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Upper Atmosphere Research Satellite (UARS) Central Data Handling Facility (CDHF) Software System (UCSS) User's Guide

CSC

Revision 8

Prepared for

National Aeronautics and Space Administration
Goddard Space Flight Center
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Under

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Task Assignment 5146

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UPPER ATMOSPHERE RESEARCH SATELLITE (UARS)

CENTRAL DATA HANDLING FACILITY (CDHF)

SOFTWARE SYSTEM (UCSS)

USER'S GUIDE

REVISION 8

Prepared for

GODDARD SPACE FLIGHT CENTER

By

COMPUTER SCIENCES CORPORATION

Under
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Prepared by:

(signature) 10/16/92

S. Adamson   Date

N. Downs
C. McCrobie
H. Nguyen
B. Pedersen
A. Reindollar

Approved by:

K. D. Taylor 10/16/92

K. D. Taylor   Date
UCSS Project Manager

ABSTRACT

Computer Sciences Corporation (CSC) is under contract (NAS 5-29250) to the National Aeronautics and Space Administration (NASA) Goddard Space Flight Center (GSFC) to develop major portions of the Upper Atmosphere Research Satellite (UARS) Central Data Handling Facility (CDHF) Software System (UCSS). In addition, CSC is tasked to provide technical support to the UARS Principal Investigators (PIs) and operations personnel. Services provided by the UCSS include the data transfer services, user interface services, and operational support services. This User's Guide is a user reference manual describing those services available to the general CDHF user community.

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Section

1

Introduction

1.1 Purpose of this Document

> The UCSS User's Guide presents the information needed to effectively use the UCSS services. Its primary goals are to teach the new user how to access the UCSS services, and to serve as reference material for the more experienced user.

The audience for this document is expected to be the scientific users of the Upper Atmosphere Research Satellite (UARS) Central Data Handling Facility (CDHF) Software System (UCSS). Scientific users include Principal Investigators (PIs), Collaborative Investigators (Co-Is), Theoretical Investigators (TIs), and their associated staffs. Other UCSS users include operators, production support and data base administration personnel. Their views to the UCSS are provided in the UCSS Operations Guide (Reference 6), and the UCSS Data Base Administration Manual (Reference 3). The program interfaces used by the PIs in the development of production programs are documented in the UCSS Programmer's Guide to Production Software Support Services (Reference 2).

The UCSS User's Guide has several goals summarized in Table 1.1. The first goal is to teach a new user how to interact with the system. The User's Guide provides detailed descriptions of the menus, commands, reports, and displays that are available to the user. The UCSS also provides online help information and online menus designed to guide the user through the execution of the UCSS system capabilities.

The second goal of the User's Guide is to provide reference material to the user. It can be used to look up the procedure for performing a UCSS function, the parameters and their format, an explanation of the format and content of a display or report, the meaning of an error message, or other information. The document was designed to allow the user to quickly find needed information. A complete table of contents and index is provided for easy access to desired information.

The third goal is to show alternative ways for performing the same functions. Every major interactive function that the user can perform is described in a separate section in this document. That section shows the menu tree that selects that function and the command structure for invoking that function from VAX/VMS DCL. A user accustomed to performing some function from a menu may choose to embed a DCL command equivalent in a command procedure.

It is assumed that the user already understands the basic UARS concepts like data types and other UARS terminology. The user should also be familiar with the basic VAX/VMS concepts, control language and help systems.

Function	For Example:
Help the User Get Started	Introduce functions and benefits Teach basic operations/procedures Warn against errors
Help When Things Go Wrong	Describe meaning of errors Identify problems/solutions
Improve Productivity and Satisfaction	Demonstrate optional methods Teach shortcuts Aid customization/modification

Table 1.1. The Purpose of the UCSS User's Guide

1.2 How the User's Guide is Organized

The first two sections of this document introduce the user to the basic user interface concepts and conventions. The remaining sections describe in detail how to use the UCSS services. This document is designed to provide quick and easy access to any needed information.

A new user of the UCSS should read Sections 1 and 2 before attempting to use the system. Section 1 defines the terminology and the environment for the rest of the document. Section 2 describes how to begin using the system. It includes a discussion of how to use the menus, screen handling software, and the help facility. After completing the first two sections, the reader should be able to refer to and understand any portion of the remainder of the manual.

This document contains a table of contents and various appendixes to aid the user in locating particular information. Tables and Figures are provided to clarify the presentation of information. Once on the system, the User's Guide is augmented by online help and menus which provide additional aid in the operation of all basic functions.

Each section of the User's Guide is partitioned into several subsections. Each subsection is devoted to a separate topic. The page layout presents the entire concept with minimal page turning. Each subsection contains a functional headline, a topic summary, text presenting the ideas of the topic, and one or more examples, tables, or figures to illustrate the points of the topic. Table 1.2 provides an overview of the contents of the User's Guide by section.

Section	Contents
1	Introduction to the User's Guide Brief overview of the UARS CDHF environment
2	Accessing the UCSS services
3	Data catalog services
4	Data transfer services
5	Orbit/Attitude Services
6	Displays: invoking them, format, contents, and options
7	Reports: how to invoke them, what they look like, and what they contain
8	Decommutated ACRIM File Structure
9	Grid Utility
Appendix A	Error messages: list of messages with cause and suggested responses
Appendix B	OSR Display Services - Screen Definitions & Use
Appendix C	UCSS Data Type/Subtype Definitions
Appendix D	Menu/Command tree: menu selections available and command equivalents
Appendix E	Node Name Assignments
Appendix F	Job Identifier Structure
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Table 1.2. Summary of the User's Guide by Section

1.3 The UARS CDHF Software System

> The UARS CDHF is a collection of hardware, software, and operational components that support the access to and processing of UARS data by the UARS scientific community.

The primary mission of the UARS CDHF is to host the production processing, data management, and user data access functions for the UARS project. The UCSS is designed to provide services that support these functions. Interactive UCSS services can be accessed through a menu system, or through commands or command files. The interactive functions include data transfer, data catalog, report/display, and orbit/attitude services. These services are explained throughout the remainder of this document.

Figure 1.3 summarizes the UCSS services and interfaces. Data are received from the Data Capture Facility (DCF), Flight Dynamics Facility (FDF), and correlative data sources under the control of the data transfer services. This data may then be processed using the appropriate production processing programs. The data is then available for transfer to Remote Analysis Computers (RACs) or to user directories on the CDHF.

Interactive services provide menus, command interfaces, alert generation, system logging, displays, reports, system monitoring, and access to other utilities.

Services that support the production processing environment include the automatic and manual scheduling of production jobs, the production software support services, and the simulated services.

Data transfer services support the transfer of data to and from the RACs. The use of these services control the communication bandwidth with the RACs.

Data management services include storage management (controlling the storing and accessing of data) and catalog management functions (e.g. staging data for processing or destaging data to make room for other data). In addition, program and interactive data querying capabilities are provided.

Accounting data are gathered and maintained for production services and for data transfer services.

INTERACTIVE
INTERFACE

DATA
TRANSFER

UCSS

INTERACTIVE SERVICES

PRODUCTION SERVICES

DATA TRANSFER
SERVICES

DATA MANAGEMENT
SERVICES

DBMS

RAC USER

LOCAL USER

CDHF OPERATIONS

CORRELATIVE
DATA
SOURCES

DATA CAPTURE
FACILITY
(DCF)

FLIGHT DYNAMICS
FACILITY
(FDF)

REMOTE ANALYSIS
COMPUTER
(RAC)

OUTPUT TAPE
DESTINATIONS

ACRIM II
PRINCIPAL
INVESTIGATOR

NSSDC

Figure 1.3. UCSS Services and Interfaces

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1.4 The Hardware Environment

> The UCSS is implemented on a DEC VAX/VMS cluster designed to provide enough computing power and data handling capability to support both production processing and the interactive and data transfer needs of remote users.

As with many data processing environments, the hardware configuration of the UARS CDHF is expected to be dynamic, changing as the needs of the environment and technology change. The core of the system is configured as a VAX based cluster, multiple magnetic disk storage, and other peripherals. It uses a virtual memory management scheme based on a 32 bit architecture. Resources including disk files and job queues can be shared across the cluster.

Peripherals include magnetic disks, magnetic tapes, and an online mass storage system (MSS). In addition, there are line printers, local terminals, and a console printer.

A DEC Ethernet Local Area Network (LAN) is also included in the hardware configuration. This LAN supports communication among the CDHF processor(s) and the RAC systems.

1.5 UARS CDHF and RAC Environments and the UCSS

> The processing of UARS data can take place in three separate
> environments. These are the production environment, the user
> environment and the RAC environment.

From the UARS scientific users point of view, two facilities support the processing and analysis of his data. They are the UARS CDHF and his RAC. The RAC is dedicated to and controlled by the scientist/user at that facility. The RAC also provides a means to access the UARS CDHF. The RAC communications capability is designed to support several simultaneous users per RAC (over DECnet).

The CDHF is a shared facility. It is shared among the scientific users and operations personnel. The CDHF System Manager controls the accounts and the allocation of system resources.

As shown in Figure 1.5, the UARS CDHF magnetic disk space is divided into UCSS-managed disk space and user-managed disk space. UCSS-managed disk space is that portion of the CDHF storage space that is controlled by the UCSS. It is used for the storage of the UCSS Catalog, cataloged files, and various types of work spaces. User-managed disk space is that portion of the CDHF magnetic disk storage space that is controlled by the scientific user community.

The amount of disk space allocated to the UCSS functions is controllable by operations personnel. Maintenance of the files in the user directories is the responsibility of the users.

Figure 1.5   UARS CDHF Disk Space Allocations

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1.6 Summary of the User Environment

> The user has several ways to interact with the UCSS services. This includes VAX/VMS-like commands, menus, prompts, VAX/VMS-like help screens, various reports and displays, and an INGRES data base system.

The UCSS provides several features about the operation and processing for the UARS environment. These include the following:

- VAX/VMS-like commands for UCSS functions
- Menus and prompting screens using full screen editing services
- Help system using the VAX/VMS help services
- Status displays for measuring status/progress of various UCSS services on the data being processed
- Reports on the processing of data
- INGRES data bases and the use thereof

Most of the UCSS interactive functions can be accessed through commands that look much like VMS DCL commands. These commands may have parameters and/or qualifiers like many VAX/VMS commands have. This means of accessing the UCSS services is described in detail in Section 2.7.

The UCSS services may also be selected from menus. When using this approach, information is supplied to the UCSS through prompting screens. A more detailed explanation of this approach is supplied in Section 2.6.

Both the command and menu systems just described provide access to a VMS HELP system. The HELP facility is further described in Section 2.4.

Various displays can be invoked from either the menu system or through VMS-like commands. They provide various displays about general status of UCSS processing, production processing, production scheduling, and RAC transfers. The detailed content of these displays is presented in Section 6.

Various reports may be generated that summarize production processing, data transfers, and resource usage. Reports differ from displays in that they are designed for 132 column hard copy output. Reports also summarize information over a time period, while displays are snapshots of information. Reports must be run while logged onto a node that has INGRES installed. Reports are discussed in more detail in Section 7.

The services allow the user to perform a variety of activities that help him to track and analyze the results of UCSS processing. The data transfer services allow the transfer of data to and from the CDHF. The data management services allow the user to query the catalog which keeps track of the data resident at the CDHF. In addition he may catalog a calibration or correlative file or provide some limited updating of catalog entries. The Orbit/ Attitude services aid the user in interactively analyzing data. Displays are

available to check the status of production processing and data transfers. Reports are available to provide analysis of processing histories. These topics are covered in detail throughout the remainder of this document.

Section

2

Getting Started

2.1 Terminal Support

> The UCSS operates on several terminal types. The ability to access the
> UCSS services through a hard copy terminal is possible through the
> command interface. This option does impose some limitations on the
> interface with the system.

The UCSS may be operated by using VMS-like commands or by using the UCSS menu
system. The command mode uses DCL-like commands to perform the UCSS services.
The menu mode uses a screen interface called the Operations/User Support Run-time
(OSR) services. This screen interface is a full-screen editing system and is described
more fully in Section 2.5. Functions that require the OSR display services are not
available on terminals not supported by this software. The following terminals are
supported by the OSR display services:

- Tektronix 4106 compatible (e.g 4107 & 4109) color graphics
- DEC VT100 alphanumeric
- DEC VT240 series graphics

If a later model terminal is used and problems are encountered in attempting to use the
display interface, it is recommended that those terminals be set up to emulate the
VT100 or VT200 series terminal.

The UCSS software can be operated from a hard copy terminal or a terminal type not
supported by the UCSS display system. On hard copy terminals, perform all desired
functions through the VAX/VMS DCL interface. These commands are summarized in
Section 2.7.

The prime limitation to running on a hard copy device or unsupported terminal type is
that UCSS displays may not be available. These include menus, prompting sequences,
updating displays, and most sequential displays. Parameter checking, error messages,
reports, and the other interactive UCSS functions are available in the command mode.

2.2 How to Interactively Access the UCSS

```
UCSS interactive services are available to authorized users.
Authorization is provided through accounts and passwords assigned by
CDHF operations as determined by the Project Office.
```

To access the UCSS services a user must be authorized to use the CDHF. An authorized user is assigned an account number, default disk device and directory name, default devices, a password, and a set of privileges and resource quotas. To obtain authorization, contact the CDHF Coordinator for your RAC/group. The CDHF/RAC Coordinator will set up your account with the resident system manager for the UARS CDHF.

To access the CDHF node, first log onto the local RAC computer, then enter the following command:

$ SET HOST <node-name>

Where the node names are defined in Appendix E. Then, in response to the prompts, enter your user name and account password. Your account on the CDHF should include the login procedure referred to in the following paragraph.

The UCSS login procedure defines symbols used by the UCSS services and sets up UCSS commands. These symbols are defined in the command procedure UCSSLOGIN. To access these symbols, the following command sequence should appear in the user's login procedure:

$ SYS_CONNECT UARSDB

$ @UCSS_ROOT:UCSSLOGIN

Once logged onto the CDHF, there are several interfaces or "views" available to the user as mentioned in Section 1.6. The remaining sections in Section 2 further describe these interfaces. They include the following:

- The Operations/User Support Run-time (OSR) services provide a full screen editing mode to support menus and prompting sequences.

- The INGRES Data Base Management System provides data base services to authorized INGRES users.

- The UCSS services can be accessed by a VAX/VMS-like command system as well as the menu system.

- A VAX/VMS help system is available for UCSS services. This help system operates in the same fashion that the standard VAX help system operates.

2.3 Security

Security is required both in the access to data and the access to resources. Most of the security is provided through VAX/VMS supplied methods.

Various forms of security are provided by the UCSS services to protect UARS data and information, and to restrict access to privileged functions.

UCSS uses VMS provided file protection mechanisms. UCSS-managed cataloged data files are read-only files. The intent is to allow only the UCSS-controlled services to read, write, or delete UARS data files. In this manner, the UCSS maintains knowledge of where files are stored through the data catalog. When files are staged/destaged from/to the Mass Storage Subsystem, the creating and deleting of files uses UCSS access rights.

Files are cataloged through production programs or interactive cataloging services (the $ CATALOG command, $ CORRELATIVE command, equivalent menu selections). A user may catalog files of a data type for which he is authorized to catalog. A list of what user names may catalog which data types is maintained by CDHF operations personnel.

Operations services are restricted to those personnel in the operations group. Control of who may gain access to operations menu functions and the equivalent commands is maintained by operations personnel.

2.4 The HELP Features

> A UCSS help feature is available to the user from menus or from the
> DCL level. Topics include the UCSS commands, the UCSS menus, and
> software support services calling sequences.

Help is available to the users from both the menus and the command line interface. The help feature uses the standard VAX/VMS Help Facility. Help is available from the DCL prompt by using the symbol $UCSSHELP. Topics covered by the help facility for the UCSS environment include:

- UCSS Commands and their syntax/usage
- Summary of each UCSS interactive capability and how to invoke it
- Various tables of commands/formats/error messages
- Description of the calling sequence to each interface specified in the Programmer's Guide to Production Software Support Services

Most menus have a help option. Selection of the help option provides help concerning the menu in which the user resides at the moment. More global help is provided from the main menu.

The same help information is accessible from the command line. By entering the qualifier /HELP with any of the commands, the help descriptions for that command is provided. If the /HELP qualifier is used, other qualifiers are ignored. A more global help is provided through the command $UCSSHELP.

Help is provided on the production software support services through the symbol PGHELP. These symbols are defined in UCSSLOGIN.COM.

2.5 OSR Display Services for Menus/Prompting Sequences

> The Operations/User Support Run-time (OSR) services provide a full screen editing service used in the support of menus and prompting sequences. This mode of operation provides a specialized screen format and command set.

The menu system and many applications that the menu system invokes use the OSR display services. This display interface uses its own screen layout and command set for controlling both the on-screen cursor and the underlying applications. The use of the menu system and the applications invoked is further described in Section 2.6. The remainder of Section 2.5 summarizes the mechanics of the OSR interface itself. Further information about the OSR may be found in Appendix B.

The term "screen" refers to the image visible to the user at one time on a CRT. A screen consists of 22 lines containing 80 characters of information and is shown in Figure 2.5. The information at the top of the screen identifies the display that generated the screen image. The message line is used for status information intended to keep the user apprised of processing progress or detected errors. The command line is identified by the "UARS>" prompt.

Commands may use upper case or lower case. Parameters must be separated from the command by one or more spaces. The full command string may not exceed the length of the command line. Any commands entered that exceed the command line wraps around to the beginning of the line. Continuations are not permitted. Commands may be abbreviated to the shortest unique letter sequence (one letter beyond ambiguity) (e.g., "T" is acceptable for TERMINATE. See Appendix B for more information.

The term "display" refers to a related set of information that is presented over one or more screens (or pages). The current page number and the number of pages are indicated in the bottom right corner of the display screen. For multi-page displays, the user may scroll through the display, one screen (page) at a time. The **PAGE** command (entered at the UARS> prompt line) selects which page of a current display is to be generated.

> e.g.   **PAGE** 3   selects the third page of the current display
>   **PAGE**   selects the next page of the display
>   **PAGE** -1   selects the previous page of the display

The **PAGE** command (as all OSR commands) may be abbreviated to its shortest unique form, i.e. **PAGE** may be shortened to P, e.g.

> **P** 3   is the same as   **PAGE** 3

An application program may request that data be input through a prompting sequence. The prompts are issued in the applications display area.

The special function keys (see Table 2.5) allow the user to move to and modify the editable data fields. To edit, the user moves the cursor (by using the TAB key and arrow keys) to some part of an editable field and types over the existing value. When all changes have been made, the user leaves the field either by typing in the last character of the editable field, by using the TAB key, or by entering CTRL-J to move to the command line. However, the cursor is not moved until the user's input has been validated. If the user's input fails data validation (e.g., limit and data type checks), the cursor is placed at the first character position of the invalid field, the field is changed to blinking text, and an error message is displayed on the display message line. The field may then be re-edited.

```
┌─────────────────────────┬───────────────────┬────────┬────────┐
│ DISPLAY NAME (CPOINT NAME) │      TITLE        │  DATE  │  TIME  │
├─────────────────────────┴───────────────────┴────────┴────────┤
│                                                                 │
│                                                                 │
│                                                                 │
│                                                                 │
│                        APPLICATIONS                             │
│                                                                 │
│                          DISPLAY                                │
│                                                                 │
│                           AREA                                  │
│                                                                 │
│                                                                 │
│                                                                 │
│                                                                 │
├──────────────────────────────────────────────┬────────────────┤
│          MESSAGE    LINE                       │   DS i OF J     │
├──────────────────────────────────────────────┼────────────────┤
│ UARS>      COMMAND    LINE                      │   PG m OF n     │
└──────────────────────────────────────────────┴────────────────┘
```

Figure 2.5.   Display Screen Format

If the user's input validation is successful, the cursor is moved to the next field or to a location based on the selected special function key. After the last field in the display is edited and validated, the cursor moves to the command line. CTRL-J moves the cursor to the command line from any editable field.

After fields have been edited to the desired data, the NEXT command exits from the prompting sequence and resume application processing. The SHOW command is used to request information from the display system about the current software version, calendar date, display format of an editable field, and current default command.

SHOW FORMAT requires an editable field to be current. To select an edit field, the NEXT FIELD or PREVIOUS FIELD keys are used to place the cursor at the beginning of the desired edit field. To place the cursor on the command line, the user hits the CTRL-J (PF1) key and then enters SHOW FORMAT.

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If the user enters **SHOW DEFAULT** and no default command has been **ESTABLISH**ed (c.f. Appendix B), a message to that effect is sent to the display message line.

The **TERMINATE** command exits the applications process. For some applications, **TERMINATE** is the standard way to exit the process. For others, **TERMINATE** should be used when the user must abort the process.

To interrupt applications processing, the user hits the **ENTER COMMAND** key to move the cursor to the display command line. He then enters **TERMINATE**. Response is delayed briefly if the display system is currently generating the next display.

Displays are manipulated and edited by users by run-time commands, and special terminal function keys. Commands allow the user to perform such functions as paging through multi-page displays, selecting items on a menu, and proceeding to the next display (i.e. continuing processing).

Key functions and device keyboard assignments are summarized in Table 2.5.

KEY NAME	FUNCTION	KEYBOARD ASSIGNMENT		
		VT100	VT240	TEK401X
COMMAND TERMINATOR	Send command on command line to be processed (if no command on command line, default is sent if one has been ESTABLISHED- see Appendix B).	RETURN	RETURN	RETURN
DELETE IN FIELD	Delete character in edit field or command line; move cursor back one space and erase character at that position (cursor stops at beginning of edit field).	DELETE	DELETE	RUB OUT
ENTER COMMAND	Interrupt applications processing and move cursor to beginning of command line to permit command entry; erase input if command was being entered.	Ctrl-j (PF1)	Ctrl-j (PF1)	Ctrl-j
NEXT EDIT POSITION	Move cursor forward to next un-protected character position. If end of current edit field is reached, cursor moves to next edit field, wraps around from bottom to top of screen.	RIGHT ARROW	RIGHT ARROW	F4
NEXT FIELD	Move cursor forward to next edit field on display (cursor wraps around from bottom to top of screen).	TAB	TAB	TAB
NEXT LINE	Move cursor to same column position on next line. If new position is protected, a next field is executed.	DOWN ARROW	DOWN ARROW	F2
PREVIOUS EDIT POSITION	Move cursor backward to last un-protected character position. If beginning of current edit field is reached, cursor moves back to end of previous edit field, and wraps around from top to bottom of screen.	LEFT ARROW	LEFT ARROW	F3
PREVIOUS FIELD	Move cursor backward to beginning of previous edit field on the display. (cursor wraps around from top to bottom of screen).	BACK SPACE	F12 (BS)	BACK SPACE
PREVIOUS LINE	Move cursor to same column position on previous line. If new position is protected, a previous field is executed.	UP ARROW	UP ARROW	F1

Table 2.5. Special Function Key Description

2.6 Using Menus

> The user can access the interactive UCSS services through the use of the menu system.

When the proper symbols have been predefined by the login procedure described in Section 2.2, the user invokes the menu system by entering at the DCL level:

$ UCSS

This command brings up the main user menu. The user may then choose the desired function from alternatives presented. The main user menu appears as displayed below:

```
MENUDISP   (        )         MENU SYSTEM          DATE   TIME
                              MAIN USER MENU


        1.  Data transfer services
        2.  Catalog services
        3.  Orbit/attitude services
        4.  Display services
        5.  Report services
        6.  DBMS Access




    [ PF2 on the Keypad is application help,    PF4 is keyboard help


    Keypad(1...6)    Help(PF2)    LastMenu(PF3)    Keys(PF4)    Quit    DCL
                                                            DS 1 OF 1
    UARS>                                                   PG 1 OF 1
```

The above menu provides multiple options to the user. He may choose from the items in the menu display (choices 1 through 6) or he may choose from the list at the bottom of the screen. The choice is made by pressing the specified keypad key.

To select a choice from the menu list, press the keypad numeric key associated with the desired entry. The selection may also be made at the UARS> prompt line by entering the menu selection number and pressing RETURN. In other words, to select Catalog services, press keypad '2' or enter '2' at the UARS> prompt line. All commands entered at the UARS> prompt line are executed when the RETURN key is pressed.

The help line at the bottom describes the screen choices. Options in parentheses are keypad choices. In most cases, the portion not in parentheses can be entered at the UARS> prompt line to invoke the same function. For example, to get help, either press keypad 'PF2' or enter HELP at the UARS> prompt.

To traverse up the menu tree, use the LastMenu(PF3) option. Using this option at the top menu does not exit the menu system. At the command line, use QUIT, EXIT, or TERMINATE to exit the menu system.

Many screen applications support access to VAX/VMS DCL by the *DCL* command. This command spawns a sub-process providing DCL access. The user of the DCL command feature should not alter anything that might affect the process from which he was spawned. To return to the application, log out of the sub-process.

VAX/VMS broadcast messages are disabled while in the menu system.

A submenu may be entered directly from the DCL command line by specifying a parameter on the UCSS command. The options are as follows:

COMMAND	RESULT
UCSS	Main User Menu
UCSS DT	Data Transfer Services Submenu
UCSS CAT	Catalog Services Submenu
UCSS DSP	Display Services Submenu
UCSS RPT	Report Services Submenu
UCSS OAS	Orbit/Attitude Services Submenu
UCSS DBMS	Access to INGRES

2.7 Using Commands

> The user can invoke UCSS services directly using UCSS commands.
> Commands can be entered interactively at the DCL level, or be used
> in command procedures.

The user can invoke UCSS services from the DCL command line or from command procedures. The UCSS commands are summarized in Table 2.7. These commands are explained in detail in Sections 3 to 7. UCSS commands are entered at the VAX/VMS DCL prompt. Each command has its own set of parameters and qualifiers associated with it. Prompts may be issued for any required parameters or qualifiers not specified on the command line. Validity checks on the values and combination of optional parameters are also performed.

The user can write command procedures that use the UCSS commands. All required parameters and qualifiers must be specified when using a UCSS command in a command procedure. Frequently used procedures using commands can be set up in advance. The parameters can be changed with an editor and the command procedure(s) submitted in a batch mode as with any other DCL command procedure. Any errors in format or data cause the command with the error to be aborted and appropriate errors written to SYS$OUTPUT.

If UCSS commands are entered by the user but are reported as undefined by the VAX/VMS, then the appropriate symbols may not have been set up as discussed in Section 2.2.

COMMAND	PARAMETERS/QUALIFIERS	PURPOSE	SECTION
CATALOG	file-specification data attributes	Catalog the file located by the parameter file-specification into the UCSS controlled catalog; the file may be from the CDHF user space or the remote RAC as specified by the node name in the file specification parameter	3.6
CORRELATIVE	file and version	Catalog or Correlative data file	10.0
DISPLAY	display-name output destination selection criteria	Generate on the user terminal the display identified by the parameter display-name	6.0
DT/UA or DT/RAC	source-file- specification destination-file- specification	Transfer data from the source-file-specification to the destination-file-specification; the source or destination can be in either the RAC or the user managed disk space on the UARS CDHF	4.3, 4.4
DT/CDHF	destination-file- specification catalog attributes	Transfer data from the UCSS catalog to the destination-file-specification specified by the parameter. The file location can be in the user-managed disk space at a RAC.	4.2
DT/CANCEL	request-ID	Cancels the data transfer identified by the request-ID.	
QRY	result-file catalog attributes	Interactively search the UCSS data base for the records that match the attributes provided by the qualifiers. Provide results in a result file if specified. Otherwise, display the results.	3.5
RPT	report-name	Generate into SYS$OUTPUT the report identified by the parameter report-name	7.0
UCSS	DT CAT DSP RPT OAS DBMS	Activate the user menu system. Select submenus using parameter.	2.6
UPDATE	entry selection comments & quality flags	Request that a catalog entry be updated; input parameters are prompted for to select the entry and fields to be modified.	3.7

Note: The qualifier /HELP may be used with any of these commands to request information about the command.

Table 2.7. Summary of User UCSS Commands

2.8 INGRES - An Overview

> INGRES is a data base management system that is used by the UCSS to provide data management and access services for important system information including the UARS science data catalog.

INGRES is a relational data base management system which provides facilities to organize, maintain, and control access to important UARS CDHF data. INGRES includes the following subsystems:

- Interactive Query Languages (Structured Query Language-SQL)
- Query by Forms (QBF)
- Report by Forms (RBF)
- Report Writer
- Embedded Query Languages
- Graphics
- Applications by Forms (ABF)

A flexible means of accessing the data base is by SQL, an interactive query language that allows the user to access the data base to perform computations, create views of the data base, run ad hoc queries, develop application programs, among other functions. The user is not allowed to perform some functions like updating fields in the UARS data base. The user may perform predefined functions through the UCSS services. SQL is useful for looking up non-standard pieces of information or combinations of information.

The most user friendly approach to INGRES is Application by Forms (ABF). For more information, see the respective INGRES documentation.

Authorization to use INGRES is controlled by the INGRES System Administrator for the CDHF.

The UARS Data Base is named UARSDB. For information about how to use SQL or any of the other INGRES tools, refer to the appropriate INGRES documentation.

2.9 INGRES Terminal Definitions

> All INGRES forms-driven front-ends (including ABF applications) need to know the type and characteristics of the terminal in use. To accomplish this, INGRES software translates the logical name **TERM_INGRES**, which can be defined at the process (i.e., user) level.

While there are many possible values for the logical name TERM_INGRES to represent the myriads of terminal types available on INGRES systems, the remaining discussion restricts itself to those commonly available on VAX systems -- specifically, the VT100 and VT200 terminals and their cousins.

The **$UCSSLOGIN** defines the logical name TERM_INGRES as *vt100f*. The meaning of this logical name is defined in the following paragraphs. If the user wishes a different "feel", he may change this logical name at a point after **$UCSSLOGIN** is invoked.

A possible value for TERM_INGRES consists of a terminal identifier followed by zero or more characteristics identifiers. The allowed terminal identifiers are:

1. *"vt100"* identifies VT100 family terminals,

2. *"vt125"* identifies VT125 terminals, and

3. *"vt220"* identifies those terminals in the VT220 series.

The following table lists the allowed characteristics identifiers.

Value	Characteristics
" "	function keys not activated
"n"	numeric keypad serve as numeric keys, function keys not activated
"k"	PF1 key activated, but all other keypad keys are inactive
"f"	keypad keys mapped as function keys, other function keys are activated
"w"	132-column mode
"i"	<Return> key action altered

The intent of TERM_INGRES is to identify how the user wishes INGRES to display menu options, and to identify the terminal type and the necessary escape sequences or control commands needed to effect the forms.

Therefore, a value of *vt100f* ("vt100" + "f") indicates that INGRES should assume a VT100 with function keys, even if the terminal is in fact a VT240. Similarly, a value of *vt220nkw* indicates a VT220 with numeric keypad, function keys, in wide (132 column) mode.

The "*i*" characteristic is different, and is explained by an example. Suppose a user is entering "UARS" in a field in which "UCSSOPERATIONS" is already defined:

Name: `UCSSOPERATIONS`

After the "S" in "UARS" is typed, the field looks like

Name: `UARSOPERATIONS`

where "^" indicates the location of the cursor. By default, if the user presses the <tab> key to advance to the next field or a menu key to invoke a menu option, the value in the name field remains "UARSOPERATIONS". If the <return> key is used instead, INGRES clears the remainder of the field from the cursor before advancing to the next field. In this case, the field's value is "UARS". Use of the "*i*" characteristic informs INGRES that the <return> key is NOT to result in a clearing of the remainder of the field.

Some last points:

1. The "vt125" accepts no characteristics identifiers,

2. If function keys are enabled, then <pf1> is INGRES's menu key; if not, then <escape> is INGRES's menu key.

3. Not all combinations of characteristics identifiers are legal. The final authority is the file TERMCAP.; in the INGRES account. For example, the value *vt100nk* is not valid. Each INGRES front-end reports an error if the value for TERM_INGRES is invalid.

A few examples are presented to illustrate how various settings affect the look of INGRES forms applications using the ISQL command.

VT100

```
Enter SQL Statements                              Database: uarsdb
┌─────────────────────────────────────────────────────────────┐
│                                                             │
│                                                             │
│                                                             │
│                                                             │
│                                                             │
│                                                             │
└─────────────────────────────────────────────────────────────┘
      Go  Resume  Complete  Blank  Edit  File  OnError  LineEdit >
```

Notice that no function key mappings are provided. The user must also be careful when using the Menu key. A function key, if pressed, results in the transmission of an escape sequence to INGRES. INGRES interprets the <escape> character correctly, placing

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the cursor at the end of the command line. However, the remainder of the escape sequence is echoed as though input by the user. For example, an attempt to use the F11/ESC key as the Menu key results in the following:

```
Enter SQL Statements                              Database: uarsdb
 ┌──────────────────────────────────────────────────────────────┐
 │                                                              │
 │                                                              │
 │                                                              │
 │                                                              │
 │                                                              │
 └──────────────────────────────────────────────────────────────┘
     Go  Resume  Complete  Blank  Edit  File  OnError  LineEdit > : [23~
```

The user must erase the "[23 ~ " from the input line before selecting the desired option.

VT100K

```
Enter SQL Statements                              Database: uarsdb
 ┌──────────────────────────────────────────────────────────────┐
 │                                                              │
 │                                                              │
 │                                                              │
 │                                                              │
 │                                                              │
 └──────────────────────────────────────────────────────────────┘
     Go  Resume  Complete  Blank  Edit  File  OnError  LineEdit >
```

Again, notice that no function key mappings are defined. However, the PF1 key now correctly serves as the menu key.

VT100F

```
Enter SQL Statements                              Database: uarsdb
 ┌──────────────────────────────────────────────────────────────┐
 │                                                              │
 │                                                              │
 │                                                              │
 │                                                              │
 │                                                              │
 └──────────────────────────────────────────────────────────────┘
     Go(Enter)  Resume(2)  Complete(3)  Blank(4)  Edit(5)  File(6)  >
```

Note that function key mappings appropriate for a VT100 terminal are now defined.

VT220F

```
Enter SQL Statements                              Database: uarsdb
 ┌──────────────────────────────────────────────────────────────┐
 │                                                              │
 │                                                              │
 │                                                              │
 │                                                              │
 │                                                              │
 └──────────────────────────────────────────────────────────────┘
     Go(Do)  Resume(F12)  Complete(F13)  Blank(F14)  Edit(F17)  >
```

2.10 Command Syntax Conventions Used in this Document

> In the discussion of UCSS command syntax throughout this manual, there is a need to define the notations used. Special notations are used to denote options in the command structure.

This guide uses the following conventions to describe the UCSS commands.

Convention	Meaning
[optional-item]	Brackets indicate that the enclosed item is optional. (Brackets are not, however, optional in the syntax of a directory name in a file specification.) Thus, "[optional-item]" means that you may use "optional-item" if desired but that it may not be required.
some-construct[,...]	In command formats a horizontal ellipsis indicates that the preceding items can be repeated one or more times. In examples a horizontal ellipsis indicates that the preceding items can be repeated one or more times, that additional items can be entered, or that optional items have been omitted. Thus "some-construct[,...]" means that you may repeat "some-construct" as many times as desired with commas separating the items in the resulting list.
option-1 | option-2 | ...	Split-stiles separate items in a list of options.
[option-1 | option-2 | ...]	Brackets containing a list of options represents a choice of none or of one option from the list. Thus "[option-1 | option-2]" means that you may use either "option-1", or "option-2", or neither, but not both.
{ option-1 | option-2 }	Braces containing a list of options represents a choice of one item from the list.
ROMAN CAPITAL LETTERS	Roman capital letters represent items to be used exactly as shown.
Symbols other than [ ] { } |	Symbols other than [ ] { } | represent items to be used exactly as shown. Brackets, however, are also required in the syntax of a directory name in a file specification.
Italic letters and digits	Constructs in italics represent items that you must provide according to the circumstances and the action desired.

Section

3

Data Catalog Services

3.1 What is the Catalog?

> The catalog is a directory system which includes descriptive data
> about each data file in its domain. The catalog is implemented
> by a DBMS to facilitate catalog access.

The primary function of the CDHF is to process and store data for access by users. The catalog provides the mechanism for controlling the accounting and access to the data. The catalog contains the following types of information:

- Entries describing cataloged science data files, hereinafter collectively referred to as the **data catalog** or **catalog**

- Entries describing cataloged science production programs

Cataloging science production programs is an operations function and is discussed further in Reference 6.

The following figure demonstrates the relationships among the data catalog, science data storage, and the user's functions of query, update, and cataloging (by production program, correlative data ingest, or cataloging process).

When production programs access and create data using the UCSS production services described in the Reference 2, the catalog is accessed to find existing data or to create new entries for new data.

Files are inserted into UCSS system space and an entry is placed in the catalog when the files are "cataloged". The primary source of cataloged files are production programs developed by the science team. Files may be interactively inserted into the catalog by using the **$CATALOG** command, **$CORRELATIVE** command, or the UCSS menu system's respective function. This capability is provided primarily for cataloging data that is not created by production programs, like calibration data. Users may also request that changes be made to a catalog entry's comments and user quality fields.

This can be done either by the $UPDATE command or the UCSS menu system's update catalog feature.

Users may query the catalog by using the $QRY command or through the catalog services of the menu system. The query function allows the user to determine information about the entries in the catalog. In this manner he can determine what data is cataloged. Results of a query may also be input to the data transfer process. This function is described in detail in Section 3.5 of the User's Guide or Section 3.3.15 of the Operations Guide.

The contents of a catalog entry of most interest to the user are defined in the Table 3.1. The attributes listed in the table are used to distinguish each cataloged file in the CDHF and maintain information about it. The field names specified in the column of the table labeled "ATTRIBUTE" are those that should be used in querying the catalog. The full definition of the catalog is available using the Catalog Attributes Report described in Section 7.13.

Date/time fields are stored by INGRES in an internal format. However, the UCSS interfaces to INGRES convert dates to standard VAX/VMS time formats. Therefore, all UCSS interfaces convert times to this format. Times can be provided in VMS, UDTF, or UARS day format. See Section 3.2.1 of the User's Guide or Section 3.2.2 of the Operations Guide, /TIME qualifier for further explanation of this approach.

There are two user quality fields. These are three-character, text fields. One is termed *pi-data-quality*, and the other is *uars-data-quality*.

A given catalog entry could have multiple data gaps. The gap fields are used to represent time gaps in a data file. These gap fields can be supplied by a user production program. A gap is defined by a gap start time and gap stop time.

ATTRIBUTE	TYPE/SIZE	COMMENTS
TYPE	c*12	UARS data type; e.g. CLAES
LEVEL	c*3	Data level; e.g. 0, 3AL
SUBTYPE	c*12	Data subtype; e.g. DEFINITIVE
SOURCE	c*12	For correlative data
CALIBRATION_ID	c*12	For calibration data
DAY	i*2	UARS day (>0)
VERSION	i*2	CCB assigned version no.(1-9999)
CYCLE	i*1	Processing count (1-99)
FILE_NAME	c*80	UCSS File Name
TEST	c*1	T=test data, F=production
START_TIME	date	Data start time
STOP_TIME	date	Data stop time
FILE_SIZE	i*4	in blocks
RECORD_SIZE	i*4	in bytes (used in open)
DATA_QUALITY_UARS	c*3	Quality of file assigned by UCSS
DATA_QUALITY_PI	c*3	Quality of file assigned by PI
COMMENTS	c*80	Free-format text
DATA_GAP	date(2)	GAP(n)

Table 3.1 Selected Catalog Attribute Definitions

3.2 Command Line Qualifiers for Data Catalog Access

When using DCL commands to operate the UCSS, various qualifiers are
needed to specify catalog file attributes and to provide other inputs
to the commands.

Table 3.2 summarizes the valid qualifiers that define data catalog attributes. Note that combinations of qualifiers are not always appropriate. These qualifiers are described in detail in the following section.

QUALIFIER	DESCRIPTION
/CALIBRATION_ID	Calibration identifier (12 characters)
/COMMENTS	User comments for this catalog file /COMMENTS = "text string" (80 characters)
/CRULE	Cycle Rule. Used in the selection of catalog records by cycle ranges. Cycle keywords are: HIGHEST, HIGHEST_COMMON, or ALL. Specify a single version. /CRULE = cycle-keyword
/CYCLE	Repeat count (analogous to VAX/VMS version) /CYCLE = nn where nn ranges from 1 to 31 and increments by 1 for each file created with all other attributes equal (including version). Defaults to latest cycle.

/DAY	The UARS day or day range
	    /DAY = uars-day
	    /DAY = (start-uars-day,stop-uars-day)

/FIELDS	Used with /VALUES to specify attributes or attribute values not specifiable using other qualifiers
	    /FIELDS = (attribute-1, attribute-2,...,attribute-n)
	    /VALUES = (value-1, value-2, ... value-n)

/FILE	A UCSS file name with attributes for the catalog search.
	    /FILE = file-name or
	    /FILE = "#file"
	where a file name is defined in Section 3.2.2 (User's Guide) or Section 3.2.3 (Operations Guide)
	    #file is a file specification of a file containing file names

/GAPS	A list of time gaps in a data file in the format /GAPS = ("a b", "c d", ... "m n") where a,b,c,d,...,m,n are start-stop-time pairs in VAX/VMS, UDTF, or UARS day time format
/LEVEL	The level of date to process /LEVEL = data-level i.e., 0, 1, 2, 3AS, 3AL, 3AT, 3LP, 3TP

Table 3.2 Valid Qualifiers For Data Catalog Access (1 of 2)

QUALIFIER	DESCRIPTION
/ORBIT	The UARS orbit or orbit range /ORBIT = *orbit-number* /ORBIT = (*start-orbit,stop-orbit*)
/PIDQ	Principal Investigator data quality flags /PIDQ = *x.y* where x.y is a 3 character quality indicator
/QL_NUMBER	The quicklook data set. /QL_NUMBER = *n* where n is the nth pass of the day specified
/RECORD_SIZE	The record length in bytes for this file /RECORD_SIZE = *nnnnn*
/SOURCE	The source of data (applies only to Correlative data) /SOURCE = *source*
/START_TIME	Data start time (VMS C*23 format, UDTF, or UARS day)
/STOP_TIME	Data stop time (VMS C*23 format, UDTF, or UARS day)
/SUBTYPE	The subtype of data. Valid subtype values differ for each data type. /SUBTYPE = *subtype*
/TEST	Flag to indicate if this is production or test file /TEST = *test-type* for record selection where test-type= TEST, PROD or ALL
/TIME	Time range of data for processing /TIME = (*start-time,stop-time*) (VMS C*23 format, UDTF, or UARS day)
/TYPE	The type of data /TYPE = *data-type*
/UARSDQ	UARS assigned data quality flags /UARSDQ = *x.y* where x.y is a 3 character quality indicator
/VALUES	Used with /FIELDS to specify attributes or attribute values not specifiable using other qualifiers /FIELDS = (*attribute-1, attribute-2, ...* *attribute-n*) /VALUES = (*value-1, value-2, ... value-n*)
/VERSION	The CCB-approved version number of data to be selected /VERSION = *nnnn* where nnnn ranges from 0001 to 9999 Defaults to latest version.
/VRULE	Version Rule. Used in the selection of catalog records by version ranges. Version keywords are: HIGHEST, HIGHEST_COMMON, or ALL /VRULE = *version-keyword*

Table 3.2 Valid Qualifiers For Data Catalog Access (2 of 2)

3.2.1 Definition of Qualifiers for Catalog

```
Many catalog data attributes can be accessed with qualifiers in
UCSS commands.  These qualifiers are described in this section.
```

The following is a detailed definition of the qualifiers that pertain to the catalog and that can be used with UCSS commands. Qualifiers that are not related to data attributes or that are specific to a UCSS function are described in their respective sections. The commands themselves and their functions are defined throughout the remainder of this document.

All qualifiers may be abbreviated to that combination of letters that make them unique. Text fields have trailing blanks ignored.

The most common error in using these qualifiers is using single quotes instead of double quotes when quotes are appropriate.

/CALIBRATION_ID = *calibration-identifier*

Specifies the calibration identifier for a calibration data file. This identifier may consist of 1 to 12 alphanumeric and underscore characters. Trailing blanks are ignored.

Default: None

Examples:　**/CALIBRATION_ID = cal_1_123456**

/COMMENTS = *"text-string"*

Specifies the user comments field. The text string can be from 1 to 80 characters in upper/lower case. It is a free format text field and must be enclosed in double-quotation marks.

Default: Blanks

Examples:　　**/COMMENTS = "This file is for test purposes..."**

　　　　　　/COMMENTS = "This file used an old version."

/CRULE = cycle-rule

Specifies the cycle rule for selection of data catalog records. Cycle-rule is one of the following keywords: HIGHEST, HIGHEST_COMMON, or ALL. HIGHEST means the record with the highest cycle is retrieved when all other attributes are the same.

HIGHEST_COMMON means to retrieve the records with the highest cycle common to all entries with all other attributes the same. ALL means to retrieve records with all cycles, with other attributes the same. You <u>must</u> specify a single version.

Default: HIGHEST

Examples: /CRULE = HIGHEST
             Retrieves record with highest cycle.

             /CRULE = ALL
             Retrieves all records of any cycle that meet other constraints.

             /CRULE = HIGHEST_COMMON
             Retrieves record with highest cycle in all records meeting other constraints.

/CYCLE = *nn*

Specifies the cycle number of a data file. The cycle number is the processing count (analogous to VAX/VMS version). The initial cycle number is 1. To have a higher cycle number, the data must have been created using the same version of the processing program and input data. Cycles greater than 1 are "pure" reprocessing of data instead of reprocessing of data with a new program or new set of input data. This qualifier is usually used with the /VERSION qualifier.

Default: Highest cycle (highest cycle number for a specified version of an existing file).

Examples: /CYCLE = 1
             /CYCLE = 01
             /CYCLE = 34

/DAY = *uars-day* or

             /DAY = (*start-uars-day,stop-uars-day*)

Specifies the UARS day or day range. Days are specified as 1 to 4 digit positive numbers. Day ranges are appropriate primarily to data transfers and results in either a virtual file or multi-file transfer (see Sections 4.1.4, 4.1.5 of the User's Guide).

For day ranges the days specified by both endpoints are included in the file. Day

numbers start with 1 (the day of launch of UARS). Negative and zero day numbers are invalid. The stop day number must be greater than or equal to the start day number.

This qualifier may not be used with any other time qualifier, such as the /ORBIT or /TIME qualifiers.

Default: None

Examples: /DAY = 142
              /DAY = (24,40)

/FIELDS = *field-name-list*

This qualifier is used with the /VALUES qualifier to specify criteria for data catalog record selection. A one-to-one correspondence in the field-name-list of both qualifiers is established to specify the name of a field and its associated value. Field names are the logical name from the data catalog. A list of these names can be obtained by the $RPT CAT_ATTS report. Operators may be used in the /VALUES qualifier (>, <, ~, =) to specify a range of records for selection. Operators are not allowed in other qualifiers included in this section.

Default: None

Examples: /FIELDS = (ONLINE_STATUS, FILE_SIZE)
              /VALUES = (1,>1000)

This example selects records which are online (online_status=1) and of size greater than 1000 blocks.

/FILE = *file-name* or

       /FILE = "#*file-specification*"

Specifies a file by its file name. The term *file name* used here is a specialized file specification for UARS data files. The detailed definition of the UCSS file naming convention for cataloged files is defined in Section 3.2.2 of the User's Guide or Section 3.2.3 of the Operations Guide.

A UCSS file name is created automatically when a file is cataloged and is based on the

attributes supplied to the cataloging process.

Multiple files can be specified for some UCSS functions (e.g., data transfer, query, stage/destage) by creating a list of file names in a file. This file can be created manually or through a data base query. The file containing the file names is preceded with the symbol "#" when used with the /FILE qualifier. Note that this file specification (using "#" must be enclosed in double quotes in the /FILE qualifier.

Default: None

Example:

/FILE = CLAES_L0_D0102.V0001_C01_PROD

/FILE = HALOE_L3AT_SH202_D0023.V0001_C01_TEST

/FILE = CORR_ZNMC_STEMP_D0003.V0001_C01_PROD
    (Correlative)

/FILE = CAL_WINDII_L1_D0100.XANGLES_V0003_C01_PROD
    (Calibration)

/FILE = ACRIM_D0404.Q2_V0002_C01_PROD (Quicklook)

/FILE = "#MY_FILES:FILE_LIST.DAT"

/GAPS = *gaps-list*

Specifies a list of gaps when cataloging a data file. The gaps list is a list of gap start/stop time pairs. The start and stop times are separated by a space. Each pair is separated by other pairs in the list by a comma. Each start/stop time pair is enclosed in double-quotes. As with other time fields, partial time information is defaulted to current date/zero time). Thus the syntax is:

/GAPS = ("start-time1 stop-time1"," start-time2 stop-time2,"...)

An alternative is provided for specifying times for the /START_TIME, /STOP_TIME, /GAPS, and /TIME qualifiers. This alternative allows the user to enter a VMS time, UDTF time, or UARS day. The VMS time is entered as described above. To enter a UDTF time, the format is a 'U' followed by the UDTF time. In other words:

U*yyyddd   nnnnnnnn*

U*yyyddd : nnnnnnnn*

U*yyyddd   hh : mm : ss . mmm*

U*yyyddd : hh : mm : ss . mmm*

Also, the format for UARS day is as follows:

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$$Dnnnn \quad hh:mm:ss$$

where *nnnn* is the UARS day (the 'D' is needed here) and may be from 1 to 4 digits.

NOTE: For data gaps, a time value must be supplied for each date. Partial time values are accepted.

Default: None

Examples: **/GAPS ="01-JAN-1992 11:06:07**   **01-JAN-1992 11:23:45"**

                    /GAPS =("01-JAN-1992 11:06:07   **01-JAN-1992 11:23:45", -**
                           "01-JAN-1992 11:36:53   **01-JAN-1992 11:38:49", -**
                           "01-JAN-1992 12:22:07   **01-JAN-1992 12:28:55")**

                    /GAPS =("01-JAN-1992 11:08   **01-JAN-1992 11:10:47", -**
                           "01-JAN-1992 23   **02-JAN")**

                    /GAPS ="U92021 11:06:07   **U92021 11:23:45"**

/LEVEL = *data-level*

Specifies the level of the data to be transferred. Valid levels include 0, 1, 2, 3AT, 3AL, 3AS, 3LP, and 3TP.

Default: None

Examples: **/LEVEL = 0**   **/LEVEL = 3AT**   **/LEVEL=3LP**
                   /LEVEL = 1   **/LEVEL = 3AL**   **/LEVEL=3TP**
                   /LEVEL = 2   **/LEVEL = 3AS**

/ORBIT = *orbit-number*   **or**

                  /ORBIT = *(start-orbit-number,stop-orbit-number)*

Although orbit number is not a catalog attribute, it may be used to specify data times.

/ORBIT specifies those files containing data for the specified orbit or orbit range. For data transfers, the file(s) that results contain whole days of data and has not been 'trimmed' to match the exact orbit start and stop times. If the **/VIRTUAL** qualifier is present, the files are combined into one file for data transfer; if not present, then the data transfer is a multi-file request.

Orbit numbers must be greater than zero.

If the orbit range exceeds one UARS day's bounds, the /VIRTUAL qualifier is provided, and the data is level is one of the set {0, 3AL, 3AS, 3AT, 3LP, 3TP}. A virtual file is created containing the specified data (for data transfer). Otherwise, a multi-file request is created. The start orbit number must be less than or equal to the stop orbit number.

This qualifier may not be used with any other qualifier that specifies data times.

Default: None

Examples: /ORBIT = 1
              /ORBIT = (5,34)

/PIDQ = *pi-data-quality*

Specifies quality flags that reflect PI assigned quality for this data record. The field is a 3 character text field. It is a free format field, but it may optionally conform to the standard quality format in the /UARSDQ qualifier. This field may be updated using the $UPDATE command. This qualifier may be used in the selection of data.

Default: None

Examples: /PIDQ = 1.2

/QL_NUMBER = *n*

Selects the quicklook data set. The quicklook number is an absolute number representing the *nth* quicklook data set for a UARS day. The quicklook number is defined as follows:

          /QL_NUMBER = n

          where if   n > 0   then pass n of day is specified
                     n = 0   latest pass
                     n < 0   nth previous pass

To select a quicklook data set, the following qualifiers must be specified:

          /TYPE = QUICKLOOK
          /SUBTYPE = *instrument*
          /DAY = *UARS-day*
          /QL_NUMBER = *n*   *(where n>0)*

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Default: Most recent

Examples: /QL_NUMBER = 1   (Quicklook #1 for this UARS day)
              /QL_NUMBER = 0   (Most recent)
              /QL_NUMBER = -1 (2nd most recent)

/RECORD_SIZE = *nnnnn*

Specifies the record length for each record in the file to be cataloged. The record size is
a required field for cataloging a data file. It is specified as a 1 to 5 digit number
equal to the record length in bytes.

Default: None

Examples: /RECORD_SIZE = 2532   (Record length for L0 quality data)
              /RECORD_SIZE = 14400   (Record length for L0 OBC data)

/SOURCE = *source*

Specifies the source of a correlative data file. The valid sources are to be determined by
the users.

Default: None

Examples: /SOURCE = NMC

/START_TIME = *data-start-time*

Specifies the data start time. This attribute is primarily used when the /TIME qualifier
does not apply, such as while cataloging a data file. See Reference 5 for complete
information on specifying absolute time values.

Partial times are defaulted to a complete time format from left to right in the date
string. Parts of the date not supplied are filled (for VMS time) in with those parts from
the current date. Parts of the time portion are defaulted to zeroes.

Double-quotes are required if a blank is embedded between the date and time field. A
':' is optional at this location. Double-quotes may be used for all time formats.

An alternative is provided for specifying times for the /START_TIME, /STOP_TIME,
/GAPS, and /TIME qualifiers. This alternative allows the user to enter a VMS time,
UDTF time, or UARS day. The VMS time is entered as described above. To enter a
UDTF time, the format is a 'U' followed by the UDTF time. In other words:

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Uyyyddd   nnnnnnnn

Uyyyddd : nnnnnnnn

Uyyyddd   hh : mm : ss . mmm

Uyyyddd : hh : mm : ss . mmm

Where *yyy* is a 2 or 3 digit year (e.g., 91 for 1991), *nnnnnnnn* is the number of milliseconds, and the format *hh : mm : ss . mmm* is hours, minutes, seconds, and milliseconds. Defaults are applied as zero for times.

Also, the format for UARS day is as follows:

Dnnnn   hh : mm : ss

where *nnnn* is the UARS day (the 'D' is needed here) and may be from 1 to 4 digits.

This qualifier may not be used with any other qualifiers that specify data times.

Default: None

Examples:	/START_TIME = "15-APR-1993 12"	(Noon)
	/START_TIME = "15-APR-1993 23:59:59"	(Last data time of day)
	/START_TIME = 15-APR-1993	(Midnight at start of day)
	/START_TIME = "U91125 247"	(UDTF time year 91 day 125, 247 msec)
	/START_TIME = U91125:247	(UDTF time year 91 day 125, 247 msec)
	/START_TIME = "U91125 15:24:37"	(UDTF time year 91 day 125, GMT time)
	/START_TIME = D126	(UARS day 126)
	/START_TIME = "D126 15:24:37"	(UARS day 126, GMT time)

/STOP_TIME = *data-stop-time*

Specifies the data stop time. This attribute is primarily used when the /TIME qualifier does not apply, such as while cataloging a data file. See Reference 5 for complete information on specifying absolute time values. Partial times are defaulted to a full VMS C*23 format from left to right in the date string. Parts of the date not supplied are filled in with those parts from the current date. Parts of the time portion are defaulted to zeroes.

Double-quotes are required if a blank is embedded between the date and time field. A ':' is optional at this location. Double-quotes may be used with all time formats.

This qualifier may not be used with any other qualifiers that specify data times.

An alternative is provided for specifying times for the /START_TIME, /STOP_TIME, GAPS, and /TIME qualifiers. This alternative allows the user to enter a VMS time, UDTF time, or UARS day. The VMS time is entered as described above. To enter a UDTF time, the format is a 'U' followed by the UDTF time. In other words:

$$U yyyddd \quad nnnnnnnn$$
$$U yyyddd : nnnnnnnn$$
$$U yyyddd \quad hh : mm : ss . mmm$$
$$U yyyddd : hh : mm : ss . mmm$$

Where *yyy* is a 2 or 3 digit year (e.g., 91 for 1991), *nnnnnnnn* is the number of milliseconds, and the format *hh : mm : ss . mmm* is hours, minutes, seconds, and milliseconds. Defaults are applied as zero for times.

Also, the format for UARS day is as follows:

$$D nnnn \quad hh : mm : ss$$

where *nnnn* is the UARS day (the 'D' is needed here) and may be from 1 to 4 digits.

Default: None

Examples:

/STOP_TIME = "15-APR-1993 12"	(Noon)
/STOP_TIME = "15-APR-1993 23:59:59"	(Last data time of day)
/STOP_TIME = 15-APR-1993	(Midnight at start of day)
/STOP_TIME = "U91125 247"	(UDTF time year 91 day 125, 247 mls)
/STOP_TIME = U91125:247	(UDTF time year 91 day 125, 247 mls)
/STOP_TIME = "U91125 15:24:37"	(UDTF time year 91 day 125, GMT time)
/STOP_TIME = D126	(UARS day 126)
/STOP_TIME = "D126 15:24:37"	(UARS day 126, GMT time)

/SUBTYPE = *subtype*

Selects the subtype of data. The valid values for subtypes are dependent on the value for data type (see /TYPE below). The valid subtypes are specified by the users. Valid subtype names are incorporated into the error checking for combinations of type/level/subtype. Invalid combinations are rejected.

Default: None

Examples: **TYPE = ORBIT   /SUBTYPE = DEFINITIVE**
               TYPE = ORBIT   /SUBTYPE = PREDICTIVE1
               TYPE = ATTITUDE/SUBTYPE = EXTRSC

/TEST = *test-type*

Specifies whether the file is specified as a test file or a production file. For cataloging, this qualifier has no value. The presence of this qualifier indicates that this is a test file. For selection of catalog records, the *test-type* value is required and has the following keywords as options:

      TEST   Select only records indicating TEST files
      PROD   Select only records that are not TEST files
      ALL   Select all records

For data transfers, /TEST = ALL selects the catalog record which matches all other attributes specified and has the highest version and cycle.   This file could be a TEST file or a PROD file. Note that /VRULE and /CRULE will affect this result.

For query, /TEST = ALL selects all records and all versions/cycles that match the other select attributes specified.

For cataloging, /TEST indicates that this file is a test data file.

Default: Files default to production files.

Examples: **/TEST**   (for cataloging only)
               /TEST = TEST
               /TEST = PROD
               /TEST = ALL

/TIME = *(start-time,stop-time)* or

               /TIME = *start-time*

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Specifies the time range of data to be selected. For selecting entries from the catalog, the time range is internally converted to a UARS day range. The start and stop times are in standard VAX/VMS absolute time formats. The start and stop times may be on different days. All UCSS time values are specified in Greenwich Mean Time (GMT). If only the start time is specified, the stop time is the current time.

All time values that contain an embedded blank must use the double quotes (") character to surround the time field or provide a colon instead of a space between the date and time field. Otherwise, the double quotes are optional.

For data transfers, if the time range exceeds the UARS day bounds for one day and level, a virtual file is created with the selected data at the time of data transfer. Only the parts of the files between the times specified are included in the virtual file.

This qualifier may not be used with any other qualifiers that specify data times. The stop-time must be greater than or equal to the start-time.

Partial times are defaulted to a full time format from left to right in the date string. Parts of the date not supplied are filled in with those parts from the current date. Parts of the time portion are defaulted to zeroes.

An alternative is provided for specifying times for the /START_TIME, /STOP_TIME, and /TIME qualifiers. This alternative allows the user to enter a VMS time, UDTF time, or UARS day. The VMS time is entered as described above. To enter a UDTF time, the format is a 'U' followed by the UDTF time. In other words:

$$U yyyddd \quad nnnnnnnn$$

$$U yyyddd : nnnnnnnn$$

$$U yyyddd \quad hh : mm : ss . mmm$$

$$U yyyddd : hh : mm : ss . mmm$$

Where *yyy* is a 2 or 3 digit year (e.g., 91 for 1991), *nnnnnnnn* is the number of milliseconds, and the format *hh : mm : ss . mmm* is hours, minutes, seconds, and milliseconds. Defaults are applied as zero for times.

Also, the format for UARS day is as follows:

$$D nnnn \quad hh : mm : ss$$

where *nnnn* is the UARS day (the 'D' is needed here) and may be from 1 to 4 digits.

Default: None

Examples: /TIME = ("15-APR-1993 12",   15-APR-1993:23:59)
              /TIME = ("15-APR-1993 12",   "16-APR-1993 12")
              /TIME = 15-APR

/TIME = "U91125 247"

/TIME = U91125:247

/TIME = "U91125 15:24:37"

/TIME = D126

/TIME = "D126 15:24:37"

/TYPE = *data-type*

Selects the data type. The valid types include the following:

Instruments:
ACRIM	PEM	
CLAES	SOLSTICE	
HALOE	SUSIM	
HRDI	SUSIMA	
ISAMS	SUSIMB	
MLS	WINDII	

Others:
ATTITUDE	CORRELATIVE	ORBIT
CALIBRATION	ENGINEERING	MODEL
CIR86	OBC	QUALITY
QUICKLOOK	SSPP	
SLPEPHEM	STELLAREPHEM	
SPACECRAFT	UARS	

Default: None

Examples: /TYPE = CLAES

              /TYPE = CORRELATIVE

              /TYPE = CALIBRATION

/UARSDQ = *UARS-data-quality*

Specifies quality flags that reflect quality by production processing (via argument to file
close/deassign calls) for this data record. The field is a 3 character text field. For level
3 data, it conforms to the standard quality format defined below. This field may be
updated using the $UPDATE command. This qualifier may be used in the selection of
data.

The format of quality follows:

Machine inspected	0.q
Qualitative evaluation	1.q
Intensive analysis	2.q

where q = 1 (less than 50% good data)
2 (50% - 75% good data)
3 (76% - 98% good data)
4 (better than 98% good)

Default: None

Examples: /UARSDQ = 1.2

/VALUES = *field-name-list*

This qualifier is used with the /FIELDS qualifier to specify criteria for data catalog record selection. A one-to-one correspondence in the field-name-list of both qualifiers is established to specify the name of a field and its associated value. Field names are the logical name from the data catalog. A list of these names can be obtained by the $RPT   CAT_ATTS report. Operators may be used in the /VALUES qualifier (>, <, ~, =).   Operators are not allowed in other qualifiers included in this section.

Default: None

Examples: /FIELDS =(ONLINE_STATUS, FILE_SIZE)
/VALUES =(1, >1000)

This example selects records which are online (online_status=1) and of size greater than 1000 blocks.

/VERSION = *nnnn*

Selects the version of the data to be selected. This value is the Configuration Control Board (CCB) assigned version number of the data. The number is the same as the number assigned to the version attribute of the job or program that generated the data.

Default: Most recent (highest version number)

Examples: /VERSION = 3
/VERSION = 0003
/VERSION = 03

/VRULE = version-rule

Specifies the version rule for selection of data catalog records. *Version-rule* is one of the following keywords: HIGHEST, HIGHEST_COMMON, or ALL. HIGHEST means the record with the highest version is retrieved when all other attributes are the same. HIGHEST_COMMON means to retrieve the records with the highest version common to all entries with all other attributes the same.

Default: HIGHEST

Examples: **/VRULE = HIGHEST**
Retrieves record with highest version.

/VRULE = ALL
Retrieves all records of any version that meet other constraints.

/VRULE = HIGHEST_COMMON
Retrieves record with highest version that is in all records meeting other constraints.

3.2.2 Definition of UARS File Names

When specifying UARS File Names in the menu system and through DCL command parameters and qualifiers, there is a standard naming convention to follow.

UARS data file names are 80-character fields in the catalog. Each file name is composed of the attributes needed to uniquely identify the data contained in the file.

When entering a full file name as a qualifier or prompt parameter, care must be taken to match the real file name exactly. Otherwise, a match is not found. The best way to ensure a match is to query the catalog with the type, level, subtype, and other parameters as needed to acquire the exact file name. The use of wildcards is supported in most functions.

The definition of the file name is table-driven. Operations personnel may update this table when new file types are defined. Existing definitions cannot be altered (without deleting all existing records using that convention). No embedded spaces are allowed. The catalog data type always appears at the beginning of the file name; the version, cycle, and test/production data indicator ("PROD" or "TEST") always appears at the end of the file name.

Attribute values are separated by an underscore ("_"). If the attribute does not apply to a particular file, it is omitted in the file name. All the attributes except the TYPE attribute are preceded by a letter which denotes that specific attribute. The following letter definitions have been predefined in the table that controls the file name. Additional letters may be defined in future name conventions (such as for new correlative file definitions).

"L" - LEVEL	"Q" - QUICKLOOK_ID
"S" - SUBTYPE	"Z" - SOURCE
"X" - CALIBRATION_ID	"I" - INSTRUMENT TYPE
"D" - DAY	"W" - STATION ID
"V" - VERSION	"P" - CORRELATIVE INVESTIGATOR
"C" - CYCLE	

Attribute values for DAY, QUICKLOOK_ID, VERSION, and CYCLE are padded with "0" (zero) on the left (leading zeroes) to fill the respective field lengths. The other attributes are neither zero nor blank filled.

Examples for specific data types are as follows:

Level 0, Science, and Orbit/Attitude Files.

The attribute values, as appropriate, are combined in the following order to form the file name and file type parts: TYPE, LEVEL, SUBTYPE, DAY, VERSION, CYCLE, "TEST" or "PROD". Examples are:

> **CLAES_L0_D0102.V0001_C01_PROD**
>
> **HALOE_L3AL_SH2O2_D0023.V0001_C01_TEST**
>
> **ORBIT_SDEFINITIVE_D0003.V0002_C01_PROD**

Calibration Files.

The names given to calibration files are defined in this manner: "CAL", SUBTYPE (instrument), LEVEL (if appropriate), CALIBRATION_ID, DAY (if appropriate), VERSION, CYCLE, and "TEST" or "PROD". Examples are:

> **CAL_SWINDII.XANGLES_V0003_C01_PROD**
>
> **CAL_SISAMS_L2_D0012.XGRADIENTS_V0001_C02_TEST**

Quicklook Files.

The order of the attributes in the names of quicklook files is "QUICKLOOK_", SUBTYPE (L0 types), DAY, QUICKLOOK_ID, and "TEST" or "PROD". Examples are:

> **QUICKLOOK_SACRIM_D0404.Q02_V0002_C01_PROD**
>
> **QUICKLOOK_SOBC_D1004.Q03_V0001_C01_PROD**

Note: In these examples, use of the phrase "if appropriate" means that field makes sense in combination with other attributes specified.

Correlative Files.

There are potentially numerous definitions for correlative data file names. The best way to determine the current definition for an existing file is to query the catalog for file name based on the desired attributes. An example of a correlative file name appears as follows:

> **CORR_ZGROUND_STGAS_D150.PMCG_WTMO_ILDR_V0001_L01_PROD**

Other Files.

Some files have special naming requirements. For example, the CIRA86 data type is

dayless. The naming convention for CIRA86 files includes CIRA86, subtype, version, cycle, and the PROD/TEST indicator. For example:

CIRA86_STEMP_WAVE1.V0001_C01_PROD

3.3 Working with the Catalog from Commands

> When using DCL commands to access the catalog, various qualifiers are used to specify attributes for querying the catalog, for updating catalog entries, and for cataloging a file. These attributes specify how to select catalog entries, how to order the information returned, and how to specify what subset of information is to be processed.

There are three elements to specify when selecting information in the catalog. The elements are as follows:

Elements	Meaning
Constraints Data Order	Fields for selecting data Fields to retrieve/update in the catalog Fields to sequence the data

A constraint is used for selecting the data to process. If the user is looking for a particular catalog entry, it is the constraints that determine which records are selected.

Once an entry is selected, information is extracted from or updated in that entry. Those fields are the attribute values to retrieve or update.

When selecting a list of entries, it is sometimes desirable to specify that the entries be returned in a particular sequence or order.

Not all three elements are required for all commands. It depends on the command that is to be used as to which elements are required.

TYPE	DESCRIPTION	COMMAND
Select	Selecting entries from catalog	QRY, UPDATE
Fields	Specifying the fields to be used for updating, displaying, and cataloging functions.	QRY, UPDATE CATALOG
Order	Defining the order in which information is returned on query	QRY

There are three user commands that operate on catalog entries. They are the **$QRY**, **$CATALOG,** and **$UPDATE** commands. The **$QRY** command extracts data from entries in the catalog. The **$CATALOG** command puts entries in the catalog. The **$UPDATE** command modifies particular fields in the catalog. The previous table summarizes the type definition and the commands to which that type is pertinent. The following sections of this document provide expanded descriptions of each command.

Each command uses qualifiers to specify the fields in the catalog entry. Since the same field in the catalog entry may be used to select, sort, or output, there must be a way to differentiate the use. They are differentiated by making the qualifiers local to an action keyword. The action keyword (where it is applicable) for each command and function is as follows:

COMMAND	CONSTRAINTS	DATA	ORDER
QRY	SELECT	DISPLAY	ORDER
UPDATE	SELECT	CHANGE	n/a
CATALOG	n/a	ATTRIBUTES	n/a

This means that for a query, the constraint, display attributes, and order attributes are to be supplied. For updating an entry in the catalog, the select attributes and the attributes to be changed are specified. To catalog a file, the attributes for cataloging are supplied.

Each command uses a parameter keyword to specify the desired elements described above. The above table specifies the keyword name used in the indicated commands. Thus DISPLAY pertains to the information to be displayed from a query. CHANGE specifies the attributes to be changed in the UPDATE command. ATTRIBUTES specifies the cataloging attributes. See the individual commands for more information.

The parameter keywords for operations on the catalog may appear in the commands in any order:

SELECT
ATTRIBUTES   ($CATALOG only)
CHANGE   ($UPDATE only)
DISPLAY   ($QRY only)
ORDER   ($QRY only)

3.3.1 Selecting Catalog Entries using UCSS Commands

> The "select" attributes are used to define the constraints for
> selecting entries in the catalog.

Select attributes are specified as qualifiers to the parameter keyword "SELECT". The following select qualifiers have been defined:

/CALIBRATION_ID	/LEVEL	/SUBTYPE	/VERSION
/CRULE	/ORBIT*	/TEST	/VRULE
/CYCLE	/PIDQ	/TIME*	
/DAY*	/QL_NUMBER	/TYPE	
/FILE	/SOURCE	/UARSDQ	

The qualifiers shown with an asterisk allow ranges to be specified. All other qualifiers accept single values in the expected format.

Select qualifiers <u>always</u> follow the command parameter SELECT. Thus the command syntax is as follows:

$ *command-verb*   SELECT   */select-qualifier-list*

where *select-qualifier-list* is a series of zero or more of the select qualifiers identified above. For those commands that define the SELECT parameter, if no select attributes are to be specified, the SELECT parameter is still required (with an empty select-qualifier-list).

If it is desired to select based on catalog fields not supported in the *select-qualifier-list*, then the field name and value to select on is provided as follows:

/FIELDS = (*field name list*)
/VALUES = (*value list*)

The *field-name-list* is a list of names of fields from the catalog entry. The value list is the list of values corresponding by position to the names in the name list. For example:

/FIELDS = (CREATE_TIME, CREATE_JOB)
/VALUES = (TODAY, HAL*)

This query returns a list of catalog entries created from all HALOE jobs today.

A definition of all valid field names is provided in the report defined in Section 7.13 about reporting catalog attributes. The /FIELDS and /VALUES qualifiers may be combined with the other qualifiers. However, the same field in the catalog should not be specified in both the /FIELDS qualifier and the pre-defined qualifiers. If they are, unpredictable results may occur.

Some qualifiers allow ranges to be specified instead of unique values. A range may be specified for numeric or time fields. A range specifies a start and end. When using the pre-defined qualifiers marked with an asterisk at the beginning of this section, a range is specified using a DCL command list format. For example:

/DAY = (5,6)

This may also be specified by the following qualifiers:

/FIELDS = (DAY)
/VALUES = (5-6)

In this case the range specifies a start and endpoint separated by a dash ("-").

Ranges may be open ended. The following comparison operators may precede the specified value when using the /FIELDS qualifier:

> greater than
>= greater than or equal to
< less than
<= less than or equal to
<> not equal to

For example:

/FIELDS = (DAY)
/VALUES = (<=34)   means for UARS day less than or equal to 34

When using pre-defined qualifiers, the keyword TODAY is allowed for specifying date fields. It is translated to the VAX/VMS definition of TODAY and applies to the time of the UARS CDHF system clock.

Two modifiers are allowed for values in the SELECT constraints definition only for the /FIELDS and /VALUES qualifiers. They have the following meaning:

* - the use of the "*" qualification value indicates a pattern match (wildcard) instead of an exact match, e.g., "HALOE*" matches both "HALOE1" and "HALOE2".

~ - the use of the "~" indicates a "not equal" value. For example, "~0" specified for level means all levels except level 0.

Whether an operator or modifier is allowed for a particular attribute depends on the field type of that attribute. Every attribute in the data catalog is validated based on its field type. The field types for each attribute are available through the report $RPT CAT_ATTS. In that report the type in the TYPE/SIZE field indicates the field type. Operators can be applied based on the field type as shown with an "x" in the following table.

Field Type ID	Field Type Name	Negate ~a	Comparison Operators <a, <=a, >a, >=a, a-b	List (a,b,....)	Wildcards a*
1	CHAR	x	x	x	x
2	INT	x	x	x	
3	HEX	x	x	x	x
4	DATE	x	x	x	
5	UIC	x	x	x	
6	BOOLEAN	x		x	
7	FILESPEC	x	x	x	x
8	TEXT	x			
9	REAL	x	x	x	
10	INTERVAL	x	x	x	

Note that a list can appear for one attribute among a list of attributes. That is, a single attribute may contain a list of possible values. For example:

/FIELDS = (DAY, LEVEL)
/VALUES = ("13,14,16,18", "3AL,3AT")

this example selects records for UARS days 13, 14, 16, or 18 where level is 3AL or 3AT. Syntactically, there are two elements in each list (day, level for /FIELDS, and two quoted strings for /VALUES). Each value element is also a list.

3.3.2 Controlling the Order of Returned Data

> The user can specify in what order entries from the catalog are
> retrieved for a data query.

The user specifies the order in which catalog entries are retrieved by identifying the field(s) on which to order the data returned and, optionally, the order direction (ascending or descending). The keyword "ORDER" in combination with a fields list identifies the fields on which to order the returned information. The format is as follows:

command **ORDER** /**FIELDS** = *field-list*

A field list can be one or more quoted fields. If more than one, then the fields are enclosed in parentheses and separated by commas. The first field specified defines the most important key for retrieving fields. Remaining fields are in decreasing order of importance. All field values are in ascending order unless there is a keyword DESCENDING specified with the field.

The following examples use valid field lists.

          $QRY   SELECT/...
                  DISPLAY...
                  ORDER /FIELDS = "STOP_TIME DESCENDING"

          $QRY   SELECT/...
                  DISPLAY...
                  ORDER /FIELDS = (LEVEL, DAY)

          $QRY   SELECT/...
                  DISPLAY...
                  ORDER /FIELDS = FILE_NAME

For more information on $QRY, see Section 3.5 of the User's Guide or Section 3.3.15 of the Operations Guide.

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3.4 Selecting Catalog Entries Interactively

> A generalized file selection interface allows the user/operator to interactively access data catalog records in the same manner across several functions.

The generic file selection software provides a consistent user interface for selecting catalog records. As described in the section on selecting catalog entries using commands, records are selected by specifying catalog attribute names and values. This consistent user interface is used in the following interactive functions:

- Query the Catalog
- Catalog File Stage/Destage
- Save Catalog Files to Tape   (Operator)
- Tape Generation   (Operator)
- Update Catalog Entry

A multi-page display specifies catalog attributes for selecting catalog records. The general form of each screen is as follows:

```
              ATTRIBUTE NAME              OPER NO.      ATTRIBUTE VALUE
         ----------------                 ---- --       ----------------
         ----------- GENERAL ATTRIBUTES ---------
         1. TYPE (instru./CORRELATIVE/CALIBRATION)  NLOW
         2. LEVEL                                   NLOW
         3. SUBTYPE (species/corr.dat.type/instru)  NLOW
                . . .




         OPER: [N]ot: ~a    [L]ist: a,b,c,...  [O]perator: <a,<=a,>a,  >=a,a-b    [W]ild: a*       Function
                                                                                                   name
         Continue(Enter)    UARS>(PF1)    Page(.or-)    Help(PF2)    Quit    DCL                   inserted
                                                                             DS   1  OF  1        here.
         UARS>                                                               PG   1  OF  6
```

Note that the screen is broken into areas. The left part of the screen lists attributes. Each attribute is numbered. This number selects the desired attributes. The number of each chosen attribute is entered in the column headed as "No."

The user selects by number the attributes to be used in the right part of the screen, along with the associated values. The associated value to the attribute is entered in the column headed as "Attribute Value". Records with the attribute n having the value indicated are selected. For example, if TYPE is attribute number 1, enter a 1 in the NO. column and the value for type (e.g. CLAES) in the same row in the Attribute Values column.

The left and right parts of the screen are independent of one another. In other words, the attribute number and value do <u>not</u> have to appear on the same line as the attribute name in the list at the right.

Several rules apply to the use of this technique:

- Attributes can be specified on any line of any page
- As many attributes as desired can be specified
- Attribute values can span more than one line (use sequential lines with the No. column blank in those rows)
- Most fields allow operators (e.g. ~, >, <, =) - See "Oper" column
- Some fields allow wildcards (pattern match) using a '*'
- Some fields allow a list or range of values
- Each attribute number can be entered only once
- Each attribute number must have at least one attribute value
- Attribute numbers may be entered in any order on any page, but the attribute value must begin on the same row as the attribute number

The operators allowed for a given attribute are encoded in the "Oper" column. The meaning of the encoding is listed at the bottom of the screen. For example, 'N' means "not-value" and 'L' means a list can be provided.

After the user enters the desired selection attributes, he presses N at the UARS> prompt or presses Enter on the keyboard to continue. The inputs are validated. Any errors detected are flagged with a '?' mark between the No. and Attribute Values column. These errors are further defined on the last pages of the display. At the UARS> prompt, enter the "PAGE n" command to go to page "n" of the display.

No further processing can be performed until all errors are corrected. Errors include syntax errors (e.g. duplicate numbers or unexpected characters), field type errors (e.g. number vs. text), correctness (e.g. valid UARS TYPE), and combination errors (e.g. non-correlative and SOURCE). Combinatorial errors are flagged with an 'x' instead of a '?'. The following examples show the generic screen layouts. Note that the current function being used (e.g. Stage data files or Query the Catalog) are indicated on the line of the screen that is mostly dashed.

Generic Example 1.   Screen Layout for File Selection by Attributes

```
ATTRIB  (        )        FILE SELECTION BY ATTRIBUTE DISPLAY
             ATTRIBUTE NAME                 OPER NO.      ATTRIBUTE VALUE
             ---------------                ---- --       ----------------
------------- GENERAL ATTRIBUTES ---------
 1. TYPE (instru./CORRELATIVE/CALIBRATION)  NLOW
 2. LEVEL                                   NLOW
 3. SUBTYPE (species/corr.dat.type/instru)  NLOW
 4. UARS DAY                                NLO
 5. VERSION (Rule=HIGH./COMMON/ALL 1-9999)  NLO
 6. CYCLE    (Rule=HIGHEST/COMMON/ALL 1-99) NLO
 7. START TIME                              NLO
 8. STOP TIME                               NLO
 9. DATA QUALITY UARS                       NOW
10. DATA QUALITY PI                         NOW
11. TEST DATA (T/F)  (T=TEST/F=PRODUCTION)  NLW
12. COMMENTS                                NOW
---------- CALIBRATION ATTRIBUTES --------
13. CALIBRATION ID                          NLOW

NOTE: See HELP for information on valid expressions in the attribute value field    Function
                                                                                     name
Continue(Enter)    UARS>(PF1)     Page(,or-)    Help(PF2)    Quit    DCL             inserted
                                                                    DS   1  OF  1   here.
UARS>                                                               PG   1  OF  6
```

```
ATTRIB  (        )        FILE SELECTION BY ATTRIBUTE DISPLAY
             ATTRIBUTE NAME                 OPER NO.      ATTRIBUTE VALUE
             ---------------                ---- --       ----------------
------------- FILE ATTRIBUTES -------------
14. FILE NAME                               NLOW
15. FILE SIZE                               NLO
16. DISK                                    NLOW
17. DIRECTORY                               NLOW
18. ONLINE STATUS(1=on,2=off,3=stg,4=dest)  NLO
19. FILE SPECIFICATION                      NLOW
--------------- LEVEL 3 ATTRIBUTES --------
20. START INDEX IN LEVEL 3 GRID             NLO
21. NUMBER OF LEVEL 3 GRID DATA POINTS      NLO
22. MAXIMUM LATITUDE (level 3AL & correla.) NLO
23. MINIMUM LATITUDE (level 3AL & correla.) NLO

NOTE: See HELP for information on valid expressions in the attribute value field    Function
                                                                                     name
Continue(Enter)    UARS>(PF1)     Page(,or-)    Help(PF2)    Quit    DCL             inserted
                                                                    DS   1  OF  1   here.
UARS>                                                               PG   2  OF  6
```

```
ATTRIB  (        )        FILE SELECTION BY ATTRIBUTE DISPLAY
             ATTRIBUTE NAME                 OPER NO.      ATTRIBUTE VALUE
             ---------------                ---- --       ----------------
------------- CORRELATIVE ATTRIBUTES -------
24. SOURCE                                  NLOW
25. UARS PRINCIPAL INVESTIGATOR (PI)        NOW
26. CORRELATIVE PRINCIPAL INVESTIGATOR (PI) NOW
27. STATION IDENTIFICATION                  NOW
28. INSTRUMENT IDENTIFICATION               NOW
29. MAXIMUM LONGITUDE                       NLO
30. MINIMUM LONGITUDE                       NLO
31. MAXIMUM ALTITUDE                        NLO
32. MINIMUM ALTITUDE                        NLO
33. UNITS ALTITUDE                          NLOW
34. PARAMETERS                              NOW
--------------- SOLAR ATTRIBUTES -----------
35. BASE WAVELENGTH                         NLO

NOTE: See HELP for information on valid expressions in the attribute value field    Function
                                                                                     name
Continue(Enter)    UARS>(PF1)     Page(,or-)    Help(PF2)    Quit    DCL             inserted
                                                                    DS   1  OF  1   here.
UARS>                                                               PG   3  OF  6
```

```
ATTRIB (     )     FILE SELECTION BY ATTRIBUTE DISPLAY
              ATTRIBUTE NAME              OPER NO.    ATTRIBUTE VALUE
              ---------------             ---- --     -----------------
--------------- QUICKLOOK ATTRIBUTES -------
36. QUICKLOOK ID                          NLO
37. ORBIT NUMBER                          NLO
--------------- OTHER ATTRIBUTES -----------
38. FILE STORED ON MSS (T=yes stored/F=no) NLW
39. FILE ID (hexadecimal)                 NLOW
40. CREATE JOB        (job id)            NLOW
41. CREATE NAME       (job step)          NLO
42. FILE CREATE TIME (catalog)            NLO
43. EXPIRATION TIME                       NLO
44. NUMBER OF STAGE REQUESTS              NLO
45. NUMBER OF STAGE TRANSFERS             NLO
46. RECORD SIZE                           NLO
47. FILE USE RESERVE COUNT                NLO
48. DESTAGE TIME                          NLO

NOTE: See HELP for information on valid expressions in the attribute value field

Continue(Enter)    UARS>(PF1)    Page(.or-)    Help(PF2)    Quit    DCL
                                                                   DS   1  OF  1
UARS>                                                              PG   4  OF  6
```
Function name inserted here.

```
ATTRIB (     )     FILE SELECTION BY ATTRIBUTE DISPLAY
              ATTRIBUTE NAME              OPER NO.    ATTRIBUTE VALUE
              ---------------             ---- --     -----------------
49. MASS STORAGE SYSTEM (MSS) FILE ID     NOW
50. LAST JOB ACCESS (job id)              NLOW
51. LAST NAME ACCESS (job step)           NLO
52. TIME OF LAST ACCESS                   NLO
53. TIME OF SAVE TO TAPE                  NLO
54. SAVE TAPE ID                          NOW
55. DATA GAPS                             NLO
56. DATA MODE                             NLO

NOTE: See HELP for information on valid expressions in the attribute value field

Continue(Enter)    UARS>(PF1)    Page(.or-)    Help(PF2)    Quit    DCL
                                                                   DS   1  OF  1
UARS>                                                              PG   5  OF  6
```
Function name inserted here.

```
ATTRIB (     )     FILE SELECTION BY ATTRIBUTE DISPLAY
    ATTRIBUTE NAME        ATTRIBUTE VALUE           ERROR MESSAGE
    ---------------       -----------------         ---------------

                         DATABASE ERRORS:
                         -----------------




NOTE: See HELP for information on valid expressions in the attribute value field

Continue(Enter)    UARS>(PF1)    Page(.or-)    Help(PF2)    Quit    DCL
                                                                   DS   1  OF  1
UARS>                                                              PG   6  OF  6
```
Function name inserted here.

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3.5 Querying the Catalog

> The Query function enables the user to examine file attributes stored
> in the UCSS data catalog. Results of queries can be displayed on
> the screen or output to a disk file for subsequent use. The user has
> some control over the display format.

The data catalog is a directory system which includes descriptive data about each data file in its domain. This descriptive data is a set of attributes that describe the file. Each file has a corresponding record in the catalog, containing these descriptive attributes.

The user can use the query function to examine the data catalog. The following items are input to support this function:

- Specify attributes that SELECT records
- Specify attributes from each record to examine (DISPLAY)
- Specify the order of records output (ORDER)
- Specify the output destination (display or file)
- Specify the output format

The selection of records is done by specifying attribute name and value pairs. For example, the user may wish to select the records whose data type is xxx and whose level is yyy. To do this, he must specify the attributes TYPE and LEVEL and the associated values xxx and yyy as select attributes. In the command mode, attributes are specfied by qualifiers (see User's Guide - Section 3.3.1 or Operations Guide - Section 3.2.5). In the menu mode, attributes are specified by specifying the desired attribute and its associated value on the screen (User's Guide - Section 3.5.2 or Operations Guide - Section 3.3.15).

Next the user must select what he wants to know from each record. To do this he must specify the attribute field names that he wants to examine. In command mode, the user must know the attribute field names. This can be obtained through the report on catalog attributes ($RPT CAT_ATTS described in Section 7.13. In menu mode, the attributes are described on the screen and the user selects the numbers of the desired attributes to be displayed.

The order of records output is optionally controlled by specifying the attributes on which to sort. The order that the attributes are specified determines the priority of sort order.

The output of the query can be displayed on the screen or placed into a file for later use.

There is a variety of options for formatting the query output. They are summarized as follows:

- Output formatted to 80 or 132 characters wide to the screen, or a user selected width when output to a file.
- Output in columns or record format
- Output headings above columns (columnar mode only)
- Output date and selection attributes at beginning of report (for file output only) (if columnar mode- headings above columns)

When formatting output in columns, if the field does not completely fit in the specified width, then the output line is truncated at the end of the previous field. The fields are output in the order that they are specified in the display list, one column of data per attribute.

When formatting in record format, each field is listed with its value on the same line (if it fits). A line is filled before outputting to the next line; therefore, more than one attribute may appear on a line. Record format is useful when displaying fields of a length that does not fit on the columnar display. For example:

```
TYPE: CLAES     LEVEL:   0    DAY:    1
```

Headings are automatically provided when querying in column mode unless they are suppressed. Suppression is desirable when creating a list of file names for use as input to data transfers.

Sometimes it is desirable to know when a query was done and what attributes were used to select records. This can be provided when the output is directed to a file by selecting the appropriate option. Then, when the file is printed, it appears first in the output. If the no-headings option is specified, this option is not available.

3.5.1 Querying the Catalog Using Commands

> The Query function enables the user to examine file attributes stored in the UCSS data catalog. Selection and control attributes are supplied through qualifiers.

MENU TREE   Catalog services (User Menu)
Data management services (Operations Menu)
Query the catalog

COMMAND $ QRY   [*command-qualifiers*]

SELECT [*/select-qualifiers*]

DISPLAY /FIELDS = *(display-attribute-list)*

[ORDER   /FIELDS = *(order-attribute-list)*]

PARAMETERS   SELECT */select-qualifiers*

Specifies the catalog data attributes to be used in selecting which records in the data base to access. Each attribute and its associated value expression is specified by qualifiers. The SELECT keyword is required but the *select-qualifiers* list is optional. The select qualifiers /CRULE and /VRULE are not supported for the $QRY command. See User's Guide - Section 3.3.1 or Operations Guide - Section 3.2.5.

