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# CSDS User Interface ISDAT 2.2 Release Note

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# 1 Introduction

## 1.1 Scope of this document

This document describes the *ISDAT 2.2, Release 4* deliverables from IRF-U to ESRIN pertinent to contract ESRIN No. 10855/94/I-GP, CCN No. 95001 within the CSDS User Interface Project.

## 1.2 Acronyms and abbreviations

Acronyms and abbreviations are explained in Table 1.

Acronym	Meaning
AT	Acceptance Test
CCN	Contract Change Notice
CDF	Common Data Format
CSDS	Cluster Science data System
ESRIN	European Space Research Institute
IDL	Interactive Data Language
IRF-U	Institutet för Rymdfysik, Uppsalaavdelningen Swedish Inst. of Space Phys., Uppsala Division
ISDAT	Interactive Science Data Analysis Tool
NDC	National Data Centre
PS	PostScript
SPR	Software Problem Report
SVVP	Software Verification and Validation Plan
UI	User Interface
WEC	Wave Experiment Consortium

Table 1: Acronyms and abbreviations

## 1.3 Related documents

Some of the CSDS ISDAT 2.2 documents make reference to documents developed within the Cluster WEC data system working group activity. The WEC documents are not a part of this delivery, but they are made available on the ESRIN ftp server for reference. The documents in question are:

1. A description of the ISDAT 2.2 data structure [Ref. 17] stored as file *cwd-obspm-dd-001.ps* in directory *irfu/docs*.
2. A description of joining mechanisms [Ref. 1] stored as file *cwd-obspm-tn-0001.ps* in directory *irfu/docs*.

## 1.4 Formats of the delivery

In accordance with previous deliveries by IRF-U within the CSDS User Interface project, no hard products are delivered. All items are delivered on the ESRIN ftp server. The following formats are used:

- Documents are delivered in Postscript format and in some cases also in compressed (zip) Postscript format. To de-compress them: use *unzip file.zip*
- Source code and test files are delivered as *archive* files (tar) that are compressed (gz). To un-compress them use *gunzip file.tar.gz*. To un-pack the un-compressed file do: *tar -xvf file.tar*.

## 2 Deliverables

The complete CSDS-UI ISDAT 2.2 delivery includes of the following items:

**Item 1** Architectural Design Document, see section 3.1, page 2.

**Item 2** Detailed Design Document, see section 3.2, page 2.

**Item 3** Software Verification and Validation Plan / Acceptance Test Procedure, see section 3.3, page 3.

**Item 4** Software Installation Manual, see section 3.4, page 3.

**Item 5** User Manuals, see section 3.5, page 3.

**Item 6** ISDAT 2.2 software, see section 3.6, page 4.

## 3 Release Notes

### 3.1 Item 1: Architectural Design Document

The CSDS ISDAT 2.2 Architectural Design Document [Ref. 3] is delivered as Postscript formatted files *ds-irf-ad-001\_21t.ps* and *ds-irf-ad-001\_21a.ps* on the ESRIN CSDS project ftp server under directory irfu/docs. The complete document is also available in compressed form (zip) in file *ds-irf-ad-001\_21.zip*. The relevant version is Issue 2, revision 1, dated 14 October 1995. The document has been slightly updated since the delivery 29 September 1995.

### 3.2 Item 2: Detailed Design Document

The CSDS ISDAT 2.2 Detailed Design Document [Ref. 4] is delivered as a Postscript formatted file *ds-irf-dd-0001\_20.ps*. on the ESRIN CSDS project ftp server under directory irfu/docs. The complete document is also available in compressed form in file

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*ds-irf-dd-0001\_20.zip*. The relevant version is Issue 2, revision 0. The document has not been changed since the partial delivery 29 September 1995.

### 3.3 Item 3: SVVP/AT

#### 3.3.1 Test Plan

The CSDS ISDAT 2.2 Software Verification and Validation Plan [Ref. 6] is delivered as a Postscript formatted file *ds-irf-tp-0001.ps* on the ESRIN CSDS project ftp server under directory *irfu/docs*. The relevant version is Issue 2, revision 1. The AT has been slightly updated since the partial delivery 29 September 1995.

#### 3.3.2 Test procedures

Acceptance test procedures are delivered in an archive, compressed file *test\_proc.tar.gz* under directory *irfu/R4* of the ESRIN ftp server. A list of files contained in the file is given in Appendix A.

#### 3.3.3 Test input CDF files

A set of CDF files, needed for the tests, is provided in file *test\_data.tar.gz* in directory *irfu/R4* of the ESRIN ftp server. A list of the test data files is provided in Appendix B. All AT input CDF files originate at ESRIN.

### 3.4 Item 4: Software Installation Manual

The CSDS ISDAT 2.2 Installation Manual [Ref. 5] is delivered as a Postscript formatted file *ds-irf-im-0001\_21.ps* on the ESRIN CSDS project ftp server under directory *irfu/docs*. The relevant version is Issue 2, revision 1.

