connect to the discipline directory, catalog, or inventory system to find out more information about the data set. When you log out of a remote system, you will be returned to the same screen from which you entered the **LINK** command.

To select a new title, enter **EXIT** or **D Q** (for **DISPLAY QUERY_RESULTS**).

4. SEARCHING FOR DATA CENTER/DATA SYSTEM DESCRIPTIONS

After you select the data center search option from the MD main menu, an entry form will be displayed. Enter the common name (acronym) for the data center or data information system of interest (e.g., NSSDC, NODS, PDS, PLDS). For a list of available descriptions, enter ? and then enter the number that corresponds to your choice.

After entering the data center or data system name, enter **SEARCH** to search for the information. Then select the desired option from the query results and page through the available information. Enter **DISPLAY** to view the available screen display options.

5. SEARCHING FOR CAMPAIGN/PROJECT DESCRIPTIONS

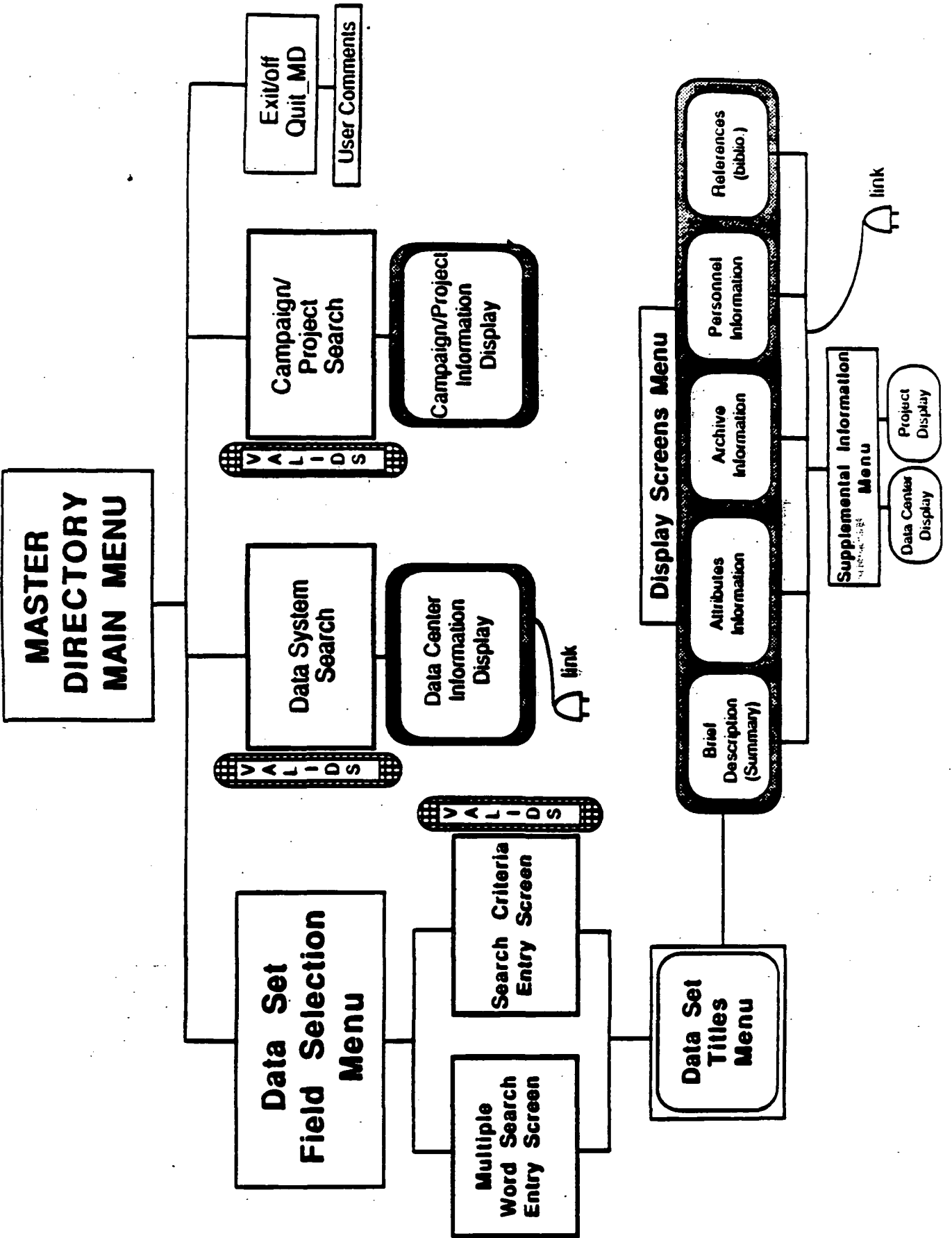
After you select the project information search option from the MD main menu, an entry form will be displayed. Enter the common name (acronym) for the scientific project of interest (e.g., ISCCP, FIFE). For a list of available project names, enter ? and then enter the number that corresponds to the project of choice.