DISPLAY /FIELDS = *(display-attribute-list)*

Required parameter that specifies the data attributes whose values are extracted from the catalog. In this case the desired attributes names are listed after the /FIELDS qualifier where each field is delimited by commas. At least one field is required. The attribute names can be obtained by using the catalog attributes report described in Section 7.13. Field names can be abbreviated to uniqueness.

ORDER /FIELDS = *(order-attribute-list)*

Optional parameter that specifies the sorting criteria. The leftmost attribute is the most important key. To use the "DESCENDING" option, put the field in double-quotes (e.g. "TYPE DESCENDING"). The attribute names can be obtained by using the catalog attributes report described in Section 7.13. Field names can be abbreviated to uniqueness.

QUALIFIERS   The command qualifiers are all optional. They may appear anywhere in the command. They are as follows:

/ATTRIBUTES

Specifies that the query selection attributes and the date of the query are reported at the beginning of the output results. This qualifier is only allowed when outputting to a file (/OUTFILE) with headers (not /PLAIN).

/HELP provides help on this command.

/OUTFILE = *output-file-specification*

Specifies a file name into which the result of the query is output. If this qualifier is not supplied, output goes to SYS$OUTPUT (usually the terminal screen).

/PLAIN

Used with the /OUTFILE qualifier, it specifies the output to be without headers (i.e., plain). This form of file can be used as input to the data transfer services subsystem.

/RECLEN = *record-length-in-bytes*

This optional qualifier specifies the length of the query results written to a file specified by the user with the /OUTFILE qualifier. The length of the query results record should be between 0 and 32767 bytes. If no value is supplied with the /RECLEN qualifier, then the length is automatically calculated as the sum of the bytes required to output the selected output attributes.

The /RECLEN qualifier is used when the /OUTFILE qualifier is specified. If the /RECLEN qualifier is not used, then the width of the output is determined by the presence of the /WIDE qualifier. The /RECLEN qualifier and /WIDE qualifier are mutually exclusive.

/RECORD

Specifies that the output be in record (full screen) format instead of the default of columnar format.

/WIDE

Specifies that the width of the report to be 132 columns wide instead of the default of 80 columns.

DESCRIPTION The Query Catalog function provides a limited degree of query capability on the catalog. The command form may be invoked from a non-interactive command procedure (i.e., from a batch job) if the /OUTFILE qualifier is used.

ERROR Any internal data base errors causes the command to be aborted.
PROCESSING

SEE ALSO Working with the Data Catalog From Commands (User's Guide
Section 3.3, Operations Guide Section 3.2.4)
Selecting Catalog Entries Using UCSS Commands User's
Guide Section 3.3.1, Operations Guide Section 3.2.5)
Controlling the Order of Returned Data (User's Guide Section 3.3.2,
Operations Guide Section 3.2.6)
Selecting Catalog Entries Interactively (User's Guide Section 3.4,
Operations Guide Section 3.2.7)
Transfer Data from CDHF/Catalog (User's Guide Section 4.2,
Operations Guide Section 3.3.8.1)
Catalog Table Attributes Report (Section 7.13)

EXAMPLES

Example 1.   QUERY with results to a file.

        $QRY /OUTFILE = [MYDIR]QUERY_FILES.DAT -
                SELECT   /TYPE = CLAES -
                          /LEVEL = 2 -
                DISPLAY   /FIELDS = (FILE_NAME, FILE_SIZE)

This example returns the FILE_NAME and FILE_SIZE of all CLAES level 2 data files. The query results are written to the file QUERY_FILES.DAT.

Example 2.   QUERY with no header to a file

        $QRY /OUTFILE = [MYDIR]QUERY_FILES.DAT /PLAIN -
                SELECT   /TYPE = CLAES -
                          /LEVEL = 1 -
                DISPLAY   /FIELDS = FILE_NAME

This example provides a simple listing in file QUERY_FILES.DAT of all CLAES level 1 file names. This file can then be used in a data transfer request, for example:

        $DT /CDHF -
                MYNODE::DISK1:[MYDIR] -
                SELECT /FILE = "#[MYDIR]QUERY_FILES.DAT"

Example 3. QUERY showing non standard record length in full record format

```
$QRY  /OUTFILE = MYFILE.DAT -
        SELECT  /TYPE = HALOE -
                /LEVEL = 1 -
        DISPLAY -
                /FIELDS = (FILE_NAME,  DATA_GAP) -
        /RECORD -
        /RECLEN = 300
```

This example provides a listing in a file MYFILE.DAT of all HALOE Level 1 file names and associated data gaps. The record length is 300 bytes. The output is in full record mode, not column mode.

Example 4. QUERY with output in full record format

```
$QRY  /WIDE  /RECORD -
        SELECT   /TYPE = HALOE -
        DISPLAY /FIELDS = (FILE_NAME,  ONLINE_STATUS) -
        ORDER   /FIELDS = ONLINE_STATUS
```

This example provides in 132 column output the HALOE file names and online status. The output is in record format.
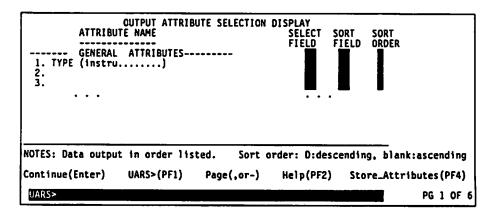
3.5.2 Querying the Catalog Using Menus

> The Query function enables the user to examine file attributes stored in the UCSS data catalog. Selection and control attributes are supplied through multi-page prompting screens.

The Query Catalog function provides a limited degree of query capability on the catalog. The menu version of the query capability is supported by several multi-page displays. Each display is oriented around the functions of record selection, attribute display selection, sorting, and output formatting as described in Section 3.5 (User's Guide) or Section 3.3.15 (Operations Guide).

Record selection proceeds as defined in the section on selecting catalog entries interactively (see User's Guide Section 3.4 or Operations Guide Section 3.2.7).

Once the selection criteria are specified, then the items to display and the order of displayed output is chosen. The following screen provides this capability.

```
                    OUTPUT ATTRIBUTE SELECTION DISPLAY
            ATTRIBUTE NAME                      SELECT  SORT   SORT
            --------------                      FIELD   FIELD  ORDER
    ------- GENERAL  ATTRIBUTES---------
    1. TYPE (instru........)                      █      █      █
    2.                                            █      █      █
    3.                                            █      █      █
            . . .                                   . . .



    _____
    NOTES: Data output in order listed.    Sort order: D:descending, blank:ascending

    Continue(Enter)    UARS>(PF1)    Page(,or-)    Help(PF2)    Store_Attributes(PF4)
    UARS>                                                           PG 1 OF 6
```

Note that the screen is broken into areas. Attributes are described on the left part of the screen. The user selects by number the attributes to be displayed and those on which to sort on the right part of the screen. The user may also indicate descending order for any sort field by entering 'D' in the same row as the field selected in the SORT FIELD column. The default is ascending order and is indicated by leaving the field blank. Help information is available.

The user may also want to store this set of attributes in a file for re-use at a future query. The system allows one set of attributes to be saved for interactive re-use. The file name must translate from the logical name "DEFAULT_USER_QUERY". If this logical name is not defined, the store attributes to a file function (PF4, or KEYS at UARS>) fails. If it is defined, previous definitions are destroyed. To save multiple query attribute combinations, it is recommended that pre-defined query commands ($QRY) be set up in ".COM" files. These can then be invoked at a DCL prompt. They can even be submitted in batch if the /OUTFILE qualifier is used. See User's Guide Section 3.5.1 or Operations Guide Section 3.3.15.1 for more information on the $QRY command.

Several rules apply to using the OUTPUT ATTRIBUTE SELECTION DISPLAY:

- Attributes can be specified by number on any line of any page
- As many attributes as desired can be specified; however, only as many as will fit on the output are displayed
- Each attribute number can only be entered once
- Attribute numbers may be entered in any order on any page, but the attribute value must begin on the same row as the attribute number
- attributes are output in the order specified.

After the user enters the desired selection numbers, he presses 'N' at the UARS> prompt (or keypad Enter) to continue. The inputs are validated. Any errors detected are flagged with a '?' mark. These errors are further defined on the last pages of the display. At the UARS> prompt, enter the "PAGE n" command to go to page "n" of the display. No further processing can be performed until all errors are corrected.

Next the user must specify the output format control information. Defaults for these fields are defined, but the user can override them. This is demonstrated as follows:

```
IOFORM (    )         QUERY OUTPUT FORMAT DISPLAY

Output options:

1. Wide:    ▓      (Yes = 132 column,    No = 80 column)

2. Columns: ▓      (Yes = column output,  No = Row output)

3. Headings: ▓     (Yes = column headings, No = No headings)

4. Screen:  ▓      (Yes = Screen output   No = File output)

─────────────────────────────────────────────────────────
NOTES: Not all option combinations are valid.  See message line for errors.

Continue(Enter)   UARS>(PF1)   Quit
                                              DS  1 OF 1
 UARS>                                        PG  1 OF 1
```

```
FILINFO (    )        QUERY OUTPUT FILE FORMAT DISPLAY

---------------- >>>  FILE only options:   <<< --------------------

DATE & ATTRIBUTE LIST  [ Y=date & select attribute list /N=none]: ▓
        This option outputs on the first page of the query results
        those attributes used to select records and the current date

WIDTH selection: ▓

        1. 80  characters per line
        2. 132 characters per line
        3. nnnnn characters per line:   ▓▓▓▓▓
        4. Automatic record length calculation
           based on output attributes selected


    Enter USER FILE:  ▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓
    SPECIFICATION

─────────────────────────────────────────────────────────
Continue(Enter)   UARS>(PF1)   Quit
                                              DS  1 OF 1
 UARS>                                        PG  1 OF 1
```

If no data are found that meet the request, a message so indicating the condition is displayed.

```
MESSAGE (    )      NO DATA FOUND DISPLAY

**********************************************************************
                    NO DATA was FOUND in the:

                       << Data Catalog >>

         Which satisfies requested Attribute Selection Criteria

                   No further processing performed

                       On this QUERY request




Continue(Enter)
**********************************************************************
QUERY request processing complete.                        DS 1 OF 1
UARS>                                                      PG 1 OF 1
```

If the user routes his output to a file, the following screen is an example of a screen that informs him of the results of the query.

```
MESSAGE (    )    QUERY RESULTS FILE GENERATED

**********************************************************************
                    QUERY RESULTS GENERATED

   FILE:  QUERY_RESULTS_FUL.DAT

   TOTAL DATA RECORDS (Plus headers):   60




Continue(Enter)
**********************************************************************
QUERY request processing complete.                        DS 1 OF 1
UARS>                                                      PG 1 OF 1
```

When the query results are output to a display, the format of the output screen is as follows:

```
RESULTxxx                    RESULTS  DISPLAY


                  ...  Output  data  ...


_____
Total lines generated: xxx        Select 1st display line: [   1]
Continue(Enter)    Page(,or-)

UARS>                                                      PG 1 OF 1
```
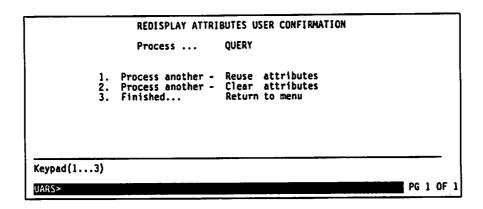
The format of the query output data is either columnar or record-by-record as selected by the user. Since the output of the query can exceed the number of display pages allocated to query output, a scrolling function is provided. All query output is routed to a temporary file. This data is then loaded into the display pages and displayed. The number of display lines

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generated by the query and written to the temporary file is shown at the bottom right corner of the screen. Also shown is the line number from the file of the first line on the first page of the display (shown in "Scroll to line no."). There may be data in the file not shown on any page of the display. To access that data, at the "Select 1st line no:" prompt, change the number from 1 to the desired starting line in the query results file. Approximately 160 lines comprise one display (10 pages).

After the query has been processed, the user is given the option to perform another query or return to the menu. If another query is requested, then he also has the option to use/not use the attributes of the previous query. This is demonstrated below:

```
              REDISPLAY ATTRIBUTES USER CONFIRMATION

                 Process ...     QUERY


            1.  Process another -  Reuse  attributes
            2.  Process another -  Clear  attributes
            3.  Finished...        Return to menu




  Keypad(1...3)
  UARS>                                              PG 1 OF 1
```

Example 1. Query Scenario for 80 Column Columnar Display

```
ATTRIB  (     )      FILE SELECTION BY ATTRIBUTE DISPLAY
              ATTRIBUTE NAME                OPER NO.      ATTRIBUTE VALUE
              --------------                ---- --       ---------------
---------- GENERAL ATTRIBUTES ----------
 1. TYPE (instru./CORRELATIVE/CALIBRATION) NLOW
 2. LEVEL                                  NLOW  1    HRDI
 3. SUBTYPE (species/corr.dat.type/instru) NLOW  2    0
 4. UARS DAY                               NLO
 5. VERSION (Rule=HIGH./COMMON/ALL 1-9999) NLO
 6. CYCLE   (Rule=HIGHEST/COMMON/ALL 1-99) NLO
 7. START TIME                             NLO
 8. STOP TIME                              NLO
 9. DATA QUALITY UARS                      NOW
10. DATA QUALITY PI                        NOW
11. TEST DATA (T/F)  (T=TEST/F=PRODUCTION) NLW
12. COMMENTS                               NOW
---------- CALIBRATION ATTRIBUTES --------
13. CALIBRATION ID                         NLOW

NOTE: See HELP for information on valid expressions in the attribute value fields

Continue(Enter)    UARS>(PF1)    Page(,or-)    Help(PF2)    Quit    DCL
                                                                    DS  1  OF  1
UARS>                                                               PG  1  OF  6
```

```
IOATTR  (     )      OUTPUT ATTRIBUTE SELECTION DISPLAY
              ATTRIBUTE NAME                 SELECT    SORT    SORT
              --------------                 FIELD     FIELD   ORDER
---------- GENERAL ATTRIBUTES ----------
 1. TYPE (instru./CORRELATIVE/CALIBRATION)     4        14
 2. LEVEL                                     15        15
 3. SUBTYPE (species/corr.dat.type/instru)    18                D
 4. UARS DAY                                  14
 5. VERSION (Rule=HIGH./COMMON/ALL 1-9999)
 6. CYCLE   (Rule=HIGHEST/COMMON/ALL 1-99)
 7. START TIME
 8. STOP TIME
 9. DATA QUALITY UARS
10. DATA QUALITY PI
11. TEST DATA (T/F)  (T=TEST/F=PRODUCTION)
12. COMMENTS
---------- CALIBRATION ATTRIBUTES --------
13. CALIBRATION ID

NOTES: Data output in order listed.    Sort order: D:descending, blank:ascending

Continue(Enter)    UARS>(PF1)    Page(,or-)    HELP(PF2)    Store_Attributes(PF4)
                                                                  DS  1  OF  1
UARS>                                                             PG  1  OF  6
```

Specify
in desired
output order.

Numbers can be
from later pages
of the display.

```
IOFORM  (    )         QUERY OUTPUT FORMAT DISPLAY

Output options:

1. Wide:     N         (Yes = 132 column,     No = 80 column)

2. Columns:  Y         (Yes = column output,  No = Row output)

3. Headings: Y         (Yes = column headings, No = No headings)

4. Screen:   Y         (Yes = Screen output   No = File output)

NOTES: Not all option combinations are valid.  See message line for errors.

Continue(Enter)    UARS>(PF1)    Quit
                                                          DS  1  OF  1
UARS>                                                     PG  1  OF  1
```

Example 1. Query Scenario for 80 Column Columnar Display (Continued)

```
RESULT80 (          )              RESULTS  DISPLAY
DAY      FILE_SIZE     ONLINE_STATUS
124      100614        2
125      100614        2
126      100536        2
127      100614        1
128      100575        1
129      58617         1




Total lines generated: xxx                Select 1st display line: ▓▓▓]
Continue(Enter)      Page(,or-)
                                                          DS   1  OF  1
UARS>                                                     PG   1  OF  1
```

Note: Since file name was too big to fit on one line, the field was truncated
      from the display. All later fields would also have been omitted.

```
                    REDISPLAY ATTRIBUTE USER CONFIRMATION

                    Process ...      QUERY

              1.  Process another -  Reuse  attributes
              2.  Process another -  Clear  attributes
              3.  Finished...        Return to menu



Keypad(1...3)

UARS>                                              PG   1  OF  1
```

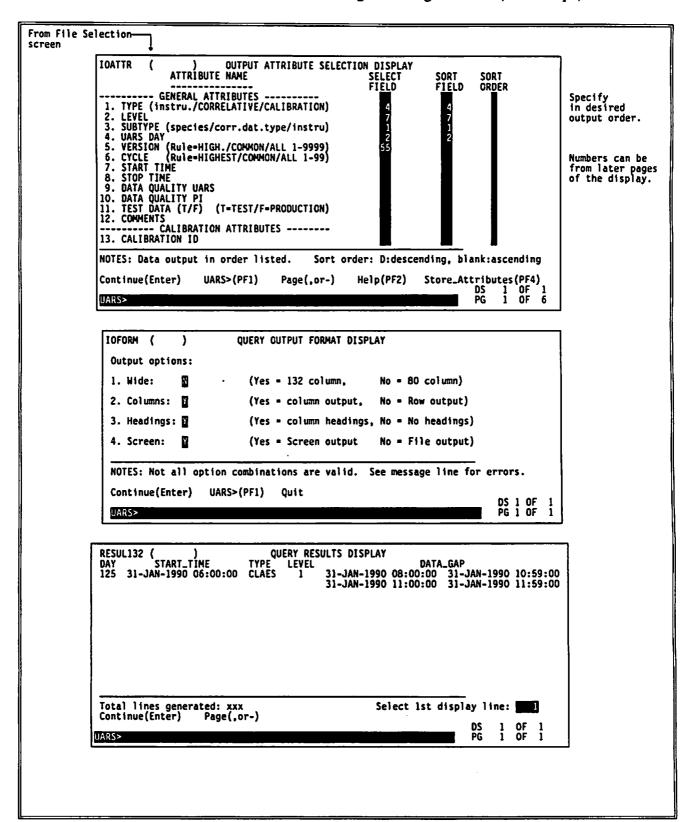*Example 2. Query Scenario for 132 Record Format Output to File*

```
ATTRIB   (      )       FILE SELECTION BY ATTRIBUTE DISPLAY
              ATTRIBUTE NAME                OPER NO.      ATTRIBUTE VALUE
              ---------------               ---- --       ----------------
---------- GENERAL ATTRIBUTES ----------
1. TYPE (instru./CORRELATIVE/CALIBRATION)  NLOW
2. LEVEL                                   NLOW  1    HRDI
3. SUBTYPE (species/corr.dat.type/instru)  NLOW  2    0
4. UARS DAY                                NLO
5. VERSION (Rule=HIGH./COMMON/ALL 1-9999)  NLO
6. CYCLE    (Rule=HIGHEST/COMMON/ALL 1-99) NLO
7. START TIME                              NLO
8. STOP TIME                               NLO
9. DATA QUALITY UARS                       NOW
10. DATA QUALITY PI                        NOW
11. TEST DATA (T/F)  (T=TEST/F=PRODUCTION) NLW
12. COMMENTS                               NOW
---------- CALIBRATION ATTRIBUTES --------
13. CALIBRATION ID                         NLOW
_____
NOTE: See HELP for information on valid expressions in the attribute value fields

Continue(Enter)    UARS>(PF1)    Page(,or-)   Help(PF2)    Quit    DCL
                                                                   DS   1  OF  1
UARS>                                                              PG   1  OF  6
```

```
IOATTR   (      )      OUTPUT ATTRIBUTE SELECTION DISPLAY
             ATTRIBUTE NAME               SELECT    SORT    SORT
             ---------------              FIELD     FIELD   ORDER
---------- GENERAL ATTRIBUTES ----------
1. TYPE (instru./CORRELATIVE/CALIBRATION)   4        14
2. LEVEL                                    15       15
3. SUBTYPE (species/corr.dat.type/instru)   18               D
4. UARS DAY                                 14
5. VERSION (Rule=HIGH./COMMON/ALL 1-9999)
6. CYCLE    (Rule=HIGHEST/COMMON/ALL 1-99)
7. START TIME
8. STOP TIME
9. DATA QUALITY UARS
10. DATA QUALITY PI
11. TEST DATA (T/F)  (T=TEST/F=PRODUCTION)
12. COMMENTS
---------- CALIBRATION ATTRIBUTES --------
13. CALIBRATION ID
_____
NOTES: Data output in order listed.    Sort order: D:descending, blank:ascending

Continue(Enter)    UARS>(PF1)    Page(,or-)   Help(PF2)    Store_Attributes(PF4)
                                                                   DS   1  OF  1
UARS>                                                              PG   1  OF  6
```

Specify
in desired
output order.

Numbers can be
from later pages
of the display.

```
IOFORM   (    )          QUERY OUTPUT FORMAT DISPLAY

Output options:

1. Wide:      N         (Yes = 132 column,     No = 80 column)

2. Columns:   N         (Yes = column output,  No = Row output)

3. Headings:  Y         (Yes = column headings, No = No headings)

4. Screen:    N         (Yes = Screen output   No = File output)

_____
NOTES: Not all option combinations are valid.  See message line for errors.

Continue(Enter)    UARS>(PF1)    Quit
                                                        DS  1 OF 1
UARS>                                                   PG  1 OF  1
```

Example 2. Query Scenario for 132 Record Format to File (Continued)

```
FILINFO (    )          QUERY OUTPUT FILE FORMAT DISPLAY

----------------- >>>  FILE only options:   <<< --------------------

DATE & ATTRIBUTE LIST  [ Y=date & select attribute list /N=none]: █
       This option outputs on the first page of the query results
       Those attributes used to select records and the current date

WIDTH selection: █

       1. 80  characters per line
       2. 132 characters per line
       3. nnnnn characters per line:    ████
       4. Automatic record length calculation
          based on output attributes selected


Enter USER FILE: query_results_ful.dat
SPECIFICATION
```
```
Continue(Enter)     UARS>(PF1)      Quit
                                                      DS  1 OF 1
UARS>                                                 PG  1 OF 1
```

```
MESSAGE  (      )           QUERY RESULTS FILE GENERATED

*****************************************************************************


                 QUERY RESULTS FILE GENERATED

FILE:  QUERY_RESULTS_FUL.DAT

TOTAL DATA RECORDS (Plus headers):   18


Continue(Enter)


*****************************************************************************
```
```
QUERY request processing complete.                    DS  1  OF  1
UARS>                                                 PG  1  OF  1
```

A dump of the query results file for this query might look as shown below:

                        DATE:28-FEB-1991 20:28:00.84

FILE SELECTION CRITERIA FOR THIS REQUEST IS AS FOLLOWS:
TYPE : HRDI
LEVEL : 0

```
------------------------------------------------------------------------------------
DAY: 124    FILE_SIZE: 7527         ONLINE_STATUS: 2
FILE_NAME: HRDI_L0_D0001.V0001_C01_PROD
------------------------------------------------------------------------------------
DAY: 125    FILE_SIZE: 100614       ONLINE_STATUS: 2
FILE_NAME: HRDI_L0_D0125.V0001_C01_PROD
------------------------------------------------------------------------------------
DAY: 126    FILE_SIZE: 100536       ONLINE_STATUS: 1
FILE_NAME: HRDI_L0_D0126.V0001_C01_PROD
------------------------------------------------------------------------------------
DAY: 127    FILE_SIZE: 100614       ONLINE_STATUS: 1
FILE_NAME: HRDI_L0_D0127.V0001_C02_PROD
------------------------------------------------------------------------------------
DAY: 128    FILE_SIZE: 100575       ONLINE_STATUS: 1
FILE_NAME: HRDI_L0_D0367.V0005_C01_PROD
------------------------------------------------------------------------------------
DAY: 129    FILE_SIZE: 58617        ONLINE_STATUS: 1
FILE_NAME: HRDI_L0_D0368.V0001_C01_PROD
```

Example 3. Query Scenario Showing How Attributes Are Shown When There is More than One Value Associated with a Single Catalog Attribute (Data Gaps)

```
From File Selection
screen
        ┌──────────────────────────────────────────────────────────┐
        │ IOATTR  (      )      OUTPUT ATTRIBUTE SELECTION DISPLAY   │      Specify
        │             ATTRIBUTE NAME            SELECT   SORT   SORT  │      in desired
        │             ---------------            FIELD   FIELD  ORDER │      output order.
        │ ---------- GENERAL ATTRIBUTES ----------                   │
        │  1. TYPE (instru./CORRELATIVE/CALIBRATION)     4      4     │
        │  2. LEVEL                               7      7           │
        │  3. SUBTYPE (species/corr.dat.type/instru)     1      1     │
        │  4. UARS DAY                            2      2           │      Numbers can be
        │  5. VERSION (Rule=HIGH./COMMON/ALL 1-9999)    55          │      from later pages
        │  6. CYCLE   (Rule=HIGHEST/COMMON/ALL 1-99)                 │      of the display.
        │  7. START TIME                                            │
        │  8. STOP TIME                                             │
        │  9. DATA QUALITY UARS                                     │
        │ 10. DATA QUALITY PI                                       │
        │ 11. TEST DATA (T/F)   (T=TEST/F=PRODUCTION)               │
        │ 12. COMMENTS                                              │
        │ ---------- CALIBRATION ATTRIBUTES --------                │
        │ 13. CALIBRATION ID                                       │
        │ ───────────────────────────────────────────────────────── │
        │ NOTES: Data output in order listed.   Sort order: D:descending, blank:ascending │
        │                                                          │
        │ Continue(Enter)    UARS>(PF1)    Page(,or-)    Help(PF2)   Store_Attributes(PF4) │
        │                                                    DS   1  OF  1  │
        │ UARS>                                              PG   1  OF  6  │
        └──────────────────────────────────────────────────────────┘


        ┌──────────────────────────────────────────────────────────┐
        │ IOFORM  (    )          QUERY OUTPUT FORMAT DISPLAY        │
        │                                                          │
        │ Output options:                                          │
        │                                                          │
        │ 1. Wide:    N  ·   (Yes = 132 column,    No = 80 column)  │
        │                                                          │
        │ 2. Columns: Y      (Yes = column output,  No = Row output)│
        │                                                          │
        │ 3. Headings: Y     (Yes = column headings, No = No headings)│
        │                                                          │
        │ 4. Screen:  Y      (Yes = Screen output   No = File output)│
        │ ───────────────────────────────────────────────────────── │
        │ NOTES: Not all option combinations are valid.  See message line for errors. │
        │                                                          │
        │ Continue(Enter)   UARS>(PF1)   Quit                      │
        │                                                    DS 1 OF 1 │
        │ UARS>                                              PG 1 OF 1 │
        └──────────────────────────────────────────────────────────┘


        ┌──────────────────────────────────────────────────────────┐
        │ RESUL132 (     )          QUERY RESULTS DISPLAY           │
        │ DAY      START_TIME      TYPE   LEVEL          DATA_GAP    │
        │ 125  31-JAN-1990 06:00:00  CLAES   1    31-JAN-1990 08:00:00  31-JAN-1990 10:59:00 │
        │                                         31-JAN-1990 11:00:00  31-JAN-1990 11:59:00 │
        │                                                          │
        │                                                          │
        │ ───────────────────────────────────────────────────────── │
        │ Total lines generated: xxx          Select 1st display line: [    1] │
        │ Continue(Enter)    Page(,or-)                            │
        │                                                    DS  1  OF  1 │
        │ UARS>                                              PG  1  OF  1 │
        └──────────────────────────────────────────────────────────┘
```

3.6 Cataloging a Data File

> Users may request that a file be cataloged in system space. This is
> done so that other users may access the file or so that production
> programs may access the data. The user may catalog only those data
> types that he is authorized to catalog.

MENU TREE   Catalog services
Catalog a data file

COMMAND   **$ CATALOG** *source-file-specification*
                 ATTRIBUTES */attribute-qualifiers*

PARAMETERS **ATTRIBUTES** */attribute-qualifiers*

Specifies the attributes required by the catalog for this data file. Each
attribute value is supplied by a qualifier defined to supply that value.
These qualifiers are listed below and fully defined in Section 3.2.1
(User's Guide) or Section 3.2.2 (Operations Guide)

Source-file-specification

Specifies the file to catalog. This file specification may specify node,
disk, and directory as well as the file name. WORLD read access to
the file and its directory path is required.

QUALIFIERS   The following attribute qualifiers may be used in cataloging a file:

/ CALIBRATION_ID = *calibration-identifier*

/ COMMENTS = *"text-string"*

/ DAY = *day number*

/ FIELDS = *field-name-list*

/ GAPS = *gaps list (e.g. ("time1 time2", "time1 time2"))*

/ LEVEL = *level*

/ PIDQ = *PI-data-quality-value*

/ RECORD_SIZE = *record-length (in bytes)*

/ START_TIME = *data-start-time*

/ STOP_TIME = *data-stop-time*

/ SUBTYPE = *subtype*

/ **TEST**

/ **TYPE** = *type*

/ **UARSDQ** = *UARS-data-quality-value*

/ **VALUES** = *field-values-list*

/ **VERSION** = *version*

/ **HELP**   provides help on this command

The /GAPS, /FIELDS, /VALUES, /PIDQ, and /UARSDQ qualifiers are always optional. All other attribute qualifiers are required if they apply to the data type being cataloged.

The following attributes are <u>always</u> required (except /START_TIME and /STOP_TIME are optional for calibration data):

/RECORD_SIZE	/TYPE
/START_TIME	/VERSION
/STOP_TIME	

DESCRIPTION   This process provides the mechanism for the user to request the cataloging of a data file. In the menu system, input parameters are requested through prompting sequences. The command may be issued from a command procedure only if *source-file-specification* and the required attributes for the file being cataloged are provided.

ERROR PROCESSING   The user may catalog only those data types that he is authorized to catalog. A table containing the list of data types that may be cataloged by each user name is maintained by the CDHF Data Base Administrator. If an attempt is made to catalog a file that is not authorized, a privilege error occurs and the file is not cataloged.

Note that Correlative data may <u>not</u> be cataloged with the **CATALOG** command.

SEE ALSO   3.1 What Is The Catalog? (User's Guide)
3.2 The Data Catalog (Operations Guide)
3.9 Data Security (User's Guide)

EXAMPLES

<u>Example 1. Catalog a data file</u>

```
$CATALOG  MYFILE.DAT -
          ATTRIBUTES -
                 /TYPE = CALIBRATION -
                 /CALIBRATION_ID = CONTROL -
                 /LEVEL = 1 -
                 /DAY = 125 -
                 /RECORD_SIZE = 512 -
                 /SUBTYPE = CLAES -
                 /VERSION = 1
```

Example 2. Using Menus to Catalog a Data File with Data Gaps

```
CATLOG    (        )              CATALOG A DATA FILE


Source file specification:       (Node::Device:[Directory]Filename)
CSC$DISK:[CSCOPS]CALIBRATION.FILE

NOTE: WORLD read access is required, or use of proxy acct.

REQUIRED ATTRIBUTES (in most cases)    OTHER ATTRIBUTES
-----------------------------------    --------------------------------
Type:        CALIBRATION               Subtype:             SUSIM
Level:       1                         Calibration ID:      TEST_CAL_ID
UARS day:    200                       PI data quality:
Version:     1                         UARS data quality:
Record size: 2000    (Bytes)
Start time:  1-jan-1991 00:00:00.00    Data gaps? (Y/N)  Y
Stop time:   4-JAN-1991 00:00:00.00    More attributes on Page 2...
Test data? (Y/N) N

Comments (optional):  This is to catalog a calibration file


Continue(Enter)   Cancel(.)   UARS>(PF1)   Page(,or-)   DCL
                                                             DS  1 OF 1
UARS>                                                        PG  1 OF 2
```

```
CATLOG    (        )              CATALOG A DATA FILE

Additional optional attributes:

L3 base index:
L3 number points:
Maximum latitude:
Minimum latitude:
Quicklook ID (>0)
Orbit number




Continue(Enter)   Cancel(.)   UARS>(PF1)   Page(,or-)   DCL
                                                             DS  1 OF 1
UARS>                                                        PG  2 OF 2
```

```
GAPDAT    (        )              DATA GAPS LIST


      GAP START TIME                 GAP STOP TIME
      --------------                 -------------








   More gaps? (Y/N)  N

Continue(Enter)   Cancel(.)   UARS>(PF1)   Page(,or-)   DCL
                                                             DS  1 OF 1
UARS>                                                        PG  1 OF 2
```

Example 2. Using Menus to Catalog a Data File with Data Gaps (Continued)

```
MESSAGE  (        )              CATALOGING SUCCESS
*****************************************************************************

Cataloging was successful...

Cataloged file name:
DISK12:[UCSS.RO]CAL_SUSIM_L1_D0200.XTEST_CAL_ID_V0001_C02_PROD




Continue (Enter)

*****************************************************************************
                                                        DS   1 OF  1
UARS>                                                   PG   2 OF  2
```

3.7 Updating a Data Catalog Entry

> Users may request that updates be made to selected fields of a catalog entry.

MENU TREE   Catalog services
Request update of catalog entry

COMMAND   **$ UPDATE**

      SELECT */select-attribute-qualifiers*

      CHANGE/*changeable-attributes*

PARAMETERS   **SELECT** */select-attribute-qualifiers*

Specifies the catalog data attributes to be used selecting which records in the data base to access. Each attribute and its associated value expression is specified by qualifiers. See User's Guide Section 3.3.1 or Operations Guide Section 3.2.5.

CHANGE */changeable-attributes*

The only attributes that may be updated are the comments and quality fields.

QUALIFIERS   **CHANGE**

      /COMMENTS = *"comment-string"*

      /PIDQ = *PI-data-quality-flag*

      /UARSDQ = *UARS-data-quality-flag*

      SELECT
      /select-attribute-qualifiers

      /HELP provides help on this command

DESCRIPTION   This process provides the mechanism for an authorized user to request the updating of catalog entries. Authorization is maintained by the CDHF Data Base Administrator and may differ from the cataloging authorization.

In the menu system, input parameters are requested through prompting sequences.

The command may be issued from a command procedure if both **CHANGE** and **SELECT** parameters are specified.

The values specified in *select-attribute-qualifiers* could specify multiple files. From the command line, these attributes must specify a single data file or the command terminates without updating anything. From the menu system, if more than one file is located, then the list of file names is displayed. The user may then select by marking the number the file(s) to which this update is to be applied. Note that version or cycle is enough to provide more than one entry in the catalog.

The qualifier /VERSION and /CYCLE may be used to help specify the appropriate catalog entry.

To blank out the comments, just enter /COMMENTS with no value.

Currently, only the **COMMENTS, PIDQ,** and **UARSDQ** attributes may be specified. The two data quality fields are 3-character text fields.

ERROR PROCESSING   If the qualifiers do not specify a unique record, then an error message is generated and the command is ignored.

SEE ALSO
3.1   What Is The Catalog? (User's Guide)
3.2   The Data Catalog (Operations Guide)
3.3   Working with the Catalog From Commands (User's Guide)
3.2.4 Working with the Catalog From Commands (Operations Guide)
3.3.1 Selecting Catalog Entries Using UCSS Commands (User's Guide)
3.2.5 Selecting Catalog Entries Using UCSS Commands (Operations Guide)
3.9   Data Security (User's Guide)

EXAMPLES

Example 1.   Update comments field

> **$UPDATE -**
>   **SELECT   /TYPE = SOLSTICE   /LEVEL = 1   /DAY = 55 -**
>   **CHANGE   /COMMENTS = "BAD ALGORITHM"**

Example 2.   Update quality field

> **$UPDATE -**
>   **SELECT   /TYPE = MLS   /SUBTYPE = OZONE /LEVEL = 3AL -**
>   **/DAY = 105 /VERSION = 2   -**
>   **CHANGE   /PIDQ = 1.4   /UARSDQ = 1.4**

Example 3.   Using Menus to Update a Catalog Entry

```
MENUDISP (        )              MENU SYSTEM
                              CATALOG SERVICES


        1.   Catalog a data file
        2.   Catalog correlative data
        3.   Query the catalog
        4.   Request update of catalog entry
        5.   DBMS access



Keypad(1...5)   Help(PF2)    LastMenu(PF3)    Keys(PF4)    Quit    DCL
                                                                  DS   1 OF   1
UARS>                                                             PG   1 OF   1
```

```
ATTRIB   (       )     FILE SELECTION BY ATTRIBUTE DISPLAY
                   ATTRIBUTE NAME           OPER  NO.    ATTRIBUTE VALUE
                   ---------------          ----  --     -------------------
---------- GENERAL ATTRIBUTES ----------             1   MLS
 1. TYPE (instru./CORRELATIVE/CALIBRATION) NLOW      2   3AT
 2. LEVEL                                  NLOW      3   TEMP
 3. SUBTYPE (species/corr.dat.type/instru) NLOW      6   1-5
 4. UARS DAY                               NLO
 5. VERSION (Rule=HIGH./COMMON/ALL 1-9999) NLO
 6. CYCLE   (Rule=HIGHEST/COMMON/ALL 1-99) NLO
 7. START TIME                             NLO
 8. STOP TIME                              NLO
 9. DATA QUALITY UARS                      NOW
10. DATA QUALITY PI                        NOW
11. TEST DATA (T/F)   (T=TEST/F=PRODUCTION) NLW
12. COMMENTS                               NOW
---------- CALIBRATION ATTRIBUTES --------
13. CALIBRATION ID                         NLOW

NOTE: See HELP for information on valid expressions in the attribute value fields

Continue(Enter)   UARS>(PF1)    Page(,or-)    Help(PF2)    Quit    DCL
                                                                  DS   1  OF   1
UARS>                                                             PG   1  OF   2
```

```
FILES    (       )          CATALOG UPDATE FILES LIST

 Enter X in the SELECT column to select which catalog entries to update.

 Update all files shown below? (Y/N)  N

 SELECT                    FILE NAMES
 ------                    -------------------
        MLS_L3AT_STEMP_D0001.V0001_C01_PROD
    X   MLS_L3AT_STEMP_D0002.V0001_C01_PROD
        MLS_L3AT_STEMP_D0003.V0001_C01_PROD
    X   MLS_L3AT_STEMP_D0004.V0001_C01_PROD


Continue(Enter)   UARS>(PF1)    Page(,or-)
                                                          DS   1  OF   1
UARS>                                                     PG   1  OF   2
```

```
UPDATE   (       )          CATALOG UPDATE INFORMATION

 The following fields are initialized with the symbol ###
 To change the field value, remove this symbol

 Comments:
 These files need to be reprocessed

 PI Data Quality:    ###
 UARS Data Quality:  ###


Continue(Enter)   UARS>(PF1)
                                                          DS   1  OF   1
UARS>                                                     PG   1  OF   2
```

3-55

3.8 Accessing The DBMS

> This function is provided to enable the user to use INGRES to perform queries of a more complex nature than those provided by the $QRY command.

MENU TREE Main User Menu -or- Main Operations Menu -or- Catalog Services DBMS access

COMMAND $ UCSS DBMS or
$ INGMENU = *data-base-name*

PARAMETERS When INGMENU is used, the data base name may be optionally provided. If it is not provided, it is prompted for.

QUALIFIERS None

DESCRIPTION This process provides the mechanism by which the user can access the INGRES system. These commands provide access to a generalized INGRES menu. A sample INGRES menu from INGRES Version 6 is shown below. From this menu, the user can select the desired operation. Not menu selections may be available.

INGRES provides a variety of ways to access data base tables. These are addressed more fully in Section 2.8 of this document.

Tables	Create/examine tables or query/report on table data
Forms	Create/edit/use forms for customized data access
JoinDefs	Create/edit/use join definitions on multiple tables
Reports	Create/edit/run reports
Applications	Create/edit/run 4GL applications
Queries	Use SQL, QUEL, or Query-By-Forms to query data

ERROR PROCESSING Error processing is provided by INGRES.

SEE ALSO 2.8 INGRES - An Overview
3.1 What Is The Catalog?

3.9 Data Security

> There are two security issues for the UCSS catalog. The first security
> issue is to ensure the safety and integrity of the data itself. The
> second security issue is the control of access to the data.

The UCSS performs several steps to ensure that the data under its control is
maintained safely.

- There are controls over who may add to or update the catalog.

- Backup copies of the catalog are maintained on safe storage.

- Catalog integrity checks can be made under operator direction during
  UCSS initialization.

Catalog entries are made by authorized users by the $CATALOG command or
production programs.

Read privileges for the catalog and all science data are granted to the UARS user
community. Production processing may not write to already cataloged files.

An authorized user may update three of the catalog fields. This is performed through
the $UPDATE function described in Section 3.7. The authorization is maintained by
the CDHF Data Base Administrator.

The catalog is periodically backed up by operations personnel. In the event of a
problem, the capability to use these backups is provided to operations.

Periodically the operations team verifies the catalog. This process checks the data file
location fields in the catalog data entries against their actual locations on magnetic disk
and mass storage. It produces a report for the operator describing any discrepancies.
The frequency of this process is established by operational procedures.

Section
4

Data Transfer Services

4.1 Overview of Data Transfer Services

> The Data Transfer Services allow the user to request the transfer of
> data files among the UCSS system space, user space, and the RACs.

The transfer of UCSS data can take place among three environments (see Section 1.5).
These are the UCSS-managed disk space (i.e. "catalog controlled disk space" or "system
space"), the user-managed disk space (i.e. "user space" or "user area"), and the RACs.
The users can request transfers of data between one of the CDHF areas and a RAC
(Figure 4.1-1).

The user makes requests for data transfers through either the menus or UCSS DCL
commands. In both cases, information to determine the source, destination, and
attributes of the transfer is required. Menus prompt for required information.
Parameters and qualifiers provide the information to UCSS commands.

For data transfers from the CDHF, the information obtained is saved as a request
pending execution. The request is assigned a priority. This priority is input to
determine when to transfer the data. The initial status of the request is returned to the
user when the request is made. This approach provides for better resource
sharing/management.

For data transfers into the CDHF, the transfer process is performed immediately. Only
one file may be transferred at a time into the CDHF. The application that controls the
data transfer waits until the transfer is completed before returning control to the user.

The status of a particular user's requests may be obtained at any time by requesting a
display of the transfer requests (see Section 6.8). This process is summarized in Figure
4.1-2. Various parameters affect the transfer of data. These include the priority of the
request, the resources required to execute the request, and the location of the data.
The user may request that a transfer take place "ASAP" (as soon as it can be performed
based on available resources), or in the future (e.g. overnight). This input is part of the
priority determination. Resources include the availability of the file, the availability of
the lines to the RAC (for RAC transfers), and the size of the file (classified as bulk or
small files).

4-2

1. Cataloged File to User Space
2. User Space to RAC
3. RAC to User Space
4. User Space to Catalog
5. Cataloged File to RAC
6. RAC to Catalog

Figure 4.1-1. The Users Can Request Transfers In All Directions

Figure 4.1-2. Processing Data Transfer Requests

4.1.1 The Data Transfer Function

At the CDHF, files reside in the user-managed disk space (user area) and the catalog controlled, UCSS-managed disk space. The data transfer functions include transfers of data from these CDHF areas to the RACs and from the RACs to these CDHF areas. All user requested transfers are performed using the "DT" and the "CATALOG" commands.

The following table summarizes the UCSS commands for transferring data among the storage spaces. Full accounting of the data transfers is maintained. These commands may be used instead of the menu system. To move data into the UCSS system space, the data must be cataloged. This movement is done by the $CATALOG or $CORRELATIVE commands, discussed elsewhere in this document.

COMMAND	FUNCTION	PARAMETERS & QUALIFIERS
DT/RAC	RAC to USER AREA	source file specification & destination file specification
DT/UA	USER AREA to RAC	source file specification & destination file specification
DT/USER = username	Production job to RAC or User Area	logical file identifier & destination file specification
DT/CDHF	Cataloged data to RAC or USER AREA	destination file specification & describing qualifiers

The DT commands have one of the following structures:

```
$ DT /xxx          file-spec          [SELECT/select-attributes]
                                      [destination-file-spec]


This qualifier      This parameter       This parameter is the
specifies the       is the destination   destination file for
data source as      for transfers from   non-cataloged transfers
user area, RAC,     the catalog, or the  or the SELECT keyword
CDHF catalog,       source for non-      with attribute quali-
or production job.  cataloged transfers. fiers for cataloged data.
```

For more information about file specifications, see Section 4.1.6.

RAC to User Area or User Area to RAC. To transfer data from the RAC to the user-managed disk space on the CDHF, the following command is used:

$ DT /RAC   source-file-specification   destination-file-specification

To transfer data from the user-managed disk space to the RAC, the following command is used:

$ DT /UA   *disk:[directory]source-file-specification*   *destination-file-specification*

In both cases the qualifier indicates the source location of the data. Both the source and destination file specifications may include the node name. The node names determine which RAC is involved in the transfer. The file specifications must be valid VAX/VMS format and should not include wild cards (*.*) or the percent sign (%). Both parameters are required. Multiple file transfers may be set up in two ways. The first involves setting up a command procedure containing multiple DT commands and then invoking the command procedure. This results in a separate transfer request and acknowledgement for each command in the file.

The second multiple file transfer method is to set up a list of file specifications in another file. This file is the source file. It is enclosed in double-quotes as follows:

$ DT /UA   "*#source-file-list-specification*"   *destination-file-specification*

See Section 4.1.5 for more details about multi-file transfers.

<u>Note.</u> Transfers from the RAC to the user-managed disk space may not use the second transfer method with the "#file specification".

<u>Cataloged Data to RAC or User Area.</u> To transfer data from the catalog controlled, UCSS-managed disk space, the following command is used:

$ DT /CDHF   *destination-file-specification*   SELECT /*select-qualifiers*

The qualifier /CDHF indicates that the source of the transfer is the catalog controlled data base. For transfers to a RAC, the destination file specification must include the node name to specify the node to which the file is transferred. The default node name is the current node. Select qualifiers are required to determine which data to transfer. These qualifiers are local to the keyword parameter SELECT. See Section 3.3.1 for a description of these qualifiers. The destination file specification parameter is required and has no default.

The file specification must be valid VAX/VMS format and should not include wild cards (*), the percent sign (%), nor file list references (#). Multiple files may be transferred by setting up a command procedure containing multiple DT commands and then invoking the command procedure.

<u>RAC or User Area to Catalog.</u> To transfer data from the RAC or user area into the catalog controlled (UCSS-managed) disk space, the following command is used:

$ CATALOG   *source-file-specification*   - or -

$ CORRELATIVE

The $CATALOG command is further defined in Section 3.6. The $CORRELATIVE command is defined in Section 10.

<u>Production Job to User Area or RAC.</u> It may be desirable to transfer copies of files manipulated by production jobs to the User Area or RAC for further "offline" processing or analysis. These files are identified by their logical file identifier as used in the production jobs. Users are encouraged to transfer cataloged files upon production job termination. Non-cataloged files (user status, scratch, etc.) may be transferred between production job steps. The data transfer command DT performs these transfers. The DT commands are placed in the DCL that runs the production job.

Different data transfer commands are used to transfer cataloged and non-cataloged files from production jobs. The following command should be used to transfer <u>cataloged</u> files after the production job has <u>successfully</u> completed (the files are cataloged):

$ DT /CDHF /USER = *username*   *destination-file-specification*
                                                  SELECT /FILE=*logical-file-id*

The user assigns this logical file identifier when he opens the file in the production job using the production software support services.

The following command transfers <u>non-cataloged</u> files:

$ DT /USER = *username*   *logical-file-id*   *destination-file-spec*

This logical file identifier is available until the job image exits. This command is the only way that the user can transfer user status files.

The use of the /USER qualifier helps determine the proper file ownership at the destination. If the destination is to the user area at the CDHF, the owner of the file is specified by the /USER qualifier. If the destination is a RAC, the owner of the file at the RAC is the proxy account or the directory owner at the RAC.

The account specified by the /USER qualifier at the CDHF will receive the completion mail message. The use of /USER requires the privilege SYSPRV.

If the production job <u>fails,</u> proper DCL should be present to bypass the appropriate transfer requests.

Proxy Accounts. Each RAC System Manager will establish a proxy account. This proxy account should have access to at least one directory into which files can be written or from which files can be read by the UCSS Data Transfer function. This account can be accessed simply by node as the destination. On most RACs, this account is called CDHF_FILES. The RAC process on the CDHF also runs under the account CDHF_FILES.

It is good policy to make the directory into which most files are transfered the Proxy account default directory. Then all files transfered into this account are owned by the proxy account. Other approaches may cause ownership problems.

UCSS RAC Data Transfer uses the following rules for accessing files at the RAC:

- When cataloged data is transferred to a RAC, the proxy account is used. The access allowed at a RAC is defined by the access allowed to the proxy account at the RAC.

- When data is transferred from a CDHF user area to a RAC, the user's UIC is used at the CDHF for access to the data, while the proxy is used at the RAC.

- When a data file is cataloged, UCSS operation's accounts are used and these accounts must have read access to the file. The easiest way to ensure proper access is to have WORLD read access on the file to be cataloged and the directory in which it resides. The file may be either on a RAC or in a user area at the CDHF.

- When a file is transferred from a RAC to a User Area on the CDHF, the user account is used for access to both the User Area at the CDHF and at the RAC.

4.1.2 Summary of Qualifiers for Data Transfer

> When using DCL commands to operate the UCSS, various qualifiers are
> needed to specify catalog file attributes and to provide other inputs
> to the command.

Table 4.1.2 summarizes the qualifiers for the data transfer functions. This set of
qualifiers does not address the data source defining qualifiers: /CDHF, /RAC, and
/UA. Those qualifiers are addressed in Section 4.1.1. It also does not address catalog
selection attributes. The select qualifiers are described in Sections 3.2 and 3.3.1.

QUALIFIER	DESCRIPTION
/ACRIM	Decommutate Quality and OBC data and transfer decommutated data plus Level 0 ACRIM data. Format is: DT/CDHF/ACRIM ...
/AFTER	Hold a transfer until after a particular time /AFTER = vms-time
/CANCEL/ID	Cancel a data transfer request by data transfer request identifier /CANCEL/ID = request-identifier
/NODE	Used with /CANCEL to cancel requests to a particular node.
/NOMAIL	Allows the user to request that no mail be sent if the transfer request SUCCESSFULLY completes.
/USER	Used with /CANCEL to optionally define the user name of the requests to cancel. Also used for data transfers from a production job to establish file ownership.
/VDATE	Selects the latest date for which version is to be considered in the selection /VDATE=time where time could be a vms time, Uudtf-time, or Dday format.
/VIRTUAL	Selects that a virtual file transfer is to be performed

Table 4.1.2 Valid Qualifiers For Data Transfer Functions

4.1.3 Definition of Qualifiers for Data Transfers

All qualifiers may be abbreviated to that combination of letters that makes it unique.

Qualifiers may be categorized into two groups. The first group part is the qualifiers for accessing the data catalog. These qualifiers are defined in detail in Sections 3.2.1 and 3.2.2. The second group is the qualifiers for controlling the data transfer services. These qualifiers are defined below.

Some combinations of qualifiers are disallowed for the data transfer command. These are identified by an 'X' in Table 4.1.3.

	CDHF	RAC	UA	VERSION	CYCLE	DAY	ORBIT	FILE	TIME
CDHF		X	X						
RAC	X		X						
UA	X	X							
ACRIM		X	X						
CANCEL	X	X	X						
TYPE		X	X					X	
VALUES		X	X					X	
FIELDS		X	X					X	
CALIBRATION_ID		X	X					X	
TEST		X	X					X	
VIRTUAL		X	X	X	X	X		X	
VDATE		X	X	X				X	
TIME		X	X			X	X	X	
SUBTYPE		X	X					X	
QL_NUMBER		X	X					X	
ORBIT		X	X			X		X	X
LEVEL		X	X					X	
DAY		X	X				X	X	X
CYCLE		X	X					X	
VRULE				X				X	
CRULE					X			X	
USER	X	X	X						

Table 4.1.3. Qualifier Combinations for Data Transfer

/ACRIM

Allows the transfer of ACRIM Level 0 and decommutated quality and OBC data. The associated quality and OBC data is staged. Data is extracted from these files and used to create a "decommutated" file. This decommutated file and the associated ACRIM Level 0 file is then transferred to the requested location. See Section 8 for more information about the decommutation process.

Defaults: Test flag is "Production"

Examples:

$ DT /CDHF /ACRIM   ACRIM::   SELECT /DAY = 125   /TEST = TEST
$ DT /CDHF /ACRIM   ACRIM::   SELECT /DAY = (125,126)

The first example produces a decommutated file for UARS day 125 and issues the data transfer request. The request is a multi-file transfer containing the ACRIM level 0 file and the decommutated file. The first example accesses test data, the latter accesses production data over a day range.

/AFTER = *time*

Specifies that the transfer be held until after a particular time. If the specified time has passed, the transfer is scheduled for the next available opportunity.

You can specify an absolute time or a combination time. Absolute times are specified in terms of Greenwich Mean Time (GMT). The keywords TODAY and TOMORROW are also meaningful inputs. See the VAX/VMS DCL Concepts Manual (Reference 5) for complete information about specifying time values. Note that relative times are quoted.

Default: ASAP

Examples:	/AFTER = TODAY	Schedule at next opportunity
	/AFTER = TOMORROW	Schedule after next GMT midnight
	/AFTER = "15-APR-1993 12"	Schedule after 12:00 noon on April 15, 1993
	/AFTER = "+5"	Schedule 5 hours from now
	/AFTER = "+:5"	Schedule after 5 minutes from now
	/AFTER = 20:30	Schedule after 10:30 P.M. tonight

/CANCEL   /ID = *request-identifier*   **or**
/CANCEL   /ID = ALL_MFT   **or**
/CANCEL   /ID = ALL_SFT

Cancels data transfer requests. Data transfer requests may be pending or in-progress. A user can only cancel requests he initiated. Operators may cancel any request.

If the request identifier is invalid or the requesting user is not the originator of the request, then an error message is generated and the request is ignored. The request identifier may be looked up using the Display RAC Transfer Schedule function.

Request identifiers are of the form: RDT_*nnnnnnnn*, MFT_*nnnnnnnn*, or ACR_*nnnnnnnn* where *nnnnnnnn* is an 8-digit hexadecimal number. The request ID may also be the keyword ALL_MFT or ALL_SFT; i.e., the request is to cancel all multi-file requests (ALL_MFT) or all single-file requests (ALL_SFT), respectively. The ALL_MFT options cancels all MFT and ACR requests. When used with the /USER qualifier, all SFT / MFT requests for a user may be specified for cancellation.

Default: None

Examples: /CANCEL   /ID = RDT_000012AF

/NODE = *node-name*

This qualifier can optionally be used with the /CANCEL qualifier to cancel all transfers to a specified node.

Default: All nodes

Examples: /NODE = CLAES

/NOMAIL

This qualifier allows the user to request that no mail be sent if the transfer request SUCCESSFULLY completes. Under any other completion (failed or cancelled), the user is notified of the request completion by mail message.

For multi-file transfers, the conditional initial mail message is always sent. The completion multi-file transfer mail message may not be sent if all transfers in the multi-file transfer succeed.

/USER = *user-name-to-cancel*   or
           /USER = *user-name-for-transferred-file*

The user name of the requests to cancel. If a non-operations person is performing the cancellation request, then this qualifier is optional. If supplied, it must match the user name of the current process. If an operations person is performing the cancellation, this qualifier allows him to selectively cancel requests for a particular user. This capability is of particular use when all multi-file requests or all single file requests for a given user name are cancelled. See /CANCEL above for more information.

For files transferred from a production job, the $DT /USER = *user-name* format is used. The user name is needed to establish ownership of the file transferred. This qualifier is required in this case.

/VDATE = *version-date*

Files matching the attributes created <u>after</u> this version date are not selected.

Default: current date

Examples: /VDATE = "02-FEB-1992 12:00:00"

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/VIRTUAL

Specifies a virtual file transfer request instead of a multi-file request. This determination is necessary if the time span specified for the transfer crosses a UARS day boundary. A virtual file is one file that contains all the data across the entire time range. A multi-file request transfers one file per UARS day for each file in the time range specified. See Section 4.1.4 for more information.

This qualifier can only be used to produce Level 0, 3AL, 3AS, 3AT, 3LP, and 3TP virtual files. No other types of virtual file transfers are supported.

Default: Multi-file request

Examples: /VIRTUAL

4.1.4 Virtual File Transfers

The user can transfer virtual data files from the catalog controlled UCSS data base to the specified RAC or to the user area at the CDHF.

The UARS science data files are created on a UARS day basis and normally cover the 24-hour period starting at 00 GMT. However, when transferring data to the RAC, a user may wish to select a time range of the data and transfer a single file containing data for only the requested time range. This type of data transfer is a virtual file transfer and the resulting file is called a virtual file.

The user can select data from multiple UARS day files or he can select a subset of data from a single day. The data can be selected by specifying a time range or by specifying an orbit range.

```
┌──────────────────────────────────────────────┐
│  ┌──────────┬──────────┬──────────┬─────────┐ │
│  │ DAY  n   │ DAY  n+1 │ DAY  n+2 │ DAY n+3 │ │
│  └──────────┴──────────┴──────────┴─────────┘ │
│       └──────── time range specified ────┘    │
│                                               │
│                       │                       │
│                       ▼                       │
│            ┌─────────────────────┐            │
│            │    Virtual  File    │            │
│            └─────────────────────┘            │
└──────────────────────────────────────────────┘
```

```
┌──────────────────────────────────────────────┐
│  ┌─────────────────────────────────────────┐  │
│  │           A single UARS day             │  │
│  └─────────────────────────────────────────┘  │
│      └──────── time range specified ────┘     │
│                                               │
│                       │                       │
│                       ▼                       │
│            ┌─────────────────────┐            │
│            │    Virtual  File    │            │
│            └─────────────────────┘            │
└──────────────────────────────────────────────┘
```

The UCSS data transfer function supports virtual file transfers for only Level 0, 3AL, 3AS, 3AT, 3LP, and 3TP data. There is no UCSS support of virtual file transfers for Level 1 or 2, calibration, and correlative data since the file formats are not known to the UCSS software.

To transfer a virtual file the UCSS data transfer software needs to identify the files for each UARS day in the time range to be used. The default algorithm is to select the files with the highest version and cycle (i.e. the latest). If the user wishes to get earlier data,

a version date (VDATE qualifier in command mode) can be specified which results in the selection of the highest version and cycle of the file created (create time in the catalog) before the version date. Also, in the menu system, the user has the option to select the individual versions and cycles from a display of those available.

The following is a virtual file transfer command example:

$ DT/CDHF destination-specification -
              SELECT /VIRTUAL -
                        /TYPE = CLAES -
                        /LEVEL = 0 -
                        /TIME = ("24-OCT-1992 12:00:00", -
                                    "25-OCT-1992 15:00:00") -
                        /VDATE = "26-OCT-1992 18:00"

In this example the virtual file produced contains the CLAES Level 0 data for the specified time range. The highest version and cycle of the data cataloged before the version date is selected for the two days.

The /VIRTUAL, /TYPE, and /LEVEL qualifiers are required on the $DT command for a virtual file transfer. In addition the /TIME, /DAY, or /ORBIT qualifier must be provided to select the time range of the data to be transferred. The /SUBTYPE qualifier is used when transferring Level 3AL, 3AT, 3LP, or 3TP data.

The /VDATE qualifier is optional and the version date defaults to the current system time.

There are some limitation on the number of days that can be specified in a virtual file transfer request. These limits are set by UARS CDHF resource constraints. The maximum number of days in a Level 0 virtual file request is 10 since the Level 0 files are large. The maximum number of days in a Level 3 virtual file request is 1000 since these files are expected to be smaller.

4.1.5 Multi-File Transfer Requests

> The user can transfer a group of files by specifying a multi-file data transfer request. This request specifies a list of files to be included in the transfer.

When the user selects multiple files for transfer in a single transfer request, this request is a multi-file transfer. A multi-file transfer can be for cataloged files or user area files.

A multi-file transfer request is tracked as a single request. The user is notified by mail when transfers for all files are completed.

There are two basic methods of selecting multiple files for transfer by the menu system or commands. The user can either specify a list of file names or specify the files using catalog attributes and a day range. Both methods can be used in a single multi-file request when issued from the menu system.

A multi-file transfer by file list is useful when the user has a list of file names to be transferred. This method is the only option for transferring multiple files of non-cataloged data. To generate a multi-file transfer request, the user must specify the file name of a file containing the desired list on the /FILE qualifier on the command, or the source specification on the prompting screen. When using the menu system, the user has the option to loop through the prompting screens specifying the files individually. The user is not permitted to use both a file list and specify individual files in the same multi-file request. The list file needs to have WORLD read access to ensure that the UCSS has access to the file.

The list of source files for transfer is contained in a separate file. It has the following format:

Record #	Contents
1	VMS file descriptor 1 or UCSS cataloged file name 1
2	VMS file descriptor 2 or UCSS cataloged file name 2
	. . .
n	VMS file descriptor n or UCSS cataloged file name n

where n is the maximum number of files allowed in a multi-file transfer request.

The maximum number of files in a multi-file transfer request is 15.

The VMS file descriptor is a VAX/VMS file specification which must contain the following structure:

disk:[dir]filename{.file-type}{;file-version}

The items shown in braces "{}" are optional extensions to the file name. Do not include the braces in the file specification used in the file descriptors. Note that wildcards ("*") and the percent sign (%) are <u>not</u> allowed in the file descriptors.

When specifying UCSS cataloged file names, the disk and directory information is prohibited. A list of cataloged file names can be created by using the Catalog Query function as described in Section 3.5.

To create a list of .FOR files to be transferred from one's CDHF user area to one's RAC, the following DCL command may be used:

    $dir   /noheader   /notrailer   /output = mft_source_file_list. *.for

To transfer multiple files by attributes, the user must select the primary catalog attributes (i.e. type, level, subtype, source, and calibration ID) needed to identify the type of data, then specify a day range that covers multiple days. The day range is selected by using the /DAY qualifier on the DT command or by entering the UARS start and stop days on the prompting screen.

4.1.6 File Name Requirements for Data Transfers

> When specifying the source and destination file names in data transfer requests, certain portions of the file specifications are required, not appropriate, or optional.

Source or destination file specifications are required for the data transfer requests. Special rules are applied in the error checking of these file specifications, depending on what is being attempted. These rules apply in both the command and menu/prompting sequence methods of invoking the requests. These rules are explained in the tables on the following pages.

The following cases are addressed in Table 4.1.6.

- Transferring a single cataloged file to the RAC or User Area
- Single or multi-file transfers from the User Area to the RAC
- Transferring multiple cataloged files to the RAC or User Area by the Menu System
- Transferring multiple cataloged files to the RAC using a source file list
- Transferring multiple cataloged files to the User Area using a source file list

A multi-file source file list is a file that contains a list of file names to be shipped to the RAC or user area (see Section 4.1.5).

If version numbers are optional and not supplied, then the highest version of the file is used.

TRANSFER TYPE	SOURCE	DESTI/ NATION	SOURCE/SOURCE FILE LIST						FILE DESTINATION					
			NODE	DISK	DIRECTORY	FILE NAME	TYPE	VERSION	NODE	DISK	DIRECTORY	FILE NAME	TYPE	VERSION
SINGLE FILE	USER-AREA	RAC	*	REQ	REQ	REQ	OPT	OPT	REQ	OPT	OPT	OPT	OPT	OPT
SINGLE FILE	RAC	USER-AREA	OPT	OPT	OPT	REQ	OPT	OPT	*	REQ	REQ	OPT	OPT	OPT
** SINGLE FILE	RAC or USER-AREA	CATALOG	OPT	OPT	OPT	REQ	OPT	OPT	*	*	*	*	*	*
SINGLE FILE	CATALOG	RAC	*	*	*	REQ	REQ	*	REQ	OPT	OPT	OPT	OPT	OPT
SINGLE FILE	CATALOG	USER-AREA	*	*	*	REQ	REQ	*	BLANK	REQ	REQ	OPT	OPT	OPT
MULTI-FILE(1)	USER-AREA	RAC	Blank	REQ	REQ	REQ	OPT	OPT	REQ	OPT	OPT	*	*	*
MULTI-FILE(2)	USER-AREA	RAC	NODE	REQ	REQ	REQ	OPT	OPT	REQ	OPT	OPT	*	*	*
MULTI-FILE(3)	CATALOG	RAC	*	*	*	REQ	REQ	*	REQ	OPT	OPT	*	*	*
MULTI-FILE(3)	CATALOG	USER-AREA	*	*	*	REQ	REQ	*	BLANK	REQ	REQ	*	*	*
MULTI-FILE(4)	CATALOG	RAC	Blank	REQ	REQ	REQ	OPT	OPT	REQ	OPT	OPT	*	*	*
MULTI-FILE(4)	CATALOG	USER-AREA	Blank	REQ	REQ	REQ	OPT	OPT	Blank	REQ	REQ	*	*	*
MULTI-FILE(5)	CATALOG	RAC	REQ	REQ	REQ	REQ	OPT	OPT	REQ	OPT	OPT	*	*	*
MULTI-FILE(5)	CATALOG	USER-AREA	REQ	REQ	REQ	REQ	OPT	OPT	Blank	REQ	REQ	*	*	*

* - NOT APPLICABLE
** - Destination is specified by attributes
REQ - Required field
OPT - Optional field

(1) Source file list at CDHF for UA to RAC
(2) Source file list at RAC for UA to RAC
(3) Destination specification needs to be entered only once
    and may be changed at any entry. All files go to the
    destination of last file entered. (menu system)
(4) Source file list at CDHF for catalog to RAC/UA
(5) Source file list at RAC for catalog to RAC/UA

Table 4.1.6.   Rules for Error Checking File Specifications for Data Transfers

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4.2 Transfer Data from CDHF/Catalog

> The user can transfer cataloged data files to the specified RAC or to the user area at the CDHF.

MENU TREE   Data transfer services
Transfer cataloged data

COMMAND $ DT /CDHF   *destination-file-specification*
SELECT */select-qualifiers*

PARAMETERS *destination-file-specification*

This parameter is the file specification of the file to which the data is transferred. It should include the node name of the system to which data is to be transmitted. The node names are defined in Appendix E. If the transfer is to the user area at the CDHF, the directory name defines where to put the data. Only valid VAX/VMS file names are accepted. This parameter must precede the SELECT keyword.

QUALIFIERS   */AFTER = time*

Specifies that the transfer be held until after a specified time.

/CANCEL   /ID = *request-identifier* or
/CANCEL   /ID = ALL_MFT   or
/CANCEL   /ID = ALL_SFT
/CANCEL   /NODE = *node-name*

Cancels a data transfer request. The data transfer request may be pending or in progress. If the request identifier is invalid or the requesting user is not the originator of the request, then an error message is generated and the request is ignored. The /NODE qualifier allows cancelling all transfers to a particular node.

/NOMAIL

Mail reporting the status of the transfer is suppressed if the transfer is successfully made.

/USER = *user-name*

The user name of the originator of the requests to be cancelled.

/VDATE = *time*

The date the file was cataloged, used for a virtual file request. The default (current date) retrieves the last version of the file that was cataloged.

/VIRTUAL   indicates virtual file transfer

See Section 3.3.1 for *select-qualifiers*.

DESCRIPTION The transfer data from CDHF/Catalog function transfers cataloged files from the specified RAC or to the User Area on the CDHF.

This function can be invoked from a menu or command. The menus prompt for the desired parameters. For commands, control information is supplied by parameters and qualifiers. In either mode an acknowledgement of the request is returned to the requestor.

When using relative quicklook access in command mode (/QL_NUMBER qualifier with zero or negative quicklook number... See Section 3.2.1), if the quick-look data set is not found, the closest set is identified and displayed and no action is taken. When specifying a quicklook data set relatively in the menus and the set is not found, then a screen is presented to pick the closest data set.

The user may track the progress of the request with the RAC transfer schedule display (Section 6.8).

For a complete description of each qualifier, see Section 4.1.3. For file name defaults, see Section 4.1.6.

ERROR   All input parameters and qualifiers are checked for validity. Error
PROCESSING messages are sent to the screen for interactive requests. Errors cause the request to be ignored.

If the data is not found in the catalog when the request is made, then an error message is returned to the interactive user.

For requests made from command procedures, error messages are returned through SYS$OUTPUT.

SEE ALSO   3.2.1   Definition of Qualifiers for the Data Catalog
                  3.3.1   Selecting Catalog Entries Using UCSS Commands
                  4.1   Overview of Data Transfer Services
                  4.1.3   Definition of Qualifiers for Data Transfers
                  4.1.6   File Name Requirements for Data Transfers
                  6.8   RAC Transfer Schedule

EXAMPLES   Following are command examples and menu screen flow examples:

Example 1.   Transfer by File Name.

   $ DT /CDHF HALOE::DISK2:[MYDIR]WORK1.SCR -
        SELECT -
           /FILE = HALOE_L0_D0015.V0001_C01_PROD

This command sets up a transfer of a data set of HALOE level 0 data for day 15, version and cycle 1. The data is transferred to the HALOE node on disk 2 into a file named WORK1.SCR.

Example 2.   Transfer virtual file for level 0 by orbit range.

   $ DT /CDHF HALOE::WORK1.SCR -
        SELECT /VIRTUAL -
           /ORBIT = (33,42) -
           /LEVEL = 0 -
           /TYPE = HALOE -
           /AFTER = TOMORROW

This command creates a virtual file for transfer that starts at the time the first orbit starts and ends at the time the second orbit ends. The data is transfered to the HALOE RAC proxy account and file named WORK1.SCR.

Example 3.   Transfer virtual file for level 3 by time range.

   $ DT /CDHF SPRLJ::DISK9:[L3VIRT.DIR] -
        SELECT /VIRTUAL -
           /TYPE = HRDI -
           /LEVEL = 3AT -
           /SUBTYPE = TEMP_A -
           /TIME = ("02-FEB-1992 00:00:00", -
            "03-FEB-1992 05:22:00") -
           /VDATE = "10-NOV-1992 00:00:00"-
           /AFTER = "29-NOV-1992 15:24:00"

This command transfers a HRDI level 3AT file with a subtype of TEMP_A for the spacecraft data time equivalent to 02-FEB-1992 to 03-FEB 1992 05:22, with a version date of 10-NOV-1992. The file is to be transferred to the HRDI RAC (SPRLJ) after 29-NOV-1992 15:24.

Example 4.   Transfer CALIBRATION data by attributes.

```
$ DT /CDHF   CLAES:: -
              SELECT -
                      /TYPE = CALIBRATION -
                      /SUBTYPE = CLAES -
                      /LEVEL = 1   /DAY = 125 -
                      /CALIBRATION_ID = ID1 -
                      /VERSION = 100   /CYCLE = 1
```

This command transfers a CALIBRATION file for CLAES level 1 data for UARS day 125, with a calibration ID of ID1, version 100, and cycle 1. The default requested transfer time is the current system time (now).

Example 5.   Transfer CLAES level 1 data by attributes.

```
$ DT /CDHF     CLAES::DISK2:[CLAES.L1.DIR] -
               SELECT -
                      /TYPE = CLAES -
                      /LEVEL = 1    /DAY = 125 -
                      /SUBTYPE = ABSCALDATA -
                      /VERSION = 1    /CYCLE = 5
```

This command transfers a CLAES level 1 file with the subtype of ABSCALDATA for UARS day 125, version 1, and cycle 5 to the CLAES RAC, to the directory called [CLAES.L1.DIR]. The default requested transfer time is the current system time (now).

Example 6.   Transfer CORRELATIVE data.

```
$ DT /CDHF     SPRLJ:: -
               SELECT -
                      /TYPE = CORRELATIVE -
                      /SOURCE = NMC -
                      /SUBTYPE = TEMP -
                      /DAY = 125   /VERSION = 10
```

This command transfers CORRELATIVE data from NMC with a subtype of temperature for UARS day 125, version 10 to the SPRLC RAC.

Example 7. Transfer QUICKLOOK file.

```
$ DT /CDHF   CLAES:: -
              SELECT-
                      /TYPE = QUICKLOOK-
                      /SUBTYPE = CLAES-
                      /QL_NUMBER = 2-
                      /DAY = 127-
```

This command transfers quicklook data with the quicklook type of CLAES, quicklook number 2 and for UARS day 127, to the CLAES RAC.

Example 8. Create and Transfer a multi-file request.

```
$ QRY    /OUTFILE = MYDISK:[MYDIR]QUERY_FILES.DAT/PLAIN -
         SELECT  /TYPE = CLAES   /LEVEL = 1 -
         DISPLAY  /FIELDS = FILE_NAME
```

This example provides a simple listing in file QUERY_FILES.DAT of all CLAES level 1 files names. This file can then be used in a data transfer request, for example:

```
$ DT  /CDHF    MYNODE::DISK1:[MYDIR] -
               SELECT   /FILE = "#MYDISK:[MYDIR]QUERY_FILES.DAT"
```

Example 9. Single Data File Transfer from the Catalog by Filename

```
MENUDISP (        )                 MENU SYSTEM
                              DATA TRANSFER SERVICES


            1.   Transfer cataloged data
            2.   Transfer data from RAC to User Area
            3.   Transfer data from User Area to RAC
            4.   Catalog a data file
            5.   Cancel data transfer request
            6.   Monitor data transfers



Keypad(1...6)    Help(PF2)    LastMenu(PF3)    Keys(PF4)    Quit    DCL
                                                                      DS   1 OF   1
UARS>                                                                 PG   1 OF   1
```

```
FROMCDHF (        )       TRANSFER CATALOGED DATA FROM CDHF


            1.   Transfer data by filename
            2.   Transfer data by attributes
            3.   Transfer virtual file                          Option 1 Selected.
            4.   Transfer ACRIM/OBC files



Keypad(1...4)    LastMenu(PF3)    Keys(PF4)    Quit    DCL
                                                             DS   1 OF   1
UARS>                                                        PG   1 OF   1
```

```
BYFILENM (        )       TRANSFER CATALOGED DATA BY FILENAME

Catalog file name (Filename.Type)      - OR -
Catalog source file list (/Disk:[Directory]Filename)
CLAES_LO_D0102.V0002_C01_PROD

RAC destination specification    (Node::)      - OR -
User Area destination specification    (Disk:[Directory])
CLAES::CLAESLO_D0102.V0002_C01_PROD

Transfer time (vms, Uudtf, Oday): 19-MAY-1992 12:20

Continue(Enter)    Cancel_request(.)      UARS>(PF1)
                                                         DS   1 OF   1
UARS>                                                    PG   1 OF   1
```

```
MOREXFER (        )      COMPLETE MULTI-FILE TRANSFER FROM CDHF


            1.   Transfer another by filename
            2.   Transfer another by attributes                 Option 3 Selected
            3.   DONE - Submit transfer request


    Number of files already selected:  1

Keypad(1...3)    Cancel_request(.)
                                                         DS   1 OF   1
UARS>                                                    PG   1 OF   1
```

Example 10.   Single Data File Transfer from the Catalog by Attributes

```
MENUDISP (        )              MENU SYSTEM
                            DATA TRANSFER SERVICES


         1.   Transfer cataloged data
         2.   Transfer data from RAC to User Area
         3.   Transfer data from User Area to RAC
         4.   Catalog a data file
         5.   Cancel data transfer request
         6.   Monitor data transfers



Keypad(1...6)   Help(PF2)   LastMenu(PF3)   Keys(PF4)   Quit   DCL
                                                               DS   1 OF   1
UARS>                                                          PG   1 OF   1
```

```
FROMCDHF (        )       TRANSFER CATALOGED DATA FROM CDHF


         1.   Transfer data by filename
         2.   Transfer data by attributes
         3.   Transfer virtual file
         4.   Transfer ACRIM/OBC files



Keypad(1...4)   LastMenu(PF3)   Keys(PF4)   Quit   DCL
                                                        DS   1 OF   1
UARS>                                                   PG   1 OF   1
```
Option 2 Selected

```
SELCTYPE (        ) SELECT CATALOGED DATA TYPE FOR TRANSFER

NUMBER          TYPE
-----           ------------------
  1             ACRIM
  2             ATTITUDE
  3             CALIBRATION
  4             CLAES
  5             CORRELATIVE
  6             ENGINEERING
  7             HALOE
  8             HRDI
  9             ISAMS
 10             MLS
 11             MODEL
 12             OBC
----------------------------
Select type number:    10

Continue(Enter)    Cancel_request(.)     Page(-or,)
                                                        DS   1 OF   1
UARS>                                                   PG   1 OF   2
```

```
BYATTRIB (        ) TRANSFER CATALOGED DATA BY ATTRIBUTES

Selected items:  MLS
Select from the list below for attribute:   LEVEL

NUMBER       ATTRIBUTE
-------      ----------------
   1         0
   2         1
   3         2
   4         3AT
   5         3AL
   6         3LP
   7         3TP


---------------------------------------------------------------------
Select attribute number:  ███ ]
```

Continue(Enter)	Cancel_request(.)	Page(,or-)			
			DS	1 OF	1
UARS>			PG	1 OF	1


```
FQUAL (        )       FINAL QUALIFIERS FOR INSTRUMENT DATA

Selected items:   MLS           LEVEL: 0

Time range (vms, Uudtf, Dday): 19-MAY-1992 00:00:00  -  19-MAY-1992 12:00:00

Version:  ███ ]
Cycle:    ██ ]

Test data? (Y/N) █

RAC destination file specification  (Node::)   - OR -
User Area destination file specification (Disk:[Directory])
MLS::

Transfer time (vms, Uudtf, Dday): 19-MAY-1992 12:20
```

Continue(Enter)	Cancel_request(.)	UARS>(PF1)			
			DS	1 OF	1
UARS>			PG	1 OF	1


```
MOREXFER (        )    COMPLETE MULTI-FILE TRANSFER FROM CDHF



            1.    Transfer another by filename
            2.    Transfer another by attributes
            3.    DONE - Submit transfer request


   Number of files already selected:  2
```

Keypad(1...3)	Cancel_request(.)			
		DS	1 OF	1
UARS>		PG	1 OF	1

Example 11. Virtual File Transfer from the Catalog by Attributes

```
MENUDISP (        )               MENU SYSTEM
                            DATA TRANSFER SERVICES


         1.   Transfer cataloged data
         2.   Transfer data from RAC to User Area
         3.   Transfer data from User Area to RAC
         4.   Catalog a data file
         5.   Cancel data transfer request
         6.   Monitor data transfers


Keypad(1...6)    Help(PF2)    LastMenu(PF3)    Keys(PF4)    Quit    DCL
                                                                DS   1 OF   1
UARS>                                                           PG   1 OF   1
```

```
FROMCDHF (        )        TRANSFER CATALOGED DATA FROM CDHF


         1.   Transfer data by filename
         2.   Transfer data by attributes                       Option 3 Selected
         3.   Transfer virtual file
         4.   Transfer ACRIM/OBC files


Keypad(1...4)    LastMenu(PF3)    Keys(PF4)    Quit    DCL
                                                                DS   1 OF   1
UARS>                                                           PG   1 OF   1
```

```
SELVTYPE (          ) SELECT VIRTUAL FILE TYPE FOR TRANSFER

NUMBER          TYPE
-----           ----------------
   1            CLAES
   2            HALOE
   3            HRDI
   4            ISAMS
   5            MLS
   6            PEM
   7            SOLSTICE
   8            SUSIM
   9            SUSIMA
  10            SUSIMB
  11            WINDII
  12            ACRIM
  13            ENGINEERING
-----------------------------
Select type number:    5

Continue(Enter)    Cancel_request(.)      Page(-or,)
                                                                DS   1 OF   1
UARS>                                                           PG   1 OF   2
```

```
VFATTRIB (        ) SELECT VIRTUAL FILE ATTRIBUTES FOR TRANSFER

Selected items:   MLS
Select from the list below for attribute: LEVEL

NUMBER      ATTRIBUTE
-----       --------------------------------------------------------
   1        0
   2        3AL
   3        3AT
   4        3LP
   5        3TP

------------------------------
Select attribute number:   3

Continue(Enter)    Cancel_request(.)      Page(,or-)
                                                                DS   1 OF   1
UARS>                                                           PG   1 OF   1
```

```
VFATTRIB (        ) SELECT VIRTUAL FILE ATTRIBUTES FOR TRANSFER

Selected items:      MLS          LEVEL: 3AT
Select from the list below for attribute: SUBTYPE

NUMBER     ATTRIBUTE
------     ----------------------------------------------------------------
  1        CLO
  2        H20
  3        03

----------------------------------
Select attribute number:     ▉1
─────────────────────────────────────────────────────────────────────
Continue(Enter)    Cancel_request(.)      Page(,or-)
                                                              DS   1 OF   1
UARS▶▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉             PG   1 OF   1
```

```
VRTFQUAL (        )      FINAL QUALIFIERS FOR VIRTUAL FILE DATA

Selected items:      MLS          LEVEL : 3AT       SUBTYPE: CLO

Enter either time, UARS day, or Orbit
   Time range (vms, Uudtf, Dday): ▉▉▉▉▉▉▉▉▉▉▉▉▉  -  ▉▉▉▉▉▉▉▉▉▉▉▉
   Orbit range: ▉13455▉ - ▉13467▉

Version rule:      ▉2▉                  Version rule selection:
Version rule date: ▉28-SEP-1990 15:32▉     1 - Highest version/cycle
   (vms, Uudtf, Dday)                      2 - Individual version/cycle

Test data? (Y/N) ▉

RAC destination (Node::)  -or-   User Area destination (Disk:[Directory])
▉MLS::MLS_3AT_ORBIT_13455_13467_FCLO.DAT▉

Transfer time (vms, Uudtf, Dday): ▉NOW▉▉▉▉▉▉▉▉▉
─────────────────────────────────────────────────────────────────────
Continue(Enter)    Cancel_request(.)      UARS▶(PF1)
                                                              DS   1 OF   1
UARS▶▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉             PG   1 OF   1
```

```
DISPALVC (        ) VERSIONS AND CYCLES FOR VIRTUAL FILE REQUEST

Selected items:      MLS          LEVEL: 3AT       SUBTYPE: CLO

Choose ONE version/cycle pair for each day

VERSION CYCLE     DAY   VER  CYC   VER  CYC   VER  CYC   VER  CYC   VER  CYC
------- -----     ----  ---- ---   ---- ---   ---- ---   ---- ---   ---- ---
 ▉       ▉        276    2    1     3    1     4    1     0    0     0    0
                  277    2    1     3    1
─────────────────────────────────────────────────────────────────────
Continue(Enter)    Cancel_request(.)      Page(,or-)      UARS▶(PF1)
                                                              DS   1 OF   1
UARS▶▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉             PG   1 OF   1
```

```
DONEXFER (        )         COMPLETE TRANSFER FROM CDHF

                  Transfer request complete.

                  Submit or Cancel request...                 SUBMIT REQUEST

Submit(Enter)      Cancel_request(.)
                                                              DS   1 OF   1
UARS▶▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉▉             PG   1 OF   1
```

Example 12. Multi-File Transfer from the Catalog by Filename

```
MENUDISP (     )          MENU SYSTEM
                       DATA TRANSFER SERVICES


         1.  Transfer cataloged data
         2.  Transfer data from RAC to User Area
         3.  Transfer data from User Area to RAC
         4.  Catalog a data file
         5.  Cancel data transfer request
         6.  Monitor data transfers



Keypad(1...6)   Help(PF2)   LastMenu(PF3)   Keys(PF4)   Quit   DCL
UARS>                                                 PG   1 OF   1
```

```
FROMCDHF (     )        TRANSFER CATALOGED DATA FROM CDHF


         1.  Transfer data by filename
         2.  Transfer data by attributes
         3.  Transfer virtual file
         4.  Transfer ACRIM/OBC files



Keypad(1...4)   LastMenu(PF3)   Keys(PF4)   Quit   DCL
                                              DS   1 OF   1
UARS>                                         PG   1 OF   1
```

Option 1 Selected

```
BYFILENM (     )  TRANSFER CATALOGED DATA BY FILENAME

Catalog file name (Filename.Type)      - OR -
Catalog source file list (#Disk:[Directory]Filename)
QUALITY_LO_DO368.V0001_LO1_PROD


RAC destination specification   (Node::)      - OR -
User Area destination specification   (Disk:[Directory])
HALOE::QUALITY_LO_DO102.V0002_CO1_PROD


Transfer time (vms, Uudtf, Dday):  12-MAY-1993 12:20


Continue(Enter)    Cancel_request(.)    UARS>(PF1)

UARS>
```

```
MOREXFER (     )   COMPLETE MULTI-FILE TRANSFER FROM CDHF


         1.  Transfer another by filename
         2.  Transfer another by attributes
         3.  DONE - Submit transfer request


Number of files already selected:  2

Keypad(1...3)    Cancel_request(.)
                                              DS   1 OF   1
UARS>                                         PG   1 OF   1
```

Option 1
See Example 13-Option 2

Note:
If the correct
values are not
entered you will
receive a different
screen. (INVALID
FILE SPECIFICATION).
(Example 21).
Returns you to pre-
vious screen. Make
correction and con-
tinue.