### 3.5 Item 5: Software User Manual

The software user manuals consist of one cover document and one document for each ISDAT client as well as one separate document for the ISDAT server. The documents were delivered as issue 2.0 September 29. Some of user manuals have been updated since then. The following documents are included:

1. The overall CSDS ISDAT 2.2 user manual [Ref. 7] delivered as file *ds-irf-um-0001\_21.ps*, Issue 2, revision 1.
2. The CSDS ISDAT 2.2 server manual [Ref. 8] delivered as file *ds-irf-um-0002\_20.ps*, Issue 2, revision 0

3. The CSDS ISDAT 2.2 cuigr manual [Ref. 9] delivered as file *ds-irf-um-0003\_21.ps*, Issue 2, revision 1.
4. The CSDS ISDAT 2.2 cuitm manual [Ref. 10] delivered as file *ds-irf-um-0004\_21.ps*, Issue 2, revision 1.
5. The CSDS ISDAT 2.2 cuimeta manual [Ref. 11] delivered as file *ds-irf-um-0005\_20.ps*, Issue 2, revision 0.
6. The CSDS ISDAT 2.2 IDL manual [Ref. 12] delivered as file *ds-irf-um-0006\_20.ps*, Issue 2, revision 0.
7. The CSDS ISDAT 2.2 user defined C clients manual [Ref. 13] delivered as file *ds-irf-um-0007\_20.ps*. This document is also available as only text part in file *ds-irf-um-0007t\_20.ps* and only appendicies in file *ds-irf-um-0007a\_20.ps*. Issue 2, revision 0.
8. The CSDS ISDAT 2.2 search client manual [Ref. 14] delivered as file *ds-irf-um-0008\_21.ps*, Issue 2, revision 1.
9. The CSDS ISDAT 2.2 cuistat manual [Ref. 15] delivered as file *ds-irf-um-0009\_20.ps*, Issue 2, revision 0.

A compressed file *ds-irf-um.zip* containing all user manuals (1 - 9 above) is also provided on the ESRIN ftp server.

## 3.6 Item 6: ISDAT 2.2 source code

### 3.6.1 Product files

The CSDS ISDAT 2.2 software is provided in an *archive*, GNU compressed file: *isdat\_csd-2.2.tar.gz* containing the main ISDAT source code. A list of files contained in the archive is given in a separate file *file\_list.txt* in the *irfu/R4* directory of the ESRIN ftp server.

### 3.6.2 External software versions

The CSDS ISDAT 2.2 sub-system has been tested with the following supporting software versions:

- SUN Solaris 2.4.
- CDF format software 2.4 in accordance with [Ref. 2].
- CDF skeleton version 1.7 in accordance with [Ref. 16].

### 3.6.3 ISDAT 2.2 sub-system caveats

- ISDAT 2.2 is compatible with ISDAT 2.1 delivered as release 3 in the meaning that the internal data format has not been changed [Ref. 17]. This means that ISDAT

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servers and clients can communicate across revisions 1 and 2. This has, however, not been formally tested, and the National Data Centres should be recommended to upgrade all installations to ISDAT 2.2.

- Release notes for the individual software modules are given below.

#### 3.6.4 ISDAT 2.2 server and tools caveats

The following reported software problems (SPR's) for CSDS UI release 3 have been closed (ESRIN numbering is used):

**488** Error message for missing data.

**505** New map files updating.

**510** Passing arguments to *dbhstart*

**516** Updating of map and qty files

**620** Error message at *dbhstop*

**709** The *cuiimgen -p* option

**716** int\*4 support in server.

**767** *cuiimgen* file scanning

**801** *cuiimgen* server conflict

**812** Local file not visible when connected to NDC

In addition the following deficiencies of ISDAT 2.1 have been corrected:

- The *search* function can now handle status variables.
- The server *Csds module* does now check for the existence of the \$CULMAP/map and \$CULMAP/qty directories. The lack of check could earlier cause the server to crash if using *cuiimgen* and cause clients to terminate abnormally.

There are no known remaining software problems in the server module.

#### 3.6.5 ISDAT 2.2 *cuitm* client caveats

The following reported software problem (SPR) for release 3 have been closed (ESRIN numbering is used):

**692** *cuitm* now has a message field that keeps the user informed about some time-consuming activities like starting of clients, collecting data etc. (see [Ref. 10] for details).

There are no known remaining anomalies in the *cuitm* software.



### **3.6.6 ISDAT 2.2 cuigr client caveats**

The following reported software problems (SPR's) for release 3 have been closed (ESRIN numbering is used):

- 94** Right and upper axis
- 95** Grid in plots
- 315** Transformation to polar coordinates
- 439** x/y plot in flat file
- 477** Multiple opening of File-Config-Load dialog windows
- 478** Load dialog window attachment
- 480** Print file name in PS prints when applicable
- 481** Keyboard shortcuts
- 482** Tear off menus
- 490** Window size of flat file dialog
- 493** Time zoom
- 498** Save tensor name
- 515** Calculator apply and close buttons
- 540** Time zoom
- 532** CDF v1.7
- 536** Saving non-existing curves
- 633** Print dialog
- 635** Warning message when CDF file not created
- 638** Config file name in window title
- 640** Menu shortcuts
- 660** Unique shortcuts
- 661** Scroll bars in help windows
- 662** Debug output handling
- 665** Handling of long time intervals
- 666** Use of dots in scatter plots
- 695** Lower case in CDF file extensions
- 700** Config file name in title bar
- 707** The number of output CDF variables increased to 16

**715** CDF Global attribute

**772** Handling of WHISPER data

**773** Internal error

There are no known remaining anomalies in the *cuigr* client software.

