



PDS TABLE EXPLORER

A web-based visualization tool for viewing, filtering,
and downloading PDS3 and PDS4 table data

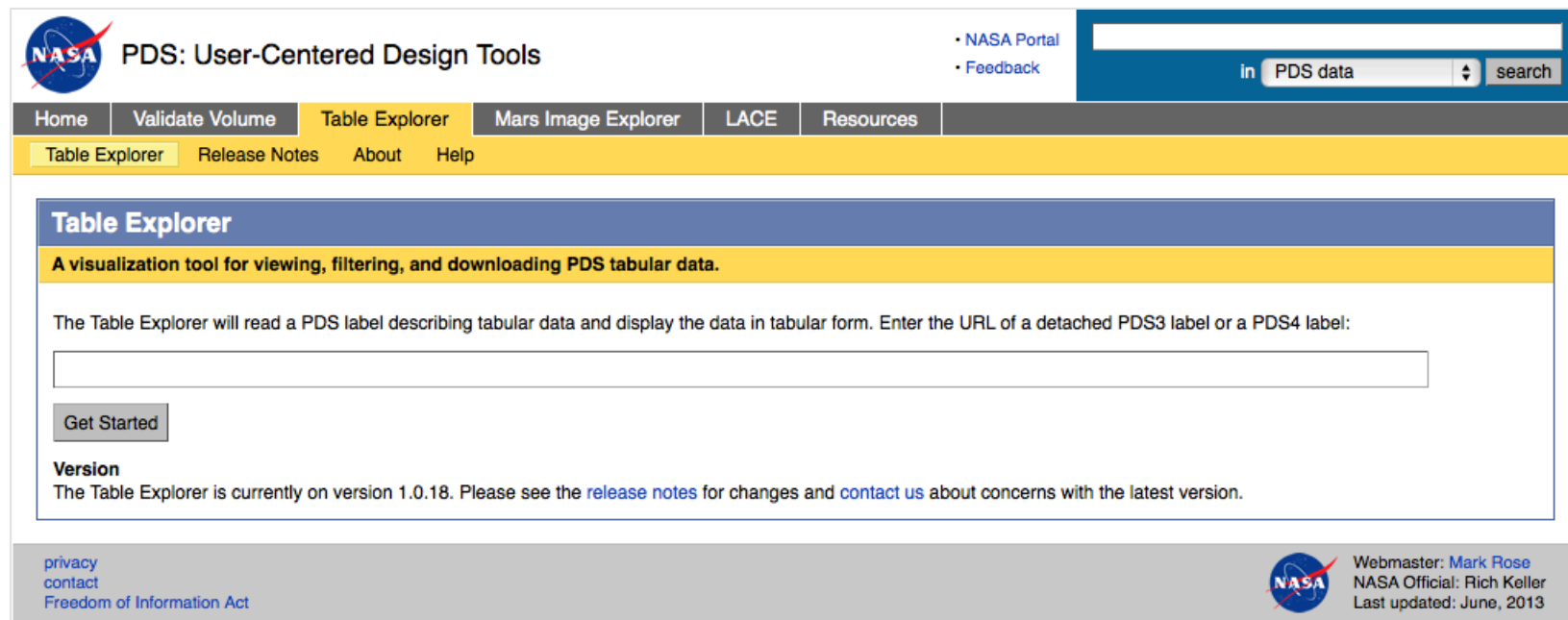
PDS User-Centered Design team

Main Features

- Preview PDS3 or PDS4 table data in an easy-to-view tabular format
- Select and re-order table columns to be displayed
- Sort by column
- Filter to eliminate rows based on numeric conditions
- Download data in CSV and/or Fixed-width formats
- Hover over column header and source file name to display pertinent label information

PDS Table Explorer Startup

- To start exploring a table, enter a PDS3 or PDS4 label URL:



The screenshot shows the PDS Table Explorer web interface. At the top, there is a NASA logo and the text "PDS: User-Centered Design Tools". To the right, there are links for "NASA Portal" and "Feedback", and a search bar with the text "in PDS data" and a "search" button. Below this is a navigation bar with links for "Home", "Validate Volume", "Table Explorer" (which is highlighted), "Mars Image Explorer", "LACE", and "Resources". Under "Table Explorer", there are sub-links for "Table Explorer", "Release Notes", "About", and "Help". The main content area has a header "Table Explorer" and a description: "A visualization tool for viewing, filtering, and downloading PDS tabular data." Below this, it says: "The Table Explorer will read a PDS label describing tabular data and display the data in tabular form. Enter the URL of a detached PDS3 label or a PDS4 label:" followed by a text input field. A "Get Started" button is located below the input field. At the bottom, there is a "Version" section stating: "The Table Explorer is currently on version 1.0.18. Please see the [release notes](#) for changes and [contact us](#) about concerns with the latest version." The footer contains links for "privacy", "contact", and "Freedom of Information Act" on the left, and the NASA logo with contact information on the right: "Webmaster: [Mark Rose](#)", "NASA Official: Rich Keller", and "Last updated: June, 2013".

<http://pdstools.arc.nasa.gov/pdsWeb/TableExplorer>

PDS Table Explorer User Interface



PDS: User-Centered Design Tools

2. Data Filtering & Download

3. File & Status Info

Home Validate Volume Table Explorer Mars Image Explorer Resources

Table Explorer Release Notes About Help

Columns

Select Columns Order Columns

66 of 66 columns selected

Rows

Filter Rows Sort Rows

45815 of 45815 rows selected

Output

File Type comma separated - CSV

☒ Include header row?

Download

Source Files

Label housekeeping_13325_13334.xml Tabular Data File housekeeping_13325_13334.tab

Progress

Processing complete. You may select and view the rest of the data.

Start over

Preview

1 to 100 of 45815 rows Jump To: 1 to 100 Show: 100 per page

Please browse over column titles for more information. Missing values are specified by an asterisk.

row	TIME	CONTROLLER_TEMP	P3_3V_MON	M5V_MON	P5V_MON	FED_TEMP	HVPS_TEMP	W_SCREEN_V_MON	MCP_TEMP	LVPS_TEMP	MCP_LOW_V_MON
1	2013-325T00:23:05.548	2.390258E1	3.26917E0	-4.897804E0	4.962148E0	2.351257E1	2.527484E1	1.8348E1	3.019385E1	2.49865E1	-2.50756E1
2	2013-325T00:23:15.548	2.604496E1	3.367034E0	-4.903932E0	4.969808E0	2.35868E1	2.53067E1	-1.684958E2	3.048657E1	2.513711E1	-2.35466E1
3	2013-325T00:23:25.548	2.379923E1	3.294242E0	-4.890144E0	4.96368E0	2.354557E1	2.552109E1	-1.700248E2	3.043609E1	2.557846E1	-1.073664E3
4	2013-325T00:23:35.548	2.466272E1	3.343579E0	-4.897804E0	4.969808E0	2.368565E1	2.540213E1	-1.715538E2	3.041078E1	2.597485E1	-1.075499E3
5	2013-325T00:23:45.549	2.379923E1	3.320933E0	-4.891676E0	4.968276E0	2.373502E1	2.546562E1	-1.730828E2	3.009712E1	2.633759E1	-1.074581E3
6	2013-325T00:23:55.549	2.542728E1	3.347623E0	-4.900868E0	4.969808E0	2.377612E1	2.548148E1	-1.736944E2	3.005177E1	2.660757E1	-1.081615E3
7	2013-325T00:24:05.549	2.48939E1	3.257846E0	-4.9024E0	4.959084E0	2.373502E1	2.57736E1	-1.709422E2	3.053687E1	2.69255E1	-1.081615E3
8	2013-325T00:24:15.549	2.428215E1	3.285346E0	-4.891676E0	4.959084E0	2.380899E1	2.576574E1	-1.736944E2	3.015524E1	2.717354E1	-1.082226E3
9	2013-325T00:24:25.549	2.409799E1	3.312845E0	-4.888612E0	4.974404E0	2.397305E1	2.565545E1	-1.761408E2	2.97504E1	2.731559E1	-1.083449E3
10	2013-325T00:24:35.549	2.599822E1	3.293434E0	-4.890144E0	4.968276E0	2.396486E1	2.586E1	-1.736944E2	3.025799E1	2.761227E1	-1.083449E3