Example 13. Multi-File Transfer from the Catalog by Attributes

```
MENUDISP (       )          MENU SYSTEM
                       DATA TRANSFER SERVICES


         1.   Transfer cataloged data
         2.   Transfer data from RAC to User Area
         3.   Transfer data from User Area to RAC
         4.   Catalog a data file
         5.   Cancel data transfer request
         6.   Monitor data transfers




Keypad(1...6)    Help(PF2)    LastMenu(PF3)    Keys(PF4)    Quit    DCL
                                                                   DS   1 OF    1
UARS>                                                              PG   1 OF    1
```

```
FROMCDHF (       )    TRANSFER CATALOGED DATA FROM CDHF



         1.    Transfer data by filename
         2.    Transfer data by attributes
         3.    Transfer virtual file
         4.    Transfer ACRIM/OBC files



Keypad(1...4)    LastMenu(PF3)    Keys(PF4)    Quit    DCL
                                                             DS   1 OF   1
UARS>                                                        PG   1 OF   1
```

Option 2 Selected

```
SELCTYPE (    )    SELECT CATALOGED DATA TYPE FOR TRANSFER

NUMBER           TYPE
-----        -----------------
 13          ORBIT
 14          PEM
 15          QUALITY
 16          QUICKLOOK
 17          SLPEPHEM
 18          SOLSTICE
 19          SPACECRAFT
 20          STELLAREPHEM
 21          SUSIM
 22          SUSIMA
 23          SUSIMB
 24          WINDII
-----------------------------
Select type number:   15

Continue(Enter)      Cancel_request(.)      Page(-or,)
                                                        DS    1 OF    1
UARS>                                                   PG    2 OF    2
```

Option 2

4-31

Example 13. Multi-File Transfer from the Catalog by Attributes (Continued)

```
FQUAL (          )       FINAL QUALIFIERS FOR INSTRUMENT DATA

Selected items:   QUALITY          LEVEL: 0          SUBTYPE:

Time range (vms, Uudtf, Dday): ███████████████  -  ███████████████

Version:  ██
Cycle:    ██

Test data? (Y/N)  █

RAC destination file specification  (Node::)    - OR -
User Area destination file specification (Disk:[Directory]])
naloe::████████████████████████████████████████████████

Transfer time (vms, Uudtf, Dday):  ████████████████████

Continue(Enter)     Cancel_request(.)      UARS>(PF1)
                                                        DS   1 OF   1
UARS>████████████████████████████████                  PG   1 OF   1
```

```
MOREXFER (          )     COMPLETE MULTI-FILE TRANSFER FROM CDHF


          1.    Transfer another by filename
          2.    Transfer another by attributes
          3.    DONE - Submit transfer request


    Number of files already selected:   2


Keypad(1...3)     Cancel_request(.)
                                                        DS   1 OF   1
UARS>████████████████████████████████                  PG   1 OF   1
```

Option 2

See Example 12
 for Option 1

Example 14. Transfer a List of Files from the Catalog by Filename

```
MENUDISP (       )              MENU SYSTEM
                            DATA TRANSFER SERVICES



           1.   Transfer cataloged data
           2.   Transfer data from RAC to User Area
           3.   Transfer data from User Area to RAC
           4.   Catalog a data file
           5.   Cancel data transfer request
           6.   Monitor data transfers




Keypad(1...6)    Help(PF2)    LastMenu(PF3)    Keys(PF4)    Quit    DCL
                                                                DS   1 OF   1
UARS>                                                           PG   1 OF   1
```
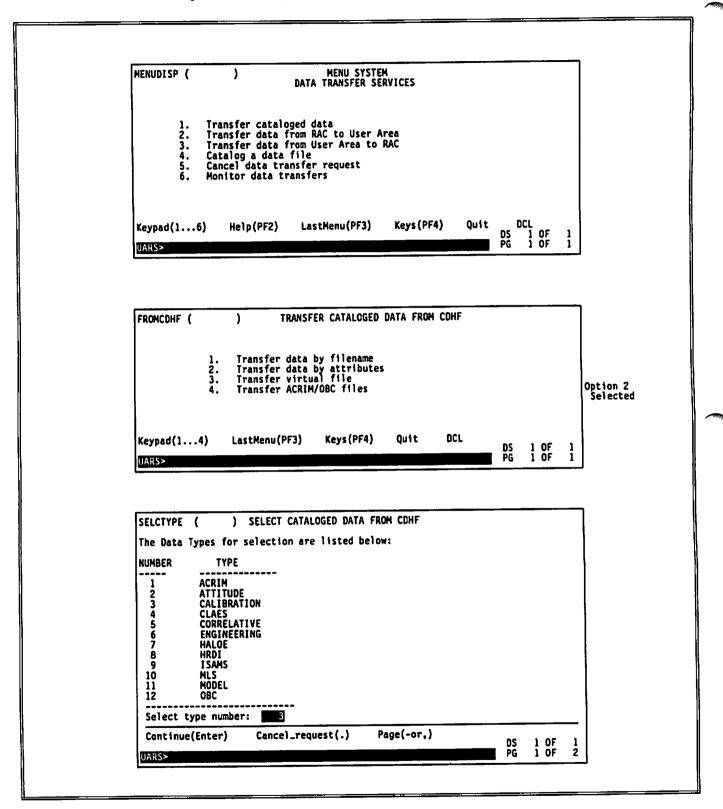
```
FROMCDHF (       )         TRANSFER CATALOGED DATA FROM CDHF

                                                                     Option 1
           1.   Transfer data by filename                              Selected
           2.   Transfer data by attributes
           3.   Transfer virtual file
           4.   Transfer ACRIM/OBC files



Keypad(1...4)    LastMenu(PF3)    Keys(PF4)    Quit    DCL

UARS>                                                           PG   1 OF   1
```

```
BYFILENM (       )         TRANSFER CATALOGED DATA BY FILENAME

Catalog file name (Filename.Type)      - OR -
Catalog source file list (#Disk:[Directory]Filename)                 Note:
#MYDISK:[REQUESTORS_SUBDIR]FILE_LIST.DAT                              The "#" sign
                                                                     in the file name
                                                                     defines this
Catalog file name (Filename.Type)      - OR -                        reference as a
Catalog source file list (#Disk:[Directory]Filename)                 list of files
CLAES::


Transfer time (vms, Uudtf, Dday):   12-MAY-1993 12:20


Continue(Enter)    Cancel_request(.)      UARS>(PF1)
                                                                DS   1 OF   1
UARS>                                                           PG   1 OF   1
```

```
DONEXFER (       )         COMPLETE TRANSFER FROM CDHF


              Transfer request complete.                             SUBMIT REQUEST

              Submit or Cancel request...


Submit(Enter)      Cancel_request(.)
                                                                DS   1 OF   1
UARS>                                                           PG   1 OF   1
```

4-33

Example 15.   Transfer a Quicklook Data File by Attributes

```
MENUDISP (        )              MENU SYSTEM
                            DATA TRANSFER SERVICES


        1.   Transfer cataloged data
        2.   Transfer data from RAC to User Area
        3.   Transfer data from User Area to RAC
        4.   Catalog a data file
        5.   Cancel data transfer request
        6.   Monitor data transfers



Keypad(1...6)    Help(PF2)    LastMenu(PF3)    Keys(PF4)    Quit    DCL
                                                                DS   1 OF   1
 UARS>                                                           PG   1 OF   1
```

```
FROMCDHF (        )        TRANSFER CATALOGED DATA FROM CDHF



        1.   Transfer data by filename
        2.   Transfer data by attributes
        3.   Transfer virtual file
        4.   Transfer ACRIM/OBC files
```
                                                                                Option 2 Selected
```
Keypad(1...4)    LastMenu(PF3)    Keys(PF4)    Quit    DCL
                                                           DS   1 OF   1
 UARS>                                                      PG   1 OF   1
```

```
SELCTYPE (        ) SELECT CATALOGED DATA TYPE FOR TRANSFER
The Data Types for selection are listed below:

NUMBER         TYPE
-----          ------------
 13            ORBIT
 14            PEM
 15            QUALITY
 16            QUICKLOOK
 17            SLPEPHEM
 18            SOLSTICE
 19            SPACECRAFT
 20            STELLAREPHEM
 21            SUSIM
 22            SUSIMA
 23            SUSIMB
 24            WINDII
------------------------------
Select type number:    16

Continue(Enter)    Cancel_request(.)    Page(-or,)
                                                        DS   1 OF   1
 UARS>                                                   PG   2 OF   2
```

4-34

Example 15.   Transfer a Quicklook Data File by Attributes (Continued)

```
BYATTRIB (        ) TRANSFER CATALOGED DATA BY ATTRIBUTES

 Selected items:    QUICKLOOK
 Select from the list below for attribute:   SUBTYPE

NUMBER      ATTRIBUTE
-------     ----------------
  1         ACRIM
  2         CLAES
  3         HALOE

--------------------------------------------------------------
Select attribute number:  ██2
_____
Continue(Enter)    Cancel_request(.)      Page(,or-)
                                                        DS   1 OF  1
UARS>                                                   PG   1 OF  1
```

```
QIKFQUAL (        )        QUICKLOOK FINAL QUALIFIER SELECTION
Selected items:                      SUBTYPE: CLAES

Data time  (vms, Uudtf, Dday): ████████████████    (Selects UARS day)

Version:       █0
Quicklook ID: █

     Note:  Quicklook ID of " " displays all available quicklook data sets.
            Quicklook ID  <= 0  specifies relative quicklook data set.
            Quicklook ID  > 0  specifies absolute quicklook data set.

Test data? (Y/N)  █

RAC destination file specification  (Node::)    - OR -
User Area destination file specification (Disk:[Directory])
haloe::████████████████████████████████████

Transfer time (vms, Uudtf, Dday):  NOW
_____
Continue(Enter)    Cancel_request(.)      UARS>(PF1)
                                                        DS   1 OF  1
UARS>                                                   PG   1 OF  1
```

```
RQLPASS (        )      RELATIVE QUICKLOOK PASS INFORMATION

Quicklook data sets currently available:

    NUMBER    DAY    ID    VERSION
    ------    ----   ----  -------
      1       106    1      1
      2       106    2      1


    Select number to process:   ██2

_____
Continue(Enter)    Cancel_request(.)      Page(,or-)
                                                        DS   1 OF  1
UARS>                                                   PG   1 OF  1
```

```
MOREXFER (        )     COMPLETE MULTI-FILE TRANSFER FROM CDHF


            1.   Transfer another by filename
            2.   Transfer another by attributes
            3.   DONE - Submit transfer request


   Number of files already selected:  11
_____
Keypad(1...3)    Cancel_request(.)
                                                        DS   1 OF  1
UARS>                                                   PG   1 OF  1
```

Option 2 Selected

TRANSFER ANOTHER
BY ATTRIBUTES

SELCTYPE

Example 16. Transfer a Correlative Data File by Attribute

```
MENUDISP (        )              MENU SYSTEM
                             DATA TRANSFER SERVICES


         1.    Transfer cataloged data
         2.    Transfer data from RAC to User Area
         3.    Transfer data from User Area to RAC
         4.    Catalog a data file
         5.    Cancel data transfer request
         6.    Monitor data transfers


Keypad(1...6)   Help(PF2)    LastMenu(PF3)    Keys(PF4)    Quit    DCL
                                                                 DS   1 OF   1
UARS>                                                            PG   1 OF   1
```

```
FROMCDHF (        )       TRANSFER CATALOGED DATA FROM CDHF


         1.    Transfer data by filename
         2.    Transfer data by attributes
         3.    Transfer virtual file
         4.    Transfer ACRIM/OBC files

                                                               Option 2
                                                               Selected
Keypad(1...4)   LastMenu(PF3)    Keys(PF4)    Quit    DCL
                                                          DS   1 OF   1
UARS>                                                     PG   1 OF   1
```

```
SELCTYPE (        ) SELECT CATALOGED DATA TYPE FOR TRANSFER

The Data Types for selection are listed below:

NUMBER           TYPE
-----            ---------------
  1              ACRIM
  2              ATTITUDE
  3              CALIBRATION
  4              CLAES
  5              CORRELATIVE
  6              ENGINEERING
  7              HALOE
  8              HRDI
  9              ISAMS
 10              MLS
 11              MODEL
 12              OBC
-----------------------------------
Select type number:    ▉ 5

Continue(Enter)    Cancel_request(.)    Page(-or,)
                                                     DS   1 OF   1
UARS>                                                PG   1 OF   2
```

```
BYATTRIB (        ) TRANSFER CATALOGED DATA BY ATTRIBUTES

Selected items:    CORRELATIVE
Select from the list below for attribute:    SOURCE

NUMBER        ATTRIBUTE
-------       ---------------
  1           NMC
  2           UKMO_ASS


-------------------------------------------------------------------
Select attribute number:    ▉ 1

Continue(Enter)    Cancel_request(.)    Page(,or-)
                                                   DS   1 OF   1
UARS>                                              PG   1 OF   1
```

Example 16. Transfer a Correlative Data File by Attribute (Continued)

```
BYATTRIB (        ) TRANSFER CATALOGED DATA BY ATTRIBUTES

Selected items:    CORRELATIVE    SOURCE : NMC
Select from the list below for attribute:   SUBTYPE

NUMBER      ATTRIBUTE
-------     ---------------
  1         HEIGHT
  2         MOISTURE
  3         TEMP

-------------------------------------------------------------------
Select attribute number:    ███ 3
Continue(Enter)    Cancel_request(.)      Page(,or-)
                                                           DS   1 OF   1
UARS>                                                      PG   1 OF   1
```

```
CORFQUAL (        )     CORRELATIVE FINAL QUALIFIER SELECTION

Selected items:    CORRELATIVE    SOURCE : NMC         SUBTYPE : TEMP

Data time   (vms, Uudtf, Dday): ████████████████       (Selects UARS day)

Version:   ██ 1
Cycle:     █ 1

Test data? (Y/N)  █

RAC destination file specification  (Node::)    - OR -
User Area destination file specification (Disk:[Directory])
haloe::

Transfer time (vms, Uudtf, Dday):  NOW ███████████


Continue(Enter)    Cancel_request(.)      UARS>(PF1)
                                                           DS   1 OF   1
UARS>                                                      PG   1 OF   1
```

```
MOREXFER (        )     COMPLETE MULTI-FILE TRANSFER FROM CDHF


            1.    Transfer another by filename
            2.    Transfer another by attributes
            3.    DONE - Submit transfer request


  Number of files already selected:  11


Keypad(1...3)     Cancel_request(.)
                                                           DS   1 OF   1
UARS>                                                      PG   1 OF   1
```

SELCTYPE

Option 2 Selected

TRANSFER ANOTHER
BY ATTRIBUTES

Example 17. Transfer a Calibration File by Attributes

```
MENUDISP (        )              MENU SYSTEM
                             DATA TRANSFER SERVICES


        1.   Transfer cataloged data
        2.   Transfer data from RAC to User Area
        3.   Transfer data from User Area to RAC
        4.   Catalog a data file
        5.   Cancel data transfer request
        6.   Monitor data transfers




Keypad(1...6)    Help(PF2)    LastMenu(PF3)    Keys(PF4)    Quit    DCL
                                                                   DS   1 OF   1
UARS>                                                               PG   1 OF   1
```

```
FROMCDHF (        )         TRANSFER CATALOGED DATA FROM CDHF



        1.   Transfer data by filename
        2.   Transfer data by attributes
        3.   Transfer virtual file                             Option 2
        4.   Transfer ACRIM/OBC files                          Selected



Keypad(1...4)    LastMenu(PF3)    Keys(PF4)    Quit    DCL
                                                          DS   1 OF   1
UARS>                                                      PG   1 OF   1
```

```
SELCTYPE (       )   SELECT CATALOGED DATA FROM CDHF

The Data Types for selection are listed below:

NUMBER        TYPE
-----        -------------
  1          ACRIM
  2          ATTITUDE
  3          CALIBRATION
  4          CLAES
  5          CORRELATIVE
  6          ENGINEERING
  7          HALOE
  8          HRDI
  9          ISAMS
 10          MLS
 11          MODEL
 12          OBC
---------------------------
Select type number:    3

Continue(Enter)    Cancel_request(.)    Page(-or,)
                                                     DS   1 OF   1
UARS>                                                 PG   1 OF   2
```

Example 17. *Transfer a Calibration File by Attributes (Continued)*

```
BYATTRIB (         ) TRANSFER CATALOGED DATA BY ATTRIBUTES

Selected items:    CALIBRATION
Select from the list below for attribute:   SUBTYPE

NUMBER       ATTRIBUTE
-------      ------------
  1          CLAES
  2          CLIM
-------------------------------------------------------------------
Select attribute number:   ███
```
```
Continue(Enter)    Cancel_request(.)      Page(,or-)
                                                         DS   1 OF   1
UARS>                                                    PG   1 OF   1
```

```
BYATTRIB (         ) TRANSFER CATALOGED DATA BY ATTRIBUTES

Selected items:    CALIBRATION   SUBTYPE: CLAES
Select from the list below for attribute:   CALIBRATION_ID

NUMBER       ATTRIBUTE
-------      ---------------
  1          ANGLE_TO_ON
  2          BASE_ENG_257
  3          CLAES_CAL3
  4          CLAES_CAL4
  5          CLAES_CAL4T1
  6          CLAES_CAL4T2
  7          CLAES_CAL4T3
  8          CLAES_CAL4T4
  9          CLAES_CAL4T5
 10          CLAES_CAL4T6
 11          CLAES_CAL4T7
-------------------------------------------------------------------
Select attribute number:   ███
```
```
Continue(Enter)    Cancel_request(.)      Page(,or-)
                                                         DS   1 OF   1
UARS>                                                    PG   1 OF   1
```

```
CALFQUAL (         )   CALIBRATION FINAL QUALIFIER SELECTION

Selected items:    SUBTYPE:CLAES        CAL_ID:ANGLE_TO_ON    LEVEL:1

Data time  (vms, Uudtf, Dday): ████████████████   (Selects UARS day)

Version:  ███
Cycle:    ██

Test data? (Y/N)  █

RAC destination file specification  (Node::)    - OR -
User Area destination file specification (Disk:[Directory])
haloe::

Transfer time (vms, Uudtf, Dday):  NOW█████████
```
```
Continue(Enter)    Cancel_request(.)      UARS>(PF1)
                                                         DS   1 OF   1
UARS>                                                    PG   1 OF   1
```

```
MOREXFER (         )   COMPLETE MULTI-FILE TRANSFER FROM CDHF

            1.   Transfer another by filename           Option 2 Selected
            2.   Transfer another by attributes
            3.   DONE - Submit transfer request         TRANSFER ANOTHER
                                                        BY ATTRIBUTES
   Number of files already selected:  11
```
```
Keypad(1...3)    Cancel_request(.)
                                                         DS   1 OF   1
UARS>                                                    PG   1 OF   1
```

Example 18. Transfer an ACRIM/OBC file

```
MENUDISP (        )              MENU SYSTEM
                            DATA TRANSFER SERVICES


        1.   Transfer cataloged data
        2.   Transfer data from RAC to User Area
        3.   Transfer data from User Area to RAC
        4.   Catalog a data file
        5.   Cancel data transfer request
        6.   Monitor data transfers




Keypad(1...6)   Help(PF2)   LastMenu(PF3)   Keys(PF4)   Quit    DCL
                                                                DS   1 OF   1
UARS>                                                           PG   1 OF   1
```

```
FROMCDHF (        )       TRANSFER CATALOGED DATA FROM CDHF


        1.   Transfer data by filename
        2.   Transfer data by attributes
        3.   Transfer virtual file
        4.   Transfer ACRIM/OBC files                          Option 4 Selected

Keypad(1...4)   LastMenu(PF3)   Keys(PF4)   Quit   DCL
                                                          DS   1 OF   1
UARS>                                                     PG   1 OF   1
```

```
ACRIMREQ (        )     FINAL QUALIFIERS FOR ACRIM FILE DATA

Last complete ACRIM transfer:        1-FEB-1992  -  1-FEB-1992

Last ACRIM transfer if incomplete:   2-FEB-1992  -  2-FEB-1992

Time range (vms, Uudtf, Dday): ▇▇▇▇▇▇▇▇▇▇  -  ▇▇▇▇▇▇▇▇▇▇
    ( 7 day maximum )

Test data? (Y/N) ▇    Version: ▇▇    Cycle: ▇

RAC destination file specification  (Node::)     - OR -
User Area destination file specification (Disk:[Directory])
ACRIM::▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇

▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇▇

Transfer time (vms, Uudtf, Dday): NOW▇▇▇▇▇▇▇▇▇

Continue(Enter)    Cancel_request(.)    UARS>(PF1)

UARS>
```

```
DONEXFER (        )        COMPLETE TRANSFER FROM CDHF

              Transfer request complete.

              Submit or Cancel request...
                                                           SUBMIT REQUEST

Submit(Enter)       Cancel_request(.)
                                                     DS   1 OF   1
UARS>                                                PG   1 OF   1
```

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Example 19. Invalid Multi-file Transfer Request Error Screen

When building a multi-file request by looping through the prompting screens as shown in Example 14, the user has entered a file list specification (with an "/" sign). This option is not available when building a multi-file request in this manner. Either the list is built in advance and the "/" reference is used, or the list is built through the menus and no "/" reference is used.

```
INVALMFT (        )      INVALID MULTI-FILE TRANSFER REQUEST

The use of the "/" character cannot be used in this context.

        Select:

            1.   Re-display transfer cataloged data by filename menu
            2.   DONE - Submit transfer request


Keypad(1...2)     Cancel_request(.)
                                                        DS   1 OF   1
UARS>                                                   PG   1 OF   1
```

Example 20. Missing Data In a Specified Day Range

This warning screen informs the user that there may be some information missing in the data base pertaining to the time range he specified.

```
IDENTFIL (        )    MISSING FILES IN DAY RANGE SPECIFICATION
** There are files missing within specified day range...
** Files found:
------------------------------------------------------------------
CLAES_LO_D0102.V0001_C01_PROD




Continue(Enter)        Cancel_request(.)
                                                        DS   1 OF   1
UARS>                                                   PG   1 OF   1
```

Example 21. Missing Data In a Virtual File

This warning screen informs the user that there may be some information missing in the data base pertaining to the time range he specified for a virtual file.

```
VMISSDAY (        )    MISSING FILES IN VIRTUAL FILE REQUEST

** Missing UARS days in the Virtual File Request.
** No files for the days displayed below.
** This means there will be/day gaps in the virtual file that is created.
------------------------------------------------------------------
  UARS DAY        VMS DAY
  ----            ----------
    127           4-FEB-1992
    128           5-FEB-1992


Continue(Enter)        Cancel_request(.)
                                                        DS   1 OF   1
UARS>                                                   PG   1 OF   1
```

Example 22. Overriding the Bulk File Classification of a File Transfer

```
XFERBULK (         )    BULK FILE TRANSFER REQUEST STATUS DISPLAY
*******************************************************************************
Your request is a BULK transfer and will transfer during the bulk time window.
NOTE: If necessary the schedule override option is available below:

Request ID:  RDT_00004340                 Request type = BULK
File size (blocks):  63525

BULK transfer start time: 00:00:00        Stop time:   00:00:00

Source file specification:
CLAES_LO_D0125.V0001_C01_PROD

Destination file specification:
HALOE::

Override bulk classification? (Y/N)  ▊

Continue(Enter)
                                                        DS   1 OF   1
UARS>                                                   PG   1 OF   1
```

Example 23. Verification of Use of an Alternate Relative Quicklook Data Set

```
QLPASSAC (        )              USE THIS QUICKLOOK PASS

The requested quicklook pass/version was not found in the data base


                               REQUESTED       CLOSEST
                               ---------       ---------
               UARS day            0             106
               Quicklook ID       -20             1
               Version             0              1




   NOTE:  This is the highest version for this pass.

   Use the closest quicklook data (Y) or Re-select (N):  ▊

Continue(Enter)    Cancel_request(.)
                                                        DS   1 OF   1
UARS>                                                   PG   1 OF   1
```

Example 24. Verification of Time Override for Scheduled Quicklook Transfers

```
QDAYEROR (        )         QUICKLOOK REQUEST TIME PROBLEM

** Quicklook data transfer cannot be scheduled for a future date and time.

** In order to ensure the availability of the desired quicklook data,
** the arrival of new quicklook data may result in deletion of the desired file.

** The transfer time will be reset to the current system time.


Continue(Enter)    Cancel_request(.)
                                                        DS   1 OF   1
UARS>                                                   PG   1 OF   1
```

Example 25.   No Files Found In a Virtual File Transfer

```
┌─────────────────────────────────────────────────────────────────────────┐
│NOVFILES (        )      NO FILES FOUND FOR VIRTUAL TIME RANGE             │
│                                                                          │
│                                                                          │
│** No files found matching the virtual file time range and version date   │
│                                                                          │
│                                                                          │
│** NOTE: The current attributes type, level, and subtype will be used     │
│** when re-entering the virtual file time range.                          │
│** If those attributes need to be changed - the request must be cancelled │
│** and re-entered at the Main Data Transfer Menu.                         │
│                                                                          │
│                                                                          │
│                                                                          │
│                                                                          │
│                                                                          │
│──────────────────────────────────────────────────────────────────────── │
│Continue(Enter)     Cancel_request(.)                                     │
│                                                         DS   1 OF   1     │
│UARS>                                                    PG   1 OF   1     │
└─────────────────────────────────────────────────────────────────────────┘
```

Example 26.   Verification For Override of Bulk Virtual Files

```
┌─────────────────────────────────────────────────────────────────────────┐
│BULKVIRT (        )    OVERRIDE FOR VIRTUAL FILE CLASSIFICATION            │
│**************************************************************************  │
│                                                                          │
│                                                                          │
│Virtual file requests may be classified as BULK transfer requests.        │
│                                                                          │
│Override BULK transfer classification? (Y/N)  N                           │
│                                                                          │
│                                                                          │
│──────────────────────────────────────────────────────────────────────── │
│Continue(Enter)                                                           │
│                                                         DS   1 OF   1     │
│UARS>                                                    PG   1 OF   1     │
└─────────────────────────────────────────────────────────────────────────┘
```

Example 27.   Successful Transfer Request Display

```
┌─────────────────────────────────────────────────────────────────────────┐
│XFERSTAT (        )         TRANSFER REQUEST STATUS DISPLAY               │
│**************************************************************************  │
│Your data transfer request has been successfully recorded.                │
│The following status information applies to your request.                 │
│                                                                          │
│Request ID:        RDT_00004359                                           │
│Request type:      VIRTUAL                                                 │
│Transfer priority: ASAP                                                    │
│                                                                          │
│Requested transfer time:   2-OCT-1990 15:28                               │
│Request status:            WAITING TO BE STARTED                           │
│                                                                          │
│Source file specification:                                                │
│N/A                                                                       │
│File size in blocks:  480                                                 │
│Destination file specification:                                           │
│HALOE::                                                                   │
│                                                                          │
│NOTE: SNAP BATCH at UARS> to record this screen in file:   XFERSTAT.SNP   │
│──────────────────────────────────────────────────────────────────────── │
│Continue(Enter)                                                           │
│                                                         DS   1 OF   1     │
│UARS>                                                    PG   1 OF   1     │
└─────────────────────────────────────────────────────────────────────────┘
```

Example 28. Missing Files in Requested Time Range for ACRIM File Transfer

```
MISACRFL (        )       MISSING DAYS IN ACRIM FILE REQUEST

** Missing UARS days in the ACRIM file request.
** The days displayed below have no data files.
** This means there will be day gaps in the list of ACRIM files transferred.

---------------------------------------------------------------
 UARS DAY    VMS DAY
 -------     -----------
    123     31-JAN-1992
    124      1-FEB-1992
    126      3-FEB-1992
    127      4-FEB-1992
    128      5-FEB-1992

---------------------------------------------------------------


Continue(Enter)      Cancel_request(.)
                                                         DS   1 OF   1
 UARS>                                                    PG   1 OF   1
```

Example 29. Verify Overwrite of Destination File With Version Number

```
DESTVERS (        )       PROBLEM DESTINATION FILE SPECIFICATION

  <<<   WARNING   >>>

** You have specified a file version for the destination file specification.
** If you have a file at the RAC with the same file specification and
** the same version number
** The RAC Transfer system will REPLACE ( overwrite ) your file.


Re-edit transfer request? (Y/N)  Y

Continue(Enter)      Cancel_request(.)
                                                         DS   1 OF   1
 UARS>                                                    PG   1 OF   1
```

Example 30. Transfer Request Problem Screen (Transfer Request Accepted)

```
XFERPROB (         )      TRANSFER REQUEST PROBLEM STATUS DISPLAY
***************************************************************************

Request ID:  RDT_0000435D

Your transfer request was accepted.

However, there was a problem (indicated below) in its final disposition.

When the error condition is resolved by Operations, your transfer
will be initiated.

Error Text:
---------------------------------------------------------------
MFT File Copy Spawn Failed


NOTE: SNAP BATCH at UARS> to record this screen in file:  XFERSTAT.SNP


Continue(Enter)
                                                         DS   1 OF   1
 UARS>                                                   .PG   1 OF   1
```

Example 31. Bulk Data Transfer Override Error Screen (Transfer Accepted as Bulk)

```
XFERBERR (         )   TRANSFER REQUEST BULK ERROR STATUS DISPLAY
*************************************************************************************

Request ID:  RDT_0000435E

BULK file transfer request accepted.

Currently NOT able to override the assigned transfer priority.
Request still classified as BULK.
You will need to inform UARS Operations if you still want to override priority.

Error Text:
-----------------------------------------------------------------------
RAC Transfer Table Error


NOTE: SNAP BATCH at UARS> to record this screen in file:  XFERSTAT.SNP
_____
Continue(Enter)
                                                          DS   1 OF   1
UARS>                                                     PG   1 OF   1
```

4.3 Transfer Data from User Area to RAC

The user can transfer data files from the User Area to the RAC.

MENU TREE   Data transfer services
Transfer data from User Area to RAC

COMMAND $ DT /UA *source-file-specification*   *destination-file-specification*

PARAMETERS *source-file-specification* or

"#source-file-specification"

This parameter is the file specification of the file to be transferred.
This parameter may also be a file list. If a list, the parameter defines
the file containing the list of file names and is preceded by an "#".
File list parameters are quoted.

destination-file-specification

This parameter is the file specification of the file to which the data is
transferred. It must include the node name of the system to which
data is to be transmitted. The node names are defined in Appendix
E. The directory name defines where to put the data. If the disk and
directory names are omitted, the default destination is the RAC's
proxy account. Only valid VAX/VMS file names are accepted.

If a file list is specified as the source, the destination files are named
with the same file name as the source. In this case, the destination file
specification should contain only the node name, disk volume, and
directory.

QUALIFIERS   /AFTER = *time*

DESCRIPTION One or more files may be transferred from the User Area to the RAC.

This function can be invoked from a menu or a command. The
menus prompt for the desired parameters. To use the command
mode, control information is input through parameters. In either
mode an acknowledgement of the request is returned to the
requestor.

The request to transfer the files is scheduled and executed as resources and time are available. The user may track the progress of the request with the RAC transfer schedule display.

ERROR PROCESSING All input parameters and qualifiers are checked for validity. Error messages are sent to the screen for interactive requests. Errors in UCSS commands cause the requested command to terminate. Errors cause the request to be rejected, or the input information to be re-prompted for (in menu mode).

If the source file is not found when the request is made, or one of the directories is not found, an error is generated and the required information is re-prompted for (menu mode) or the command terminated (command mode).

SEE ALSO 4.1 Overview of Data Transfer Services
6.8 RAC Transfer Schedule

EXAMPLES

Example 1. Transfer of File to RAC

$ DT /UA   DISK1:[MY_DIR]FILE1.X -
                HALOE::FILE2.X

In this example, FILE1.X located in the user area directory [MY_DIR] is transferred to the node HALOE in the default proxy direcory that has been established for RAC transfers. The file is renamed to FILE2.X at the destination.

Example 2. Transfer of a File List

$ DT /UA   "#DISKX:[MY_DIR]LIST.X" -
                HALOE::

In this example the user is requesting a transfer of the files identified in the file LIST.X. This file LIST.X resides in the user area. It contains a list of valid file-specifications which specify the files to transfer. If a file in the list is not found at the time of transfer, or an invalid file specification is in the list, the multi-file transfer completion mail message contains a list of those files that could not be transferred.

Example 3. Transfer a Single Data File from the User Area to the RAC

```
MENUDISP (        )              MENU SYSTEM
                            DATA TRANSFER SERVICES


         1.  Transfer cataloged data
         2.  Transfer data from RAC to User Area
         3.  Transfer data from User Area to the RAC
         4.  Catalog a data file
         5.  Cancel data transfer request                    Option 3 Selected
         6.  Monitor RAC data transfers




Keypad(1...6)   Help(PF2)    LastMenu(PF3)   Keys(PF4)   Quit   DCL
                                                                DS   1 OF   1
UARS>                                                           PG   1 OF   1
```

```
UATORAC  (         )    TRANSFER DATA FROM USER AREA TO RAC

Source file specification  (Disk:[Directory]Filename)    - OR -
Source file list   (#Disk:[Directory]Filename)
DISK3:[DIRECTORY]MYFILE_NAME.DAT


Destination file specification   (Node::)
HALOE::                                                      Next (N) command
                                                            (cont) processing

Transfer time (vms, Uudtf, Dday):  NOW
< NOTE: [NOW] - current system time >


Continue(Enter)    Cancel_request(.)    UARS>(PF1)
                                                            DS   1 OF   1
UARS>                                                       PG   1 OF   1
```

Example 4.   Transfer a File List from the User Area to the RAC

```
MENUDISP (        )              MENU SYSTEM
                          DATA TRANSFER SERVICES


          1.   Transfer cataloged data
          2.   Transfer data from RAC to User Area
          3.   Transfer data from User Area to the RAC
          4.   Catalog a data file
          5.   Cancel data transfer request
          6.   Monitor RAC data transfers                    Option 3
                                                              Selected



Keypad(1...6)   Help(PF2)    LastMenu(PF3)    Keys(PF4)    Quit    DCL
                                                                   DS   1 OF   1
UARS>                                                              PG   1 OF   1
```

```
UATORAC  (         )    TRANSFER DATA FROM USER AREA TO RAC

Source File Specification  (Disk:[Directory]Filename)    - OR -
Source File List   (#Disk:[Directory]Filename)
#DISK3:[DIRECTORY]MYFILE_LIST.DAT


Destination file spec.  (Node::)
HALOE::


Transfer time (vms, Uudtf, Dday):  NOW
< NOTE: [NOW] = current system time >

Continue(Enter)     Cancel_request(.)      UARS>(PF1)
                                                       DS   1 OF   1
UARS>                                                  PG   1 OF   1
```

4.4 Transfer Data from RAC to User Area

> The user can transfer data files from the RAC to the user area on the
> CDHF. Data may be then processed in the user area or cataloged for
> use by the production jobs.

MENU TREE   Data transfer services
Transfer data from RAC to User Area

COMMAND $ DT /RAC *source-file-specification*   *destination-file-specification*

PARAMETERS *source-file-specification*

This paremeter is the file specification of the file to be transferred.
This parameter may not be a file list.

destination-file-specification

This parameter is the file specification of the file to which the data is
transferred. It should not include the node name since the CDHF is
the target node. Node names are ignored. It must specify the target
disk and directory. Only valid VAX/VMS file names are accepted.

QUALIFIERS   None

DESCRIPTION This function provides for the transferring of a file from the RAC to the
User Area.

This function can be invoked from a menu or a command. The
menus prompt for the desired parameters. To use the command
mode, control information is input through parameters. In either
mode the user's terminal pauses while it awaits the completion of the
transfer.

ERROR   All input parameters are checked for validity. Error messages are sent to
PROCESSING the screen for interactive requests. Errors cause the request to be
ignored.

If the source file is not found when the request is made, an error is
generated and the request ignored (command mode). Some errors in
the interactive mode (menu system) causes the re-prompting for
corrections to the erroneous information. A common error is not
having world access to the file and its directory; or, not using the
proxy account for the source file.

SEE ALSO   4.1 Overview of Data Transfer Services

               6.8 RAC Transfer Schedule

EXAMPLES

Example 1. Transfer from RAC to User Area

<div align="center">

$ DT /RAC HALOE::DISKX:[MY_DIR]FILE1.X -

DISKY:[HALOE]FILE2.X

</div>

In this example the user is requesting a transfer of a file from the HALOE RAC in the directory [MY_DIR] by the name FILE1.X. The user is requesting that this file be transferred to the CDHF node, to the directory [HALOE]. The file is renamed at the same time to FILE2.X at the CDHF node.

Example 2.   Transfer a Single Data file from the RAC to the User Area

```
MENUDISP (        )              MENU SYSTEM
                           DATA TRANSFER SERVICES


       1.   Transfer cataloged data
       2.   Transfer data from RAC to User Area
       3.   Transfer data from User Area to the RAC
       4.   Catalog a data file
       5.   Cancel data transfer request
       6.   Monitor RAC data transfers                          Option 2
                                                                Selected



Keypad(1...6)   Help(PF2)    LastMenu(PF3)   Keys(PF4)   Quit   DCL
                                                                DS   1 OF   1
UARS>                                                           PG   1 OF   1
```

```
RACTOUA  (        )         TRANSFER DATA FROM RAC TO USER AREA

Source file specification:
(Node::Disk:[Directory]Filename)


NOTE:  WORLD read access is required, or use of proxy account.

User Area Destination file specification:
(Disk:[Directory]Filename)



Continue(Enter)      Cancel_request(.)      UARS>(PF1)
                                                        DS   1 OF   1
UARS>                                                   PG   1 OF   1
```

Example 3. File Access Error Screen

```
RACUAERR (        )        RAC TO USER AREA COPY ERROR



Error accessing CDHF2::CSC$DISK:[UCSSOPS]USER.FOR
%RMS-E-PRV, insufficient privilege or file protection violation




Continue(Enter)
                                                    DS   1 OF   1
UARS>                                               PG   1 OF   1
```

This example demonstrates an error screen that may occur if the UCSS cannot gain access to the file being transferred. Make sure that the file and direcotry containing the file have WORLD read access.

4.5 Data Transfer Request Completion Mail Messages

> The user is usually informed of the result of the data transfer that was requested by a mail message or message on the terminal. The method depends on the type of transfer. The user may elect not to be notified by a data transfer request mail message for successful transfers.

The user may request data transfers in all directions among the user's RAC, the UCSS catalog controlled data, and the user area. The method of reporting on the status of the transfers varies with the transfer type. It is summarized as follows:

TRANSFER DIRECTION	METHOD TO REPORT STATUS
RAC to User Area	Message to terminal
RAC to Catalog	Message to terminal
User Area to RAC	Mail to user
Catalog to User Area	Mail to user
Catalog to RAC	Mail to user

As indicated in the above table, a mail message is sometimes generated after a data transfer completes. This occurs for User Area to RAC transfers, Catalog to User Area transfers, and Catalog to RAC transfers. The mail message describes the completion status of the data transfer request.

For multi-file transfer requests, an initial mail message is also generated if some of the files requested cannot be found or if the user has requested more files than are permitted in the multi-file transfer request. An example of a multi-file transfer request initial mail message is shown below.

Multi-file Transfer Initial Mail Message

```
From: UARS::CSCOPS        22-JUL-1991 19:00:25.78
To: MCCROBIE
CC:
Subj: Initial status for MFT_0000C731

Multi-file transfer request startup status for MFT # MFT_0000C731
Number of files that are being transferred:      1.
Maximum number of files allowed in an MFT =     15.


The following      1 files were not transferred:

bad_file.dat
       Catalog File Does Not Exist
```

Data transfers may be single file transfers or multi-file transfers. These transfer types were defined earlier in Section 4 of the document. Examples of a successful single file transfer and a successful and unsuccessful multi-file data transfer request completion mail message follow:

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```
From: UARS::CSCOPS        22-JUL-1991 18:48:33.42
To: MCCROBIE
CC:
Subj: RDT_0000C728 to CDHF  Completed

Transfer completion status: TRANSFER SUCCESSFULLY COMPLETED

 Single-file transfer request completion status for: RDT_0000C728

Time request received:   22-JUL-1991 18:48:12
Requested transfer time: 22-JUL-1991 18:48:13
Time request started:    22-JUL-1991 18:48:20
Time request completed:  22-JUL-1991 18:48:24
Number copies attempted:    0

Source file specification:
DISK21:[UCSS.RO]QUICKLOOK_SQUALITY_D0126.Q03_V0001_C01_PROD

Science Catalog Attributes:

---------------------------------------------------------------------

FILE_NAME:
QUICKLOOK_SQUALITY_D0126.Q03_V0001_C01_PROD
ORBIT_NUMBER: 0       UARS_PI:
CORRELATIVE_PI:
START_TIME: 03-FEB-1992 21:28:57       STOP_TIME: 03-FEB-1992 22:59:37
RECORD_SIZE: 2532         DATA_QUALITY_UARS:     DATA_QUALITY_PI:
COMMENTS:

L3_BASE_INDEX: 0           L3_NBR_POINTS: 0
MAX_LATITUDE: 0.000000E+00  MIN_LATITUDE: 0.000000E+00
BASE_WAVELENGTH: 0.000000E+00  MIN_LONGITUDE: 0.000000E+00
MAX_LONGITUDE: 0.000000E+00  MIN_ALTITUDE: 0.000000E+00
MAX_ALTITUDE: 0.000000E+00  UNITS_ALTITUDE:    STATION_ID:
INSTRUMENT_ID:             TEST: F  FILE_SIZE: 426

 Destination file specification:
CSC$DISK:[MCCROBIE]QUICKLOOK_SQUALITY_D0126.Q03_V0001_C01_PROD;1


 Copy  1 status:

%COPY-I-REPLACED, CSC$DISK:[MCCROBIE]QUICKLOOK_SQUALITY_D0126.Q03_V0001_C01_PROD
 ;1 being replaced
%COPY-S-COPIED, DISK21:[UCSS.RO]QUICKLOOK_SQUALITY_D0126.Q03_V0001_C01_PROD;1 co
 pied to CSC$DISK:[MCCROBIE]QUICKLOOK_SQUALITY_D0126.Q03_V0001_C01_PROD;1 (421 b
 locks)
```

```
From: UARS::CSCOPS        22-JUL-1991 18:56:40.41
To: MCCROBIE
CC:
Subj: RDT_0000C72F to CDHF  Failed

Transfer completion status: TRANSFER FAILED

Single-file transfer request completion status for: RDT_0000C72F

Time request received:    22-JUL-1991 18:49:13
Requested transfer time:  22-JUL-1991 18:49:13
Time request started:     22-JUL-1991 18:56:30
Time request completed:   22-JUL-1991 18:56:33
Number copies attempted:     1

Source file specification:
DISK12:[UCSS.RO]HRDI_LO_D0125.V9998_C01_PROD


 Destination file specification:
CSC$DISK:[MCCROBIE]HRDI_LO_D0125.V9998_C01_PROD;1


 Copy  1 status:

%COPY-E-OPENOUT, error opening CSC$DISK:[MCCROBIE]HRDI_LO_D0125.V9998_C01_PROD;1
  as output
-RMS-E-CRE, ACP file create failed
-SYSTEM-F-EXDISKQUOTA, disk quota exceeded
%COPY-W-NOTCOPIED, DISK12:[UCSS.RO]HRDI_LO_D0125.V9998_C01_PROD;1 not copied
```

```
From: UARS::CSCOPS        22-JUL-1991 19:02:45.37
To: MCCROBIE
CC:
Subj: Completion status for MFT_0000C734

Multi-file transfer request completion status for: MFT_0000C734

Time request received: 22-JUL-1991 19:02:04
Requested transfer time: 22-JUL-1991 19:02:04
Time request completed: 22-JUL-1991 19:02:37
Time request restarted:
Number of files that were being transferred:      2
Destination of the files in this MFT: CSC$DISK:[MCCROBIE]

Number of files that were transferred okay:      2
Number of files that were not transferred okay:      0

The following      2 files were successfully transferred:


------------------------------------------------------------------
RDT_00345678
CSC$DISK:[MCCROBIE]QUICKLOOK_SQUALITY_D0125.Q04_V0001_C01_PROD;1
------------------------------------------------------------------


FILE_NAME:
QUICKLOOK_SQUALITY_D0125.Q04_V0001_C01_PROD
ORBIT_NUMBER: 1861    UARS_PI:
CORRELATIVE_PI:
START_TIME: 02-FEB-1992 21:28:57        STOP_TIME: 02-FEB-1992 22:59:37
RECORD_SIZE: 2532          DATA_QUALITY_UARS:     DATA_QUALITY_PI:
COMMENTS:

L3_BASE_INDEX: 0            L3_NBR_POINTS: 0
MAX_LATITUDE: 0.000000E+00   MIN_LATITUDE: 0.000000E+00
BASE_WAVELENGTH: 0.000000E+00   MIN_LONGITUDE: 0.000000E+00
MAX_LONGITUDE: 0.000000E+00   MIN_ALTITUDE: 0.000000E+00
MAX_ALTITUDE: 0.000000E+00   UNITS_ALTITUDE:     STATION_ID:
INSTRUMENT_ID:               TEST: F  FILE_SIZE: 426


------------------------------------------------------------------
RDT_00345679
CSC$DISK:[MCCROBIE]QUICKLOOK_SSUSIMA_D0125.Q04_V0001_C01_PROD;1
------------------------------------------------------------------


FILE_NAME:
QUICKLOOK_SSUSIMA_D0125.Q04_V0001_C01_PROD
ORBIT_NUMBER: 1861    UARS_PI:
CORRELATIVE_PI:
START_TIME: 02-FEB-1992 21:28:57        STOP_TIME: 02-FEB-1992 22:59:37
RECORD_SIZE: 8256          DATA_QUALITY_UARS:     DATA_QUALITY_PI:
COMMENTS:

L3_BASE_INDEX: 0            L3_NBR_POINTS: 0
MAX_LATITUDE: 0.000000E+00   MIN_LATITUDE: 0.000000E+00
BASE_WAVELENGTH: 0.000000E+00   MIN_LONGITUDE: 0.000000E+00
MAX_LONGITUDE: 0.000000E+00   MIN_ALTITUDE: 0.000000E+00
MAX_ALTITUDE: 0.000000E+00   UNITS_ALTITUDE:     STATION_ID:
INSTRUMENT_ID:               TEST: F  FILE_SIZE: 1386
```

```
From: UARS::CSCOPS       22-JUL-1991 19:00:42.40
To: MCCROBIE
CC:
Subj: Completion status for MFT_0000C731

Multi-file transfer request completion status for: MFT_0000C731

Time request received: 22-JUL-1991 19:00:09
Requested transfer time: 22-JUL-1991 19:00:09
Time request completed: 22-JUL-1991 19:00:38
Time request restarted:
Number of files that were being transferred:     1
Destination of the files in this MFT: CSC$DISK:[MCCROBIE]

Number of files that were transferred okay:    0
Number of files that were not transferred okay:    1


The following    1 files were unsuccessfully transferred:

-------------------------------------------------------------------
RDT_00000678
DISK12:[UCSS.RO]HRDI_LO_DO125.V9998_C01_PROD

 Copy  1 status:

%COPY-E-OPENOUT, error opening CSC$DISK:[MCCROBIE]HRDI_LO_DO125.V9998_C01_PROD;1
  as output
-RMS-E-CRE, ACP file create failed
-SYSTEM-F-EXDISKQUOTA, disk quota exceeded
%COPY-W-NOTCOPIED, DISK12:[UCSS.RO]HRDI_LO_DO125.V9998_C01_PROD;1 not copied


-------------------------------------------------------------------
```

```
From: UARS::CSCOPS        22-JUL-1991 19:45:59.80
To: CSCOPS
CC:
Subj: Completion of virtual: RDT_0000C74B

Virtual-file transfer request completion status for: RDT_0000C74B

Virtual file's type: QUALITY      subtype:              level: 0
Virtual file's time range: 02-FEB-1992 01:00:00 04-FEB-1992 23:00:00
Time request received:   22-JUL-1991 19:42:51
Requested transfer time: 22-JUL-1991 19:42:51

Transfer completion status is TRANSFER SUCCESSFULLY COMPLETED
Request was retried  0 times.

Source files:
QUALITY_LO_D0125.V9998_C01_PROD
--------------------------------------------------------------------

FILE_NAME:
QUALITY_LO_D0125.V9998_C01_PROD
ORBIT_NUMBER: 0        UARS_PI:
CORRELATIVE_PI:
START_TIME: 02-FEB-1992 00:00:00      STOP_TIME: 02-FEB-1992 23:54:08
RECORD_SIZE: 2532          DATA_QUALITY_UARS:    DATA_QUALITY_PI:
COMMENTS:

L3_BASE_INDEX: 0            L3_NBR_POINTS: 0
MAX_LATITUDE: 0.000000E+00   MIN_LATITUDE: 0.000000E+00
BASE_WAVELENGTH: 0.000000E+00   MIN_LONGITUDE: 0.000000E+00
MAX_LONGITUDE: 0.000000E+00   MIN_ALTITUDE: 0.000000E+00
MAX_ALTITUDE: 0.000000E+00   UNITS_ALTITUDE:     STATION_ID:
INSTRUMENT_ID:            TEST: F  FILE_SIZE: 6504
QUALITY_LO_D0126.V0001_C06_PROD
--------------------------------------------------------------------

FILE_NAME:
QUALITY_LO_D0126.V0001_C06_PROD
ORBIT_NUMBER: 0        UARS_PI:
CORRELATIVE_PI:
START_TIME: 03-FEB-1992 00:00:00      STOP_TIME: 03-FEB-1992 23:59:59
RECORD_SIZE: 2532          DATA_QUALITY_UARS:    DATA_QUALITY_PI:
COMMENTS:
SIDS3 qal for SOLSTICE obcdecode simulation 6/27/91
L3_BASE_INDEX: 0            L3_NBR_POINTS: 0
MAX_LATITUDE: 0.000000E+00   MIN_LATITUDE: 0.000000E+00
BASE_WAVELENGTH: 0.000000E+00   MIN_LONGITUDE: 0.000000E+00
MAX_LONGITUDE: 0.000000E+00   MIN_ALTITUDE: 0.000000E+00
MAX_ALTITUDE: 0.000000E+00   UNITS_ALTITUDE:     STATION_ID:
INSTRUMENT_ID:            TEST: F  FILE_SIZE: 6525
QUALITY_LO_D0127.V0001_C06_PROD
--------------------------------------------------------------------

FILE_NAME:
QUALITY_LO_D0127.V0001_C06_PROD
ORBIT_NUMBER: 0        UARS_PI:
CORRELATIVE_PI:
START_TIME: 04-FEB-1992 00:00:00      STOP_TIME: 04-FEB-1992 23:59:59
RECORD_SIZE: 2532          DATA_QUALITY_UARS:    DATA_QUALITY_PI:
COMMENTS:
SIDS3 qal for SOLSTICE obcdecode simulation 7/16/91
L3_BASE_INDEX: 0            L3_NBR_POINTS: 0
MAX_LATITUDE: 0.000000E+00   MIN_LATITUDE: 0.000000E+00
BASE_WAVELENGTH: 0.000000E+00   MIN_LONGITUDE: 0.000000E+00
MAX_LONGITUDE: 0.000000E+00   MIN_ALTITUDE: 0.000000E+00
MAX_ALTITUDE: 0.000000E+00   UNITS_ALTITUDE:     STATION_ID:
INSTRUMENT_ID:            TEST: F  FILE_SIZE: 6528

Time request started:   22-JUL-1991 19:45:24
Time request completed: 22-JUL-1991 19:45:49

Highest version/cycle of each file was used.
Virtual file's destination file specification:

DISK40:[CSCOPS.RAC_XFER]QUALITY_LO_D0125.RDT_0000C74B;1
```

Unsuccessful Virtual File Transfer Completion Mail Message

```
From: UARS::CSCOPS        22-JUL-1991 19:14:05.72
To: MCCROBIE
CC:
Subj: Completion of virtual: RDT_0000C73D

Virtual-file transfer request completion status for: RDT_0000C73D

Virtual file's type: QUALITY      subtype:              level: 0
Virtual file's time range: 02-FEB-1992 01:00:00 04-FEB-1992 03:00:00
Time request received:   22-JUL-1991 19:10:27
Requested transfer time: 22-JUL-1991 19:09:51

Transfer completion status is TRANSFER FAILED
Request was retried  1 times.

Source files:
QUALITY_LO_D0125.V9998_C01_PROD
QUALITY_LO_D0126.V0001_C06_PROD
QUALITY_LO_D0127.V0001_C06_PROD

Time request started:   22-JUL-1991 19:13:56
Time request completed: 22-JUL-1991 19:13:59

Virtual file's destination file specification:

CSC$DISK:[MCCROBIE]QUALITY_LO_D0125.RDT_0000C73D;1


  Copy  1 status:

%COPY-E-OPENOUT, error opening CSC$DISK:[MCCROBIE]QUALITY_LO_D0125.RDT_0000C73D;
  1 as output
 -RMS-E-CRE, ACP file create failed
 -SYSTEM-F-EXDISKQUOTA, disk quota exceeded
%COPY-W-NOTCOPIED, DISK21:[UCSS.SCR]QUALITY_LO_D0125.RDT_0000C73D;1 not copied
```

4.6 Cancelling RAC Data Transfer Requests

> The user can request the cancellation of any outgoing transfer request.

MENU TREE   RAC data transfer services
                 Cancel data transfer request

COMMAND $ DT /CANCEL /ID = {*request-identifier* | ALL_MFT | ALL_SFT }
                 [/USER = *user-name*]
                 [/NODE = *node-name*]

PARAMETERS   None

QUALIFIERS   **/CANCEL**

                 The cancel qualifier selects this as data transfer cancellation.

                 / ID = {*request-identifier* | ALL_MFT | ALL_SFT }

                 The /ID qualifier identifies a single data transfer request or a group of
                 requests for cancellation. ALL_MFT means all multi-file transfer
                 requests. ALL_SFT means all single file transfer requests.

                 / NODE = *node-name*

                 This qualifier provides the option to cancel transfers destined to the
                 specified node. The node name must match the name stored in the
                 RAC tables.

                 / USER = *user-name*

                 This optional qualifier identifies a user name for cancellation. This
                 qualifier must be used if operations is performing the cancellation.

DESCRIPTION This function provides for the cancellation of a file transfer from the
                 User Area to the RAC or from the Catalog to the RAC or User Area.
                 Outgoing transfers are scheduled by the RAC transfer scheduler.
                 Every transfer request is identified by a request identifier. These may
                 be looked up using the RAC displays.

                 The user can cancel his own transfers. The operator can transfer
                 anyone's transfer requests, but must specify the /USER qualifier.

ERROR PROCESSING   All input parameters are checked for validity. Error messages are sent to the screen for requests. Errors cause the request to be ignored.
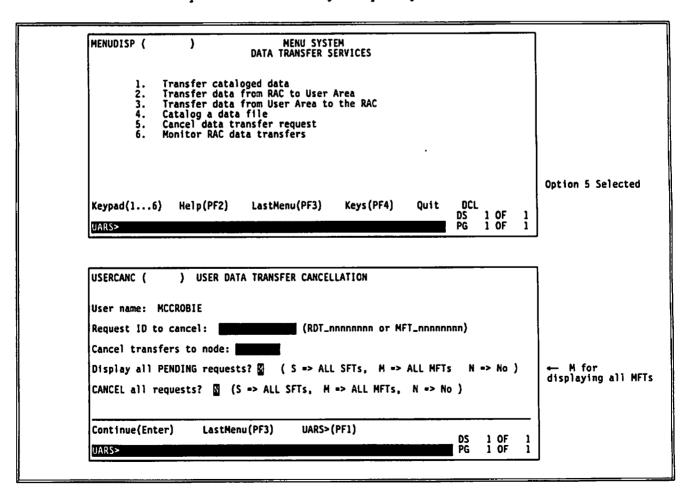
SEE ALSO   None

EXAMPLES

Example 1.   Cancelling a Data Transfer Request

$ DT /CANCEL /ID = RDT_12345678

This command cancels a data transfer request whose identifier is RDT_12345678. This identifier is in the format RDT_*nnnnnnnn*, ACR_nnnnnnnn, or MFT_*nnnnnnnn*, depending if it is a single or multi-file transfer. The request identifier can be looked up through the Display RAC Transfer Schedule function. Only the user who initiated the transfer request may cancel it. If necessary, operations can cancel any data transfer request.

Example 2.   Cancel Transfer Requests from User Account

```
MENUDISP (        )              MENU SYSTEM
                           DATA TRANSFER SERVICES


        1.   Transfer cataloged data
        2.   Transfer data from RAC to User Area
        3.   Transfer data from User Area to the RAC
        4.   Catalog a data file
        5.   Cancel data transfer request
        6.   Monitor RAC data transfers



                                                                   Option 5 Selected

Keypad(1...6)   Help(PF2)    LastMenu(PF3)   Keys(PF4)    Quit   DCL
                                                                DS   1 OF   1
UARS>                                                           PG   1 OF   1
```

```
USERCANC (      )  USER DATA TRANSFER CANCELLATION

User name: MCCROBIE

Request ID to cancel:  ▮▮▮▮▮▮▮▮  (RDT_nnnnnnnn or MFT_nnnnnnnn)

Cancel transfers to node: ▮▮▮▮▮▮

Display all PENDING requests? ▮  ( S => ALL SFTs,  M => ALL MFTs   N => No )     ←— M for
                                                                                displaying all MFTs
CANCEL all requests?  ▮  (S => ALL SFTs,  M => ALL MFTs,  N => No )


Continue(Enter)    LastMenu(PF3)     UARS>(PF1)
                                                    DS   1 OF   1
UARS>                                               PG   1 OF   1
```

Example 2. Cancel Transfer Requests from User Account (Continued)

```
SHOWALL  (    )   SHOW OUTSTANDING TRANSFER REQUESTS

User name - MCCROBIE

Request ID      Request Status    Virtual  Requested Transfer Time
Source file specification
--------------------------------------------------------------------
MFT_0000432A    Pending                    03-OCT-1990 00:00:00
UCSS_RDT:MFT_0000432A.SLIST;1
--------------------------------------------------------------------
MFT_0000432B    Pending                    04-OCT-1990 00:00:00
UCSS_RDT:MFT_0000432B.SLIST;1
--------------------------------------------------------------------
CANCEL request ID:  MFT_0000432A

Continue(Enter)
                                              DS   1 OF   1
UARS>                                         PG   1 OF   1
```

Example 3. Cancellation Message When User Cancels Request

```
CANCLMSG (         ) TRANSFER REQUEST CANCELLATION STATUS DISPLAY
****************************************************************************

Your Transfer Request was successfully cancelled.




Continue(Enter)
                                              DS   1 OF   1
UARS>                                         PG   1 OF   1
```

Example 4.   Cancel Transfer Requests from an Operations Account

```
MENUDISP (        )              MENU SYSTEM
                            DATA TRANSFER SERVICES


          1.    Transfer cataloged data
          2.    Transfer data from RAC to User Area
          3.    Transfer data from User Area to the RAC
          4.    Catalog a data file
          5.    Cancel data transfer request
          6.    Monitor RAC data transfers




                                                                      Option 5 Selected


Keypad(1...6)   Help(PF2)   LastMenu(PF3)   Keys(PF4)   Quit    DCL
                                                               DS    1 OF   1
UARS>                                                          PG    1 OF   1
```

```
OPSCANC (      )  USER DATA TRANSFER CANCELLATION


User name:  MCCROBIE                                          ← Modifiable in an
                                                                operations account
Request ID to cancel:                (RDT_nnnnnnnn or MFT_nnnnnnnn)

Cancel transfers to node:

Display all PENDING requests?      ( S => ALL SFTs,  M => ALL MFTs   N => No )

CANCEL all requests?       (S => ALL SFTs,  M => ALL MFTs,  N => No )
_____

Continue(Enter)     LastMenu(PF3)     UARS>(PF1)
                                                               DS    1 OF   1
UARS>                                                          PG    1 OF   1
```

```
CONFCANC (     )     CANCELLATION CONFIRMATION MENU

User name:  MCCROBIE

Number of SFTs outstanding => 4





_____

Continue_with_cancellation(Enter)     Do_not_cancel_request(.)
                                                               DS    1 OF   1
UARS>                                                          PG    1 OF   1
```

4.7 Monitor RAC Data Transfers

+---+
| The RAC data transfer monitor allows users to display status information |
| about active data transfer requests and about each defined node |
| interface. |
+---+

MENU TREE   Data transfer services
                    RAC data transfer monitor

COMMAND   No command access is provided.

PARAMETERS None

QUALIFIERS None

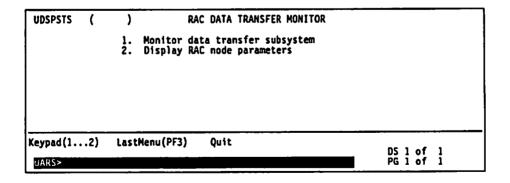**DESCRIPTION** The menu system allows monitoring of the Data Transfer Subsystem
and displaying RAC node parameters.

**ERROR
PROCESSING**

SEE ALSO   None

EXAMPLES

The menu version of the RAC Data Transfer Monitor is invoked from the RAC DATA
TRANSFER SERVICES submenu. The following screen is then presented for
selection of RDT functions.

```
+------------------------------------------------------------------+
| UDSPSTS    (    )            RAC DATA TRANSFER MONITOR            |
|                                                                  |
|              1.  Monitor data transfer subsystem                 |
|              2.  Display RAC node parameters                     |
|                                                                  |
|                                                                  |
|                                                                  |
|                                                                  |
|                                                                  |
+------------------------------------------------------------------+
| Keypad(1...2)   LastMenu(PF3)    Quit                            |
|                                                    DS 1 of  1    |
| UARS>                                              PG 1 of  1    |
+------------------------------------------------------------------+
```

The Monitor Data Transfer Subsystem option provides the following display. For each
node, the ACTIVE column specifies the number of transfer active or queued. The
WAITING column specifies the number of transfers waiting and being staged.

```
MONXFER   (   )        MONITOR DATA TRANSFER SUBSYSTEM

NODE   ACTIVE  WAITING  LINE    XFER    NODE   ACTIVE  WAITING  LINE    XFER
NAME                    STATUS  STATUS  NAME                    STATUS  STATUS
ACDURS  0      0        UP      ACTV    UMPG    0       0        UP      ACTV
CLAES   0      0        UP      ACTV    UMPGO   0       0        UP      ACTV
GELUA1  0      0        UP      ACTV    USER    0       9        UP      ACTV
GRID    0      0        UP      ACTV    UWASH   0       0        UP      ACTV
GTUARS  0      0        UP      ACTV    VIRGO   0       0        UP      ACTV
HALOE   0      0        UP      ACTV    WINDIC  0       0        UP      ACTV
ISAMS   0      0        UP      ACTV    WINDIF  2       20       UP      ACTV
MLSRAC  2      6        UP      ACTV
MLSUK   0      0        UP      ACTV
NETTLE  0      0        UP      ACTV
OBCSTF  0      0        UP      ACTV
OZONE   0      0        UP      ACTV
PEM     0      0        UP      ACTV
PEMAXS  0      0        UP      ACTV
PEMLOC  0      0        UP      ACTV
SIGO1   0      0        UP      ACTV
SPRLJ   0      0        UP      ACTV
SUSIM   0      0        UP      ACTV
UARSMS  0      0        UP      ACTV
Press space bar to return to previous display...          DS   1 OF  1
UARS>                                                      PG   1 OF  1
```

The *LINE STATUS* field indicates the line status to the node. Valid values are *UP* and *DOWN*. The *XFER STATUS* field indicates the transfer status to the node. Valid values are *ACTV, SPND,* and *TERM*. Transfers are started only if line status is *UP* and transfer status is *ACTV*. Any other combination prevents starting transfers to that node.

The Display RAC Node Parameters option on the menu presents the following display. Each column represents a node in the system. If more than 5 nodes are defined to the RAC Data Transfer Subsystem, they appear on later pages.

```
DSPPRMS   (   )        DISPLAY RAC NODE PARAMETERS

--------------------------------------------------------------------------------

Node Name          HALOE       SPRLC       USER
Node Status        UP          UP          UP
Node Xfer Status   ACTV        ACTV        ACTV
Bulk Permitted     1           1           0
Bulk Start Time    23:00:00    00:00:00    N/A
Bulk End Time      08:00:00    10:00:00    N/A
Bulk Retry Time    00:10:00    00:10:00    N/A
Bulk Retry Nbr     2           2           0
Small Permitted    1           1           2
Small Retry Time   00:01:00    00:01:00    00:00:00
Small Retry Nbr    2           2           2
Blocks Pending        114         0          201
Blocks Used          1095      1881       222063
Blocks Quota        50000     500000     500000

--------------------------------------------------------------------------------

Continue(Enter)   Page(-or,)    Quit
                                              DS  1 of  1
UARS>                                         PG  1 of  1
```

The *Blocks Pending* field indicates the number of blocks waiting to be sent to the node. This includes scheduled, active, and staging transfer requests.

The *Blocks Used* field indicates the number of blocks that have successfully been sent to the node since the last archive process. Failed and cancelled transfers are not counted in this quota.

The *Blocks Quota* field indicates the number of blocks allowed to be sent to the node during an archive period.

Section

5

Interactive Orbit/Attitude Support

5.1 Overview of Interactive Orbit/Attitude Services

> The Interactive Orbit and Attitude Services allow the user to request
> certain types of UARS orbit and attitude data for interactive terminal
> display. Status information is also returned with each request.

The user makes requests for interactive orbit and attitude data display through either the menus or through UCSS DCL commands. In both cases, request times, data types and version numbers, position vectors, etc. are required inputs from the user. This information is prompted for if the request is initiated from a menu. Parameters and qualifiers provide this same information if the request is issued from VAX/VMS DCL.

Once the request has been issued the request parameters are verified. If a parameter is specified incorrectly or is out of range the user is notified of the error. If the user accessed the orbit and attitude services interactively, the error messages is displayed on the screen. The error messages is sent to SYS$OUTPUT if the orbit/attitude service was accessed by a command procedure.

If a user requests data from files subject to destaging, like orbit and attitude data files, it is possible that his request may not be satisfied. That is, if the data needed to satisfy the request is destaged at the request time, the user is notified that he must re-issue his request later. A process is spawned to stage the needed data in response to the user's initial request.

Except for the "user specified view match" and the star file dump requests, all information obtained from the interactive orbit and attitude services can also be obtained by calling Fortran subroutines. The Fortran interface is described in the UARS Programmers Guide to Orbit and Attitude Services. This document may also be referenced if further clarification is needed concerning any of the interactive input parameters described in Sections 5.1.1 and 5.1.2.

5.1.1 Summary of Qualifiers for Interactive Orbit/Attitude Services

> When using DCL commands to operate the UCSS, various qualifiers are needed to specify the orbit and attitude data types used in calculating UARS orbit and attitude and to provide other inputs to the command.

The following table summarizes the valid qualifiers for the interactive orbit and attitude requests. Table 5.1-1 describes the qualifiers that can be entered. The qualifiers are described in detail in Section 5.1.2.

QUALIFIER	DESCRIPTION
/ALTITUDE	Specifies the *altitude* for a UARS magnetic field calculation and for the solar zenith angle calculation. For the magnetic field calculation, the altitude must be either geodetic at 100 or 250 kilometers, or geocentric at 600 kilometers. /ALTITUDE = *altitude*
/ATTVER	Specifies which type and version of UARS attitude data should be used in a calculating spacecraft attitude or SSPP attitude /ATTVER = *attitude-type* + *attitude-version-number*
/AZIMUTH	Specifies the *azimuth-angle* from the velocity vector of the spacecraft measured positive from orbit velocity towards the vector computed by (orbit velocity CROSS zenith) in a right hand system. Used for the "User Specified View Match" service /AZIMUTH = *azimuth-angle*
/FILE	Specifies output to a file /FILE = *output-file-specification*
/GEOLAT	Specifies the reference latitude(s) at which the earth radius is to be calculated. The geodetic radius is displayed for each geocentric latitude in the user specified range. /GEOLAT = (*start-lat* , *stop-lat, lat-inc*)
/HELP	Provides the user with the help information for the requested service.
/LATITUDE	Specifies the *latitude* of a (latitude,longitude) location for a UARS magnetic field data calculation or user specified view match calculation. The valid latitude range is from -89.99 to 90.00 degrees. /LATITUDE = *latitude*
/LIMBHGT	Height in kilometers at limb to view. Used in calculating the "User Specified View Match." /LIMBHGT = *limb-height*
/LONGITUDE	Specifies the *longitude* of a (latitude,longitude) location for a UARS magnetic field data calculation or a longitude range for the user specified view match calculation. Valid longitudes range from 0.00 to 359.99 degrees. /LONGITUDE = *longitude* OR /LONGITUDE = (*longitude1, longitude2*)
/NUMORB	Number of orbits to be used for calculating the "User Specified View Match." /NUMORB = *number-of-orbits*
/OBJECTS	Specifies the objects for which ephemeris data is to be displayed. The user may request from one to seven of the objects supported. The objects supported are the sun, moon, Mercury, Venus, Mars, Jupiter, and Saturn. /OBJECTS = (*object 1 , object 2, ... , object 7*)

Table 5.1-1 Valid Qualifiers for Interactive Orbit / Attitude Services (1 of 2)

QUALIFIER	DESCRIPTION
/ORBNUM	Specifies the consecutive orbit number(s) for a UARS orbit time range request. The start/stop times of each orbit in the specified range is displayed. The orbit numbers increment by one within the range specified. /ORBNUM = (start-orbit , stop-orbit)
/ORBVER	Specifies the type and version of UARS orbit data to be used in calculating UARS attitude, UARS orbital elements or UARS spacecraft orbit. /ORBVER = orbit-type + orbit-version
/PLAIN	Specifies that no headers are included. [/NOPLAIN] specifies headers are included.
/RECORD	Specifies output in record format. [/NORECORD] specifies not record format (default).
/SATPOS	Specifies UARS satellite position in ECI kilometers for Limb Tangency point calculation. /SATPOS = (x-pos, y-pos, z-pos)
/SSPPTYP	Specifies the type and version of SSPP attitude data to be used in determining SSPP attitude. /SSPPTYP = SSPP-attitude-type
/STARID	Specifies the stars for which ephemeris data is to be displayed. /STARID =(SKYMAP-id-1 , SKYMAP-id-2, ... , SKYMAP-id-20)
/START	Specifies the start time for a start-stop time range for UARS orbit/attitude data computations. The format of this start time can be UARS standard date and time format, which is prefixed by a U, or UARS day format which is prefixed by a D, or VMS time format which is unprefixed. In the following formats, mmm is the number of milliseconds. /START = (Uyyyddd milliseconds) /START = (Uyyyddd:hh:mm:ss:mmm) /START = ("Uyyyddd:hh:mm:ss:mmm") /START = (dd-mmm-yyyy:hh:mm:ss:mmm) /START = (Ddddd:hh:mm:ss:mmm)
/STOP	Specifies the stop time for a start-stop time range for UARS orbit/attitude data computations. The format of this start time can be UARS standard date and time format, which is prefixed by a U, or UARS day format which is prefixed by a D, or VMS time format which is unprefixed. This stop time must be greater than the START time. In the following formats, mmm is the number of milliseconds. /STOP = (Uyyyddd milliseconds) /STOP = (Uyyyddd:hh:mm:ss:mmm) /STOP = ("Uyyyddd:hh:mm:ss:mmm") /STOP = (dd-mmm-yyyy:hh:mm:ss:mmm) /STOP = (Ddddd:hh:mm:ss:mmm)
/STRTORB	Start orbit number for calculating the "User Specified View Match." /STRTORB = start-orbit-number
/TIMINC	This specifies the interval between the specified START and STOP times for which UARS orbit/attitude data should be computed. This time must be specified in the following format: DD:HH:MM:SS:MMM where DD is the number of days: 00-23 　　　HH is the number of hours: 00-23 　　　MM is the number of minutes: 00-59 　　　SS is the number of seconds: 00-59 　　　MMM is the number of milliseconds 000-999 TIMINC is used in the following way: if the user requested UARS attitude data for the start/stop time range of /START=90101 00000000 and /STOP=90111 00000000 and specifies a time interval of /TIMINC=01:12:00:00:00, the user would then see UARS attitude data points between April 9,1990 and April 19,1990 with 36 hours between each attitude point.
/VIEWVEC	Specifies the ECI vector in the viewing direction for calculating the limb tangent point /VIEWVEC = (x-direction, y-direction, z-direction)

Table 5.1-1 Valid Qualifiers for Interactive Orbit / Attitude Services (2 of 2)

5.1.2 Definition of Qualifiers for Interactive Orbit/Attitude Services

> When using UCSS DCL commands, various qualifiers are needed to specify UARS orbit and attitude data characteristics and to provide other inputs to the command. These qualifiers are defined in this section.

All qualifiers may be abbreviated to that combination of letters that makes it unique.

/ALTITUDE = *iii*

Specifies the altitude of the magnetic field data desired, or the altitude at which the solar zenith angle and local solar time should be calculated. For the magnetic field calculation, three altitudes are acceptable: (100 km geodetic, 250 km geodetic, and 600 km geocentric). This qualifier is specified for the magnetic field data display and for the solar zenith angle display.

Default: None

Examples: /ALTITUDE = 100

　　　　　　/ALT = 123

/ATTVER = *type* + *version*

Specifies the *type* and *version* of UARS attitude data to be used in calculations. The value of this qualifier is a character string of length *. The first character identifies the *type* of data and can be one of the following vaules:

'Q'	=>	quicklook
'E'	=>	extracted
'D'	=>	definitive
' '	=>	best currently available

The remaining characters contain the software version number + cycle number of this data and are thus specified as numeric characters. Version numbers range from 1 to 9999. Cycle numbers range from 1 to 23. Each may also be left as blanks, indicating that the user wishes the best version available for the specified type. This qualifier is specified for both the UARS attitude display and the SSPP attitude display.

Default:　　If this qualifier is not specified, the best UARS attitude currently available is used in the calculation

Examples: /ATTVER = E000101
               /ATTV = D0012
               /ATTV = Q

/AZIMUTH = *azimuth-angle*

Specifies the azimuth angle from the x-axis of the spacecraft measured positive towards the spacecraft y-axis. This qualifier is specified for only the user specified view match display. The angle is specified as a floating point number in the range of 0.00 to 360.00 degrees.

Default: None

Examples: /AZIMUTH = 320.00
               /AZ = 0.0
               /AZIMUTH = 45.23

/FILE = *file-name*

Specifies the VMS file specification of the file to contain the output.

Default: None

Examples: /FILE = DISK5:[MYACCT]MY_OUTPUT.TXT

/GEOLAT = *start-lat (,stop-lat, lat-inc)*

Specifies the reference geocentric latitude(s) at which the earth radius is to be calculated. The earth radius is calculated for the start latitude, and for latitudes obtained by adding the latitude increment to the previous latitude until the stop latitude is reached.   If only one earth radius calculation is needed, the user should enter only one geocentric latitude. The start and stop latitudes are specified as floating point numbers in the range of -89.99 to 90.00 degrees. The latitude increment is specified as a floating point number in the range of 0.00 to 179.99 degrees.

Default: None

Examples: /GEOLAT = (-45.0, -5.0, 5.0)

                   /GEOLAT = (0.0, 80.99, 11.11)

                   /GEOLAT = 10.0

/HELP

Provides the user with the help information for the requested service.

Default: None

/LATITUDE = *latitude*

Specifies the latitude component of a point on the earth's surface. Latitude is specified
as a floating point number in the range of -89.99 to 90.0 degrees. This qualifier is
specified for both the magnetic field data display and the limb tangent point calculation.

Default: None

Examples: /LATITUDE = -80.45

                   /LATITUDE = 3.8

                   /LAT = 78.2

/LIMBHGT = *limb-height*

Specifies the height (in kilometers) at the limb to view. This qualifier is used for
only the user specified view match display. The qualifier is specified as a positive
floating point number.

Default: None

Examples: /LIMBHGT = 10000.0

                   /LIM = 658.99

/LONGITUDE = *longitude*   *or*

        /LONGITUDE = *(longitude1, longitude2)*

Specifies the longitude component of a point on the earth's surface. Longitude is specified as a floating point number in the range of 0.00 to 359.99 degrees. This qualifier is used in specifying the location of a magnetic field data calculation or for specifying the longitude range for the user specified view match calculation. Thus, only one longitude is specified for magnetic field data display and two values are specified for the user specified view match.

Default: None

Examples for use with magnetic field data requests:

        /LONGITUDE = 340.0

        /LONG = 5.

        /LONG = 28.76

Examples for use with user specified view match requests:

        /LONGITUDE = (122.00, 130.00)

        /LONGITUDE = (5., 10.)

        /LONGITUDE = (45.67, 53.87)

        /LONGITUDE = (180, 170)

This last example does not include longitudes from 170 to 180.

/NUMORB = *nnn*

Specifies the number of UARS orbits to be used in calculating the user specified view match. This number is a three digit integer ranging from 1 to 999.

Default: 1

Examples: **/NUMORB = 3**

                  /NUMORB = 003

                  /NUMORB = 12

/OBJECTS = *object-1,   (object-2,   ...,   object-7)*

Specifies the objects for which solar, lunar, or planetary ephemeris is displayed. There are nine objects supported in the planetary ephemeris display: sun, moon, Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune, or ALL. These names must be specified in their entirety.

Default: If no names are specified, ephemeris is displayed for each of the nine objects.

Examples: **/OBJECTS = (MOON, VENUS)**

/OBJ = (JUPITER, SATURN, MERCURY)

/OBJECTS = SUN

/ORBNUM = *start-orbit   (, stop-orbit)*

This qualifier specifies a range of UARS orbits. Both the start-orbit and stop-orbit range from 1 to 9999. The *start-orbit* must be less than the *stop-orbit*, if more than one orbit is desired. If one orbit is needed, the user need specify only the *start-orbit*. This qualifier is used when requesting the orbit time range display. Thus, the start and stop times for the orbits in the specified range is displayed.

Default: None

Examples: **/ORBNUM =(1, 10)**

/ORBN = 6

/ORBNUM = (100, 120)

/ORBVER = *type + version*

Specifies the *type* and *version* of UARS orbit data to be used in calculating UARS attitude, UARS orbital elements or UARS spacecraft orbit data. This value is a character string of length * where the first character is the type of UARS orbit data and the remaining characters are digits are the software version number and cycle number of this data. The possible values of *type* are as follows:

'N'	=>	do not use orbit data for calculation*
'P1'	=>	predicted
'P2'	=>	predicted
'P3'	=>	predicted
'D'	=>	definitive
' '	=>	best currently available

* not valid when requesting UARS spacecraft orbit display

If the version/cycle numbers are left blank then the best available version of the specified type is used.

Default: Best currently available type and version

Examples: /ORBVER = D000201
             /ORBV = P1000101
             /ORBVER = N

/PLAIN   [NOPLAIN]

Specifies whether headers are included in the output for columnar format. PLAIN indicates that no headers are included.

Default: NOPLAIN is the default

/RECORD   [NORECORD]

Specifies whether output is in record format or columnar format. RECORD indicates that the output is record format.

Default: NORECORD is the default.

/SATPOS = *x-pos, y-pos, z-pos*

Specifies the three-dimensional position of the UARS satellite in ECI kilometers. Each coordinate of the position is a floating point number with two significant figures past the decimal point. This qualifier is specified for the limb tangency point calculation

Default: None

Examples: /SATPOS = (23.0, 44.0, 250.0)
             /SATPOS = (55.98, 100.43, 100.88)

/SSPPTYP = *type*

Specifies the type of UARS SSPP attitude data to be used for the UARS SSPP attitude data display. The value is a single character which is the type of UARS SSPP data to be used for calculation. The possible values of type are as follows:

'Q'	=>	quicklook
'E'	=>	extracted
' '	=>	best currently available

Default: Best currently available type

Examples: /SSPPTYP = E000101
              /SSPPTYP = Q03

/STARID = *skymap-id-1* (, *skymap-id-2, ..., skymap-id-n*)

Specifies the stars for which stellar ephemeris is to be calculated. A complete list of star identifiers supported can be displayed with the **$ OASERVICE STRDMP** command. Only twenty stars can be specified on each call to the stellar ephemeris display.

Default: None

Examples: /STARID = (80001, 20004, 65478, 39387)
              /STARID = 23456

/START = *start-time*

Specifies the first time for which data is to be calculated/displayed. This qualifier is used for most of the orbit/attitude interactive services to specify a time range for data display. The format of this time can be UARS standard date and time format (UDTF) which is prefixed by a 'U', UARS day format which is prefixed by a 'D', or VMS time format which is unprefixed. This qualifier is used with the /STOP and /TIMINC qualifiers. If the user desires only one time in any of his requests, only the /START qualifier is needed.

Default: None

Examples: /START = (U92070)
              /START = ("U92070 0")
              /START = (10-MAR)

```
/START = 10-MAR
/START = "10-MAR-1992"
/START = ("10-MAR-1992:00:01:00.00")
/START = ("10-MAR-1992:00:01:00.00:001")
/START = (U92070:0)
/START = D181
/START = ("D181:01:00:00")
/START = D181:01:00:00
```

/STOP = *stop-time*

Specifies the last time for which data is to be calculated/displayed. This qualifier is used for most of the orbit/attitude interactive services to specify a time range for data display. The format of this time can be UARS standard date and time format (UDTF) which is prefixed by a 'U', UARS day format which is prefixed by a 'D', or VMS time format which is unprefixed. This qualifier is used with the /STOP and /TIMINC qualifiers. If the user desires only one time in any of his requests, only the /START qualifier is needed.

The value of the /STOP qualifier must be greater than the value of the /START qualifier. If the user desires only one time for calculation, then the /STOP qualifier need not be specified.

Default: None

Examples:
```
/STOP = ( U92070 )
/STOP = ( "U92070 0" )
/STOP = ( 10-MAR )
/STOP = 10-MAR
/STOP = "10-MAR-1992"
/STOP = ("10-MAR-1992:00:01:00.00")
/STOP = ("10-MAR-1992:00:01:00.00:011")
/STOP = (U92070:0)
/STOP = D181
/STOP = ("D181:01:00:00")
/STOP = D181:01:00:00
```

/STRTORB = *start-orbit-number*

Specifies the first orbit number to be used for calculating the user specified view match. This qualifier is a four digit integer ranging from 0 to 9999.

Default: None

Examples: /STRTORB = 10

                    /STRTORB = 1002

                    /STRTORB = 4

/TIMINC = *time-increment*

This qualifier specifies the interval between the START and STOP times at which data is calculated/displayed. Thus, this qualifier is specified when only BOTH the /START and /STOP qualifiers are used in a request. The format of this time is as follows:

$$DD{:}HH{:}MM{:}SS{:}MMM \quad \text{where}$$

DD	is the number of days:	00 - 23
HH	is the number of hours:	00 - 23
MM	is the number of minutes:	00 - 59
SS	is the number of seconds:	00 - 59
MMM	is the number of milliseconds:	000-999

/TIMINC is used in the following way: if the user requested UARS orbit data for the START/STOP time range of /START = 90101 00000000 and /STOP = 90111 00000000 and specifies a time interval of /TIMINC = 00:12:00:00, the user would see UARS orbit data points between April 9, 1990 and April 19, 1990 with 12 hours between each orbit point.

Default: None

Examples: /TIMINC = 00:01:50:00

                    /TIMINC = 01:03:30:30

                    /TIMINC = 00:20:23:29:899

/VIEWVEC = *x-direction, y-direction, z-direction*

Specifies the ECI vector in the viewing direction for calculating the limb tangent point. Each component is specified as a floating point number with four significant digits.

Default: None

Examples: /VIEWVEC = (20.2, 30.33, 100.)
             /VIEW = (23.33, 44., 35.8)

5.2 Request Spacecraft Attitude

> The following UARS attitude data is displayed at each time requested:
> - yaw, pitch, and roll from the local vertical reference frame
> - average yaw, pitch, and roll rates (degree/second)
> - rotation matrix from the Operational MACS Frame (OMF) to the ECI frame
> - type/version of attitude data used in calculation
> - type/version of orbit data used in calculation

MENU TREE   Orbit/Attitude services
Request spacecraft attitude

COMMAND $ OASERVICE   UARS_ATT

PARAMETERS   UARS_ATT is a keyword used to select this orbit/attitude service.

QUALIFIERS   /START = (*start-time*)

/STOP = (*stop-time*)

/TIMINC = *dd:hh:mm:ss*

/ATTVER = *cccccc*

/ORBVER = *ccccccccc*

/RECORD

/PLAIN

/FILE = *file-specification*

/HELP

DESCRIPTION The user can request UARS attitude data at one or more times. As Orbit/many UARS attitude points as possible are displayed per screen. The user indicates readiness for the next display by entering the appropriate command on the screen command line.

This function can be invoked from a menu or from the DCL command. The menus prompt for the desired parameters. To use the command mode, control information is input through parameters and qualifiers. In either mode an acknowledgement of the request is returned to the requestor.

ERROR
PROCESSING All input parameters and qualifiers are checked for validity. Error messages are sent to the screen for interactive requests. Errors cause the request to be ignored. For requests made from a command procedure, error messages are returned through SYS$OUTPUT. If the data needed for calculations is not online at the request time, the user is informed, a staging of the data is spawned, and the request

5-15

terminates. The user can then re-issue the request once the data has been staged.

EXAMPLES

Example 1. Request Most Recent Version of UARS Attitude

```
$ OASERVICE    UARS_ATT -
               /START = ( "U90100 0" ) -
               /STOP = ( "U90110 0" ) -
               /TIMINC = 00:12:00:00
```

This command requests UARS attitude for April 10, 1990 through April 20, 1990 at twelve hour increments. The most recent attitude and orbit data is used in the calculation.

Example 2. Request UARS attitude using specific data types in calculation

```
$ OASERVICE    UARS_ATT -
               /START = ( "U92020 0" ) -
               /STOP = ( "U92021 0" ) -
               /TIMINC = 00:00:30:00 -
               /ATTVER = D000403 -
               /ORBVER = D
```

This command requests UARS attitude data for January 20, 1992 at 30 minute increments. The fourth version and third cycle of definitive attitude data and the best available version/cycle of definitive orbit for the days requested is used in the calculations.

Example 3. Attitude Request When File is Destaged

```
SATATT    (        )              SPACECRAFT ATTITUDE

    Enter start time: █92033            stop time: ███████████████
        Formats: VMS date/time dd-mmm-yyyy hh:mm:ss.cc
            or: UARS day      Dnnnn hh:mm:ss.mmm
            or: UDTF time     Uyyyddd nnnnnnnn
                              Uyyyddd hh:mm:ss.mmm
    Enter time increment:  █:█:█:█
        DD:HH:MM:SS
        DD: range 00..23  HH: range 00..23
        MM: range 00..59  SS: range 00..59  mmm: range 000..999

    Specify the type of attitude data: █ /█/█
        The format is type/version/cycle
        The valid codes are the following:
        Q - quicklook
        E - extracted
        D - definitive
          - best available
        Examples: E/0010/01, D/0012, Q01/

    NextField(TAB)   Page(,or-)   OAMenu(PF3)   UARS(PF1)   Output(Enter)
                                                             DS   1 OF   1
    UARS>███████████████████████████████████████████████    PG   1 OF   3
```

```
SATATT    (        )              SPACECRAFT ATTITUDE

    Specify the type orbit of data: █ /█ /█
        The format is type/version/cycle
        N  - do not use orbit data
        P1, P2, P3 - predictive1,2,3
        D  - definitive
           - best available
        Examples: P1/0008/01, D/0012




    NextField(TAB)   Page(,or-)   OAMenu(PF3)   UARS(PF1)   Output(Enter)
                                                             DS   1 OF   1
    UARS>███████████████████████████████████████████████    PG   2 OF   3
```

```
SATATT    (        )              SPACECRAFT ATTITUDE

    Select query results report format?  █
        [C]olumnar or [F]ull

    Select query results output mode?    █
        [F]ile or [D]isplay

    Enter User Comment for file header: _____

    Enter output filename: ████████████████████████



    NextField(TAB)   Page(,or-)   OAMenu(PF3)   UARS(PF1)   Output(Enter)
                                                             DS   1 OF   1
    UARS>███████████████████████████████████████████████    PG   3 OF   3
```

```
ATTCOL    <      >          SPACECRAFT ATTITUDE
TIME:  092033   00000000   ATTITUDE TYPE:    /    /      ORBIT TYPE:   /    /
YAW:      0.000000  AVG YAW:      0.000000    TRANSFORM MATRIX:    0.0000000    0.0000000    0.0000000
PITCH:    0.000000  AVG PITCH:    0.000000                        0.0000000    0.0000000    0.0000000
ROLL:     0.000000  AVG ROLL:     0.000000                        0.0000000    0.0000000    0.0000000
attitude required is offline, stage is in progress
-------------------------------------------------------------------------------------------------------

    Page(,or-)  InputScreen(Enter)  OAMenu(PF3)

                                                             DS   1 OF   1
    UARS>███████████████████████████████████████████████    PG   1 OF   3
```

Example 4. Normal Attitude Request (1 of 2)

```
SATATT   (       )              SPACECRAFT ATTITUDE

  Enter start time: u92033                    stop time: u92033 3600000
       Formats: VMS date/time dd-mmm-yyyy hh:mm:ss.cc
           or: UARS day      Dnnnn hh:mm:ss.mmm
           or: UDTF time     Uyyyddd nnnnnnnn
                             Uyyyddd hh:mm:ss.mmm
  Enter time increment:   0: 0: 0: 0
       DD:HH:MM:SS
       DD: range 00..23   HH: range 00..23
       MM: range 00..59   SS: range 00..59    mmm: range 000..999

  Specify the type of attitude data:    /  /
       The format is type/version/cycle
       The valid codes are the following:
       Q - quicklook
       E - extracted
       D - definitive
         - best available
       Examples: E/0010/01, D/0012, Q01/

  NextField(TAB)   Page(,or-)   OAMenu(PF3)   UARS(PF1)   Output(Enter)
                                                          DS   1 OF   1
 UARS>                                                    PG   1 OF   3
```

```
SATATT   (       )              SPACECRAFT ATTITUDE




  Specify the type orbit of data:   /   /
       The format is type/version/cycle
       N  - do not use orbit data
       P1, P2, P3 - predictive1,2,3
       D  - definitive
          - best available
       Examples: P1/0008/01, D/0012








  NextField(TAB)   Page(,or-)   OAMenu(PF3)   UARS(PF1)   Output(Enter)
                                                          DS   1 OF   1
 UARS>                                                    PG   2 OF   3
```

```
SATATT   (       )              SPACECRAFT ATTITUDE



  Select query results report format?
       [C]olumnar or [F]ull


  Select query results output mode?
       [F]ile or [D]isplay


  Enter User Comment for file header:

  Enter output filename:



  NextField(TAB)   Page(,or-)   OAMenu(PF3)   UARS(PF1)   Output(Enter)
                                                          DS   1 OF   1
 UARS>                                                    PG   3 OF   3
```

Example 4. Normal Attitude Request (2 of 2)

```
ATTCOL    <      >                    SPACECRAFT ATTITUDE
TIME:  092033   00000000  ATTITUDE TYPE:  D  /0002/03      ORBIT TYPE:  D /0002/01
YAW:      0.000003  AVG YAW:     -0.000070  TRANSFORM MATRIX:         0.9346098    0.1636954   -0.3157665
PITCH:    0.002126  AVG PITCH:   -0.061856                           0.0474942    0.8224062    0.5669147
ROLL:     0.000002  AVG ROLL:     0.000002                           0.3524896   -0.5448411    0.7608543

------------------------------------------------------------------------------------------------------------
TIME:  092033   00600000  ATTITUDE TYPE:  D  /0002/03      ORBIT TYPE:  D /0002/01
YAW:     -0.000003  AVG YAW:     -0.000036  TRANSFORM MATRIX:         0.5541317    0.1641501   -0.8160837
PITCH:    0.002134  AVG PITCH:   -0.061998                           0.3797961    0.8225235    0.4233320
ROLL:    -0.000003  AVG ROLL:     0.000001                           0.7407381   -0.5445271    0.3934428

------------------------------------------------------------------------------------------------------------
TIME:  092033   01200000  ATTITUDE TYPE:  D  /0002/03      ORBIT TYPE:  D /0002/01
YAW:      0.000002  AVG YAW:      0.000014  TRANSFORM MATRIX:        -0.0530170    0.1642096   -0.9849997
PITCH:    0.002134  AVG PITCH:   -0.062192                           0.5584807    0.8225782    0.1070723
ROLL:     0.000002  AVG ROLL:     0.000000                           0.8278216   -0.5444267   -0.1353185

------------------------------------------------------------------------------------------------------------

  Page(.or-)  InputScreen(Enter)  OAMenu(PF3)

                                                        DS    1 OF   1
UARS>                                                   PG    1 OF   3
```

```
ATTCOL    <      >                    SPACECRAFT ATTITUDE
TIME:  092033   01800000  ATTITUDE TYPE:  D  /0002/03      ORBIT TYPE:  D /0002/01
YAW:     -0.000003  AVG YAW:      0.000057  TRANSFORM MATRIX:        -0.6398929    0.1643667   -0.7506801
PITCH:    0.002146  AVG PITCH:   -0.062355                           0.5091373    0.8223729   -0.2539332
ROLL:     0.000002  AVG ROLL:     0.000000                           0.5756008   -0.5446893   -0.6099159