### **3.6.7 ISDAT 2.2 cuimeta client caveats**

There are no known *cuimeta* deficiencies.

### **3.6.8 ISDAT 2.2 IDL library caveats**

The IDL interface can now handle vector variables and other variables of complex nature like status variables. The demonstration client *p3.pro* has been updated to demonstrate the ability to handle vectors.

There are no known remaining anomalies in the IDL interface software.

### **3.6.9 ISDAT 2.2 User defined C clients caveats**

There are no known anomalies with respect to the interface to user supplied C clients.

### **3.6.10 ISDAT 2.2 cuistat client caveats**

The following reported software problems (SPR's) for release 3 have been closed (ESRIN numbering is used):

**499** The size of the *cuistat* window

**500** Changing format of the output.

**554** Fill values

There are no known remaining anomalies with respect to the *cuistat* client software.

### **3.6.11 ISDAT 2.2 search client caveats**

The following reported software problem (SPR) for release 3 have been closed (ESRIN numbering is used):

**338** Negation operator

The *search* client can now handle status variables.

There are no known remaining anomalies in the *search* software.

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## 4 Reference Documents

- [1] The Joining of Cluster WEC Data. Technical Report CWD-OBSPM-TN-0001, Observatoire de Paris a Meudon, September 1994.
- [2] CSDS-UI external interface control document. Technical Report DS-ESR-ID-0001, ESRIN, October 1994. Issue 1.1.
- [3] CSDS User Interface ISDAT Architectural Design Document. Technical Report DS-IRF-AD-0001, IRF-U, October 1995. Issue 2.1.
- [4] CSDS User Interface, ISDAT Detailed Design Document. Technical Report DS-IRF-DD-001, IRF-U, September 1995. Issue 2.0.
- [5] CSDS User Interface, ISDAT Installation Manual. Technical Report DS-IRF-IM-0001, IRF-U, October 1995. Issue 2.1.
- [6] CSDS User Interface, ISDAT 2.1 Software Verification and Validation Plan. Technical Report DS-IRF-TP-0001, IRF-U, April 1995. Issue 1.0.
- [7] CSDS User Interface, ISDAT User Manual. Technical Report DS-IRF-UM-0001, IRF-U, October 1995. Issue 2.1.
- [8] CSDS User Interface, ISDAT Server User Manual. Technical Report DS-IRF-UM-0002, IRF-U, September 1995. Issue 2.0.
- [9] CSDS User Interface, ISDAT cuigr Client User Manual. Technical Report DS-IRF-UM-0003, IRF-U, October 1995. Issue 2.1.
- [10] CSDS User Interface, ISDAT cuitm User Manual. Technical Report DS-IRF-UM-0004, IRF-U, October 1995. Issue 2.1.
- [11] CSDS User Interface, ISDAT ciumeta Client User Manual. Technical Report DS-IRF-UM-0005, IRF-U, September 1995. Issue 2.0.
- [12] CSDS User Interface, Including IDL Clients in the ISDAT Client Package. Technical Report DS-IRF-UM-0006, IRF-U, September 1995. Issue 2.0.
- [13] CSDS User Interface, Writing User Defined C Clients to be included in the ISDAT Client Package. Technical Report DS-IRF-UM-0007, IRF-U, September 1995. Issue 2.0.
- [14] CSDS User Interface, ISDAT search Client User's Manual. Technical Report DS-IRF-UM-0008, IRF-U, October 1995. Issue 2.1.
- [15] CSDS User Interface ISDAT cuistat Client User Manual. Technical Report DS-IRF-UM-0009, IRF-U, September 1995. Issue 2.0.
- [16] Reference document for CSDS CDF implementation. Technical Report DS-QMW-TN-0003, Queen Mary and Westfield College, October 1994. Issue 1.1.
- [17] WECdata structure working group. Editor C. Harvey. The structure of the WEC/ISDAT data. Technical Report CWD-OBSPM-DD-001, OBSPM, March 1995.