1. Table Preview

1. Table Preview Pane

Displays all the data described in the label in tabular format based on the formatting specified in the label

Preview									
1 to 100 of 45815 rows Jump To: <input type="text" value="1 to 100"/> Show: <input type="text" value="100 per page"/>									
Please browse over column titles for more information. Missing values are specified by an asterisk.									
row	TIME	CONTROLLER_TEMP	P3_3V_MON	M5V_MON	P5V_MON	FED_TEMP	HVPS_TEMP	W_SCREEN_V_MON	MCP_TEMP
1	2013-325T00:23:05.548	2.390258E1	3.26917E0	-4.897804E0	4.962148E0	2.351257E1	2.527484E1	1.8348E1	3.019385E1
2	2013-325T00:23:15.548	2.604496E1	3.367034E0	-4.903932E0	4.969808E0	2.35868E1	2.53067E1	-1.684958E2	3.048657E1
3	2013-325T00:23:25.548	2.379923E1	3.294242E0	-4.890144E0	4.96368E0	2.354557E1	2.552109E1	-1.700248E2	3.043609E1
4	2013-325T00:23:35.548	2.466272E1	3.343579E0	-4.897804E0	4.969808E0	2.368565E1	2.540213E1	-1.715538E2	3.041078E1
5	2013-325T00:23:45.549	2.379923E1	3.320933E0	-4.891676E0	4.968276E0	2.373502E1	2.546562E1	-1.730828E2	3.009712E1
6	2013-325T00:23:55.549	2.542728E1	3.347623E0	-4.900868E0	4.969808E0	2.377612E1	2.548148E1	-1.736944E2	3.005177E1
7	2013-325T00:24:05.549	2.48939E1	3.257846E0	-4.9024E0	4.959084E0	2.373502E1	2.57736E1	-1.709422E2	3.053687E1
8	2013-325T00:24:15.549	2.428215E1	3.285346E0	-4.891676E0	4.959084E0	2.380899E1	2.576574E1	-1.736944E2	3.015524E1
9	2013-325T00:24:25.549	2.409799E1	3.312845E0	-4.888612E0	4.974404E0	2.397305E1	2.565545E1	-1.761408E2	2.97504E1
10	2013-325T00:24:35.549	2.599822E1	3.293434E0	-4.890144E0	4.968276E0	2.396486E1	2.586E1	-1.736944E2	3.025799E1
11	2013-325T00:24:45.549	2.528791E1	3.262699E0	-4.903932E0	4.957552E0	2.396486E1	2.611789E1	-1.706364E2	3.059949E1
12	2013-325T00:24:55.550	2.605665E1	3.27564E0	-4.896272E0	4.966744E0	2.407944E1	2.608673E1	-1.736944E2	3.030272E1
13	2013-325T00:25:05.550	2.565996E1	3.262699E0	-4.903932E0	4.968276E0	2.41693E1	2.602434E1	-1.746118E2	3.023237E1
14	2013-325T00:25:15.550	2.439736E1	3.321742E0	-4.890144E0	4.972872E0	2.419379E1	2.631192E1	-1.718596E2	3.057448E1
15	2013-325T00:25:25.550	2.685476E1	3.340344E0	-4.89474E0	4.977468E0	2.42916E1	2.625771E1	-1.752234E2	3.016812E1
16	2013-325T00:25:35.550	2.606834E1	3.265934E0	-4.900868E0	4.960616E0	2.432417E1	2.64509E1	-1.721654E2	3.063693E1