------------------------------------------------------------------------------------------------------------
TIME:  092033   02400000  ATTITUDE TYPE:  D  /0002/03      ORBIT TYPE:  D /0002/01
YAW:     -0.000002  AVG YAW:      0.000077  TRANSFORM MATRIX:        -0.9643166    0.1649752   -0.2070669
PITCH:    0.002145  AVG PITCH:   -0.062428                           0.2504382    0.8220923   -0.5113170
ROLL:     0.000002  AVG ROLL:     0.000001                           0.0858734   -0.5449288   -0.8340733

------------------------------------------------------------------------------------------------------------
TIME:  092033   03000000  ATTITUDE TYPE:  D  /0002/03      ORBIT TYPE:  D /0002/01
YAW:     -0.000001  AVG YAW:      0.000066  TRANSFORM MATRIX:        -0.8913403    0.1657233    0.4219576
PITCH:    0.002146  AVG PITCH:   -0.062392                          -0.1115143    0.8220327   -0.5584143
ROLL:     0.000000  AVG ROLL:     0.000000                          -0.4394052   -0.5447916   -0.7142305

------------------------------------------------------------------------------------------------------------

  Page(.or-)  InputScreen(Enter)  OAMenu(PF3)

                                                        DS    1 OF   1
UARS>                                                   PG    2 OF   3
```

```
ATTCOL    <      >                    SPACECRAFT ATTITUDE
TIME:  092033   03600000  ATTITUDE TYPE:  D  /0002/03      ORBIT TYPE:  D /0002/01
YAW:      0.000000  AVG YAW:      0.000028  TRANSFORM MATRIX:        -0.4517573    0.1660928    0.8765435
PITCH:    0.002143  AVG PITCH:   -0.062254                          -0.4273601    0.8221645   -0.3760438
ROLL:     0.000003  AVG ROLL:    -0.000001                          -0.7831211   -0.5444803   -0.3004374

------------------------------------------------------------------------------------------------------------




  Page(.or-)  InputScreen(Enter)  OAMenu(PF3)

                                                        DS    1 OF   1
UARS>                                                   PG    3 OF   3
```

5.3 Request SSPP Attitude

> In response to an SSPP Attitude data request, the user sees the following data displayed for each time requested:
> - time of first available OBC readout at or after the requested time
> - rotation matrix from the Solar/Stellar Pointing Platform (SSPP) to the ECI frame
> - type of SSPP attitude data used in calculations
> - calibration data set used
> - type/version of attitude data that was used in calculations

MENU TREE   Orbit/Attitude services
Request SSPP attitude

COMMAND $ OASERVICE   SSPP_ATT

PARAMETERS   SSPP_ATT is a keyword used to select this orbit/attitude service

QUALIFIERS   /START = (*start-time*)

/STOP = (*stop-time*)

/TIMINC= *dd:hh:mm:ss*

/SSPPTYP= *cccccc*

/ATTVER= *cccccc*

/RECORD

/PLAIN

/FILE = *file-specification*

/HELP

DESCRIPTION   The user can request SSPP attitude data at one or more times. One OBC readout time and the corresponding rotation matrix is displayed per screen. The user indicates readiness for the next display by entering the appropriate command on the screen command line.

This function can be invoked from a menu or from the DCL command. The menus prompt for the desired parameters. To use the command mode, control information is input through parameters and qualifiers. In either mode an acknowledgement of the request is returned to the requestor.

ERROR PROCESSING   All input parameters and qualifiers are checked for validity. Error messages are sent to the screen for interactive requests. Errors cause the request to be ignored. For requests made from a command procedure, error messages are returned through SYS$OUTPUT.

If the data needed for calculations is not on-line at the request time, the user is informed, a staging of the data is spawned, and the request terminates. The user can then re-issue the request once the data has been staged.

EXAMPLES

Example 1. Request Most Recent Version of UARS SSPP Attitude

    $ OASERVICE SSPP_ATT -
        /START = ("U90100 0") -
        /STOP = ("U90110 0") -
        /TIMINC = 00:12:00:00

This command requests UARS SSPP attitude for April 10, 1990 through April 20, 1990 at twelve hour increments. The most recent attitude and SSPP data is used in the calculation.

Example 2. Request SSPP attitude using specific data types in calculation

    $ OASERVICE SSPP_ATT -
        /START = ("U92020 0") -
        /STOP = ("U92021 0") -
        /TIMINC = 00:00:30:00 -
        /SSPPTYP = E -
        /ATTVER = D0004

This command requests UARS SSPP attitude data for January 20, 1992 at 30 minute increments. Extracted SSPP data, the TBD calibration data set, and the fourth version of definitive attitude data is used in the calculations.

Example 3.   Output from SSPP Attitude where no Gimbals are Available

```
SSPPATT  (        )                SSPP ATTITUDE

    Enter start time: ▓92037 100000▓       stop time: ▓92037 100000▓
         Formats: VMS date/time dd-mmm-yyyy hh:mm:ss.cc
              or: UARS day      Dnnnn hh:mm:ss.mmm
              or: UDTF time     Uyyyddd nnnnnnnn
                                Uyyyddd hh:mm:ss.mmm

    Enter time increment:    ▓0▓:▓0▓:▓0▓:▓0▓
         DD:HH:MM:SS
         DD: range 00..23   HH: range 00..23
         MM: range 00..59   SS: range 00..59     mmm: range 000.999

    Specify the type of raw sspp data:  ▓▓ /▓▓/ ▓▓
         The format is type/version/cycle
         The valid codes are the following:
         Q - quicklook
         E - extracted
          - best available
         Examples: E/0001/01, Q03/, Q

    NextField(TAB)   Page(.or-)   OAMenu(PF3)   UARS(PF1)   Output(Enter)
                                                            DS   1 OF   1
UARS>                                                       PG   1 OF   3
```

```
SSPPATT  (        )                SSPP ATTITUDE

    Specify the type of attitude data:  ▓▓ /▓▓/ ▓▓
         The format is type/version/cycle
         The valid codes are the following:
         Q - quicklook
         E - extracted
         D - definitive
          - best available
         Examples: E/0001/01, D/012, Q01/

    NextField(TAB)   Page(.or-)   OAMenu(PF3)   UARS(PF1)   Output(Enter)
                                                            DS   1 OF   1
UARS>                                                       PG   2 OF   3
```

```
SSPPATT  (        )                SSPP ATTITUDE

    Select query results report format?  ▓C▓
         [C]olumnar or [F]ull


    Select query results output mode?    ▓D▓
         [F]ile or [D]isplay

    Enter User Comment for file header:
    ▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓
    Enter output filename: ▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓

    NextField(TAB)   Page(.or-)   OAMenu(PF3)   UARS(PF1)   Output(Enter)
                                                            DS   1 OF   1
UARS>                                                       PG   3 OF   3
```

```
SSPPCOL  (        )                SSPP ATTITUDE
TIME:  092037  00100000  ATTITUDE TYPE:    /    /      SSPP ATTITUDE:    /    /    SSPP CAL SET:
SSPP Mode:  00000009  SSPP Target:  00000099      TRANSFORM MATRIX:    0.0000000   0.0000000   0.0000000
                                                                       0.0000000   0.0000000   0.0000000
                                                                       0.0000000   0.0000000   0.0000000
there is no file in the catalog for requested SSPP gimbals


Page(.or-)  InputScreen(Enter)  OAMenu(PF3)
                                                            DS   1 OF   1
UARS>                                                       PG   1 OF   1
```

Example 4.   Output from Normal SSPP Attitude Request (1 of 2)

```
SSPPATT  (        )                    SSPP ATTITUDE

   Enter start time: u92035 100000          stop time: u92035 300000
        Formats: VMS date/time  dd-mmm-yyyy hh:mm:ss.cc
             or: UARS day        Dnnnn hh:mm:ss.mmm
             or: UDTF time       Uyyyddd nnnnnnnn
                                 Uyyyddd hh:mm:ss.mmm
   Enter time increment:     0: 0: 0: 0
        DD:HH:MM:SS
        DD: range 00..23   HH: range 00..23
        MM: range 00..59   SS: range 00..59      mmm: range 000.999

   Specify the type of raw sspp data:   █ /█ /█
        The format is type/version/cycle
        The valid codes are the following:
        Q - quicklook
        E - extracted
          - best available
        Examples: E/0001/01, Q03/, Q

   NextField(TAB)   Page(,or-)   OAMenu(PF3)   UARS(PF1)   Output(Enter)
                                                           DS    1 OF   1
UARS>                                                      PG    1 OF   3
```

```
SSPPATT  (        )                    SSPP ATTITUDE




   Specify the type of attitude data:   █ /█ /█
        The format is type/version/cycle
        The valid codes are the following:
        Q - quicklook
        E - extracted
        D - definitive
          - best available
        Examples: E/0001/01, D/012, Q01/




   NextField(TAB)   Page(,or-)   OAMenu(PF3)   UARS(PF1)   Output(Enter)
                                                           DS    1 OF   1
UARS>                                                      PG    2 OF   3
```

```
SSPPATT  (        )                    SSPP ATTITUDE


   Select query results report format?  █
        [C]olumnar or [F]ull



   Select query results output mode?    █
        [F]ile or [D]isplay

   Enter User Comment for file header:

   Enter output filename:

   NextField(TAB)   Page(,or-)   OAMenu(PF3)   UARS(PF1)   Output(Enter)
                                                           DS    1 OF   1
UARS>                                                      PG    3 OF   3
```

Example 4. Output from Normal SSPP Attitude Request (2 of 2)

```
SSPPCOL  (         )                SSPP ATTITUDE
TIME:  092035   00097316  ATTITUDE TYPE:  D  /0002/01    SSPP ATTITUDE:  E  /0002/05   SSPP CAL SET:  1-OCT-1991
SSPP Mode:  00000003  SSPP Target:  00000000            TRANSFORM MATRIX:     -0.6023247     0.4018781     0.6897094
                                                                              -0.2995157     0.6871182    -0.6619359
                                                                              -0.7399293    -0.6052791    -0.2934995
------------------------------------------------------------------------------------------------------------------
TIME:  092035   00146468  ATTITUDE TYPE:  D  /0002/01    SSPP ATTITUDE:  E  /0002/05   SSPP CAL SET:  1-OCT-1991
SSPP Mode:  00000001  SSPP Target:  00000000            TRANSFORM MATRIX:     -0.5907682     0.4013802     0.6999193
                                                                              -0.3076344     0.6898949    -0.6552909
                                                                              -0.7458915    -0.6024442    -0.2840896
------------------------------------------------------------------------------------------------------------------
TIME:  092035   00199716  ATTITUDE TYPE:  D  /0002/01    SSPP ATTITUDE:  E  /0002/05   SSPP CAL SET:  1-OCT-1991
SSPP Mode:  00000001  SSPP Target:  00000000            TRANSFORM MATRIX:     -0.5907644     0.4013807     0.6999221
                                                                              -0.3076318     0.6898993    -0.6552876
                                                                              -0.7458955    -0.6024389    -0.2840904
------------------------------------------------------------------------------------------------------------------

    Page(,or-)  InputScreen(Enter)  OAMenu(PF3)

                                                        DS   1 OF  1
UARS>                                                   PG   1 OF  2
```

```
SSPPCOL  (         )                SSPP ATTITUDE
TIME:  092035   00248868  ATTITUDE TYPE:  D  /0002/01    SSPP ATTITUDE:  E  /0002/05   SSPP CAL SET:  1-OCT-1991
SSPP Mode:  00000001  SSPP Target:  00000000            TRANSFORM MATRIX:     -0.5907539     0.4013815     0.6999304
                                                                              -0.3076309     0.6899071    -0.6552796
                                                                              -0.7459041    -0.6024292    -0.2840880
------------------------------------------------------------------------------------------------------------------
TIME:  092035   00298020  ATTITUDE TYPE:  D  /0002/01    SSPP ATTITUDE:  E  /0002/05   SSPP CAL SET:  1-OCT-1991
SSPP Mode:  00000001  SSPP Target:  00000000            TRANSFORM MATRIX:     -0.5907415     0.4013849     0.6999392
                                                                              -0.3076280     0.6899158    -0.6552719
                                                                              -0.7459152    -0.6024171    -0.2840847
------------------------------------------------------------------------------------------------------------------



    Page(,or-)  InputScreen(Enter)  OAMenu(PF3)

                                                        DS   1 OF  1
UARS>                                                   PG   2 OF  2
```

5.4 Request Spacecraft Orbit

> The following UARS orbit data is displayed for each time requested:
> - ECI radius vector (x,y,z) in kilometers from the center of the
>   Earth to the satellite
> - ECI velocity vector in kilometers per second
> - type and version of stored orbit data used in the calculation

MENU TREE   Orbit/Attitude services
Request spacecraft orbit

COMMAND $ OASERVICE UARS_ORB

PARAMETERS   UARS_ORB is a keyword used to select this orbit/attitude service.

QUALIFIERS   /START = (*start-time*)

/STOP = (*stop-time*)

/TIMINC = *dd:hh:mm:ss*

/ORBVER = *cccccccc*

/RECORD

/PLAIN

/FILE = *file-specification*

/HELP

DESCRIPTION   The user can request UARS orbit data at one or more times. Four UARS orbit data points is displayed per screen. The user indicates readiness for the next display by entering the appropriate command on the screen command line.

This function can be invoked from a menu or from the DCL command. The menus prompt for the desired parameters. To use the command mode, control information is input through parameters and qualifiers. In either mode an acknowledgement of the request is returned to the requestor.

ERROR PROCESSING   All input parameters and qualifiers are checked for validity. Error messages are sent to the screen for interactive requests. Errors cause the request to be ignored. For requests made from a command procedure, error messages are returned through SYS$OUTPUT.

If the orbit data needed for calculations is not on-line at the request time, the user is informed, a staging of the data is spawned, and the request terminates. The user can then re-issue the request once the data has been staged.

EXAMPLES

Example 1. Request Most Recent Version of UARS Orbit

> $ OASERVICE UARS_ORB -
>   /START = ("U92100 0") -
>   /STOP = ("U92110 0") -
>   /TIMINC = 01:00:00:00

This command requests UARS orbit for April 10, 1992 through April 20, 1992 at one day increments. The most recent spacecraft orbit data is used in the calculation.

Example 2. Request UARS orbit using specific raw orbit data

> $ OASERVICE UARS_ORB-
>   /START = ("U92200 0") -
>   /STOP = ("U92201 0") -
>   /TIMINC = 00:01:00:00 -
>   /ORBVER = P1000101

This command requests UARS orbit for July 19, 1992 at one hour increments.
Version 1, cycle 1 of the P1 predictive spacecraft orbit data is used in the calculations for the requested orbit data.

P1 specifies that the predictive orbit was computed with data one day before the time of the data set. P2 and P3 specify orbit computation 2 and 3 days before the data set time respectively.

Example 3. Normal Orbit Request (1 of 3)

```
SATORB   (       )        SATELLITE POSITION AND VELOCITY

   Enter start time: u92033 43200000        stop time: u92033 67500000
      Formats: VMS date/time dd-mmm-yyyy hh:mm:ss.cc
           or: UARS day      Dnnnn hh:mm:ss.mmm
           or: UDTF time     Uyyyddd nnnnnnnnn
                             Uyyyddd hh:mm:ss.mmm
   Enter time increment:    0: 0: 0: 0
      DD:HH:MM:SS
      DD: range 00..23    HH: range 00..23
      MM: range 00..59    SS: range 00..59    mmm: range 000..999

   Specify the type of orbit data: █ /█/█
         format is type/version/cycle
         P1, P2, P3 - predictive1,2,3
         D  - definitive
            - best available
         Examples: P1/0001/01, D /0001


   NextField(TAB)   Page(,or-)   OAMenu(PF3)   UARS(PF1)   Output(Enter)
                                                           DS   1 OF   1
UARS>                                                      PG   1 OF   2
```

```
SATORB   (       )        SATELLITE POSITION AND VELOCITY


   Select query results report format?  █
      [C]olumnar or [F]ull



   Select query results output mode?    █
      [F]ile or [D]isplay

   Enter User Comment for file header:


   Enter output filename: █


   NextField(TAB)   Page(,or-)   OAMenu(PF3)   UARS(PF1)   Output(Enter)
                                                           DS   1 OF   1
UARS>                                                      PG   2 OF   2
```

```
ORBCOL   (       )              SPACECRAFT ORBIT
TIME:  092033   43200000        ORBIT TYPE USED:  D /0002/01
SATELLITE POSITION:  -367.607574  SATELLITE VELOCITY:    -7.425277
                     3915.484863                          0.983548
                     5735.385742                         -1.142752

------------------------------------------------------------------------
TIME:  092033   45000000        ORBIT TYPE USED:  D /0002/01
SATELLITE POSITION: -6201.470703  SATELLITE VELOCITY:     3.135784
                     -631.871399                         -4.310362
                    -3143.091064                         -5.350466

------------------------------------------------------------------------
TIME:  092033   46800000        ORBIT TYPE USED:  D /0002/01
SATELLITE POSITION:  4968.999023  SATELLITE VELOCITY:     5.088408
                    -3487.759521          .                2.206653
                    -3449.551758                           5.123552

------------------------------------------------------------------------
   Page(,or-)  InputScreen(Enter)  OAMenu(PF3)

                                                           DS   1 OF   1
UARS>                                                      PG   1 OF   5
```

Example 3. Normal Orbit Request (2 of 3)

```
ORBCOL  (        )              SPACECRAFT ORBIT
TIME:  092033    48600000       ORBIT TYPE USED:  D /0002/01
SATELLITE POSITION:    2499.125732    SATELLITE VELOCITY:        -6.916070
                       3181.558350                                2.684186
                       5656.751465                                1.538484

---------------------------------------------------------------------------
TIME:  092033    50400000       ORBIT TYPE USED:  D /0002/01
SATELLITE POSITION:   -6838.388672    SATELLITE VELOCITY:         0.073941
                       1092.654297                               -4.210464
                       -832.579285                               -6.279843

---------------------------------------------------------------------------
TIME:  092033    52200000       ORBIT TYPE USED:  D /0002/01
SATELLITE POSITION:    2579.528564    SATELLITE VELOCITY:         6.847093
                      -4030.250732                                0.432830
                      -5090.207031                                3.136306

---------------------------------------------------------------------------

   Page(,or-)  InputScreen(Enter)   OAMenu(PF3)

                                                         DS   1 OF   1
UARS>                                                    PG   2 OF   5
```

```
ORBCOL  (        )              SPACECRAFT ORBIT
TIME:  092033    54000000       ORBIT TYPE USED:  D /0002/01
SATELLITE POSITION:    4910.950195    SATELLITE VELOCITY:        -5.160992
                       1856.146606                                3.895874
                       4567.282227                                3.944603

---------------------------------------------------------------------------
TIME:  092033    55800000       ORBIT TYPE USED:  D /0002/01
SATELLITE POSITION:   -6246.939453    SATELLITE VELOCITY:        -3.006719
                       2623.379395                               -3.333510
                       1625.815308                               -6.093427

---------------------------------------------------------------------------
TIME:  092033    57600000       ORBIT TYPE USED:  D /0002/01
SATELLITE POSITION:    -265.798004    SATELLITE VELOCITY:         7.380368
                      -3839.069824                               -1.423072
                      -5832.553223                                0.601403

---------------------------------------------------------------------------

   Page(,or-)  InputScreen(Enter)   OAMenu(PF3)

                                                         DS   1 OF   1
UARS>                                                    PG   3 OF   5
```

```
ORBCOL  (        )              SPACECRAFT ORBIT
TIME:  092033    59400000       ORBIT TYPE USED:  D /0002/01
SATELLITE POSITION:    6433.920410    SATELLITE VELOCITY:        -2.479573
                        181.739365                                4.392557
                       2661.822510                                5.645157

---------------------------------------------------------------------------
TIME:  092033    61200000       ORBIT TYPE USED:  D /0002/01
SATELLITE POSITION:   -4532.169434    SATELLITE VELOCITY:        -5.547225
                       3676.591553                               -1.835130
                       3794.020264                               -4.818705

---------------------------------------------------------------------------
TIME:  092033    63000000       ORBIT TYPE USED:  D /0002/01
SATELLITE POSITION:   -3059.427246    SATELLITE VELOCITY:         6.600266
                      -2947.095947                               -3.026835
                      -5547.196777                               -2.038238

---------------------------------------------------------------------------

   Page(,or-)  InputScreen(Enter)   OAMenu(PF3)

                                                         DS   1 OF   1
UARS>                                                    PG   4 OF   5
```

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Example 3. Normal Orbit Request (3 of 3)

```
ORBCOL    (        )              SPACECRAFT ORBIT
TIME:   092033   64800000         ORBIT TYPE USED:  D /0002/01
SATELLITE POSITION:   6795.961426    SATELLITE VELOCITY:      0.639757
                     -1533.847168                             4.080468
                      281.158508                              6.336568

------------------------------------------------------------------
TIME:   092033   66600000         ORBIT TYPE USED:  D /0002/01
SATELLITE POSITION:  -2003.371094    SATELLITE VELOCITY:     -7.085601
                      4055.073242                             0.010300
                      5284.391113                            -2.682019

------------------------------------------------------------------




    Page(,or-)   InputScreen(Enter)   OAMenu(PF3)

                                                       DS   1 OF   1
UARS>                                                  PG   5 OF   5
```

5.5 Request Orbital Elements

```
The following orbital elements data is displayed for each time
requested:
     - semi-major axis (kilometers)
     - eccentricity
     - inclination (radians)
     - right ascension of ascending node (radians)
     - argument of perigee (radians)
     - mean anomaly (radians)
     - rate of change of right ascension of ascending node (rad/sec)
     - rate of change of argument of perigee (rad/sec)
     - mean motion (rad/sec)
     - nodal period (seconds)
     - orbit number
     - epoch date and time in UARS SDTF
     - type/version of orbit data used in calculation
```

MENU TREE Orbit/Attitude services
      Request orbital elements

COMMAND $ OASERVICE ORB_ELT

      ORB_ELT is a keyword used to select this orbit/attitude service.

QUALIFIERS /START = *(yyddd, mmmmmmmmm)*

      /STOP = *(yyddd, mmmmmmmmm)*

      /TIMINC = *dd:hh:mm:ss*

      /ORBVER = *cccccccc*

      /RECORD

      /PLAIN

      /FILE = *file-specification*

      /HELP

DESCRIPTION The user can request orbital elements data at one or more times. Three sets of UARS orbital elements is displayed per screen. The user indicates readiness for the next display by entering the appropriate command on the screen command line.

      This function can be invoked from a menu or from the DCL command. The menus prompt for the desired parameters. To use the command mode, control information is input through parameters and qualifiers. In either mode an acknowledgement of the request is returned to the requestor.

ERROR PROCESSING   All input parameters and qualifiers are checked for validity. Error messages are sent to the screen for interactive requests. Errors cause the request to be ignored. For requests made from a command procedure, error messages are returned through SYS$OUTPUT.

If the orbit data needed for calculations is not online when the request is issued the following occurs: the user is informed, a staging of the data is spawned, and the request terminates. The user can then re-issue the request once the data has been staged.

EXAMPLES

Example 1. Request UARS Orbital Elements using most recent version of orbit data.

              $ OASERVICE   ORB_ELT -
                             /START = ("U92100 0") -
                             /STOP = ("U92110 0") -
                             /TIMINC = 01:00:00:00

This command requests UARS orbital elements for April 10, 1992 through April 20, 1992 at one day increments. The most recent orbit data is used in the calculation.

Example 2. Request UARS orbital elements using specific orbit data.

              $ OASERVICE   ORB_ELT -
                             /START = ("U92200 0") -
                             /STOP = ("U92201 0") -
                             /TIMINC = 00:01:00:00 -
                             /ORBVER = P

This command requests UARS orbital elements for July 19, 1992 at one hour increments. The best available version/cycle of predictive orbit data is used in the calculations for the requested orbital elements data.

Example 3. Orbital Elements Request When No Orbit Time File is Available

```
ORBELTS (       )                   ORBITAL ELEMENTS

   Enter start time: ▓92033▓             stop time: ▓92033▓
      Formats: VMS date/time  dd-mmm-yyyy hh:mm:ss.cc
           or: UARS day        Dnnnn hh:mm:ss.mmm
           or: UDTF time       Uyyyddd nnnnnnnn
                               Uyyyddd hh:mm:ss.mmm
   Enter time increment:    ▓0▓:▓0▓:▓0▓:▓0▓
      DD:HH:MM:SS
      DD: range 00..23   HH: range 00..23
      MM: range 00..59   SS: range 00..59    mmm: range 000..999

   Specify the type orbit of data: ▓P1▓ /▓   ▓ /▓ ▓
      The format is type/version/cycle
      P1, P2, P3 - predictive1,2,3
      D  - definitive
         - best available
      Examples: P1/0001/01, D /0001


   NextField(TAB)   Page(,or-)   OAMenu(PF3)   UARS>(PF1)   Output(Enter)
                                                            DS   1 OF   1
   UARS>                                                    PG   1 OF   2
```

```
ORBELTS (       )                   ORBITAL ELEMENTS



   Select query results report format? ▓C▓
         [C]olumnar or [F]ull


   Select query results output mode?   ▓D▓
         [F]ile or [D]isplay

   Enter User Comment for file header:
   ▓                                                ▓
   Enter output filename: ▓                    ▓



   NextField(TAB)   Page(,or-)   OAMenu(PF3)   UARS>(PF1)   Output(Enter)
                                                            DS   1 OF   1
   UARS>                                                    PG   2 OF   2
```

```
ELTSCOL (       )                   ORBITAL ELEMENTS
TIME: 092033   00000000   Orbit Type: P1/0002/01   Epoch Date: 092032 00000000
Orbit Num:    -999  Semi Major Axis: 6973.4501953  Eccentricity: 0.207970E-02
Inclination:  0.9948929 RA of Asc Node:  6.0866966 Perigee Arg:  1.6091985
Mean Anomaly:    3.5040143  Change Rate of Asc. Node: -0.802114E-06
                          Change Rate of Arg. of Perigee:  0.355629E-06
 orbit time file could not be opened
-------------------------------------------------------------------------------







   Page(,or-)   InputScreen(Enter)   OAMenu(PF3)

                                                            DS   1 OF   1
   UARS>                                                    PG   1 OF   1
```

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Example 4.   Orbital Elements Request When Orbit Time File is Available

```
ORBELTS  (        )              ORBITAL ELEMENTS

   Enter start time: █92033                 stop time: ██████████
        Formats: VMS date/time dd-mmm-yyyy hh:mm:ss.cc
             or: UARS day      Dnnnn hh:mm:ss.mmm
             or: UDTF time     Uyyyddd nnnnnnnn
                               Uyyyddd hh:mm:ss.mmm
   Enter time increment:    █:█:█:█
        DD:HH:MM:SS
        DD: range 00..23    HH: range 00..23
        MM: range 00..59    SS: range 00..59    mmm: range 000..999

   Specify the type orbit of data: █ /███ /█
        The format is type/version/cycle
        P1, P2, P3 - predictive1,2,3
        D  - definitive
           - best available
        Examples: P1/0001/01, D /0001


   NextField(TAB)   Page(,or-)   OAMenu(PF3)   UARS>(PF1)   Output(Enter)
                                                            DS   1 OF   1
   UARS>                                                    PG   1 OF   2
```

```
ORBELTS  (        )              ORBITAL ELEMENTS


   Select query results report format?  █
        [C]olumnar or [F]ull


   Select query results output mode?     █
        [F]ile or [D]isplay

   Enter User Comment for file header: _____
   ████████████████████████████████████████████████████
   Enter output filename: ████████████████████████████████



   NextField(TAB)   Page(,or-)   OAMenu(PF3)   UARS>(PF1)   Output(Enter)
                                                            DS   1 OF   1
   UARS>                                                    PG   2 OF   2
```

```
ELTSCOL  (        )              ORBITAL ELEMENTS
TIME:  092033   00000000   Orbit Type:  P1/0002/01  Epoch Date: 092032 00000000
Orbit Num:    1851  Semi Major Axis:  6973.4501953  Eccentricity:  0.207970E-02
Inclination:   0.9948929 RA of Asc Node:   6.0866966 Perigee Arg:  1.6091985
Mean Anomaly:    3.5040143  Change Rate of Asc. Node:  -0.802114E-06
                            Change Rate of Arg. of Perigee:   0.355629E-06

----------------------------------------------------------------------------






   Page(,or-)   InputScreen(Enter)   OAMenu(PF3)

                                                            DS   1 OF   1
   UARS>                                                    PG   1 OF   1
```

5.6 Request Orbit Time Range

> When the user requests a UARS Orbit Time Range the begin time and end time of each requested orbit are displayed.

MENU TREE   Orbit/Attitude services
Request orbit time range

COMMAND $ OASERVICE OTIM_RANG

PARAMETERS   OTIM_RANG is the keyword used to select this orbit/attitude service.

QUALIFIERS   /ORBNUM = (*start-orb*, *stop-orb*)

/RECORD

/PLAIN

/FILE = *file-specification*

/HELP

DESCRIPTION   The user can request a series or consecutive UARS orbit start and stop times. Ten UARS orbit time ranges is displayed per screen. The user indicates readiness for the next display by entering the appropriate command on the screen command line.

This function can be invoked from a menu or from the DCL command. The menus prompt for the desired parameters. To use the command mode, control information is input through parameters and qualifiers. In either mode an acknowledgement of the request is returned to the requestor.

ERROR PROCESSING   All input parameters and qualifiers are checked for validity. Error messages are sent to the screen for interactive requests. Errors cause the request to be ignored. For requests made from a command procedure, error messages are returned through SYS$OUTPUT.

If the data needed for calculations is not on-line when the request is issued, the user is informed, a staging of the data is spawned, and the request terminates. The user can then re-issue the request once the data has been staged.

EXAMPLES

Example 1. Request Start and Stop times of the fourth UARS orbit.

$ OASERVICE   OTIM_RANG
                  /ORBNUM = (4, 4)

This command requests the begin and end times of the fourth UARS orbit.

Example 2. Request Start and Stop times of UARS orbits one through ten.

$ OASERVICE   OTIM_RANG
                  /ORBNUM = (1, 10)

This command requests the begin and end times of UARS orbits 1-10.

Example 3. Orbit Time Request When No Orbit Time File Available (1 of 2)

```
ORBTIME  (        )             ORBIT START AND STOP TIMES

    Specify start orbit number requested: ███████ 45

    Specify stop orbit number requested: ███████ 80

    Select query results report format?  �

        [C]olumnar or [F]ull

    Select query results output mode?    ▐

        [F]ile or [D]isplay

    Enter User Comment for file header: _____

    Enter output filename: ██████████████████████████████████████████████

    NextField(TAB)   Page(,or-)   OAMenu(PF3)   UARS>(PF1)   Output(Enter)
                                                             OS   1 OF   1
    UARS>████████████████████████████████████████           PG   1 OF   1
```

Example 3.   Orbit Time Request When No Orbit Time File Available (2 of 2)

```
OTMRES  (        )              ORBIT TIMES
ORBIT NUMBER    Start Time      HH:MM:SS     Stop Time      HH:MM:SS                        STATUS
------------    ----------      --------     ---------      --------                        ------
        45      0           0   00:00:00     0          0   00:00:00    orbit time file could not be opened
        46      0           0   00:00:00     0          0   00:00:00    orbit time file could not be opened
        47      0           0   00:00:00     0          0   00:00:00    orbit time file could not be opened
        48      0           0   00:00:00     0          0   00:00:00    orbit time file could not be opened
        49      0           0   00:00:00     0          0   00:00:00    orbit time file could not be opened
        50      0           0   00:00:00     0          0   00:00:00    orbit time file could not be opened
        51      0           0   00:00:00     0          0   00:00:00    orbit time file could not be opened
        52      0           0   00:00:00     0          0   00:00:00    orbit time file could not be opened
        53      0           0   00:00:00     0          0   00:00:00    orbit time file could not be opened
        54      0           0   00:00:00     0          0   00:00:00    orbit time file could not be opened
        55      0           0   00:00:00     0          0   00:00:00    orbit time file could not be opened
        56      0           0   00:00:00     0          0   00:00:00    orbit time file could not be opened
        57      0           0   00:00:00     0          0   00:00:00    orbit time file could not be opened
        58      0           0   00:00:00     0          0   00:00:00    orbit time file could not be opened
        59      0           0   00:00:00     0          0   00:00:00    orbit time file could not be opened
        60      0           0   00:00:00     0          0   00:00:00    orbit time file could not be opened
        61      0           0   00:00:00     0          0   00:00:00    orbit time file could not be opened
  Page(,or-)  InputScreen(Enter)   OAMenu(PF3)
                                                                     DS  1 OF  1
UARS>                                                                PG  1 OF  3
```

```
OTMRES  (        )              ORBIT TIMES
ORBIT NUMBER    Start Time      HH:MM:SS     Stop Time      HH:MM:SS                        STATUS
------------    ----------      --------     ---------      --------                        ------
        63      0           0   00:00:00     0          0   00:00:00    orbit time file could not be opened
        64      0           0   00:00:00     0          0   00:00:00    orbit time file could not be opened
        65      0           0   00:00:00     0          0   00:00:00    error obtaining logical unit number for the orbit
        66      0           0   00:00:00     0          0   00:00:00    error obtaining logical unit number for the orbit
        67      0           0   00:00:00     0          0   00:00:00    error obtaining logical unit number for the orbit
        68      0           0   00:00:00     0          0   00:00:00    error obtaining logical unit number for the orbit
        69      0           0   00:00:00     0          0   00:00:00    error obtaining logical unit number for the orbit
        70      0           0   00:00:00     0          0   00:00:00    error obtaining logical unit number for the orbit
        71      0           0   00:00:00     0          0   00:00:00    error obtaining logical unit number for the orbit
        72      0           0   00:00:00     0          0   00:00:00    error obtaining logical unit number for the orbit
        73      0           0   00:00:00     0          0   00:00:00    error obtaining logical unit number for the orbit
        74      0           0   00:00:00     0          0   00:00:00    error obtaining logical unit number for the orbit
        75      0           0   00:00:00     0          0   00:00:00    error obtaining logical unit number for the orbit
        76      0           0   00:00:00     0          0   00:00:00    error obtaining logical unit number for the orbit
        77      0           0   00:00:00     0          0   00:00:00    error obtaining logical unit number for the orbit
        78      0           0   00:00:00     0          0   00:00:00    error obtaining logical unit number for the orbit
        79      0           0   00:00:00     0          0   00:00:00    error obtaining logical unit number for the orbit
        80      0           0   00:00:00     0          0   00:00:00    error obtaining logical unit number for the orbit
  Page(,or-)  InputScreen(Enter)   OAMenu(PF3)
                                                                     DS  1 OF  1
UARS>                                                                PG  2 OF  3
```

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Example 4.   Normal Orbit Time Request (1 of 2)

```
ORBTIME  (        )           ORBIT START AND STOP TIMES


     Specify start orbit number requested:  ████████ 45


     Specify stop orbit number requested:   ████████ 94


     Select query results report format?  ▊
          [C]olumnar or [F]ull


     Select query results output mode?     ▊
          [F]ile or [D]isplay

     Enter User Comment for file header:
     ███████████████████████████████████████████████████
     Enter output filename: ██████████████████████████████

     NextField(TAB)   Page(,or-)   OAMenu(PF3)   UARS>(PF1)   Output(Enter)
                                                                DS   1 OF   1
     UARS>████████████████████████████████████████████        PG   1 OF   1
```

```
OTMRES   (        )               ORBIT TIMES

ORBIT NUMBER    Start Time     HH:MM:SS    Stop Time      HH:MM:SS          STATUS
------------    ----------     --------    ---------      --------          ------
         45     91276 81897256 22:44:57    91277  1285829 00:21:25
         46     91277  1285830 00:21:25    91277  7074403 01:57:54
         47     91277  7074404 01:57:54    91277 12862977 03:34:22
         48     91277 12862978 03:34:22    91277 18651551 05:10:51
         49     91277 18651552 05:10:51    91277 24440125 06:47:20
         50     91277 24440126 06:47:20    91277 30228699 08:23:48
         51     91277 30228700 08:23:48    91277 36017273 10:00:17
         52     91277 36017274 10:00:17    91277 41805847 11:36:45
         53     91277 41805848 11:36:45    91277 47594421 13:13:14
         54     91277 47594422 13:13:14    91277 53382995 14:49:42
         55     91277 53382996 14:49:42    91277 59171569 16:26:11
         56     91277 59171570 16:26:11    91277 64960143 18:02:40
         57     91277 64960144 18:02:40    91277 70748717 19:39:08
         58     91277 70748718 19:39:08    91277 76537291 21:15:37
         59     91277 76537292 21:15:37    91277 82325865 22:52:05
         60     91277 82325866 22:52:05    91278  1714439 00:28:34
         61     91278  1714440 00:28:34    91278  7503013 02:05:03
   Page(,or-)   InputScreen(Enter)   OAMenu(PF3)
                                                      DS   1 OF   1
     UARS>████████████████████████████████████████   PG   1 OF   3
```

```
OTMRES   (        )               ORBIT TIMES
ORBIT NUMBER    Start Time     HH:MM:SS    Stop Time      HH:MM:SS          STATUS
------------    ----------     --------    ---------      --------          ------
         63     91278 13291588 03:41:31    91278 19080161 05:18:00
         64     91278 19080162 05:18:00    91278 24868735 06:54:28
         65     91278 24868736 06:54:28    91278 30657309 08:30:57
         66     91278 30657310 08:30:57    91278 36445883 10:07:25
         67     91278 36445884 10:07:25    91278 42234457 11:43:54
         68     91278 42234458 11:43:54    91278 48023031 13:20:23
         69     91278 48023032 13:20:23    91278 53811605 14:56:51
         70     91278 53811606 14:56:51    91278 59600179 16:33:20
         71     91278 59600180 16:33:20    91278 65388753 18:09:48
         72     91278 65388754 18:09:48    91278 71177327 19:46:17
         73     91278 71177328 19:46:17    91278 76965901 21:22:45
         74     91278 76965902 21:22:45    91278 82754475 22:59:14
         75     91278 82754476 22:59:14    91279  2143049 00:35:43
         76     91279  2143050 00:35:43    91279  7931623 02:12:11
         77     91279  7931624 02:12:11    91279 13720197 03:48:40
         78     91279 13720198 03:48:40    91279 19508771 05:25:08
         79     91279 19508772 05:25:08    91279 25297345 07:01:37
         80     91279 25297346 07:01:37    91279 31085919 08:38:05
   Page(,or-)   InputScreen(Enter)   OAMenu(PF3)
                                                      DS   1 OF   1
     UARS>████████████████████████████████████████   PG   2 OF   3
```

Example 4. Normal Orbit Time Request (2 of 2)

```
OTMRES   (          )                ORBIT TIMES
ORBIT NUMBER    Start Time      HH:MM:SS    Stop Time       HH:MM:SS                    STATUS
------------    ----------      --------    ---------       --------                    ------
       82       91279  36874494  10:14:34   91279  42663067  11:51:03
       83       91279  42663068  11:51:03   91279  48451641  13:27:31
       84       91279  48451642  13:27:31   91279  54240215  15:04:00
       85       91279  54240216  15:04:00   91279  60028789  16:40:28
       86       91279  60028790  16:40:28   91279  65817363  18:16:57
       87       91279  65817364  18:16:57   91279  71605937  19:53:25
       88       91279  71605938  19:53:25   91279  77394511  21:29:54
       89       91279  77394512  21:29:54   91279  83183085  23:06:23
       90       91279  83183086  23:06:23   91280   2571659  00:42:51
       91       91280   2571660  00:42:51   91280   8360233  02:19:20
       92       91280   8360234  02:19:20   91280  14148807  03:55:48
       93       91280  14148808  03:55:48   91280  19937381  05:32:17
       94       91280  19937382  05:32:17   91280  25725955  07:08:45



     Page(,or-)  InputScreen(Enter)    OAMenu(PF3)
                                                            DS   1 OF  1
 UARS>                                                      PG   3 OF  3
```

5.7 Request Planetary Ephemeris

> The user can request planetary ephemeris for any or a combination of the listed objects: MOON, SUN, MERCURY, VENUS, MARS, JUPITER, SATURN, URANUS, and NEPT NE. The data displayed by a planetary ephemeris request is as follows:
> - Greenwich Apparent Sidereal Time at request time
> - True-of-date position composed of an ECI (x,y,z) unit vector + distance in kilometers

MENU TREE   Orbit/Attitude services
Request planetary ephemeris data

COMMAND $ OASERVICE PLANET

PARAMETERS   SLP is the keyword used to select this orbit/attitude service

QUALIFIERS   /START = (*start-time*)

/STOP = (*stop-time*)

/TIMINC = *dd:hh:mm:ss*

/OBJECTS = *ccccccc (,ccccccc, ..., ccccccc)*

/RECORD

/PLAIN

/FILE = *file-specification*

/HELP

DESCRIPTION   The user can request planetary ephemeris data at one or more times. Planetary positions for up to seven objects at a single time is displayed per screen. Thus, if the user requests ephemeris for the sun and moon at ten different times, ten screens are generated, each with the true of date positions for the sun and moon at the next time. The user indicates readiness for the next display by entering the appropriate command on the screen command line.

This function can be invoked from a menu or from the DCL command. The menus prompt for the desired parameters. To use the command mode, control information is input through parameters and qualifiers. In either mode an acknowledgement of the request is returned to the requestor.

ERROR PROCESSING   All input parameters and qualifiers are checked for validity. Error messages are sent to the screen for interactive requests. Errors cause the request to be ignored. For requests made from a command procedure, error messages are returned through SYS$OUTPUT.

Planetary ephemeris data is always online, so there is no need to worry about data destaging slowing the user's request.

EXAMPLES

Example 1. Request planetary ephemeris for all objects supported

$ OASERVICE   PLANET -
                /START = ("U92100 0") -
                /STOP = ("U92110 0") -
                /TIMINC = 01:00:00:00 -

This command requests UARS planetary ephemeris for April 10, 1992 through April 20, 1992 at one day increments. Ephemeris is displayed for all objects. This is the default setting (i.e. no qualifier specified).

Example 2. Request ephemeris data for the Sun and Moon

$ OASERVICE PLANET -
                /START = ("U92200 0") -
                /STOP = ("U92201 0") -
                /TIMINC = 00:01:00:00 -
                /OBJECTS = (SUN,   MOON)

This command requests planetary ephemeris for the sun and the moon on July 19, 1992 at one hour increments.

Example 3.   Planet Request for which Time is Earlier than in the SLP File (1 of 2)

```
EPHEM    (      )        SOLAR, LUNAR, PLANETARY EPHEMERIS

   Enter start time: u89001              stop time: u89002
      Formats: VMS date/time dd-mmm-yyyy hh:mm:ss.cc
          or: UARS day      Dnnnn hh:mm:ss.mmm
          or: UDTF time     Uyyyddd nnnnnnnn
                            Uyyyddd hh:mm:ss.mmm
   Enter time increment:    0:12:0:0
      DD:HH:MM:SS
      DD: range 00..23   HH: range 00..23
      MM: range 00..59   SS: range 00..59

   Enter any character to specify the objects requested:
      n  Sun
      y  Moon
      z  Mercury
      n  Venus
         Mars
      x  Jupiter
         Saturn
      c  Uranus
         Neptune
   NextField(TAB)   Page(,or-)   OAMenu(PF3)   UARS>(PF1)   Output(Enter)
                                                             DS  1 OF   1
   UARS>                                                     PG  1 OF   2
```

```
EPHEM    (        )       SOLAR, LUNAR, PLANETARY EPHEMERIS


     Select query results report format?  ▓
          [C]olumnar or [F]ull


     Select query results output mode?    ▣
          [F]ile or [D]isplay

     Enter User Comment for file header: ████████████████████████████

     Enter output filename: ████████████████████████████████



     NextField(TAB)   Page(,or-)   OAMenu(PF3)   UARS>(PF1)   Output(Enter)
                                                                DS   1 OF  1
  UARS> █████████████████████████████████████████            PG   2 OF  2
```

```
EPHEMCOL (          )     SOLAR, LUNAR, AND PLANETARY EPHEMERIS
Time:  089001   00000000   Greenwich Apparent Sidereal Time:   999.9899902
BODY           X             Y              Z              DISTANCE
Sun        0.0000000     0.0000000      0.0000000             0.
Moon       0.0000000     0.0000000      0.0000000             0.
Mercury    0.0000000     0.0000000      0.0000000             0.
Venus      0.0000000     0.0000000      0.0000000             0.
Jupiter    0.0000000     0.0000000      0.0000000             0.
Uranus     0.0000000     0.0000000      0.0000000             0.
 time requested is too early in file to process
--------------------------------------------------------------------------
Time:  089001   43200000   Greenwich Apparent Sidereal Time:   999.9899902
BODY           X             Y              Z              DISTANCE
Sun        0.0000000     0.0000000      0.0000000             0.
Moon       0.0000000     0.0000000      0.0000000             0.
Mercury    0.0000000     0.0000000      0.0000000             0.
Venus      0.0000000     0.0000000      0.0000000             0.
Jupiter    0.0000000     0.0000000      0.0000000             0.
Uranus     0.0000000     0.0000000      0.0000000             0.

    Page(,or-)  InputScreen(Enter)   OAMenu(PF3)

                                                    DS   1 OF  1
  UARS> ███████████████████████████████           PG   1 OF  2
```

```
EPHEMCOL (          )      SOLAR, LUNAR, AND PLANETARY EPHEMERIS
 time requested is too early in file to process
--------------------------------------------------------------------------
Time:  089002   00000000   Greenwich Apparent Sidereal Time:   999.9899902
BODY           X             Y              Z              DISTANCE
Sun        0.0000000     0.0000000      0.0000000             0.
Moon       0.0000000     0.0000000      0.0000000             0.
Mercury    0.0000000     0.0000000      0.0000000             0.
Venus      0.0000000     0.0000000      0.0000000             0.
Jupiter    0.0000000     0.0000000      0.0000000             0.
Uranus     0.0000000     0.0000000      0.0000000             0.
 time requested is too early in file to process
--------------------------------------------------------------------------




    Page(,or-)  InputScreen(Enter)   OAMenu(PF3)

                                                    DS   1 OF  1
  UARS> ███████████████████████████████           PG   2 OF  2
```

Example 4. Normal Planet Request (1 of 2)

```
EPHEM    (      )         SOLAR, LUNAR, PLANETARY EPHEMERIS

  Enter start time: U92033              stop time: U92034
       Formats: VMS date/time dd-mmm-yyyy hh:mm:ss.cc
           or: UARS day      Dnnnn hh:mm:ss.mmm
           or: UDTF time     Uyyyddd nnnnnnnn
                             Uyyyddd hh:mm:ss.mmm
  Enter time increment:  0:12:0:0
     DD:HH:MM:SS
     DD: range 00..23   HH: range 00..23
     MM: range 00..59   SS: range 00..59

  Enter any character to specify the objects requested:
     A  Sun
     1  Moon
     X  Mercury
     Z  Venus
        Mars
        Jupiter
        Saturn
     V  Uranus
     n  Neptune
  NextField(TAB)   Page(.or-)   OAMenu(PF3)   UARS>(PF1)   Output(Enter)
                                                           DS   1 OF   1
UARS>                                                      PG   1 OF   2
```

```
EPHEM    (      )         SOLAR, LUNAR, PLANETARY EPHEMERIS



  Select query results report format?  C
       [C]olumnar or [F]ull



  Select query results output mode?    D
       [F]ile or [D]isplay

  Enter User Comment for file header:


  Enter output filename:



  NextField(TAB)   Page(.or-)   OAMenu(PF3)   UARS>(PF1)   Output(Enter)
                                                           DS   1 OF   1
UARS>                                                      PG   2 OF   2
```

```
EPHEMCOL (      )     SOLAR, LUNAR, AND PLANETARY EPHEMERIS
Time:  092033    00000000    Greenwich Apparent Sidereal Time:   131.4516296
BODY          X            Y            Z            DISTANCE
Sun       0.6741276   -0.6776587   -0.2938209      147418240.
Moon      0.3915401   -0.8524078   -0.3465508         406426.
Mercury   0.5745519   -0.7367545   -0.3564867      210516784.
Venus     0.1641310   -0.9104167   -0.3797400      196569040.
Uranus    0.2680169   -0.8813009   -0.3891987     3050287616.
Neptune   0.2991166   -0.8804525   -0.3678759     4650366464.

-------------------------------------------------------------------------
Time:  092033    43200000    Greenwich Apparent Sidereal Time:   311.9444580
BODY          X            Y            Z            DISTANCE
Sun       0.6806447   -0.6721528   -0.2914334      147429072.
Moon      0.4837914   -0.8144639   -0.3203037         406509.
Mercury   0.5862994   -0.7289133   -0.3534662      210612944.
Venus     0.1747007   -0.9085796   -0.3794244      196991136.
Uranus    0.2684775   -0.8811823   -0.3891499     3049724672.
Neptune   0.2994087   -0.8803685   -0.3678395     4649824768.

   Page(.or-)   InputScreen(Enter)   OAMenu(PF3)

                                                           DS   1 OF   1
UARS>                                                      PG   1 OF   2
```

Example 4. Normal Planet Request (2 of 2)

```
EPHEMCOL (        )      SOLAR, LUNAR, AND PLANETARY EPHEMERIS

----------------------------------------------------------------------
Time:  092034   00000000    Greenwich Apparent Sidereal Time:   132.4372864
BODY            X               Y               Z               DISTANCE
Sun         0.6871076       -0.6665949      -0.2890234       147440016.
Moon        0.5709410       -0.7678237      -0.2906426          406423.
Mercury     0.5979663       -0.7208993      -0.3503433       210688816.
Venus       0.1852519       -0.9066378      -0.3790641       197412080.
Uranus      0.2689366       -0.8810638      -0.3891012      3049152000.
Neptune     0.2996997       -0.8802845      -0.3678031      4649273856.


----------------------------------------------------------------------




     Page(,or-)   InputScreen(Enter)    OAMenu(PF3)

                                                         DS   1 OF  1
UARS>                                                    PG   2 OF  2
```

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5.8 Request Stellar Ephemeris

> The user can request stellar ephemeris for the stars listed below, with up
> to twenty stars per request issued:
>
> The following ephemeris data is displayed for each star:
>   - SKYMAP catalog number of the star
>   - Star name
>   - Visual magnitude of the star
>   - (B-V) color
>   - True-of-date position of the star in spherical coordinates
>   - Spectral type of the star
>   - Other TBD attributes

MENU TREE   Orbit/Attitude services
Request stellar ephemeris data

COMMAND $ OASERVICE STAR

PARAMETER   STAR is the keyword used to select this orbit/attitude service.

QUALIFIERS   /START = (*start-time*)

/STOP = (*stop-time*)

/TIMINC = *dd:hh:mm:ss*

/STARID = *ccccccc* (, *ccccccc*, ..., *ccccccc*)

/RECORD

/PLAIN

/FILE = *file-specification*

/HELP

DESCRIPTION   The user can request stellar ephemeris data at one or more times for up
to twenty stars. Stellar ephemeris is displayed for four stars at a
single time per screen. Thus, if the user requests twenty stars, there
is five displays per time requested. The user indicates readiness for
the next display by entering the appropriate command on the screen
command line.

This function can be invoked from a menu or from the DCL
command. The menus prompt for the desired parameters. To use
the command mode, control information is input through parameters
and qualifiers. In either mode an acknowledgement of the request is
returned to the requestor.

ERROR   All input parameters and qualifiers are checked for validity. Error
PROCESSING messages are sent to the screen for interactive requests. Errors cause
the request to be ignored. For requests made from a command

procedure, error messages are returned through SYS$OUTPUT. Stellar ephemeris is always on-line in the UCSS, so the user never receives a "destaged data" message.

SEE ALSO   5.14 Request Start Dump

EXAMPLES

<u>Example 1. Request Stellar Ephemeris for the following three stars:</u>

    xxxx, *yyyy*, *aaaa*

    $ OASERVICE STAR -
           /START = ("U92100 0") -
           /STOP = ("U92110 0") -
           /TIMINC = 01:00:00:00 -
           /STARID = (*xxxx*, *yyyy*, *aaaa* **)**

This command requests stellar ephemerides for April 10, 1992 through April 20, 1992 at one day increments for stars *xxxx*, *yyyy*, and *aaaa*.

Example 2. Normal Star Ephemeris Request (1 of 2)

```
STAR     (          )            APPARENT POSITION OF STARS

   Enter start time: u92033                    stop time: u92034
        Formats: VMS date/time  dd-mmm-yyyy hh:mm:ss.cc
             or: UARS day       Dnnnn hh:mm:ss.mmm
             or: UDTF time      Uyyyddd nnnnnnnn
                                Uyyyddd hh:mm:ss.mmm
   Enter time increment:    0:12:0:0
        DD:HH:MM:SS.mmm
        DD: range 00..23
        HH: range 00..59
        MM: range 00..59
        SS: range 00..59
        mmm: range 000..999


   NextField(TAB)   Page(,or-)   OAMenu(PF3)   UARS>(PF1)   Output(Enter)
                                                            DS   1 OF   1
UARS>                                                       PG   1 OF   3
```

```
STAR     (          )            APPARENT POSITION OF STARS

   8430115    Specify the star identifiers
         0
         0
         0
         0
         0
         0
         0
         0
         0
         0
         0
         0
         0
         0
   NextField(TAB)   Page(,or-)   OAMenu(PF3)   UARS>(PF1)   Output(Enter)
                                                            DS   1 OF   1
UARS>                                                       PG   2 OF   3
```

```
STAR     (          )            APPARENT POSITION OF STARS
         0

   Select query results output mode?      D
        [F]ile or [D]isplay

   Enter User Comment for file header:

   Enter output filename:



   NextField(TAB)   Page(,or-)   OAMenu(PF3)   UARS>(PF1)   Output(Enter)
                                                            DS   1 OF   1
UARS>                                                       PG   3 OF   3
```

Example 2. Normal Star Ephemeris Request (2 of 2)

```
STARRES   (        )          APPARENT POSITION OF STARS
UDTF:     92033        0  Skymap ID:   8430115    Star Name:      ALF  PYX
Position X:   -0.546702  Right Asc:   130.816895  PM Right Asc:   -0.000006
         Y:    0.634404  Declin:      -33.156509  PM Declin:       0.000002
         Z:   -0.546603

Use Flags:              5          Position Error:      0.080000
Visual Mag:       3.680000         Dif Mag Var:      -999.998779
FHST Mag:         3.627810         Dif Mag Binary:     -9.999000
TotalM Right asc: 0.009907         Dif Pos Binary:      0.000000
TotalM Declin:   -0.003610         Spec Class:           1150
Blue Mag:         3.500000         Lumin Class:            30
Ultraviolet Mag:  2.620000

Unit Vector  X:   -0.547217  Neighbors:     8.034725     8.034725
             Y:    0.633484                 8.034725     7.845274
             Z:   -0.546974                 8.034725     7.845274
                                            8.034725     7.845274
Total page created:      3 You are looking at page        1
Select next page: ████2 or select page increment: ████0

    Page(.or-)   InputScreen(Enter)   OAMenu(PF3)
                                                        DS   1 OF   1
UARS>                                                   PG   1 OF   1
```

```
STARRES   (        )          APPARENT POSITION OF STARS
UDTF:     92034        0  Skymap ID:   8430115    Star Name:      ALF  PYX
Position X:   -0.546701  Right Asc:   130.824402  PM Right Asc:   -0.000006
         Y:    0.634304  Declin:      -33.159683  PM Declin:       0.000002
         Z:   -0.546605

Use Flags:              5          Position Error:      0.080000
Visual Mag:       3.680000         Dif Mag Var:      -999.998779
FHST Mag:         3.627810         Dif Mag Binary:     -9.999000
TotalM Right asc: 0.010053         Dif Pos Binary:      0.000000
TotalM Declin:   -0.003637         Spec Class:           1150
Blue Mag:         3.500000         Lumin Class:            30
Ultraviolet Mag:  2.620000

Unit Vector  X:   -0.547281  Neighbors:    -9.900000     8.034725
             Y:    0.633484                 8.034725     7.845274
             Z:   -0.546974                 8.034725     7.845274
                                            8.034725     7.845274
Total page created:      3 You are looking at page        2
Select next page: ████3 or select page increment: ████0

    Page(.or-)   InputScreen(Enter)   OAMenu(PF3)
                                                        DS   1 OF   1
UARS>                                                   PG   1 OF   1
```

```
STARRES   (        )          APPARENT POSITION OF STARS
UDTF:     92034        0  Skymap ID:   8430115    Star Name:      ALF  PYX
Position X:   -0.546701  Right Asc:   130.824402  PM Right Asc:   -0.000006
         Y:    0.634304  Declin:      -33.159683  PM Declin:       0.000002
         Z:   -0.546605

Use Flags:              5          Position Error:      0.080000
Visual Mag:       3.680000         Dif Mag Var:      -999.998779
FHST Mag:         3.627810         Dif Mag Binary:     -9.999000
TotalM Right asc: 0.010053         Dif Pos Binary:      0.000000
TotalM Declin:   -0.003637         Spec Class:           1150
Blue Mag:         3.500000         Lumin Class:            30
Ultraviolet Mag:  2.620000

Unit Vector  X:   -0.547281  Neighbors:    -9.900000     8.034725
             Y:    0.633484                 8.034725     7.845274
             Z:   -0.546974                 8.034725     7.845274
                                            8.034725     7.845274
Total page created:      3 You are looking at page        3
Select next page: ████3 or select page increment: ████0

    Page(.or-)   InputScreen(Enter)   OAMenu(PF3)
                                                        DS   1 OF   1
UARS>                                                   PG   1 OF   1
```

5.9 Request Limb Tangent Point Calculation

```
The following data is displayed in response to a limb tangent point
calculation request:
    - geodetic latitude of limb tangent point
    - east longitude of limb tangent point at request time
    - geodetic altitude in kilometers of limb tangent point above
      ellipsoidal earth
    - ECI limb tangent point in kilometers *
    - bearing of view vector as seen by an observer at the limb
      tangent point *

    *(only if input view vector is non-zero)
```

MENU TREE   Orbit/Attitude services
Request limb tangent point calculation

COMMAND $ OASERVICE   LIMB

PARAMETERS   LIMB is the keyword used to select this orbit/attitude service

QUALIFIERS   /START = (*start-time*)

/SATPOS = (x, y, z)

/VIEWVEC = (x, y, z)

/RECORD

/PLAIN

/FILE = *file-specification*

/HELP

DESCRIPTION   One limb tangent calculation is performed per user request. Thus, there is one display generated per request, containing the results of the specified limb tangent calculation.

This function can be invoked from a menu or from the DCL command. The menus prompt for the desired parameters. To use the command mode, control information is input through parameters and qualifiers. In either mode an acknowledgement of the request is returned to the requestor.

ERROR PROCESSING   All input parameters and qualifiers are checked for validity. Error messages are sent to the screen for interactive requests. Errors cause the request to be ignored. For requests made from a command procedure, error messages are returned through SYS$OUTPUT.

EXAMPLES

Example 1.   Request Limb Tangency data at given view vector

$ OASERVICE LIMB -
             /START = ("U92200 0") -
             /SATPOS = (104.5, 209.6, 303.7) -
             /VIEWVEC = (20, 40, 50)

This command requests limb tangency data on July 19, 1992 with a viewing direction of (20, 40, 50).

Example 3. Limb Calculation Request by Menu

```
LIMBCALC (        )          LIMB TANGENCY POINT CALCULATION
      Enter time: u92033 1375488
          Formats: VMS date/time dd-mmm-yyyy hh:mm:ss.cc
             or: UARS day      Dnnnn hh:mm:ss.mmm
             or: UDTF time     Uyyyddd nnnnnnnn
                               Uyyyddd hh:mm:ss.mmm
      Enter position of satellite (km) :
          X:  6668.41  Y:    4.42  Z:  2017.93

      Enter position of view vector:
          X:  -0.24097  Y:  0.56870  Z:  0.78646

      Select query results report format?  F
          [C]olumnar or [F]ull
      Select query results output mode?    D
          [F]ile or [D]isplay
      Enter User Comment for file header:

      Enter output filename:

      NextField(TAB)   OAMenu(PF3)   UARS>(PF1)   Output(Enter)
                                                             DS   1 OF   1
UARS>                                                        PG   1 OF   1
```

```
LCRES    (       )          LIMB TANGENCY POINT CALCULATION

   Time Requested:   92033    1375488


   Geodetic latitude (degrees):      17.061344

   East longitude (degrees):         222.924438

   Geodetic altitude (km):           590.712891


   ECI limb tangent point in kilometers:
       X:       6664.229004
       Y:         14.288015
       Z:       2031.576660

   Bearing of view vector (degrees North through East):      34.695415

   Status:    normal successful completion

   InputScreen(Enter)    OAMenu(PF3)
                                                          DS   1 OF   1
UARS>                                                     PG   1 OF   1
```

5.10 Request Geodetic Earth Radius

> The following data is displayed when the user requests an earth radius calculation:
> - geodetic latitude (in degrees)
> - geodetic earth radius (in kilometers) of the reference

MENU TREE   Orbit/Attitude services
Request geodetic earth radius

COMMAND $ OASERVICE EARTHR

PARAMETERS   EARTHR is the keyword used to select this orbit/attitude service

QUALIFIERS   /GEOLAT = (*FFF.F*, *FFF.F*, *FF.F*)

/RECORD

/PLAIN

/FILE = *file-specification*

/HELP

DESCRIPTION   The user can specify a series of earth radius calculations by specifying a start latitude, stop latitude, and a number of degrees between each latitude point. Ten earth radii with the corresponding geodetic latitudes is displayed per screen. The user indicates readiness for the next display by entering the appropriate command on the screen command line.

This function can be invoked from a menu or from the DCL command. The menus prompt for the desired parameters. To use the command mode, control information is input through parameters and qualifiers. In either mode an acknowledgement of the request is returned to the requestor.

ERROR PROCESSING   All input parameters and qualifiers are checked for validity. Error messages are sent to the screen for interactive requests. Errors cause the request to be ignored. For requests made from a command procedure, error messages are returned through SYS$OUTPUT.

EXAMPLES

Example 1. Request Earth Radius at geocentric latitudes of -65 and 70 degrees.

$ OASERVICE EARTHR -
/GEOLAT = (65.0, 80.0, 5.0)

This command requests the geodetic latitudes and earth radii at geocentric latitudes of 65.0, 70.0, 75.0, and 80.0 degrees.

Example 2. Earth Radius Request

```
EARTHRAD (        )                    EARTH RADIUS

   Enter the start geocentric latitude in degrees: -90.0000

   Enter the stop geocentric latitude in degrees:  90.0000

   Enter the latitude increment in degrees (except 0.0):  10.0000

   Select query results report format?  C
          [C]olumnar or [F]ull

   Select query results output mode?    D
          [F]ile or [D]isplay

   Enter User Comment for file header:

   Enter output filename:


   NextField(TAB)   OAMenu(PF3)   UARS>(PF1)   Output(Enter)
                                                         DS   1 OF   1
                                                         PG   1 OF   1
```

```
EARTHRES (        )                    EARTH RADIUS


GEOC LAT   GEODETIC LAT   GEOD EARTH RAD          STATUS
--------   ------------   --------------          ------
-90.0000   -90.000000      6356.7553711
-80.0000   -80.065605      6357.3969727
-70.0000   -70.123367      6359.2456055
-60.0000   -60.166363      6362.0815430
-50.0000   -50.189392      6365.5649414
-40.0000   -40.189610      6369.2783203
-30.0000   -30.166924      6372.7739258
-20.0000   -20.124006      6375.6274414
-10.0000   -10.066021      6377.4921875
  0.0000     0.000000      6378.1401367
 10.0000    10.066021      6377.4921875
 20.0000    20.124006      6375.6274414
 30.0000    30.166924      6372.7739258
 40.0000    40.189610      6369.2783203
 50.0000    50.189392      6365.5649414
 60.0000    60.166363      6362.0815430
   InputScreen(Enter)    OAMenu(PF3)
                                                    DS   1 OF   1
UARS>                                               PG   1 OF   2
```

```
EARTHRES (        )              EARTH RADIUS
GEOC LAT   GEODETIC LAT   GEOD EARTH RAD       STATUS
--------   ------------   --------------       ------
 70.0000    70.123367      6359.2456055
 80.0000    80.065605      6357.3969727
 90.0000    90.000000      6356.7553711


   InputScreen(Enter)    OAMenu(PF3)
                                                DS   1 OF   1
UARS>                                           PG   2 OF   2
```

5.11 Request Magnetic Field Data

> The following data is displayed in response to a request for UARS
> magnetic field data:
> - invariant latitude at the given time and location
> - magnetic latitude at the given time and location
> - magnetic solar time at the given time

MENU TREE   Orbit/Attitude services
                  Request magnetic field data

COMMAND $ OASERVICE MAG

PARAMETERS   MAG is the keyword used to select this orbit/attitude service.

QUALIFIERS   /START = (*start-time*)

                  /STOP = (*stop-time*)

                  /TIMINC = *dd:hh:mm:ss*

                  /ALTITUDE = *iii*

                  /LATIUTDE = *fff.f*

                  /LONGITUDE = *fff.f*

                  /RECORD

                  /PLAIN

                  /FILE = *file-specification*

                  /HELP

DESCRIPTION   The user can request magnetic field data at one or more times for one
                  location. Six sets of magnetic field points is displayed per screen. The
                  user indicates readiness for the next display by entering the
                  appropriate command on the screen command line.

                  This function can be invoked from a menu or from the DCL
                  command. The menus prompt for the desired parameters. To use
                  the command mode, control information is input through parameters
                  and qualifiers. In either mode an acknowledgement of the request is
                  returned to the requestor.

ERROR   All input parameters and qualifiers are checked for validity. Error
PROCESSING   messages are sent to the screen for interactive requests. Errors cause the
                  request to be ignored. For requests made from a command
                  procedure, error messages are returned through SYS$OUTPUT.

EXAMPLES

Example 1. Request Magnetic Field Data at eleven different times

```
$ OASERVICE MAG -
                    /START = ( "U92100 0" ) -
                    /STOP = ( "U92110 0" ) -
                    /TIMINC = 01:00:00:00 -
                    /ALTITUDE = 100 -
                    /LATITUDE = -45.0 -
                    /LONGITUDE = 200.0
```

This command requests UARS magnetic field data for April 10, 1992 through April 20, 1992 at one day increments. The request location is -45.0 degrees latitude and 200.0 degrees longitude at 100 kilometers geodetic altitude. Thus, eleven magnetic field data sets is returned for the same location but at one day increments.

Example 2.   Magnetic Field Request (1 of 2)

```
MAGFIELD (        )            MAGNETIC FIELD COORDINATES          91.225 12:36:3
     Enter start time: u92033 1376488         stop time: u92034
         Formats: VMS date/time dd-mmm-yyyy hh:mm:ss.cc
             or: UARS day      Dnnnn hh:mm:ss.mmm
             or: UDTF time     Uyyyddd nnnnnnnn
                               Uyyyddd hh:mm:ss.mmm
     Enter time increment:   0: 0: 0: 0
         DD:HH:MM:SS
         DD: range 00..23   HH: range 00..23
         MM: range 00..59   SS: range 00..59

     Specify the altitude of the magnetic field: 100.0
         100.0 - 100.0 kilometers (geodetic)
         250.0 - 250.0 kilometers (geodetic)
         600.0 - 600.0 kilometers (geocentric)

     Specify the latitude component (degrees): 20.00

     Specify the longitude component (degrees): 90.00
     NextField(TAB)   Page(.or-)   OAMenu(PF3)   UARS>(PF1)   Output(Enter)
                                                              DS   1 OF   1
 UARS>                                                        PG   1 OF   2
```

```
MAGFIELD (        )            MAGNETIC FIELD COORDINATES

     Select query results report format?  C
         [C]olumnar or [F]ull

     Select query results output mode?   D
         [F]ile or [D]isplay

     Enter User Comment for file header:

     Enter output filename:

     NextField(TAB)   Page(.or-)   OAMenu(PF3)   UARS>(PF1)   Output(Enter)
                                                              DS   1 OF   1
 UARS>                                                        PG   2 OF   2
```

Example 2. Magnetic Field Request (2 of 2)

```
MAGRES    (         )        MAGNETIC FIELD COORDINATES


   TIME                INVARIANT LAT   MAGNETIC LAT  MAG SOLAR TIME                          STATUS
   ----                -------------   ------------  --------------                          ------
 92033    43200000       -7.841369       9.717656    18.022848
 92033    46800000       -7.841369       9.717656    18.987249
 92033    50400000       -7.841369       9.717656    19.947950
 92033    54000000       -7.841369       9.717656    20.908100
 92033    57600000       -7.841369       9.717656    21.869177
 92033    61200000       -7.841369       9.717656    22.831177
 92033    64800000       -7.841369       9.717656    23.793245
 92033    68400000       -7.841369       9.717656     0.754529
 92033    72000000       -7.841369       9.717656     1.715027
 92033    75600000       -7.841369       9.717656     2.676193
 92033    79200000       -7.841369       9.717656     3.641166
 92033    82800000       -7.841369       9.717656     4.614510
 92034           0       -7.841712       9.717580     5.601545
 92034     3600000       -7.841712       9.717580     6.607265
 92034     7200000       -7.841712       9.717580     7.634957
 92034    10800000       -7.841712       9.717580     8.684793
InputScreen(Enter)    OAMenu(PF3)
                                                            DS    1 OF   1
UARS>                                                       PG    1 OF   2
```

```
MAGRES    (         )        MAGNETIC FIELD COORDINATES
   TIME                INVARIANT LAT   MAGNETIC LAT  MAG SOLAR TIME                          STATUS
   ----                -------------   ------------  --------------                          ------
 92034    14400000       -7.841712       9.717580     9.752839
 92034    18000000       -7.841712       9.717580    10.831153
 92034    21600000       -7.841712       9.717580    11.909280
 92034    25200000       -7.841712       9.717580    12.976810
 92034    28800000       -7.841712       9.717580    14.025910
 92034    32400000       -7.841712       9.717580    15.052793
 92034    36000000       -7.841712       9.717580    16.057756
 92034    39600000       -7.841712       9.717580    17.044197
 92034    43200000       -7.841712       9.717580    18.017176




InputScreen(Enter)    OAMenu(PF3)
                                                            DS    1 OF   1
UARS>                                                       PG    2 OF   2
```

5.12 Request User Specified View Match

> When this service is requested, the user sees a list of times and
> longitudes at which the spacecraft was in the correct position to
> "see" the user specified view.

MENU TREE   Orbit/Attitude services
Request S/C position time ranges

COMMAND $ OASERVICE VIEW

PARAMETERS VIEW is the keyword used to select this orbit/attitude service

QUALIFIERS   /STRORB = *nnnn*

/NUMORB = *nnnn*

/LATITUDE = *fff.ff*

/LONGITUDE = (*fff.ff, fff.ff*)

/LIMBHGT = *ffff.ff*

/AZIMUTH = *fff.ff*

/RECORD

/PLAIN

/FILE = *file-specification*

/HELP

DESCRIPTION One view may be specified per request issued. Eight time/longitude
sets is displayed per screen. The user indicates readiness for the next
display by entering the appropriate command on the screen command
line.

This function can be invoked from a menu or from the DCL
command. The menus prompt for the desired parameters. To use
the command mode, control information is input through parameters
and qualifiers. In either mode an acknowledgement of the request is
returned to the requestor.

**ERROR
PROCESSING** All input parameters and qualifiers are checked for validity. Error
messages are sent to the screen for interactive requests. Errors cause
the request to be ignored. For requests made from a command
procedure, error messages are returned through SYS$OUTPUT.

If the data needed for calculations is not on-line when the request is
issued, the user is informed, a staging of the data is spawned, and the
request terminates. The user can then re-issue the request once the
data has been staged.

EXAMPLES

Example 1. Request view match for three orbits starting at UARS orbit number 10.

$ OASERVICE VIEW -
           /STRTORB = 10 -

           /NUMORB = 3 -

           /LATITUDE = 45.0 -

           /LONGITUDE = (100.00, 120.00) -

           /LIMBHGT = 100.0 -

           /AZIMUTH = 240.0

This command requests a view match for UARS orbits 10 through 12, between longitudes of 100 and 120 degrees, with a latitude of 45 degrees, limb height of 100.0 kilometers, and an azimuth angle of 240 degrees.

Example 2. View Match Request (1 of 2)

```
FINDTIME (        )                    FIND TIME

   Specify start orbit number requested:    1851

   Specify number of orbits to search:      25

   Enter angle from spacecraft x-axis (azimuth):    45.000000

   Enter height above geodetic earth (km):    30.000000

   Enter geodetic earth latitude (degrees):   20.000000

   Enter longitude range (degrees):    0.000000    359.899994


   NextField(TAB)   Page(.or-)   OAMenu(PF3)   UARS>(PF1)   Output(Enter)
                                                            DS   1 OF   1
UARS>                                                       PG   1 OF   2
```

```
FINDTIME (       )                    FIND TIME

   Select query results report format?   C
         [C]olumnar or [F]ull

   Select query results output mode?   D
         [F]ile or [D]isplay

   Enter User Comment for file header:

   Enter output filename:




   NextField(TAB)   Page(.or-)   OAMenu(PF3)   UARS>(PF1)   Output(Enter)
                                                            DS   1 OF   1
UARS>                                                       PG   2 OF   2
```

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Example 2.   View Match Request (2 of 2)

```
OAFCOL   (       )              FIND ORBIT TIMES


ORBIT NUMBER      TIME                     LATITUDE        LONGITUDE
------------      ----                     --------        ---------
        1851     92032    81985263        20.000000        271.910095
        1851     92032    83668496        20.000000         12.732056
        1852     92033     1375488        20.000000        247.450928
        1852     92033     3059484        20.000000        348.271362
        1853     92033     7166849        20.000000        222.987366
        1853     92033     8850854        20.000000        323.808655
        1854     92033    12958209        20.000000        198.523865
        1854     92033    14642224        20.000000        299.345947
        1855     92033    18749570        20.000000        174.060303
        1855     92033    20433594        20.000000        274.883240
        1856     92033    24540930        20.000000        149.596771
        1856     92033    26224964        20.000000        250.420471
        1857     92033    30332291        20.000000        125.133179
        1857     92033    32016335        20.000000        225.957764
        1858     92033    36123652        20.000000        100.669708
        1858     92033    37807704        20.000000        201.495056
        1859     92033    41915012        20.000000         76.206116
                                                       DS    1 OF    1
UARS>                                                  PG    1 OF    3
```

```
OAFCOL   (       )              FIND ORBIT TIMES
ORBIT NUMBER      TIME                     LATITUDE        LONGITUDE
------------      ----                     --------        ---------
        1859     92033    43599075        20.000000        177.032288
        1860     92033    47706373        20.000000         51.742615
        1860     92033    49390444        20.000000        152.569580
        1861     92033    53497733        20.000000         27.279083
        1861     92033    55181815        20.000000        128.106873
        1862     92033    59289094        20.000000          2.815552
        1862     92033    60973184        20.000000        103.644104
        1863     92033    65080455        20.000000        338.352051
        1863     92033    66764555        20.000000         79.181396
        1864     92033    70871815        20.000000        313.888489
        1864     92033    72555925        20.000000         54.718689
        1865     92033    76663176        20.000000        289.424927
        1865     92033    78347295        20.000000         30.255920
        1866     92033    82454537        20.000000        264.961426
        1866     92033    84138665        20.000000          5.793213
        1867     92034     1845898        20.000000        240.497864
        1867     92034     3530036        20.000000        341.330505
        1868     92034     7637258        20.000000        216.034302
        1868     92034     9321406        20.000000        316.867798
                                                       DS    1 OF    1
UARS>                                                  PG    2 OF    3
```

```
OAFCOL   (       )              FIND ORBIT TIMES
ORBIT NUMBER      TIME                     LATITUDE        LONGITUDE
------------      ----                     --------        ---------
        1869     92034    13428619        20.000000        191.570801
        1869     92034    15112776        20.000000        292.405029
        1870     92034    19219980        20.000000        167.107300
        1870     92034    20904146        20.000000        267.942322
        1871     92034    25011340        20.000000        142.643768
        1871     92034    26695516        20.000000        243.479614
        1872     92034    30802702        20.000000        118.180145
        1872     92034    32486887        20.000000        219.016846
        1873     92034    36594062        20.000000         93.716705
        1873     92034    38278257        20.000000        194.554138
        1874     92034    42385423        20.000000         69.253113
        1874     92034    44069627        20.000000        170.091492
        1875     92034    48176783        20.000000         44.789612
        1875     92034    49860998        20.000000        145.628723

   Status:    normal successful completion


                                                       DS    1 OF    1
UARS>                                                  PG    3 OF    3
```

5.13 Request Solar Zenith Angle and Local Solar Time

> When this service is requested, the user sees the solar zenith angle and local solar time for the specified time, altitude, latitude, and longitude.

MENU TREE   Orbit/Attitude services
              Request solar zenith angle calculation

COMMAND $ OASERVICE SZA_LST

PARAMETERS SZA_LST is the keyword used to select this orbit/attitude service

QUALIFIERS   /START = (*start-time*)

              /ALTITUDE = (*iii*)

              /LATITUDE = (*fff.f*)

              /LONGITUDE = (*fff.f*)

              /RECORD

              /PLAIN

              /FILE = *filename*

              /HELP

DESCRIPTION One solar zenith angle and local solar time can be calculated per request.

              This function can be invoked from a menu or from the DCL command. The menus prompt for the desired parameters. To user the command mode, control information is input through parameters and qualifiers. In either mode, an acknowledgement of the request is returned to the requestor.

**ERROR
PROCESSING** All input parameters and qualifiers are checked for validity. Error message sent to the screen for interactive requests. Errors cause the request to be ignored. For requests made from a command procedure, error messages are returned through SYS$OUTPUT.

              If solar/lunar/planetary ephemeris is not on-line when the request is made, the user is informed, a staging of the data is spawned, and the request terminates. The user can then re-issue the request once the data has been staged.

EXAMPLES

<u>Example 1. Request solar zenith angle and local solar time for UDTF 92010,0, latitude 20 deg., longitude 230 deg., and altitude 23 km.</u>

```
$ OASERVICE    SZA_LST -
               /LONG = ( 230 ) -
               /LAT = ( 20 ) -
               /ALT = 23 -
               /START = ( "U92010 0" )
```

Output:

```
Orbit/Attitude Services -- Solar Zenith Angle and Local Apparent Solar Time

Solar Zenith Angle                 Local Apparent Solar Time
    (degrees)                              (hours)

----------------------------------------------------------------------------

    62.46179                              15.215

----------------------------------------------------------------------------
```

5.14 Request Skymap Identifier Dump

> When this service is requested, the user sees the list of skymap
> identifiers with the abbreviation for the star name for all stars in the
> UARS CDHF star catalog.

MENU TREE   Orbit/Attitude services
Request SKYMAP ID dump

COMMAND $ OASERVICE   STRDMP

PARAMETERS STRDMP is the keyword used to select this orbit/attitude service

QUALIFIERS   /FILE = *filename*
/HELP

DESCRIPTION The entire list of Skymap identifiers is printed with the 12 character
abbreviation for star name.

This function can be invoked from a menu or from the DCL
command. The menus prompt for the desired parameters. To user
the command mode, control information is input through parameters
and qualifiers. In either mode, an acknowledgement of the request is
returned to the requestor.

ERROR   All input parameters and qualifiers are checked for validity.
PROCESSING Error message sent to the screen for interactive requests. Errors
cause the request to be ignored. For requests made from a command
procedure, error messages are returned through SYS$OUTPUT.

If the star catalog is not on-line when the request is made, the user is
informed, a staging of the data is spawned, and the request
terminates. The user can then re-issue the request once the data has
been staged.

EXAMPLES

Example 1. Request the dump from the command line.

       $ OASERVICE   STRDMP

Output:

```
   SKYMAP ID          STAR NAME
   ---------          ---------
      10140      30        PSC
      30106      2         CET
      80054      21 ALF    AND
      90020      11 BET    CAS
      90055         EPS    PHE
     130041      88 GAM    PEG
     140096      7         CET
     180051      25 SIG    AND
     190067      8  IOT    CET
     190115         ZET    TUC
     250030         BET    HYI
     260042         KAP    PHE

... Many stars are skipped
    for brevity in this example...


   23390141      17 IOT    PSC
   23400060      19 KAP    AND
   23420008      18 LAM    PSC
   23420094     105 OMG2   AQR
   23480140         DLT    SCL
   23570137      84 PSI    PEG
   23580056
   23590054      28 OMG    PSC
   23590152         EPS    TUC
   33470001     IRC +10    216
   34150001     IRC +30    219
   44450001     IRC +40    448
```

Example 2. Star Dump Request

```
STRDMP    (       )                    STAR DUMP



    Select query results output mode?     F
         [F]ile or [D]isplay

    Enter User Comment for file header:
    THIS IS A USER COMMENT
    Enter output filename:   STAR_DUMP_TEXT.FILE









    NextField(TAB)    OAMenu(PF3)    UARS>(PF1)    Output(Enter)
                                                              DS   1 OF   1
UARS>                                                         PG   1 OF   1
```

```
STRDMP    (       )                    STAR DUMP



    Select query results output mode?     F
         [F]ile or [D]isplay

    Enter User Comment for file header:
    THIS IS A USER COMMENT
    Enter output filename:   STAR_DUMP_TEXT.FILE








    NextField(TAB)    OAMenu(PF3)    UARS>(PF1)    Output(Enter)
    OUTPUT IS IN FILE    STAR_DUMP_TEXT.FILE                  DS   1 OF   1
UARS>                                                         PG   1 OF   1
```

The output to this request is in the file called STAR_DUMP_TEXT.FILE in the user's current directory.

Section

6

Interactive Displays

6.1 Overview of Interactive Displays

> The users may monitor various UCSS functions by using interactive
> displays. These displays include the monitoring of UCSS status,
> production processing and data transfer activities.

The interactive displays provide the user a window into various components of the UCSS accounting. The user can look at the system processing with the system status displays. He can view production processing in various states of scheduling and completion. He can look at the status of RAC transfers and transfer requests. He can also look at quicklook transfer status. He can even view archived accounting data (with coordination from operations).

Displays can be brought up through either the UCSS menu system, in which case information about the desired display is asked for on a prompting screen; or through the DCL display command, where qualifiers are used to describe the information desired. In the following sections, examples of the display commands are given, followed by a picture of the prompting screen for the UCSS menu system. Then the resulting screen with the desired information, which results from both the display command and the prompting screen, is given.

When a time range is requested, the user can enter a start-time and a stop-time, or just a start-time (the stop-time defaults to current time), or the number of hours ago to current time in desired time range (defaults to 24 hours).

Wildcards can be used in most (non-time) fields. For example JOBID can be input as "HAL*"; thus all jobs with first three letter of HAL are found.

If a qualifier is used that is not allowed for that display, it is ignored, with the display still generated.

Accounting data is archived from the online accounting tables after a period of time has elapsed. This archival is done to increase the efficiency of accessing the current accounting information. Most of the displays allow the user to access archived data. However, the operations personnel must be involved in acquiring the archived data. Data in a specified time range can be loaded into the system in a special reporting area. By answering YES to the archive question on the display prompting screens, data is pulled from these reporting tables. The regular accounting tables are ignored in this case.

Table 6.1 summarizes the individual displays described in the remainder of this section. The user should note that some displays have more than one screen's worth of information; those screens can be accessed by typing 'P' in the UARS input line; or by using the keypad dash and comma keys. 'P' brings up the next page; or 'P 4' brings up page 4. The page numbers appear in the bottom right hand corner of the screen.

DISPLAY CLASS	SECTION	DISPLAY NAME	DISPLAY COMMAND KEYWORD	DESCRIPTION
System	6.2	System Status	STATUS	Summary of data transfers and production processing status for the last 24 hours.
Production Processing	6.3	Completed Production Processing	PRODUCTION	List of completed production jobs in the order of most recently completed first.
	6.4	Production Accounting Record	PAR	Display of the contents of production accounting record. This record describes an active or completed production job.
	6.5	Active/Pending Production Jobs	ACTIVE_JOBS	List identifying the production jobs currently processing.
	6.6	Active Schedule Requests	ACTIVE_SRQS	List of schedule requests that have not expired. A schedule request results in the scheduling of one or more jobs.
	6.7	Production Monthly Resource Summary	RESOURCE	A summary of resources used by production jobs can be displayed to provide an indication of the resources used during the month for a particular job or instrument.
RAC Data Transfer	6.8	RAC Transfer Schedule	RAC_XFR_SCH	List of transfers to/from a specified RAC
Other	6.9	Quicklook Transfer Summary	QL_XFR_SUMMARY	List of completed quicklook transfers from the DCF to the CDHF

Table 6.1.   Summary of Displays

6.2 System Status

> The operator/user can monitor the status of various elements of the
> UCSS by invoking the system status display. This display provides
> summary status information for RAC data transfers, production
> processing, DCF transfers, quicklook transfers and FDF transfers.

MENU TREE   Display Services
                      UCSS System Status

COMMAND $ DISPLAY   STATUS

PARAMETERS STATUS is a keyword used to select this display.

QUALIFIERS /PERIOD=*nnn*

                  The time period in hours on which to report; i.e., the current time
minus *nnn* hours to now. This value defaults to 24.

DESCRIPTION The System Status Display shows the status of various UCSS processing
activities over the last *nnn* hours. This means that the data is
collected over the time period starting at the current time - 24 (or
nnn) hours and ending with the current time. The time range applies
to only RAC transfers and production processing statistics.

The first block of information presented is the average number of
interactive users over the last few minutes. The data is presented for
each node in the CDHF cluster that supports interactive users.

The RAC transfer statistics report those transfers in progress,
completed successfully, pending, failed, and cancelled during the
specified time period. Unknown statuses are errors.

- <u>Transfers in progress</u> include transfers currently transmitting data,
  that have failed and are waiting to be retried, and those transfers
  being retried.

- <u>Successful</u> RAC transfers are successfully completed transfers.

- <u>Pending</u> RAC transfers are transfers that have been requested
  during this time range but not yet started, or transfers waiting for
  file staging.

- <u>Failed</u> RAC transfers are transfers that have failed because of a failure in data transfer, file staging, exceeding line quotas, startup failure, or copy completion status failure.

- <u>Cancelled</u> RAC transfers are those transfers manually cancelled by the user or operator.

- <u>Unknown</u> specifies statuses that have been added to the system but not included in the display. Any non-zero entries here should generate a problem report to the software maintenance team.

The last level 0 data transfer that was completed is reported with its UARS day and completion time.

The production processing statistics report both the status of the scheduler and the progress of jobs over the reporting period.

- Jobs Successful and Jobs Failed refer to completed production processing.

- Jobs In Progress include those jobs submitted or running.

- Jobs pending include jobs scheduled, staging data, requesting space, or ready for execution.

The status of the schedule execution process itself is reflected after the title: "PRODUCTION PROCESSING". The following table shows the possible statuses and their meaning.

STATUS	MEANING
DOWN	Scheduler not functioning - No new jobs being started
ACTIVE-PRIO n	Scheduler active - Jobs started with VMS priority n
SUSPENDED	Scheduler suspended - No new jobs started until scheduler resumed
EXITING	Scheduler about to go down... Awaiting completion of all currently active production jobs

The data time ranges for the last three quicklook data transfers received is displayed.

The last UARS day processed by the orbit/attitude programs is reported in the lower right hand corner of the display.

Figures 6.2-1 and 6.2-2 present the prompting screen and a sample display.