After entering the project name, enter **SEARCH** to search for the project information. Then select the desired option from the query results and page through the available information. Enter **DISPLAY** to view the available display options.

6. EXIT THE MD

ENTER "QUIT_MD" WHEN YOU WANT TO LEAVE THE MD SYSTEM

After being prompted for any comments, you will be returned to the NSSDC menu. You can then select the logout option from the NSSDC main menu.



MASTER DIRECTORY A Scientific Data Information Service

Types of Services

The Master Directory provides five top level options to learn more about data.

Data Set Information

A search using selected keywords will provide you with a description of relevant data sets, their attributes, spatial and temporal coverage, data center, personnel contacts, and bibliography. More detailed information, browse or ordering capability is available through automated connections to other systems utilizing the LINK command.

Supplementary Information

Data Center Information

A description of the data center and its focus, contact information, access procedures, ordering and price policy, and available distribution media is provided. Direct access is provided to some data centers through the LINK command.

Campaign/Project Information

Scientific campaigns or projects, contact information, and their associated data bases are described.

Source/Spacecraft/Platform Information

Spacecraft/Platform and other data source information including orbital characteristics, mode of operation, attached instrumentation and dates of operation are described.

Sensor/Instrument Descriptions

The instruments and sensors used to obtain data are described. This includes the dates of operation, wavelength range, spatial and spectral resolution, and associated source/spacecraft.

The MD is a FREE on-line data information service.

The MD is MULTIDISCIPLINARY: data sets in Earth science (geology, oceanography, atmospheric science), space physics, solar physics, planetary science, astronomy/astrophysics are described.

The MD is MULTIAGENCY: it describes data held by NASA, NOAA, USGS, DOE, EPA and other agencies and universities.

Access Procedures

The MD resides on a VAX at NSSDC and may be reached by several methods. The MD is Option #1 on the menu of NSSDC's On-Line Data Information Services (NODIS) account.

From SPAN nodes:

\$SET HOST NSSDCA

USERNAME: NSSDC (no password)

From Internet:

\$TELNET NSSDCA.GSFC.NASA.GOV or

\$TELNET 128.183.10.4

USERNAME: NSSDC (no password)

Via Direct Dial:

Set modem to 8 bits, no parity, 1 stop bit, 300, 1200 (preferable), or 2400 baud.

Dial (301) 286-9000

ENTER NUMBER: MD

CALL COMPLETE: [CR]

USERNAME: NSSDC (no password)

For assistance or more information contact the MD User Support Office

National Space Science Data Center (NSSDC)

NASA Goddard Space Flight Center

Greenbelt, MD 20771

(301) 794-5186 SPAN: NCF::SHIPE

INTERNET: SHIPE@NSSDCA.GSFC.NASA.GOV

The Automatic LINK

The MD possesses the capability to LINK directly to other on-line systems. This immediate connection allows you to get more information on the directory entry, and in some cases, browse, manipulate, or order data of interest. The MD currently has connections to:

ADC	Astronomy Data Center
ARIN	Aerospace Research Information Network
CCRS	Canadian Center for Remote Sensing
EICS	Energetic Ion Composition Spectrometer File
EROS	Earth Resources Observation Systems Data Center
GISS	Goddard Institute for Space Studies
IUE	International Ultraviolet Explorer Processing Facilities
LANG	LANGMUIR Probe Catalog
LEDA	On-Line Earthnet Data Availability Catalog
MAG	Magnetic Field Experiment Catalog
NACS	Neutral Atmosphere Composition Spectrometer File
NCDS	NASA's Climate Data System
NODC	National Oceanographic Data Center
NODS	NASA Ocean Data System
NSSDC	National Space Science Data Center
OMNI	Interplanetary Medium Data Base
OCEANIC	Ocean Network Information Center
PDS	Planetary Data System
PLDS	Pilot Land Data System
SAI	Auroral Imaging File
SDCS	Synthetic Aperture Radar Data Catalog System
SDDAS	SWRI Data Display and Archival System
TOMS	Total Ozone Mapping Spectrometer Data
URI	University of Rhode Island/AVHRR Inventory
IDM/RPA	Ion Drift Meter/Reterodring Potential Analyzer Catalog
VEFI	Vector Electric Field Instrument Catalog
WATS	Wind and Temperature Spectrometer File