## A CSDS ISDAT 2.2 Test Procedure Files

```
total 14694
-rw-r--r--  1 csds      1425 Oct  4 11:45 AT00-1.txt
-rw-r--r--  1 csds      1374 Oct  4 11:45 AT00-1b.txt
-rw-r--r--  1 csds        212 Oct  4 11:45 AT01-1.ctm
-rw-rw-r--  1 csds        590 Oct  9 11:37 AT01-1.flat
-rw-r--r--  1 csds      1982 Oct  4 11:45 AT01-1.igr
-rw-r--r--  1 csds        214 Oct  4 11:45 AT01-10.ctm
-rw-rw-r--  1 csds      1393 Oct 10 10:00 AT01-10.flat
-rw-rw-r--  1 csds      2687 Oct 10 09:58 AT01-10.igr
-rw-rw-r--  1 csds     73748 Oct 10 09:58 AT01-10.ps
-rw-r--r--  1 csds        214 Oct  4 11:45 AT01-11.ctm
-rw-rw-r--  1 csds      1409 Oct 10 10:17 AT01-11.flat
-rw-rw-r--  1 csds      2693 Oct 10 10:16 AT01-11.igr
-rw-rw-r--  1 csds     73630 Oct 10 10:17 AT01-11.ps
-rw-r--r--  1 csds      6308 Oct  4 11:45 AT01-3.ps
-rw-r--r--  1 csds        217 Oct  4 11:45 AT01-6.ctm
-rw-rw-r--  1 csds      6179 Oct  9 11:51 AT01-6.flat
-rw-rw-r--  1 csds      2028 Oct  9 11:53 AT01-6.igr
-rw-rw-r--  1 csds     21929 Oct  9 11:51 AT01-6.ps
-rw-r--r--  1 csds        217 Oct  4 11:45 AT01-7a.ctm
-rw-r--r--  1 csds      1437 Oct  4 11:45 AT01-7a.flat
-rw-r--r--  1 csds      1942 Oct  4 11:45 AT01-7a.igr
-rw-r--r--  1 csds      9518 Oct  4 11:45 AT01-7a.ps
-rw-r--r--  1 csds        217 Oct  4 11:45 AT01-7b.ctm
-rw-r--r--  1 csds      1468 Oct  4 11:45 AT01-7b.flat
-rw-r--r--  1 csds      2993 Oct  4 11:45 AT01-7b.igr
-rw-r--r--  1 csds     26516 Oct  4 11:45 AT01-7b.ps
-rw-r--r--  1 csds        217 Oct  4 11:45 AT01-8.ctm
-rw-rw-r--  1 csds      2084 Oct  9 11:54 AT01-8.flat
-rw-r--r--  1 csds      2004 Oct  4 11:45 AT01-8.igr
-rw-rw-r--  1 csds      9803 Oct  9 11:55 AT01-8.ps
-rw-r--r--  1 csds        217 Oct  4 11:45 AT01-8a.ctm
-rw-rw-r--  1 csds      2009 Oct  9 11:56 AT01-8a.flat
-rw-r--r--  1 csds      1942 Oct  4 11:45 AT01-8a.igr
-rw-rw-r--  1 csds     11653 Oct  9 11:56 AT01-8a.ps
-rw-rw-r--  1 csds        234 Oct 14 13:28 AT01-9.ctm
-rw-rw-r--  1 csds     42803 Oct 14 13:35 AT01-9.flat
-rw-rw-r--  1 csds      2812 Oct 14 13:28 AT01-9.igr
-rw-rw-r--  1 csds    230509 Oct 14 13:30 AT01-9.ps
-rw-rw-rw-  1 csds        218 Oct  4 11:45 AT01-9a.ctm
-rw-rw-r--  1 csds     17142 Oct 14 13:39 AT01-9a.flat
-rw-rw-r--  1 csds      2494 Oct 13 11:45 AT01-9a.igr
-rw-rw-r--  1 csds    116356 Oct 14 13:38 AT01-9a.ps
-rw-rw-r--  1 csds        233 Oct  9 14:25 AT01-9b.ctm
-rw-rw-r--  1 csds      5937 Oct 14 13:41 AT01-9b.flat
-rw-rw-r--  1 csds      3235 Oct 14 13:20 AT01-9b.igr
-rw-rw-r--  1 csds    130629 Oct  9 14:41 AT01-9b.ps
-rw-rw-rw-  1 csds        218 Oct  4 11:45 AT01-9c.ctm
-rw-rw-rw-  1 csds     12483 Oct  4 11:45 AT01-9c.flat
-rw-rw-rw-  1 csds      2278 Oct  4 11:45 AT01-9c.igr
-rw-rw-rw-  1 csds    118000 Oct  4 11:45 AT01-9c.ps
-rw-rw-rw-  1 csds        234 Oct  4 11:45 AT01-9d.ctm
-rw-rw-r--  1 csds     34517 Oct  9 15:51 AT01-9d.flat
```