```
STATPARM (    )        UCSS SYSTEM STATUS DISPLAY


The time period covered is from the current time
back to (current time - the number of hours entered below)

  Last ▉ hours




Continue(Enter)      LastMenu(PF3)
                                                        DS 1 of 1
UARS>                                                   PG 1 of 1
```

Figure 6.2-1.   The System Status Display Prompting Screen

```
SYSSTAT (    )              UCSS SYSTEM STATUS DISPLAY
              dd-mmm-yyyy hh:mm:ss  -  dd-mmm-yyyy hh:mm:ss
  CURRENT AVG. NO. INTERACTIVE USERS:   PRODUCTION PROCESSING   ACTIVE-PRIO 4
    CDHF1  21   CDHF2  14                  Successful       12
    CDHF3   3   CDHF4   5                  Failed            2
                                           In progress      13
TRANSFER    UA-> RAC-> FROM    TO          Pending          48
STATUS      RAC  UA   CATALOG CATALOG
------      ---  ---- ------- -------   QUICKLOOK DATA TIMES:
In progress  7    4      2      0         Newest: 2-FEB-1992 02:00:00
Successful  101   17     93      3         2nd:    2-FEB-1992 10:00:00
Pending      8    13     45      0         3rd:    2-FEB-1992 04:00:00
Failed       2    0      1       0
Cancelled    1    0      0       0      LAST UARS DAY FOR
Unknown      0    0      0       0         Definitive attitude: 39
                                           Definitive orbit:    38
LAST LO DATA TRANSFER STATUS:              Predicted orbit:     41
   Time received:  2-FEB-1992 12:24:00     Extracted attitude:  39
   UARS day: 125                           SSPP gimbal:         38

Continue(Enter)
                                                        DS   1 OF    1
UARS>                                                   PG   1 OF    1
```

Figure 6.2-2.   The System Status Display

ERROR   None
PROCESSING

SEE ALSO   Appendix B - OSR Display Services for
                   Menus/Prompting Sequences

<div align="center">

EXAMPLES

Example 1.   Command example changing period.

$ DISPLAY   STATUS   /PERIOD = 48

</div>

6.3 Completed Production Processing

> The Completed Production Processing Display provides a summary of recently completed production processing jobs.

MENU TREE   Display Services
                 Completed Production Processing

COMMAND $DISPLAY PRODUCTION

PARAMETERS PRODUCTION is a keyword used to select this display.

QUALIFIERS   /TIME=*start-time*   or

/TIME=*(start-time,stop-time)*
where:
   start-time is the earliest time from which to search
   stop-time is the latest time from which to search (defaults
    to current time)

The search time is applied against the start time of each production job. The time defaults to the last 24 hours.

/JOBID= *IIILJJJVVVVVVSSSDDDDXX* as defined in Appendix F

The /JOBID qualifier can specify wildcards that allow for a list of selected entries (see the examples).

/STATUS=*status*   or

/STATUS=*(status1, ... status4)*
where:

   status is one or more of the following:
      PASS
      FAIL
      FAIL-RECOVERED
      FAIL-UNRECOVERABLE

The STATUS qualifier may be a single status or list of statuses. The PASS status keyword may be negated to mean "not this status" by using the " ~ " key). PASS means that the job completed successfully. FAIL means that the job failed but has not been recovered. FAIL-RECOVERED means the job has been successfully recovered. FAIL-UNRECOVERABLE means the job was not recoverable.

DESCRIPTION A display is generated which lists the selected production jobs. The format of the display is shown in the examples. If no selection criteria are entered, all completed jobs are shown regardless of instrument, completion status, or time. Items are listed in reverse time order based on start-time of job. Items are shown until there are no more jobs that match the criteria or until the user exits the display.

Selection criteria may be used to reduce the scope of the display to items of interest.

Only one screen of information at a time is displayed. If there is additional information to display, it may be requested through the display prompt.

```
PRODPARM (        )      COMPLETED PRODUCTION PROCESSING

  Job identifier:
  (IIILJJJVVVVVSSSDDDDXX  e.g. HAL* )

  Select zero or more job selection criteria below with an 'X'
                       Pass
                       Fail
                       Fail-Recovered
                       Fail-Unrecoverable

  Selecting zero entries retrieves all records matching other criteria.

  Time range option:      (vms, Uudtf, Dday)
             1. Last    24   Hours
             2. From                        to current time
             3. From                        to

  Use archived data? (Y/N)  N
  Note:  Call operator to load archived data.
──────────────────────────────────────────────────────────
Continue(Enter)      UARS>(PF1)      LastMenu(PF3)
                                                    OS   1 OF   1
UARS>                                               PG   1 OF   1
```

Figure 6.3-1. The Completed Production Processing Display Prompting Screen

```
PRODCOMP (        )      COMPLETED PRODUCTION PROCESSING

      Job ID                    Status           Time Completed
  ──────────────────        ──────────────    ──────────────────
  HRD300800003021012503     PASS              10-JUL-1993 19:55:34
  HRD300800003021012502     RECV              10-JUL-1993 13:33:55
  HRD062000003021012500     FAIL              10-JUL-1993 19:38:34



──────────────────────────────────────────────────────────
Continue(Enter)      Page(,or-)
                                                    OS   1 OF   1
UARS>                                               PG   1 OF   n
```

Figure 6.3-2. The Completed Production Processing Display Screen Layout

ERROR PROCESSING Internal table errors are reported by error messages.

SEE ALSO   Appendix B - OSR Display Services for Menus/Prompting Sequences
                            3.2.1 Definition of Qualifiers for Catalog

EXAMPLES

Example 1. Simple Command:

           $ DISPLAY   PRODUCTION

The above command produces the display with all entries for all completed production programs presented.

Example 2. Use of qualifiers:

           $ DISPLAY   PRODUCTION -
                        /JOBID = HAL* -
                        /STATUS = ~PASS

The above command produces a display of HALOE production processing for runs that did not pass (as specified by the symbol '~').

Example 3. Use of Job ID Wildcards

           $DISPLAY   PRODUCTION
                        /JOBID=HAL0*

The above command produces a display of HALOE level 0 production processing for last 24 hours (the time default).

Example 4. Use of Specified Times

           $DISPLAY   PRODUCTION
                        /TIME = ("23-APR-1989 12:00:00", -
                                        "30-APR-1989 23") -
                        /JOBID = HAL0*

The above example produces a display of HALOE production processing for level 0 data from noon April 23, 1989 to April 30, 1989 23 hours (11 p.m.).

6.4 Production Accounting Record

| The contents of production accounting records may be displayed. |

MENU TREE   Display Services
                      Production Accounting Record

COMMAND $ DISPLAY PAR

PARAMETERS   PAR is a keyword used to
                      select this display.

QUALIFIERS   /JOBID = *job-identifier*

where the *job-identifier* is defined in Appendix F

If the /JOBID qualifier is provided, it is used as an additional method of limiting the data for display. Partial job identifiers are valid. See the examples.

/TIME = *time-of-completed-processing* or

/TIME = *(start-time,stop-time)*

A time value may be specified to indicate that the record list contains entries after the time provided or in the time range specified. The time is applied to the completion time of the processing. The default time is 24 hours.

DESCRIPTION   If the display request is made from the menu system, then a prompting display is presented to ask for the job identifier and time constraints (see Figure 6.4-1).

The entire contents of the selected record job summary and job steps information) is presented on a set of multi-page displays. The format of the display containing the record content is shown in Figure 6.4-3.

There is a limit to the number of lines that can be displayed in this display. This limit is set high and is not likely to be reached. If the limit is reached, a warning message is output on the display message line.

The user can exit the display anytime by entering a 'T' at the UARS> prompt. The user may view the various pages with the 'Page' command or keypad dash and comma keys.

After the report is displayed, a prompting screen appears which asks the user if he wants to go back to the list of jobs to chose another job for which to see the report. If he chooses to go back, he can then choose another job to see the detailed information for, or he can terminate the display.

```
PARPARM    (      )   PRODUCTION ACCOUNTING RECORD SELECTION


   Job identifier (optional):  ███████████████████████
         ( IIILJJJVVVVVSSSDDDDXX e.g. HAL* )


   Time range option: █     (vms, Uudtf, Dday)
            1. Last  ██  Hours
            2. From  ████████████   to current time ████████
            3. From  ████████████   to ███████████


   Use archived data? (Y/N)  █
   Note:  Call operator to load archived data.

─────────────────────────────────────────────────────────
Continue(Enter)      UARS>(PF1)      LastMenu(PF3)
                                                   DS   1 OF   1
UARS>████████████████████████████████████         PG   1 OF   1
```

Figure 6.4-1.   The Production Accounting Record Display Prompting Screen

```
PRODACCT (         )          PRODUCTION ACCOUNTING RECORD

 #        Job ID              CPU    Status  Job Start Time   Job Stop Time
 ───  ──────────────────────  ─────  ──────  ───────────────  ───────────────
 1    PEM301100004007012500   CDHF3  RUN     23-JUL-91 20:36
 2    ISA300100004006012602   CDHF3  FAIL    23-JUL-91 18:58  23-JUL-91 19:12
 3    ISA300100004006012601   CDHF3  FAIL    23-JUL-91 18:53  23-JUL-91 18:53
 4    HRD100400001006012500   CDHF4  RUN     23-JUL-91 18:51
 5    ISA300100004006012600   CDHF3  FAIL    23-JUL-91 18:51  23-JUL-91 18:51
 6    ATTN00100001010012502   CDHF4  FAIL    23-JUL-91 18:28  23-JUL-91 18:28
 7    WIN100300001001012500   CDHF3  FAIL    23-JUL-91 18:15  23-JUL-91 18:15
 8    PEM200300004003012606   CDHF4  PASS    23-JUL-91 17:29  23-JUL-91 18:06
 9    PEM200300004003012605   CDHF4  FAIL    23-JUL-91 17:04  23-JUL-91 17:05
             Select Job ID: █
─────────────────────────────────────────────────────────────────────
Continue(Enter)      UARS>(PF1)      LastMenu(PF3)
                                                   DS   1 OF   1
UARS>████████████████████████████████             PG   1 OF   1
```

Figure 6.4-2.   The Record Selection Display

ERROR PROCESSING   Internal table errors are reported by error messages.

SEE ALSO   Appendix B - OSR Display Services for Menus/Prompting Sequences
3.2.1   Definition of Qualifiers for Catalog

EXAMPLES   Sample commands:

$ DISPLAY   PAR

This command invokes the prompting display and lists all records in descending time order for selection of the desired entry.

$ DISPLAY   PAR   /JOBID = xxxxxxxxx

If *xxxxxxxxx* is a completed job identifier, then the prompting display contains only that one entry.

$ DISPLAY   PAR   /JOBID = HAL*

In this case the job identifier indicates only HAL entries be listed.

$ DISPLAY   PAR   /JOBID = HAL1

In this case the job identifier indicates only HAL Level 1 entries be listed.

```
                        JOB SUMMARY REPORT

UCSS JOB ID:   HRDCINDY0619991C000004          JOB COMPLETION STATUS: FAIL

UCSS VERSION:  5.1                             UOAS_VERSION: NOT SUPPLIED

JOB START TIME:  19-JUN-1991 15:57:00          JOB STOP TIME: 19-JUN-1991 16:10:44

JOB CPU USAGE:   0 00:03:55.66                 CPU ID: CDHF2

DIRECT I/O COUNT:     5044                     BUFFERED I/O COUNT:    11970

MAX WORKING SET SIZE:     4019


JOB ERROR MESSAGES:

  %PFA-W-INVFINDISP, file closed with an inappropriate final disposition
                 uncataloged file HRDI_L3A_LID_1 left with disposition of HELD
  %PFA-W-INVFINDISP, file closed with an inappropriate final disposition
                 uncataloged file HRDI_L3A_LID_2 left with disposition of HELD
  %PFA-W-INVFINDISP, file closed with an inappropriate final disposition
                 uncataloged file HRDI_L3A_LID_3 left with disposition of HELD
  %PFA-W-INVFINDISP, file closed with an inappropriate final disposition
                 uncataloged file HRDI_L3P_LID_1 left with disposition of HELD
  %PFA-W-INVFINDISP, file closed with an inappropriate final disposition
                 uncataloged file HRDI_L3P_LID_2 left with disposition of HELD
  %PFA-W-INVFINDISP, file closed with an inappropriate final disposition
                 uncataloged file HRDI_L3P_LID_3 left with disposition of HELD
```

Figure 6.4-3.   An Example Containing Errors (1 of 3)

```
REPORT  (      )          PRODUCTION ACCOUNTING RECORD

UCSS JOB ID: HRDCINDY0619910000004    JOB STEP NUMBER:      PROGRAM ID: LO_TO_L3AL_HELD1

PROCESSING_TIME_RANGE: 02-FEB-1992 00:00:00 - 04-FEB-1992 23:59:59   UARS PRIMARY PROCESSING DAY:


INPUT PARAMETERS:

        PARAMETER NAME          PARAMETER VALUE

        BASE_INDEX              1
        L3A_EST_FSIZE           400
        L3P_EST_FSIZE           150
        MAX_NUM_WORDS           10
        MAX_POINTS              30
        MAX_REC_COUNT           15
        NUM_POINTS              30
        NUM_WORDS               10
        PARAM1                  VALUE1
        PARAM10                 VALUE10
        PARAM11                 VALUE11
        PARAM2                  VALUE2
        PARAM21                 VALUE21
        PARAM22                 VALUE22
        PARAM23                 VALUE23
        PARAM24                 VALUE24
        PARAM25                 VALUE25
        PARAM26                 VALUE26
        PARAM27                 VALUE27
        PARAM28                 VALUE28


CATALOGED INPUT FILES:

                                                  UARS                     CALIBRATION   SOURCE
        LOGICAL FILE ID    TYPE      SUBTYPE  LEVEL DAY   VERSION  CYCLE        ID         ID

        HRDI_LEVELO_LID    HRDI                 0   125   9998     1
        HRDI_LEVELO_LID    HRDI                 0   126   1        1
        HRDI_LEVELO_LID    HRDI                 0   127   1        2
        QUAL_LEVELO_LID    QUALITY              0   125   9998     1
        QUAL_LEVELO_LID    QUALITY              0   126   1        5
        QUAL_LEVELO_LID    QUALITY              0   127   1        5
        SLP_EPHEMERIS      SLPEPHEM                 1     2        10


OUTPUT FILES:

                                             UARS                   EST  ALLOCATED      CALIBRATION
        LOGICAL FILE ID    TYPE     SUBTYPE  LEVEL DAY  VERSION CYCLE SIZE  SIZE  DISP       ID

        HRDI_L3A_LID_1    HRDI     TEMP      3AL  125    9       0   400   402  HOLD
        HRDI_L3P_LID_1    HRDI     TEMP      3LP  125    9       0   150   150  HOLD
        HRDI_L3A_LID_2    HRDI     TEMP      3AL  126    9       0   400   402  HOLD
        HRDI_L3P_LID_2    HRDI     TEMP      3LP  126    9       0   150   150  HOLD
        HRDI_L3A_LID_3    HRDI     TEMP      3AL  127    9       0   400   402  HOLD
        HRDI_L3P_LID_3    HRDI     TEMP      3LP  127    9       0   150   150  HOLD


SCRATCH FILES:

                        EST  ALLOCATED
        LOGICAL FILE ID SIZE   SIZE   DISP                           SCRATCH FILE NAME


USER STATUS FILES:

        USER STATUS
        FILE NUMBER                             USER STATUS FILE NAME

            1          CSC$DISK:[UCSSOPS.TEST_DATA]HRD3008_3_1.USR;30
            2          CSC$DISK:[UCSSOPS.TEST_DATA]HRD3008_3_2.USR;30
```

Figure 6.4-3. An Example Containing Errors (2 of 3)

```
ERROR MESSAGES:

    %PFA-W-UNKOPTSFOU, optional description id not available for current file
                      Error in CLOSELF: Generating SFOU record for level-3LP file HRDI_L3P_LID_1
    %PFA-W-FILETMGAP, time between successive files exceeds normal inter-record gap
                      READLO/QUALRD err: gap precedes time  92034:00018432 on file: QUAL_LEVELO_LID
    %PFA-W-UNKOPTSFOU, optional description id not available for current file
                      status not normal after hrdi level-3LP CLOSELF
    %PFA-W-FILETMGAP, time between successive files exceeds normal inter-record gap
                      READLO/QUALRD err: gap precedes time  92034:00041984 on file: HRDI_LEVELO_LID
    %PFA-W-FILETMGAP, time between successive files exceeds normal inter-record gap
                      status not normal after qualrd
    %PFA-W-UNKOPTSFOU, optional description id not available for current file
                      Error in CLOSELF: Generating SFOU record for level-3LP file HRDI_L3P_LID_2
    %PFA-W-FILETMGAP, time between successive files exceeds normal inter-record gap
                      status not normal after readlO of hrdi
    %PFA-W-FILETMGAP, time between successive files exceeds normal inter-record gap
                      READLO/QUALRD err: gap precedes time  92035:00060416 on file: QUAL_LEVELO_LID
    %PFA-W-UNKOPTSFOU, optional description id not available for current file
                      status not normal after hrdi level-3LP CLOSELF
    %PFA-W-FILETMGAP, time between successive files exceeds normal inter-record gap
                      READLO/QUALRD err: gap precedes time  92035:00018432 on file: HRDI_LEVELO_LID
    %PFA-W-FILETMGAP, time between successive files exceeds normal inter-record gap
                      status not normal after qualrd
    %PFA-W-UNKOPTSFOU, optional description id not available for current file
                      Error in CLOSELF: Generating SFOU record for level-3LP file HRDI_L3P_LID_3
    %PFA-W-FILETMGAP, time between successive files exceeds normal inter-record gap
                      status not normal after readlO of hrdi
    %PFA-W-UNKOPTSFOU, optional description id not available for current file
                      status not normal after hrdi level-3LP CLOSELF


PROGRAM START TIME: 19-JUN-1991  5:57:05        PROGRAM STOP TIME: 19-JUN-1991 16:07:53
PROGRAM COMPLETION STATUS:                      PROGRAM CPU USAGE:    2 09:09:22.88
DIRECT IO COUNT:                                BUFFERED IO COUNT:
```

Figure 6.4-3.   An Example Containing Errors (3 of 3)

6-14

6.5 Active/Pending Production Jobs

> The Active/Pending Production Jobs display presents a list of the active
> and pending production jobs in reverse time sequential order based on
> scheduled start time.

MENU TREE   Display services
Active/pending production jobs

COMMAND $ DISPLAY ACTIVE_JOBS

PARAMETERS   ACTIVE_JOBS is a keyword used to select this display.

QUALIFIERS   None

DESCRIPTION   A display is generated listing the active and pending production jobs in reverse time order based on scheduled start time. As many screens as needed are generated under user control.

An active job is a job whose job status is "Submitted" or "Running". Pending jobs include those jobs scheduled but held by the operator, jobs staging data before execution, and jobs ready for execution but are awaiting a particular time for execution. See the table on the opposite page.

The TEST flag means that the output from one or more job steps is test data. In other words, the job is run in test mode. The output data from test jobs has a file extension ending in "_TEST". The PRODUCTION flag means that this is production job as opposed to a non-production job. A production job operating on production data produces data files ending in "_PROD". A production job running test data has files ending in "_TEST".

ERROR PROCESSING   Internal table errors are reported by error messages.

SEE ALSO   None

EXAMPLES   Sample Display

```
ACTVJOB (        )        ACTIVE & PENDING PRODUCTION JOBS

    Job ID              Day   Job Status   Flags   Scheduled* / Submit Time
--------------------    ----  ------------  -----  ------------------------
WIN100300001001012501   125   SCHEDULED    HTP    23-JUL-1991 01:00:00  *
HAL300100002004012500   125   SCHEDULED    HTP    22-JUL-1991 01:00:00  *
PEM200300004001012501   125   SCHEDULED    HTP    18-JUL-1991 00:00:00  *
HAL300100002003012500   125   SCHEDULED    HTP    18-JUL-1991 01:00:00  *
PEM200300002008012500   125   SCHEDULED    HTP    12-JUL-1991 11:00:00  *
MLS100200001026012600   126   SCHEDULED    HTP    10-JUL-1991 15:00:00  *
SOL300200002048012500   125   EXPAND/EDIT  TP     10-JUL-1991 00:00:00  *
MLS100200001030012600   126   SCHEDULED    HTP    10-JUL-1991 00:00:00  *


Flags:  H: Held by operator       T: Test job          P: Production data
* Scheduled start time used for pending jobs, submit time for active jobs

Continue(Enter)      Page(.or-)
                                                              DS   1 OF   1
UARS>                                                         PG   1 OF   1
```

Figure 6.5. The Active/Pending Production Jobs Display

JOB STATUS	MEANING
SUBMITTED RUNNING	Job has recently started Job is being processed
SCHEDULED STAGING SPACE READY IN EXPANSION/EDIT	Job ready for staging to begin Staging of data in progress Waiting for output disk space Availability of resources verified and job awaiting start time or CPU Job is currently being created or modified

FLAGS	KEY	MEANING
H T P	HELD TEST PRODUCTION	Held by the operator Job creates test output Job is a production job

6.6 Active Schedule Requests

> The user may display a list of active schedule requests. An active
> request may correspond to a job that is awaiting an event to occur.
> Active requests are defined to be any request that has not expired
> (expired means all jobs associated with the request were run).

MENU TREE   Display services
Active schedule requests

COMMAND $ DISPLAY ACTIVE_SRQS

PARAMETERS   ACTIVE_SRQS is the keyword used to select this display.

QUALIFIERS   None

DESCRIPTION   A display is generated which lists the active schedule requests. Entries
are displayed in the order they occur in the Schedule Request list. As
many screens as needed are generated under user control.

The Schedule Request Table is used by operations personnel to
define how often a job is scheduled, on what node the job is
scheduled, and how to resolve scheduling conflicts.

The expansion status is shown for each request. The status reflects
the situation when the last schedule expansion was performed (as
opposed to the possible current status).

Jobs awaiting an event have the status of MSNGFILE if a
precondition for execution includes a catalog file that does not yet
exist. They have a status of WAITJOB if a precondition for execution
includes awaiting the execution of a previous job's processing and that
job has not yet completed.

Operations personnel may block the further creation of jobs in the
schedule expansion process by defining one of the logical names that
are set up for that purpose. If a job is not created because of the
existence of one of these logical names, then the status is
LNMBLOCK.

If there is more than one request for a production job's processing of
a given day, there is a request conflict. If this occurs, the request that
has been assigned a lower priority is skipped for that job creation.
The status in the lower priority request is set to CONFLICT.

A schedule request usually is set up to process a range of UARS days. The processing is planned to occur over an established time period. Therefore, the percentage complete of the planned work may be calculated and compared to the rate of actual work. If the actual work is performed at a rate ahead of the planned rate of performance (based on percentages planned vs. percentages actually performed), then the expansion status is set to AHEAD.

If during the expansion process, it is found that not all necessary information has been input by the operator, a INCMPLETE results. If a data base or other non-recoverable error occurs during job expansion, an ERROR results. More error information can be found in the UCSS Log.

ERROR PROCESSING   None

SEE ALSO   None

```
CHDREQ  (          )              ACTIVE SCHEDULE REQUESTS

                      Day        Last Day    Expansion
      Request ID      Range      Scheduled   Status      Last Expansion Time
      --------------- ---------  ---------   ----------  -----------------------
      ATTN00100001001 125 -125     0         MSNGFILE    24-JUL-1991 14:00:45
      CLA100100002003 125 -125     0         ALRDYSC     24-JUL-1991 14:01:16
      HAL300100001040 125 -125     0         INCMPLETE   24-JUL-1991 14:02:40
      HAL300100001041 52  -52      0         INCMPLETE   24-JUL-1991 14:02:41
      HAL300100001042 126 -126     126       INCMPLETE   24-JUL-1991 14:02:42
      HAL300100001045 126 -126     126       INCMPLETE   24-JUL-1991 14:02:47
      HAL300100001050 126 -126     126       INCMPLETE   24-JUL-1991 14:02:54
      HAL300100001051 127 -127     127       INCMPLETE   24-JUL-1991 14:02:55
      HAL300100002007 125 -125     0         ALRDYSC     24-JUL-1991 14:03:13
      HAL300100002009 126 -126     126       INCMPLETE   24-JUL-1991 14:03:15
      HAL300100002010 126 -126     126       INCMPLETE   24-JUL-1991 14:03:17
      HAL300100002011 126 -126     126       INCMPLETE   24-JUL-1991 14:03:18
      HRD300100001003 125 -125     125       INCMPLETE   24-JUL-1991 14:03:56
      HRD300100001004 125 -125     125       INCMPLETE   24-JUL-1991 14:03:57
      HRD300100001005 125 -125     125       INCMPLETE   24-JUL-1991 14:03:58

Continue(Enter)    Page(,or-)
                                                           DS   1 OF   1
UARS>                                                      PG   1 OF   6
```

Figure 6.6.   The Active Schedule Requests Display

EXPANSION STATUS	MEANING
OK	Okay to expand
MSNGFILE	A required catalog file was not available
WAITJOB	Job awaiting completion of previous job(s)
ALRDYSC	Job was scheduled
ALRDYEXPD	Job was fully scheduled (multiply scheduled to max)
LNMBLOCK	Job creation stopped because logical name was defined in the system
CONFLICT	Request conflicts with another request specified with the same job definition
AHEAD	Request is ahead of schedule
INCMPLETE	Request is not complete
ERROR	Error in expansion

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6.7 Production Monthly Resource Summary

> A monthly summary of resources used by production processing can be displayed. Information is selectable by job instrument, and (optionally) level and sequence number and time.

MENU TREE   Display services
Production monthly resource summary

COMMAND $ DISPLAY RESOURCE

PARAMETERS   RESOURCE is the keyword used to select this display.

QUALIFIERS   /INSTRUMENT = *instrument* (3 characters)

An instrument <u>must</u> be supplied. The 3-character instruments are identified in Appendix C.

/LEVEL = *data-level* (1 character)

/SEQNUM = *sequence number* (3 characters)

This sequence number is part of the job identifier.

/MONTH = *month-year combination (MMMYY)*

This qualifier cannot be used with the /TIME qualifier.

/TIME = *time-of-completed-processing* or

/TIME = *(start-time,stop-time)*

A time value may be specified to indicate that the record list contains entries after the time provided or in the time range specified. The time is applied to the completion time of the processing. This qualifier cannot be used with the /MONTH qualifier.

DESCRIPTION A display is generated which lists the resources used for an instrument (or type), or for an instrument plus level, or for an instrument plus level plus sequence-number. Only the instrument is required input; the level and sequence-number are optional. (Do not supply a sequence number without a level). The sequence-number is the 3-character portion of the job identifier following instrument and level (see Appendix F for description of the job identifier).

A time range can be input as either a month and year, or as a start and stop time. If no time range is given, the current month and year are assumed. If only a start time is given, the interval is the start time to the present time.

During display generation, the search status is maintained on the display message line.

ERROR PROCESSING Internal table errors are reported by error messages.

SEE ALSO 3.2.1 Definition of Qualifiers for Catalog

EXAMPLES Sample commands:

```
$ DISPLAY  RESOURCE   /INSTRUMENT = HAL -
                      /LEVEL = 1 -
                      /SEQNUM = 003
```

This example generates the resource summary for all jobs with the specified job instrument, level and sequence number (the first 7 characters of the job identifier; see Appendix F for job identifier description).

```
$ DISPLAY  RESOURCE -
           /MONTH = JUN93 -
           /INSTRUMENT = SUS
```

This example generates the resource summary for SUSIM jobs in the specified month.

```
RSRCPARM (   )    PRODUCTION MONTHLY RESOURCE SUMMARY PROMPT

Instrument:
Level:            ▄▄  (optional)
Sequence number:  █▌  (optional)


Time Range (fill in one of the following):
  1. Month / Year (MMMYY):
  2. Time (vms, Uudtf, Dday):  ████████    - ██████████




  Use archived data? (Y/N)  ▓
  Note:  Call operator to load archived data.


─────────────────────────────────────────────────────────────────
Continue(Enter)      UARS>(PF1)        LastMenu(PF3)
                                                         DS  1 OF  1
UARS>                                                    PG  1 OF  6
```

Figure 6.7-1. The Production Monthly Resource Summary Prompting Screen


```
RESOURCE (       )  PRODUCTION RESOURCE SUMMARY

             For Job: HRD****
             For time: 01-JUL-1991 00:00:00    - 31-JUL-1991 23:59:59

  Node  CPU Time: Direct I/Os:  Buffered I/Os:  No. Jobs Completed:    12
  CDHF4  0 02:09:05.53 275261       74563       No. Jobs Passed:        0
                                                No. Jobs Failed:       12
                                                Total Wall Clock Time:
                                                   0 07:29:32.98

  JOB DEF ID          UARS DAYS PROCESSED
  ------------        ----------------------------------------------------
  HRDI100400001       HRDI VERSION 3.1
                      125   126   127   128   129   130   131   132   133   134   135

  HRDI300100001       HRDI V3
                      125   126   127


─────────────────────────────────────────────────────────────────
Continue(Enter)      Page(,or-)
                                                         DS  1 OF  1
UARS>                                                    PG  1 OF  1
```

Figure 6.7-2. The Production Monthly Resource Summary Display

6.8 RAC Transfer Schedule

> The user can display a list of transfers to/from the RAC which are in
> progress, pending initiation, or complete. He can specify a single
> RAC or all RACs.

MENU TREE   Display services
                  RAC data transfer schedule

COMMAND $ DISPLAY   RAC_XFR_SCH

PARAMETERS   RAC_XFR_SCH is a keyword used to select this display.

QUALIFIERS   /NODE = *node-name*

/REQUESTOR = *vms-user-name*

The search may be limited to a particular user request by the
/REQUESTOR qualifier.

/TIME = *time-of-completed-processing* or

/TIME = *(start-time,stop-time)*

A time value may be specified to indicate that the record list contains
entries after the time provided or in the time range specified. The
time is applied to the scheduled transfer time. The default time is the
last 12 hours.

/STATUS = *status-keyword*

The valid data transfer status keywords for limiting searches and also
the status shown in this display include the following:

PENDING	Transfer is awaiting event (e.g., staging, time) or in progress
SUCCESSFUL	Transfers completed successfully
COMPLETE	Transfer completed successfully, failed, or cancelled
FAILED	Transfer failed
CANCELLED	By operations or user
ALL	Includes all Complete, Cancelled, Failed, In-Progress or Pending transfers

If no status is given by the user, transfers for all statuses is displayed.

DESCRIPTION To produce this display, the user must provide sufficient information to extract data about the data transfers. This information is either provided by qualifiers or by the prompting display (see Figure 6.8-1). If no qualifiers are provided, then the prompting display is automatically generated. If no node is specified, information about all nodes is provided.

The time range qualifier is used to limit the displayed data to requests scheduled during a particular time period. If only one time is specified, then the data displayed is for requests submitted after the time specified.

Data is displayed in descending time order by scheduled time of transfer followed by descending time request was received.

Time data is displayed based on the status of the request:

Time	Status
completion time time cancelled time received time scheduled	successfully completed transfers cancelled transfers (transfers to RAC) transfers from RAC transfers to RAC for in progress, pending initiation, and other pending or failed statuses

The priority displayed can be one of the following:

Priority	Meaning
IMMEDIATE ASAP SCHEDULED BULK	Transfer file first Transfer files next Transfer at user requested time Transfer is scheduled for the bulk transfer time

Priority IMMEDIATE means that the operator has forced this transfer request to the highest possible priority. This means that for all transfers available for transferring now, this file is first in the queue to go out. ASAP means that the user has requested that the transfer occur when the resources are available. There are likely to be several files with this status. SCHEDULED status means that when the transfer was requested, the user indicated that transfer should be delayed until after a specified time. If a file has a status of BULK, then it is to be transferred during the bulk transfer time.

**ERROR
PROCESSING** Internal table errors are reported by error messages.

```
RACXPARM          RAC DATA TRANSFER SCHEDULE

  Enter zero or more of the following optional search qualifiers:

    Node:        ████████
    Requestor:   ████████████████

  Time Range based on scheduled time of transfer (vms, Uudtf, Dday):
                      ████████████████ - ████████████████

  Transfer status code selection:  █
          1- All                      4- Cancelled
          2- Pending                  5- Successful
          3- Completed:               6- Failed
             (Successful, cancelled, failed)

  Use archived data? (Y/N)  █

  Note:  Call operator to load archived data.


Continue(Enter)      UARS>(PF1)      LastMenu(PF3)
                                                      DS   1 OF   1
UARS>█████████████████████████████████████           PG   1 OF   1
```

Figure 6.8-1. The RAC Data Transfer Schedule Prompting Display

```
DATAXFR  (         )         RAC DATA TRANSFER SCHEDULE

Request ID        Size     Prio-      Transfer  Status
Source File Name  Blocks   rity    From    To    Time          Requestor
--------------------------------------------------------------------------
RDT_0000C5D1      234      ASAP    CDHF  USER  Transfer_successful
CORR_ZNMC_SMOISTURE_D0999.V0004_C01_PROD         24-JUL-1991 13:23 UCSSOPS5
--------------------------------------------------------------------------
RDT_0000C3D1      248430   ASAP    CDHF  MLSRAC Transfer_successful
MODEL_SGROSE_D0349.V0001_C01_PROD                20-JUL-1991 01:18 NAKAMURA
--------------------------------------------------------------------------
RDT_0000C2FO      21174    ASAP    CDHF  ISAMS  Transfer_successful
ISAMS_LO_D0053.V0001_C02_PROD                    19-JUL-1991 14:01 ROISIN
--------------------------------------------------------------------------
RDT_0000C145      24       ASAP    CDHF  USER   Transfer_successful
HALOE_L3AT_SALT_D0125.V0001_C04_PROD             18-JUL-1991 18:16 WIMPLE
--------------------------------------------------------------------------
RDT_0000BFF7      248430   ASAP    CDHF  MLSRAC Transfer_successful
MODEL_SGROSE_D0357.V0001_C01_PROD                18-JUL-1991 01:49 NAKAMURA
--------------------------------------------------------------------------

Continue(Enter)       Page(.or-)
                                                      DS   1 OF   1
UARS>█████████████████████████████████████           PG   1 OF  63
```

Figure 6.8-2. The RAC Data Transfer Screen Layout

6.9 Quicklook Transfer Summary

> The user can display information about recent completed quicklook transfers from the DCF to the CDHF.

MENU TREE   Display services
Quicklook transfer summary

COMMAND $ DISPLAY   QL_XFR_SUMMARY

PARAMETERS   QL_XFR_SUMMARY is a keyword used to select this display.

QUALIFIERS   None

DESCRIPTION   A display is generated which shows a summary of the recent quicklook transfers, sorted in descending time order by UARS day. The display indicates the UARS day, quicklook identifier, start/stop dates and time created on the UCSS. Also included is an indication of whether the data is test data.

ERROR PROCESSING   Internal table errors are reported by error messages.

SEE ALSO   None

EXAMPLES   Sample Display

```
QLXFER    (      )    QUICKLOOK DATA TRANSFER SUMMARY

Data UARS  QL   Test                                                      Created
Set  Day   ID   Data       Start Date            Stop Date                 Date
---  ---   --  --------  -------------------  -------------------   -------------
 1   126   1            03-FEB-1992 21:28:57  03-FEB-1992 22:59:37  03-FEB 23:34
 2   126   2 TEST DATA  03-FEB-1992 21:28:57  03-FEB-1992 22:59:37  03-FEB 23:34
 3   126   2            03-FEB-1992 21:28:57  03-FEB-1992 22:59:37  03-FEB 23:34
 4   125   3            02-FEB-1992 21:28:57  03-FEB-1992 22:59:37  03-FEB 23:34
 5   125   4            02-FEB-1992 21:28:57  03-FEB-1992 22:59:37  03-FEB 23:34
 6   125   6            02-FEB-1992 21:28:57  03-FEB-1992 22:59:37  03-FEB 23:34



Continue(Enter)        Page(.or-)
                                                            DS   1 OF    1
USER>                                                       PG   1 OF    1
```

Figure 6.9. Quicklook Transfer Summary Screen Layout

Section

7

Report Generation

7.1 Report Generation Overview

> The users may generate various reports summarizing production
> processing, data transfers, and resource utilization. Reports can be
> directed to files (and later printed) or displayed on the user
> terminal. Reports must be run on a node running INGRES.

A report is a collection of information about a topic in a format that can be printed. It is designed for 132 column printer output format. A report can be selected from the Reports Menu or by the RPT command. The RPT command has the following general format:

RPT   <report-id> [/FILE=*file-specification*] [/*report-qualifiers*]

　　　[ ] mean that the field(s) are optional

The report identifier is a pre-defined keyword. The following sections define the keywords for each report that is defined. The /FILE qualifier is optional. The report-qualifiers apply to the report selected.

Report output can be directed under user control to a disk file (using the /FILE qualifier) or to the screen. If the user selects the reporting function through the menu system, then the routing of output is dependent on the report selected. Most reports are implemented using the INGRES report writer tool. For these reports, the output is generated to the screen and the option to put a copy to the printer or a file is provided by menu selections at the bottom. If the report exceeds 80 columns on the screen, the user can use the Ctrl-L and Ctrl-H keys to pan left and right (See Help line on menu).

If a report is not generated through the INGRES report writer tool, then the output is controlled through the screen shown in Figure 7.1. Reports that exceed 80 columns are then output in a screen width of 132 where that is supported by the terminal.

REPORTS MUST BE RUN WHILE LOGGED ONTO AN INGRES NODE.

Print to a file. If the qualifier /FILE=*file-specification* is specified in the RPT command, then the report is written to that file specification. If the node name is specified, then the UCSS must have write permission to the node, device, and directory supplied. For example:

　　　$ **RPT** /FILE = *node::[directory]file-name   report-name*

Generate report on display screen. If the /FILE qualifier is not specified when generating a report from the command line, then the report is generated on the display screen as described before.

```
RPTPRMPT (        )              OUTPUT SELECTION METHOD



       1. Output to file specification
       2. Output to screen

       File specification:

       ████████████████████████████████████████████


 Keypad(1 or 2)    Continue(Enter)    LastMenu(PF3)
                                                         DS  1 OF  1
 UARS>                                                   PG  1 OF  1
```

Figure 7.1. Output Selection Method for Reports

Report output can be multiple screens/pages in length. When outputting to the screen, the output pauses at the end of each screen of data. For INGRES report writer screens, use the PAGE keys and CTRL-H and CTRL-L to shift the page. Otherwise, RETURN continues the report.

Reporting time range defaults. Most reports cover a default time range, although this time range can be redefined by the qualifier /TIME and in some cases /DAY or /MONTH. Many reports default to the most recent 24-hour time period. This time period is defined from the previous day at 6 a.m. local time to the current day at 6 a.m. local time. Other defaulted time periods (such as the last 7 days) also use the 6 a.m. time period to define the hour of day for the range.

Using Archived Data. Accounting data is archived from the online production accounting tables after a period of time has elapsed. Archival is done to increase the efficiency of accessing the current accounting information. Most of the reports allow the user to access archived data. However, the operations personnel must be involved in acquiring the archived data. Data in a specified time range can be loaded by the operator into the system in a special reporting area. By answering YES to the archive question on the report OUTPUT SELECTION METHOD screen, data is pulled from these reporting tables. The regular production accounting tables are ignored in this case.

Not all reports support archive data. The following reports can use archived data that is retrieved from archival storage:

- Schedule Request Status
- Production Job Summary
- DCF Transfer Log
- RAC Transfer History
- RAC Transfer Statistics
- ACRIM/MFT Processing Log
- Quicklook Transfer Log

- Job Accounting Record Summary
- Production Accounting Record Report
- Instrument Resource Usage Summary
- All Production Accounting Report
- Job Error Summary

7-3

REPORT CLASS	SECTION	REPORT NAME	REPORT COMMAND KEYWORD	DESCRIPTION
Production Processing	7.2	Schedule Request Status	SRQ	For a given job identifier set, List the processing status for each UARS day in the specified day range.
	7.3	Production Job Summary	JOB_SUM	Provide in several formats information about production processing.
	7.12	Job Accounting Record Summary	JAR	Provide information about the run of a production job to aid in post-execution analysis.
	7.15	Production Accounting Record Report	PAR	Recreates the reports provided at the end of a Production Job... Same as DISPLAY PAR, but to printer.
	7.17	Instrument Resource Usage Summary	USAGE	Provide time, cpu use, number of jobs, number of files and file size for all jobs grouped by instrument in a time range.
	7.18	Production Job Error Summary	JOB_ERROR	Provides most severe error of last step run.
	7.19	UARS CDHF Production Processing Status	UARS_CDHF_STAT	Provides the number of UARS days processed and the earliest and latest UARS day processed.
TRANSFER LOGS	7.4	DCF Transfer Log	DCF_XFR_LOG	List the data transfers over a specified period of time from the Data Capture Facility.
	7.5	FDF Transfer Log	FDF_XFR_LOG	List the data transfers from the FDF over a specified time period.
	7.6	RAC Transfer History	RAC_XFR_HIST	List the UCSS controlled transfers to and from the RACs over a specified time period.
	7.9	Correlative Transfer Log	CORR_XFR_LOG	List the data transfers of correlative data over a specified time period.
	7.10	Quicklook Transfer Log	QL_XFR_LOG	List the data transfers of quicklook data from the Data Capture Facility over a given time period.
RAC Data Transfer	7.7	RAC Transfer Statistics	RAC_XFR_STATS	Provides an accounting summary of the data transfers to/from the RACs over a specified time period.
	7.8	Pending RAC Transfer Request Status	RAC_XFRS	Provides a list of RAC data transfers to/from the RACs which are in progress or pending initiation.
	7.11	ACRIM/MFT Processing Log	ACRIM or MFT	List the ACRIM or MFT processing completed over a specified time period.
Other	7.13	Catalog Table Attributes	CAT_ATTS	Definition of the catalog attribute names, types, and sizes.
	7.14	Valid Catalog Attribute Summary Combinations	CDT	List of catalog attribute combinations.
	7.16	Archive Summary Reports	SUM_DATA_INGEST SUM_JOB_RESOURCE SUM_PROD_PROC SUM_RAC_XFR SUM_TAPE_GEN SUM_STAGE_REQ	Generates reports from the data in the archive summary tables. This data summarized accounting information that has been moved into data archival. Data is selected by time range. Information includes DCF data ingests, production job resource utilization, production processing summaries, RAC transfer accounting, tape generation accounting, and staging information.
	7.20	Correlative Data Summary	SUM_CORREL_DATA_FILES	Provides the number of correlative files in the catalog with start time in the time range by subtype and correlative PI.
	7.21	Disk Drive Summary Information	DUTIL	Provides name, status, size, quota, and usage of UCSS assigned disks.

Table 7.1. Summary of Reports

7.2 Schedule Request Status

> The Schedule Request Status Report provides for a specified job identifier set the processing status for each UARS day in the specified day range.

MENU TREE   Report Services
Production processing reports
Schedule request status

COMMAND $ RPT   SRQ [/FILE = *file-specification*]

    /JOBID_SHRT = *job-identifier*

    { /DAY = *(start-uars-day, stop-uars-day)* |

    /TIME = *(start-time, stop-time)* }

    [/ARCHIVE]

PARAMETERS SRQ is a keyword that selects this report.

QUALIFIERS   /FILE = *file-specification*

The /FILE qualifier specifies a file name to which the report is routed. If this qualifier is not specified, the report is displayed on the user's terminal.

/JOBID_SHRT = *job-identifier*

The job identifier specified here is expected to be a wildcarded portion of the full job identifier as defined in Appendix F. This qualifier is <u>required</u>. This parameter is not required in menu mode.

The first four characters of the job identifier are used to specify the data type and level (See Appendix F). If the job identifier is defined as follows, then the report describes processing for that data type and level:

    /JOBID_SHRT = IIIL*   or

    /JOBID_SHRT = III*

where III is the 3-character representation of instrument (see Appendix C) and L is the level (0,1,2,3). The asterisk is a wildcard which specifies all job identifiers that match the previous characters.

/DAY = *(start-uars-day, stop-uars-day)*

The day range defines the time range in which to search. If only one day is specified, data from only that day is reported. This defaults to the last 24 hour reporting period (see Section 7.1).

/TIME = *(start-time, stop-time)*

The time range can be VMS, UDTF, or UARS day format using this qualifier. See Section 3.2.2 of the Operations Guide or Section 3.2.1 of the User's Guide for more information. This defaults to the last 24 hour reporting period (see Section 7.1).

/ARCHIVE

The presence of this qualifier causes the report to include data from the accounting data archive report tables. The loading of the reporting tables must be coordinated with the operations personnel. See Section 7.1 for further discussion of archived data.

DESCRIPTION This report provides status for a specified job set across each UARS day in the UARS day range requested. The output is organized by providing information on each job related to each schedule request.

The information presented is sorted by request identifier, skeleton identifier, and sequence number.

JOB STATUS	MEANING
EDITING	Job being edited by schedule maintenance
SCHEDULED	Job ready for staging to begin
STAGING	Staging of data in progress
SPACE RQ	Waiting for output disk space
READY	Availability of resources verified
RDY CPUWT	Job is ready awaiting CPU
FILE WAIT	Job is awaiting availability of a file
SUBMITTED	Job has recently started
RUNNING	Job being processed
COMPLETE	Successfully completed
FAILED	Unsuccessfully completed
FAIL-FILE	Missing required input file
FAIL-SCHEDULING	Unsuccessfully completed
FAIL-CRASH	Cannot reserve disk space for output files or system crash
RECOVERY	Job Recovery in progress
UNRECOVER	Job Unrecoverable

Table 7.2-1. Job Submission Statuses

STATUS	DESCRIPTION
CATLG FILE NOT AVAILABLE	A required file did not exist at the CDHF
WAIT FOR PREVIOUS JOB	A precondition job was specified that has not yet completed
JOB FULLY SCHEDULED	The job is already on the schedule the maximum number of times
JOB CREATE STEP LOG NAME	A blocking logical name was specified in the precondition table, and this logical name was defined in the system- Multiple jobs can be blocked by specifying the same logical name as a precondition
CONFLICT W/ANOTHER RQST	The request conflicted for the next UARS day with another request for the same job, and the other request had a higher conflict priority
RQST AHEAD OF SCHEDULE	The request is 'ahead of schedule'; that is, a calculation of the number of jobs to run and how much time is allowed revealed that this job did not need to be scheduled
RQST INCOMPLETE	Some field of the Request or Job Definition was required but not specified. See the ERR command or the Expansion report file for further information
RQST EXPANSION ERROR	An error was detected during expansion. See the Expansion report file, or the Expansion .LOG file, for further information
RQST EXPIRED	This request is 'expired', it has already scheduled job for the last UARS day requested

Table 7.2-2. Job Expansion Statuses

ERROR PROCESSING   Invalid file specifications generate error messages and the request to be request to be ignored.

SEE ALSO

3.2.1 Definition of Qualifiers for Catalog (User's Guide)
3.2.2 Definition of Qualifiers for Catalog (Operations Guide)
6.3 Completed Processing
7.1. Report Generation Overview
Appendix C for 3-character instrument names
Appendix F for definition of job-identifier

```
PROCPARM (        )            SCHEDULE REQUEST STATUS

    Job identifier:   ███
    (IIIL    e.g., HAL* )

    Time range (vms, Uudtf, Dday):
              ███████████  -  ███████████


    Use archived data? (Y/N) █
    Note:  Call operator to load archived data.

_____
Continue(Enter)    UARS>(PF1)    Help(PF2)    LastMenu(PF3)    Keys(PF4)
                                                              DS   1 OF   1
 UARS> ███████████████████████████████████████████          PG   1 OF   1
```

Figure 7.2.1 Schedule Request Status Menu Screen

```
                      SCHEDULE REQUEST STATUS
                         for JOBID:  HAL%
                       UARS DAYS  125-126
              1-JAN-1992 00:00:00  -  17-MAR-1992 23:59:59

  Request ID       Job Def ID   Production  Test Expansion Status Start Day Stop Day Last Day Scheduled
  ---------------- -----------  ----------  ---- ---------------- --------- -------- ------------------
  HAL100100001004  HAL1001          T        T    MSNGFILE           125      125      125

            Day     Seq. No.   Submit Status       Submit Time
            ----    --------   -------------    --------------------
            125     00         SCHEDULED        24-AUG-1990 00:00:00


  Request ID       Job Def ID   Production  Test Expansion Status Start Day Stop Day Last Day Scheduled
  ---------------- -----------  ----------  ---- ---------------- --------- -------- ------------------
  HAL100100001009  HAL1001          T        T    AHEAD              125      125      125

            Day     Seq. No.   Submit Status       Submit_Time
            ----    --------   -------------    --------------------
            125     00         RECOVERY         27-AUG-1990 17:36:16
            125     01         RECOVERY         27-AUG-1990 19:26:59
            125     02         COMPLETE         28-AUG-1990 20:22:44
            126     00         SCHEDULED        28-AUG-1990 21:52:27
```

Figure 7.2.2 Schedule Request Status Report Format

7.3 Production Job Summary

> The Production Job Summary provides a variety of information about production processing. The information is available in several formats.

MENU TREE   Report services
Production processing reports
Production job summary
   - Job summary - summmary
   - Job summary - completed jobs
   - Job summary - all jobs
   - Job summary - by job definition

COMMAND $ RPT   JOB_SUM   [/FILE = *file-specification*]

   [/TIME = *(start-time,   stop-time)*]

   [/JOBID_SHRT = *job-identifier*]

   [/ARCHIVE]

   { /SUMMARY |

      /COMPLETE |

      /ALL |

      /JOB_DEF }

PARAMETERS   JOB_SUM is a keyword that selects this report.

QUALIFIERS   /FILE = *file-specification*

The /FILE qualifier specifies a file name to which the report is routed. If this qualifier is not specified, the report is displayed on the user's terminal.

/JOBID_SHRT = *job-identifier*

The job identifier specified here is expected to be a wildcarded portion of the full job identifier as defined in Appendix F. This qualifier is only <u>required</u> when the /SUMMARY qualifier is used.

/JOBID_SHRT is the job identifier where /JOBID_SHRT = IIIL*
where III is the 3-character representation of the instrument and L is the level (0,1,2,3). The asterisk is a wildcard which specifies all job identifiers that match the previous characters. If the job identifier is defined as follows, then the report describes processing for all levels for that data type, one level at a time.

/JOBID_SHRT = III*

/TIME = *(start-time, stop-time)*

or /TIME = *start-time*

The time range defaults to the 24 hour period defined in Section 7.1.

If only the start time is specified, the report covers from that time to the current time.

/ARCHIVE

The presence of this qualifier causes the report to include data from the accounting data archive report tables. The loading of the reporting tables must be coordinated with the operations personnel. See Section 7.1 for further discussion of archived data.

/SUMMARY

This qualifier selects the job summary report. This report presents the job status, start/stop time of processing, elapsed processing time, node, actual/normalized CPU usage, and direct/buffered I/O for the selected jobs. From the menus there are three sort options (job identifier, node, or the time the job began (job start time)).

/COMPLETE

This qualifier reports on completed production jobs. This report provides wall clock time, cpu use, disk use for each completed job step in the selected time range. Jobs are listed in ascending order by the job processing stop time. Jobs are selected if the start time falls in the time range. A job is considered complete if it has a status of PASS, FAIL, RECV, or UNRC.

/ALL

This qualifier reports on all production jobs in the selected time range, regardless of completion status. This report provides wall clock time, cpu use, disk use for each step of each job. The format is the same as that caused by the /COMPLETE qualifier. Job are listed in ascending time order by start time. Jobs are selected if the start time falls in the time range.

/JOB_DEF

This qualifier selects the job summary by job definition report. This report duplicates the Production Monthly Resource Summary Display. It presents a summary of the resources used by production

processing in the selected time range, and lists for each job definition the UARS days processed.

DESCRIPTION This report provides statistics about the production processing over a selected time range. Various formats for this information are provided to serve different purposes.

Since the data presented in many of the reports are similar, the following table may help determine which report to use. The full job identifier appears in all reports except the job definition report. This last report contains only the job definition portion, but it does report which UARS days are processed by each job definition.

In the table, Yes or No means that the report presents that data indicated by the header. Job means data is presented at the job level, Step means it is presented at the program step level. Counts means that only a count of the element or status is shown.

Report	Job ID	Status	Run Time Start/Stop	Elapsed Time	Node	Direct/ Buffered I/O	CPU Actual/ Normalized	Peak Work- ing Set	UARS days	Job Counts
Summary	Yes	Job	Job	Job	Yes	Job	Job	Yes	No	No
Complete	Yes	Job/Step	Job/Step	Job/Step	Yes	Job/Step	Job/Step	No	No	Yes
All	Yes	Job/Step	Job/Step	Job/Step	Yes	Job/Step	Job/Step	No	No	Yes
Job—Def	Jobdef	Counts	No	Total	No	By Node	By Node	No	Yes	Yes

The wall clock and CPU times of the job do not equal the sum of the job steps since the job times include the overhead of starting/stopping the job steps. The recovery process also affects these totals. This also applies to direct and buffered I/Os.

The reports present the job or step status. A failed job is expected to be processed by the operator into a recovered job or unrecoverable job. Job steps can attain a PASS or FAIL status. Jobs can attain a PASS, FAIL, UNRC (unrecoverable), or RECV (recovered) status. If the job is currently running, the job status is RUN.

ERROR PROCESSING Invalid file specifications generate error messages and cause the request to be ignored.

SEE ALSO
3.2.1 Definition of Qualifiers for Catalog (User's Guide)
3.2.2 Definition of Qualifiers for Catalog (Operations Guide)
7.1. Report Generation Overview

EXAMPLES

$RPT JOB-SUM /SUMMARY /JOBID-SHRT = CLA3 -

/TIME = ("28-NOV-1992:01:01:01", - "

29-NOV-1992:12:00:00") -

$RPT JOB-SUM /COMPLETE /JOBID-SHRT = HAL* -

/TIME = (28-NOV-1992, 29-NOV-1992) -

```
JOBPARM (        )              JOB SUMMARY

     Job identifier: ███
     (IIIL    e.g., HAL* )

     Time range (vms, Uudtf, Dday):
     ███████            -  ███████████

     Choose keypad option:
          Data ordered by:
                1. Job ID
                2. Node
                3. Time job begin

     Output file (or TT: for screen):
     TT:██████████████

     Use archived data? (Y/N)  █
     Note:  Call operator to load archived data.

Keypad(1...3)    UARS>(PF1)    Help(PF2)    LastMenu(PF3)    Keys(PF4)
                                                            DS  1 OF  1
UARS>█████████████████████████████████████████            PG  1 OF  1
```

Figure 7.3.1   Job Summary Prompting Screen (Summary)

```
                      JOB SUMMARY FOR ALL JOBS
                           SORTED BY JOB ID
                          UARS DAYS  190-191
             07-APR-1992 12:45:38  -  08-APR-1992 12:45:38


       Job ID        Start Time    Elapsed Time   Direct I/O    Actual CPU       Peak
     Job Status      Stop Time        Node       Buffered I/O Normalized CPU  Working Set
------------------- ------------------ ------------ ------------ --------------- -----------
ATTN00100003031012601 07-APR-1992 23:54:08  00 00:00:05          132   00 00:00:06      1712
           UNRC    07-APR-1992 23:54:13     CDHF4            346   00 00:04:04

ATTN00100003031012700 07-APR-1992 14:33:52  00 04:56:53          179   00 00:59:41      1991
           FAIL    07-APR-1992 19:30:45     CDHF3            352   00 03:14:23

SCR100100001002013201 07-APR-1992 16:11:42  00 00:00:08          157   00 00:00:21      2352
           RECV    07-APR-1992 16:11:50     CDHF2            378   00 00:02:36

SCR100100001002013202 07-APR-1992 17:52:40  00 00:00:07          132   00 00:00:43      2367
           FAIL    07-APR-1992 17:52:47     CDHF2            378   00 00:05:15
```

Figure 7.3.1 Job Summary Layout (Summary)

```
PRODREP    (        )          JOB SUMMARY - COMPLETED JOBS

      Job identifier (not required): ██
        (IIIL      e.g.  HAL*)



      Time range option: █    (vms, Uudtf, Dday)
               1. Last  ██  Hours
               2. From  20-AUG-1992 10:00:00  to current time
               3. From  20-AUG-1992 10:00:00  to  21-AUG-1992 10:00:00


      Output file (or TT: for screen):
        TT:

      Use archived data? (Y/N)  █
      Note:  Call operator to load archived data.
─────────────────────────────────────────────────────────────────────
Continue (Enter)  UARS>(PF1)     Help(PF2)     LastMenu(PF3)     Keys(PF4)
                                                                 DS  1 OF  1
 UARS>                                                           PG  1 OF  1
```

Figure 7.3.2 Job Summary Prompting Screen (Completed Jobs)

```
                    JOB SUMMARY - COMPLETED JOBS (detail)
                              By stop time
                            UARS DAYS  189-191
               06-APR-1992 13:34:00  -  08-APR-1992 13:34:00
```

Job ID Version/Node	Step	Program ID	Start Time Stop Time	CPU Actual CPU Normalized	Status	Direct I/O Buffered I/O	Disk Usage (blocks)
ATTN00100006003020800	1	ATTITUDE_EXTRAC6	07-APR-1992 18:28:19	0 00:00:11	PASS	2956	
00006 /4			07-APR-1992 18:35:14	0 00:07:07		1432	5319
		Elapsed time: 0 00:07:42		0 00:00:11	PASS	2956	5319
				0 00:07:07		1432	
CLS000100003028004400	1	BDPS_1_E1	07-APR-1992 18:28:05	0 00:09:03	PASS	5679	
00003 /3			07-APR-1992 19:23:01	0 05:35:08		2152	0
	2	BDPS_OA_E1	07-APR-1992 19:23:11	0 00:00:59	PASS	1158	
			07-APR-1992 19:49:09	0 00:36:55		955	0
	3	ZREGISTER_E1	07-APR-1992 19:49:15	0 00:01:04	PASS	3733	
			07-APR-1992 20:03:12	0 00:39:29		1676	34122
		Elapsed time: 0 01:36:03		0 00:11:07	FAIL	10570	34122
				0 06:51:33		4783	

Figure 7.3.2 Job Summary Layout (Completed Jobs)

```
PRODREP1 (           )          JOB SUMMARY - ALL JOBS

        Job identifier (not required): ███
           (IIIL      e.g.  HAL")         .


        Time range option: █   (vms, Uudtf, Dday)
                 1. Last  ██   Hours
                 2. From  20-AUG-1992 10:00:00  to current time
                 3. From  20-AUG-1992 10:00:00  to 21-AUG-1992 10:00:00

        Output file (or TT: for screen):
                 TT:

        Use archived data? (Y/N) █
        Note:  Call operator to load archived data.

Continue (Enter)  UARS>(PF1)    Help(PF2)    LastMenu(PF3)   Keys(PF4)
                                                             DS  1 OF  1
 UARS>                                                       PG  1 OF  1
```

Figure 7.3.3   Job Summary Prompting Screen (All Jobs)

```
                        JOB SUMMARY - ALL JOBS (detail)
                                By start time
                              UARS DAYS  208-210
                    06-APR-1992 13:34:00  -  08-APR-1992 13:34:00


     Job ID                          Start Time      CPU Actual         Direct I/O  Disk Usage
  Version/Node   Step  Program ID    Stop Time    CPU Normalized Status Buffered I/O  (blocks)
-------------------- ---- ----------- -------------------- --------------- ------ ------------ --------
CLS000100003028004400  1  BDPS_1_E1   07-APR-1992 18:28:05  0 00:09:03  PASS    5679
00003 /3                             07-APR-1992 19:23:01  0 05:35:08          2152         0
                    2  BDPS_OA_E1   07-APR-1992 19:23:11  0 00:00:59  PASS    1158
                                     07-APR-1992 19:49:09  0 00:36:55           955         0
                    3  ZREGISTER_E1 07-APR-1992 19:49:15  0 00:01:04  PASS    3733
                                     07-APR-1992 20:03:12  0 00:39:29          1676     34122

                    Elapsed time:  0 01:36:03  0 00:11:07   FAIL   10570     34122
                                                0 06:51:33  RCVRY #1  4783


GPIMLSD0000803020600   1  GEN_3B_PROD2 08-APR-1992 12:13:43  0 00:01:46  PASS   17601
00008 /4                             08-APR-1992 16:15:38  0 01:05:42          5931      3981
                    2  GEN_3B_PROD2 08-APR-1992 16:16:06  0 00:00:00             0
                                                           0 00:00:00             0         0

                    Elapsed time:  0 00:00:00  0 00:01:46   RUN   17601      3981
                                                0 01:05:42          5931
```

Figure 7.3.3   Job Summary Layout (All Jobs)

```
RSRCPARM  (          )          JOB SUMMARY BY JOB DEFINITION

   Instrument:
   Level:          ┏━┓  (optional)
   Sequence number:┗━┛  (optional)

   Time range (fill in one of the following):
   1. Month / Year (MMMYY):
   2. Time (vms, Uudtf, Dday):  ███████████████  -  ███████████████

     Output file (or TT: for screen):
     ▐TT:▏███████████████

     Use archived data? (Y/N)  █

     Note:  Call operator to load archived data.
───────────────────────────────────────────────────────────────────
Continue (Enter)        UARS>(PF1)            LastMenu(PF3)
                                                         DS  1 OF  1
▐UARS>▏████████████████████████████████████████████      PG  1 OF  1
```

Figure 7.3.4   Job Summary Prompting Screen (by Job Def)

```
                    JOB SUMMARY BY JOB DEFINITION
                           For Job: HAL%
                        UARS DAYS  208-210
             06-APR-1992 00:00:00  -  08-APR-1992 12:37:27

Node    CPU Time      Direct I/Os    Buffered I/Os
-----   -----------   -----------    -------------   No. Jobs Completed:   121
CDHF3   1 01:29:14.52     975429         539273      No. Jobs Passed:       99
CDHF4   1 21:24:14.17    1371875         685898      No. Jobs Failed:       22
CDHF2   0 04:07:32.96     287856         162196      Total Wall Clock Time: 12 14:27:08.00


  Job Def ID
  -----------
    UARS Days Processed
  ------------------------------------------------------------------
ATTN00100006    ATTITUDE EXTRACTION @ LAUNCH
    100    101    102    103    104    105    106    107    108    109    110    206    207
    208    209     96     97     98     99
CLS000100003    CLAES 3.1 MISSION READY
     44     44     44     44     44     44
GPIISAA00011    GPI FOR ISAMS (TEST-ASCENDING)
    203
GPIISAD00011    GPI FOR ISAMS (DESCENDING)
     95     96
```

Figure 7.3.4   Job Summary Layout (by Job Def)

7-15

7.4 Data Capture Facility (DCF) Transfer Log

> The Data Capture Facility Transfer Log provides a log of the data transfers from the DCF over a specified time period. These transfers include quicklook, and level 0 type data.

MENU TREE   Report services
Transfer logs
DCF transfer log

    $ RPT DCF_XFR_LOG[/FILE = *file-specification*

                             /TIME = *(start-time, stop-time)*

                             /INGEST_TYPE = *ingest-type*]

                           [/ARCHIVE]

PARAMETERS   DCF_XFR_LOG is a keyword that selects this report.

QUALIFIERS   **/FILE = *file-specification***

The /FILE qualifier specifies a file name to which the report is routed. If this qualifier is not specified, the report is displayed on the user's terminal.

/TIME = *(start-time, stop-time)*
    or **/TIME = *start-time***

If not supplied, the time range defaults to the last 7 days.

If only the start time is specified, the report covers from then to the current time.

The times are applied to the date/time when the transfer was initiated.

/INGEST_TYPE = *ingest-type*
    or **/INGEST_TYPE = *(ingest-type-list)***

The /INGEST_TYPE qualifier specifies the type of DCF ingest. The ingest type can be one or more of the following types (defaults to all three):
- P (Production)
- Q (Quicklook)
- T (Test)

/ARCHIVE

The presence of this qualifier causes the report to include data from the accounting data archive report tables. The loading of the reporting tables must be coordinated with the operations personnel. See Section 7.1 for further discussion of archived data.

DESCRIPTION This report provides a list of the completed DCF transfers that have occurred over the specified time period.

All items are listed in order by the most recent UARS day first. The ingest stop-time reflects time that the ingest completed or was cancelled.

If the ingest processing aborts, the stop-time field is blank.

If the status field is blank, then a new status code has been defined and the report has not been modified to support it. Contact software maintenance in this case.

ERROR PROCESSING Invalid file specifications, time, ingest_type qualifiers generates error messages and cause the request to be ignored.

SEE ALSO
3.2.1 Definition of Qualifiers for Catalog (User's Guide)
3.2.2 Definition of Qualifiers for Catalog (Operations Guide)
7.1. Report Generation Overview

```
DCFPARM  (          )          DCF TRANSFER LOG

     Time range (vms, Uudtf, Dday):    (optional)
     ███████████████  -  ███████████████


     Transfer type: █
            P • Production
            Q • Quicklook
            T • Test
            A • All


     Use archived data? (Y/N)  █
     Note:  Call operator to load archived data.
Continue(Enter)     UARS>(PF1)     Help(PF2)     LastMenu(PF3)    Keys(PF4)
                                                                 DS   1 OF   1
UARS>████████████████████████████████████████                   PG   1 OF   1
```

Figure 7.4.1   DCF Transfer Log Prompting Screen

7-17

```
                              DCF TRANSFER LOG
                            UARS DAYS  100-101
                 1-NOV-1992 00:00:00  -  30-NOV-1992 23:59:59

UARS               Data                                  Ingest Start Time   Data Start Time
Day   Version Cycle Type Source        Status               Stop  Time        Stop Time      Ingest ID
---   ------- ----- ---- ------  --------------------------  -------------------- -------------------- ----------
100      2     1     P   TAPE1  cancelled by DCF_CONT_INGEST  20-NOV-1992 23:02:20  17-NOV-1992 00:00:00  000020CF
                                                              20-NOV-1992 23:50:02  17-NOV-1992 23:59:59
```

Figure 7.4.2.   DCF Transfer Log Report Format

EXAMPLES

Example 1. Generate report

$ RPT DCF_XFR_LOG

This command displays on the terminal all the transfers that took place during the
last 7 days.

Example 2.   Generate report to a file for production and test data

$ RPT DCF_XFR_LOG   /FILE = printf.lis -
/TIME = (10-JAN-1992 10:30:00,   15-APR-1992 12:00:00) -
/INGEST-TYPE = (p,t)

This command writes a report to the file printf.lis listing transfers have taken place
between 10-jan-1992 10:30:00 and 15-apr-1992 12:00:00 and that have an ingest type of
P or T.

Example 3.   Generate a report to a file for quicklook and test data

$ RPT DCF_XFR_LOG   /FILE = printf.lis   /INGEST_TYPE = (q,t)

This command produces a report into the file printf.lis file listing transfers that took
place this month with ingest_type Q or T.

7.5 Flight Dynamics Facility (FDF) Transfer Log

> The Flight Dynamics Facility Transfer Log provides a log of the data transfers from the FDF over a specified time period. These transfers include orbit/attitude data to and from that facility.

MENU TREE   Report services
Transfer logs
FDF transfer log

COMMAND $ RPT FDF_XFR_LOG [/FILE = *file-specification*
/TIME = *(start-time, stop-time)*]

PARAMETERS FDF_XFR_LOG is a keyword that selects this report.

QUALIFIERS   /FILE = *file-specification*

The /FILE qualifier specifies a file name where the report is routed to. If this qualifier is not specified, the report is displayed on the user's terminal.

/TIME = *(start-time, stop-time)*

or /TIME = *start-time*

If not supplied, the time range defaults to the last 7 days. It is applied to the completion time of the transfer.

If only the start time is specified, the report covers from that time to the current time.

DESCRIPTION This report provides a list of the completed FDF transfers that have occurred over the specified time period. The /TIME qualifier specifies a time range on which to be reported. This parameter defaults to the current month.

The report output is sorted by descending UARS day.

ERROR   Invalid file specifications or time qualifiers generates error messages
PROCESSING and cause the request to be ignored.

SEE ALSO   3.2.1 Definition of Qualifiers for Catalog (User's Guide)
3.2.2 Definition of Qualifiers for Catalog (Operations Guide)
7.1. Report Generation Overview

```
 FDFPARM  (          )        FDF TRANSFER LOG


     Time range (vms, Uudtf, Dday):  (Optional)
     ▓▓▓▓▓▓▓▓▓▓▓▓▓  -  ▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓

     Use archived data? (Y/N)  ▓
     Note:  Call operator to load archived data.



Continue(Enter)    UARS>(PF1)    Help(PF2)    LastMenu(PF3)   Keys(PF4)
                                                             DS   1 OF   1
UARS>▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓           PG   1 OF   1
```

Figure 7.5.1   FDF Transfer Log Prompting Screen

```
                              FDF TRANSFER LOG
                             UARS DAYS   171-187
                  1-MAR-1992 00:00:00  -  17-MAR-1992 23:59:59

UARS  File         Ingest              Data
Day   Type      Start/Stop Time     Start/Stop Time        Completion Status
----  -----   -------------------  -------------------   --------------------------------
 187  ORBIT   17-MAR-1992 16:07:19  16-MAR-1992 00:00:00
              17-MAR-1992 16:32:12  19-MAR-1992 00:00:00  %SYSTEM-S-NORMAL, normal successful completion
 186  ORBIT   16-MAR-1992 16:07:19  15-MAR-1992 00:00:00
              16-MAR-1992 16:32:12  18-MAR-1992 00:00:00  %SYSTEM-S-NORMAL, normal successful completion
 185  ORBIT   15-MAR-1992 16:07:19  14-MAR-1992 00:00:00
              15-MAR-1992 16:32:12  17-MAR-1992 00:00:00  %SYSTEM-S-NORMAL, normal successful completion
 184  ORBIT   14-MAR-1992 16:07:19  13-MAR-1992 00:00:00
              14-MAR-1992 16:32:12  16-MAR-1992 00:00:00  %SYSTEM-S-NORMAL, normal successful completion
 183  ORBIT   13-MAR-1992 16:07:19  12-MAR-1992 00:00:00
              13-MAR-1992 16:32:12  15-MAR-1992 00:00:00  %SYSTEM-S-NORMAL, normal successful completion
 182  ORBIT   12-MAR-1992 16:07:19  11-MAR-1992 00:00:00
              12-MAR-1992 16:32:12  14-MAR-1992 00:00:00  %SYSTEM-S-NORMAL, normal successful completion
 181  ORBIT   11-MAR-1992 16:07:19  10-MAR-1992 00:00:00
              11-MAR-1992 16:32:12  13-MAR-1992 00:00:00  %SYSTEM-S-NORMAL, normal successful completion
 180  ORBIT   10-MAR-1992 16:07:19  09-MAR-1992 00:00:00
              10-MAR-1992 16:32:12  12-MAR-1992 00:00:00  %SYSTEM-S-NORMAL, normal successful completion
```

Figure 7.5.2.   Flight Dynamics Facility (FDF) Transfer Log Report Format

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7.6 RAC Transfer History

> The RAC Transfer History provides a log of the data transfers to and from the RACs over a specified time period. Those transfers that used the UCSS provided transfer services are included.

MENU TREE Report services
       RAC data transfers
       RAC transfer history

COMMAND $ RPT RAC_XFR_HIST

         [/FILE = *file-specification*

         /NODE = *node-name*

         /TIME = *(start-time, stop-time)*]

         [/ARCHIVE]

PARAMETERS RAC_XFR_HIST is a keyword that selects this report.

QUALIFIERS /FILE = *file-specification*

The /FILE qualifier specifies a file name to which the report is routed. If this qualifier is not specified, the report is displayed on the user's terminal.

/NODE = *node-name*

The user can specify a RAC by the node name defined in Appendix E of the users guide. If no node name is specified, all RAC transfers are specified. Wildcards in the node name are acceptable. For outgoing transfers, this is the node to which the UCSS transmits. For incoming transfers, this is the node from which the transfer takes place.

/TIME = *(start-time, stop-time)*

  or /TIME = *start-time*

The /TIME qualifier specifies a time range to be reported on. The time range applies to the completion time of the transfer (called transfer time). This parameter defaults to the last 24 hour reporting period (see Section 7.1).

If only the start time is specified, the report covers from that time to the current time.

/ARCHIVE

The presence of this qualifier causes the report to include data from the accounting data archive report tables. The loading of the reporting tables must be coordinated with the operations personnel. See Section 7.1 for further discussion of archived data.

DESCRIPTION This report provides a list of the completed RAC transfers over the specified period.

The user can specify a node by the node-name defined in Appendix E. The node name can end in a wildcard character (*). If no node name is specified, transfers for all nodes are listed.

All items are listed by the most recently completed transfer first.

The file name includes the full VMS file specification. The node, disk, and directory indicated may not be the current file location.

Only that data since the last archive activity is available for this report. If no data is available in the time range specified, the report is empty or a message indicates that no data is available.

ERROR Invalid file specifications or time or RAC qualifiers generate error
PROCESSING messages and cause the request to be ignored.

SEE ALSO   3.2.1 Definition of Qualifiers for Catalog (User's Guide)
3.2.2 Definition of Qualifiers for Catalog (Operations Guide)
6.8. RAC Transfer Schedule
7.1. Report Generation Overview

EXAMPLES

Example 1. Generate report to a file

        $ RPT   RAC_XFR_HIST -

                   /FILE = PRINTF.RPT -

                   /TIME = (12-JAN-1992,   21-MAR-1992)

This command produces a report in the file printf.rpt listing transfers that have taken place between 12-jan-1992 and 21-mar-1992. The report also lists transfers for all nodes since the /NODE qualifier is omitted.

Example 2. Generate a report containing data for a specified node

$ RPT   RAC_XFR_HIST /NODE = SUSIM   /FILE = PRINTF.RPT -

/TIME = (1-JAN-1992,   1-MAR-1992)

This command produces a report in the file printf.rpt listing transfers taken place between 1-jan-1992 and 1-mar-1992 for node SUSIM.

```
RACXPARM (            )        RAC TRANSFER HISTORY

     Node: ████████  (optional)

     Time range option: █    (vms, Uudtf, Dday)
               1. Last  ██  Hours
               2. From  █████████████████████  to current time
               3. From  01-APR-1992 10:00:00  to  02-APR-1992 10:00:00


     Use archived data? (Y/N)  █
     Note:  Call operator to load archived data.

Continue(Enter)    UARS>(PF1)    Help(PF2)    LastMenu(PF3)    Keys(PF4)
                                                              OS   1 OF   1
UARS>█████████████████████████████████████████████████████  PG   1 OF   1
```

Figure 7.6.1   RAC Transfer History Prompting Screen

```
                      RAC TRANSFER HISTORY for ALL NODES
                              UARS DAY 211
                 09-APR-1992 01:17:54  -  09-APR-1992 13:17:54

Request ID      Requestor         Request Time          Transfer Time        From    To       Size
-----------     ---------         ------------          -------------        ----    -----    ----------
                File Identifier / Request Status
                -------------------------------
RDT_000C789B    GELL               09-APR-1992 11:11:46   09-APR-1992 11:45:56  CDHF    SPRLJ    1179
                DISK13:UCSS.RO]QUICKLOOK_SENGINEERING_D0211.VOOO1_CO1_PROD

                transfer successfully completed

RDT_000C781B    ISMCMN             09-APR-1992 10:23:31   09-APR-1992 11:38:08  CDHF    SIGO1    2400
                DISK5:[UCSS_RO]ISAMS_L2_S73WRAD_D0203.VOOO5_CO2_PROD

                transfer successfully completed
```

Figure 7.6.2.   RAC Transfer History Report Format

FIELD	MEANING
Request ID	Identifier assigned by the RAC transfer subsystem
Requestor	The user name of the person that requested the transfer
Request Time	The CDHF system time at which the transfer request was made
Transfer Time	The completion time of the transfer
From/To	The nodes from/to which the transfer occurred
Size	The size in blocks of the file that was transferred
File Identifier	The full file specification of where the file was located at the time of transfer

Figure 7.6.3.   Report Field Definitions

7.7 RAC Transfer Statistics

The RAC Transfer Statistics Report provides an accounting summary of
the data transfers to and from the RACs over a specified period of
time. Only those transfers that used the UCSS provided transfer
services are included.

MENU TREE   Report services
                         RAC data transfers
                         RAC transfer statistics

COMMAND $ RPT RAC_XFR_STATS

                    [/FILE = *file-specification*

                             /NODE = *node-name*

                             /TIME = *(start-time,   stop-time)*

                             /MONTH = *mmmyy*]

                    [/ARCHIVE]

PARAMETERS   RAC_XFR_STATS is a keyword that selects this report.

QUALIFIERS   /FILE = *file-specification*

                 The /FILE qualifier specifies a file name to which the report is
routed. If this qualifier is not specified, the report is displayed on the
user's terminal.

                 /NODE = *node-name*

                 The user can specified a RAC by the node name defined in Appendix
E of the users guide. If no node name is specified, all RAC transfers
are specified. Wildcards in the node name are acceptable. For
outgoing transfers, this is the node to which the UCSS transmits. For
incoming transfers, this is the node from which the transfer takes
place.

                 /MONTH = *mmmyy*

                 The /MONTH qualifier specifies a month and year on which to
report. The format expected is month and year (MMMYY), where
MMM=first three characters of the month on which to report and
YY=last two digits of year.

                 /TIME = *(start-time,   stop-time)*

                     or /TIME = *start-time*

If not supplied, the time range defaults to the current month through today.

/ARCHIVE

The presence of this qualifier causes the report to include data from the accounting data archive report tables. The loading of the reporting tables must be coordinated with the operations personnel. See Section 7.1 for further discussion of archived data.

DESCRIPTION This report provides summary statistic of completed RAC transfers that have occurred over the specified time period.

The /TIME qualifier specifies a time range on which to report. If no time parameter is supplied, the time range defaults to the current month. Only completed transfers are counted.

The month and time qualifiers are mutually exclusive.

The node name list contains a node called USER. This node represents the User Area for catalog to user-area transfers.

ERROR Invalid file specifications or RAC or time qualifiers generates error
PROCESSING messages and cause the request to be ignored.

SEE ALSO 3.2.1 Definition of Qualifiers for Catalog (User's Guide)
3.2.2 Definition of Qualifiers for Catalog (Operations Guide)
7.1. Report Generation Overview

```
RACXSPRM (          )        RAC TRANSFER STATISTICS

  Node: ████     (optional)

  Time range option: █   (vms, Uudtf, Dday)
          1. Last  24  Hours
          2. From  ████████████████    to current time
          3. From  01-APR-1992 10:00:00  to  02-APR-1992 10:00:00

  Use archived data? (Y/N)  █
  Note:  Call operator to load archived data.

 _____
Continue(Enter)     UARS>(PF1)     Help(PF2)     LastMenu(PF3)   Keys(PF4)
                                                                  DS   1 OF   1
UARS>                                                             PG   1 OF   1
```

Figure 7.7.1   RAC Transfer History Prompting Screen

```
                              RAC TRANSFER STATISTICS
                                UARS DAYS  211-212
                    09-APR-1992 01:17:54  -  09-APR-1992 13:17:54


RAC NODES:

        No. Files    Blocks     No. Files   Blocks     No. Cancelled   No. Failed Transfers
Node    To  RAC      To  RAC     From RAC    From RAC     Requests      From RAC    To RAC
-------  ----------  ----------  ----------  ----------  --------------  ---------  ----------
NETTLE       104       80682         0           0             0            0           0
ISAMS        364      422478         0           0             0            0           6
ACDURS        51        4095         0           0             0            0           0
PEM          133     1524615         0           0             0            0           0
SPRLJ        115     1177764         0           0             0            0           0
VIRGO        112       74829         0           0             0            0           0
SIGO1        932     1717203         0           0             0            0           0
PEMAXS       121     1408692         0           0             0            0           3
MLSRAC       221     1391256         0           0             0            0           1
HALOE         85      947313         0           0             0            0           4
MLSUK        157     1150056         0           0             0            0           0
SUSIM        178      333765         0           0             0            0           0
WINDIC       342      763563         0           0             0            0           5
WINDIF        29      439113         0           0             0            0           0
UWASH        413      651873         0           0             0            0           7
OZONE        207      242250         1          60             0            0           0
CLAES          0           0         0           0             0            0           1

------------------------------------------------------------------------------------------
TOTALS:
            7117    24648474         2         120             0            0          54


CDHF NODES:

        No. Files    Blocks     No. Files   Blocks     No. cancelled   No. Failed Transfers
Node    To  RAC      To  RAC     From RAC    From RAC     Requests      From RAC    To RAC
-------  ----------  ----------  ----------  ----------  --------------  ---------  ----------
CDHF1        958     3853452         2           6             0            0           0
CDHF4          0           0        10         636             4            0           0

------------------------------------------------------------------------------------------
TOTALS:
             958     3853452        12         642             4            0           0
```

Figure 7.7.2   RAC Transfer Statistics Report Format

EXAMPLES

<u>Example 1.   Report command using defaults.</u>

$ RPT   RAC_XFR_STATS

This command displays on the terminal screen all the RAC transfer statistics taking
place during the 24 hour default time period ending on the day the command was
issued (See Section 7.1). The RAC transfer statistics for all nodes are listed since the
/NODE qualifier is not specified.

Example 2. Demonstrate use of /MONTH and /NODE qualifiers.

$ RPT   RAC_XFR_STATS   /NODE = SUSIM -
                        /MONTH = APR92

This command displays on the user's terminal all the RAC transfer statistics for node SUSIM for the month of APRIL 1992.

Example 3. Output report data to a file using one time value.

$ RPT   RAC_XFR_STATS   /FILE = PRINTF.LIS -
                        /TIME = 5-MAY-1992

This command produces the report of RAC transfer statistics for all nodes for RAC transfers taking place between 5-may-1992 and the current time. The report is written to the file printf.lis.

Example 4. Output report data to a file over a specified time range.

$ RPT   RAC_XFR_STATS   /FILE = PRINTF.LIS -
                        /TIME = (5-MAY-1992,   5-JUL-1992)

This command produces the report of RAC transfer statistics for all nodes for RAC transfers taking place in the 5-may-1992 and 5-july-1992). The report is written to the file printf.lis.

7.8 Pending RAC Transfer Request Status

> The user can produce a report describing a list of in progress or
> pending transfers to/from the RAC. A specified RAC destination or all
> RACs may be specified.

MENU TREE   Report services
RAC data transfers
Pending RAC transfer request status

COMMAND $ RPT RAC_XFRS

[/FILE = *file-specification*

/NODE = *node-name*

/REQUESTOR = *user-name*]

PARAMETERS   RAC_XFRS is a keyword used to select this report.

QUALIFIERS   /FILE = *file-specification*

The /FILE qualifier specifies a file name where the report is routed
to. If this qualifier is not specified, the report is displayed on the
user's terminal.

/NODE = *node-name*

The user can specified a RAC by the node name defined in Appendix
E of the users guide. If no node name is specified, all RAC transfers
are specified. Wildcards in the node name are acceptable. Note that
to see transfers to the User Area from the catalog, specify a node
name of "USER".

/REQUESTOR = *user-name*

The user can specify that only those transfers requested by his user
name be listed.

DESCRIPTION   This report provides a list of RAC data transfer requests in progress
or pending. If the NODE qualifier is present, then the report
contains requests for transfers destined to that node. If no node is
specified, then all requests to all nodes are listed. Requests in each
node are sorted by status keyword.

The valid statuses for this report are as follows:

- in progress
- waiting to be started
- waiting for file stage completion
- waiting for retry
- ready, queued for transfer
- creating virtual file
- creating destination file
- receipt in progress
- destination file created
- failed creating destination file
- failed waiting to be retried
- transfer being retried

ERROR
PROCESSING

Invalid /FILE qualifiers generates error messages and the request messages and the request is ignored.

SEE ALSO

6.8   RAC Transfer Schedule Display
7.1.   Report Generation Overview

```
┌────────────────────────────────────────────────────────────────────┐
│   RACXRPRH (          )        PENDING RAC TRANSFERS                │
│                                                                      │
│                                                                      │
│      Node:  ▓▓▓▓▓     (optional)                                    │
│                                                                      │
│      User name of requestor: ▓▓▓▓▓▓▓▓       (optional)             │
│                                                                      │
│                                                                      │
│                                                                      │
├────────────────────────────────────────────────────────────────────┤
│ Continue(Enter)    UARS>(PF1)    Help(PF2)    LastMenu(PF3)  Keys(PF4)│
│                                                              OS  1 OF  1│
│ UARS>                                                        PG  1 OF  1│
└────────────────────────────────────────────────────────────────────┘
```

Figure 7.8.1   Pending RAC Transfer Status Report Prompting Screen

```
┌────────────────────────────────────────────────────────────────────────────┐
│                    PENDING RAC TRANSFERS STATUS for ALL NODES               │
│                           Transfer                                          │
│  Request ID   Size (Blocks)  From  To   Priority  Time Requested   Time Scheduled          Status        │
│  ----------   -------------  ----  ----  --------  -------------------- ----------------------- ----------------------│
│  File Name                                                                   Requestor          │
│  ----------                                                                  ----------          │
│  RDT_000C4945        309     CDHF  ISAMS   ASAP   06-APR-1992 08:30:30 06-APR-1992 08:30:30  Queued_for_transfer │
│  DISK23:[UCSS.SCR]TST.RDT_000C4945                                           BARNETT          │
│                                                                              │
└────────────────────────────────────────────────────────────────────────────┘
```

Figure 7.8.2   Pending RAC Transfer Status Report Format

7.9 Correlative Transfer Log

> The Correlative Transfer Log provides a log of the data transfers of
> correlative data over a specified time period.

MENU TREE Report services
Transfer logs
Correlative transfer log

COMMAND $ RPT CORR_XFR_LOG

[/FILE = *file-specification*

/TIME = *(start-time, stop-time)*

/SOURCE = *source-name*]

PARAMETERS CORR_XFR_LOG is a keyword that selects this report.

QUALIFIERS /FILE = *file-specification*

The /FILE qualifier specifies a file name where the report is routed
to. If this qualifier is not specified, the report is displayed on the
user's terminal.

/TIME = *(start-time, stop-time)*

or /TIME = *start-time*

If not supplied, the time range defaults to the last 7 days.

If only the start time is specified, the report covers from that time to
the current time.

/SOURCE = *source-name*

The source-name is the data source as defined in the data catalog.

DESCRIPTION This report provides a list of the completed correlative transfers that
have occurred over the specified time period. The /TIME qualifier
specifies a time range in which to list the correlative data transfers.
This parameter defaults to the current month if not supplied.

All items are listed in order by the most recently completed transfer
first.

ERROR   Invalid file specifications or time qualifiers generates error messages
PROCESSING and cause the request to be ignored.

SEE ALSO   3.2.1 Definition of Qualifiers for Catalog (User's Guide)
3.2.2 Definition of Qualifiers for Catalog (Operations Guide)
7.1. Report Generation Overview

EXAMPLES $ RPT   CORR_XFR_LOG -
/TIME = (24-FEB-1992,   1-MAR-1992)-
/SOURCE = NMC_3


```
CORREL    (        )        CORRELATIVE TRANSFER LOG


    Source (class):    ████████████    (optional)


    Time range option: █    (vms, Uudtf, Dday)
              1. Last  24  Hours
              2. From  ████████████    to current time
              3. From  ████████████    to ████████████




Continue(Enter)    UARS>(PF1)    Help(PF2)    LastMenu(PF3)    Keys(PF4)
                                                              DS    1 OF    1
UARS>███████████████████████████████████████████             PG    1 OF    1
```

Figure 7.9.1   Correlative Transfer Log Prompting Screen


```
                        CORRELATIVE TRANSFER LOG
                            UARS DAYS 192-192
                09-APR-1992 01:17:54  -  09-APR-1992 13:17:54


                  Correlative   Record                                                      Quality
UARS PI      Class    Type      Size    Start Time          Stop Time           Create Time          PI  UARS
--------     -----  --------    ------  -------------       -------------       --------------------  ---  ---
CORR PI      Comments
--------     --------
A. J. Miller NMC    TEMP        16964   02-nov-1992 18:39:55 02-nov-1992 19:22:05 08-nov-1992 19:55:21
S. Godin     unexpected layer at more than 30km great variability in space and in intensity
```

Figure 7.9.2   Correlative Transfer Log

7.10 Quicklook Transfer Log

> The Quicklook Transfer Log provides a log of the data transfer of
> quicklook data from the DCF over a specified time period.

MENU TREE   Report services
                Transfer logs
                Quicklook transfer log

COMMAND   **$ RPT QL_XFR_LOG**

                 [/FILE = *file-specification*

                 /TIME = *(start-time,   stop-time)*

                 /FIELD = **{ DAY | START_TIME }**

                 /ASCENDING

                 /ARCHIVE]

PARAMETERS QL_XFR_LOG is a keyword that selects this report.

QUALIFIERS **/FILE** = *file-specification*

The /FILE qualifier specifies a file name to where the report is
routed. If this qualifier is not specified, the report is displayed on the
user's terminal.

/TIME = *(start-time,   stop-time)*

    or **/TIME** = *start-time*

The /TIME qualifier specifies a time range to be reported on. The
time range applies to the completion time of the transfer. This
parameter defaults to the last 7 days.

If only the start time is specified, the report covers from that time to
the current time.

/FIELD = **{ DAY | START_TIME }**

Data in the report can be ordered by UARS day or by data start time.
The default is day, descending.

/ASCENDING

The data can be ordered in either ascending or descending order.
This qualifier specifies ascending order. The time field used to
determine the order is defined by the qualifier /FIELD.

/ARCHIVE

The presence of this qualifier causes the report to include data from the accounting data archive report tables. The loading of the reporting tables must be coordinated with the operations personnel. See Section 7.1 for further discussion of archived data.

DESCRIPTION This report provides a list of the completed QUICKLOOK transfers that have occurred over the specified time period.

All items are listed in order as specified by the qualifiers /FIELD and /ASCENDING.

ERROR Invalid file specifications, time, ingest_type qualifiers generates error
PROCESSING messages and cause the request to be ignored.

SEE ALSO 3.2.1 Definition of Qualifiers for Catalog (User's Guide)
3.2.2 Definition of Qualifiers for Catalog (Operations Guide)
7.1. Report Generation Overview

```
QLXPARM  (        )          QUICKLOOK TRANSFER LOG


   Time range option: 3_   (vms, Uudtf, Oday)
             1. Last  24_  Hours
             2. From  21-AUG-1992 10:00:00  to current time
             3. From  21-AUG-1992 10:00:00  to  28-AUG-1992 10:00:00

   Choose keypad option:

       Data ordered by:
           1.  UARS day, descending order
           2.  Data start time, descending order
           3.  UARS day, ascending order
           4.  Data start time, ascending order

   Use archived data? (Y/N)  N
   Note:  Call operator to load archived data.