First Step to Data

Jim Thieman, Goddard Space Flight Center

Have you ever started a research task and needed to find overlapping measurements of two or more parameters for a given location? Did you wonder which data centers throughout the world might have datasets pertaining to your interests? Did you wish you could quickly access data information systems which have more details about the data (i.e., calibration, type of instrument, inherent problems) or offer browsing, data manipulation, or an automated data-ordering capability? The NASA Master Directory (MD) represents the first step to fulfilling some of these needs and is a free service available now for your use and evaluation.

The goal of the MD project is to enable researchers to efficiently identify, locate, and obtain access to space and Earth science data. The intent of the project is to work with existing data information systems and to influence newly developing systems to make them more interoperable by enabling a user to efficiently perform the data searches described above.

To fulfill this goal, representatives from several NASA and non-NASA data information systems meet regularly to try to implement an interoperable, network-connected data information system (see article on the Fourth Catalog Interoperability Workshop, p. 29). As a first step, the group has concentrated on developing interoperable directories which provide brief, overview information about available datasets and lead to the more detailed information. The first data information system incorporating the results of these interactions is the NASA Master Directory.

Version 1 of the Directory was released in September 1988 and is now

available for general use (see access procedures at the end of this article).

A Necessary First Step

The MD should be considered a first step in the data-search process for several reasons. It is the first step a researcher should take to locate data of interest in the Earth and space sciences. It is an index to all space and Earth science data holdings archived within NASA as well as those data stored in non-NASA institutions. The user can not only get information on where to go next to obtain further details about the data but, in many cases, the MD will automatically link the user to other data information systems which contain more detailed information online.

The MD and other interconnected data information systems are the first step in creating a virtual national data system which would provide the user in the space station era with an interoperable environment enabling efficient Earth and space science data location and acquisition.

The MD is the first directory to fully use the Directory Interchange Format

(DIF) as the basis for its database. The DIF was developed by the Catalog Interoperability Working Group as a standard for exchanging directory information among data information systems. The DIF defines a data structure in a simple keyword = value ASCII file which is relatively simple for a data holder to create and edit, and the resulting file can be automatically loaded into the MD database.

The MD user interface resides on a VAX 8650 computer within the National Space Science Data Center (NSSDC) at the Goddard Space Flight Center. It is written in the C language and uses the CURSES screen control to display information for the user. The interface supports some of the full-screen capabilities of many terminals and PCs, especially the DEC VT-compatible terminals, but it is also usable from the simplest "dumb" terminal. The MD database is contained in a Britton-Lee IDM 500 database machine attached to the VAX.

Using the Master Directory

The Directory is a service available to all researchers. It is one of several services offered within the captive (no password) NSSDC account. When a user first logs in he is asked for name and address information so that we might send data or provide direct response or further assistance as needed. The user also may be asked to describe his terminal type at this point. Next, the menu showing the services available in the account is displayed. The NASA Master Directory is option 1 in this menu. Choosing this option brings one to the Master Directory main menu.

As the user enters the MD he will be asked to participate in an evaluation of the Directory by answering some brief questions. This evaluation will take place from June to December 1989, and is part of an effort to determine user needs and the ability of the Directory to fulfill them. The evaluation is central to future Directory and interoperability de-

velopment, so we encourage user participation.

From the main menu (top box in the figure), the user may choose to search for information on datasets, descriptions of coordinated data-analysis campaigns or projects (usually from several spacecraft or ground sensors), or descriptions of data centers holding space and Earth science data. In the last of these options there may sometimes be an online data information system available within the data center being described. If the MD has a connection capability to the other information system, a LINK command is offered and the user may enter that command to invoke the connection. The user is then automatically

The Master Directory is the first step a researcher should take to locate data of interest in the Earth and space sciences. It is an index to all space and Earth science data holdings archived within NASA as well as those data stored in non-NASA institutions.

logged into the other data system and can continue from that point. When exiting the other system, the user is returned to the place from which he left the MD.