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-rw-rw-rw-	1	csds	2178	Oct	4	11:45	AT01-9d.igr
-rw-rw-r--	1	csds	49791	Oct	9	15:50	AT01-9d.ps
-rw-rw-r--	1	csds	49092	Oct	4	11:45	AT01-9d.ps.ps
-rw-rw-rw-	1	csds	234	Oct	4	11:45	AT01-9e.ctm
-rw-rw-r--	1	csds	5565	Oct	9	15:54	AT01-9e.flat
-rw-rw-rw-	1	csds	2178	Oct	4	11:45	AT01-9e.igr
-rw-rw-r--	1	csds	12094	Oct	9	15:54	AT01-9e.ps
-rw-r--r--	1	csds	214	Oct	4	11:45	AT01.ctm
-rw-r--r--	1	csds	213	Oct	4	11:45	AT02-1.ctm
-rw-r--r--	1	csds	2089	Oct	4	11:45	AT02-1.igr
-rw-r--r--	1	csds	9895	Oct	4	11:45	AT02-1.ps
-rw-rw-r--	1	csds	9053	Oct	10	10:22	AT02-3.flat
-rw-rw-r--	1	csds	3259	Oct	10	10:23	AT02-3.igr
-rw-rw-r--	1	csds	75644	Oct	10	10:23	AT02-3.ps
-rw-r--r--	1	csds	6473	Oct	4	11:45	AT02-4.flat
-rw-r--r--	1	csds	214	Oct	4	11:45	AT03-1.ctm
-rw-rw-r--	1	csds	21728	Oct	10	10:29	AT03-1.flat
-rw-r--r--	1	csds	770	Oct	4	11:45	AT03-1.igr
-rw-r--r--	1	csds	71168	Oct	4	11:45	AT03-1.ps
-rw-rw-r--	1	csds	233	Oct	11	14:45	AT04-1.ctm
-rw-r--r--	1	csds	1932	Oct	4	11:45	AT04-1.igr
-rw-r--r--	1	csds	217	Oct	4	11:45	AT04-3.ctm
-rw-r--r--	1	csds	1932	Oct	4	11:45	AT04-3.igr
-rw-rw-r--	1	csds	233	Oct	11	14:52	AT04-5.ctm
-rw-r--r--	1	csds	1932	Oct	4	11:45	AT04-5.igr
-rw-rw-r--	1	csds	233	Oct	11	11:46	AT04-7.ctm
-rw-rw-r--	1	csds	3194	Oct	11	11:45	AT04-7.igr
-rw-r--r--	1	csds	218	Oct	4	11:45	AT04-9.ctm
-rw-rw-r--	1	csds	3198	Oct	11	16:50	AT04-9.igr
-rw-r--r--	1	csds	214	Oct	4	11:45	AT05.ctm
-rw-r--r--	1	csds	1854	Oct	4	11:45	AT05.igr
-rw-r--r--	1	csds	215	Oct	4	11:45	AT06.ctm
-rw-r--r--	1	csds	1854	Oct	4	11:45	AT06.igr
-rw-r--r--	1	csds	30081	Oct	4	11:45	AT07-1.ps
-rw-r--r--	1	csds	213	Oct	4	11:45	AT07-2.ctm
-rw-rw-r--	1	csds	8489	Oct	10	10:34	AT07-2.flat
-rw-r--r--	1	csds	2856	Oct	4	11:45	AT07-2.igr
-rw-r--r--	1	csds	213	Oct	4	11:45	AT07.ctm
-rw-r--r--	1	csds	2877	Oct	4	11:45	AT07.igr
-rw-r--r--	1	csds	18	Oct	4	11:45	AT07.igt
-rw-r--r--	1	csds	18	Oct	4	11:45	AT08-0.igt
-rw-r--r--	1	csds	2467	Oct	4	11:45	AT08-1.igr
-rw-r--r--	1	csds	18	Oct	4	11:45	AT08-1.igt
-rw-r--r--	1	csds	407496	Oct	4	11:45	AT08-1.ps
-rw-r--r--	1	csds	217	Oct	4	11:45	AT08-10.ctm
-rw-rw-r--	1	csds	3297	Oct	10	11:14	AT08-10.igr
-rw-r--r--	1	csds	25	Oct	4	11:45	AT08-10.igt
-rw-rw-r--	1	csds	63591	Oct	10	11:15	AT08-10.ps
-rw-r--r--	1	csds	214	Oct	4	11:45	AT08-11.ctm
-rw-r--r--	1	csds	2491	Oct	4	11:45	AT08-11.igr
-rw-r--r--	1	csds	407271	Oct	4	11:45	AT08-11.ps
-rw-r--r--	1	csds	214	Oct	4	11:45	AT08-1a.ctm
-rw-r--r--	1	csds	2524	Oct	4	11:45	AT08-1a.igr
-rw-r--r--	1	csds	407268	Oct	4	11:45	AT08-1a.ps
-rw-r--r--	1	csds	2467	Oct	4	11:45	AT08-2.igr
-rw-r--r--	1	csds	407376	Oct	4	11:45	AT08-2.ps

```
-rw-r--r--  1 csds      2467 Oct  4 11:45 AT08-3.igr
-rw-r--r--  1 csds    407306 Oct  4 11:45 AT08-3.ps
-rw-r--r--  1 csds      2541 Oct  4 11:45 AT08-4.igr