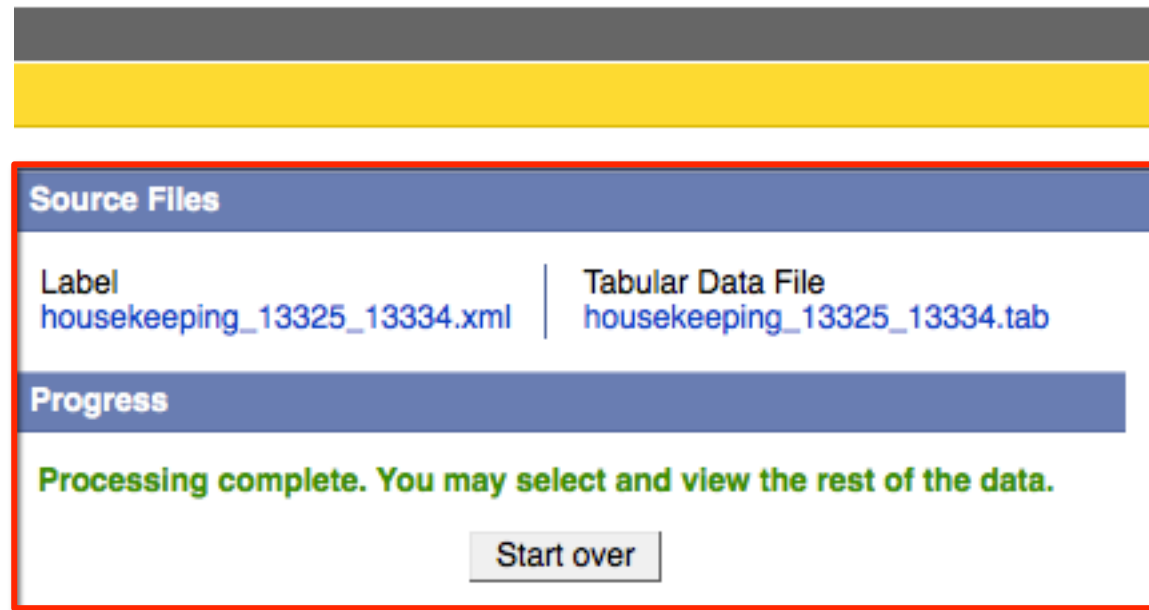
2. Data Filtering & Download Pane

- Allows you to select, sort, order, filter, and output/download the selected tabular data
- The data is downloaded in the format specified and with the control conditions applied

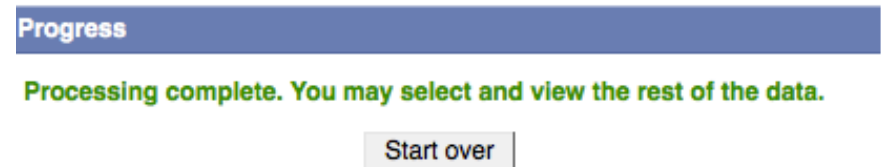
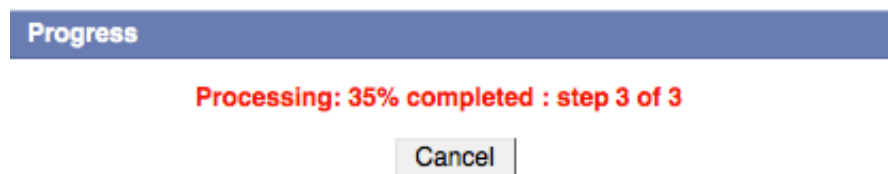
Columns	Rows	Output
<div>Select Columns Order Columns</div> <div>66 of 66 columns selected</div>	<div>Filter Rows Sort Rows</div> <div>45815 of 45815 rows selected</div>	<div>File Type comma separated - CSV ▾</div> <div><input checked="" type="checkbox"/> Include header row?</div> <div>Download</div>

3. File and Status Info Pane

Displays current data processing progress and informative status messages



Typical status messages shown:



Other User Interface Features

- Hover over column and source file names to display pop-up box with information specified in the label

Rows

File Type

comma separated - CSV

☒ Include header row?