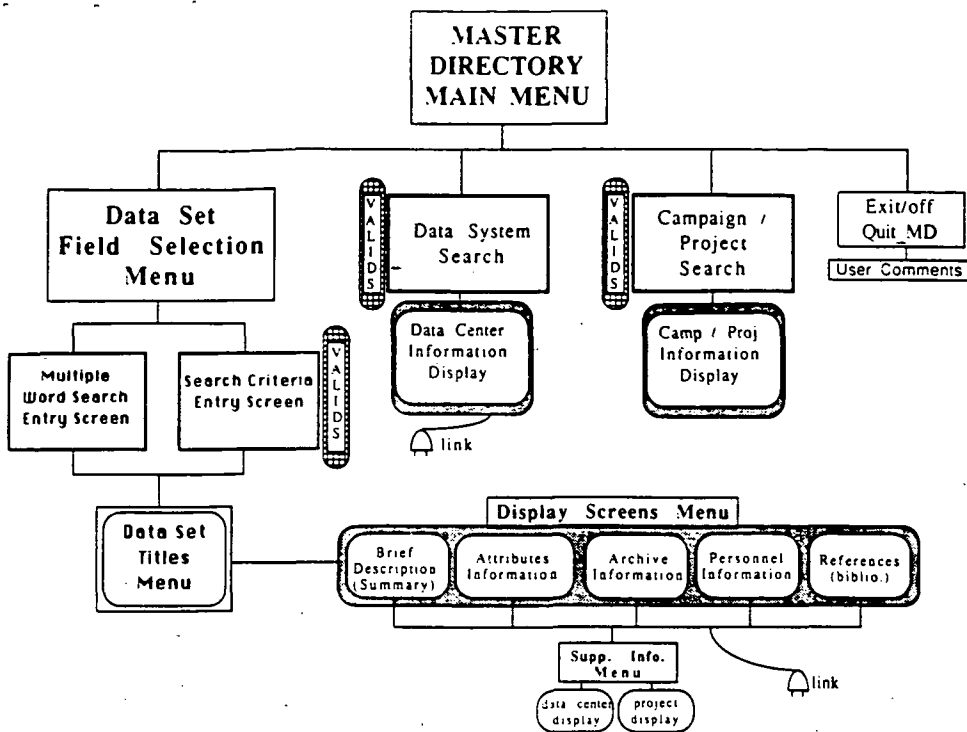
Most Directory users are interested in taking the first option and searching for specific information about datasets. As seen in the figure, there are two methods offered.

The first method allows the user to enter up to four words or phrases which are compared against all database entries in the major keyword fields. The results of all of the searches are combined using either the Boolean "and" or "or" depending on the user's wish for either the intersection or union of all datasets

found. It should be mentioned that an entry will have a "wildcard" operator attached to the end so that, for example, an entry of "MAG" will successfully match such keywords as "MAGNETOMETER," "MAGNETIC FIELDS," and "MAGSAT." It will not, however, match "FLUXGATE MAGNETOMETER" since the characters "MAG" must appear at the beginning of the keyword. There is no guarantee that a specific word or phrase will be found among the entries and the more specific the user becomes in specifying search words or phrases, the less likely it is that any datasets will be found. It should also be understood that this search method cannot be used in conjunction with a request for specific times or spatial areas of interest.

The second method is more structured and more certain of yielding results. In this method the user chooses one or more of the following specific categories of keywords to be used in a search: science discipline, parameter measured, location keyword, latitude and longitude range, time range, sensor name, source (i.e., spacecraft, platform) name, investigator, campaign, data center, and general keyword.

As the user enters values into some of these categories, the values are compared against lists of valid values for those fields. If the choice is not on the valid list, the user is so informed and told to enter a "?" to display the list of valid values from which to make a choice. When keyword categories have valid lists, the choices will often be "cross-validated" so that, for example, when discipline and parameter are used together, the choice of "Earth science" as the discipline will limit the number of valid parameters to only those which have been used in the datasets keyed as "Earth science." This guarantees that a choice from among the "cross-validated" parameters will return at least one dataset in a search. The result of a dataset search is the display of a list of titles which satisfies the search requirements. Selecting a particular title of



interest leads to the display of all of the information contained about that entry on a series of screens, starting with a brief summary of text description. At any point, the user may exit those screens and go back to the titles menu to select a different title, or may choose to go to the search key selection screen and modify the keywords to try a different search. The user may choose to see supplementary information about data centers or campaigns which may be relevant to this dataset. This is the same information which would be seen in the alternate paths from the main menu as described above.