-rw-r--r--  1 csds    403902 Oct  4 11:45 AT08-4.ps
-rw-r--r--  1 csds      2471 Oct  4 11:45 AT08-5.igr
-rw-r--r--  1 csds    407622 Oct  4 11:45 AT08-5.ps
-rw-r--r--  1 csds       213 Oct  4 11:45 AT08-6.ctm
-rw-r--r--  1 csds      2549 Oct  4 11:45 AT08-6.igr
-rw-r--r--  1 csds     23989 Oct  4 11:45 AT08-6.ps
-rw-r--r--  1 csds      2640 Oct  4 11:45 AT08-7.igr
-rw-r--r--  1 csds     26193 Oct  4 11:45 AT08-7.ps
-rw-r--r--  1 csds      2578 Oct  4 11:45 AT08-8.igr
-rw-r--r--  1 csds     24187 Oct  4 11:45 AT08-8.ps
-rw-rw-r--  1 csds      2494 Oct 10 10:54 AT08-9.igr
-rw-r--r--  1 csds       214 Oct  4 11:45 AT08.ctm
-rw-r--r--  1 csds       980 Oct  4 11:45 AT08.igr
-rw-r--r--  1 csds       213 Oct  4 11:45 AT09-10.ctm
-rw-rw-r--  1 csds     3038 Oct 10 11:26 AT09-10.flat
-rw-r--r--  1 csds     2328 Oct  4 11:45 AT09-10.igr
-rw-r--r--  1 csds       178 Oct  4 11:45 AT09-10.sea
-rw-r--r--  1 csds       213 Oct  4 11:45 AT09-11.ctm
-rw-rw-r--  1 csds     3038 Oct 10 11:26 AT09-11.flat
-rw-r--r--  1 csds     2345 Oct  4 11:45 AT09-11.igr
-rw-r--r--  1 csds       177 Oct  4 11:45 AT09-11.sea
-rw-r--r--  1 csds       214 Oct  4 11:45 AT09-2.ctm
-rw-rw-r--  1 csds     1107 Oct 10 11:26 AT09-2.flat
-rw-r--r--  1 csds     2116 Oct  4 11:45 AT09-2.igr
-rw-r--r--  1 csds       140 Oct  4 11:45 AT09-2.sea
-rw-r--r--  1 csds       214 Oct  4 11:45 AT09-3.ctm
-rw-rw-r--  1 csds     3330 Oct 10 11:26 AT09-3.flat
-rw-r--r--  1 csds     2136 Oct  4 11:45 AT09-3.igr
-rw-r--r--  1 csds       140 Oct  4 11:45 AT09-3.sea
-rw-r--r--  1 csds       213 Oct  4 11:45 AT09-4.ctm
-rw-rw-r--  1 csds     5588 Oct 10 11:26 AT09-4.flat
-rw-r--r--  1 csds     2301 Oct  4 11:45 AT09-4.igr
-rw-r--r--  1 csds       171 Oct  4 11:45 AT09-4.sea
-rw-r--r--  1 csds       213 Oct  4 11:45 AT09-5.ctm
-rw-rw-r--  1 csds     4220 Oct 10 11:26 AT09-5.flat
-rw-r--r--  1 csds     2301 Oct  4 11:45 AT09-5.igr
-rw-r--r--  1 csds       190 Oct  4 11:45 AT09-5.sea
-rw-r--r--  1 csds       213 Oct  4 11:45 AT09-6.ctm
-rw-rw-r--  1 csds       686 Oct 10 11:26 AT09-6.flat
-rw-r--r--  1 csds     2301 Oct  4 11:45 AT09-6.igr
-rw-r--r--  1 csds       190 Oct  4 11:45 AT09-6.sea
-rw-r--r--  1 csds       213 Oct  4 11:45 AT09-7.ctm
-rw-rw-r--  1 csds     1655 Oct 10 11:26 AT09-7.flat
-rw-r--r--  1 csds     2301 Oct  4 11:45 AT09-7.igr
-rw-r--r--  1 csds       343 Oct  4 11:45 AT09-7.sea
-rw-r--r--  1 csds       213 Oct  4 11:45 AT09-8.ctm
-rw-rw-r--  1 csds     3992 Oct 10 11:26 AT09-8.flat
-rw-r--r--  1 csds     2301 Oct  4 11:45 AT09-8.igr
-rw-r--r--  1 csds       180 Oct  4 11:45 AT09-8.sea
-rw-r--r--  1 csds       213 Oct  4 11:45 AT09-9.ctm
-rw-rw-r--  1 csds     1199 Oct 10 11:26 AT09-9.flat
-rw-r--r--  1 csds     2335 Oct  4 11:45 AT09-9.igr
-rw-r--r--  1 csds       180 Oct  4 11:45 AT09-9.sea
```