Keypad(1...4)    UARS>(PF1)    Help(PF2)    LastMenu(PF3)    Keys(PF4)
                                                            OS    1 OF  1
 UARS>                                                       PG    1 OF  1
```

Figure 7.10.1   Quicklook Transfer Log Prompting Screen

```
                        QUICKLOOK TRANSFER LOG
                        For Transfers Starting
                           UARS DAYS 398-427
                   1-NOV-1992 00:0:00 - 30-NOV-1992 00:00:00

UARS QL QL  Ingest    Ingest            Ingest              Data
Day  ID Type Source   Status          Start/Stop          Start/Stop
---  -- ---- ------   ------------------ ------------------- -------------------
211   1  P   DCF   successf. dcf transf.  09-APR-1992 01:54   09-APR-1992 00:00
                                          09-APR-1992 02:07   09-APR-1992 01:17

211   2  P   DCF   successf. dcf transf.  09-APR-1992 09:14   09-APR-1992 03:31
                                          09-APR-1992 09:25   09-APR-1992 08:45
```

Figure 7.10.2   Quicklook Transfer Log

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EXAMPLES

Example 1. Example using defaults.

$RPT   QL_XFR_LOG

This command displays on the terminal all the transfers that have taken place
in the 7 day reporting period between the time the command was issued and that time
less 7 days, in descending order by UARS day.

Example 2. Example routing output to a file, using a time range.

$RPT   QL_XFR_LOG   /FILE = printf.lis -
                     /TIME = ("10-JAN-1992 10:30:00", -
                                  "15-APR-1992 12:00:00")

This command writes a report to printf.lis listing transfers that have taken place
between 10-jan-1992 10:30:00 and 15-apr-1992 12:00:00

Example 3. Example demonstrating /FIELD and /ASCENDING qualifiers

$RPT   QL_XFR_LOG -
       /TIME = ("10-JAN-1992 10:30:00", -
                    "15-APR-1992 12:00:00") -
       /FIELD = DAY   /ASCENDING

This command writes a report to the screen listing transfers in ascending time order by
UARS day, that have taken place in the indicated time range.

Example 4. Example demonstrating how defaults are applied to /FIELD qualifier

$RPT   QL_XFR_LOG /FIELD = START_TIME

This command writes a report to the screen listing transfers that have taken place in the
last 7 days, listed in descending time order by data start time.

7.11 ACRIM/MFT Processing Log

The ACRIM/MFT Processing Log provides a log of the ACRIM or MFT processing completed over a specified time period	

MENU TREE   Report services
RAC data transfer
ACRIM/MFT processing log

COMMAND   **$ RPT**   **ACRIM**   [/FILE = *file-specification*

                            /TIME = *(start-time,   stop-time)*]

                            [/ARCHIVE]

                            - or -

            $ RPT   **MFT**   [/FILE = *file-specification*

                            /TIME = *(start-time,   stop-time)*]

                            [/ARCHIVE]

PARAMETERS   ACRIM or MFT is a keyword that selects this report.

QUALIFIERS   /FILE = *file-specification*

The /FILE qualifier specifies a file name where the report is routed to. If this qualifier is not specified, the report is displayed on the user's terminal.

/TIME = *(start-time,   stop-time)*

   or /TIME = *start-time*

The /TIME qualifier specifies a time range to be reported on. The time range applies to the completion time of the transfer. This parameter defaults to the last 7 days.

If only the start time is specified, the report covers from that time to the current time.

/ARCHIVE

The presence of this qualifier causes the report to include data from the accounting data archive report tables. The loading of the reporting tables must be coordinated with the operations personnel. See Section 7.1 for further discussion of archived data.

DESCRIPTION This report provides a list of the processing activities that occurred over the selected time period for either ACRIM or MFT data sets.

The report is printed in ascending order by request type.

ERROR PROCESSING Invalid file specifications generates error messages and cause the request to be ignored.

SEE ALSO
3.2.1 Definition of Qualifiers for Catalog (User's Guide)
3.2.2 Definition of Qualifiers for Catalog (Operations Guide)
7.1. Report Generation Overview

EXAMPLES $ RPT   MFT   /TIME =   ("28-NOV-1992 01:01:01",-
                                          "29-NOV-1992 12:00:00")

$ RPT   ACRIM   /TIME = (28-NOV-1992,   29-NOV-1992)

```
MFTPARM  (           )            ACRIM/MFT TRANSFER LOG

     File type:  ███   ( ACR / MFT )

     Time range option: █    (vms, Uudtf, Dday)
        1. Last   ██  Hours
        2. From   ███████████        to current time
        3. From   ███████████        to  ████████████

     Use archived data? (Y/N)  ▐
     Note:  Call operator to load archived data.
─────────────────────────────────────────────────────────────
Continue(Enter)    UARS>(PF1)    Help(PF2)    LastMenu(PF3)    Keys(PF4)
                                                               DS   1 OF   1
UARS>                                                          PG   1 OF   1
```

Figure 7.11.1   ACRIM/MFT Transfer Log Prompting Screen

```
                              ACRIM TRANSFER LOG
                            FOR TRANSFERS STARTING
                              UARS DAYS 191-192
                    8-APR-1992 00:00:00  -  9-APR-1992 14:43:47



Request ID    Node    Username   No Files/Failed Priority       Status                        Time
-----------   ------  ---------- --------------- --------  ------------------------   ------------------------------
ACR_000C718E  USER    ACRIMCMN         2 /  0    ASAP      transfer complete          Request:  09-APR-1992 04:09
                                                                                      Schedule: 09-APR-1992 04:09
Dest File: ACR$DISK:[ACRIMCMN]                                                        Start:    09-APR-1992 04:22
Source File: UCSS_RDT:ACR_000C718E.SLIST;1                                            End:      09-APR-1992 04:30

          Request ID    File Size    Request Type              Status
          ----------    ---------    ------------    --------------------------------
          RDT_000C7209    10725      small           transfer successfully completed
          Source file name: DISK33:[UCSS.RO]ACRIM_LO_D0208.V0002_C01_PROD

          Request ID    File Size    Request Type              Status
          ----------    ---------    ------------    --------------------------------
          RDT_000C720A     6528      small           transfer successfully completed
          Source file name: DISK31:[UCSS_WRK.UCSS_ACRIM]DCOM_08C_LO_D0208.V0002_C01_PROD
```

Figure 7.11.2. ACRIM/MFT Report Layout

7.12 Job Accounting Record Summary

> The job accounting record report displays information about a
> production scheduler record to aid in post-execution analysis of a
> job's processing. Included is job-level information, program-level
> information about each job step, and the DCL runstream for the job.

MENU TREE   Report services
Production processing reports
Job accounting record summary

COMMAND $ RPT   JAR   /JOBID = *job_identifier*
[/ARCHIVE]

PARAMETERS   JAR is a keyword that selects this report.

QUALIFIERS   /JOBID = *job-identifier*

The job identifier for this qualifier is the full job identifier as defined
in Appendix F. This value is required for successful operation of this
report. A job identifiers list is available in the completed production
processing display.

/ARCHIVE

The presence of this qualifier causes the report to include data from
the accounting data archive report tables. The loading of the
reporting tables must be coordinated with the operations personnel.
See Section 7.1 for further discussion of archival.

DESCRIPTION   The job accounting record report displays information about a
production job that has already executed. The purpose is to aid in the
analysis of execution problems for the job. To make this analysis
clearer, the DCL runstream is output. Also output is enough
information to describe what job steps were executed, and some
information about each job step as far as the parameter/file
information available.

ERROR   None
PROCESSING

SEE ALSO   6.3 Completed Production Processing

EXAMPLES $ RPT JAR   /JOBID = HAL100100001011012512

```
JARPARM (   )    JOB ACCOUNTING RECORD SUMMARY

   Job identifier (required): ███████████████
   (IIILJJJVVVVVSSSDDDDXX  e.g. HAL* )

      Time range option: █   (vms, Uudtf, Dday)
               1. Last  ██  Hours
               2. From  ████████████   to current time ██████████
               3. From  ████████████   to ██████████████

   Use archived data? (Y/N) █
   Note:  Call operator to load archived data.
```
───
```
Continue(Enter)    UARS>(PF1)    Help(PF2)    LastMenu(PF3)   Keys(PF4)
                                                         DS   1 OF   1
UARS>██████████████████████████████            PG   1 OF   1
```

Job Accounting Record Summary Prompting Screen.

```
JOBACCT    (       )              JOB ACCOUNTING RECORD JOB IDS

                      Submit            Submit           UARS
  #    Job ID         Status            Time             Day     Flags
 ---   ------------   -----------       --------------   -----   -----
   1 GPIISAD00012001009600   COMPLETE    09-APR-92 07:54   96     P
   2 GPIISAA00013001009600   COMPLETE    09-APR-92 07:50   96     P
   3 ATTN00100006005010400   COMPLETE    09-APR-92 07:26   104    P
   4 ATTN00100006005010300   COMPLETE    09-APR-92 07:03   103    P
   5 ISA300000002016020300   SUBMITTED   09-APR-92 06:22   203    P
   6 ISA300000002012020500   FAILED      09-APR-92 06:15   205    P
   7 HAL200100002010012300   COMPLETE    09-APR-92 04:48   123    P
   8 GPIISAD00012001009500   COMPLETE    09-APR-92 02:23   95     P
   9 GPIISAA00013001009500   COMPLETE    09-APR-92 02:17   95     P
  10 GPIISAA00012001009500   SUBMITTED   09-APR-92 01:48   95     TP
  11 ATTN00100006005010000   COMPLETE    09-APR-92 00:32   100    P
  12 HRD300300015004021000   EXPAND/EDIT 09-APR-92 00:00   210    P
  13 GPIISAD00011006012600   SCHEDULED   09-APR-92 00:00   126    P
  14 CLS000100003032004400   FAILED      08-APR-92 23:46   44     TP
          Select job ID: ███
```
───
```
Continue(Enter)    UARS>(PF1)    LastMenu(PF3)
                                                DS   1 OF   1
UARS>███████████████████████████       PG   1 OF   1
```

Job Accounting Record Summary Record Selection Screen

```
                        JOB ACCOUNTING RECORD
                FOR JOB ID: MLS300100019001022700

JOB INFORMATION:
----------------
        Job def ID: MLS3001              Job def version: 19         UARS day:  227
        Test flag:      F                Production flag:  T         Submit status: COMPLETE
        Number user files:   0
        User file prefix:   DISK54:[UCSSOPS5.MLS_USF]MLS3001_19
        Auxiliary directory:  MLS$DISK:[MLSDMA.LOG]



PROGRAM INFORMATION FOR STEP NUMBER 1   :
-----------------------------------------
        Program ID:  MLS_TANTRAK12
        Processing time: 25-APR-1992 00:00:00    -    25-APR-1992 23:59:59
        Restart: T


        File information :
                Type: MLS               UARS day: 227
                Subtype: MLSRAD         Usage: INPUT DATA
                Level:  1               Required:  T
                File size:  0           Source:
                Calibration ID:         Calibration match:


        Parameter information :
                PARAMETER NAME          PARAMETER VALUE
                --------------------    --------------------
                ATT_TYP_VER             '
                CLI_PROF_CALID          CLIM_MLS_002
                CORR_CALID              DATARICHNESS
                CORR_ERROR_FACTOR       2.0
                CORR_SUBTYPE1           TEMP
                CORR_SUBTYPE2           HEIGHT
                CORR_SUBTYPE3           MOISTURE
                L2PCQ_CALID             003
                NMC_H2O_ERR_FACTOR      0.3
                NUM_CORR_PARMS          03
                ORB_TYP_VER             0
                SOURCE                  NMC
                UARS_CLI_CALID          ZONALMEAN
                UARS_CLI_ERRORS         NO
                UIPT_CALID              UIPT_0001
                VERSION_MLS_TANTRAK     V331

PROGRAM INFORMATION FOR STEP NUMBER 2   :
-----------------------------------------
        Program ID:  MLS_RETRIV12
        Processing time: 25-APR-1992 00:00:00    -    25-APR-1992 23:59:59
        Restart: T




DCL RUNSTREAM:
  $   RUN PDS_EXE:PDS_JOB_INIT
  $   IF UARS_PASS_FLAG .EQS. "FAIL" THEN GOTO EXIT
  $JOB_STEP_1:        ! MLS_TANTRAK12
  $   DEFINE/PROCESS job_step 1
  $   UARS_PASS_FLAG = "FAIL"
  $   RUN DISK29:[UCSS_PROG]MLS_TANTRAK_PROD.EXE;10
  $   IF UARS_PASS_FLAG .EQS. "FAIL" THEN GOTO JOBTERM
  $ !
  $JOB_STEP_2:        ! MLS_RETRIV12
  $   DEFINE/PROCESS job_step 2
  $   UARS_PASS_FLAG = "FAIL"
  $   RUN DISK29:[UCSS_PROG]MLS_RETRIV_PROD.EXE;9
  $   IF UARS_PASS_FLAG .EQS. "FAIL" THEN GOTO JOBTERM
  $ !
  $   DT/USER=MLSDMA MLSL2_LMFQ MLSRAC::MLS4:[CDHF_FILES]
  $   DT/USER=MLSDMA MLSL2_L2OUT MLSRAC::MLS4:[CDHF_FILES]
  $   DT/USER=MLSDMA L3AL_FCLO MLSRAC::MLS4:[CDHF_FILES]
```

Job Accounting Record Summary Report Output (1 of 2)

```
$ DT/USER=MLSDMA L3AL_FH2O MLSRAC::MLS4:[CDHF_FILES]
$ DT/USER=MLSDMA L3AL_FO3_183 MLSRAC::MLS4:[CDHF_FILES]
$ DT/USER=MLSDMA L3AL_FO3_205 MLSRAC::MLS4:[CDHF_FILES]
$ DT/USER=MLSDMA L3AL_TEMP MLSRAC::MLS4:[CDHF_FILES]
$ DT/USER=MLSDMA L3AT_FCLO MLSRAC::MLS4:[CDHF_FILES]
$ DT/USER=MLSDMA L3AT_FH2O MLSRAC::MLS4:[CDHF_FILES]
$ DT/USER=MLSDMA L3AT_FO3_183 MLSRAC::MLS4:[CDHF_FILES]
$ DT/USER=MLSDMA L3AT_FO3_205 MLSRAC::MLS4:[CDHF_FILES]
$ DT/USER=MLSDMA L3AT_TEMP MLSRAC::MLS4:[CDHF_FILES]
$ DT/USER=MLSDMA L3LP_PARAM MLSRAC::MLS4:[CDHF_FILES]
$ DT/USER=MLSDMA L3TP_PARAM MLSRAC::MLS4:[CDHF_FILES]
$ DT/USER=BRIGNALL MLSL2_L2OUT MLSUK::DUB1:[MLSDATA]
$ DT/USER=BRIGNALL L3AL_FCLO MLSUK::DUB1:[MLSDATA]
$ DT/USER=BRIGNALL L3AL_FH2O MLSUK::DUB1:[MLSDATA]
$ DT/USER=BRIGNALL L3AL_FO3_183 MLSUK::DUB1:[MLSDATA]
$ DT/USER=BRIGNALL L3AL_FO3_205 MLSUK::DUB1:[MLSDATA]
$ DT/USER=BRIGNALL L3AL_TEMP MLSUK::DUB1:[MLSDATA]
$ DT/USER=BRIGNALL L3AT_FCLO MLSUK::DUB1:[MLSDATA]
$ DT/USER=BRIGNALL L3AT_FH2O MLSUK::DUB1:[MLSDATA]
$ DT/USER=BRIGNALL L3AT_FO3_183 MLSUK::DUB1:[MLSDATA]
$ DT/USER=BRIGNALL L3AT_FO3_205 MLSUK::DUB1:[MLSDATA]
$ DT/USER=BRIGNALL L3AT_TEMP MLSUK::DUB1:[MLSDATA]
$ DT/USER=BRIGNALL L3LP_PARAM MLSUK::DUB1:[MLSDATA]
$ DT/USER=BRIGNALL L3TP_PARAM MLSUK::DUB1:[MLSDATA]
$ !
$ !
$JOBTERM:
$    RUN PDS_EXE:PDS_JOB_TERM
$ EXIT:
```

Job Accounting Record Summary Report Output (2 of 2)

7.13 Catalog Table Attributes

> The catalog attributes report provides a list of all the attributes of the catalog table.

MENU TREE   Report services
Other Reports
Catalog attributes

COMMAND $ RPT CAT_ATTS [/FILE = *file-specification*]

PARAMETERS CAT_ATTS is a keyword that selects this report.

QUALIFIERS /FILE = *file-specification*

The /FILE qualifier specifies a file name where the report is routed to. If this qualifier is not specified, the report is displayed on the user's terminal.

DESCRIPTION This report provides a list of all the attributes found in the data catalog logical table (CDR), their types, and descriptions. The types define how they are validated by INGRES and are shown in the following table.

TYPE	MEANING
hex	ASCII hex number
char	any alphanumeric character plus underscore
text	any character
int	integer number
*1	integer byte
*2	2 bytes; half-word
*4	whole word; 4 bytes
real	real number
date	VMS format: DD-MMM-YYYY hh:mm:ss
filespec	VMS file format
logical	'T' or 'F'
interval	*value* DAYS
	value HOURS
	value MINUTES
	value SECONDS

The attribute names shown in this report are used in the following places:
- /FIELDS and /VALUES qualifiers
- Query output results
- Query field selection

ERROR   None
PROCESSING

SEE ALSO   None

EXAMPLES

```
                      Logical Attributes for CDR

     Name              Type/Size          Description
     ---------------   ---------          ------------------------------------------
     FILE_ID           HEX*16             numeric representation of the files's
                                          major attributes
     TYPE              CHAR*12            instrument or other value for the
                                          catalog file's major discriminator
     LEVEL             CHAR*3             processing level of the file or job
     SUBTYPE           CHAR*12            measurement, species, or other value for
                                          the secondary discriminator for the
                                          cataloged file
     SOURCE            CHAR*12            source of the correlative file
     CALIBRATION_ID    CHAR*12            user-assigned ID of the calibration file
     DAY               INT*2              UARS day associated with the file or job

                                  .   .   .
```

Catalog Table Attributes Report Output

7.14 Valid Catalog Attribute Combinations

> The Valid Catalog Attribute Combinations provides a list of completed
> Catalog attribute combinations.

MENU TREE   Report services
Other reports
Valid catalog attribute combinations

COMMAND $ RPT CDT   [/FILE = *file-specification*]
[/PATTERN = *match-string*]

PARAMETERS   CDT is the keyword for Catalog Data Types that selects this report.

QUALIFIERS   /FILE = *file-specification*

The /FILE qualifier specifies a file name to which the report is
routed. If this qualifier is not specified, the report is displayed on the
user's terminal.

/PATTERN = *match-string*

The output from this report can be limited to those entries that
match a specific pattern as supplied in the field *match-string*. The
match is performed from left to right. However, the percent (%) and
underscore (_) are wildcards. Percent matches 0 or more characters,
underscore matches exactly one character.

DESCRIPTION   This report provides a list of the completed Catalog attribute
combinations that have been defined. Each attribute combination
contains at least a top and bottom attribute. The attribute
combinations begin with a valid value for the top attribute (type) and
end with the bottom attribute (version). Each attribute in the
structure is separated by a colon. The structures are listed in
ascending order with a blank line between various attribute types.

The legend at the top of the report defines the various attribute
combinations. The attributes in braces are optional. The attribute
combinations are based on the top attribute value.

For instance, the structure for calibration could be:

CALIBRATION:CLAES:CLAES_CAL10:0:DAY:VERSION

and means the following:

Attribute name	Value
TYPE	CALIBRATION
SUBTYPE	CLAES
CALIBRATION _ID	CLAES_CAL10
LEVEL	0
DAY	DAY
VERSION	VERSION

A structure for the instrument ACRIM may be defined as such:

Attribute name	Value
TYPE	ACRIM
LEVEL	0
DAY	DAY
VERSION	VERSION

So in the report the values printed are horizontal separated by colons:

ACRIM:0:DAY:VERSION

A subset of the report can be selected by specifying a job pattern match. The selection screen for this option is shown in the example below. There is no command mode equivalent to this feature.

ERROR PROCESSING   Invalid file specification qualifier generates error messages and cause the request to be ignored.

SEE ALSO   7.1. Report Generation Overview

EXAMPLES $ RPT CDT

```
RPTPRM2  (    )    OUTPUT SELECTION METHOD AND PATTERN MATCH

 Pattern match (not required): ███

         1. Output to file specification
         2. Output to screen

         File specification:

         ███████████████████████████████████████████


 Keypad (1 or 2)              LastMenu(PF3)
                                                     DS   1 OF   1
 UARS>                                               PG   1 OF   1
```

Prompting Screen for Output Selection

```
                        VALID CATALOG ATTRIBUTE COMBINATIONS

                    Instrument--> Level--> (Subtype )--> Day--> Version
                    ATTITUDE/ORBIT--> Subtype--> Day--> Version
                    CALIBRATION--> Subtype--> Calibrationid-->
                            (Level )--> (Day]--> Version
                    CORRELATIVE--> Source--> (Subtype )--> Day--> Version
                    QUICKLOOK--> Subtype--> Day--> Quicklookid--> Version
                    MODEL--> Subtype--> Day--> Version
                    CIRA86--> Subtype--> Version

ACRIM:0:DAY:VERSION
ACRIM:1:ACRIMS:DAY:VERSION
ACRIM:3:ACRIMZ:ACRIMSZ:DAY:VERSION

ATTITUDE:DEFNSC:DAY:VERSION

CALIBRATION:ACRIM:ACRIM_CAL10:0:DAY:VERSION
CALIBRATION:ACRIM:ACRIM_CAL10:1:DAY:VERSION
CALIBRATION:ACRIM:ID1:1:DAY:VERSION
CALIBRATION:ACRIM:ID2:1:DAY:VERSION

CLAES:0:DAY:VERSION

CORRELATIVE:NMC:HEIGHTS:DAY:VERSION
CORRELATIVE:NMC:TEMP:DAY:VERSION

HALOE:0:DAY:VERSION
HALOE:1:AVERAGE:DAY:VERSION

ISAMS:0:DAY:VERSION

ORBIT:DEFINITIVE:DAY:VERSION
ORBIT:PREDICTIVE1:DAY:VERSION

QUICKLOOK:ENGINEERING:DAY:QUICKLOOK_ID:VERSION
QUICKLOOK:SUSIMA:DAY:QUICKLOOK_ID:VERSION
QUICKLOOK:SUSIMB:DAY:QUICKLOOK_ID:VERSION
QUICKLOOK:WINDII:DAY:QUICKLOOK_ID:VERSION

SLPEPHEM:DAY:VERSION

SOLSTICE:0:DAY:VERSION
SOLSTICE:3AS:DAY:VERSION

WINDII:0:DAY:VERSION
```

7.15 Production Accounting Record Report

> Recreates the reports provided at the end of a Production Job. The data is extracted from the production accounting information and the reports are recreated using the same software that generated the original reports.

MENU TREE   Report services
Production processing reports
Production accounting report

COMMAND $ RPT PAR   /JOBID = *job-identifier*
[/ARCHIVE]

PARAMETERS PAR is the keyword that selects this report.

QUALIFIERS   /JOBID = *job_identifier*

The job identifier selects the production job that recreates this report. The full job identifier must be used. It is defined in Appendix F. The job identifiers can be looked up using the completed production processing display or the production job summary report. This qualifier is required.

/FILE = *file-specification*

The /FILE qualifier specifies a file name to which the report is routed. If this qualifier is not specified, the report is displayed on the user's terminal.

/ARCHIVE

The presence of this qualifier causes the report to include data from the accounting data archive report tables. The loading of the reporting tables must be coordinated with the operations personnel. See Section 7.1 for further discussion of archival.

DESCRIPTION This report shows the same data as shown in the Production Accounting Record Display. It is the same report that is generated at the completion of production processing for a job. It includes a Production Job Summary and a report for each step in the job.

The data on which to report is selected by job identifier.

The prompting screen when invoked from the menu system is shown in Figure 7.15.

ERROR PROCESSING	Invalid file specification qualifier generates error messages and cause the request to be ignored.

SEE ALSO　　6.4　Production Accounting Record Display

　　　　　　　　　Appendix F　Job Identifier Structure

EXAMPLES

<u>Example 1. Sample command</u>

$$\$ RPT \quad PAR \quad /JOBID = HAL100200001009011501$$

```
PARPARM    (       )       PRODUCTION ACCOUNTING RECORD SUMMARY


   Job identifier:       ███████████████
   (IIILJJJVVVVVSSSDDDDXX  e.g. HAL* )

      Time range option: █   (vms, Uudtf, Dday)
             1. Last  24  Hours
             2. From       ████████████    to current time
             3. From       ████████████    to  ████████████

      Use archived data? (Y/N)  █
      Note:  Call operator to load archived data.

  Continue(Enter)     UARS>(PF1)      Help(PF2)      LastMenu(PF3)   Keys(PF4)
                                                                  DS   1 OF   1
   UARS>█████████████████████████████████████             PG   1 OF   1
```

Figure 7.15. Production Accounting Record Summary Prompting Display

```
JOBACCT    (       )       PRODUCTION ACCOUNTING RECORD IDS


  #        Job ID            CPU     Status   Job Start Time      Job Stop Time
 ---  -----------------     ------   ------   -----------------   -----------------
   1 GPIISAD000012001009600  CDHF2   PASS     09-APR-92 07:54     09-APR-92 09:34
   2 GPIISAA000013001009600  CDHF2   PASS     09-APR-92 07:50     09-APR-92 09:10
   3 ATTN00100006005010400   CDHF4   PASS     09-APR-92 07:26     09-APR-92 10:20
   4 ATTN00100006005010300   CDHF4   PASS     09-APR-92 07:03     09-APR-92 08:09
   5 ISA300000002016020300   CDHF3   RECV     09-APR-92 06:22     09-APR-92 11:26
   6 ISA300000002012020500   CDHF3   PASS     09-APR-92 06:15     09-APR-92 12:05
   7 HAL200100002010012300   CDHF4   PASS     09-APR-92 04:48     09-APR-92 07:18
   8 GPIISAD000012001009500  CDHF2   PASS     09-APR-92 02:23     09-APR-92 05:44
   9 GPIISAA000013001009500  CDHF4   PASS     09-APR-92 02:17     09-APR-92 05:01
  10 GPIISAA000012001009500  CDHF4   PASS     09-APR-92 01:48     09-APR-92 04:28
  11 ATTN00100006005010000   CDHF4   PASS     09-APR-92 00:32     09-APR-92 03:59
  12 HRD300300015004021000   CDHF4   RECV     09-APR-92 00:00     09-APR-92 02:14
  13 GPIISAD00011006012600   CDHF4   PASS     09-APR-92 00:00     09-APR-92 08:37
  14 CLS000100003032004400   CDHF4   RECV     08-APR-92 23:46     09-APR-92 09:29
           Select Job ID: ███

Continue(Enter)     UARS>(PF1)       LastMenu(PF3)
                                                                  DS   1 OF   1
   UARS>█████████████████████████████████████             PG   1 OF   1
```

Production Accounting Record Summary Record Selection Screen

7.16 Archive Summary Reports

> As production accounting tables are archived to their historical
> tables (then to tape), some summary information from the records
> being archived from these tables, is saved in the summary tables, and
> reports can be generated from these summary tables.

MENU TREE   Report services
Archive summary reports

COMMAND   **$ RPT**   *report-parameter-keyword*

PARAMETERS   The *report-parameter-keywords* for the archive reports are:

> SUM_DATA_INGEST
> SUM_JOB_RESOURCE
> SUM_PROD_PROC
> SUM_RAC_XFR
> SUM_TAPE_GEN
> SUM_STAGE_REQ

QUALIFIERS   **/TIME** = *(start-time,   stop-time)*

> or **/TIME** = *start-time*

If omitted, the time range is defaulted to the time from launch date to
the time of last archiving to historical tables.

If only the start time is specified, the report covers from that time to
the current time.

/NODE = *node-name*

The user can specify a RAC by the node name defined in Appendix E
of the users guide. If no node name is specified, all RAC transfers are
specified. No wildcards in the node name are acceptable.

This qualifier is used for the RAC transfer summary report.

/FILE = *file-specification*

The /FILE qualifier specifies a file name to which the report is
routed. If this qualifier is not specified, the report is displayed on the
user's terminal.

DESCRIPTION Accounting data is archived from the online production accounting tables after a period of time has elapsed. When the archival process is performed, certain statistics are extracted about the data being archived and summarized into online summary tables. These tables always remain online and are accessible through the archive summary reports.

Data is stored in the archive summary tables based on UARS day. All summary reports request a time range for reporting.

See the examples for further discussion of each report.

ERROR PROCESSING Invalid file specification qualifier generates error messages and cause the request to be ignored.

SEE ALSO 3.2.1 Definition of Qualifiers for Catalog (User's Guide)
3.2.2 Definition of Qualifiers for Catalog (Operations Guide)
7.1. Report Generation Overview

EXAMPLES

Example 1. SUM_DATA_INGEST

This report gives the number of jobs categorized by run status; i.e., successful, failed, or cancelled, and by type: production, test, or quicklook, and by transport : tape or wire. For example, it gives the number of successful, production tape jobs, or failed test wire jobs. It also gives totals of all jobs, (all types and transport modes), by run status. Prompts for start and stop times of time period in which these jobs occur.

```
                          LEVEL 0 DATA INGEST STATISTICS
                                 UARS DAYS 1-230
                     12-SEP-1991 00:00:00  -  28-APR-1992 17:40:28

                  S  U  C  C  E  S  S      F   A   I   L          C A N C E L
                  Wire        Tape        Wire        Tape       Wire        Tape
                  ----------------        ----------------       ----------------
  Production       0           0           5           1          11           4

  Test             0           0           0           0           0           0

  Quicklook      621          60           7          10          23           2

         Total success:  681      Total failed:   23    Total cancelled:   40
```

Example 2. SUM_JOB_RESOURCE

This report gives estimated and actual cpu use, estimated and actual working set, and number of direct and buffered I/Os, by node for all production jobs in the prompted for search period.

```
                    JOB RESOURCE UTILIZATION
                        UARS DAYS 1-230
            12-SEP-1992 00:00:00  -  28-APR-1992 17:28:46

Node: CDHF2
     Estimated CPU use:      4 16:03:00   No. of direct IO's:      358,026
     Actual CPU use:        37 19:51:30   No. of buffered IO's:    307,049


Node: CDHF3
     Estimated CPU use:      3 06:46:00   No. of direct IO's:    17,529,293
     Actual CPU use:       272 08:54:51   No. of buffered IO's:   7,001,610


Node: CDHF4
     Estimated CPU use:      4 09:47:00   No. of direct IO's:    18,277,345
     Actual CPU use:       607 22:32:08   No. of buffered IO's:   8,741,937
```

Example 3. SUM_PROD_PROC

This report gives number of scheduled non-production jobs, number of scheduled production jobs of test mode, number of scheduled production jobs of production mode, and number of jobs run, by node. It prompts for start and stop times of the search period.

```
                 PRODUCTION PROCESSING STATISTICS
                        UARS DAYS 1-230
            12-SEP-1991 00:00:00  -  28-APR-1992 17:40:28

                       Node:  CDHF2
     Number of scheduled non-production jobs:           159
     Number of scheduled production jobs/test mode:     159
     Number of scheduled production jobs/production mode:  293

     Number of production jobs run:                     230


                       Node:  CDHF3
     Number of scheduled non-production jobs:           176
     Number of scheduled production jobs/test mode:     176
     Number of scheduled production jobs/production mode:  197

     Number of production jobs run:                   1,397


                       Node:  CDHF4
     Number of scheduled non-production jobs:           298
     Number of scheduled production jobs/test mode:     293
     Number of scheduled production jobs/production mode:  305

     Number of production jobs run:                   2,001
```

Example 4. SUM_RAC_XFR

This report gives by node the number of user to RAC and catalog to RAC data transfers categorized by bulk vs. small transfers, and by run status (successful, failed and cancelled). It gives the maximum and median file sizes for these categories and the number of data file receipts by RAC to user and by RAC to catalog, categorized by run status: successful, failed or cancelled.

It gives number of multi-file requests and number of restarts and retries of user area to RAC and catalog to RAC transfers, maximum and median number of files per multi-file request, and number of virtual files for catalog to RAC category.

```
                              RAC TRANSFER DATA
                               UARS DAYS 1-230
                  12-SEP-1991 00:00:00  -  28-APR-1992 17:40:28
                                   NODE: *

                           DATA TRANSFER              DATA RECEIVE
                  UA to RAC       CATALOG to RAC
                 Bulk    Small    Bulk    Small    RAC to UA    RAC to CATALOG
                 -----   -----    -----   -----    ---------    --------------
Success             0    10845      963    8438         5             658
Fail                0      325       56     425         0               0
Cancel              0        3        2       1         0               2
Max file size       0     9999     9489    9984         3          364809


                              DATA TRANSFER
            UA to RAC                          CATALOG to RAC
    ----------------------------      --------------------------------

Number multi-file        0           Number multi-file            397
   requests                             requests
                                     Maximum number files          15
    Number restarts     984            in multi-file request
    Number retries     1560

                                     Number restarts              553
                                     Number retries              1518
                                     Number virtual files          54
```

Example 5. SUM_TAPE_GEN

This report gives the number of requests for tape generation and number of requests for tape validation for a given (prompted) time period.

```
            TAPE GENERATION STATISTICS
                 UARS DAYS 191-192
        08-APR-1992 17:40:28  -  09-APR-1992 17:40:28


    No. Tape Generation Requests:        0
    No. Tape Validation Requests:        0
```

Example 6. SUM_STAGE_REQ

This report gives number of stage requests and number of files requested for prompted time period.

```
                          STAGE REQUESTS STATISTICS
                             UARS DAYS 184-192
                 01-APR-1992 17:40:28  -  09-APR-1992 17:40:28


No. of requests:   53631        Total no. of files staged:   57403
   No. of successful requests:    49150
   No. of failed requests:           51
   No. of cancelled requests:         0
```

7.17 Instrument Resource Usage Summary

> The Instrument Resource Usage Summary provides time, cpu use, numbers
> of jobs executed, and the number and sizes of files for all jobs.
> They are grouped by instrument in the specified time range.

MENU TREE Report services
Production processing reports
Instrument resource usage summary

COMMAND $ RPT USAGE
[/FILE = *file-specification*]
[/TIME = *(start-time, stop-time)*]
[/ARCHIVE]

PARAMETERS USAGE is a keyword that selects this report.

QUALIFIERS /TIME = *(start-time, stop-time)*

or /TIME = *start-time*

If omitted, the time range is defaulted to the last 24 hour time period
as defined in Section 7.1.

If only the start time is specified, the report covers from that time to
the current time.

/FILE = file-specification

The /FILE qualifier specifies a file name to which the report is
routed. If this qualifier is not specified, the report is displayed on the
user's terminal.

/ARCHIVE

The presence of this qualifier causes the report to include data from
the accounting data archive report tables. The loading of the
reporting tables must be coordinated with the operations personnel.
See Section 7.1 for further discussion of archival.

DESCRIPTION This report provides total wall clock time, total and normalized CPU
time, number of jobs total, number of jobs restarted, number of jobs
passed and failed, and the number and sizes of output and scratch
files, and the number of input and user files. This data is grouped by
instrument in the specified time range.

ERROR   Invalid file specification qualifier generates error messages and cause
PROCESSING   the request to be ignored.

SEE ALSO   3.2.1 Definition of Qualifiers for Catalog (User's Guide)
               3.2.2 Definition of Qualifiers for Catalog (Operations Guide)
               7.1. Report Generation Overview

```
PRODUTIL  (      )      INSTRUMENT RESOURCE USAGE SUMMARY

      Time range option: █    (vms, Uudtf, Dday)
               1. Last   24  Hours
               2. From                        to current time
               3. From                        to

      Use archived data? (Y/N)  █
      Note:  Call operator to load archived data.

Continue(Enter)      UARS>(PF1)      Help(PF2)      LastMenu(PF3)   Keys(PF4)
                                                              DS   1 OF   1
UARS>                                                         PG   1 OF   1
```

Figure 7.17.1   Instrument Resource Usage Summary Prompting Display

```
                        INSTRUMENT RESOURCE USAGE SUMMARY
                              UARS DAYS   184-192
                  1-APR-1992 00:00:00   -   9-APR-1992 18:10:15


              Total CPU/   Tot Jobs/ Passed/  No. Input    No. /Size    No. User    No. / Size
Inst  Wall Clock   Norm CPU    Restarts  Failed   Files        Output       Status      Scratch
----- ------------ ----------  --------- -------- ---------- ------------- ----------- -------------
ATT   0 00:02:42.00 000 00:00:20      1       1       2               2          1              0
                    000 00:12:42      0       0                    5385                         0

GPI   2 13:38:39.00 000 02:15:58     35      30      540            452          0              0
                    003 11:50:58      1       5                  318837                         0
```

Figure 7.17.2   Instrument Resource Usage Summary Report Layout

7.18 Job Error Summary

> The Job Error Summary Report provides the most severe error encountered
> in the last step of each job executed. Only jobs that did not pass are
> reported.

MENU TREE   Report services
Production processing reports
Job error summary   \

COMMAND   **$ RPT JOB_ERROR**
        [/FILE = *file-specification*]
        [/TIME = *(start-time,   stop-time)*]

PARAMETERS JOB_ERROR is a keyword that selects this report.

QUALIFIERS   /TIME = *(start-time,   stop-time)*

        or /TIME = *start-time*

If omitted, the time range is defaulted to the last 24 hour default time
period as defined in Section 7.1.

If only the start time is specified, the report covers from that time to
the current time.

/FILE = file-specification

The /FILE qualifier specifies a file name to which the report is
routed. If this qualifier is not specified, the report is displayed on the
user's terminal.

DESCRIPTION This report provides for each job identifier the job start and stop time,
an indicator if this is a recovered job, a test job, the UARS day, the
node, the total CPU and wall clock times, and the last step run. The
most severe error status encountered in that last step is presented.

At the end of the job, the count of jobs, job steps, and recovered jobs
is presented. Also presented is the total CPU and wall clock usage
and the total number of passed and failed jobs.

ERROR   Invalid file specification qualifier generates error messages and cause
PROCESSING the request to be ignored.

3.2.1 Definition of Qualifiers for Catalog (User's Guide)
            3.2.2 Definition of Qualifiers for Catalog (Operations Guide)
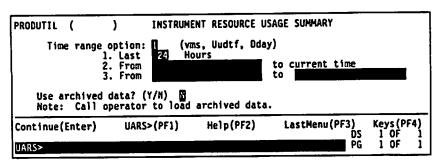   7.1. Report Generation Overview

```
ERRSUM   (    )                    JOB ERROR SUMMARY

        Job pattern match:  ████

        Time range option: █    (vms, Uudtf, Dday)
                     1. Last  ▓▓ Hours
                     2. From        █████████     to current time
                     3. From        █████████     to  ██████████████

        Output file (or TT: for screen):
          ▓TT:████████████████

        Use archived data? (Y/N)  ▓
        Note:  Call operator to load archived data.

Continue(Enter)     UARS>(PF1)    Help(PF2)    LastMenu(PF3)   Keys(PF4)
                                                          DS   1 OF    1
▓UARS>██████████████████████████████████████████    PG   1 OF    1
```

Figure 7.18.1   Job Error Summary Prompting Display

```
                    JOB ERROR SUMMARY FOR ALL JOBS
                          UARS DAYS  184-192
              1-APR-1992 00:00:00  -  9-APR-1992 18:10:15


                                              CPU          Wall         Last
  Start Time                                  Time         Clock        Step    Status
  Stop Time          Job ID      Rec Type Day Node
  -----------------  ----------------- --- ---- ---- ---- ----------- ----------- -----  --------
  03-APR-1992 18:00:16 HRD301000004001012501  Y   T   125   4   00 00:05:30 00 00:02:46  1      PASS
  03-APR-1992 18:03:02
                       Condition occurred on level-less file with LID = SLP_EPHEMERIS

  07-APR-1992 20:15:17 SPR204100002001012501  Y   T   125   4   00 00:05:00 00 00:05:04  1      PASS
  07-APR-1992 20:20:21
                       Condition occurred on level-less file with LID = NMC_LID



Totals:   Number    Number    Number    Total            Total            Number   Number
          Jobs    Job Steps  Recovered  CPU              Wall Clock       Failed   Passed
          ------  ---------  --------   ----------------  ---------------  -------- --------
            2         2         2       00 00:10:30       00 00:07:50         0        2
```

Figure 7.18.2   Job Error Summary Report Layout

7.19 UARS CDHF Production Processing Status

> The UARS CDHF Production Processing Status Report gives the number of UARS days processed in three different reporting periods: the whole mission to date, the last week of the mission, and an operator input time period.

MENU TREE   Report services
Production processing reports
UARS CDHF production processing status

COMMAND $ RPT UARS_CDHF_STAT
[/FILE = *file-specification*]
[/TIME = *(start-time, stop-time)*]

PARAMETERS   UARS_CDHF_STAT is a keyword that selects this report.

QUALIFIERS   /TIME = *(start-time, stop-time)*

or /TIME = *start-time*

If omitted, the time range is defaulted to the last 24 hour default time period as defined in Section 7.1.

If only the start time is specified, the report covers from that time to the current time.

/FILE = *file-specification*

The /FILE qualifier specifies a file name to which the report is routed. If this qualifier is not specified, the report is displayed on the user's terminal.

DESCRIPTION   This report provides the number of the UARS days processed and the earliest and latest UARS day processed for the whole mission to the current date.

It also provides the latest UARS day processed, the number of UARS days processed, and the number of UARS days backlogged for the most current week.

It also provides the number of UARS days processed, the number of UARS days backlogged for an operator input specified time period.

ERROR
PROCESSING Invalid file specification qualifier generates error messages and cause the request to be ignored.

SEE ALSO 3.2.1 Definition of Qualifiers for Catalog (User's Guide)
3.2.2 Definition of Qualifiers for Catalog (Operations Guide)
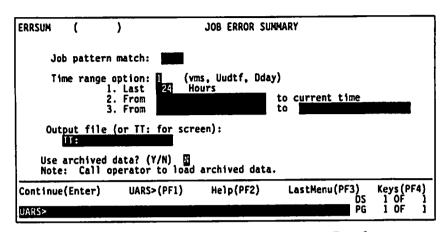7.1. Report Generation Overview

```
DAYINSTR (     )      UARS CDHF PRODUCTION PROCESSING STATUS

        Time range option: █    (vms, Uudtf, Dday)

                    1. From  ██████████  to current time ██████
                    2. From  ██████████  to  ██████████████
        Output file (or TT: for screen):
                    TT:███████████████

Continue(Enter)      UARS>(PF1)      Help(PF2)      LastMenu(PF3)    Keys(PF4)
                                                                 DS  1 OF  1
UARS>███████████████████████████████████████████████████       PG  1 OF  1
```

Figure 7.19.1   UARS Day by Instrument/Level Report Prompting Display

UARS CDHF PRODUCTION PROCESSING STATUS

Instrument / Level	----- MISSION TO DATE ---------- Days 1 - 321			------------ REPORT WEEK -------- Days 316 - 322			--- REPORT PERIOD --- Days 245 - 322	
	Days Processed	Earliest Day	Latest Day	Latest Day	No. Days Processed	No. Days Backlog	No. Days Processed	No. Days Backlog
CLAES 1	7	1	300	0	0	7	1	77
HALOE 1	3	125	126	0	0	7	0	78
HRDI 3AL	3	125	127	0	0	7	0	78
3AT	3	125	127	0	0	7	0	78
SUSIM 3AS	3	125	127	0	0	7	0	78

Figure 7.19.2   UARS Day by Instrument/Level Report Report Layout

7.20 Correlative Data Summary

> The Summary of Correlative Data Files report provides the number of correlative data files with the same subytpe and correlative PI and the earliest and latest start times of those files.

MENU TREE   Report services
Other reports
Correlative data summary

COMMAND $ RPT   SUM_CORREL_DATA_FILES
[/FILE = *file-specification*]
[/TIME = *(start-time,   stop-time)*]
[/SUBTYPE = *subtype*]
[/CORR_PI = *correlative-PI*]

PARAMETERS   SUM_CORREL_DATA_FILES is the keyword that selects this report.

QUALIFIERS   /TIME = *(start-time,   stop-time)*

or /TIME = *start-time*

If omitted, the time range is defaulted to the last 24 hour default time period as defined in Section 7.1.

If only the start time is specified, the report covers from that time to the current time.

/FILE = *file-specification*

The /FILE qualifier specifies a file name to which the report is routed. If this qualifier is not specified, the report is displayed on the user's terminal.

/SUBTYPE = *subtype*

Subtype as found in the data catalog. Wildcards are supported. This is an optional qualifier.

/CORR_PI = *correlative-PI*

Correlative Principal Investigator as defined for the file. Wildcards are supported.

DESCRIPTION This report provides the number of correlative files in the catalog with a start time within the specified time range. Data is grouped by subtype and correlative PI.

ERROR PROCESSING Invalid file specification qualifier generates error messages and cause the request to be ignored.

SEE ALSO 3.2.1 Definition of Qualifiers for Catalog (User's Guide)
3.2.2 Definition of Qualifiers for Catalog (Operations Guide)
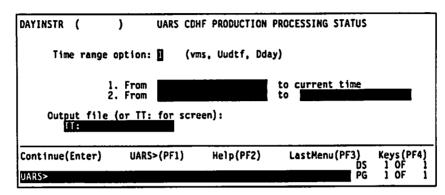7.1. Report Generation Overview

```
CORRDATA (      )              CORRELATIVE DATA


    Subtype pattern match:     ████████

    Correlative PI pattern match:  █████████████

    Time range option: █    (vms, Uudtf, Dday)

            1. Last   24  Hours
            2. From          ████████  to current time
            3. From          ████████  to  ████████████

    Output file (or TT: for screen):
            TT:██████████


Continue(Enter)    UARS>(PF1)    Help(PF2)    LastMenu(PF3)  Keys(PF4)
                                                        DS   1 OF   1
UARS>███████████████████████████               PG   1 OF   1
```

Figure 7.20.1   Summary of Correlative Data Files Prompting Display

```
                    SUMMARY OF CORRELATIVE DATA FILES

                          UARS DAYS  93 - 322
                1-JAN-1992 10:00:00 - 17 AUG-1992 10:00:00

Correlative  Correlative   Source   No.      Earliest              Latest               Day
Data Type    PI                     Files    Start Time            Start Time
----------   ------------  -------  ------   --------------------  --------------------  ------
ASSIM        A. O'NEILL    UKMO       3      01-jan-1992 12:00:00  04-feb-1992 12:00:00   127

HEIGHT       A. O'NEILL    UKMO_SSU  24      02-feb-1992 12:00:00  02-feb-1992 12:00:00   125

HEIGHTS                    NMC        3      02-feb-1992 18:39:55  02-feb-1992 18:48:34   127

TEMP         MILLERAJ      NMC        3      02-feb-1992 12:00:00  02-feb-1992 12:00:00   126
```

Figure 7.20.2   Summary of Correlative Data Files Report Layout

7-60

7.21 Disk Drive Summary Information

> The Disk Drive Summary Information report provides status, quota, and usage information about each disk used by the UCSS.

MENU TREE   No menu access

COMMAND $ RPT DUTIL   [/FILE = *file-specification*]

PARAMETERS   DUTIL is the keyword that selects this report.

QUALIFIERS   /FILE = *file-specification*

The /FILE qualifier specifies a file name to which the report is routed. If this qualifier is not specified, the report is displayed on the user's terminal.

DESCRIPTION   This report provides the name, status, size, quota, and usage of the UCSS assigned disks.

ERROR PROCESSING   None

SEE ALSO   3.2.1 Definition of Qualifiers for Catalog (User's Guide)
3.2.2 Definition of Qualifiers for Catalog (Operations Guide)
7.1. Report Generation Overview

```
                        DISK DRIVE SUMMARY INFORMATION

Disk name    Disk status                 Size            UCSS quota         Current UCSS usage
---------    -------------------------   ------------    ----------------   --------------------
DISK12:      (available to UCSS)         1216665            500000             419301

DISK21:      (available to UCSS)         2376153           2375850            1527292
```

Figure 7.21   Disk Drive Summary Information Report Layout

Section
8

Decommutated ACRIM File Structure

8.1 Decommutated ACRIM File Structure

> The ACRIM instrument is using the UARS as a flight of opportunity. The ACRIM
> data is not processed at the CDHF. The ACRIM Level 0 files along with any
> associated data are sent to the ACRIM PI.

The UCSS produces a data package for transmission to the ACRIM PI using the data transfer
services. This package includes a decommutated file (created from the Quality and OBC
data), and the Level 0 data file for each UARS day in the request. Up to seven UARS days of
data can be processed with one ACRIM request. In addition, Orbit data is transferred
separately. Each file contains one day of data. The transmission of this data is selectable from
the data transfer menu system or through the DT command using the /ACRIM qualifier. See
Section 4 for more information on how to access the services.

As shown in Figure 8-1, the decommutated ACRIM file is created from the OBC level 0 data
file and the Quality data file. For each OBC/Quality record pair, a decommutated ACRIM
record is created. Each decommutated ACRIM record is 2532 bytes in length. There are
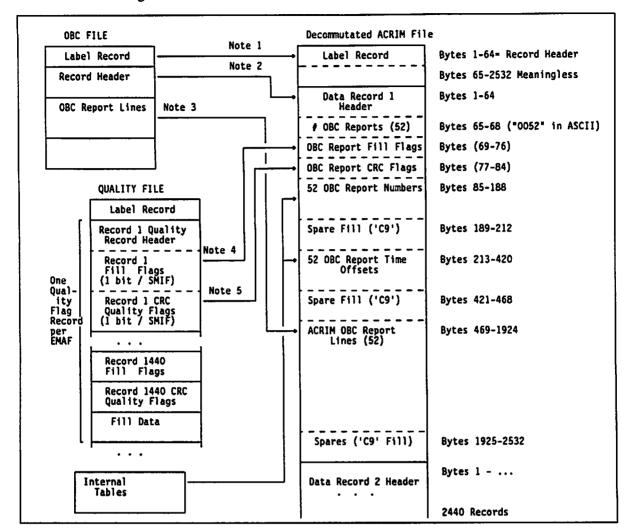2440 records in the file.

Figure 8-1. How the Decommutated ACRIM OBC File is Created

OBC FILE

Label Record	— Note 1 →
Record Header	Note 2
OBC Report Lines	Note 3

QUALITY FILE

Label Record
Record 1 Quality Record Header
Record 1 Fill Flags (1 bit / SMIF) — Note 4
Record 1 CRC Quality Flags (1 bit / SMIF) — Note 5
. . .
Record 1440 Fill Flags
Record 1440 CRC Quality Flags
Fill Data
. . .
Internal Tables

One Quality Flag Record per EMAF

Decommutated ACRIM File

Label Record	Bytes 1-64= Record Header
	Bytes 65-2532 Meaningless
Data Record 1 Header	Bytes 1-64
# OBC Reports (52)	Bytes 65-68 ("0052" in ASCII)
OBC Report Fill Flags	Bytes (69-76)
OBC Report CRC Flags	Bytes (77-84)
52 OBC Report Numbers	Bytes 85-188
Spare Fill ('C9')	Bytes 189-212
52 OBC Report Time Offsets	Bytes 213-420
Spare Fill ('C9')	Bytes 421-468
ACRIM OBC Report Lines (52)	Bytes 469-1924
Spares ('C9' Fill)	Bytes 1925-2532
Data Record 2 Header	Bytes 1 - ...
. . .	2440 Records

Notes:

1. The label record is created from the OBC file with the data set number changed to 0 (ASCII) and data set identifier set to "OBCA". The remainder of the 64 byte label record is unchanged. Bytes 65-2532 are not meaningful.

2. The OBC record header is copied and the instrument data set number is set to ASCII 0 (Bytes 1-2), the record type is set to ASCII 3 (Bytes 3-4).

3. The on-board computer outputs information in 28-byte segments (report-id plus 27 bytes of data). In the OBC file this information is segmented into four pieces containing 7 bytes of SMIF information in each piece (28 bytes). Each 28-byte segment represents one report line. Only ACRIM-specific report lines are selected from the OBC record. This includes OBC report numbers 43, 54, 55, and 56. The mapping is shown in Table 8-1. The report number sequence and report time offsets are stored in Bytes 85-188 and Bytes 213-420, respectively.

4. There is a quality bit representing each report line (52 reports) reflecting whether there is fill data in the report. The quality bits appear in Bytes 69-76 of the decommutated ACRIM record. Bit 1 of Byte 69 correlates to Report 1, Bit 2 to Report 2, etc.. Of the 64 bits, the first 52 are meaningful and the remainder are meaningless. If any of the four SMIFs for that report line contain fill (as indicated by examining the four quality bits in the Quality file), the bit in the decommutated ACRIM file is set nonzero. Zero value means 'good'.

5. There is a quality bit representing each report line (52 reports) reflecting the CRC check for that report. These bits appear in Bytes 77-84 and operates in the same way as noted in Note 4.

Table 8-1. Summary of OBC Report in ACRIM OBC Decommutated Record

OBC Report Number	Byte Offset	OBC Report Occurrence Number	Time Offset Milliseconds
56	468	1	-3.036
54	496	1	1.06
55	524	1	1.06
43	552	1	-14.42
56	580	2	1.06
54	608	2	5.156
55	636	2	5.156
56	664	3	5.156
54	692	3	9.252
55	720	3	9.252
56	748	4	9.252
54	776	4	13.348
55	804	4	13.348
56	832	5	13.348
54	860	5	17.444
55	888	5	17.444
43	916	2	-14.42
56	944	6	17.444
54	972	6	21.54
55	1000	6	21.54
56	1028	7	21.54
54	1056	7	25.636
55	1084	7	25.636
56	1112	8	25.636
54	1140	8	29.732
55	1168	8	29.732
56	1196	9	29.732
54	1224	9	33.828
55	1252	9	33.828
43	1280	3	-14.42
56	1308	10	33.828
54	1336	10	37.924
55	1364	10	37.924
56	1392	11	37.924
54	1420	11	42.02
55	1448	11	42.02
56	1476	12	42.02
54	1504	12	46.116
55	1532	12	46.116
56	1560	13	46.116
54	1588	13	50.212
55	1616	13	50.212
43	1644	4	51.108
56	1672	14	50.212
54	1700	14	54.308
55	1728	14	54.308
56	1756	15	54.308
54	1784	15	58.404
55	1812	15	58.404
56	1840	16	58.404
54	1868	16	62.5
55	1896	16	62.5

Section
9

Grid Utility

9.1 Grid Utility

> The grid utility allows the user to display UARS grid data for
> specified instrument/subtype pairs. Information for each grid
> includes instrument name, subtype, units of measurement,
> starting/stopping grid levels in both pressure and altitude grids,
> and "native" mode of the grid.

MENU TREE   Not available from menus.

COMMAND $ VERT_DEF   *instrument-id*   [*subtype-id*]

PARAMETERS *Instrument-id* is the instrument for which information is to be displayed.

Subtype-id is the level 3 subtype for which information is to be
displayed. It is required except for instrument UARS.

Valid instrument-id/subtype-id pairs are shown in the following table.
Keyword *ALL* is valid for instrument or subtype. When *ALL* is
specified, all instrument/subtype elements meeting the specified
criteria are displayed. See the examples for more information on the
use of *ALL*.

Instrument	Subtypes		
CLAES	HCL	NO2	CH4
	CLONO2	N2O	CF2CL2
	TEMP	HNO3	CFCL3
	O3	N2O5	
	NO	H2O	
HALOE	O3	CH4	
	NO	HCL	
	NO2	HF	
	H2O		
HRDI	ZONWIN1_P	MERWIN1_Z	
	ZONWIN1_Z	MERWIN2_P	
	ZONWIN2_P	MERWIN2_Z	
	ZONWIN2_Z	TEMP_P	
	MERWIN1_P	TEMP_Z	
ISAMS	TEMP	HNO3	
	O3	N2O5	
	NO	H2O	
	NO2	CH4	
	N2O	CO	
MLS	O3		
	H2O		
	CLO		
PEM	VOLER		
WINDII	TEMP		
	WIND		
UARS	PRESSURE		
	ALTITUDE		
ALL	<all above subtypes>		

DESCRIPTION The user can display UARS grid data for a specified instrument/subtype pair, for all instruments, or for a specific subtype.

The information that is displayed includes the instrument name, subtype, units of measurements, start/stop points for the grid in both pressure and altitude levels, and an indication (with an asterisk - '*') of the native mode of the subtype. For example, see the following screen.

```
                Millibars            Kilometers
   Instrument  Subtype     Start       Stop        Start   Stop    Units
   CLAES       HCL       0.2650E+03  0.2196E+00  * 10.00   57.00   VMR
   CLAES       CLONO2    0.2549E+02  0.5746E+01  * 23.00   33.00   VMR
   CLAES       TEMP      0.2650E+03  0.2196E+00  * 10.00   60.00   K
     ...                                         |
                                                 |
                                                 |
                                      Indicates
                                      Native
                                      Mode is
                                      Kilometers
```

The abbreviations for the units shown in the display are defined in the following table.

UNITS	MEANING
VMR	Volume Mixing Ratio
K	Kelvin
MS	Meters per Second
PHCM3S	Photons per Cubic Centimeter-Second
MILLIBARS	Millibars
KILOMETERS	Kilometers

ERROR PROCESSING Unknown instrument or subtypes are report as such to the user. Error messages are output to SYS$OUTPUT.

SEE ALSO Programmer's Guide, VERT_DEF

EXAMPLES

Example 1.   Requesting all instrument/subtype grids

$ VERT_DEF   ALL

Example 2.   Requesting specific instrument/subtype grid

$ VERT_DEF   CLAES   HCL

Example 3.   Requesting all instruments for specific subtype

$ VERT_DEF   ALL   NO2

Example 4.   Requesting all subtypes for a specific instrument

$ VERT_DEF   CLAES   ALL

Section
10

Correlative Data Ingest

10.1 Correlative Data Ingest Overview

> The Correlative Data Ingest Subsystem provides the capability of
> cataloging correlative data files residing on disk or tape in either
> backup or copy format. This can be done either through the menu system
> or the DCL command.

Correlative data is expected to consist of data from sources like balloon, rocket, shuttle flights, National Meteorological Center (NMC), and satellite data from the United Kingdom Meteorological Office. This data helps validate and monitor data processing software, to perform specific scientific studies, and to provide temperature and pressure profile data for data processing programs.

The correlative data ingest process accepts, verifies and catalogs a correlative data file. This correlative data must be in a VAX/VMS readable format that can be accessed by the VAX/VMS copy command (called copy format) or by the VMS Backup Utility (called backup format). The correlative data file that the user creates can be placed on disks or magnetic tapes in either copy format or backup format.

The correlative data file that the user inputs to this subsystem contains variable or fixed length records. This file is composed of a header record followed by data records. The header record contains attributes names and values extracted, validated and used to catalog the file. The header record is further defined in Table 10.1.

The first portion of the header record contains a block of bytes that conforms to the Standard Format Data Unit (SFDU) adapted by the Consultative Committee For Space Data System and controlled by UARS SFDU Control Authority. The SFDU portion is the first part of the header record and has a default size of 88 bytes. This portion can be customized in size to the correlative data type being processed.

```
┌─────────────────────┐
│   SFDU BLOCK        │
├ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┤   Header Record
│   DATA ATTRIBUTES   │
└─────────────────────┘

┌─────────────────────┐
│                     │
│   DATA RECORD 1     │
│                     │
├─────────────────────┤
│   DATA RECORD 2     │
├─────────────────────┤
│   DATA RECORD n     │
└─────────────────────┘
```

Item No.	Byte Offset	Description	Length	Comments
1	0	Project name	C*4	e.g. 'UARS'
2	4	UARS principal investigator	C*20	e.g. 'Miller A. J. '
3	24	Correlative measurement investigator	C*20	e.g. 'Smith J. A. '
4	44	Correlative data class	C*8	e.g. 'NMC ' 'UKMO ' 'BALLOON ' 'ROCKET ' 'PLANE ' 'GROUND ' 'SHUTTLE '
5	52	Instrument Type	C*12	e.g. 'LIDAR'
6	64	Observing Station	C*12	e.g. 'OHP'
7	76	Subtype	C*12	e.g. 'TEMP' 'HEIGHT'
8	88	Start time of the file (VAX VMS date and time format)	C*23	e.g. '27-MAR-1989 16:30:24.00'
9	111	Stop time of the file (same format as above	C*23	e.g. '27-MAR-1989 16:50:00.00'
10	134	Max latitude	C*7	e.g. '90.000'
11	141	Min latitude	C*7	e.g. '-90.000'
12	148	Max longitude	C*7	e.g. '270.000'
13	155	Min longitude	C*7	e.g. '0.000'
14	162	Max altitude(km)	C*8	
15	170	Min altitude(km)	C*8	
16	178	Max altitude (mbar)	C*8	e.g. '1.000'
17	186	Min altitude (mbar)	C*8	e.g. '850.000'
18	194	Record size	C*6	e.g. ' 8500'
19	200	number of records	C*6	e.g. ' 1400'
20	206	User quality (UARS)	C*3	e.g. '123'
21	209	User quality (PI)	C*3	e.g. '456'
22	212	User comment	C*80	free ASCII text
24	292	Fill with blank to record length		

Table 10.1. Correlative Data Ingest Header Record Layout

10.2 Handling Correlative Data Using VMS Backup Format

> Correlative data may be saved using the VMS Backup Utility. The
> correlative file may be cataloged directly from a VMS Backup save set,
> if the save set is properly created.

The VMS Backup Utility can save and restore files from disk to tape or disk files. Files created by the VMS Backup Utility are called save sets. Save sets are written in a format that only the VMS Backup Utility can interpret.

The following scenarios using the VMS Backup Utility are supported:
- A save set is created on disk at the CDHF
- A save set is created on tape at the CDHF
- A save set is created on disk at a RAC and is accessible by DECNET
- A save set is created on tape at a RAC, shipped to the CDHF, and input at the CDHF from the tape

In all these cases, the file access privileges MUST be set up to allow WORLD read. This includes both the files and the directory path to those files. Please refer to the VMS backup utility for further restrictions on file name lengths, etc. Note that for save sets generated at the RAC, the /INTERCHANGE qualifier should be used with the BACKUP command.

Creating save sets. When creating save sets, you must specify both a save set name (thus naming the collection of files to save) and the file specification for the file(s) being saved or restored. The format of a command to create a backup save set is as follows:

$ BACKUP *from-file-specifier* *save-set-name* [/SAVE_SET | /LABEL=tape-label]

The *from-file-specifier* defines the files to place into the save set and may contain wildcards. It must not contain a node name. The *save-set-name* defines the name of the save set. An example of saving a save set to disk follows:

$ BACKUP   NOAA$DISK:[MYDIR]NMCT_920204 -

CSC$DISK:[UCSSOPS.CORRELATIVE]CORREL.BCK/SAVE_SET

Note that when saving to disk, the /SAVE_SET qualifier is required.

Following is an example showing how files are saved on magnetic tapes using the backup command.

$ BACKUP   NOAA$DISK:[MYDIR]NMCT_920204 -

TAPE0:STATDAT.BCK/LABEL=MYTAPE

The above example saves the disk file nmct_920204 to a save set statdat.bck on magnetic tape with label mytape. The label qualifier is required for tape operation. It identifies the tape on which this save set is created.

Performing correlative ingest from save sets. To input data from a save set, the following information must be provided:
- Source file name (i.e., file name and file type)
- Save set name
- Tape label name (if from tape)
- SFDU header size (88 bytes is default size)
- CCB version number (required)
- Indication of test data set, if that applies

An operator at the CDHF cannot access a save set on a tape device at a remote node.

The following table summarizes the "look" of the file information for accessing a file on a save set for use in the correlative ingest function:

Backup Device	From-file-specifier	Save-set-name
tape backup	file name, file-type	save_set_name
disk backup	file-name, file-type	disk:[directory]save_set_name

The following examples demonstrate how to use the correlative command to perform a correlative data ingest.

Example 1. Correlative data ingest from tape

The format of the correlative command is as follows:

$ CORRELATIVE /TAPE = < tape-device > -

/FILE = < from_file_specifier> -

/SAVE_SET = < save_set_name > -

/VERSION = < version_no > -

/LABEL = < tape-label >

An example is as follows:

$ CORRELATIVE/TAPE = TAPE1 -

/FILE = CORR_DATA_FILE.DAT -

/SAVE_SET = COR_BCK.DAT -

/VERSION = 1 -

/LABEL=MYLABEL

The example shows the cataloging of the correlative data file corr_data_file.dat saved on tape by the name cor_bck.dat. The version number of the cataloged file is 1. The tape is labeled as mylabel.

<u>Example 2.   Correlative data ingest from disk</u>

Allows the cataloging in backup format of files stored on local or remote nodes. The format of the disk backup is as follows:

The format of the correlative command is as follows:

$ CORRELATIVE /FILE = < *source_file_spec* > -

   /SAVE_SET = < *save_set_name* > -

   /VERSION = < *version_no* >

An example is as follows:

$ CORRELATIVE /FILE = CORR_DATA_FILE.DAT -

   /SAVE_SET = COR_BCK.DAT -

   /VERSION = 3

The example above shows the cataloging in backup format of the correlative file corr_data_file.dat restored from a save set cor_bck.dat. The version of the cataloged file is 3.

$ CORRELATIVE /FILE = CORR_DATA_FILE.DAT -

   /SAVE_SET = SPRLC::DISK3:COR_BCK.DAT -

   /VERSION = 1

The example above shows the cataloging in backup format of the correlative file CORR_DATA_FILE.DAT restored from a save set COR_BCK.DAT at the remote node SPRLC. The version of the cataloged file is 1.

10.3 Handling Correlative Data Using VMS Copy Format

> Correlative data may be saved using the VMS COPY command to disk or tape devices. Under most circumstances, the correlative file may then be cataloged directly from that saved file.

The following scenarios using the VMS COPY command are supported:
- A file is copied to disk at the CDHF
- A file is copied to tape at the CDHF
- A file is copied to disk at a RAC and is accessible by DECNET
- A copied on tape at a RAC, shipped to the CDHF, and input at the CDHF from the tape

In all these cases, the file access privileges MUST be set up to allow WORLD read. This includes both the files and the directory path to those files. Please refer to the VMS COPY command for further restrictions on file name lengths, etc.

Performing correlative ingest from a file in copy format. To input data from a save set, the following information must be provided:
- Source file name (i.e., file name and file type)
- Tape label name (if from tape)
- SFDU header size (88 bytes is default size)
- CCB version number
- Indication of test data set, if that applies

An operator at the CDHF cannot access a file on a tape device at a remote node.

The following table summarizes the "look" of the file information for accessing a file for use in the correlative ingest function for files in copy format.

Device	From-file-specifier
tape	file-name
disk	disk:[directory]file-name

<u>Example 1.   Correlative data ingest from tape</u>

The format of the correlative command is as follows:

        $ CORRELATIVE   **/TAPE =** *< tape-device >* -

                                /FILE = *< source_file_spec >* -

                                /LABEL = *< label_name >* -

                                /VERSION = *< version-number >*

An example is as follows:

        $ CORRELATIVE   **/TAPE = TAPE1:** -

                                /FILE = CORR_DATA_FILE.DAT -

                                /VERSION = 2 -

                                /LABEL = CORFIL

The label (of the tape) qualifier is required. The value of the qualifier must be the same as the label on the tape volume.

The example shows the cataloging in copy format of the correlative data file corr_data_file.dat stored on tape. The version number of the cataloged file is 2.

<u>Example 2.   Correlative data ingest from disk</u>

The format of the is correlative command is as follows:

        $ CORRELATIVE   **/FILE =** *< corr_data_file.dat >* -

                                /VERSION = *< version_no >*

An example is as follows:

        $ CORRELATIVE   **/FILE = corr_data_file.dat** -

                                /VERSION = 2   **/SFDU = 122**

The example above shows the cataloging in copy format of the correlative file corr_data_file.dat on the local node. The value of the SFDU is required since the file was initially created with the SFDU larger than the default value of 88 bytes.

Another disk based example is as follows:

$ CORRELATIVE   /FILE=sprlc::disk1:[mydir]corr_data_file.dat

The example above shows the cataloging in copy format of the correlative file corr_data_file.dat on the remote node.

Limitations:

- Tape files can only be copied locally; the copy of remote tape files is not supported by VMS.

- The device (tape) and device name (e.g. tape1:) must be specified when the correlative command is issued to copy a tape file.

10.4 Correlative Data Ingest Command ($CORRELATIVE)

> The UCSS provides the capability to catalog correlative data files residing on disk or tape in either backup or copy format. This can be done either through the menu system or the DCL command.

MENU TREE   Data management services   (User Menu)
                 Catalog correlative data

                 Data transfer services   (Operations Menu)
                 Receive correlative data

COMMAND $ CORRELATIVE -

         /VERSION = *source-file-version* -

         /FILE = *source-file-spec* -

         [/TAPE = *tape-device* -

           /LABEL = *tape-label*] -

         [/SAVE_SET = *save-set-name*]

         [/SFDU = *standard-format-data-unit-size*]

         [/TEST]

PARAMETERS None

QUALIFIERS   /VERSION=*source-file-version*

The CCB-assigned version of the source file. This qualifier is required.

/FILE=*source-file-spec*

The /FILE qualifier specifies the file name of the correlative data file to be ingested. Whether it contains the file path depends on the operation and is shown in the following table.

Backup Device	source-file-spec	Save-set-name
tape backup	file name, file-type	save_set_name
disk backup	file-name, file-type	node::disk:[directory]save_set_name
tape copy	file-name, file-type	
disk copy	node::disk:[directory]file-name	

/TAPE=tape-device

The tape device or logical name defining the tape device. The tape device may contain a colon (:).

If the /TAPE qualifier is specified, then the /LABEL qualifier is required. If the file is from a BACKUP tape (or disk), then the /SAVE_SET qualifier must be used.

/LABEL=tape-label

If the /TAPE qualifier is used, then the /LABEL qualifier is required. All correlative tape ingests must be from a labeled tape. The value of the qualifier must be the same as the label on the tape volume.

/SAVE_SET=save-set-name

A save set is created by the VMS Backup Utility. At that point a save set name is assigned to the backed-up files. The format of the save set name varies depending on the source (tape or disk).

Remote <u>tape</u> operations are prohibited.

From disk, the save set name format is as follows:

[node::]disk:[directory]save_set_name

Note that the node name is optional for disk backups.

/SFDU=standard-format-data-unit-size

Correlative files have a standard format data unit header. The software assumes that this header is of a certain size (currently, 88 bytes). If the supplied file has a different header size, that must be entered using this qualifier (in bytes).

/TEST

If the /TEST qualifier is provided, the data is cataloged as test data.

/HELP provides help on this command

DESCRIPTION The correlative data ingest function accepts, verifies and catalogs a correlative data file. This correlative data must be in a VAX/VMS readable format that can be accessed by the VAX/VMS copy command (called copy format) or by the VMS Backup Utility (called backup format). The correlative data file that the user creates can be placed on disks or magnetic tapes in either copy format or backup format. Remote tape operations are prohibited.

The correlative data file consists of fixed or variable length records. This file is composed of a header record followed by data records. The header record contains attributes names and values extracted, validated and used to catalog the file.

ERROR The correlative data file to be catalog is validated. The following
PROCESSING checks are made.

- Type/Subtype/Source are all correct
- The user is authorized to catalog correlative data
- The data start time is <= the data stop time
- The number of records specified in the header matches
    the number of records in the file

Note that if the SFDU size specified is incorrect (the default is 88 bytes), the attributes extraction is likely to fail. This most frequently causes the data time check mentioned above to fail.

SEE ALSO Section 10 - Correlative Data Ingest

EXAMPLES

Example 1. Correlative Data Ingest in Backup Mode from Tape

$ CORRELATIVE /TAPE = TAPE0   /VERSION = 1 -
                        /FILE = CORR_DATA_FILE.DAT -
                        /SAVE_SET = COR_BCK.DAT

The example shows the cataloging of the correlative data file corr_data_file.dat saved on tape by the name cor_bck.dat. The version number of the cataloged file is 1.

<u>Example 2. Correlative Data Ingest in Backup Mode from Disk</u>

Allows the cataloging in backup format of files stored on local or remote nodes. The format of the disk backup is as follows:

$ CORRELATIVE   /FILE = CORR_DATA_FILE.DAT -
                  /SAVE_SET = COR_BCK.DAT -
                  /VERSION = 3

The example above shows the cataloging in backup format of the correlative file corr_data_file.dat restored from a save set cor_bck.dat on disk. The version of the cataloged file is 3.

$ CORRELATIVE /FILE = CORR_DATA_FILE.DAT -
              /SAVE_SET = SPRLC::DISK3:COR_BCK.DAT -
              /VERSION = 1

The example above shows the cataloging in backup format of the correlative file corr_data_file.dat restored from a save set cor_bck.dat at the remote node SPRLC. the version of the cataloged file is 1.

<u>Example 3. Correlative Data Ingest from Tape in Copy Format</u>

$ CORRELATIVE /TAPE = TAPE0-
               /FILE = CORR_DATA_FILE.DAT-
               /VERSION = 2   /LABEL = CORFIL

The label (of the tape) qualifier is required. The value of the qualifier must be the same as the label on the tape volume.

The example shows the cataloging in copy format of the correlative data file corr_data_file.dat stored on tape. The version number of the cataloged file is 2.

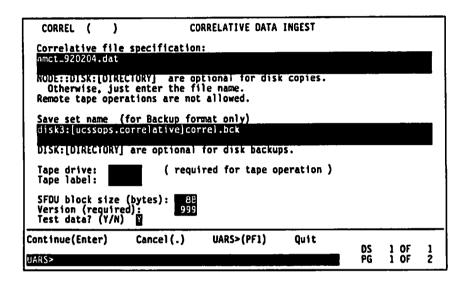<u>Example 4. Correlative Data Ingest from Disk in Copy Format</u>

$ CORRELATIVE   /FILE = CORR_DATA_FILE.DAT -
                /VERSION = 2   /SFDU = 122

The example above shows the cataloging in copy format of the correlative file corr_data_file.dat on the local node. The SFDU qualifier is required since the file was created with the SFDU header larger than the default value of 88 bytes.

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Example 5.   Correlative Data Ingest from Remote Disk in Copy Format

$ CORRELATIVE /FILE = -

SPRLC::DISK1:[MYDIR]CORR_DATA_FILE.DAT -

/VERSION = 1

The example above shows the cataloging in copy format of the correlative file
corr_data_file.dat on the remote node.

```
CORREL  (   )              CORRELATIVE DATA INGEST

Correlative file specification:
amct_920204.dat

NODE::DISK:[DIRECTORY]  are optional for disk copies.
  Otherwise, just enter the file name.
Remote tape operations are not allowed.

Save set name  (for Backup format only)
disk3:[ucssops.correlative]correl.bck

DISK:[DIRECTORY] are optional for disk backups.

Tape drive:                 ( required for tape operation )
Tape label:

SFDU block size (bytes):   88
Version (required):        999
Test data? (Y/N)   Y