If further information about the selection is available in other data information systems, and if a link to that data system is available from the Master Directory, the LINK command will appear at the end of the line of allowable commands. As mentioned before, invoking this command will result in an automatic login to the other information system. Upon logging out of the other system, the user will return to the MD from the point of departure. Currently, the MD provides connection to approxi-

mately 15 other data information systems and the number is increasing with time.

Obviously, the usefulness of the directory will depend on its ability to satisfy the data information needs of the scientific community. The wider the range of dataset information contained, the more likely it is that users will find what they need. In much the same way that research results should be published to add to the body of scientific knowledge, useful datasets which are created should be made known to the scientific community to expand the foundation for research. We invite those who hold useful and usable datasets, and who are willing to make copies of the data for others, to submit information about their data to the MD via a DIF file(s). The DIF file is not difficult to create and does not require much time. A manual describing the process of creating the DIF file is available from the author.

The directory is still in its infancy, but we believe it is sufficiently mature to be of service to many researchers interested in identifying, locating, and learning how to acquire data of interest. The directory is a free service and we invite all to try it and let us know if it fulfills this function.

The methods of access are as follows.

SPAN:

From SPAN nodes, enter "SET HOST NSSDCA" from the \$ prompt and enter "NSSDC" at the Username: prompt; there is no password.

Direct Dial:

Set your terminal to full duplex, eight bits, no parity, one stop bit and 300, 1200, or 2400 baud. Dial 301-286-9000. When the system responds with CONNECT 1200 (or 300 or 2400), press return twice. You will be prompted ENTER NUMBER::; you then enter "MD" for the MD system. When you see the message CALL COMPLETE, press return for the Username: prompt. At the Username: prompt enter "NSSDC" (no password).

INTERNET or ARPANET:

Enter TELNET 128.183.10.4 to connect to the NSSDCA computer. At the Username: prompt enter "NSSDC" (no password).

TELENET:

Enter "ID ;32107035/GSFC" at the @ prompt within Telenet. Enter "036156" when prompted for a password. At the Username: prompt enter "NSSDC" (no password). Telenet access may change in the near future, so contact the author if you are unsuccessful via this method and have no convenient alternatives.

At any point in the MD, the COMMENTS command may be issued and comments entered. We welcome your evaluation. For further information contact the author: (301) 286-9790, FTS 888-9790; JTHIEMAN/GSFCMAIL, NSSDCA::THIEMAN.

Progress and Goals Discussed at Fourth Catalog Interoperability Workshop

The Fourth Catalog Interoperability (CI) Workshop, hosted by NSSDC from May 3-5, brought together members of the CI working group, the CI science advisory group, and interested observers to discuss progress on the issues of data system interoperability and the NASA Master Directory (MD), and to establish new goals for the CI effort. Decisions were made to proceed with the advertising and evaluation of the Master Directory, to test the passing of user data search criteria among inventory and catalog systems, and to analyze additional building blocks of an interoperable data system to support global change and space science research.

One of the most important recommendations was that evaluation of the Master Directory should begin as

soon as possible (see facing page). The data set entries in the MD were provided by NASA, the National Oceanic and Atmospheric Administration (NOAA), the U.S. Geological Survey (USGS), and the international and academic communities. The evaluation is designed to determine the preferences and research interests of the users and priorities for future directory development.

Progress in providing efficient mechanisms for locating data of interest was discussed. These efforts focus on cooperation and standardization among discipline and agency data systems, as well as standards such as the Directory Interchange Format (DIF) and user search criteria passing from one system to another. The resultant interoperable

system should allow a user to efficiently locate, learn about, and order data of interest through widely scattered data systems.

Plans for increasing interoperability among the interconnected systems were also discussed. The MD is being replicated in Italy to test its use as a prototype international directory to earth observing data. It will be used by the International Committee on Earth Observation Satellites (CEOS) Working Group on Data to evaluate issues associated with international data directories and access.