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-rw-r--r-- 1 csds      214 Oct  4 11:45 AT10.ctm
-rw-r--r-- 1 csds      213 Oct  4 11:45 AT11.ctm
-rw-r--r-- 1 csds     1659 Oct  4 11:45 AT11.mta
-rw-r--r-- 1 csds      214 Oct  4 11:45 AT12-2.ctm
-rw-r--r-- 1 csds     1872 Oct  4 11:45 AT12-2.igr
-rw-r--r-- 1 csds      215 Oct  4 11:45 AT12.ctm
-rw-r--r-- 1 csds      215 Oct  4 11:45 AT13.ctm
-rw-rw-r-- 1 csds     22241 Oct 10 11:30 AT13.flat
-rw-r--r-- 1 csds      213 Oct  4 11:45 AT14.ctm
-rw-rw-r-- 1 csds     1083 Oct 10 11:36 AT14.flat
-rw-rw-r-- 1 csds     1327 Oct 10 11:36 AT14.igr
-rw-r--r-- 1 csds     13000 Oct  4 11:45 AT14.ps
-rw-r--r-- 1 csds      214 Oct  4 11:45 AT15.ctm
-rw-r--r-- 1 csds      231 Oct  4 11:45 AT21-10.ctm
-rw-r--r-- 1 csds     1788 Oct  4 11:45 AT21-10.igr
-rw-r--r-- 1 csds      235 Oct  4 11:45 AT21-11.ctm
-rw-r--r-- 1 csds     1853 Oct  4 11:45 AT21-11.igr
-rw-r--r-- 1 csds     211126 Oct  4 11:45 AT21-110.flat
-rw-r--r-- 1 csds      234 Oct  4 11:45 AT21-12.ctm
-rw-r--r-- 1 csds     1792 Oct  4 11:45 AT21-12.igr
-rw-rw-r-- 1 csds      233 Oct  4 11:45 AT21-13.ctm
-rw-rw-r-- 1 csds     2259 Oct  4 11:45 AT21-13.igr
-rw-rw-r-- 1 csds      614 Oct  4 11:45 AT21-13.txt
-rw-r--r-- 1 csds      214 Oct  4 11:45 AT21.ctm
-rw-r--r-- 1 csds      750 Oct  4 11:45 AT21.igr
-rw-r--r-- 1 csds      214 Oct  4 11:45 AT22.ctm
-rw-r--r-- 1 csds      750 Oct  4 11:45 AT22.igr
-rw-r--r-- 1 csds      214 Oct  4 11:45 AT24.ctm
-rw-r--r-- 1 csds     3067 Oct  4 11:45 AT24.igr
-rw-r--r-- 1 csds      213 Oct  4 11:45 AT29.ctm
-rw-r--r-- 1 csds     1890 Oct  4 11:45 AT29.igr
-rw-r--r-- 1 csds      212 Oct  4 11:45 AT31-1.ctm
-rw-r--r-- 1 csds      780 Oct  4 11:45 AT31-1.sta
-rw-r--r-- 1 csds      615 Oct  4 11:45 AT31-2.sta
-rw-r--r-- 1 csds      540 Oct  4 11:45 AT31-3.sta
-rw-r--r-- 1 csds      315 Oct  4 11:45 AT31-4.sta
-rw-r--r-- 1 csds      231 Oct  4 11:45 AT32-11.ctm
-rw-rw-r-- 1 csds     905079 Oct 12 17:52 AT32-11.flat
-rw-r--r-- 1 csds     1865 Oct  4 11:45 AT32-11.igr
-rw-r--r-- 1 csds      231 Oct  4 11:45 AT32-12.ctm
-rw-r--r-- 1 csds     1865 Oct  4 11:45 AT32-12.igr
-rw-r--r-- 1 csds      233 Oct  4 11:45 AT32-13.ctm
-rw-r--r-- 1 csds     1864 Oct  4 11:45 AT32-13.igr
-rw-r--r-- 1 csds      231 Oct  4 15:21 AT32-21.ctm
-rw-r--r-- 1 csds     1334077 Oct  4 15:22 AT32-21.flat
-rw-r--r-- 1 csds      1866 Oct  4 11:45 AT32-21.igr
-rw-r--r-- 1 csds      231 Oct  4 11:45 AT32-22.ctm
-rw-r--r-- 1 csds     1866 Oct  4 11:45 AT32-22.igr
-rw-r--r-- 1 csds      233 Oct  4 15:22 AT32-23.ctm
-rw-r--r-- 1 csds     1865 Oct  4 11:45 AT32-23.igr
-rw-rw-r-- 1 csds      231 Oct 12 16:23 AT32-31.ctm
-rw-rw-r-- 1 csds     14319 Oct 12 16:26 AT32-31.flat
-rw-rw-r-- 1 csds     1927 Oct 12 16:24 AT32-31.igr
-rw-r--r-- 1 csds      234 Oct  4 11:45 AT34-1.stub
-rw-r--r-- 1 csds      230 Oct  4 11:45 AT34-2.ctm
-rw-r--r-- 1 csds     1846 Oct  4 11:45 AT34-2.igr
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-rw-r--r--  1 csds      236 Oct  4 11:45 AT34-2.stub
-rw-r--r--  1 csds       93 Oct  4 11:45 AT34-cli.sh
-rw-r--r--  1 csds       40 Oct  4 11:45 AT34-srv.sh
-rw-r--r--  1 csds      230 Oct  4 11:45 AT35-1.ctm
-rw-r--r--  1 csds     1846 Oct  4 11:45 AT35-1.igr
-rw-r--r--  1 csds      240 Oct  4 11:45 AT35-1.stub
-rw-r--r--  1 csds       93 Oct  4 11:45 AT35-cli.sh
-rw-r--r--  1 csds       40 Oct  4 11:45 AT35-srv.sh
-rw-r--r--  1 csds      231 Oct  4 11:45 AT36.ctm
-rw-r--r--  1 csds     1783 Oct  4 11:45 AT36.igr
-rw-r--r--  1 csds     2001 Oct  4 11:45 AT_VI_1.txt