Continue(Enter)     Cancel(.)      UARS>(PF1)     Quit
                                                        DS   1 OF   1
UARS>                                                   PG   1 OF   2
```

Example 6.   Correlative Data Ingest Menu Screen Layout

APPENDIXES

A - Error Messages

B - OSR Display Services

C - Data Definitions

D - Menu/Command Table

E - Node Name Assignments

F - Job Identifier Structure

G - OSR Messages

H - Automatic Job Initiation After DCF Ingests

Appendix A - Error Messages

Sometimes the user will receive an error message on his interactive terminal about some of the processes he is trying to perform. The error message appear in VAX/VMS message format otherwise. The textual content of the error messages is defined to provide as much information as possible in the body of the message itself. The messages are listed here with some explanation of their cause.

The following tables appear in this section:

A.1 Archive/Attribute Selection Utility Condition Codes and Messages

A.2 UCSS Command/Menu System Condition Codes and Messages

A.3 Data Base Interface Condition Codes and Messages

A.4 DCF Ingest Condition Codes and Messages

A.5 Data Management Condition Codes and Messages

A.6 UCSS Initialization Condition Codes and Messages

A.7 RAC Data Transfer Condition Codes and Messages

A.8 Router Message Interface Condition Codes and Messages

A.9 Router Task Condition Codes and Messages

A.10 Scheduler Expansion/Execution Condition Codes and Messages

A.11 Stage/Destage Criteria Condition Codes and Messages

A.12 Storage Management Condition Codes and Messages

A.13 General UCSS Condition Codes and Messages

A.14 PFA Message Codes

A.15 UTL Message Codes

Table A.1   Archive/Attribute Selection Utility Condition Codes And Messages

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
ARCHIVE_MESSAGES			
ARC_ACCESS	Information	Unable to access table	
ARC_DELETE	Information	Unable to delete record from table	
ARC_INSERT	Information	Unable to insert record into table	
ARC_TAPERR	Information	Error setting update archive, continuing w/archive to hist. tab	
ARC_UPDATE	Information	Unable to update record in table	
ATTRIBUTE_SELECTION_UTILITY_MESSAGES			
ASU_BAD_ERR_TYPE	Warning	Bad single/cross/none(-1/1/0)validate error type:	Indicates wrong validation types eturned from CDS_CHECK_ATTS software error
ASU_CDI_STRT_ERROR	Warning	Database error	Problem opening DB, or no date matches requested get hardcopy report
ASU_CONV_ATOI	Warning	Error converting ascii value:	Error converting operater entered number to integer
ASU_CONV_ITOA	Warning	Error converting integer value:	Problem translating record count to ascii for display in message display which shows query files complete a/xx records
ASU_DESTAGE_ACCESS	Warning	Error accessing Destage task	Problem accessing destage sw, symptom of software error
ASU_DESTAGE_FAIL	Warning	Destage failure	Problem destaging file. Reexecute
ASU_FILNMERR	Warning	<currently not used>	
ASU_FORT_CLOSE	Warning	Error closing file	Error closing file, reexecute sw. If persists, get hardcopy of error and report as software error
ASU_FORT_GET_LUN	Warning	Error getting logical unit number	Reexecute sw. If persists get hardcopy of error and report as sw err
ASU_FORT_OPEN	Warning	Error opening file	Error opening file, reexecute sw. If persists get hardcopy of error report
ASU_FORT_READ	Warning	Error reading file	Error reading
ASU FORT_WRITE	Warning	Error writing file	Error writing. Reexecute sw. If persists get hardcopy and report
ASU_LL_CLOSE_FAIL	Warning	Error deallocating linked_list memory	Error to close the file
ASU_LL_READ_FAIL	Warning	Error reading linked_list filename	Error to read the file
ASU_NO_FIND	Warning	Error attempting to match on value	Attribute name not found in catalog
ASU_QUEUE_READ	Warning	Error reading Desatge disposition queue	Problem reading queue - symptom of symptom error-report
ASU_STAGE_ERRMSG	Warning	File stage error	Problem staging files. Get hardcopy and report as sw error

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
CMD_ARCHERR	Error	Rac pending transfers will not appear in archive tables	
CMD_BATCHERR	Error	Query running in batch mode and output file not specified	Output file qualifier must be specified when running in batch mode.
CMD_BLANKALT	Warning	Maximum altitude is blank	The value of this field is mandatory
CMD_BLANKCORPI	Warning	Blank correlative principal investigator field	The value of this field is mandatory
CMD_CORINGERR	Warning	Correlative ingest error:	Attribute value supplied is invalid
CMD_FLDNOTEX	Error	Field " " does not exist in the data catalog	Attribute value is invalid
CMD_FORTRAN_ERROR	Warning	Fortran I/O error	
CMD_FDFERR	Error	Flight dynamics transfers will not appear in archive tables	
CMD_JOBIDSHRT	Error	Jobid_shrt is required	Jobid_shrt is not specified
CMD_INSPRIV	Error	Insufficient privilege	User has insufficient system privilege
CMD_INSUFFPRV	Error	Insufficient authorization for attempted function	Insufficient privilege to catalog soecified file
CMD_INVALIDRQST	Error	Invalid request type	Invalid tape generation request
CMD_INVGAPTIME	Error	Gap start time not less than stop time or invalid time	The gap start time is greater than the the gap stop time
CMD_INVFILSPEC	Information	Invalid file specification	The file is incorrectly specified
CMD_INVRECLEN	Error	Invalid record length	Invalid record length specified
CMD_INVRPTID	Information	Invalid report id	The report indentification is incorrectly specified
CMD_INVTIME	Error	Start time not less than stop time or invalid time	On qualifier or prompted value inputs
CMD_INVUARSDAY	Error	Invalid UARS day	The UARS day specified is incorrect
CMD_INVUDTFTIME	Error	Invalud UDTF time	The UdTF time specified is incorrect
CMD_INVUSRNAME	Error	Invalid user name	Invalid user name specified
CMD_MAXALT	Warning	Maximum altitude has values in KM and MBAR	The header record contains maximum version altitude in both values. Only one is allowed
CMD_MAXLAT	Warning	Maximum latitude is blank	The value of this field is mandatory
CMD_MAXLONG	Warning	Maximum longitude is blank	The value of this field is mandatory
CMD_MENU_ERROR	Warning	Internal menu table error	Check recent chaps to menu system tables
CMD_MISMATCHAR	Information	Mismatch between argument count for	The specified values between FIELDS and VALUES qualifiers are unequal
CMD_MISREQID	Warning	Missing request id Enter: DT/CANCEL/IO=rac_id	
CMD_MISSINGFLD	Information	Field value not entered for xxxxxxxx	The value for the specified qualifiers is missing
CMD_MISSQUAL	Error	Qualifier is missing	Qualifier is not specified
CMD_MISSTRTSTP	Information	Start time or stop time missing	Start time or stop time is not specified
CMD_MISTPLABEL	Error	Tape label is missing	

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
CMD_MSINGJOBNAM	Warning	Job name	The job name is missing
CMD_NEGDAY	Warning	Time specified indicates negative UARS day	Time specified is prior to LAUNCH date
CMD_NOBATCHCMD	Error	The batch command is not allowed in the menu environment	
CMD_NODATAAVAIL	Information	No data available for specified query	Data does not exist in the data base for specified query
CMD_NOFILE	Information	Invalid or non-existing file	
CMD_NOFLDSUPL	Information	No field supplied for	The values for the specified qualifier is missing
CMD_QUALREQ	Warning	User qualifier is required	User qualifier is not specified
CMD_REMISMATCH	Warning	Number records in file not equal to that of header record	The number of records specified in the header record is not equal to the
CMD_RQQUALNSPEC	Error	Required qualifier not specified	The required qualifier is not specified
CMD_SMRECLEN	Warning	Record length is smaller than header length + sfdu	The record length specified in the header record field is smaller than the actual record length + sfdu
CMD_STPTIMEMSG	Information	Missing stop time	On qualifier or prompted value inputs
CMD_TIMEALDSP	Information	Time has already been specified	On qualifier or prompted value inputs
CMD_TYPEALDSP	Information	Type has already been specified	On qualifier or prompted value inputs
CMD_UCSSNOTUP	Warning	UCSS is not up	The UCSS is not running
CMD_ULNCH_DAT_BAD	Error	UARS Launch Date invalid or not defined	
CMD_UNKWNPARAM	Information	Unkown parameter received	The specified parameter is non - existing
CMD_VERSIONMIS	Warning	Version number is not entered or is invalid	
CMD_VERSVRULE	Information	Version and version rule cannot be present at the same time	Version and rule cannot be specified at the same time
CMD_VRT_BADLVL	Information	Invalid level for virtual data transfers	
CMD_VRT_TOOBIG	Information	Virtual transfer day/time range too big	On qualifier or prompted value inputs

Table A.3   Data Base Interface Condition Codes and Messages (1 of 4)

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
DBI_AMBATTNAM	Warning	Attribute is ambiguous in xxxxxxxxxx	An unambiguous attribute name cannot be determined from the input string.
DBI_AMBFNCNAM	Warning	Function is ambiguous in xxxxxxxxxx	An unambiguous function name cannot be determined from the input string.
DBI_ATTMISSING	Warning	Function in xxxxxxxxxxx requires attribute	Function reference requires an attribute, for example, providing an attribute to "MAX".
DBI_BADATTVAL	Warning	Attribute value for key traversal is invalid	Error represents coding error. Report details to software maintenance team.
DBI_BADCOMMAND	Warning	INGRES command resulted in error	INGRES reported an error attempting to execute the indicated command. Report details to operations.
DBI_BADFNCUSG	Warning	Function usage in xxxxxxxxxxx is inappropriate	An I/O attribute for a non-query request included a function reference.
DBI_BADINSERTVAL	Warning	Value specified for attribute is inappropriate	Error represents coding error. Report details to software maintenance team.
DBI_BADPATTERN	Warning	Pattern-matching for attribute is inappropriate	Pattern-matching is inappropriate for the requested attribute, such as on a numeric attribute.
DBI_BADRANGE	Warning	Range specified for attribute is invalid	Range specification for a constraint specified a low value higher than the range's high value.
DBI_BADSORTUSG	Warning	Sort specification in attribute is invalid	Non-sort attribute included a sort specification, such as 'ASC'.
DBI_BADSTARTSTOP	Warning	Start time xxxx later than stop time xxxx	In a catalog request, the data's start time is later than its stop time.
DBI_BADSUBUSG	Warning	Subscript usage in attribute is invalid	Subscripted values are only permitted for input attributes in an insert request.
DBI_BADTABLENO	Warning	Invalid number of tables for server	Configuration error. Logical name LTS_NO_TABLES did not translate to a numeric value.
DBI_BADUNDERSCORE	Warning	Attribute value may not begin with an underscore	Character attribute values may not begin with an underscore '_'.
DBI_CHANGECODE	Error	xxxxxx working buffer too small for xxxxxxxx	Error requires coding changes. Report details to software maintenance team.
DBI_CHREXPECTED	Warning	Character string expected in xxxxxxxx	Field provided includes characters that don't comprise a legitimate value. Legitimate characters are 'A'-'Z', 'a'-'z', '0'-'9', '.', '-', ','.
DBI_DATEXPECTED	Warning	Date value expected in xxxxxxxxxxx	Field provided does not represent a valid date string.
DBI_DINEXPECTED	Warning	Date interval expected in xxxxxxxx	Field provided does not represent a valid date/time interval.
DBI_EMPTYFLD	Warning	Attribute field xxxxxxxxxxx is empty	Field provided had no value where one was expected.
DBI_EXTRACRIT	Warning	Non-primary key attribute inappropriately constrained	An insert or delete request specified non primary key constraints.
DBI_EXTRAFLD	Warning	Field in xxxxxxxxx is extraneous	Field provided a valid value, but also provided trailing characters.
DBI_FILESRESERVED	Warning	Files are reserved in this quicklook data set	Attempt to purge quicklook data set in use.
DBI_FILEXPECTED	Warning	File specification expected in xxxxxxx	Field provided does not represent a valid VMS file specification.

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
DBI_HEXEXPECTED	Warning	Hex value exected in xxxxxxxxxx	Field provided does not represent a valid hex string. Legitimate characters are 'A'-'F', 'a'-'f', '0'-'9'.
DBI_ILLOPCODE	Warning	Op code not valid for start request	Coding error. A start request may not entail an update or delete.
DBI_ILLSTRMID	Warning	Stream id indicates invalid "repeating group" request	Coding error. An attempt was made to access data at an inappropriate level.
DBI_INCCOMPCOUNT	Warning	Field component value expected	An attribute defined to have multiple components was not provided with a complete (all components) value.
DBI_INCCMPTREE	Warning	Incomplete tree structure	Cataloged tree structure given not yet defined.
DBI_ILLTRANSEND	Warning	Commit or rollback issued with start requests outstanding	Error represents coding error. Report details to software maintenance team.
DBI_ILLUPDDEL	Warning	Attributes conflict in update/delete request	Constraints provided for delete request referenced distinct relations.
DBI_INSERTCRIT	Warning	Constraint attributes inappropriate for request	Constraints for insert request were at a level lower than the data to be inserted.
DBI_INSUFFPKEY	Warning	Insufficient primary key attributes available for request	Values for all the primary keys were not provided for an insert request.
DBI_INVALIDTREE	Warning	Invalid tree structure	Cataloged tree structure provided is not a defined catalog tree structure.
DBI_INVATTNAM	Warning	Attribute not recognized in xxxxxxxxx	Field provided does not represent an attribute of the logical table.
DBI_INVATTVALUE	Warning	Invalid attribute value	Catch-all error. Specific errors follow.
DBI_INVCALLSEQ	Warning	Invalid calling sequence	Error represents coding error. Report details to software maintenance team.
DBI_INVCOMPRANGE	Warning	Range not permitted with multiple-component, boolean, or interval attribute	Range specification provided for an attribute where range specifications are not permitted.
DBI_INVFNCNAM	Warning	Function not recognized in xxxxxxxxx	Field provided what is believed to be a function reference, but the function is not recognized.
DBI_INVMSGSTR	Warning	Message has invalid structure	Error represents coding error. Report details to software maintenance team.
DBI_INVOPCODE	Warning	Logical table operation code not legal for this table	A request is for an operation that is not allowed for the logical table, such as a delete request for the MNU logical table.
DBI_INVRANGE	Warning	Invalid range specifier in xxxxxxxxxx	Field provided does not represent a valid range specification, such as '<>= value'.
DBI_INVSORTVAL	Warning	Sort option is invalid in xxxxxxxxxx	Field provided a valid attribute, but the direction of sort ('ASCENDING' or 'DESCENDING') was not valid.
DBI_INVSTRMID	Warning	Stream id is not recognizable as such	Error represents coding error. Report details to software maintenance team.
DBI_INVSUBSCR	Warning	Invalid subscript in xxxxxxxxxxx	Subscripted attribute has an invalid (non-numeric) subscript.
DBI_INVTBLNAM	Warning	Logical table xxxxxxxxxxxxx not recognized	Table name provided does not represent a known logical table.
DBI_INVTIME	Warning	Invalid time value in xxxxxxxxxxx	Field provided does not include a valid time field.

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
DBI_INVTYPE	Warning	Invalid TYPE attribute value	Error represents coding error. Report details to software maintenance team.
DBI_JOBIDREQUIRED	Warning	Job ID required for insert access to table	Error represents coding error. Report details to software maintenance team.
DBI_MISSINGSEP	Warning	Missing field separator in xxxxxxxxx	Field provided attributes without an intervening separator, for example, a comma is missing in a list, or the hyphen is missing in a range.
DBI_MOREDATA	Information	More information is available	Error represents coding error. Report details to software maintenance team.
DBI_MULTIVALUE	Information	Multiple value found in attribute	Error represents coding error. Report details to software maintenance team.
DBI_NOATTGIVEN	Warning	No attribute given where required	User input error
DBI_NOATTNAM	Warning	No attribute name found in xxxxxxxxxx	Error represents coding error. Report details to software maintenance team.
DBI_NOCALIDFOUND	Warning	Attribute CALIBRATION_ID not found in file attributes	Error represents coding error. Report details to software maintenance team.
DBI_NOCNSTRNTPKEY	Warning	Primary key attribute not specified for update or delete	Primary keys were not sufficiently constrained for an update or delete request.
DBI_NODATARQST	Warning	No data satisfied request	No data satisfied the constraints provided for a request.
DBI_NODAYFOUND	Warning	Attribute DAY not found in file attributes	Error represents coding error. Report details to software maintenance team.
DBI_NOIOATT	Warning	I/O attribute not permitted for xxxxx	I/O attribute provided for a delete request.
DBI_NOMOREDATA	Warning	End-of-data for request stream id	Error represents coding error. Report details to software maintenance team.
DBI_NONEXTATT	Information	Attribute valid, end of validation tree was reached	Error represents coding error. Report details to software maintenance team.
DBI_NOSORTATT	Warning	Sort attribute not permitted for xxxx	Sort attribute(s) were provided for a non-query request.
DBI_NOSOURCEFOUND	Warning	Attribute SOURCE not found in file attributes	Error represents coding error. Report details to software maintenance team.
DBI_NOSUBTYPEFOUND	Warning	Attribute SUBTYPE not found in file attributes	Error represents coding error. Report details to software maintenance team.
DBI_NOTOPATTR	Warning	Top attribute not defined	Catalog tree is in the midst of being re-defined. Request should be re-issued at a later time.
DBI_NOTPRIMEKEY	Warning	Constraints in request do not define unique primary key	Constraints provided for an insert request must define one and only one record.
DBI_NOTPRODJOB	Warning	Catalog request rejected, job xxxxxxx	Job is not a production job, so use of CDI_CATALOG_FILE is inappropriate.
DBI_NOTYETAVAIL	Warning	Request involves an operation not yet implemented, xxxxxxxxxxxxx	Error represents coding error. Report details to software maintenance team.
DBI_NOTYPEFOUND	Warning	Attribute TYPE not found in file attributes	Error represents coding error. Report details to software maintenance team.
DBI_NOUPDPKEY	Warning	Primary key attributes may not be updated	Error represents coding error. Report details to software maintenance team.
DBI_NUMEXPECTED	Warning	Numeric value expected in xxxxxxxxx	Field provided does not represent a valid integer value.

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
DBI_OUTOFRANGE	Warning	Value out of range	Attribute value is not within the range of values allowed.
DBI_RELEASED	Warning	Requeued messages released for reprocessing	None.
DBI_REQUEUED	Warning	Request requeued	This indicates that the number of concurrent requests for a table may need to be adjusted higher.
DBI_SINGLEVALUE	Information	Parsed component has one value	Error represents coding error. Report details to software maintenance team.
DBI_TABLEINUSE	Warning	Table xxxxxxxxxxx already assigned to process xxxxxxxx	The indicated logical table is already assigned to the indicated logical table server. Report details to operations.
DBI_TIMEOUT	Warning	Logical Table Server has timed out	Request has timed out.
DBI_TOFEXPECTED	Warning	Boolean value expected in xxxxxxxxxx	Field provided does not represent a valid boolean value. Legitimate characters are 'TRUE' or 'FALSE', or an abbreviation of them.
DBI_TOOMANYRQSTS	Warning	Too many logical table requests already active	Only 10 outstanding requests are allowed for any one logical table. This message indicates that the value may need to be adjusted higher.
DBI_TRAILINGCOMMA	Warning	Trailing comma detected in field	Field provided represented a valid value, but a trailing comma was detected.
DBI_UICEXPECTED	Warning	Non-UIC string found in xxxxxxxxxx	Field provided does not represent a valid UIC in the form [group,member], with wildcards not permitted.
DBI_UNKOPCODE	Warning	Logical table operation code xxxxxxxxx is unknown	Error represents coding error. Report details to software maintenance team.
DBI_VALUETOOLONG	Warning	Value xxxxxxxxx is too long	Field provided represents a hex value whose length is longer than that currently allowed, 16 hex characters.

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
DCF_BAD_DATA_TYPE	Error	Invalid DCF data type received: xxxxx	Invalid DCF file id was transmitted from DCF computer.
DCF_BAD_FILE_ID	Error	Invalid DCF file id received: xxxxxxx	Invalid DCF file id was transmitted from DCF computer.
DCF_BAD_ID	Warning	No ingest with id= <unique id> exist	Reenter
DCF_BAD_INGEST_TYPE	Error	Invalid DCF ingest TYPE: xxxxxxxx	Programming error.
DCF_BAD_MAIL_ID	Error	Bad mail id found - id: xxxxxxxx	Programming error.
DCF_BADORBNUM	Warning	Bad orbit number	Interactive UOAS services were unable to calculate orbit number for quicklook data
DCF_BAD_QL_DAY	Error	Qiucklook ingest dayl SL is before lastl/ successfully completed quick-look ingest with dayl SL l/ ingest cancelled.	
DCF_BADQUAL	Warning	Invalid qualifier combination	
DCF_BAD_SOURCE	Warning	The specified DCF ingest source is invalid / only 'DCF', 'TAPE' and 'TAPEn' are valid.	Only DCF, Tape or TAPEN are valid ingest sources.
DCF_BAD_STATUS	Warning	DCF ingest had non-continuable status	
DCF_BADVAL	Warning	Qualifier <name> has bad value of "<value>"	
DCF_BFX_Q_OPEN	Error	DCF/BFX task queue open failure	Task already active.
DCF_BFX_NOTACTV	Warning	The DCF/BFX ingest task is not active to monitor	
DCF_BFX_Q_READ	Error	DCF/BFX task queue read failed:	Process queue read errors.
DCF_BFX_Q_WRITE	Error	DCF/BFX task queue write failed on message #	Process queue write errors.
DCF_BFX_Q_WRITE1	Error	DCF/BFX task queue write failed on message #	Process queue write errors.
DCF_CANATTERM	Warning	Tape ingest for ingest type at terminal	Cancel tape ingest from originating terminal.
DCF_CANCEL	Information	Cancellation DCF Ingest <unique id>	Does not indicate a problem
DCF_CANCEL_FAIL	Warning	DCF ingest cancellation by 'DCF_BFX_ING_CANC' sub failed	
DCF_CANCELLED	Information	Cancellation request for ingest type:	Ingest cancellation message has been sent to DCF/BFX ingest task.
DCF_CANT_CANCEL	Warning	The type ingest can no longer be cancelled because its current ingest status is:	All DCF files have been read from tape and DCF ingest verification is being performed.
DCF_CANONLY	Warning	Ingest <unique id> of type, <type> can only be cancelled ingest status= <status>	

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
DCF_CATALOG_NUM	Error	Not all quicklook files cataloged successfully I/ number of quicklook files not cataloged	
DCF_CATERROR	Error	Cataloging DCF files:	
DCF_CDI_DELFILE	Error	Could delete file with FILE_ID:	
DCF_CDR_READ	Error	Data catalog table read failed id:	Logical table error.
DCF_COMMIT_ERR	Error	Failed in committing DCF files to the catalog	Cataloging level 0 or quicklook data set failed.
DCF_COMMIT_FAIL	Error	Committing Quicklook files to cataloged failed	Quicklook files could not be committed to quicklook table.
DCF_CONTINUE	Information	Continuing DCF Ingest <unique id>	Does not indicate a problem
DCF_CRASHED	Error	DCF network ingest active when system crashed	This DCF ingest was still active when DCF/BFX ingest task was initialized ingest has been cancelled.
DCF_DATA_RECEIV	Warning	Entire data set has been received. Ingest not cancelled.	Entire DCF data set has been received so ingest could not be cancelled.
DCF_DAY_BEFORE	Error	Ingest day	
DCF_DCF_COUNT	Error	DCF ingest table count failed	Count query to DCF Ingset table failed
DCF_DCF_DELETE	Error	DCF ingest table delete failed	
DCF_DCF_ERROR	Error	A DCF ingest table write failed	
DCF_DCF_INSERT	Error	DCF ingest table insert failed	Logical table error.
DCF_DCF_NOMORE	Error		
DCF_DCF_QRY_SET	Error	DCF ingest table query setup failed	Logical table error.
DCF_DCF_QUERY	Error	DCF ingest table query read failed	Logical table error.
DCF_DCF_READ	Error	DCF ingest table read failed	Logical table error.
DCF_DCF_WRITE	Error	DCF ingest table write failed	Logical table error.
DCF_DELACTV	Error	Attempt to delete ingest <unique id> failed ingest is still active ingest status= <status>	
DCF_DELETE_FILE	Error	Delete error for file:	Task installed with wrong privileges.
DCF_DELPROD	Warning	Attempt to delete production ingest xxx ignored	The ingest is used in the delete request identified a successful prodtion ingest. These ingests may not be deleted.
DCF_DETQLTIM	Warning	Error searching for overlapping start/ stop times for ingest xxxx unique id xxx start time:xxx stop time:xxx transid:xxx	A database error occurred while checking for overlapping quicklook data ingests.
DCF_DLQL	Information	Deleting test quicklook data set xxx	Informs operator of which incomplete or test quicklook ingest is being deleted

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
DCF_DLLO	Information	Deleting test level 0 data set xxxx	Informs operator of which incomplete or test production ingest is being deleted.
DCF_DLTST	Information	Deleting test data set	Informs operator of which test input is being deleted.
DCF_FILE_DEL	Error	Quick-look delete failed.	
DCF_FILMISMTCH	Error	Expected file name of:	
DCF_FNF	Error	Could not find file to rename	
DCF_FORT_CLOSE	Error	in subroutine:	Fortran file close error occurred.
DCF_FORT_IO	Error	in subroutine:	
DCF_FORT_OPEN	Error	in subroutine:	Fortran file open error occurred.
DCF_FORT_READ	Error	in subroutine:	Fortran read error occurred.
DCF_FORT_READ1	Error	in subroutine:	Fortran read error on file label record.
DCF_FORT_WRITE	Error	in subroutine:	Fortran file write error ocuurred.
DCF_GETSPCFAIL	Error	Getting space for ingest xxxxxxxx	Not enough UCSS disk space is available to perform DCF ingest.
DCF_INVFILLAB	Error	Invalid file label record.	DCF file label record error.
DCF_INCOMP_TAPE	Warning	Tape drive name and number (TAPEn) required to check	
DCF_INGDON	Information	The tape ingest has completed status =xxx, completion status=xxx	Informs operator of completion status of tape ingests.
DCF_INGEST_ACTIVE	Warning	DCF ingest with trans. id	
DCF_INGEST_CANC	Warning	DCF ingest cancelled by 'DCF_BFX_ING_CANC'	
DCF_INVUSER	Warning	User xxxx is not authorized to execute this function	User not authorized to execute function only operations may execute DCF functions.
DCF_JOBERROR	Warning	Error starting job xxx	An error occurred while starting the specified job. Correct the job definition in the auto job file if necessary Note: This job will not be submitted for the just completed ingest.
DCF_LO_ACTIVE	Warning	Another level0 ingest is currently active, trans id:xxx unique id:xxx	A level 0 ingest in currently active. Only one ingest of a particular type Type may be active. The active ingest may be cancelled.
DCF_LO_DELETE	Error	Level 0 test data file delete failed.	
DCF_LO_DONE	Warning	Level 0 ingest for day xxx already done, id= xxx	Informs the operator that level 0 data for this day has already been ingested
DCF_LOONEACT	Warning	A production ingest is still active	The function being attempted must be run when no ingests are active
DCF_LOCK	Fatal	Can't establish lock on resource	Could not lock on a DCF resource. Internal error.

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
DCF_LOG_NAME_CRE	Error	Logical name create failed:	Task installed with wrong privileges
DCF_L0_STARTED	Information	The DCF BFX Ingest task is success-fully monitoring the level 0 ingest.	Informational message DOES NOT indicate problem.
DCF_MORECANCEL	Fatal	There are xxxx ingest that were not cancelled, please restart DCF/BFX ingest task.	More than 3 ingest were active at one time. This is an internal error, but may be corrected by restarting the DCF/BFX task.
DCF_MOUNTERR	Warning	Mount error on device xxxx	Unable to mount the tape in the tape set. Remount the tape.
DCF_MOUREQ	Information	Please mount DCF ingest tape # xxx on tape device: xxxx	Informs the operator to mount the next tape in the tape set.
DCF_MISQUAL	Warning	Missing qualifier xxx on command line	The qualifier specified is required for this function. Re-enter command with qualifier.
DCF_NO_CANCEL	Warning	DCF ingest with unique id:	
DCF_NO_ERROR	Warning	DCF ingest with trans. id	
DCF_NOINCOMP	Information	No incomplete ingests of type:	
DCF_NOINGEST	Information	No incomplete Network Ingest of type:	
DCF_NOJOBS	Warning	Auto job file not found: no jobs have been started.	The auto job file was not found. No jobs will be started. Make sure file is UCSS_DCF: AUTO_JOB_FILE.NML.
DCF_NOLODELETE	Information	No DCF Level 0 test data sets exists to delete.	
DCF_NONEED	Warning	There is not need to delete ingest xxx ingest has completion status of xxx	This ingest was previously cancelled or deleted. There is no need to currently delete the ingest.
DCF_NONODE	Warning	Job xxx not started no node for job was found	No node in the node list for the auto job was active. Check difinition of node list for auto job and correct if invalid or expand to include active nodes. Note: this job will not be submitted for the just completed ingest.
DCF_NONE_RECEIVE	Warning	No files received for ingest type	Infolan network problem. NETEX task not active.
DCF_NONE_SUCCESS	Warning	No DCF ingests have completed success-fully	
DCF_NOQLDELETE	Information	No DCF quick-look test data sets exist to delete.	
DCF_NOT_ACTIVE	Warning	No DCF ingest of type:	No DCF ingest of this type is active.
DCF_NOT_CANCELLED	Warning	No DCF ingest of type:	No DCF ingest of this type is active.
DCF_NOTESTDSET	Information	No test data set exists to delete.	
DCF_OA_FAILED	Error	OA Extraction Program failed	See o/a extraction program's log file for cause of error.

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
DCF_OVERLAP	Fatal	Ingest: xxx, Trans id: xxx overlap another QL ingest	The currently active quicklook ingest overlaps previously cataloged quick-look files. If the data is to be ingested. The currently active quick-look ingest must be continued. If the data is not to be ingested, the currently active quicklook ingest must be cancelled.
DCF_OVERRUN	Warning	This ingest will exceed maximum number of ingest online/number ingest received=xxxx, max online allowed = xxx	When this ingest completes, the oldest quicklook data set will be deleted. If the oldest set is to be saved, re-define the logical DCF_MAX_QL_DSETS to one more than its current definition. Note: that the logical name table on each node.
DCF_QLGAP	Information	A gap in UARS days exist, last ingest day =xxx/this ingest day =xxx	Informs the operator that the current ingest does not follow the previous ingest. Once the ingest is set up; It may be cancelled or continued normally
DCF_PURGE_FAILED	Error	Purging DCF Quick look data set for UARS day	
DCF_QL_ACTIVE	Warning	Another quick-look ingest is currently active.	
DCF_QL_ASSIGN	Information	The quick look id for ingest:	Informational message DOES NOT indicate problem.
DCF_QL_DELETE	Error	Quick-look test data file delete failed:	
DCF_QL_ERROR	Error	Cataloging Quick look data file for dcf data type:	
DCF_QLONEACT	Warning	A quicklook ingest is still active	The function being attempted must be run when no ingests are active
DCF_QL_STARTED	Information	The DCF BFX Ingest task is a success-fully monitoring the I/Quick look ingest. trans id.	Informational message DOES NOT indicate problem
DCF_QRL_READ	Error	Quick-look table read failed.	
DCF_QLR_TLNM_ERR	Error	Logical Name Translation for O/A time failed:	Programming error.
DCF_RDTOMNY_ID	Warning	Read too many records from tape id file. #records read	Tape identifier file contained too many records.
DCF_RENAME_FAIL	Warning	DCF file rename failed	
DCF_ROLLBACK_ERR	Error	Failure in the rollback of DCF files from the catalog	Rollback of partially cataloged level 0 or quicklook data set failed.
DCF_RSRVSPCFAIL	Error	Reserving space for ingest	Not enough UCSS disk space is available to perform DCF ingest.
DCF_SCHED_TIMER	Error	System timer could not be scheduled for xxxxxxx	Task installed with wrong privileges.
DCF_SETUP	Warning	Another test ingest is currently active/trans id:xxxx unique id:xxxx /ingest source:xxxx/ingest status:xxxx	Another test ingest is active. Only one ingest of a particular may be active.
DCF_SOME_RECEIVE	Error	Not all files received for ingest type	Only nn files have benn received from DCF.
DCF_SPAWN_FAIL	Error	Spawn failed	Task installed with wrong privileges.
DCF_TAPE_ALLOC	Error	Tape drive:	All tape drives are allocated to other processes.
DCF_TAPE_DISMOU	Error	Tape drive:	

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
DCF_TAPE_READ	Error	Tape read error.	
DCF_TIMEOUT	Warning	Could not determine if ingest to be continued was active.	
DCF_TOMNYREC	Error	Too many records read from tape. #recs	Too many EMAFs found in DCF file read from tape.
DCF_TOO_MANY_ACT	Warning	Another DCF ingest is active via Local Area Network	Only one quicklook, level 0 and test ingest can be active at a time.
DCF_TRANSERROR	Warning	Logical name:	
DCF_TST_ACTIVE	Warning	Another test ingest is currently active/trans id:xxxx unique id:xxxx /ingest source:xxxx/ingest status: =xxx	Another test ingest is active only one ingest of a particular tape may be active
DCF_TSTONEACT	Warning	A test ingest is still active	The function being attempted must be run when no ingests are active
DCF_TST_STARTED	Information	The DCF BFX ingest task is success-fully monitoring the I/Test data ingest. Trans id	Informational message DOES NOT indicate problem.
DCF_TYPENOTFND	Warning	Could not find VMS file type in file name:	
DCF_UNKINGTYPE	Warning	DCF Ingest LAN task received unknown translation of I/ OS_RUN_PARAMS	
DCF_USECONT	Warning	Use continue/cancel menus to cancel a crashed ingest	To cancel or continue a crashed ingest use the minus or command line DCF functions.
DCF_VALLOVI	Warning	Version for ingest .ne 1. Ingest version= n	
DCF_VALLODG	Warning	Day for ingest does not follow previous day. Ingest day= n, pervious day= n	
DCF_VALLOVQ	Warning	Version for ingest does not follow previous version/version for ingest= xxxx, previous version =xxxx	Informs the operator that the version of this production ingest does not follow the previous version. The ingest may be cancelled or continued normally.

Table A.5 Data Management Condition Codes and Messages

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
DM_ACTSHUT	Information	Process is shutting down	
DM_DEBUGOPEN	Error	Failed to open debug file	
DM_DEBUGWRITE	Error	Failed to write to debug file	
DM_FILESPACEUSG	Error	File space usage estimate out-of-limits	File space actually used is out of time range from estimated file space estimate should be modified for subsequent runs.
DM_INSPRIV	Warning	Process has insufficient privilege for request	File space actually used is out of time range from estimated file space estimate should be modified for subsequent runs.
DM_INVMESSAGE	Warning	Process received incorrect message code	Coding error
DM_NOLOGNAM	Error	Logical name not defined	Coding error
DM_PENDSHUT	Information	Process shutdown is pending	
DM_PROCDONE	Warning	Process is shutting down	
DM_PROCNORMAL	Information	Process status is normal	
DM_SHUTPEND	Information	Process shutdown is pending	

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Table A.6   UCSS Initilization Condition Codes and Messages

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
INT_ACTNODINCFG	Information	Active node, must remain in UCSS configuration	Cannot deactivate active node
INT_CURNODINCFG	Information	Current node, must remain in UCSS configuration	Cannot deactivate current node
INT_INITINPROG	Error	Initialization of current system is already in progress	Initialization of current system has already been started
INT_INVDBNAME	Error	Data-base name, is invalid or blank	Data base name is more than 6 characters or blank
INT_INVNODNAME	Error	Node name, is invalid or blank	Node name is more than 6 characters or blank
INT_INVNUMNOD	Error	Number of nodes from config file is outside valid range	Number of nodes is negative or exceeds MAX_NR_NODES (8)
INT_INVTIMINT	Error	Timer interval specified is negative or exceeds 1 day	
INT_KERNTASKDWN	Error	Kernel tasks unexpectedly shut-down	Unsolicited shutdown response from kernal task
INT_LOGWRTERR	Warning	Error writing to system log PASS code	System log full or write error to system log file
INT_NODBTRAN	Error	Logical name of data-base is not defined	
INT_NOENTRY	Error	Namelist entry is missing from config file	
INT_NONODETRAN	Error	Logical name of current node is not defined	
INT_NOSUCHNODE	Error	Remote node is unavailable	Specified node is unknown
INT_NOTINCONFIG	Error	Node is not part of requested configuration	
INT_OPERCANCEL	Information	Initialization cancelled by operator	
INT_OPTTSKNTRDY	Warning	Optional task was not brought up successfully	
INT_ORPHTASKS	Information	orphaned tasks left from prior initialization	
INT_OTSKNOTDWN	Error	orphaned tasks could not be brought down	
INT_QUENOTAVAIL	Error	queue not available status	Batch queue is not idle or executing
INT_REQTSKNTRDY	Error	Required task was not brought up successfully	
INT_UNEXSHUTDWN	Warning	Unexpected shut-down message from task	
INT_UNEXTSKINIT	Warning	Unexpected task initialization message from task	

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
RDT_ACR_DAY_ERR	Error	Day range exceeded for ACRIM transfer request	
RDT_ACR_STG_FAIL	Error	Stage for ACRIM/OBC/QUALITY Files Failed	Not all files were staged successfully
RDT_ACR_FIL_MISS	Information	Acrim files missing within time range	
RDT_ACTDELETE	Warning	Active transfer request was deleted from list	An active transfer was cancelled, "Normal" error during execution of cancellation
RDT_ALRINLST	Warning	Request is already in pending/active list	This transfer request was found during a requery for the node before the same transfer request was read from the process mailbox. "Normal" error for requeries
RDT_ALRCANC	Information	Request	
RDT_BADFILESPEC	Warning	File spec:	
RDT_BAD_INDEX	Error	Bad index received.	Invalid node
RDT_BAD_MAIL_ID	Error	Bad mail id found - id: xxxxxx	Programming error
RDT_BADMSG	Warning	Unknown message xxx from node xxx, queue xxx	Some task sent an unknown message to the data transfer task
RDT_BDMSGPRMS	Error	Bad message format in slist task msg	Programming error
RDT_BAD_REC_COUNT	Error	Bad record count in file:	
RDT_BAD_TIME_ID	Error	Bad timer id found - id: xxxxxx	Programming error
RDT_BADVAL	Warning	Qualifier xxxxxxxxx has bad value of "xxxxxxxxxx"	
RDT_BAD_VMS_TIME	Error	Error in VMS time field	Correct and resubmit
RDT_BULK_CREATE	Error	Creating dest. file for bulk xfer:	
RDT_BULK_FAIL	Error	Bulk file transfer failed	Bulk file transfer failed
RDT_CAN_ERR	Error	Error cancelling data transfer request	
RDT_CANQL	Error	User has cancelled data transfer request processor session	
RDT_CATSTGFAIL	Error	Getting file spec for stage id	
RDT_CDR_NOMORE	Error		
RDT_CDR_QRY_SET	Error	Data catalog table query setup failed.	Table operation or Data Catalog
RDT_CDR_QUERY	Error	Data catalog table query read failed.	Table operation or Data Catalog
RDT_CDR_READ	Error	Data catalog table read failed. id:	Table operation or Data Catalog
RDT_CDR_WRITE	Error	Data catalog table write failed. ID:	
RDT_CDT_CONT	Error	Known # of types = xxxxxxxxx	Data Type Catalog needs to be updated report problems to UCSS programming staff
RDT_CDT_QUERY	Error	Data type catalog table query read failed.	Data Type Catalog needs to be updated report problems to UCSS programming staff

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
RDT_CDT_READ	Error	New data types detected - RAC DT system needs changes.	Data Type Catalog needs to be updated report problems to UCSS programming staff
RDT_CHGERRCONT	Error	Additional = xxxxxxxxxxxx	
RDT_CLASSIFY_FAIL	Error	Fail to classify file as bulk or small	Resubmit virtual transfer
RDT_CNGERR	Error	RTED error xxxxxxxxxx	Continues error message from previous line.
RDT_CRINPFILE	Error	Failure in creating input file for id: xxxxxxxx	Task installation error
RDT_CNGERRCONT	Error	Additional: xxxx	RDT continues error message from previous line.
RDT_DEFTHRES	Information	Shutdown threshold defaulted to n	
RDT_DELETE_FILE	Error	Delete error for file: xxxxxxxxx	Report problem to UCSS programming staff
RDT_DSC_Q_OPEN	Error	Data send controller queue open failure	DSC already running
RDT_DSC_Q_READ	Error	Data send controller queue read failed	
RDT_DSC_Q_WRITE	Error	Data send controller queue write failed on messages # xxxxxxxxxx	DSC not running
RDT_DSC_TERM	Fatal	Data send controller task has terminated	RAC Transfer scheduler task did not send message to Data Send Controller Task within specified time intervals. (RAC Transfer Scheduler terminated during initialization, check log file reason.)
RDT_DSCNOTACT	Information	The MFT Controller task is not currently active	
RDT_DSCNOTSHUT	Information	The Data Transfer Subsystem is not currently shutting down	
RDT_DTNOTRUN	Information	Data Transfer subsystem is currently not running	
RDT_EOF	Error	End of data file on sequential read	
RDT_ERR_BLD_ACR_LST	Error	Error Building ACRIM List file:	List file not built cannot process request
RDT_ERR_BLD_SLIST	Error	Error Building MFT List file:	List file not built cannot process request
RDT_ERR_BLD_VFT_LST	Error	Error Building Virtual List file:	List file not built cannot process request
RDT_ERR_CPY_MFT_LST	Error	Error Building Copying User Supplied MFT List file:	
RDT_EXRETRY	Warning	Reqeust has exceeded retry limit	The transfer request has exceeded its retry limit. The copy request failed or the transfer startup failed. "Normal" error when a transfer fails
RDT_FILE_FORMAT	Error	NCP results file format error	NCP format changed
RDT_FILE_RESERV	Error	File reserv failed for file:	File does not exist in Data Catalog or Quicklook Table
RDT_FILE_SIZ	Error	Failed to get virt file size; rms status	

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
RDT_FILE_SIZE	Error	Could not get size of file:	File site in catalog is wrong
RDT_FILE_SPACE	Error	Get file space failed for file:	No disk space available on current disk
RDT_FILNMERR	Information	Error	
RDT_FORT_CLOSE	Error	in subroutine xxxxxxxx	Fortran file operations mail messages multi-file requests status files inp for copy, task installed with wrong priveleges
RDT_FORT_GET_LUN	Error	In subroutine:	
RDT_FORT_INQUIRE	Error	In subroutine	
RDT_FORT_IO	Error	in subroutine xxxxxxxx	Fortran file operations mail messages multi-file requests status files inp for copy, task installed with wrong priveleges
RDT_FORT_OPEN	Error	in subroutine xxxxxxxx	Fortran file operations mail messages multi-file requests status files inp for copy, task installed with wrong priveleges
RDT_FORT_READ	Error	in subroutine xxxxxxxx	Fortran file operations mail messages multi-file requests status files inp for copy, task installed with wrong priveleges
RDT_FORT_WRITE	Error	in subroutine xxxxxxxx	Fortran file operations mail messages multi-file requests status files inp for copy, task installed with wrong priveleges
RDT_FOUND_VIRT	Error	xxxxxxxx not possible in build 2	If found, programming error
RDT_FRE_DAT_FAIL	Error	Free data failed for stage request id:	
RDT_GRACNOTCAN	Warning	DT graceful shutdown NOT successfully cancelled	
RDT_INCONDB	Error	Inconsistent data base change found	Programming error
RDT_INCONNUMREC	Error	Inconsistent number of records	Num rec in tabel does not match num num rec in file
RDT_INVDATLEV	Error	Invalid data level	Invalid data level used
RDT_INVFILSZE	Error	Invalid file size	
RDT_INVTAB	Error	Invalid table name for RAC Data Transfer Table Edit	
RDT_INVUSER	Error	User as not authorized for operations	Only authorized user may perform function
RDT_LOCK_ERROR	Error	Could not delete file:	
RDT_MAIL_FAIL	Error	Error building virt file creation mail messages	
RDT_MAIL_SPAWN	Error	Spawn error on send mail DCL cmd. Req.	Installed with too little priveleges

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
RDT_MANY_NODES	Error	Too many node names in RAC Line Usage Table	Data Transfer task needs recompile/ link common is too small. Too many new nodes entered in RLU table
RDT_MFT_CANCEL	Error	Multi-file transfer with request id	
RDT_MFT_DBMSG	Error	Unnecessary Data Base change msg received by MFT task	Programming error
RDT_MFT_ERROR	Error	MFT with id:	
RDT_MFTNOTACT	Information	The MFT Controller task is not currently active	
RDT_MFT_Q_OPEN	Error	Multi-file Transfer Controller queue open failure	MFT Task already running
RDT_MFT_Q_READ	Error	Multi-file Transfer Controller queue read failed	
RDT_MFT_TERM	Error	MULTI-FILE TRANSFER CONTROLLER task has terminated	RTS took too long to initialize
RDT_MFT_Q_WRITE	Error	Multi-file Transfer Controller write failed on xxxxxxxxxxxxx	MFT Task not running
RDT_MISQUAL	Information	Missing qualifiers on command line: xxxxxxxxxxxx	
RDT_MSGTXT	Error		
RDT_NODATAFND	Error	No data found for given latitude with specified time range	
RDT_NODE_SUSP	Fatal	Initial node transfer status for RAC	Transfer status for this RAC is suspended
RDT_NODNOTADD	Error	Node as not added to Data Transfer	1) Report DT 2) Recompile DT using larger MAX nodes
RDT_NO_ERROR			
RDT_NOMFTINRAC	Information	No outstanding MFTs exist in RAC transfer table	
RDT_NOMORE			
RDT_NONAUTHUSR	Error	User not authorized to perform cancellation	Only initiator or operatoins may cancel
RDT_NONEEDCANC	Information	There is no need to cancel file transfer request	
RDT_NO_NODES	Error	No node names found in RAC Line Usage Table	RLU table not initialized with node names
RDT_NOOVRLAPTRING	Error	No overlap between requested time range and file time range	
RDT_NORECACCES	Error	File record cannot be accessed	File index in error
RDT_NORECORD	Error	Specific record does not exist	
RDT_NOSFTINRAC	Information	No outstanding SFTs exist in RAC transfer table	
RDT_NOSUCHNOD	Warning	Node: xxxxxxxxxx not found in RAC Line Usage Table	
RDT_OUT_RNGE_LMT	Error	No data exists for selected time	Requested time outside of selected files time ranges

SYMBOLIC NAME	SEVERITY	DESCRIPTION	POSSIBLE CAUSES/EXPLANATION
RDI_PENDINSERT	Fatal	Insertion of pending list failed, unique id xxxx, node xxxx	Task is out of virtual memory. Too many outstanding requests
RDI_PENDOPEN	Fatal	Failed to open pending list for node xxxx	Task is out of virtual memory or too many node names in data transfer subsystem
RDI_QLMISINF	Warning	Day and/or quicklook id is missing, can't continue.	
RDI_QLRESPEC	Warning	User wants to respecify quicklook pass information	
RDI_QLR_QRY_SET	Error	Quick look table query setup failed.	Table operation or Quicklook Table
RDI_QLR_QUERY	Error	Quick look table query failed.	Table operation or Quicklook Table
RDI_REPLTHRES	Information	DT was shutting down with threshold= n new threshold= n	
RDI_REQCANCELLED	Warning	Data transfer request was cancelled	Data transfer request was cancelled.
RDI_REQDON	Information	The update request is being processed	
RDI_REQLATOUT	Error	Requested latitude is outside file's latitude range	No record exist for latitude corresponding to selected time range
RDI_REQTMPAST	Error	Requested time passed	Requested time out of range
RDI_REQTMPREV	Warning	Requested time preceed file start time	Requested time out of range
RDI_RESTART_DT	Error	Data transfer could not be restated to NODE:	
RDI_RLU_NOMORE			
RDI_RLU_QRY_SET	Error	RAC line usage table query setup failed	Table operations or RAC Line Usage Table
RDI_RLU_QUERY	Error	RAC line usage table query read fail-ed	Table operations or RAC Line Usage Table
RDI_RLU_READ	Error	RAC line usage table read failed NODE:	Table operations or RAC Line Usage Table
RDI_RLU_WRITE	Error	RAC line usage table write failed. NODE:	Table operations or RAC Line Usage Table
RDI_RQLNOTEX	Warning	Day and pass id are not exact for specified relative pass id	
RDI_RSTRAFTFAIL	Error	Multi. file request id = xxxxxxxxx	Restart Job MFT failed programming error
RDI_RTSNOTACT	Information	The RTS Scheduler task is not currently active	
RDI_RTS_Q_OPEN	Error	RAC Transfer Scheduler queue open failure	RTS scheduler already running
RDI_RTS_Q_READ	Error	RAC Transfer Scheduler queue read failed	
RDI_RTS_Q_WRITE	Error	RAC Transfer Scheduler queue write failed on message # xxxxxxxxx	RTS scheduler not running
RDI_RXF_COUNT	Error	RAC transfer table count query failed	
RDI_RXF_INSERT	Error	RAC Transfer table insert failed. reg.	Table operation on RAC TRANSFER Table

Table A.7   RAC Data Transfer Condition Codes and Messages (5 of 6)

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
RDT_RXF_NODATA	Error	No outstanding data transfer request for	
RDT_RXF_QUERY	Error	RAC Transfer table query read failed.	Table operation on RAC TRANSFER Table Logical table server error
RDT_RXF_QRY_SET	Error	RAC Transfer table query setup failed.	Table operation on RAC TRANSFER Table Logical table server error
RDT_RXF_READ	Error	RAC Transfer table read failed. reg. id = xxxxxxxx	Table operation on RAC TRANSFER Table Logical table server error
RDT_RXF_WRITE	Error	RAC Transfer table write failed. reg. id = xxxxxxxx	Table operation on RAC TRANSFER Table Logical table server error
RDT_SCHED_TIMER	Error	System timer could not be scheduled for xxxxxxxx	
RDT_SFT_CANCEL	Information	Data transfer with request id	
RDT_SLIST_NOT_RUN	Fatal	UCSS RAC DATA TRANSFER not configured correctly.	
RDT_SLIST_Q_OPEN	Fatal	Slist Task Queue Open Failure	SLIST already running
RDT_SLIST_Q_WRITE	Error	Error writing msg	SLIST Task ot running
RDT_SMALL_CREATE	Error	Creating dest. file for small xfer:	
RDT_SPAWN_FAIL	Error	Spawn failed	Task installed with wrong privileges
RDT_STAGE_FAIL	Error	Stage request for xxxxxxxx failed	File stage request failed, file does not exist in Data Catalog or Quicklook table
RDT_STARTFAIL	Fatal	Start up of copy xxx failed	Task is out of process quota or does not have privilege to start transfer (TMPMBX privilege required)
RDT_STATUS_FORM	Error	Status file as bad format	
RDT_STOP_BEF_STRT	Error	Stop day preceeds start day in day range request	
RDT_SUCREQCANC	Information	Transfer request cancelled for request id	
RDT_TOOMNY_ACRFIL	Error	Too many ACRIM files specified in day range	Day range in ACRIM/DBC request is > 7
RDT_ULNCH_DAT_BAD	Fatal	UARS launch date translation failure	Launch date bad
RDT_UNKNOWN_NOD	Error	Unknown node	Programming error
RDT_VFT_Q_ACCESS	Error	Virtual file transfer queue access failure	
RDT_VIRT_ALLOC	Error	Virtual memory allocation failed	Virtual memory allocation problem (software problem)
RDT_VIRT_READ	Error	Read rec to virt mem failed for rec	Virtual memory allocation problem (software problem)
RDT_VIRT_WRIT	Error	Write rec from virt mem failed for rec	Virtual memory allocation problem (software problem)

Table A.8 Router Message Interface Condition Codes and Messages

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
RMI_INVFILEDEV	Error	Invalid LNM$FILE_DEV or invalid RMI_SYSTEM_PREFIX	Process has not does a SYS_CONNECT, or the connected system is undefined.
RMI_MISSSEG	Error	Missing start of segmented message in receiving process	Internal error, associated with system crashes.
RMI_NOALIAS	Warning	Alias name invalid. Not found in alias list for this task	Internal error
RMI_NODESPEC	Error	Node specification invalid	Internal error
RMI_NONALIGN	Error	Process queue not qualword aligned	Error building the system-link option
RMI_NONODE	Error	Current node is not a CDHF node	Attempt to run software on a non-cluster (RAC) node
RMI_NOSUCH	Error	Destination process queue doesn't exist	Either the destination process has crashed, or the process is connected to the wrong UCSS
RMI_NOTRUNC	Warning	Process queue message was too big for buffer, not truncated	Internal error
RMI_PREXIST	Error	Attempt to create an already existing process queue	Internal error
RMI_QNOTOP	Warning	Process queue not opened	Internal error
RMI_QUEOPEN	Information	Process queue is already open	Internal error
RMI_SEGORDER	Error	Segmented message segments lost or received out of order	Internal error, associated with system crashes
RMI_SEGSIZE	Error	Error in segmented message byte count	Internal error, associated with system crashes
RMI_SHTDWNREC	Warning	Immediate shutdown has been received by this task	Shutdown is terminating process in the wrong order.
RMI_SUSPENDED	Warning	Destination process queue is currently suspended	If this error is reported the reporting task has a software error
RMI_TIMOUT	Warning	Timeout occurred in process queue message transmission	Internal error associated with either system crashes, extermely overloaded nodes or software error
RMI_TOOALIAS	Warning	Too many aliases have been defined	Internal error
RMI_TRUNC	Warning	Truncaton of process queue message occurred	Internal error
RMI_UNREADMSG	Information	Message found on process queue at queue close	Internal error
RMI_UNREADSEG	Information	Incomplete segment found on process queue at queue close	Internal error

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SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
RTM_ASGERR	Fatal	Error assigning channel to IAS	Could not assign a channel to the specified mailbox. Check for existence of the mailbox.
RTM_AST	Fatal	IAS	
RTM_BADDEST	Warning	Msg ISL to node IAS not deliverable, discarded	Invalid or crashed node
RTM_DISCARD	Fatal	Msg ISL discarded, to: IAS, from: IAS	Invalid or crashed destination process
RTM_FORWNOD	Warning	Forward procq node IAS not known	Invalid node
RTM_IGNDEL	Fatal	Delete node message for node IAS ignored: Link not down	Internal error
RTM_LINKDOWN	Fatal	Network link with partner IAS went down	
RTM_MAXRETRY	Warning	IO failed after max retries	Decnet problems - the system will probably crash shortly
RTM_MBXQIO	Fatal	Failed to repost read qio on process queue mailbox-exiting	Internal error
RTM_MYNOTFND	Warning	Node name IAS not found in node list	System init error: router started on a node not in the node list
RTM_NODWN	Warning	Msg ISL to node IAS discarded, node down	Crashed node
RTM_NONODES	Warning	No nodes were defined in node list	System init error: node list empty
RTM_NOPROCDON	Information	No processing done in this iteration	
RTM_NOTADD	Fatal	Node IAS not added to router list	Too many nodes in system (8 maximum)
RTM_OTHNODE	Warning	Message bound for some other node	Internal routing table corrupted
RTM_OUTQFULL	Warning	Out queue table full	Sizing problem - see software support
RTM_PGONE	Warning	Permanent task IAS has been deleted from PTASK table	Crashed - node task's routing table entry deleted - thie is normal for a crash
RTM_SMNODRT	Warning	Message ISL routed to same node, discarded	Internal routing table c
RTM_SLOTPREEMPT	Warning	Slot in outqueue table preempted	Possible sizing problem - see software support

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
RTM_TERMPREV	Warning	Forward procq name defined before task initiated	Possible system init problem
RTM_TOOMNYPERM	Warning	Too many permanent processes. IAS not added	Sizing problem - see software support
RTM_TOONODES	Fatal	Node IAS not added to router list - too many nodes	Too many nodes in system (8 maximum)
RTM_TSKWASUP	Warning	Permanent task IAS still active at Router exit	System shutdown should terminate all others tasks first
RTM_UNEXPTERM	Warning	Unexpected termination of permanent task IAS	A UCSS task exited unexpectedly
RTM_UNKMSGDISC	Warning	Unknown message ISL discarded	Internal error
RTM_UNKNOWNOD	Warning	Unknown node IAS found	Internal error
RTM_UNHANDMESS	Warning	Unhandled network message received ISL	Decnet anomoly. See software support if it frequently occurrs
RTM_UNTERM	Warning	Unknown termination task IAS	Internal error
RTM_UNTSKTR	Warning	Unknown task IAS terminating	A task not part of the current route table (probably existed prior to the system being started is now exiting
RTM_UNUNIT	Warning	Unknown unit IXL sent message IXL	Decnet error. See software support

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
SCE_PROG_OFFLINE	Warning	Program is offline	The program executable has been destaged. Use the promote utility to bring it online from mass storage
SCE_REQIDLMTEXCED	Error	Number of schedule request ids exceeds limits for the common blk	You may not select more than 100 schedule requests for expansion at once.
SCE_REQ_INCMPLT	Warning	SRQ record may need more information	Request record not completed, see UNSEL_SCHEDULE_REQUEST.LST for further imformation
SCE_TASK_EXIT	Warning	Schedule expansion task exiting due to	Indicated error caused expansion task to exit
SCE_UNNOTSCH	Warning	Unable to notify Production Scheduler of schedule change	Schedule execution task was not running when a schedule change occurred
SCH_ERRDELPRMFLE	Warning	Error deleting parameter file xxxx	Error occurred while deleting job parameter file.
SCH_ERRDELRNSTRM	Warning	Error deleting runstream file xxxx	Error occurred while deleting runstream command file.
SCH_FAILJOB	Warning	Job has been marked as failed by the scheduler	A job which was running at the time of last system shutdown/crash has been marked as a failed job
SCH_INITFAILCPU	Warning	Scheduler cpu table was not initialized	Invalid number of nodes specified in the NODES namelist in the UCSS_CONFIG.FILE
SCH_INVNUMNODES	Warning	Number of nodes in namelist invalid	
SCH_INVALMSG	Error	Unexpected message received by Schedule Execution	Internal software error
SCH_JOBNODELOST	Warning	Job failed due to node failure	A node crash occurred, causing the failure of the job running on that node
SCH_MISSPAC	Warning	Job discrepency found between PAC and JAR, set to failed	Internal consistency error. You should examine the accounting for this job to determine if it actually failed
SCH_NOENTRY	Warning	No namelist entry	Namelist NODES is not in the UCSS_CONFIG.FILE
SCH_NOTHINGTOSTAGE	Warning	No files to stage	A job's definition called for no input files
SCH_OLDNODESTAT	Warning	System status for node has expired	The monitor's task on the given node has not updated status for fifteen minutes - probable node crash
SCH_RESUMED	Information	Production job startup has been resumed	For information only
SCH_SUSPENDED	Information	Production job startup is now suspended	For information only
SCH_SUSSTOPPROC	Warning	Attempt to suspend a terminated process	Scheduler task shutting down, and cannot be suspended
SCH_TASK_EXIT	Warning	Schedule execution task exiting due to	Indicated error caused scheduler task to exit
SCH_TERMSTOPPROC	Warning	Attempt to terminate a terminated process	Scheduler task already terminating, further shutdowns ignored

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
SCH_UNUPDTRM	Warning	Unable to mark job "IAS" terminated	Internal (possibly INGRES) error
SCH_BODWINDOW	Error	Job xxxx not rescheduled - invalid job window	No window is specified in the JAR
SCH_NORSJAR	Error	Job xxxx not rescheduled - error retrieving JAR	Data base error encountered while retrieving the JAR record
SCH_NORSJOBID	Error	Job not rescheduled - no jobid detected	Job id not defined via UCSS_JOB_ID
SCH_NORSPROD	Error	Job xxxx not rescheduled - production job not allowed	Try to reschedule a production job
SCH_NORSUPD	Error	Job xxxx not rescheduled - error updating JAR	Data base error encountered while updating the JAR record
SCH_TERMBYOPR	Error	Production job terminated by operator	Operator terminated the job

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
SM5_BADSTRS	Error	Attribute name xxxx is not valid	The specified attribute name is not valid. Re-edit the criteria file and respecify the correct attribute name.
SM5_CNGMSGERR	Warning	Error in message transmission to	Clean disks process not receiving messages or is not curently executing
SM5_DATRNGEXP	Warning	Date range expected in record	
SM5_DUPCALID	Warning	Duplicate field "CALIBRATION_ID" found in record	Two or more fields with same name in record or "END" keyword not found
SM5_DUPCYCLE	Warning	Duplicate field "CYCLE" found in record	Two or more fields with same name in record or "END" keyword not found
SM5_DUPDAY	Warning	Duplicate field "DAY" found in record	Two or more fields with same name in record or "END" keyword not found
SM5_DUPENTRY	Error	Duplicate entry has been specified in record	A duplicate file was specified in the criteria file . A field may be specified only once per record. Check for missing end of record. Re-edit and respecify record.
SM5_DUPEXPIRE	Warning	Duplicate field "EXPIRATION"_DATE" found in record	Two or more fields with same name in record or "END" keyword not found
SM5_DUPFILCNT	Warning	Duplicate field "FILE_COUNT" found in record	Two or more fields with same name in record or "END" keyword not found
SM5_DUPFILESIZE	Warning	Duplicate field "FILE_SIZE" found in record	Two or more fields with same name in record or "END" keyword not found
SM5_DUPFILPER	Warning	Duplicate field "FILE_PERCENT" found in record	Two or more fields with same name in record or "END" keyword not found
SM5_DUPGROUP	Warning	Duplicate field "UIC" found in record	Two or more fields with same name in record or "END" keyword not found
SM5_DUPLAST	Warning	Duplicate field "LAST_TIME_ACCESS" found in record	Two or more fields with same name in record or "END" keyword not found
SM5_DUPLEVEL	Warning	Duplicate field "LEVEL" found in record	Two or more fields with same name in record or "END" keyword not found
SM5_DUPMEM	Warning	Duplicate field "UIC" found in record	Two or more fields with same name in record or "END" keyword not found
SM5_DUPMSSID	Warning	Duplicate field "MSS_ID_FLAG" found in record	Two or more fields with same name in record or "END" keyword not found
SM5_DUPREQPRIOR	Warning	Duplicate field "REQUESTED_PRIORTY" found in record	Two or more fields with same name in record or "END" keyword not found
SM5_DUPRESERVE	Warning	Duplicate field "RESERVE_COUNT" found in record	Two or more fields with same name in record or "END" keyword not found
SM5_DUPSIZPER	Warning	Duplicate field "SIZE_PERCENT" found in record	Two or more fields with same name in record or "END" keyword not found
SM5_DUPSOURCE	Warning	Duplicate field "SOUCRE" found in record	Two or more fields with same name in record or "END" keyword not found
SM5_DUPSUBTYPE	Warning	Duplicate field "SUBTYPE" found in record	Two or more fields with same name in record or "END" keyword not found
SM5_DUPTOTSIZ	Warning	Duplicate field "TOTAL_SIZE" found in record	Two or more fields with same name in record or "END" keyword not found
SM5_DUPTYPE	Warning	Duplicate field "TYPE" found in record	Two or more fields with same name in record or "END" keyword not found
SM5_DUPVERSION	Warning	Duplicate field "VERSION" found in record	Two or more fields with same name in record or "END" keyword not found
SM5_EMPTY	Warning	No attributes follow field name in record	Values for the field name must be present on same line

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
SMS_NOREQPRIOR	Warning	Missing requested priority number in record	Requested priority value not entered in REQUESTGP_PRIORITY field
SMS_NORECSTR	Warning	Failed to find starting 'ASSIGNED_PRIORITY.' keyword in first record	Each record of stage criteria must start w/ 'assigned_priority.' field
SMS_NORBRACT	Warning	']' expected	UIC value missing ']'
SMS_NOPRINUM	Warning	Missing priority number in record	Priority field requires an integer
SMS_NONEWVER	Warning	No new version of	Operator quit from editor - no new version of stage/destage criteria created
SMS_NOLBRACT	Warning	'[' expected	UIC invalid, no '[' found in UIC value
SMS_NOFILPER	Warning	Missing file percentage in record	File percentage value not entered in FILE_PERCENT field
SMS_NOFILCNT	Warning	Missing file count number in record	File count value not entered in FILE_COUNT field
SMS_NOEND	Warning	Keyword 'END.' not found in record	Add keyword 'END.' to end of record
SMS_NOCOMMA	Warning	',' expected	
SMS_NEEDNOT	Warning	'.ne.' or '.eq.' expected for MSS_ID field	Only = or <> are valid relational operations for MSS_ID_VALID field
SMS_NAEXPECTED	Warning	'T' or 'F' expected	Valid values for MSS_ID_VALID keywords are T or F
SMS_NAMNOTALL	Error	Name xxxx is not allowed as a criteria attribute	Not all catalog attributes are allowed for destage criteria. Check the list in the operations guide. Re-edit and specify allowed attributes.
SMS_MISSINGKEY	Warning	Missing or invalid keyword in record	Invalid keyword entered in record
SMS_LESSEXPECTED	Warning	'.lt.' expected	< expected in field
SMS_KEYORSTRING	Warning	Keyword OR string expected	
SMS_KEYORINT	Warning	Keyword OR integer expected	
SMS_INVMEMBER	Warning	Invalid member id	UIC did not have member id or member id invalid
SMS_INVGROUP	Warning	Invalid group id	UIC did not have group id or group id invalid
SMS_INVFILENM	Warning	is not a valid stage/destage file option	Programming error will occur if editor run incorrectly
SMS_INVDATE	Warning	Invalid date field found in record	Non VMS time entered in date field
SMS_INTEXPECTED	Warning	Integer value expected	Non integer value entered in integer field
SMS_EXTRA	Warning	Extra characters following valid record	Extra characters follow 'END.' keyword
SMS_EQUORNOT	Warning	'.eq.' or '.ne.' expected	= or <> should be entered in MSS_ID_VALID field
SMS_EMPTYVALUE	Error	Value for xxxx is blank	All fields in the criteria files must have non-blank values. Re-edit and specify a value for the field.

Table A.11   Stage/Destage Criteria Condition Codes and Messages (2 of 3)

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
SM5_NOSIZPER	Warning	Missing size percentage in record	
SM5_NOTDECR	Warning	is not in decreasing priority order	Stage criteria must be in non - increasing order based on assigned - priority
SM5_NOTONEONE	Warning	More than one field per line in record	Only one field and associated values may be entered on a single line
SM5_NOTOTSIZE	Warning	Missing total size number in record	Total size value not entered in TOTAL_SIZE field
SM5_PRIORKEY	Warning	Keyword "PRIROITY" not found in record	
SM5_RELOPEXP	Warning	".lt.", ".le.", ".eq.", ".gt.", OR ".ge." expected	<, <=, =, >, >= relational opeerator expected
SM5_SRCLOCK	Warning	Lock on source criteria failed, lock held be another process	Another user is currently editing same criteria file.
SM5_STRINGEXP	Warning	String expected	
SM5_SUCCESS	Success	Successful editing	Not seen by user
SM5_TMNYCOM	Warning	Field expected after "," in record	An extra comma found in list of values remove comma or enter next value re-enter field w/ fewer characters
SM5_TOOLONG	Warning	Field in record is too long	
SM5_TOOMNYATT	Error	There are too many attributes specified in record, number specified = xxxx, maximum number allowed= xxxx	Too many attributes were specified in the criteria record. Check for missing end of record or break large record into 2 records.

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
SMI_ARRYDIMEXC	Warning	Size of an array used to get common version/cycle exceeded	Too many files requested for staging in one request. Adjust constraints
SMI_BADCRITERIA	Error	Failed to access xxx criteria file, or file has no criteria	The indicated criteria file is either not defined, not accessible, or empty.
SMI_DESTAGING	Information	File is already in the process of being destaged	No action required.
SMI_DISKAVAIL	Information	Disk is available	No action required.
SMI_DISKCLNACT	Information	Disk is undergoing cleanup	No action required.
SMI_DISKCLNFAIL	Information	Disk cleanup failed	Cleanup operations on the indicated disk failed to clear a sufficient amount of space. The destage criteria file may have to be edited, or other files moved, to make room.
SMI_DISKCLNPND	Information	Disk is scheduled for cleanup	No action required.
SMI_DISKMOD	Information	xxx for disk xxx modified	No action required. The disk table is being adjusted to the actual operations usage of the disk.
SMI_DISKUNAVAIL	Information	Disk is unavailable	No action required. Operations has made the disk unavailable for future space requests.
SMI_DISKUSAGE	Fatal	xxxx usage out-of-limits: VMS reports nnn blocks used tables indicates nnn blocks	Disk space request differs significantly from actual usage
SMI_FILEDELETED	Information	File located on the MSS and deleted from disk	File was actually copied to the MSS by this destage request, and file was deleted from online system
SMI_FILEDESTAGED	Information	File has been successfully copied to the MSS	File was actually copied to the MSS by this destage request
SMI_FILEDESTAGING	Information	File is in the processing of being destaged	File already been destaged outside of this request, therefore a new destage request is not issued, and the final disposition of that file is not known by this destage process (query the data base to get final disposition)
SMI_FILEDSTGCLNUP	Information	File is in the process of being destaged as part of cleanup	Disk cleanup
SMI_FILENOTFINAL	Warning	Usage of file	Space was reqested for a file, but its space requirements were not finalized.
SMI_FILEOFFLINE	Information	File requested is offline	No action required.
SMI_FILEONLINE	Information	Files requested is online	No action required.
SMI_FILERESERVED	Information	File requested has been reserved	No action required.
SMI_FILESONLINE	Information	Files requested are online	Stage or reserve request involved files, all of which were online.
SMI_FILESRESERVED	Information	Not all files requested were online	Reserve request involved files, not all of which were online.
SMI_FILESSTAGED	Information	Not all files requested were online	Stage request involved files, not all of which were online.
SMI_FILESTAGED	Information	File has been scheduled for staging	No action required.
SMI_FILESTAGING	Information	File in the process of being staged	No action required.
SMI_FILEUSGERR	Error	Attempt to update missing file record	An attempt to finalize the space requirements of a file was made, but the file is not recognized.

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
SMI_MISSINGDAY	Warning	Missing uars day attr for common version/cycle calculation	UARS day must be provided for common version/cycle determination.
SMI_MSSSTATUS	Fatal	Informational	
SMI_NODATARQST	Warning	No data files involved in request	No data exists in catalog that met the constraints provided.
SMI_NODESTAGEFILE	Warning	Must override to destage this file	Attempt to destage a file not normally destage-able, such as QUICKLOOK.
SMI_NOMXCOMV	Warning	No common version/cycle found	User specified constraints that resulted in catalog data with no common version/cycle numbers.
SMI_NOTUCSSDISK	Warning	Not a valid UCSS disk	User entered a disk not within UCSS control.
SMI_PARMIGNORED	Information	Stage parameter ignored	No action required.
SMI_QFNOTACT	Information	Quotas for disk xxxx not active	UCSS disks must have quotas enabled.
SMI_REQUEUESPACE	Error	Space request id xxxx for job xxxx requeued xxx times	Space request issued by the indicated job has failed the indicated number of times. The request either involves an inordinate amount of space, or current disk usage is such that space cannot be made on the disks.
SMI_SPACERQSTDIF	Warning	Reserve and get-space requests differ: request ID xxxx, file ident xxxx	A reserve space request for the file provided information that was not the same as that provided for the file's subsequent get space request.
SMI_STAGEACTIVE	Information	Stage request is currently being processed	No action required.
SMI_STAGECANCELLED	Warning	Stage request has been cancelled	No action required.
SMI_STAGEFAILED	Warning	Stage request failed .. at least one file failed staging	Examination of the individual files' staging statuses will indicate whether or not action is required.
SMI_TOOFEWDISKS	Error	Too little disk space allocated for UCSS....shutting down	At system startup, a check is made on the disks to ensure that sufficient space is available for operations. This message indicates that there is not sufficient space.
SMI_UNKNOWNDISK	Error	Disk not recognized	Disk identified is not known to VMS.

Table A.13   General UCSS Condition Codes and Messages

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
UCSS_DB_ERROR	Warning		Explanation is provided with error
UCSS_ERROR	Warning		Explanation is provided with error
UCSS_FAIL	Warning	Failure in attempted operation	
UCSS_JOBTIMEOUT	Error	Job did not complete within specified time	
UCSS_NORMAL	Sucess	Normal completion	
UCSS_NONULLPROC	Error	No null process found by UCSS monitor	
UCSS_NO_SYSNODE	Error	Logical name SYS$NODE not defined	
UCSS_SHUTDOWN	Information	Shutdown request received	
UCSS_UNEXPMSGID	Warning	Unexpected message id on input queue	

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
PFA_ATCINCRMENT	Warning	Time incrementing error detected	Either the time information is bad or a leap second adjustment was made
PFA_ATTRCNTNEG	Fatal	Attribute count is negative	Bad number of attributes supplied as an argument in CLOSELF or DASLID
PFA_ATTROMITTED	Fatal	Required user supplied attribute not provided	Required user supplied attribute not provided to DASLID (see Table 3-4)
PFA_BADEPOCHYR	Severe	No valid ACS09 base epoch year found can't calculate UFL report time	Tape was generated incorrectly, or bad data on the tape or tape format changed and no corresponding software change
PFA_BADOBCEMAF	Warning	OBC emaf header inconsistent	Bad EMAF record header
PFA_CLSEERROLD	Warning	Unable to close existing data	I/O error was returned by close.
PFA_BADOBCEMAF	Warning	OBC emaf header inconsistent	Bad EMAF record header
PFA_CLSEERROLD	Warning	Unable to close existing data file	I/O error was returned by close.
PFA_DBRECERR	Fatal	Unable to record processing error in data base	Data base access error.
PFA_DUPVIRDAY	Fatal	Duplicate virtual UARS day specified	Error in FILE_PARAMS
PFA_EARLYEOF	Fatal	Unexpected end of file encountered when positioning to or reading a data record	Probable error in data file format
PFA_EOD	Warning	End of data encountered on input from indexed file	Read Level 3AL/3LP condition indicating that all data for the requested latitude was retrieved
PFA_EOF	Warning	End of data file on sequential read	Read Level 0/3AT/3TP/3S condition indicating that End of virtual file was reached.
PFA_FILALRDDEASG	Fatal	File already deassigned	Two calls to DASLID to deassign the same LID without corresponding assign call
PFA_FILALRDYCLS	Fatal	File already closed	Two calls to CLOSELF to close the same LID without corresponding open call
PFA_FILENOTOPEN	Fatal	File has not been opened	
PFA_FILETMGAP	Warning	Time gap between successive files exceeds normal inter-record gap	Interval between file stop time on one physical file and file start time on next physical file exceeds EMAF rate.
PFA_FILNOTFREE	Warning	Attempt to free cataloged file for other use unsuccessful	Failure in interface with UCSS storage management routine SMI_FREE_FILE.
PFA_FILSTOPEN	Fatal	Deassigned file is still open	Called DASLID before closing file
PFA_FVPARALRSET	Warning	File version params have already been set for another file	User previously called SETVERCY using this LID. Request is ignored
PFA_FVPRARALRUSD	Warning	File version params have already been used by current file	LID is already in use. SETVERCY should be called before the file to which it applies is opened or assigned
PFA_GENUNREC	Fatal	General unrecoverable error	UCSS software error. Should not be reported to user.
PFA_GRIDFORM	Warning	grid utility files have incorrect format	Error returned by VERT_DEF. UCSS software error.

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
PFA_ILUDTF	Fatal	Invalid UDTF time provided	Possible error in UDTF time specification in PROGRAM_PARAMS namelist
PFA_ILVMSTI	Fatal	Invalid VMS time provided	Possible error in VMS time specification in PROGRAM_PARAMS namelist
PFA_INAPSOLRDAY	Fatal	Requested date does not match UARS day of the file	Inconsistency between UARS day specified in FILE_PARAMS and day in file.
PFA_INCFILUSE	Fatal	Inconsistent file usage specified by OLD_NEW	Attempted to open or assign a held file as new or old.
PFA_INCOMPEMAF	Fatal	Incomplete Level 0 EMAF	Missing one of the two part EMAF records. Problem in data file format
PFA_INCONNUMREC	Fatal	File record count does not exceed number of label records	Data error in file label record
PFA_INCONRECLEN	Fatal	Inconsistent record length	Data problem. Record length for the file in catalog does not match actual record length of file.
PFA_INCONRECTYP	Fatal	Level 0 record type field is invalid	Level 0 data problem. Record type for one record EMAFs is not 3. Record type for two record EMAFs is not 1 or 2.
PFA_INCORNUMARG	Fatal	Service called with incorrect number of arguments	Missing or extra arguments in subroutine call
PFA_INPVALBLNK	Information	An input value to be concatenated into a range value is blank.	Check parameters used in SETVERCY.
PFA_INVACCESSMD	Fatal	Invalid access mode for file type	Attempted to write to a read only file by calling a Level 3A write service for a cataloged file.
PFA_INVALDOY	Fatal	Invalid day of year	Day of year not within range of 1 to 366
PFA_INVALIDMSD	Fatal	Invalid mean solar distance	Data problem. Mean solar distance value retrieved from solar data record by READL3S is negative or zero.
PFA_INVALMO	Fatal	Invalid month	Month not within range of 1 to 12
PFA_INVARGDATTP	Fatal	Invalid argument data type	Error in subroutine call
PFA_INVARGSUB	Fatal	Internal error in arguments subtype	UCSS software problem. Contact UCSS software maintenance.
PFA_INVARGTYP	Fatal	Internal error in argument type	UCSS software problem. Contact UCSS software maintenance.
PFA_INVBASNDX	Fatal	Invalid base index in Level 3A file label record	Base index is not between 0 and 100
PFA_INVBASWVLEN	Fatal	Invalid base wavelength in level#3 solar file label record	Base wavelength is not between 115.5 and 425.5 nm.

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
PFA_INVCALDAY	Fatal	Invalid day of month	Day of month not within range of 1 to 31
PFA_INVCALMAT	Fatal	Invalid CALIBRATION_MATCH namelist parameter	CALIBRATION_MATCH must be 'PREV', 'NEXT', 'EXCT', or 'NEAR'
PFA_INVCMATCHV	Fatal	Invalid calibration match rule specified	Invalid DMATCH argument to ASGCAL
PFA_INVCONVDAY	Fatal	Invalid UARS_DAY obtained by conversion from a UDTF time	Inappropriate launch date used for conversion
PFA_INVCYCARG	Fatal	File cycle argument is not between 0 and 99 inclusive	Error in call to SETVERCY
PFA_INVDATALEV	Fatal	Wrong UCSS service called for the data level	Called the wrong service for the data level associated with the LID. Examples: 1. Called CLOSELF for a file that is not a Level 0, 3AT, 3AL, 3AS, or 3BS file instead of calling DASLID 2. Called Level 0 service to access Level 3A data or vice versa
PFA_INVDATARNG	Fatal	Requested data range does not overlap virtual file data range	start_index/start_wvlngth or max points specified on Read may be incorrect
PFA_INVDATGRID	Warning	Grid subtype is invalid	Check subtype in VERT_DEF call
PFA_INVDAYARG	Fatal	Invalid UARS day argument	UARS_DAY is negative
PFA_INVDEFCMATCH	Fatal	Invalid CALIBRATION_MATCH in DEFAULT_PARAMS namelist	CALIBRATION_MATCH must be 'PREV','NEXT','EXCT', or 'NEAR'
PFA_INVDEFNDLEV	Fatal	Invalid NEW_DATA_LEVEL in DEFAULT_PARAMS namelist	First character of NEW_DATA_LEVEL must be '1', '2', '3', or field must be blank
PFA_INVDEFODLEV	Fatal	Invalid OLD_DATA_LEVEL in DEFAULT_PARAMS namelist	First character of OLD_DATA_LEVEL must be '0', '1', '2', '3', or field must be blank
PFA_INVDEFOLDNEW	Fatal	Invalid OLD_NEW parameter in DEFAULT_PARAMS namelist	OLD_NEW parameter must be 'OLD' or 'NEW'
PFA_INVDISTARG	Fatal	Invalid distance argument	Distance flag is not 'I=AU' or 'UNCORRECTED' in call to READL3S
PFA_INVDLEARG	Fatal	Invalid data level argument	Data level argument is not one of the defined data levels
PFA_INVESIZEARG	Fatal	Invalid estimated file size argument	SIZE argument is zero

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
PFA_INVFDISP	Fatal	File disposition with type with type of file accessed	FDISP parameter is not valid for the type of file accessed and the UCSS is unable to determine requested position. Called DASLIO with 'CAT' dispositions for a scratch file.
PFA_INVFDISPARG	Fatal	Invalid file disposition argument	Invalid FDISP in CLOSELF or DASLIO call (not 'CAT', 'FREE', or 'HOLD')
PFA_INVFILETYP	Fatal	Invalid file type specified for usage of file	UCSS software problem Contact UCSS software maintenance.
PFA_INVFILUTIN	Fatal	Invalid file utilization indicator in UCSS internal table	UCSS software problem. Contact UCSS software maintenance.
PFA_INVFINDISP	Warning	File closed with an inappropriate final disposition	Warning issued by Jobterm. Indicates Output file was left with a final dispostion of HELD
PFA_INVFLXUARG	Fatal	Invalid flux unit argument	Flux unit specified in call to READL3S is invalid
PFA_INVHDRDASET	Fatal	Data set in LO file label does not match expected value	Data-type is not consistent with data set id. Wrong Level 0 file specified or bad data in file
PFA_INVHDRDATLV	Fatal	Invalid data level in Level 3A file label	Data problem
PFA_INVHDRDATTP	Fatal	Instrument id in file label does not match expected value	Wrong Level 3 file specified or bad data in file
PFA_INVHDRDAY	Fatal	UARS day in file label does not match expected value	Wrong file specified or bad data in file
PFA_INVHDRLAT	Fatal	Invalid latitude range field in label record of Level#3AL data file	Data problem
PFA_INVHDRSUBTP	Fatal	Data subtype in file label does not match expected value	Wrong Level 3 file specified or bad data in file
PFA_INVHDRTMRNG	Fatal	Invalid time range in file label record	Data problem
PFA_INVINDEXARG	Fatal	Invalid index argument	Index argument is not between 0 and 100
PFA_INVINSTR	Warning	Grid instrument is invalid	Check instrument id in call to VERT_DEF
PFA_INVLATGRID	Fatal	Invalid latitude grid value	Invalid latitude value in WRITEL3AL, READL3AL, WRITEL3LP, or READL3LP

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
PFA_INVLATLONG	Fatal	Invalid latitude or longitude	Invalid latitude or longitude value in WRITEL3AT, OPENL3AL, WRITEL3TP, or OPENL3LP
PFA_INVLSTSZA	Fatal	Invalid local solar time and/or solar angle calculated	UCSS software problem. Contact UCSS software maintenance
PFA_INVMAXPMS	Fatal	Specified number of params is greater than max params in file	Used a number of parameters value greater than number of parameters returned from the open in reading a parameter file
PFA_INVMAXPTS	Fatal	Invalid maximum number of data points	1. Invalid MAX_POINTS argument to OPENL3AT or OPENL3AL when creating a new file 2. Invalid maximum points field in Level 3A file label record
PFA_INVNEGDYARG	Fatal	Correlative UARS day arg. is not between -99999 and 9999	Invalid UARS day in call to ASGCOR
PFA_INVNMLDLEV	Fatal	Invalid DATA_LEVEL parameter in FILE_PARMS namelist	First character of DATA_LEVEL must be '0', '1', '2', '3', or field must be blank
PFA_INVNMLPARM	Fatal	Invalid combination of parameters in FILE_PARMS namelist	Wrong combination of parameters specified for file
PFA_INVNUMPRMS	Fatal	Invalid number of parameters specified for a parameter file	The number of parameters specified for file in READL3TP and READL3LP exceeds the maximum value allowed for the file
PFA_INVNUMPTS	Fatal	Invalid number of points arguments	1. Invalid NUM_POINTS argument to READL3AT or READL3AL. Inconsistent with START_INDEX and OPENL3AT or OPEN3AL MAX_POINTS value. 2. Invalid NUM_POINTS argument to WRITEL3AT or WRITEL3AL. Inconsistent with START_INDEX and MAX_POINTS supplied to OPENL3AT or OPENL3AL.
PFA_INVNUMRECS	Fatal	Physical record count in file label record is invalid	Data problem
PFA_INVODNWHLD	Fatal	Invalid OLD_NEW namelist parameters	OLD_NEW must be 'OLD', 'NEW', or 'HELD'
PFA_INVOLNWARG	Fatal	Invalid OLD_NEW argument	OLD_NEW argument to open or assign call is not 'OLD', 'NEW', or 'HELD'

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Table A.14 PFA Message Codes (6 of 11)

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/POSSIBLE CAUSES
PFA_INVPGCSARG	Fatal	Invalid program completion status argument	PASS_FAIL argument to PGTERM is not 'PASS' or 'FAIL'.
PFA_INVPRGMSIZ	Severe	Program parameter table size must be between 1 and 50	
PFA_INVPSEUD	Fatal	Invalid use of pseudo-virtual file	Pseudo-virtual file specified as held or in multi-file virtual input file
PFA_INVQLCODARG	Fatal	Quicklook code argument is not between -100 and 30	Bad Quicklook pass code specified in call to OPENL for Analysis Services
PFA_INVRECPEMAF	Fatal	Invalid number of records per EMAF field in file label record	Level 0 data problem
PFA_INVRECRNG	Fatal	Invalid record time range specification	STRT_DATTIM exceeds STOP_DATTIM in READL3AT, READL3AL, READL3TP, or READL3LP
PFA_INVRECSARG	Fatal	Number of records argument does not exceed zero	Bad value of MAX_DIM or MAX_DAYS specified in READL3AL, READL3AT, READL3LP, or READL3TP
PFA_INVRECTYP	Fatal	Unexpected record type value	Data problem. Level 0 data record type is not 1, 2, or 3.
PFA_INVRULEARG	Fatal	Version/cycle rule argument is not between 0 and 9	Bad version or cycle specified in call to SETVERCY for Analysis Services
PFA_INVSTRIRDX	Fatal	Start index less than base index of Level 3A file	START_INDEX in READL3AT is less than the BASE_INDEX in READL3AL, START_INDEX in READL3AL is less than the BASE_INDEX in OPENL3AL.
PFA_INVSTRLEN	Fatal	Incorrect character string length	Character string improperly sized
PFA_INVSVC	Fatal	Wrong service called for given file type	Used QUALRD or QUALQL to read non-QUALITY data or used OPENL3AT to read Level 3AS/BS solar data
PFA_INVTIMPRD	Fatal	Invalid time period type in file label record	Data problem. The type of data time period field in the Level 0 file header is invalid (not 'IO', 'QL', '24HR', 'VIRT', or 'NEAR'.)
PFA_INVTIMERNG	Fatal	Invalid time range parameters	1. STRT_DATTIM exceeds STOP_DATTIM in PGINIT. In simulated environment, a problem in the PROGRAM_PARAMS namelist. 2. STRT_DATTIM exceeds STOP_DATTIM in OPENLO, OPENL3AT, or OPENL3AL.

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
PFA_INVTMVERS	Fatal	Inconsistent time fields in version entries of the Level 3A label record	Data problem
PFA_INVUDAYRNGE	Fatal	Invalid UARS day range	UCSS Software error. Contact UCSS Software maintenance
PFA_INVUDTFARG	Fatal	Invalid UDTF time	UDTF time argument not a valid time
PFA_INVUDTFDAY	Fatal	Invalid day of year in UDTF time	UDTF day of year not between 1 and 366
PFA_INVUDTFMSEC	Fatal	Invalid milliseconds of day in UDTF time	UDTF milliseconds of day not between 0 and 86399999
PFA_INVUDTFYR	Fatal	Invalid UDTF year	No year on UDTF time
PFA_INVVERSARG	Fatal	CCB version argument is not between 0 and 9999 inclusive	Bad version specified in call to SETVERCY for Analysis Services
PFA_INVVERTIM	Fatal	Inconsistent time in time/ version entries	Data problem. Times in the time version entries in the label record(s) are not increasing.
PFA_INVVIRSPEC	Fatal	Invalid virtual file specification	More than one physical file specified for a non-virtual input file
PFA_INVVFLAG	Fatal	Invalid virtual flag in Level 3A file label record	Data problem
PFA_INVWVLUARG	Fatal	Invalid wavelength unit argument	Wavelength unit specified in OPENL3S or READL3S is not 'NM', 'STANDARD', 'A', 'MICRON', or 'CM'
PFA_JOBALRDYRUN	Fatal	Current job has already been run	UCSS Software error. Contact UCSS software maintenance
PFA_LIDINUSE	Fatal	Specified LID in use	Reused LID without calling DASLID or CLOSELF
PFA_LIDMISMATCH	Information	LID of file does not match LID in file version table	
PFA_LIDNOREUSE	Fatal	Attempted to reuse the LID that is assigned held file or a newly cataloged file	Called ASGCAT, OPENL3AT, OPENL3AL, OPENL3LP, OPENL3TP, or OPENL3S with a LID associated with a file that was held or cataloged
PFA_LIDNOTOPEN	Fatal	File corresponding to LID is not open	Called read or write service without calling the open service first
PFA_LIDOTHERUSE	Fatal	Specified LID is reserved for other use	Attempted to reuse LID assigned to newly cataloged file
PFA_LOGERR	Warning	A production job message could not be logged	UCSS Logger Failure.

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
PFA_MISINITPARM	Fatal	Missing required parameter in FILE_PARAMS namelist	Missing namelist parameter
PFA_MISSARG	Fatal	Missing a required argument	UCSS service called without all required arguments
PFA_MISSMSD	Fatal	Missing mean solar distance	Mean solar distance not supplied as parameter in call to WRITEL3S
PFA_MSDCONVERR	Fatal	Mean solar distance conversion error from OTS$CVTTD	Mean solar distance specified as a solar parameter is negative or zero
PFA_MXUSRATEXC	Information	Maximum number of allowed user-supplied attributes exceeded	Issued by CLOSELF for newly catalogued file. Limit of 100 user attributes was exceeded.
PFA_NOCLSNEW	Fatal	Failed to close a new Level 3A file	Missing CLOSELF call for a new Level 3A file
PFA_NODASGNEW	Warning	Failed to deassign an new Level 1 or 2 file	Missing DASLID call for a new Level 1 or 2 file
PFA_NODASGOLD	Warning	Failed to deassign an existing file	Missing DASLID call for an existing file
PFA_NODATAFND	Warning	No data found for given latitude within specified time range	Occurs on level 3AL/3LP read. Indicates that no data exists in requested time range.
PFA_NODATARECS	Information	Physical file contains no data records.	Occurs during Open. Indicates physical file with no data records was encountered.
PFA_NOFILE	Fatal	File does not exist	Possibly specified nonexistent file name in FILE_PARAMS namelist
PFA_NOFILECRE	Fatal	New file was not created	Assigned file was not opened before call to DASLID
PFA_NOFIPARENT	Warning or Fatal	No matching entry in file parameter table for requested file	No FILE_PARAMS namelist corresponding to the requested file in the runstream
PFA_NOFSTAVAIL	Fatal	Exceeded number of entries in file status table	Contact UCSS software maintenance
PFA_NOHELDFILE	Fatal	Held file not found	1. Failed to specify "HOLD" on call to DASLID or CLOSELF 2. Did not specify same LID
PFA_NOMATVIRPMS	Fatal	VIRTUAL_UARS_DAY and DATA_FILE_NAME list sizes not equal	Error in FILE_PARAMS namelist
PFA_NOMORLUNS	Fatal	No more logical unit numbers available	Attempting to access too many files at one time
PFA_NONCLSFIL	Warning	Failed to close an existing file	Detected by PGTERM. Virtual file was left open by user.
PFA_NOOLDFILE	Warning	Existing data file cannot be found	File does not exist. In RSS, FILE_PARAMS may not have been specified.

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
PFA_NOOPTDATA	Warning	Optional specified catalog data was not available.	Either no files satisfying user's constraints exist in the catalog, or there is no data in the files, or in RSS environment a FILE_PARAMS namelist was not specified for the file.
PFA_NOOVRLAPTM	Warning or Fatal	File time range and requested time range do not overlap	The time range specified in the open call does not overlap the file time range. In the simulated environment, probable inconsistency between the processing time range and the file time range.
PFA_NOPGINTCAL	Fatal	PGINIT was not called	Missing PGINIT call before calling UCSS services
PFA_NOPGTRMCAL	Fatal	PGTERM was not called	Program terminated without calling PGTERM
PFA_NOREQDATA	Fatal	Required data not available	File specified as required input by the scheduler is not available
PFA_NOREQRECS	Fatal	Virtual file contains no data records	All physical files have no data
PFA_NOUSFREQT	Fatal	Attempted to assign user status file when no user status files are defined for the job	Scheduler does not know of the use of user status files in this job
PFA_NOVERTIMRNG	Fatal	Version time range not found in time version array	UCSS software error. Contact UCSS software maintenance.
PFA_NOVIRFILID	Fatal	No virtual file table entry for the logical file identifier	UCSS software error. Contact UCSS software maintenance.
PFA_NOVIRTAVAIL	Fatal	No room in virtual file table	Contact UCSS software maintenance
PFA_NROVRMXDIM	Warning	Number of records requested exceeds size of array provided	Occurs on read. Indicates that MAX_DIM constraint on number of records to be returned to the user has been reached and that additional data in the requested time period could not be retrieved as a result.
PFA_OBCDATATIM	Warning	No OBC report in EMAF later or equal to requested time	OBCDECODE status indicating No data for time specified
PFA_OPTFILMISS	Warning	portions of an optional file were not available for staging	One or more day files within the user's processing range were not found in the catalog, or, in the RSS case were not in the virtual file pool. A file containing no data can also trigger this condition.
PFA_OVFLWACCT	Warning	size of program accounting table has been exceeded	RSS environment error indicates limit of 300 physical files per program has been reached. The impact of this is that not all the files used by the program will be displayed on the program summary.

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
PFA_TIMPREUARS	Warning	Record time precedes UARS day for level-3a data	Occurs on Level 3 nosolar writes. Indicates record was written with date earlier than nominal uars day of file
PFA_TIMAFTUARS	Warning	Record time lies beyond nominal UARS day	Occurs on Level 3 nosolar writes. Indicates record was written with date greater than nominal uars day of file
PFA_SYSSACCERR	Warning	Error in accessing SYS$ERROR file	Occurs in Analyst's services. SYS$ERROR was not defined properly. Failure occurred during write.
PFA_SOMEFILSTGD	Information	All or part of a file had to be staged	Occurs on open to indicate staging of files was necessary
PFA_SEQTIMERR	Fatal	Current record time is not later than previous record time	Data times are not increasing
PFA_RNGOVRFLOW	Warning	An overflow in range value occurred during concatenation	
PFA_RETTMPPREV	Warning	Some retrieved record times precede processing start time	Occurs during read. Indicates user requested record prior to requested processing stop time
PFA_RETTMPAST	Warning	Some retrieved record times follow processing stop time	Occurs during read. Indicates user requested record following requested processing stop time
PFA_REQTMPREV	Warning	Requested record time precedes file time range	Occurs during read if record date time requested is earlier than the date time of the earliest record on the physical file.
PFA_REQTMPAST	Warning	Requested record time lies beyond file time range	Occurs during read if record date time requested is later than the date time of the latest record on the physical file.
PFA_REQLATOUT	Warning	Requested latitude is outside file's latitude range	Latitude requested on level 3AL/3LP read lies outside latitude range of physical file
PFA_REQFILMISS	Fatal	Missing one or more required physical files for a virtual read	One or more Level 0 or 3A files needed for a virtual file are indicated as required by the scheduler, but are unavailable
PFA_REQATTNOSUP	Fatal	Required catalog attribute not provided	Required catalog attribute(s) not provided to DASLID (see Table 3-4)
PFA_RECLENERR	Fatal	Expected record length does not match actual record length	Data error. Data record length is incorrect.
PFA_PREVSOLDAT	Warning	Attempt to write to solar data file that already has data	Solar file already had one data record at time write was requested
PFA_PGINITPREV	Fatal	PGINIT already called	Two calls to PGINIT in same program
PFA_OVRLPTIME	Warning	Two successive physical files have overlapping time ranges	Check physical files indicated for overlapping time intervals.

Table A.14   PFA Message Codes (10 of 11)

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
PFA_TOMANYFILE	Fatal	Exceeded maximum number of FILE_PARAMS namelists supported by UCSS	User provided more FILE_PARAMS namelists than supported by the UCSS software. Contact UCSS software maintenance.
PFA_UNEXBLKARG	Fatal	Unexpected blank argument	1. Logical file id is blank in call to any of the services 2. Old-new-flag is blank in call to OPENL3AT, OPENL3AL, OPENL3S, or ASGCAT 3. Flux units, wavelength units, or distance flag is blank in call to READL3S
PFA_UNKNOWNLID	Fatal	Attempt to close or deassign an unknown LID	1. Called CLOSELF or DASLID with incorrect LID 2. Called CLOSELF or DASLID without corresponding open or assign
PFA_UNKOPTSFDU	Warning	optional description id not available for current file	SFDU descriptor id not found
PFA_UNKOBCRPT	Warning	Undefined OBC report number	OBCDECODE status indicating invalid report number. Check Programmers Guide section on subroutine OBCDECODE.
PFA_UNKREQSFDU	Fatal	Required description id is not available for current file	All portions of the current file are required and: 1. UARS SFDU file missing or unassigned, or, 2. Error in reading UARS SFDU file, or, 3. SFDU descriptor id with attributes that are subset of current file's attributes is not present in UARS SFDU file
PFA_UNMTCHFDSP	Warning	Inappropriate file disposition on close or deassign	Check Table 3-2 in programmer's guide for proper file disposition usage
PFA_USFNUMGTMAX	Fatal	User status file number greater than maximum defined for job	The use of this user status file number has

Table A.15   UTL Message Codes

SYMBOLIC NAME	SEVERITY	DESCRIPTION	EXPLANATION/ POSSIBLE CAUSES
UTL_INVLLSLOT	Warning	Linked list index is invalid	The record size of linked list is less than zero
UTL_NOLLRECORD	Warning	No linked list record has been established for xxxx operation	An operation was attempted on an unopened linked list slot
UTL_NOLLSLOT	Warning	Too many linked list opened	
UTL_ULNCH_DAT_BAD	Warning	UARS launch date translation failure	UARS launch date definition is not a valid VMS date

Appendix B - OSR Display Services

This appendix provides additional information describing the use of the OSR display services. First the OSR screen fields are defined in detail. Then the complete list of OSR commands is provided and described.