There was much discussion of "context passing." Context passing involves forwarding information about a user's data interests (time and spatial coverage, keywords, etc.), account, and address from one system to another. Passage of this information would allow a user to first determine that a data set of interest exists, then automatically move to the inventory to learn which specific data items are available. Passing the context would allow an inventory to quickly lead a user to the chosen data. In some cases, the context would be passed to a catalog system that could provide more information about the data collection, processing, or analyses. In addition, workshop participants decided that the advanced concepts of multi-inventory search capabilities of the NSSDC-developed Distributed Access View Integrated Database (DAVID) software should be tested and evaluated with selected data systems.

Scientists, data managers, and system engineers representing U.S. and international organizations and projects attended the workshop. They represented such projects as Eos, CEOS, NOAA, USGS, NASA discipline data systems, and NASA Headquarters. Short presentations were given by several multi-institution groups, including CEOS, the Interagency

see CI, page 20



Photo by Jay Friedlander

CI Workshop participants, bottom, left to right: B. Callicott (NOAA), M. Martin (JPL/PDS), M. James (NSSDC), E. Smith (JPL/NODS), N. Wakim (NSSDC), T. Jefferson (SAIC). First step: G. Karas (JPL/PLDS), F. Slazer (USGS), P. Bailey (NSSDC), V. Abreu (University of Michigan), G. Milkowski (URI), S. Ungar (GISS), R. Jenne (NCAR), M. Schein (NSSDC). Second step: E. Stemmer (Bendix), L. Ashcroft (TRW), E. Dobinson (JPL/PDS), S. Lubow (ST SCI), R. Walker (UCLA). Top: J. Brown (JPL), G. McConaughy (NSSDC), P. Ramamurthy (NSSDC), P. Comillon (URI), M. van Steenberg (NSSDC), M. Johnson (JPL/PLDS), J. King (NSSDC), R. Chinman (URI), L. Oleson (USGS/EROS), J. Thieman (NSSDC), R. Dorsey (NSSDC), M. Elington (EOS/U.K.), C. Hood (SAIC), G. Saxton (NOAA), G. Hunolt (NASA HQ).

CALENDAR

June 19-20, 1989	CD-ROM Workshop Goddard Space Flight Center
September 20-22, 1989	NASA's Climate Data System Workshop Goddard Space Flight Center
December 10-12, 1989	CDAW 9.2 Stanford University

PLDS Releases Production Version

NSSDC's Pilot Land Data System (PLDS) office recently released the production version of its PLDS-88 software and the associated *PLDS User's Guide*. During the beta-test period, the software was extensively and critically reviewed by a variety of independent land scientists and the PLDS Science Working Group members. The test results were favorable.

Written reports from four of the beta-test sites have been compiled into the document *Validation and Verification of PLDS-88*, which is available from the PLDS project office at NSSDC. Re-

CI, from page 14

Working Group on Data Management for Global Change, NASA's Earth Science Applications Data System (ESADS) project, the Eos mission, and the International Geosphere Biosphere Program. Representatives of these agencies described their efforts to make data more available for the solution of important research problems. There were also presentations by several system development groups about the status of their data management systems. All shared their plans to further the goals of interoperability.

The next CI Workshop is planned for January 1990. A detailed report on the recent workshop is available from Maryel Schein at (301) 286-9761 or NCF::SCHEIN.

James Thieman and Mary James

viewers' comments were examined in detail by the system developers; many of their suggestions have been incorporated into the production version.

NSSDC currently ports this software to the other PLDS nodes and plans to have the software up and running at JPL within a couple of months and at ARC by October. The PLDS software will function in a new operating system environment at the ARC node. This new version of the software has three new functional components, and two of the existing functions have been substantially improved. Directory and catalog functions have been added by capitalizing on existing software and information collected by other Goddard activities (i.e., the Master Directory for the directory and NASA's Climate Data System for the catalog). A query tool was also added; it permits users to access all pieces of data within the data system without knowing the logical structure of the data bases. The data access and inventory functions have been rewritten to provide greater functionality and to make them easier to use.

The inventories at ARC, NSSDC, and JPL have been loaded with information about current PLDS data holdings and other data holdings at the three centers. NSSDC will continue to expand this information by adding more entries for each data set already supported by the PLDS and by supporting several new data sets.

Blanche Meeson

Data Inquiries

For information on submitting data to the Data Center or inquiries regarding availability, cost, and ordering procedures, researchers within the United States should contact:

Submissions:

Dr. H. K. Hills
National Space Science Data Center
Code 633.8
Goddard Space Flight Center
Greenbelt, Maryland 20771
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