-rw-rw-r--  1 csds    52980 Oct 11 14:40 CL_PM_MIX_20000101_V01_AT04-9.cdf
-rw-rw-r--  1 csds    16642 Oct 11 11:18 CL_SM_MIX_20000101_V01_AT04-1.cdf
-rw-rw-r--  1 csds    16612 Oct 11 11:25 CL_SM_MIX_20000101_V01_AT04-5.cdf
-rw-rw-r--  1 csds    20968 Oct 11 13:29 CL_SM_MIX_20000101_V01_AT04-7.cdf
-rw-r--r--  1 csds       548 Oct  4 11:45 Makefile
-rw-r--r--  1 csds     3432 Oct 12 11:32 atenv
-rwxr--r--  1 csds        88 Oct  4 11:45 diffc.csh*
-rwxr-xr-x  1 csds        51 Oct  4 11:45 diff1.csh*
-rwxr-xr-x  1 csds     1272 Oct 12 14:09 irfu_test_setup_adm.csh*
-rwxr-xr-x  1 csds     3654 Oct  4 11:45 isdat_test_setup_adm.com*
-rwxr-xr-x  1 csds     2527 Oct 12 14:10 isdat_test_setup_adm.csh*
-rwxr-xr-x  1 csds     2169 Oct  4 11:45 isdat_test_setup_cl.com*
-rwxr-xr-x  1 csds     1482 Oct 12 15:30 isdat_test_setup_cl.csh*
-rw-rw-r--  1 csds    93760 Oct 14 14:32 isdat_tp.tex
-rw-r--r--  1 csds     1313 Oct  4 11:45 query_result.res
-rw-r--r--  1 csds     2679 Oct  4 11:45 sp_fgm.igr
```



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## B CSDS ISDAT 2.2 Test Data CDF Files

1360 PP/EFW/C1/C1\_PP\_EFW\_19960101\_V01.cdf  
1920 PP/EFW/C1/C1\_PP\_EFW\_19960102\_V01.cdf  
1920 PP/EFW/C1/C1\_PP\_EFW\_19960110\_V01.cdf  
1360 PP/EFW/C1/C1\_PP\_EFW\_19960101\_V02.cdf  
6562 PP/EFW/C1  
6564 PP/EFW  
480 PP/FGM/C1/C1\_PP\_FGM\_19681018\_V01.cdf  
44 PP/FGM/C1/C1\_PP\_FGM\_19950123\_V01.cdf  
526 PP/FGM/C1  
320 PP/FGM/C2/C2\_PP\_FGM\_19681018\_V01.cdf  
44 PP/FGM/C2/C2\_PP\_FGM\_19950123\_V01.cdf  
366 PP/FGM/C2  
416 PP/FGM/C3/C3\_PP\_FGM\_19681018\_V01.cdf  
44 PP/FGM/C3/C3\_PP\_FGM\_19950123\_V01.cdf  
462 PP/FGM/C3  
416 PP/FGM/C4/C4\_PP\_FGM\_19681018\_V01.cdf  
44 PP/FGM/C4/C4\_PP\_FGM\_19950123\_V01.cdf  
462 PP/FGM/C4  
1818 PP/FGM  
50 PP/DWP/C1/C1\_PP\_DWP\_19950123\_V01.cdf  
52 PP/DWP/C1  
50 PP/DWP/C2/C2\_PP\_DWP\_19950123\_V01.cdf  
52 PP/DWP/C2  
50 PP/DWP/C3/C3\_PP\_DWP\_19950123\_V01.cdf  
52 PP/DWP/C3  
50 PP/DWP/C4/C4\_PP\_DWP\_19950123\_V01.cdf  
52 PP/DWP/C4  
210 PP/DWP  
54 PP/PEA/C1/C1\_PP\_PEA\_19950123\_V01.cdf  
56 PP/PEA/C1  
54 PP/PEA/C2/C2\_PP\_PEA\_19950123\_V01.cdf  
56 PP/PEA/C2  
54 PP/PEA/C3/C3\_PP\_PEA\_19950123\_V01.cdf  
56 PP/PEA/C3  
54 PP/PEA/C4/C4\_PP\_PEA\_19950123\_V01.cdf  
56 PP/PEA/C4  
226 PP/PEA  
3104 PP/WHI/C1/C1\_PP\_WHI\_20000201\_V00.cdf  
2352 PP/WHI/C1/C1\_PP\_WHI\_19991231\_V00.cdf  
2432 PP/WHI/C1/C1\_PP\_WHI\_20000101\_V00.cdf  
7890 PP/WHI/C1  
92 PP/WHI/C2/C2\_PP\_WHI\_20000101\_V00.cdf  
2352 PP/WHI/C2/C2\_PP\_WHI\_19991231\_V00.cdf  
2446 PP/WHI/C2  
352 PP/WHI/C3/C3\_PP\_WHI\_20000101\_V00.cdf  
2352 PP/WHI/C3/C3\_PP\_WHI\_19991231\_V00.cdf  
2706 PP/WHI/C3

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2352 PP/WHI/C4/C4\_PP\_WHI\_19991231\_V00.cdf  
2464 PP/WHI/C4/C4\_PP\_WHI\_20000101\_V00.cdf  
4818 PP/WHI/C4  
17862 PP/WHI  
26682 PP  
140 SP/EFW/CL\_SP\_EFW\_19960101\_V01.cdf  
182 SP/EFW/CL\_SP\_EFW\_19960102\_V01.cdf  
182 SP/EFW/CL\_SP\_EFW\_19960110\_V01.cdf  
506 SP/EFW  
42 SP/DWP/CL\_SP\_DWP\_19950123\_V01.cdf  
44 SP/DWP  
76 SP/FGM/CL\_SP\_FGM\_19681018\_V01.cdf  
42 SP/FGM/CL\_SP\_FGM\_19950123\_V01.cdf  
120 SP/FGM  
52 SP/PEA/CL\_SP\_PEA\_19950123\_V01.cdf  
54 SP/PEA  
76 SP/CIS/CL\_SP\_CIS\_20000201\_V00.cdf  
304 SP/CIS/CL\_SP\_CIS\_19991231\_V00.cdf  
88 SP/CIS/CL\_SP\_CIS\_19991229\_V00.cdf  
256 SP/CIS/CL\_SP\_CIS\_20000101\_V00.cdf  
726 SP/CIS  
256 SP/WHI/CL\_SP\_WHI\_19991231\_V00.cdf  
82 SP/WHI/CL\_SP\_WHI\_19991229\_V00.cdf  
304 SP/WHI/CL\_SP\_WHI\_19991230\_V00.cdf  
256 SP/WHI/CL\_SP\_WHI\_20000101\_V00.cdf  
900 SP/WHI  
2352 SP