```
┌─────────────┬──────────────────────────┬──────┬──────┐
│ DISPLAY  (CPOINT │         TITLE        │ DATE │ TIME │
│ NAME      NAME)  │                      │      │      │
├─────────────┴──────────────────────────┴──────┴──────┤
│                                                       │
│                                                       │
│                                                       │
│                   APPLICATIONS                        │
│                                                       │
│                     DISPLAY                           │
│                                                       │
│                       AREA                            │
│                                                       │
│                                                       │
│                                                       │
├───────────────────────────────────┬───────────────────┤
│          MESSAGE   LINE            │    DS 1 OF J      │
├───────────────────────────────────┼───────────────────┤
│ UARS>      COMMAND   LINE          │    PG m OF n      │
└───────────────────────────────────┴───────────────────┘
```

Display Screen Format.

The CRT Screen Format

The UCSS presents a standard screen interface. This means that a screen image has a consistent pattern. This pattern is shown on the previous page. The portions of the screen are defined as follows:

Display Name	Each display is named. This name is used internally by the UCSS to define the screen images. The user does not need to reference the display name.
(Cpoint Name)	A Cpoint name is an internal name used by the UCSS to mark the start of a collection of displays. The user refers to the Cpoint (control point) name or number when making menu selections.
Title	Each display may have a title. The title presents the purpose of the display.
Date/Time	The date and time fields show the current date and time as defined by the system clock. They are kept current.

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	When there are system alerts, this field will blink on the operations terminal until an operator clears the alert.
Applications	This portion of the display presents the information for which the display was intended. It may be a full screen text message, a menu, a prompting sequence, or a status display. Thus some displays allow user entry of information. A display is frequently multi-screen images.
PG n OF m	The current screen image is page n of an m page display.
Message Line	The message line is usually used for status information intended to keep the user apprised of processing progress (e.g., "Now processing record #325). It is an informative, 65 character message.
Command Line	The command line is used for entering commands and controlling the screen. Commands for the command line are described in detail in Sections 2.2.2.
DS i OF j	The current display is the ith display of j displays in this control point.

OSR - Command Summary

Table B-1 summarizes the commands that may be entered on the command line. These commands are always entered after the "UARS>" prompt on the display command line (the last line on the terminal screen). This line is reached using the ENTER COMMAND key (Ctrl-J or PF1). Each command is terminated by the COMMAND TERMINATOR key (Enter or Return).

Commands may be in uppercase or lower case. Parameters must be separated from the command by one or more spaces. The full command string may not exceed the length of the command line. Any commands entered that exceed the command line will wrap around to the beginning of the line. Continuations are not permitted. Commands may be abbreviated to the shortest unique letter sequence (one letter beyond ambiguity) (e.g., "T" is acceptable for TERMINATE, but SNAP and SHOW may only be shortened to "SN" or "SH", respectively).

The system issues an appropriate error message to the display message line for unrecognized commands. The message includes the offending command string. The system also notifies the user whenever the command input is ambiguous (e.g., "S" may be interpreted as SHOW, SNAP, or whenever a command parameter cannot be interpreted.

COMMAND (SHORT FORM)	MEANING
1 ... 9 0	One through nine on the keypad or UARS> prompt line choose menu selection 1 ... 9 if in a menu. The zero key on the keypad provides a special menu selection.
ANNOTATE comment-string (A comment-string)	Specify string to be placed on display message line; string remains for duration of current display and appears on display hardcopy. No quotes are required.
CANCEL (C)	Cancel is the same as keypad '.' It is used by the application to cancel the pending operation.
DCL (D)	Provide access to DCL. Logout to return to application. Not available from all applications.
ESTABLISH command-string (ES command-string)	Specify default command (used whenever command terminator is entered and no command appears on the command line.
EXIT (EX)	Terminate process; invoke appl. cleanup routine, operations support exit handler. Same as QUIT and TERMINATE.
GOTO control-point (G control-point-name) (G key-number)	Jump to named control point (Name is unique, specified by 1 to 8 characters) or to control point number.
HELP (H)	Same as PF2 key. Provide available help about current screen
KEYS (K)	Same as PF4 on keypad. Often used to invoke help on keyboard.
LASTMENU (L)	Return to the last menu. This is the same as the PF3 key.
NEXT DISPLAY (N)	Proceed to next display, skipping any remaining pages.
PAGE (P)	Display next page (Equivalent to PAGE + 1, keypad comma, or RETURN with no command at the UARS> prompt.
PAGE n (P n)	Display nth page of current display
PAGE + n (P + n)	Display (Current + n)th page of current display (Current + n is <= to the maximum page number of the display
PAGE - n (P - n)	Display (Current - n)th page of current display. Keypad dash is the same as a 'P -1' or go to previous page.
PAGE display-name,n (P display-name,n)	Display first page of named display. If n is specified, display nth page of named display
QUIT (Q)	Terminate process; invoke appl. cleanup routine, operations support exit handler. Same as EXIT and TERMINATE.
REFRESH (REF)	Replace contents of current edit field with original data.
RESTORE (RES)	Ignore editing on current display; Restore original data.
SAVE (SA)	Save editing to current display (SAVE) is automatically issued on display exit
SHOW VERSION (SH V)	Display short process name and software version number
SHOW DATE (SH DA)	Display current calendar date in the format DD-MMM-YYYYY
SHOW FORMAT (SH F)	Display current edit field display format
SHOW DEFAULT (SH DE)	Display currently established default command
SNAP (SN)	Immediately output current page of current display and queue file to printer
SNAP ALL (SN A)	Immediately output all pages of current display and queue file to printer
SNAP BATCH (SN B)	Output current page of current display to batch print file (OSR.PRT in login directory).
SNAP BATCH ALL (SN B A)	Output all pages of current display to batch print file (OSR.PRT in login directory).
TERMINATE (T)	Terminate process; invoke appl. cleanup routine, operations support exit handler. Same as EXIT and QUIT.

Note: All commands may be abbreviated to the shortest unique pattern; i.e., T is
       acceptable for TERMINATE, but SNAP and SHOW may only be shortened to SN,
       and SH, respectively.

Table B-1. UCSS OSR Command Summary

The keypad has been enabled and keys defined to make menu traversal and general screen movement more efficient. Not all keypad keys are active for all screens. If a key is not active, a disabled-key message will appear on the message line. The keypad configuration is as follows:

PF1 UARS> Command	PF2 Help	PF3 Lastmenu	PF4 Key-help
7	8	9	- Page-Up
4	5	6	, Page-Down
1	2	3	ENTER Next
0		. Cancel	

The commands that may be entered at the UARS> prompt line are as follows:

RETURN-KEY. For multi-page displays, the RETURN key with no other command will present the next page of the display.

1 ... 9. A menu selection is made by entering the number assigned to the desired selection. This can be done by entering the number at the UARS> prompt line and hitting RETURN; or, by entering the keypad number for that selection.

0. Keypad zero is used by the application to perform particular functions as a special menu selection.

ANNOTATE. The ANNOTATE command allows users to add commentary to the display message line that will subsequently appear on any display hardcopy. Display hardcopy is obtained by the SNAP command. The commentary is limited to the length of the message line on the display. If the user wants to provide a comment about any screen image, he can use this command to document this (on the message line) by following with a SNAP command.

CANCEL. The period key on the keypad or the CANCEL command is often used to gracefully terminate the current processing. This command is not the same as TERMINATE, QUIT, or EXIT which force the termination.

DCL. The DCL command spawns a subprocess and provides a DCL prompt. This command is disabled if the logical name OS_DCL_CMD is not defined. Not all UCSS applications support the DCL capability. To return to the menu, log out of the subprocess.

ESTABLISH. ESTABLISH defines a default command to be used whenever the COMMAND TERMINATOR is entered with no command preceding it. A common use of this would be to establish the PAGE command. Then each time the COMMAND TERMINATOR is entered alone, a PAGE command will be issued.

If the user has not established a command, then the OSR will define the RETURN key to do a PAGE command for multi-page displays. Thus, to move from one page to the next in a multi-page display, the RETURN key is sufficient. Note that the keypad comma and dash also do page downs and page ups. The PAGE and PAGE -1 commands also perform this function.

Use SHOW DEFAULT to display the current default command. Note that no syntax checking is performed on the command string until it is issued.

EXIT. The EXIT command exits the applications process. For some applications, EXIT is the standard way to exit the process. For others, EXIT should only be used when the user must abort the process. The EXIT, TERMINATE, and QUIT command perform the same function.

GOTO. The GOTO command initiates control point jumps. When this command is entered, either an error message will be sent to the screen if there is a problem (e.g., "no such control point") or an informative message will be sent giving the direction of the jump (forward or backward) and the destination control point name. Control points are used to define the System Activity Monitor menu.

HELP. The HELP command (or PF2 key) invokes the help facility, providing help about the current display. Help is not available for all screens. Control returns to the current display.

KEYS. The KEYS command (or PF4 key) invokes help for the keyboard definitions if in a menu. For other applications, the KEYS command (or PF4 key) may be used for another purpose.

LASTMENU. The LASTMENU command (or PF3 key), when active, returns control to the previous menu.

NEXT. The NEXT command skips over the remaining pages in a display or the remaining pages in a control point. This command may also be used to return control to an application when the application has been interrupted by the ENTER COMMAND key. The keypad ENTER key will also perform a NEXT.

THE NEXT COMMAND EXITS FROM PROMPTING SEQUENCES AND CONTINUES THE APPLICATION.

PAGE. The PAGE command is used either to select which page of a current display is to be generated or to asynchonously invoke another applications display.

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e.g. PAGE 3   selects the third page of the current display

The display system performs extensive error checking of the requested page name or number. Any page number outside the valid range of the display yields an error message, with the following exception: page-number + 1 proceeds to the first page of the display.

A page down and page up capability is provided through the keypad comma and dash keys. The comma key is page down (P) and the dash is page up (P -1).

When on the last page of a multi-page display, the PAGE command (Keypad comma) will now move to the first page of the display. Likewise, when on the first page of a display, the PAGE -1 command (keypad dash) will move to the last page of a display.

QUIT. The QUIT command exits the applications process. For some applications, QUIT is the standard way to exit the process. For others, QUIT should only be used when the user must abort the process. The EXIT, TERMINATE, and QUIT command perform the same function.

REFRESH. The REFRESH command discards user input. The contents of the current edit field are replaced with the "original" data (i.e., the data present at the point of initial display generation.

To select an edit field and make it current, the user hits the NEXT FIELD or PREVIOUS FIELD keys to place the alphanumeric cursor at the beginning of the desired edit field. Next, the user hits the ENTER COMMAND key to place the cursor on the command line. Then, he enters the REFRESH command.

A field cannot be REFRESHed with the original data if a SAVE command has been issued for the current display. The contents of the fields are updated internally when the user leaves the display.

Do not confuse REFRESH with RESTORE. REFRESH is intended for use with a particular edit field; RESTORE is used with an entire display.

RESTORE. The RESTORE command discards all user input on the current display and restores the display data to the original state. A display cannot be RESTOREd with the original data if a SAVE command has been issued for the current display. The contents of the fields are permanently updated when the user leaves the display.

It should be stressed that this command discards all user edits on a full (multi-screen) display basis and is not limited to the current display page. Do not confuse RESTORE with REFRESH.

SAVE. The SAVE command transmits user edits to an applications program before display exit. The save is done automatically upon display exit. This command is of limited utility, particularly since its use can interfere with the operation of the

REFRESH and RESTORE commands. Its primary purpose is to verify operation of the display editing mechanism. However, it is also useful for checkpointing edits (as in a multi-page display).

SHOW. The SHOW command requests information from the display system about the current software version, the calendar date, the display format of an edit field, and the current default command.

SHOW FORMAT requires an edit field to be current. To select an edit field, the NEXT FIELD or PREVIOUS FIELD keys are used to place the cursor at the beginning of the desired edit field. To place the cursor on the command line, the user hits the ENTER COMMAND key and the enters SHOW FORMAT.

If the user enters SHOW DEFAULT and no default command has been ESTABLISHed, a message to that effect will be sent to the display message line.

SNAP. The SNAP command generates a "snapshot" of a single display page or an entire display. The command parameters allow the user to direct the current display page or pages to print immediately or to direct it to the appropriate batch file for later output. The batch file is OSR.PRT for users of the menu system. This file is located in the user's login directory.

To queue the batch print file to print, use the DCL PRINT command.

TERMINATE. The TERMINATE command exits the applications process. For some applications, TERMINATE is the standard way to exit the process. For others, TERMINATE should only be used when the user must abort the process.

To interrupt applications processing, the user hits the ENTER COMMAND (PF1) key to move the cursor to the display command line. He then enters TERMINATE. Response will be delayed briefly if the display system is currently generating the next display.

Insert/Overwrite Mode (Ctrl-A)

Insert mode has been provided as an option for editable fields. It is set up to work like DCL, with Ctrl-A toggling insert/overwrite mode. It is not supported on the UARS> command line.

If the field is full and the cursor is not in the last character position of the field, then the insertion of characters stops. If the cursor is in the last character position, it moves to the next field.

The backspace key in insert mode pulls the string to the left as it overwrites characters. In overwrite mode, the backspace key does not pull the string left; the cursor moves left and blank fills.

Numeric Field Editing

Fields internally defined as numeric fields start with the cursor in the rightmost column of the field. As numbers are entered, they are pushed to the left and the cursor stays in the rightmost column. When the field is full, the cursor moves to the next field.

Numerically defined fields are not editable; although, if the field is not full, the backspace key will pull numbers to the right.

Cursor Movement

When TABing from field to field, the UARS> command line is now included in the sequence.

The cursor is automatically positioned at the first editable field of a screen that has an editable field.

Appendix C - Data Definitions

This appendix provides definitions of some of the UARS data type/subtype relationships. It includes information that is used by the UCSS services in providing data validation operations. The primary parameters in the definition include data type, subtype, source, and level. Each data type has different defintions for subtype/source and level.

The current definition of the valid data types and the associated key attributes such as valid subtypes and levels are defined in the report of valid catalog attribute definitions, Section 7.14.

The valid data levels are:

LEVEL	DEFINITION
0	Raw telemetry *
1	Instrument specific
2	Instrument specific
3AT	Time oriented data
3AL	Latitude oriented data
3AS	Solar data
3LP	Parameters for Level 3AL data
3TP	Parameters for Level 3AT data

* Data reversal, quality checks, and decommutation have been performed.

SCIENCE-DATA-LEVEL-0

These are all the possible Level 0 instrument types, generated by the DCF and forwarded to the CDHF:

TYPE	3-CHAR EQUIVALENT
ACRIM	ACR
CLAES	CLS
HALOE	HAL
HRDI	HRD
ISAMS	ISM
MLS	MLS
PEM	PEM
SUSIMA	SMA
SUSIMB	SMB
SOLSTICE	SOL
WINDII	WIN

These are other file types processed by the DCF and forwarded to the CDHF:

TYPE	3-CHAR EQUIVALENT
ENGINEERING	ENG
OBC	OBC
SPACECRAFT	SCT
QUALITY	QAL
QUICKLOOK	

These are the Orbit/Attitude data types:

TYPE
ATTITUDE
ATTITUDE
ATTITUDE
ORBIT
ORBIT
ORBIT
ORBIT
SLPEPHEM
SSPP
STELLAREPHEM

These are other data type processed by the CDHF:

TYPE	3-CHAR EQUIVALENT	
CORRELATIVE	COR	
CALIBRATION	CAL	
MODEL		
UARS LOG		(OBSERVATORY LOG)

Appendix D - Menu/Command Table

Most of the UCSS interactive functions may be initiated either from a menu or DCL command line command. The DCL command line method uses one of the VAX/VMS command structure as follows:

COMMAND /qualifiers

COMMAND /qualifiers   PARAMETERs

COMMAND /qualifiers   PARAMETERs /qualifiers

Parameters are entered into menu-invoked processes through prompting sequences. Parameters are entered into command-invoked processes by parameters and qualifiers.

Table D-1 summarizes the user menu system and the associated commands, qualifiers, and parameters.

Table D-1.   User Menu/Command Syntax Table

USER MENU	SYNTAX	NOTES
MAIN USER MENU: - Data transfer services - Catalog services - Orbit/Attitude services - Display services - Report services - DBMS access	$UCSS $UCSS DT $UCSS CAT $UCSS OAS $UCSS DSP $UCSS RPT $UCSS DBMS *or* $INGMENU	 I I I I I I
RAC Data Transfer Services: - Transfer cataloged data - Transfer data from RAC to User Area - Transfer data from User Area to RAC - Catalog a data file - Cancel data transfer request - Monitor data transfer	$UCSS DT $DT/CDHF *Source-file* SELECT/*select-attributes* $DT/RAC *Source-file* *destination-file* $DT/UA *Source-file* *destination-file* $CATALOG *Source-file* ATTRIBUTES/*attribute-qualifiers* $DT/CANCEL *No command access*	1,17 2 I

Catalog Services:
- Catalog a data file
 	
- Catalog correlative data
 	
- Query the catalog
 	
- Request update of catalog entry
 	
- DBMS access
	$UCSS CAT
	$CATALOG *source-file*
	                ATTRIBUTES /*attribute-qualifiers*
	$CORRELATIVE
	
	$QRY [SELECT /*select-qualifiers*]
	        [DISPLAY /FIELDS = *display-field-list*]
	        [ORDER /FIELDS = *order-field-list*]
	        [*command-qualifiers*]
	$UPDATE
	    CHANGE /COMMENT = "*string-80-char-max*"
	              /UARSDQ = *uars-data-quality-flag*
	              /PIDQ = *pi-data-quality-flag*
	    SELECT /*select-qualifiers*
	$INGMENU *or* $UCSS DBMS
		
		2
		
		18
		
		1, 3
		
		1
		
		I

ORBIT/ATTITUDE SERVICES: - Request spacecraft attitude - Request SSPP attitude - Request spacecraft orbit - Request orbital elements - Request orbit time range - Request planetary ephemeris data - Request stellar ephemeris data - Request limb tangent point calculation - Request geodetic earth radius - Request magnetic field data - Request S/C position time ranges - Request solar zenith angle calculation - Request skymap ID dump	$UCSS OAS $OASERVICE UARS_ATT $OASERVICE SSPP_ATT $OASERVICE UARS_ORB /ORBVER $OASERVICE ORB_ELT /ORBVER $OASERVICE OTIM_RANG /ORBNUM $OASERVICE PLANET /OBJECTS $OASERVICE STAR /STARID $OASERVICE LIMB $OASERVICE EARTHR /GEOLAT $OASERVICE MAG $OASERVICE VIEW $OASERVICE SZA_LST /START $OASERVICE STRDMP /FILE	 19,20,21 19,20,22 19, 20 19, 20 19 19, 20 19, 20 19, 23 19 19,20,24 19, 25 19, 24
DISPLAYS: - UCSS system status - Completed production processing - Production accounting record - Active/pending production jobs - Production monthly resource summary - Active schedule requests - RAC data transfer schedule - Quicklook transfer summary	$UCSS DSP $DISPLAY STATUS /PERIOD=*n* $DISPLAY PRODUCTION $DISPLAY PAR /JOBID /TIME $DISPLAY ACTIVE_JOBS $DISPLAY RESOURCE $DISPLAY ACTIVE_SRQS $DISPLAY RAC_XFR_SCH $DISPLAY QL_XFR_SUMMARY	 I I, 26 I, 27 I 4, I I 5, I I
REPORTS: Production processing reports - Schedule request status - Job summary reports (summary, complete, all, job_def) - Job accounting record summary - Production accounting record report - Instrument resource usage summary - Production job error summary - UARS CDHF production processing status	$UCSS RPT $RPT SRQ $RPT JOB_SUM $RPT JAR $RPT PAR $RPT USAGE $RPT JOB_ERROR $RPT UARS_CDHF_STAT	 6 7 29 29 28 9 9
Transfer logs - DCF transfer log - FDF transfer log - RAC transfer history - Correlative transfer log - Quicklook transfer log	$RPT DCF_XFR_LOG $RPT FDF_XFR_LOG $RPT RAC_XFR_HIST $RPT CORR_XFR_LOG $RPT QL_XFR_LOG	8 9 10 13 14
RAC data transfer - RAC transfer statistics - Pending RAC transfers - ACRIM/MFT processing log - RAC transfer history	$RPT RAC_XFR_STATS $RPT RAC_XFRS $RPT ACRIM *or* RPT MFT $RPT RAC_XFR_HIST	11 12 28 10
Other reports - Catalog attribute definition - Valid catalog attribute combinations - Correlative data summary	$RPT CAT_ATTS $RPT CDT $RPT SUM_CORREL_DATA	15 31 32

I - Requires Interactive Interface

Table D-1. User Menu/Command Syntax Table

USER MENU	SYNTAX	NOTES
REPORTS (continued) Archive summary reports - RAC transfer data - Level 0 data ingest statistics - Production processing statistics - Job resource utilization - Stage request statistics - Tape generation statistics	$UCSS RPT $RPT UARSDB SUM_RAC_XFR $RPT UARSDB SUM_DATA_INGEST $RPT UARSDB SUM_PROD_PROC $RPT UARSDB SUM_JOB_RESOURCE $RPT UARSDB SUM_STAGE_REQ $RPT UARSDB SUM_TAPE_GEN	 30 30 30 30 30 30

I - Requires Interactive Interface

```
Note 1:                      Note 2:                              Note  3:          Note  4:
Select-attributes:           Attribute-qualifiers:
/CALIBRATION_ID              /CALIBRATION_ID   /START_TIME          /ATTRIBUTES       /INSTRUMENT
/CRULE      /SOURCE          /COMMENTS         /STOP_TIME           /OUTFILE          /LEVEL
/CYCLE      /SUBTYPE         /DAY              /SUBTYPE             /PLAIN            /MONTH
/DAY        /TEST            /GAPS             /TEST                /RECLEN           /SEQNUM
/FIELDS     /TIME            /LEVEL            /TYPE                /RECORD           /TIME
/FILE       /TYPE            /PIDQ             /UARSDQ              /WIDE
/LEVEL      /UARSDQ          /RECORD_SIZE      /VERSION
/ORBIT      /VALUES          /SOURCE
/PIDQ       /VERSION
/QL NUMBER  /VRULE


Note  5:          Note  6:         Note  7:          Note  8:            Note  9:              Note  10:
/NODE             /FILE            /FILE             /FILE               /TIME                 /FILE
/REQUESTOR        /JOBID_SHRT      /JOBID_SHRT       /INGEST_TYPE        /FILE                 /NODE
/TIME             /DAY             /TIME             /TIME                                     /TIME
/STATUS           /TIME            /ARCHIVE          /ARCHIVE                                  /ARCHIVE
                  /ARCHIVE         /SUMMARY
                                   /COMPLETE
                                   /ALL
                                   /JOB_DEF


Note 11:          Note  12:        Note 13:          Note 14:          Note 15:    Note 16:        Note 17:
/FILE             /FILE            /FILE             /FILE             /FILE       /DT/NODE        /AFTER
/MONTH            /NODE            /SOURCE           /TIME                         /PRODUCTION     /VDATE
/NODE             /REQUESTOR       /TIME             /FIELD                        /UCSS           /VIRTUAL
/TIME                                               /ACSCENDING                                   /ACRIM
/ARCHIVE                                            /ARCHIVE


Note 18:          Note 19:         Note 20:          Note 21:          Note 22:    Note 23:        Note 24:
/TAPE             /RECORD          /START            /ATTVER           /ATTVER     /START          /ALTITUDE
/LABEL            /PLAIN           /STOP             /ORBVER           /SSPPTYP     /SATPOS         /LATITUDE
/SAVE_SET         /FILE            /TIMINC                                         /VIEWVEC        /LONGITUDE
/SFDU
/VERSION
/FILE


Note 25:          Note 26:         Note 27:          Note 28:          Note 29:    Note 30:        Note 31:
/LATITUDE         /TIME            /JOBID            /FILE             /JOBID      /TIME           /FILE
/LONGITUDE        /JOBID           /TIME             /TIME             /ARCHIVE    /NODE           /PATTERN
/LIMBHGT          /STATUS                            /ARCHIVE                      /FILE
/AZIMUTH

Note 32:
/FILE
/TIME
/SUBTYPE
/CORR_PI
```

Appendix E - Node Name Assignments

The following table lists the node names and addresses for the associated instrument/system. This list is current as of the writing of this document.

Node Name	Location	Instrument/System
CDHF1	GSFC	CDHF
CDHF2	GSFC	CDHF
CDHF3	GSFC	CDHF
CDHF4	GSFC	CDHF
UARSMS	GSFC	CDHF
UARS	GSFC	CDHF
ACDURS	NCAR	CLAES
AIBVAX	NOAA	
CLAES	LOCKHEED	CLAES
GELUA1	SUNY	
GEUARS	GE	
GRID	GSFC, Bldg. 21	
GTUARS	GA. TECH	
HALOE	LANGLEY	HALOE
ISAMS	OXFORD University	ISAMS
MLSRAC	JPL	MLS
MLSUK	United Kingdom	MLS
PEM	SWRI	PEM
PEMAXS	LOCKHEED	PEM
SPRLJ	Univ. of Michigan	HRDI
STORMY	Lawerence Livermore NL	
SUSIM	NRL	SUSIM
UCMS	GSFC	CMS
UMPG	GSFC	MPG
UWASH	Univ. of Washington	
VIRGO	Colorado	SOLSTICE
WINDIC	YORK	WINDII
WINDIF	CNES	WINDII

Appendix F - Job Identifier Structure

Certain reports or displays may be supplied a parameter named the job identifier (JOBID). This identifier is used in the production scheduling system. The JOBID is a 21 character field. The structure of the JOBID is as follows. Spaces are provided among portions for readability in this discussion. These spaces are not part of the identifier.

III L JJJ VVVVV SSS DDDD XX

```
III      - Instrument
L        - Level of UARS data (1,2,3,or N for
               leveless data)
JJJ      - Job definition sequence number assigned
               for operations uniqueness
VVVVV    - Version number
SSS      - Schedule request sequence number assignd
               for uniqueness
DDDD     - Uars processing day number
XX       - Sequence for recovery, starts at 01
```

When specifying this as a parameter to the /JOBID qualifier, the user can control the selection of data by varying the portion of the job identifier supplied with the display request. To select by instrument he specifies:

/JOBID=III*   where the * means any
                       remaining values accepted

To select by instrument and level:

/JOBID=IIIL*

All fields must be supplied left to right until the desired information is included.

Appendix G - OSR Error Messages

This appendix lists the error messages that can be generated by the OSR Services. These error messages appear in the message line of the standard OSR display screen. The error messages are sorted by the internal subsystem of the OSR from which they are generated.

OSR-F-6401	I/O Error on DCS File
OSR-F-6402	Event mailbox write failure
OSR-F-6403	Requested display has no status record
OSR-F-6404	Requested control point does not exist: [control-point-name]
OSR-F-6405	Bad display status in ODSDISP. STOP was used
OSR-F-6406	Work area allocation failure
OSR-F-6407	Work area deallocation failure
OSR-F-6408	Invalid page number specification
OSR-F-6409	No current page number - enter PAGE display name
OSR-F-6410	Proceeding to next display
OSR-F-6411	Acknowledging BREAK. Enter command or NEXT to continue
OSR-F-6412	Command [string] not recognized
OSR-F-6413	Command [string] is ambiguous
OSR-F-6414	Restoring original data for this display
OSR-F-6415	Unable to access event queue
OSR-F-6416	Line specification outside screen
OSR-F-6417	Window too small for data
OSR-F-6418	Status table overflow
OSR-F-6419	COMMON table overflow
OSR-F-6420	Data Retrieval Table overflow
OSR-F-6421	Field Definition Table overflow
OSR-F-6422	Page Definition Table overflow
OSR-F-6423	I/O error on Data Retrieval File
OSR-F-6424	Display does not exist: [display-name]
OSR-F-6425	Process terminated. Open failure on [file-name]
OSR-F-6426	Terminal I/O failure
OSR-F-6427	Unable to establish terminal link
OSR-F-6428	Event AST mailbox creation failure
OSR-F-6429	Require CMEXEC privilege for terminal link
OSR-F-6430	Process terminated by operator
OSR-F-6431	Error opening SNAP output file
OSR-F-6432	Unable to queue SNAP output
OSR-F-6433	Default command has not been established. No action taken
OSR-F-6434	Unable to establish exit handler
OSR-F-6435	Unable to print display hardcopy file
OSR-F-6436	Final system status code = [status-code]
OSR-F-6437	Pair validation not supported for this data type
OSR-F-6438	Invalid edit, please reenter
OSR-F-6439	Field translation error, please reenter
OSR-F-6440	Command not allowed if invalid edit
OSR-F-6441	Saving all edits to this display
OSR-F-6442	Default command is: [command-string]
OSR-F-6443	Data fields outside screen limits will be truncated
OSR-F-6444	GRIP communication failure
OSR-F-6445	Unable to jump. No key # [control-point-key-number]

Figure G-1.   OSR Error Messages

OSR-F-6446	Unable to jump. No key assocaited with control point [control-point-name]
OSR-F-6447	Executing forward jump to control point [control-point-name]
OSR-F-6448	Executing backward jump to control point [control-point-name]
OSR-F-6449	Executing jump to next keyed control point
OSR-F-6450	Executing jump to end of process
OSR-F-6451	Sorry, all control point jumps are disabled
OSR-F-6452	Sorry, all backward control point jumps are disabled
OSR-F-6453	Generating SPRINT hardcopy
OSR-F-6454	Process terminated. I/O error on [file-name] File. Status = [status-code]
OSR-F-6455	Process terminated. Display files from wrong DGP
OSR-F-6456	Inconsistent DGP files. CAO ID = [hex-code]
OSR-F-6457	Unable to establish display time updating routine
OSR-F-6458	Unrecognizable NEXT parameter. No action taken
OSR-F-6459	Proceeding to next control point
OSR-F-6460	Interrupt acknowledged. Enter input
OSR-F-6461	Bad SNAP parameter - No action taken
OSR-F-6462	OSR/FSP software error
OSR-F-6463	Insufficient virtual memory for plot display: [display-name]
OSR-F-6464	Array data type not supported for plotting
OSR-F-6465	Following message written to Processing List: [processing-list-display-file-text]
OSR-F-6466	Deleted Processing List entry with SAMID: [SAMID]
OSR-F-6467	Invalid plot device for plot display [display-name]
OSR-F-6468	Data type not supported for time validation
OSR-F-6469	Bad validation specification
OSR-F-6470	Time validation failure
OSR-F-6471	Not a plot display - No action taken
OSR-F-6472	Invalid graphics function [string]
OSR-F-6473	Requested graphics function has not been implemented
OSR-F-6474	Updating plot display
OSR-F-6475	Error generating [axis-type] axis label. Probable format error
OSR-F-6476	PLOTDATA format failure for array [array-name]
OSR-F-6477	Expected parameters not found. No action taken
OSR-F-6478	Coordinate pairs required. No action taken
OSR-F-6479	Error in input parameters. No action taken
OSR-F-6480	Missing or invalid GAPS parameter
OSR-F-6481	Missing or invalid FLAGS parameter
OSR-F-6482	Missing or invalid VISIBLE parameter
OSR-F-6483	Required graphics function is ambiguous. No action taken
OSR-F-6484	EXPAND parameter(s) out of viewpoint boundaries
OSR-F-6485	Null EXPAND requested. No action taken
OSR-F-6486	Graphics function ot enabled for this display type
OSR-F-6487	Too many parameters found. No action taken
OSR-F-6488	Input coordinates are outside plot boundaries

Figure G-1.   OSR Error Messages

OSR-F-6489	Too many points within range. Please retry or EXPAND
OSR-F-6490	Coincident points: EXPAND may clarify situation
OSR-F-6491	Current function has no point within acceptable range
OSR-F-6492	Operator flagging not enabled for function
OSR-F-6493	I/O error on DFF file. Status = [status-code]
OSR-F-6494	Have you called OGSINIT today?
OSR-F-6495	No data to plot. Display skipped was: [display-name]
OSR-F-6496	No current edit field to REFRESH
OSR-F-6497	Precision loss due to predefined field limitations
OSR-F-6498	Graphics function disabled for text and circles
OSR-F-6499	Function cannot be selected for interaction
OSR-F-6500	SHOW: [requested-information-string]
OSR-F-6501	Sorry, no information on [string]
OSR-F-6502	Invalid SAMID: [SAMID]
OSR-F-6503	No entry in Processing List with SAMID: [SAMID]
OSR-F-6504	Desired entry in Processing List was locked
OSR-F-6505	Processing List file not found
OSR-F-6506	Unable to open Processing List file
OSR-F-6507	Error writing to Processing List
OSR-F-6508	Error reading from Processing List
OSR-F-6509	Error rewriting header to Processing List
OSR-F-6510	Error deleting entry from Processing List
OSR-F-6511	Unexpected Processing List I/O error: [status-code]
OSR-F-6512	Error writing message to development log
OSR-F-6513	Development run: Processing List unavailable
OSR-F-6514	SAMID rollover: Processing List entry deleted
OSR-F-6515	Error trying to lock Processing List header
OSR-F-6516	[application-name] completed normally
OSR-F-6517	[application-name] terminated by operator
OSR-F-6518	[application-name] aborted due to an error detected by OSR. Error was: [error-message]
OSR-F-6519	[application name] terminated by abnormal system error. System error status [hex] was: [status-code]. Error message follows below: [error-message]
OSR-F-6520	START: [application-text] Using OSR version [OSR-version-number] Execution mode is: [execution-mode] Node: [node-name]
OSR-F-6521	Unable to write to PASS log: logging disabled by LOGMAN
OSR-F-6522	LOG_MAILBOX creation or assign channel error
OSR-F-6523	SYS$QIO error writing message to LOG_MAILBOX
OSR-F-6524	PASS Log mailbox ("LOG_MAILBOX") full
OSR-F-6525	No FETCHed point to RENEW. No action taken
OSR-F-6526	Unable to output buffer to screen. Status [hex]: [status-code]
OSR-F-6527	Invalid format for alarm duration: [duration-string]
OSR-F-6528	Development run: PASS alarm file unavailable
OSR-F-6529	Error trying to lock PASS alarm file

Figure G-1.   OSR Error Messages

OSR-F-6530	PASS alarm file not found
OSR-F-6531	Unable to open PASS alarm file
OSR-F-6532	Unexpected PASS alarm file I/O error: [status-code]
OSR-F-6533	Alarm already exists with mnemonic: [alarm-mnemonic]
OSR-F-6534	Following entry added to PASS alarm file
	Mnemonic: [alarm-mnemonic] Duration: [duration-string] Summary of OGSYSMSG message: [error-message]
OSR-F-6535	Error writing to PASS alarm file
OSR-F-6536	Error reading from PASS alarm file
OSR-F-6537	Error deleting entry from PASS alarm file
OSR-F-6538	Deleted alarm entry with mnemonic: [alarm-mnemonic]
OSR-F-6539	No entry in alarm file with mnemonic: [alarm-mnemonic]
OSR-F-6540	ALERT_MAILBOX creation or assign channel error
OSR-F-6541	SYS$QIO error writing message to ALERT_MAILBOX
OSR-F-6542	PASS Alert mailbox ("ALERT_MAILBOX") full

Figure G-1.   OSR Error Messages

DCSU-E-6700   No such input file. Please enter filename or TERM
DCSU-E-6701   Unable to open output file. Status = [status-code]
DCSU-E-6702   No input file was specified. Please enter filename or TERM
DCSU-E-6703   No updates were made. Output file deleted
DCSU-E-6704   Output file extension changed to DCO
DCSU-E-6705   Unable to spawn $COPY. STATUS = [status-code]
DCSU-E-6706   Unable to create output file. Status = [status-code]
DCSU-E-6707   UPDATING DISPLAY AND CONTROL POINT STATUS FILE
DCSU-E-6708   Number of records updated = [record-count]

Figure G-2. CSU Error Messages

PLOTMAN-F-6720   Error: SYS$PLOT plotter batch queue paused [system-
                  message-text] Check plotter. Restart queue via DCL
                  START/QUEUE command
PLOTMAN-F-6721   Plotting aborted. Cannot access plot file: [file-name]
PLOTMAN_F-6722   Error: SYS$PLOT plotter batch queue paused Device not
                  responding or plot file is bad. Check plotter Restart queue via
                  DCL START/QUEUE command Reissue PLOT command for
                  file: [file-name]

Figure G-3.   PLOTMAN Error Messages

LOGPRT-E-6760	Could not find Log file to print
LOGPRT-E-6761	Open failure on Log file or Listing file
LOGPRT-E-6762	Error reading from LOG file to print
LOGPRT-E-6763	Error writing to PASS Log file to print
LOGPRT-E-6764	Unexpected Log file I/O error: [status-code]
LOGPRT-E-6765	Could not find PASS Log Listing file to print
LOGPRT-E-6766	Device error trying to print PASS Log Listing
LOGPRT-E-6767	Restart LOGP manually using this SAMID
LOGPRT-E-6768	I/O error reading Processing List parameters
LOGPRT-E-6769	Invalid SAMID passed to LOGP: [SAMID]
LOGPRT-E-6770	No entry found with SAMID: [SAMID]
LOGPRT-E-6771	PASS log listing generated. [Queued to [printer-name]]
LOGPRT-E-6772	Combined listing generated. [Queued to [printer-name]]
LOGPRT-E-6773	Applications listing generated. [Queued to [printer-name]]
LOGPRT-E-6774	System listing generated. [Queued to [printer-name]]

Items in brackets appear in the error message only if applicable.

Figure G-4.   LOGPRT Error Messages

LOGMAN-E-6775	SYS$CREMBX error. Log Manager is aborting
LOGMAN-E-6776	Error reading Log Mailbox. Logging disabled
LOGMAN-E-6777	Illegal control character sent to Log Mailbox
LOGMAN-E-6778	PASS Log file reinitialized
LOGMAN-E-6779	Could not find PASS Log file
LOGMAN-E-6780	Could not open PASS Log file
LOGMAN-E-6781	Error reading PASS Log file
LOGMAN-E-6782	Error writing to PASS Log file
LOGMAN-E-6783	Unexpected PASS Log I/O error: [status-code]
LOGMAN-E-6784	RMS error renaming old PASS Log: [status-code]
LOGMAN-E-6785	Log Printing Process spawn error: [status-code]
LOGMAN-E-6786	Could not write parameters to Processing List
LOGMAN-E-6787	Could not get a lock on PASS Log file
LOGMAN-E-6788	LOGP spawned to generate combined listing
LOGMAN-E-6789	LOGP spawned to generate application listing
LOGMAN-E-6790	LOGP spawned to generate system listing

Figure G-5. LOGMAN Error Messages

SAM-E-6800	SYS$CREMBX error. Reinitialization aborted
SAM-E-6801	Can't lock mailbox. Reinitialization aborted
SAM-E-6802	Can't send reinitialization message
SAM-E-6803	Could not find PASS Log file
SAM-E-6804	Could not open PASS Log file
SAM-E-6805	Error reading PASS Log file
SAM-E-6806	Unexpected PASS Log I/O error: [status-code]
SAM-W-6807	Processing List full. Delete extra entries
SAM-W-6808	Can't display all Processing List entries
SAM-E-6809	Could not find Processing List display file
SAM-E-6810	Could not open Processing List display file
SAM-E-6811	Error reading Processing List display file
SAM-E-6812	Unexpected Processing List error: [status-code]
SAM-W-6813	Invalid SAMID: [SAMID]
SAM-W-6814	No entry in Processing List with SAMID: [SAMID]
SAM-E-6815	Desired entry in Processing List was locked
SAM-W-6816	Can't display all the selected entries
SAM-W-6817	Could not open System Activity Monitor namelist file
SAM-W-6818	Could not find System Activity Monitor namelist file
SAM-W-6819	Error occurred reading the following namelist: [namelist-name]
SAM-W-6820	Could not get information about the disk: [disk-name]
SAM-W-6821	Could not set timer in order to monitor disk space
SAM-W-6822	DEL DSK AST (from namelist OANDEL) not in proper format
SAM-E-6823	Invalid characters in device name: [device-name]
SAM-E-6824	Device name not of acceptable length: [device-name]
SAM-E-6825	No device exists with name: [device-name]
SAM-E-6826	Syntax error in queue name: [queue-name]
SAM-E-6827	No queue exists with name: [queue-name]
SAM-E-6828	Unexpected error during system call: [status-code]
SAM-E-6829	Device is on a remote system: [device-name]
SAM-E-6830	Down to [number-blocks] free blocks on disk [disk-name]
SAM-E-6831	Error count up to [error-count] on disk [disk-name]
SAM-I-6832	LOGP spawned to generate PAS Log Listing
SAM-E-6833	Error spawning Log Printing Process
SAM-E-6834	Could not write parameters to Processing List
SAM-W-6835	Could not create local copy of PASS Log. Please try again
SAM-E-6836	Could not get a lock on PASS Log file
SAM-E-6837	Enter PAGE or NEXT to return to control point MAIN
SAM-E-6838	Copying current PASS log file to temporary file
SAM-E-6839	Error checking disk specified by TLM$TDS_LOCATION logical name: [disk-name]
SAM-W-6840	PASS alarm file full. Delete extra entries
SAM-E-6841	Could not get a lock on PASS alarm file
SAM-E-6842	Could not find PASS alarm file

Figure G-6.   SAM Error Messages

SAM-E-6843	Could not open PASS alarm file
SAM-E-6844	Error reading PASS alarm file
SAM-E-6845	Unexpected PASS alarm file I/O error: [status-code]
SAM-W-6846	No entry in alarm file with mnemonic: [alarm-mnemonic]
SAM-E-6847	Desired entry in PASS alarm file was locked
SAM-E-6848	Error assigning channel to ALERT_MAILBOX
SAM-E-6849	Error sending cancellation to ALERT_MAILBOX
SAM-E-6850	PASS Alert mailbox ("ALERT_MAILBOX") full
SAM-E-6851	PASS Log mailbox ("LOG_MAILBOX") full
SAM-W-6852	Stop SAMID must be greater than or equal to start SAMID

Figure G-6. SAM Error Messages

DGP-E-6900	Unable to open file " XX" Status = "NN"
DGP-E-6901	Display Status flags display not generated
DGP-E-6902	Error reading common INCLUDE file
DGP-W-6903	More than one common defined in INCLUDE file "X"
DGP-W-6904	No named COMMON statement in INCLUDE file
DGP-E-6905	Error opening INCLUDE file: "XX" Error = "NN"
DGP-E-6906	Error accessing COMMON module: RMS Error = "NN"
DGP-E-6907	Error reading from CAR2_FILE:STATUS = "NN"
DGP-E-6908	Error writing to CAR_FILE: STATUS = "NN"
DGP-E-6909	Duplicate terminal function key specified: key = "NN"
DGP-W-6910	Text field truncated to "NN" characters
DGP-E-6911	Control point status record I/O Error: Status = "NN"
DGP-E-6912	Parameter "XXXX" not in data retrieval file
DGP-E-6913	Error writing display status record: Status = "NN"
DGP-E-6914	Error writing display format record: Status = "NN"
DGP-W-6915	More than "NNN" "XX" data in display
DGP-E-6916	Name "XX" not defined
DGP-E-6917	Maximum error count exceeded - run terminated
DGP-E-6918	Display/control point status file write error: Status = "N"
DGP-E-6919	Display/control point status file read error: Status = "N"
DGP-E-6920	DML input file read error: Status = "NN"
DGP-E-6921	I/O error on data retrieval file: Status = "NN"
DGP-E-6922	Error rewriting to data retieval file: Status = "NN"
DGP-E-6923	File name "XXXX" previoulsy specified
DGP-E-6924	Control point "XXXX" currently active
DGP-E-6925	Display "XXXX" currently active
DGP-E-6926	Control point not currently active
DGP-E-6927	Display not currently active
DGP-E-6928	Command not compatible with display type "XX"
DGP-E-6929	Parenthesis mismatch
DGP-E-6930	Required parameter number "NN" missing
DGP-E-6931	Invalid command specified: "XX"
DGP-E-6932	Invalid text field specified
DGP-E-6933	Invalid name specified: "XX"
DGP-E-6934	Function key value out of range: "XX"
DGP-W-6935	Color index out of range - defaulted to index "XX"
DGP-E-6936	Plot flag value out of range: "XX"
DGP-E-6937	Numeric parameter out of range: "XX"
DGP-E-6938	Invalid numeric parameter specified: "XX"
DGP-E-6939	Invalid status keyword specified: "XX"
DGP-E-6940	Invalid line flag keyword specified: "XX"
DGP-E-6941	Invalid protection keyword specified: "XX"

Figure G-7. *DGP Error Messages*

DGP-E-6942	Invalid display type specified: "XX"
DGP-E-6943	Invalid data validation specification: "XX"
DGP-E-6944	Invalid plot type specified: "XX"
DGP-E-6945	Array subscript invalid or out of range: "XX"
DGP-W-6946	Invalid listing option: "XX"
DGP-E-6947	No file macro specified
DGP-W-6948	Too many parameters specified
DGP-E-6949	Line number and line flag combination is invalid
DGP-E-6950	Invalid display format specified: "XX"
DGP-E-6951	Display format record overflow
DGP-W-6952	Absolute display length, "NN" lines
DGP-W-6953	Display line exceeds "NN" columns
DGP-E-6954	Car object file not generated: Status = "NN"
DGP-E-6955	Too many continuation lines, input exceeds "N" characters
DGP-E-6956	Duplicate group name - "NN"
DGP-E-6957	Duplicate control point name - "NN"
DGP-E-6958	Duplicate display name - "NN"
DGP-E-6959	Group table full - maximum number allowed is "N"
DGP-W-6960	Mission common parameter "XX" - Defaulted to "N"
DGP-E-6961	COMMON parameter table overflowed with "N" parameters
DGP-W-6962	Too many colors specified - maximum allowed per display: "N"
DGP-E-6963	duplicate name specified: "XX"
DGP-E-6964	Invalid macro sequence
DGP-E-6965	Invalid array name specified: "XX"
DGP-E-6966	Invalid array declaration type specified: "XX"
DGP-E-6967	Invalid scale specification: "XX"
DGP-E-6968	Maximum number of "XX" macros exceeded
DGP-E-6969	Invalid function display specification: "XX"
DGP-E-6970	Invalid circle specification with plot display
DGP-E-6971	Background color specified by color index "n"

Figure G-7.   DGP Error Messages

Appendix H - Automatic Job Initiation After DCF Ingests

> The Automatic Job Initiation After DCF Ingests (Auto Job Kick Off)
> allows user supplied command files to be submitted automatically to
> appropriate batch queues after a DCF Ingest completes.

Command files are submitted for both quicklook ingests and production ingests. The command files are submitted as batch jobs and should be considered as such (i.e., login files are executed, log files are created).

DCF Ingest passes information about the just completed ingest to the command files by parameters. The parameters are constructed in a compact form to pass as much information as possible. The information in the parameters are not immediately accessible to the user command file. There is, however, a UCSS command file which converts the parameters to logical names for use by the user command files. The UCSS command file must be called before any other processing is done in the user command file. The following DCL statement should be inserted into the user command file:

$ @UCSS_DCF:DCF_CNVST_PARMS 'P1 'P2 'P3 'P4 'P5 'P6 'P7 'P8

The DCL statement must appear in the user command file exactly as it does above. This UCSS command file converts the parameters into the following logical names:

LOGICAL NAME	TYPE	DESCRIPTION
INGEST_DAY	Integer	UARS day of the ingest
INGEST_QL_NBR	Integer	Quicklook number of the ingest = 0 for production ingests > 0 for quicklook ingests
INGEST_VERSION	Integer	Version of the data
INGEST_CYCLE	Integer	Cycle of the data
INGEST_START	VMS Date/Time	Data start time
INGEST_STOP	VMS Date/Time	Data stop time
INGEST_FILE_NO	Integer	Number of file names
INGEST_FILE_<n>	VMS File Spec	Logical names for data files

Once the logical names are set up, the user command file may access them in any manner appropriate to the data type of the logical name (integer, VMS Date/Time, VMS File Specification).

The user must inform operations of certain information about the user command file. This includes user name, full file specification of the user command file, full file specification of the log file, preferred queue on which the job is submitted, the job id, for which type of ingest the user command file is executed, and the data types that indicate which files are pointed to by the INGEST_FILE_<n> logical names.

INFORMATION	DESCRIPTION
JOB ID	Identifier for the job
CONDITION	For which type of ingest is the job run Q - Quicklook P - Production
COMMAND FILE	Full file specification for the command file
LOG FILE	Full file specification for the log file
USER NAME	User name under which job is submitted
QUEUE LIST	List of preferred queues
DATA TYPE	List of data types which determines to what files the INGEST_FILE_<n> logical names will point

The queue list allows a maximum of eight queues to be specified. The DATA TYPE allows a maximum of four data types to be specified. The order of the data types determines which file name is assigned to INGEST_FILE_1, INGEST_FILE_2, etc.

Operations takes the above information and includes it in a file read by DCF Ingest after an ingest completes. For each entry in the file that matches the condition, a job is submitted on the first queue in the queue list that is available.

Any valid DCL command may be included in the user command file. The only requirement is that the UCSS command file

UCSS_DCF:DCF_CNVST_PARMS.COM

be invoked before any access of the logical names takes place.

Since the DCF ingest function submits the command file, the file may need appropriate protection (i.e. WORLD read protection). Alternatively, operations may wish to copy the command file to a location in the operations account. The log file may still be placed in the user's directory, since it is created after the job is submitted.

EXAMPLES: The user has given operations the following information:

```
JOB ID          ZEBRAS_QL_JOB
COMMAND FILE    ZEBRA_DISK:[ZEBRA_DIR]QUICKLOOK_JOB.COM
LOG FILE        ZEBRA_DISK:[ZEBRA_DIR]QUICKLOOK_JOB.LOG
QUEUE LIST      CDHF2_BATCH, CDHF1_BATCH
DATA TYPE       QUALITY, SPACECRAFT, OBC
USER NAME       ZEBRA
CONDITION       Q
```

H-2

The user command file might look like this:

```
$ !
$ ! execute the conversion routine - parameters to logical
$ !
$ @UCSS_DCF:DCF_CONVST_PARMS 'P1 'P2 'P3 'P4 'P5 'P6 'P7 'P8
$ !
$ ! transfer the first file (quality)
$ !
$ DT/CDHF ZEBRA_DISK:[ZEBRA_DIR.QL_FILES] -
$         SELECT/FILE=INGEST_FILE_1
$ !
$ ! transfer the second file (spacecraft)
$ !
$ DT/CDHF ZEBRA_DISK:[ZEBRA_DIR.QL_FILES] -
$         SELECT/FILE=INGEST_FILE_2
$ !
$ ! transfer the third file (obc)
$ !
$ DT/CDHF ZEBRA_DISK:[ZEBRA_DIR.QL_FILES] -
$         SELECT/FILE=INGEST_FILE_3
```

This user command file issues a data transfer request to transfer three files into the user's area. Note the use of the INGEST_FILE_<n> logical names to specify the file to be transferred. Again, the logical name may only be used after the UCSS_DCF:DCF_CNVST_PARMS.COM command procedure is invoked.

A second version of the user command file may look like this:

```
$ !
$ ! execute the conversion routine (parameter to logical)
$ @UCSS_DCF:DCF_CNVST_PARMS 'P1 'P2 'P3 'P4 'P5 'P6 'P7 'P8
$ !
$ ! find the quicklook id
$ !
$ ql_id = f$trnlnm("INGEST_QL_NBR")
$ !
$ ! if quicklook id not defined, then production processing
$ !
$ if ql_id .eq. 0 then goto production_processing
$ !
$ ! else quicklook processing
$ !
$ if ql_id .eq. 1 then goto first_ql_set_processing
$ !
$ goto done
$ production_processing:
$ !
$ ! DCL commands for production processing
$ !
$ goto done
$ first_ql_set_processing:
$ !
$ ! DCL commands for quicklook processing
$ !
$ goto done
$ done:
$ exit
```

Note: The account under which the job is submitted may restrict the
       UCSS functions that may be performed

Operational considerations for DCF automatic job initiation

The operational considerations for DCF Automatic Job Initiation include maintaining the file which lists all jobs to be submitted and informing users when their jobs have not been submitted because of a processing error.

The file which lists all jobs to be submitted is called the auto job file. This file is located at UCSS_DCF:AUTO_JOB_FILE.NML. An entry in the file is a name list which describes each job to be submitted. The format of the auto job file is as follows:

FIELD NAME	TYPE	DESCRIPTION
JOB_ID	C*16	Name by which job may be identified
CONDITION	C*1	Ingest for which job runs 'Q' - quicklook ingest 'P' - production ingest
COMMAND_FILE	C*255	Full VMS file specification for the command file supplied by user
LOG_FILE	C*255	Full VMS file specification for the log file
USER_NAME	C*12	Name of account under which job is submitted
QUEUE_LIST	C*255	List of queues on which job is submitted
DATA_RANGE	C*15	List of data types. Logical names is defined which will point to the appropriate data file for each type specified

The QUEUE_LIST has the following format:

queue1\queue2\queue3...

Each queue is separated by the "\" character. The preferred queue is listed first, followed by the second choice, followed by the third choice, and so forth. If a queue is not available, then the next queue in the list is used. Only eight queue names each up to 31 characters may be entered on the list.

The DATA_RANGE has the following format:

data_type_1\data_type_2\data_type_3\data_type_4

Each data type is separated by the "\" character. The valid data types are listed below:

DATA TYPE IN RANGE	CORRESPONDING DATA TYPE
CLS	CLAES
HAL	HALOE
HRD	HRDI
ISM	ISAMS
MLS	MLS
PEM	PEM
SOL	SOLSTICE
SMA	SUSIM A
SMB	SUSIM B
WIN	WINDII
ACR	ACRIM
ENG	ENGINEERING
SCT	SPACECRAFT
OBC	OBC
QAL	QUALITY
EXT	EXTRSC
SSP	SSPPGIMBALS

The EXT and SSP data types are valid only for quicklook jobs. If entered for production jobs, the equivalent name corresponding to that logical name is unknown.

The Auto Job File is a NAMELIST file. Each entry has the following format:

```
$DCF_JOBS
  job_id        = 'ZEBRAS_QL_JOB'
  condition     = 'Q'
  command_file  = 'ZEBRA_DISK:[ZEBRA_DIR]QUICKLOOK_JOB.COM'
  log_file      = 'ZEBRA_DISK:[ZEBRA_DIR]QUICKLOOK_JOB.LOG'
  user_name     = 'ZEBRA'
  queue_list    = 'CDHF1_BATCH\UARSDB_BATCH_CDHF1'
  data_type     = 'QAL\SCT\OBC'
$END
```

Since the user does not have an easy way to determine to which file each of the INGEST_FILE_<n> logical names point, operations should enter the data types in the same order as the user specifies. Failure to do so would result in a different logical name mapping than the user intended, and may cause the user command file to fail.

DCF Ingest passes information about the completed ingest to the user command files by parameters. These parameters are in a format that makes their direct use difficult. A command file may be used to convert the parameters into logical names that the user command file may use. This conversion command file is located at UCSS_DCF:DCF_CNVST_PARMS.COM. It contains DCL statements to change the parameters into logical names. The existence of the conversion command file is verified before any jobs are submitted. If it does not exist, DCF Ingest creates it automatically. The listing of the file may be found at the end of this discussion.

The user command files must be accessible by the account under which DCF ingest is running. This may require the user to set protection on the command file so it is accessible. Failure to do so results in that user's job not being submitted. Operations may copy all users' command files into one directory in the operations account to avoid protection issues during submission.

Listing of UCSS_DCF:DCF_CNVST_PARMS.COM

```
$ define/nolog INGEST_DAY      'p1
$ define/nolog INGEST_QL_NBR   'p2
$ define/nolog INGEST_VERSION  'p3
$ define/nolog INGEST_CYCLE    'p4
$ start_time = f$extract(0, f$locate("\", "''p5'"), "''p5'")
$ stop_time  = f$extract(f$locate("\", "''p5'")+1, f$length("''p5'"), "''p5'")
$ define/nolog INGEST_START "''start_time'"
$ define/nolog INGEST_STOP  "''stop_time'"
$ delete/symbol start_time
$ delete/symbol stop_time
$ string = "''p6'"
$ num_files = 0
$ tran_top:
$   next = f$location("\", "''string'")
$   if next .eq. 0 then goto done_tran_top
$   num_files = num_files + 1
$   logical_name = "INGEST_FILE_" + f$string(num_files)
$   equiv_name = f$extract(0, next, "''string'")
$   define/nolog 'logical_name 'equiv_name
$   next = next + 1
$   string = f$extract(next, f$length("''string'"), "''string'")
$   goto tran_top
$ done_tran_top:
$ define/nolog INGEST_FILE_NO 'num_files
$ exit
```

The following describes the mapping between parameters and logical names:

PARAMETER	LOGICAL NAME	TYPE
P1	INGEST_DAY	Integer
P2	INGEST_QL_NBR	Integer
P3	INGEST_VERSION	Integer
P4	INGEST_CYCLE	Integer
P5	INGEST_START	VMS Date/Time
P5	INGEST_STOP	VMS Date/Time
P6	INGEST_FILE_1	VMS file spec.
P6	INGEST_FILE_2	VMS file spec.
P6	INGEST_FILE_3	VMS file spec.
P6	INGEST_FILE_4	VMS file spec.

Notes: 1. Parameter P5 has the following format:
<start_time>\<stop_time>\
2. Parameter P6 has the following format:
<file spec. 1>\<file spec. 2>\<file spec. 3>\<file spec. 4>\
3. Logical name INGEST_FILE_NO is derived from parsing parameter P6.

ACRONYMS

AAS	Auxiliary Array Switch
ABF	Application by forms
AC	Alternating Current
ACCEL	Acceleration
ACE	Attitude Control Electronics
ACI	Allocated Configuration Item
ACL	Access Control List
ACR	Active Cavity Radiometer
ACRIM	Advanced Cavity Radiometer Irradiance Monitor
ACS	Attitude Control System
A/D	Analog-To-Digital
AD&C	Analog-To-Digital Converter (HRDI)
ADCS	Attitude Determination And Control Subsystem
ADP	Acceptance Data Package
ADP	Automatic Data Processing
ADPE	Automatic Data-Processing Equipment
ADR	Automatic Deficiency Report
ADU	Actuator Drive Unit
AEM	Atmospheric Explorer Mission
AF/RF	Audio Frequency/Radio Frequency
AFD	AFT Flight Deck
AG	Air To Ground
AGE	Aerospace Ground Equipment
AH	Ampere-Hour
AIB	Array Interface Box
AID	Analog Input Differential
AKA	Active Keel Actuator
ALA	Active Longeron Actuator
ALT	Altitude
AMS	Alignment Measurement System
AN	Alteration Notice
AO	Announcement Of Opportunity
AOT	Acquisition Of Target
AP	Applications Processor
APA	Allowance For Program Adjustment
APL	Applied Physics Laboratory
APOP	Automated Program Operating Plan
APS	Antenna Pointing Systems
ARC	Ames Research Center
ASC	Ascension
ASCII	American Standard Code For Information Interchange
ASE	Airborne Support Equipment
A&T	Assembly And Test
ATC	Assurance Technology Corporation
ATC	Absolute Time Code

ACRONYMS

ATCP	Absolute Time Command Processor
ATK	Auxiliary Tank Kit
ATM	Antenna Test Model
ATP	Acceptance Test Procedure
ATR	Analog Tape Recorder
ATS	Auxiliary Torquer System
ATT	Attitude
AWG	American Wire Gage
AXIS	Atmospheric X-Ray Imaging Spectrometer
AXIS-AP	Axis-Analyzer Package
AXIS-SP	Axis-sensor Package
BAT	Bench Acceptance Test
B/B	Breadboard
BBE	Base Band Equipment
BCU	Bus Coupling Unit
BDF	Blocked Data Format
BED	Block Encoder/Decoder
BER	Bit Error Rate
BFX	Bulk File Transfer
BGA	Biaxial Gimbal Assembly
BIPL	BI-Phase Level
BIPM	BI-Phase Mark
BIPS	BI-Phase Space
B/L	BASELINE
BOL	Beginning Of Life
BOM	Beginning Of Mission
BOS	Bright-Object Sensor
BP	BASEPLATE
BPA	Bus Protection Assembly
BPI	Bits Per Inch
BPS	Bits Per Second
BRF	Band Reject Filter
BTCE	Bench Test And Calibration Equipment
BTE	Bench Test Equipment
BTU	Bus Terminal Unit
B/U	Back Up
CAD	Computer Aided Design
CAL	Configured Articles List
CAL	Calibration
CAM	Cost Account Manager
CAP	Crew Activity Plan
CAP	Command Acceptance Pattern
CARD	Capability And Requirements Document
CAS	Calibrated Ancillary System
CAT	Catalog Services

ACRONYMS

CBX	Computerized Branch Exchange
CCAFS	Cape Canaveral Air Force Station
CCB	Configuration Control Board
CCBD	Configuration Control Board Directive
CCD	Charge Coupled Device
CCDID	CDHF Correlative Data Interface Description
C&DH	Command And Data Handling
CCE	Capacitively Controlled Etalon (HRDI)
CCOM	Control Center Operations Manager
CCP	Contamination Control Plan
CCR	Configuration Change Request
CCSM	Control Center System Manager
CCT	Computer Compatible Tape
CCTV	Closed Circuit Television
CD	Classification Of Defects
CDB	Correlative Data Basis
CDHF	Central Data Handling Facility
CDL	Controlled Document List
CDR	Commander
CDR	Critical Design Review
CDRL	Contract Data Requirement List
CDSC	Communications Distribution And Switching Center
CE	Communications Engineer
CEI	Contract End Item
CEP	Central Electronics Package (PEM)
CFE	Contractor Furnished Equipment
CG	Center Of Gravity
CGG	Command Generation Group
CGP	Central Ground Point
CGS	Cold Gas System
CI	Configuration Item
CIL	Critical Item List
CIR	Cargo Integration Review
CITE	Cargo Integration Test Equipment
CIU	Communications Interface Unit
CLS	Contingency Landing Site
CLAES	Cryogenic Limb Array Etalon Spectrometer
CLK	Clock
CM	Center Of Mass
CM	Centimeter
CM	Configuration Management
CMD	Command
CMF	Command Management Facility
CMO	Configuration Management Office/Officer
CMP	Configuration Management Plan

ACRONYMS

CMS	Command Management System
CMSA	Command Management System Analyst
CNES	Centre National D'estudes Spatiales (FRANCE)
CNRS	Centre National D'researche Spatiales
CNS	Computer Network Subsystem
CO	Contracting Officer
C/O	Checkout
COBE	Cosmic background Explorer
CP	Center Of Pressure
CPU	Central Processing Unit
CR	Change Request
CRT	Cathode Ray Tube
CS	Conducted Susceptibility
CSA	Configuration Status Accounting
CSC	Computer Sciences Corporation
CSCI	Computer Software Configuration Item
CSS	Coarse Sun Sensor
C/T	Command And Telemetry
CTV	Compatibility Test Van
CU	Central Unit
CU	Control Unit
CW	Counterweight
CWA	Clean Work Area
CY	Calendar Year
D	Day
D2	Deuterium
D2PS	D2 Lamp Power Supply
DAC	Direct Access Channel
DAP	Daily Activity Plan
DAU	Data Acquisition Unit
DB	Decible
DB	DEADBAND
DB	DATABASE
DBCR	DATABASE Change Request
DBMS	DATABASE Management System
DC	Direct Current
DCC	Document Control Center
DCF	Data Capture Facility
DCL	Digital Command Language
DCN	Document Change Notice
DCR	Data Change Request
DEB	Detector Electronics Box
DEC	Digital Equipment Corporation
DECnet	DEC Network
DEG	Degree

DEL	Data Evaluation Laboratory
DEMUX	Demultiplexer
DEP	Dedicated Experiment Processor
DFCD	Data Format Control Document
DFL	Decom Format Load
DGP	Display Definition Generation Process
DID	Data Item Description
DIH	Discrete Input High
DIL	Discrete Input Low
D/L	DOWNLIST
DLC	Design Load Cycle
DM	Data Management
DMA	Direct Memory Access
DML	Display Macro Language (Display Services)
DMS	Data Management System
DOCS	Data Operations Control System
DOD	Department Of Defense
DOH	Discrete Output High
DOL	Discrete Output Low
DOP	Daily Operations Plan
DPCs	Direct Power Converters
DPE	Data Processing Engineer
DRIRU	Dry Inertial Reference Unit
DRL	Data Requirements List
DRV	Drive Electronics Box
DSF	Data System Facility
DSM	Data Systems Manager
DSP	Display Services
DSWG	Data Systems Working Group
DWG	Drawing
EAGE	Electrical Aerospace Ground Equipment
ECN	Engineering Change Notice
ECO	Engineering Change Order
ECP	Engineering Change Proposal
EED	Electro Explosive Device
EGSE	Electrical Ground Support Equipment
EICD	Electrical Interface Control Drawing
ELV	Expendable Launch Vehicle
EM	Engineering Model
EMAF	Engineering Major Frame
EMC	Electromagnetic Compatibility
EMI	Electromagnetic Interference
EMIF	Engineering Minor Frame
EMU	Extravehicular Mobility Unit
ENA/DISA	Enable/Disable

ENT	Entry
EO	Engineering Order
EOL	End Of Life
EOM	End Of Mission
EPROM	Electronically Programmable Read-Only Memory (HRDI)
ESAM	Earth Sensor Assembly Module
ESD	Electrostatic Discharge
ESE	Earth Sensor Electronics
ESMC	Eastern Space And Missile Center
ESS	Earth Sensor Scanner
ETR	Eastern Test Range
EU	Electronics Unit
EU	Engineering Unit
EU	Expander Unit
EUP	Engineering Unit Print
EV	Electron Volt
EV	Extravehicular
EVA	Extra Vehicular Activity
EVCF	Eastern Vehicle Checkout Facility (CCAFS)
EXP	Experiment
FAB	Fabrication
FAM	Flight Assurance Manager
FAX	Facsimile
FCI	Functional Configuration Item
FCS	Flight Control System
FDA	Fault Detection And Annunciation
FDC	Failure Detection And Correction
FDD	Flight Dynamics Division
FDF	Flight Data File
FDF	Flight Dynamics Facility
FDS	Flight Dynamics System
FED-STD	Federal Standard
FEM	Finite Element Model
FFT	Full Functional Test
FHST	Fixed-Head Star Tracker
FLT	Flight
FM	Flight Model
FMD	Financial Management Division
FMECA	Failure Mode Effects And Criticality Analysis
FMT	Format
F/O	Fiber Optics
FOP	Flight Operations Plan
FOR	Flight Operations Review
FOSA	Flight Operations Support Annex (PIP ANNEX 2)
FOSP	Flight Operations Support Personnel

FOT	Flight Operations Team
FOV	Field-Of-View
FP	Fixed Point
FPA	Flight Planning Annex (Pip Annex 2)
FPC	Fundamental Plane Coordinate
FRB	Flight Review Board
FRD	Flight Requirements Document
FRR	Flight Readiness Review
FS	Flight Segment
FSC	Fairchild Space Corporation
FSCM	Federal Supplier Code For Manufacturers
FSEC	Fairchild Space Corporation
FSS	Fine Sun Sensor
FSS	Flight Support System
FT	Foot, Feet
FTS	Federal Telephone System
FWD	Forward
FY	Fiscal Year
G	Acceleration Of Gravity
G	Gram
GB	Gigabyte
GD	Ground
GDE	Gimbal Drive Electronics
GDPDD	Ground Data Processing Description Document
GE	General Electric
GEA	Gimbal Electronics Assembly (HALOE)
GEM	Ground-Equipment Model
GFAS	Grapple Fixture Axis System
GFE	Government Furnished Equipment
GFI	Government Furnished Information
GFP	Government Furnished Property
GG	Gravity Gradient
GH2	Gaseous Hydrogen
GHz	Gigahertz
GIIS	General Instrument Interface Specification
GMAN	General Maneuver Program
GMAS	GSFC Mission Analysis System
GMI	Goddard Management Instruction
GMT	Greenwich Mean Time
GN	Ground Network
GNC	Guidance, Navigation And Control
GND	Ground
GPC	General Purpose Computer
GPE	Ground Processing Equipment
GPI	Gridding PI

GPM	Generalized Payload Model
GPS	Global Positioning System
GR/EP	Graphite/Epoxy
GRO	Gamma Ray Observatory
GS	Ground Station
GSE	Ground Support Equipment
GSFC	Goddard Space Flight Center
GSS	Ground Support System
GSSS	Ground Support System Software
GSTDN	Ground Spaceflight Tracking And Data Network
H2	Hydrogen
HALOE	Halogen Occultation Experiment
HD	Horizon Detector
HDDR	High Density Digital Recorder
HDT	High Density Tape
He	Helium
HEPS	High Energy Particle Spectrometer
HGA	High Gain Antenna
HGAS	High Gain Antenna System
H/L	Hardline
H/L	Hydrazine Line
HQ	Headquarters (NASA)
HR	High Resolution (HRDI)
HR	Hour(s)
HRDI	High Resolution Doppler Imager
HRM	High Rate Multiplexer
HRS	Hours
HSD	High-Speed Device
HTR	Heater
HV	High Voltage
HVPS	High Voltage Power Supply
HVU	High Voltage Unit (PEM)
H/W	Hardware
Hz	Hertz (Cycle Per Second)
IAD	Interface Agreement Document
IBM	International Business Machines
IBRC	Instrument Boresight Reference Cube
ICD	Interface Control Document
ICWG	Interface Control Working Group
ID	Identification
IDL	Indentured Drawing List
IF	Intermediate Frequency
I/F	Interface
IFD	In Flight Disconnect
IFOU	Instrument Flight Operations Understanding

ACRONYMS

IFOV	Instantaneous Field Of View
IGSE	Instrument Ground Support Equipment
ILOS	Instrument Line-of-Sight
IM	Instrument Module
IMSU	Instrument Module Support Unit
IN	Inertial Coordinate System
INST	Instrument
I/O	Input/Output
IPC	Instrument Protective Cover
IPD	Information Processing Division
IPDS	Independent Payload Data Stream
IPS	Instrument Pointing System
IR	Infrared
IRD	Interface Requirements Document
IRN	Interface Revision Notice
IRU	Inertial Reference Unit
ISAMS	Improved Stratospheric And Mesospheric Sounder
ISB	Instrument Support Bench
ISO	International Standards Organization
ISS	Instrument Support System
ISU	Instrument Sensor Unit
I&T	Integation And Test
ITP	Integrated Test Plan
ITSS	Integration & Test Software System
IV	Intervehicular
IVT	Interface Verification Tape
JPL	Jet Propulsion Laboratory
JSC	Johnson Space Center
K	Kelvin
KBPS	Kilobits Per Second
KCRT	Keyboard Cathode-Ray Tube
KG	Kilogram
KM	Kilometer
KSC	Kennedy Space Center
KSCLASP	KSC Launch Site Facility Plan
KW	Kilowatt
LAAM	Limb Acquisition And Adjustment Mirror
LAN	Local Area Network
LANDSAT	Land Monitoring Satellite
LaRC	Langley Research Center
LASP	Laboratory For Atmospheric & Space Physics (UNIV. OF COLORADO)
LAT	Latitude
lb	POUND
LCC	Launch Control Center (KSC)
LCR	Launch Control Room

LEP	Low Energy Proton (Spectrometer)
LH2	Liquid Hydrogen
LHe	Liquid Helium
LIMS	Limb Infrared Monitoring Of The Stratosphere
L&L	Launch And Landing
LMSC	Lockheed Missiles And Space Company
LN2	Liquid Nitrogen
LOA	Letter Of Agreement
LOF	Local Oscillator Frequency
LONG	Longitude
LOS	Line Of Sight
LOT	Loss Of Target
LPARL	Lockheed Palo Alto Research Laboratory
LPS	Launch Porcessing System
LR	Low Resolution (HRDI)
LSB	Least Significant Bit
LSMC	Lockheed Space And Mission Corporation
LSR	Launch Support Room
LSSM	Launch Site Support Manager
LTM	Load Transformation Matrix
LTSP	Long-Term Science Plan
LV	Local Vertical Coordinate System
LVLH	Local Vertical/Local Horizontal
LZPS	Level Zero Processing System
M	Meter
MA	Milliampere
M/A	Multiple Access
MACS	MMS Attitude Control Subsystem
MACS	Module Attitude Control Subsystem
MAG	Triaxial Magnetometer (Pem)
MAGE	Mechanical Aerospace Ground Equipment
MAR	Maintenance Activity Report
MB	Megabyte
MCC	Mission Control Center
MCTF	Mission Contractor Test Facility
MDB	Multiplex Data Bus
MDC	Mission Director's Center
M&DOD	Mission And Data Operations Directorate
MDF	Manipulation Development Facility
MDM	Multiplexer-Demultiplexer Module
MEB	Main Electronics Box
MECO	Main Engine Cutoff
MEPS	Medium Energy Particle Spectrometer
MET	Mission Elapsed Time
METS	Mobile Environmental Transport Structure

ACRONYMS

MFT	Multi-File Transfer
MGSE	Mechanical Ground Support Equipment
MHz	Megahertz
MICD	Mechanical Interface Control Document
MI.	Mile
MI/ITE	Michaelson Interferometer/Inner Thermal Enclosure (WINDII)
MIL-SPEC	Military Specification
MIL-STD	Military Standard
MIN	Minute
MIPS	Million Instructions Per Second
MIS	Management Information System
MLI	Multilayer Insulation
MLP	Multi-Purpose Launch Platform
MLS	Microwave Limb Sounder
MM	Millimeter
MMS	Multimission Modular Spacecraft
MMU	Manned Maneuvering Unit
MNET	Mission Operations & Data Systems Directorate Network
MNVR	Maneuver
MO	Mission Of Opportunity
MO	Month
M/O	Maintenance And Operations
MO&DSD	Mission Operations And Data Systems Directorate
MOD	Mission Operations Division
MODLAN	Mission Operations Division Local Area Network
MODNET	MO&DSD Operations Development Network
MO&DSD	Mission Operations And Data Systems Directorate
MOI	Moment Of Inertia
MOM	Mission Operations Manager
MOP	Mission Operations Plan
MOR	Mission Operations Room
MOS	Margins Of Safety
MOU	Memorandum Of Understanding
MPCs	Uase Main Power Converters
MPF	Multipurpose Fixture
MPG	Mission Planning Group
MPS	Modular Power Subsystem
MPSR	Multipurpose Support Room
MPSS	Mission Planning And Science Scheduling
MPT	Mission Planning Terminal
MR	Master. Reference
MR	Medium Resolution (HRDI)
MR	Malfunction Report
MRB	Material Review Board
MRC	Master Reference Cube

ACRONYMS

MRM	Mission Readiness Manager
MS	Margins Of Safety
MS	Millisecond
MSB	Most Signification Bit
MSFC	Marshall Space Flight Center
MSID	Measurement/Stimulus Identification
MSOCC	Multisatellite Operations Control Center
MSR	Monthly Status Report
MSS	Module Support Structure/System
MSS	Mass Storage System
MTM	Mechanical Thermal Model
MTM	Mechanical Test Model
MTR	Magnetic Torquer System
MTR	Motor
MTTF	Magnetic Tape Test Facility
MTU	Magnetic Tape Unit
MU	Mission Unique
M/U	Mock Up
MUX	Multiplexer
MWS	Mini Work Station
MY	Man Year
M50	Mean Of 1950
N	Newton
N	Night
N2	Purified And Filtered Gaseous Nitrogen
N/A	Not Applicable
NAS	National Aerospace Standard
NASA	National Aerospace And Space Administration
NASCOM	Nasa Communication Network
NASTRAN	Nasa Structural Analysis
NBS	National Bureau Of Standards
NBTR	Narrow Band Tape Recorder
NCAR	National Center For Atmospheric Research
NCC	Network Control Center
NCR	Non-Conformance Report
ND	Networks Directorate
NDE	None Destructive Evaluation
NDPR	Nasa/Dod Purchase Request
NEI	Nonexplosive Initiator
NEPS	Nadir Energetic Particle System (Pem)
NGT	Nasa Ground Terminal
NHB	Nasa Handbook
NIE	Neps Interface Electronics (Pem)
NIST	National Institute Of Standards & Technology
NM	Nanometers

NMC	National Meteorological Center
NMEPS	Nadir Medium Energy Particle Spectrometer
NMI	Nasa Management Instruction
NMI	Nautical Mile
NMOS	Network & Mission Operations Support
NOA	New Obligation Authority
NOAA	National Oceanic And Atmospheric Administration
NonLTE	Non Local-Thermodynamic-Equilibrium
NOR	Notice Of Revision
N/R	Not Required
NRL	Naval Research Laboratory
NRT	Near Real-Time
NRZL	Non Return To Zero Level
NRZM	Non Return To Zero Mark
NRZS	Non Return To Zero Space
NSI	Nasa Standard Initiator
NSP	Nasa Support Plan
NSPAR	Non-Standard Parts Approval Request
NSSDC	National Space Sciences Data Center
NSS	Network Simulation System
NSSC	Nasa Standard Spacecraft Computer
NSTS	National Space Transportation System
NTOM	Networks Technical And Operations Manager
NTTF	Network Test And Training Facility
O/A	Orbit And Attitude
OAD	Ordinance Activated Device
OAF	Optical Alignment Facility
OAS	Orbit/Attitude Services
OBC	On-Board Computer
OBLOG	Observatory Log
OBP	On-Board Processor
OBS	Observatory
OCC	Operations Control Center
OD	Orbital Downlink
ODM	Operations Data Message
ODN	Operational Device Network
ODT	Orbit/Attitude Data Transfer
OGSE	Optical Ground Support Equipment
OIB	Orbiter Interface Box
OLCAS	On-line Cost Accrual System
OMF	Operational MACS Frame
OMNI	Omni Antenna
OMS	Orbiter Maneuvering System
OOPS	On-line Operating Plan System
OPF	Orbiter Processing Facility

ACRONYMS

OPR	Operations Readiness
OPSCON	Operations Control
OSCF	Operations Support Computing Facility
OSI	Open System Interconnection
OSR	operation support run-time (display services)
OSRS	Orbiter Structural Reference System
OSSA	Office Of Space Science And Applications
PA	Principle Axis
P/B	Playback
PAD	Pulse Amplifier Discriminator
PAIP	Performance Assurance Implementation Plan
PAM	Payload Assist Module
PAR	Performance Assurance Requirements
PAS	Payload Axis System
PASS	Pocc Applications Software Support
PATC	Pyro Actuator Test Console
PC	Personal Computer
PCAP	Payload Crew Activity Plan
PCD	Poc Capabilities Document
PCI	Product Configuration Item
PCM	Pulse Code Modulation
PCMB	Project Configuration Management Board
PCN	Project Control Number
PCR	Payload Changeout Room
PCU	Power Converter/Control Unit
PD	Program Directive
PDA	Payload Disconnect Assembly
PDB	Predefined Block
PDF	Programmable Data Formatter
PDI	Payload Data Interleaver
PDIS	Payload Data Interleaver Serializer
PDL	Programming Design Language
PDMP	Project Data Management Plan
PDR	Power Disconnect Relay
PDR	Preliminary Design Review
PDS	Power Distribution System
PDSU	Power Distribution Switching Unit
PDT	Payload Data Tape
PDU	Power Distribution Unit
PEA	Platform Electronics Assembly (Haloe)
PEM	Particle Environment Monitor
PER	Pre-Environment Review
PERT	Program Evaluation Review Technique
PET	Phase Elapsed Time
PETS	Payload Environmental Transportation System

PF	Post Flight
P/F	Protoflight
PFD	Pre-Flight Disconnect
PFM	Protoflight Model
PER	Portable Foot Restraint
PGHM	Payload Ground Handling Mechanism
PHSF	Payload Hazard Servicing Facility
PI	Payload Interrogator (sts)
PI	Principal Investigator
PIM	Payload Integation Manager
PIP	Payload Integration Plan
PIR	Program Information Request
P/L	Payload
PL	Parts List
PLB	Payload Bay
PLBD	Payload Bay Doors
PLC	Preliminary Load Cycle
PM	Phase Modulator
PM	Project Manager
PM	Propulsion Module
PMC	Pressure Modulator Cell
PMP	Pre-Modulator Processor
PMR	Project Management Report
PMS	Performance Measurement System
PMT	Photomultiplier Tube
PN	Pseudonoise
POCC	Project Operations Control Center
POP	Project Operating Plan
PPCR	Page/Processor Change Request
PPF	Payload Parameter Frame
PPL	Preferred Parts List
PPM	Parts Per Million
PPP	Payload Positioning Platform
PPS	Programmable Power Supply
PR	Procurement Request
PR	Problem Report
P&R	Primary And Redundant
PRCC	Primary Reaction Control Center
PRD	Program Requirements Document
PRLA	Payload Retention Latch Assembly
PRN	Pseudo-Random Noise
PRM	Pyro Repeater Module
PROM	Programmable Read-Only Memory
PRP	Payload Retention Panel
PRP	Program Response Plan (Ksc)

ACRONYMS

PRS	Power Regulator System
PRU	Power Regulator Unit
PS	Payload Specialist
PS	Power Supply
PSCN	Program Support Communications Network
PSI	Pounds Per Square Inch
PSIA	Pounds Per Square Inch Absolute
PSP	Payload Signal Processor
PSR	Per Ship Review
PSR	Project Status Review
PSS	Platform Sun Sensor
PSS	Portable Simulation System .
PSU	Power Switching Unit
PTD	Payload Test Director
PWR	Power
PYRO	Pyrotechnics
PZT	Piezoelectri Transducer (Hrdi)
QA	Quality Assurance
QC	Quality Control
QCM	Quartz Crystal Microbalance
QBF	Query By Forms
QL	Quicl-Look
RAC	Remote Analysis Computer
RAD	Radian
RAM	Random Access Memory
RBF	Report By Forms
RCP/RHCP	Right-Hand Circularly Polarized
RCS	Reaction Control System
RCV	Receive
R&D	Research & Development
RDE	Remote Digital Electronics Box
RF	Radio Frequency
RFI	Radio Frequency Interference
RFIB	Radio Frequency Interface Box
RFP	Request For Proposal
RGA	Residual Gas Analyzer
RIU	Remote Interface Unit
RMS	Remote Manipulator System
ROFU	Remotely-Operated Electrical Umbilical
ROFU	Remotely Operated Fluid Umbilical
ROM	Read Only Memory
ROT	Rotation
RPT	Report Services
RPU	Remote Power Unit
RSE	Receiving Site Equipment

RSS	Root Sum Square
RT	Real Time
RT	Remote Terminal
RTC	Relative Time Clock
RTCP	Real-Time Command Processor
RTS	Relative Time Sequence
RUPS	Recorder/Utility Processor/Simulator
S/A	Solar Array
SAA	South Atlantic Anomaly
SAD	Solar Array Drive
SADAPTA	Solar Array Drive And Power Transfer Assy
SADDE	Solar Array Drive And Deployment Electronics
SADFDC	Solar Array Drive Failure Detection And Correction
SAM	System Activity Monitor (display services)
SARA	Solar Array Retention Assembly
SARD	Software Assurance Recommendations Document
SARDJA	Solar Array Retention, Deployment And Jettison Assembly
SARR	Solar Array Restraint Rope
SAS	Solar Array System
SASS	Solar Array Support Structure
SBUV	Solar Backscattered Ultraviolet Spectral Radiometer
S/C	Spacecraft
SCA	Signal Conditioning Assembly
SCAMA	Switching, Conferencing, And Monitoring Arrangement
SC&CU	Signal Conditioning And Control Unit
SCD	Specification Control Drawing
SCDP	Safety Compliance Data Unit
SCIU	Spacecraft Interface Unit
SCN	Specification Change Notice
SCP	Stored Command Processor
SCR	System Concept Review
SCUC	Spacecraft Umbilical Console
SDD	Software Design Document
SDP	Software Development Plan
SDPF	Sensor Data Processing Facility
SDR	Software Discrepancy Report
SDR	System Design Review
SDVF	Software Development And Validation Facility
SE	Support Equipment
S,SEC	Second
SES	Space Environment Simulation
SH2	Solid Hydrogen
SI	Science Instrument
SIDS	Simulated Instrument Data Set
SIP	Systems Implementation Plan

ACRONYMS

SIRD	Support Instrumentation And Requirements Documents
SISA	Susim Instrument Sensor Assembly
SLF	Shuttle Landing Facility
SLS	Secondary Landing Site
SM	System Manager
SMA	S-band, Multiple Access
SMAF	Science Major Frame
SMC	Serial Magnitude Command
SMIF	Science Minor Frame
SMM	Surface Math Model
SMO	Systems Management Office
SMS	Shuttle Mission Simulator
SN	Space Network
S/N	Serial Number
S/N SNR	Signal To Noise Ratio
SOLSTICE	Solar-Stellar Irradiance Comparison Experiment
SORD	Systems And Operations Requirements Document
SOW	Statement Of Work
SPEC	Specification
SPH	Special Purpose Hardware
SPIDPO	Shuttle Payload Integration And Development Program Office
SPIF	Shuttle/Pocc Interface Facility
SPRU	Standard Power Regulator Unit
SPSS	Science Processing S/W System
SQL	Structured Query Language
SRAM	Static Random Access Memory (Hrdi)
SRD	Software Requirements Document
SRR	Software Specification Review
SRW	Standard Reaction Wheel
S/S	Subsystem
SSA	S-Band Single Access
SSAI	Science Systems Applications. Inc
S,SEC	Second
SSI	Standard Serial Interface
SSPP	Solar Stellar Pointing Platform
SSR	Specific Schedule Request
SST	Stainless Steel
ST	Space Telescope
STA	Station
STACC	Standard Telemetry And Command Components
STACC-CU	Standard Telemetry And Command Components Central Unit
STDN	Spaceflight Tracking And Data Network
STGT	Second TDRSS Ground Terminal
STINT	Standard Computer Interface Unit
STOL	System Test And Operations Language

ACRONYMS

STR	Standard Tape Recorder
STS	Space Transportation System
SURF	Synchrotron Ultraviolet Radiation Facility
SUSIM	Solar Ultraviolet Spectral Irradiance Monitor
SVS	Space Vehicle Specification (Ge)
SW	Switch
S/W	Software
SWG	Science Working Group
SwRI	Southwest Research Institute
SYNC	Synchronization
TA	Task Assignment
TAC	Telemetry And Command
TAGS	Text And Graphics Subsystem
TAM	Three-Axis Magnemeter
TB	Thermal Balance
TBD	To Be Determined
TBR	To Be Resolved
TBS	To Be Supplied
TCE	Thermal Control Electronics
TCG	Time Code Generator
TCP/IP	Transmission Control Protocol/Internet Protocol
TCS	Thermal Control System
TD	Technical Direction/Directive
TDM	Time Division Multiplexed
TDM	Tracking Data Message
TDR	Test Discrepancy Report
TDRS	Tracking Data Relay Satellite
TDRSS	Tracking Data Relay Satellite System
TE	Thermal Electric
TGS	Transportable Ground Station
THC	Thermal Control
TI	Theoretical Investigator
TICD	Thermal Interface Control Document
TIM	Technical Interface Meeting
TIM	Technical Instrument Model
TIMD	Thermal Interface Model Document
TIP	Telemetry Interface Processor
TIPIT	TDRSS Input Preprocessor Into Telops
TLM	Telemetry
T/M	Talk/Monitor
TM	Technical Manual
TM&A	Temperature Monitor And Alarm Unit
TMM	Thermal Math Model
TMON	Telemetry Monitor
TN	TDRSS Network

ACRONYMS

TO	Technical Officer/Order
TP	Telemetry Processor
TQCM	Temperature Controlled Quartz Crystal Microbalance
TR	Tape Recorder
TRR	Test Readiness Review
TSO	Time Sharing Option
TTT	Transit Tolerance Tests
TTY	Teletype
TV	Television
T/V	Thermal Vacuum
TX	Transmit
UARS	Upper Atmosphere Research Satellite
UARSFS	UARS Flight Software
UASE	UARS Airborne Support Equipment
UASEAS	UASE Axis System
UASEE	UASE Electronics
UCAS	UARS CDHF Applications Software
UCB	Umbilical Vent Connection Drive Box
UCSS	UARS CDHF Software System
UIAD	Unique Interface Agreement Document
UK	United Kingdom
UKMO	United Kingdom Meteorological Office
UMA	Unified Mission Adapter
UOAS	UARS Orbit Attitude Software
UPN	Unique Project Number
UPS	Uninteruptable Power Supply
UT	Universal Time
UTC	Universal Time Coordinated
UTS	UARS Training Simulator
UTTS	UARS Test And Training Simulator
UV	Ultraviolet
V	Volts
V/T	Vacuum Thermal
VAB	Vertical Assembly Building
VAX	DEC's Virtual Address Extension Family Of Computers
VCB	Vent Connection Drive Box
VDC	Volts Direct Current
VPF	Vertical Payload Facility
VDM	Vent Disconnect Mechanism
VDS	Vent Disconnect System
VERN	Vernier Jets
VIP	Visual Interface Processor
VIU	Vax Interface Unit
VLC	Verification Load Cycle
VME	Vector Management Electronics (Pem)

ACRONYMS

VMS	Vector Magnetometer Sensor
VMS	Virtual Memory System
VPF	Vertical Processing Facility
VPR	Vertical Payload Facility
VRCS	Vernier Reaction Control System
VT	Voltage-Temperature
VTM	Vibration Test Model
VTR	Video Tape Recorder
V/V	Verification And Validation
W	Watts
WAN	Wide-Area Network
WBS	Work Breakdown Structure
WETF	Weightless Environment Test/Training Facility
WILCO	Will Comply
WINDII	Wind Imaging Interferometer
WINTERS	Wind And Temperature By Remote Sensing
WOA	Work Order Authorization
WSGT	White Sands Ground Terminal
WSS	Work Station Stanchion
WTR	Western Test Range
XMTR	Transmitter
XPNDR	Transponder
ZEPS	Zenith Energetic Particle System
ZIE	Zeps Interface Electronics
ZOE	Zone Of Exclusion
ZMEPS	Zenith Meps

GLOSSARY

alert. An indication to the operator that some process on the UCSS requires his/her attention. Alerts are listed on the system processing list controlled by the display services.

automatic scheduling. The process by which production jobs are scheduled based on a pre-defined set of job parameters.

catalog or data catalog. a directory system which provides a set of descriptive data concerning each data file under its domain.

control point. An internal name representing a point in the screen definitions marking the start of a collection of displays. The user can refer to control points by name or number. Control points are used in the UCSS as menu selections. Control points are "jump-to" points in the control logic of the display services.

Cpoint. A control point. See the discussion on the OSR in Appendix B.

dbms. Data base management system. On the UCSS this refers to the use of INGRES for managing data tables.

destaging. The process of moving files from the UCSS controlled disk space to the MSS.

display. A related set of information that is represented on one or more screens or display pages. The various pages of a display may be viewed by scrolling through them, one page at a time.

display macro language (DML). A special language for the display services that defines the screen layouts, contents, and control.

log or uars log. A list of text messages documenting the occurrence of events or errors under control of the UCSS.

manual scheduling. The process by which the operator schedules one or more production jobs. Setup information is provided through prompting screens.

Mass Storage Subsystem. A separate online storage facility for storing large quantities of data files.

message line. That portion of a display screen controlled by the display services that is used for status messages.

1

GLOSSARY

online status. Code indicating the state of a cataloged file being online. The possible states as of this writing are:

        1 - Online
        2 - Offline
        3 - Staging in progress
        4 - Destaging in progress
        0 - marked for destaging

page of a display. The data viewable on one screen image.

processing list. A file in the UCSS that the operations staff reviews that contains a list of alerts.

proxy account. An account set up on each RAC so that the CDHF account CDHF_FILES can perform data transfers to and from that account by only specifying node name.

quicklook number. A selector for the quicklook data set within a given uars day.

scheduling. The process of setting up to initiate a program or set of programs under the control of a command procedure.

scientific user. Principal Investigator, Collaborative Investigator, Theoretical Investigator or the associated staff who will use the UCSS.

screen. The viewing area of a CRT; i.e., that image visible to the user at one time on the CRT. A screen consists of 22 lines containing 80 characters of information. A screen is sometimes referred to as a page of a display.

sequential display. a display whose data is gathered at one time and then presented on the screen.

staging. The moving of files from the MSS to the UCSS controlled disk space/

system space. See UCSS-managed disk space.

uars log or log. A list of text messages documenting the occurrence of events or errors under control of the UCSS.

UCSS-managed disk space. That set of disks, directories, and/or files that are under the control of the UCSS. Aliases for this include: system space, user-controlled disk space.

updating display. A display whose data is updated at a pre-defined interval without intervention by the user or operator.

GLOSSARY

user. Principal Investigator, Collaborative Investigator, Theoretical Investigator or the associated staff who will use the UCSS.

user area. See user-managed disk space.

user-managed disk space. That set of disks, directories, and/or files that are under control of the user community. Aliases for this include: user area, user-controlled disk space.

virtual file. A file which is logically constructed from portions of one or more other files for Level 0 or Level 3 data.

REFERENCES

1. Upper Atmosphere Research Satellite (UARS) Ground Data Processing Capability and Requirements Document (CARD), DRAFT, 430-1401-001, November 13, 1986.

2. Upper Atmosphere Research Satellite (UARS) Programmer's Guide for Production Software Support Services, CSC/SD-86/6704UD4, July 1991.

3. Upper Atmoshpere Research Satellite (UARS) Central Data Handling Facility (CDHF) Data Base Administrator's Guide, CSC/SD-89/6046, July 1991.

4. Introduction to VMS, Digital Equipment Corporation, AA-LAB4A-TE, vms 5.0, April 1988.

5. VAX/VMS DCL Concepts Manual, Digital Equipment Corporation, AA-LA10A-TE, VMS 5.0, April 1988.

6. Upper Atmosphere Research Satellite (UARS) Central Data Handling Facility (CDHF) Operations Guide, CSC/SD-87/6745UD6.