Download

Source Files

Label

housekeeping_13325_13334.xml

Tabular Data File

housekeeping_13325_13334.tab

Local Identifier:

TABLE

Description:

The primary housekeeping data contains telemetry recorded at a user selected interval, nominally around 10 seconds. This contains temperatures, voltages, and general information about the health and state of the instrument.

Offset:

0 [unit = byte]

Records:

45815

Record Delimiter:

carriage-return line-feed

Fields:

66

Groups:

0

Record Length:

541[unit = byte]

per page

es are specified by an asterisk.

M5V_MON	P5V_MON	FED_TEMP	HVPS_TEMP	W_SCREEN_V_MON	MCP_TEMP	LVPS_TEMP	MCP_LOW_V_MON
-4.897804E0	4.962148E0	2.351257E1				9865E1	-2.50756E1
-4.903932E0	4.969808E0	2.35868E1				3711E1	-2.35466E1
-4.890144E0	4.96368E0	2.354557E1				57846E1	-1.073664E3
-4.897804E0	4.969808E0	2.368565E1				7485E1	-1.075499E3
-4.891676E0	4.968276E0	2.373502E1	2.546562E1	-1.730828E2	3.009712E1	2.633759E1	-1.074581E3
-4.900868E0	4.969808E0	2.377612E1	2.548148E1	-1.736944E2	3.005177E1	2.660757E1	-1.081615E3
-4.9024E0	4.959084E0	2.373502E1	2.57736E1	-1.709422E2	3.053687E1	2.69255E1	-1.081615E3
-4.891676E0	4.959084E0	2.380899E1	2.576574E1	-1.736944E2	3.015524E1	2.717354E1	-1.082226E3

Data type: ASCII_Real

Special Constants:

Missing: -9.999999E+09

Description: High voltage power supply board temperature.

Support Summary

- Support for PDS3 labels
 - ASCII and Binary data types
 - File, container, bit column, repetitions, items types
 - Supports various data types: IEEE, VAX, PC real, complex numbers and other obsolete data types
 - Supports tables defined across multiple label files
- Support for PDS4 labels
 - Table Delimited, Table Character, Table Binary types
 - Multiple Tables and Products defined in a single label
 - Groups and Packed Data Fields (FieldBits)
- Support for zipped data files
- Support for multiple tables defined in a label

Key Feature Comparison with other PDS table display tools

Key Features		Table Explorer	PPI Data Table Viewer	Orbital Data Explorer	LRO LEND PDS Data Viewer
Label Type	PDS3	✓	✓	✓	✓
	PDS4	✓			
Sorting		✓			
Filtering		✓			
Download Format	CSV	✓	✓		✓
	ZIP		✓		
	VOTable		✓		
	Raw	✓	✓	✓	
View type	Table	✓	✓		✓
	Autoplot		✓		
	Topcat		✓		
Shows Label Metadata		✓		✓	✓
Graphing Capability					✓
Other Software Required					✓

Table Explorer: <http://pdstools.arc.nasa.gov/pdsWeb/TableExplorer>

PPI Data Table Viewer: <http://pds-ppi.igpp.ucla.edu/search/index.jsp>

Orbital Data Explorer: <http://ode.rsl.wustl.edu>

LRO LEND PDS Data Viewer: <http://pds-geosciences.wustl.edu/missions/lro/lend.htm> (Windows only)

Extensive PDS Node Testing

A subset of the tabular data from the following archives were sampled randomly and loaded using our tool:

- The Planetary Atmospheres Data Node (<http://atmos.pds.nasa.gov/>)
 - PDS Geoscience Node – Washington University in St. Louis (<http://geo.pds.nasa.gov/>)
 - Planetary Plasma Interactions Node (<http://ppi.pds.nasa.gov/>)
 - Planetary Rings Node (<http://pds-rings.seti.org/>)
-
- These archives mostly contain PDS3 labels.
 - For PDS4 labels, the LADEE Archive was used:
http://pds-atmospheres.nmsu.edu/data_and_services/atmospheres_data/LADEE/mainr.html

More results coming soon

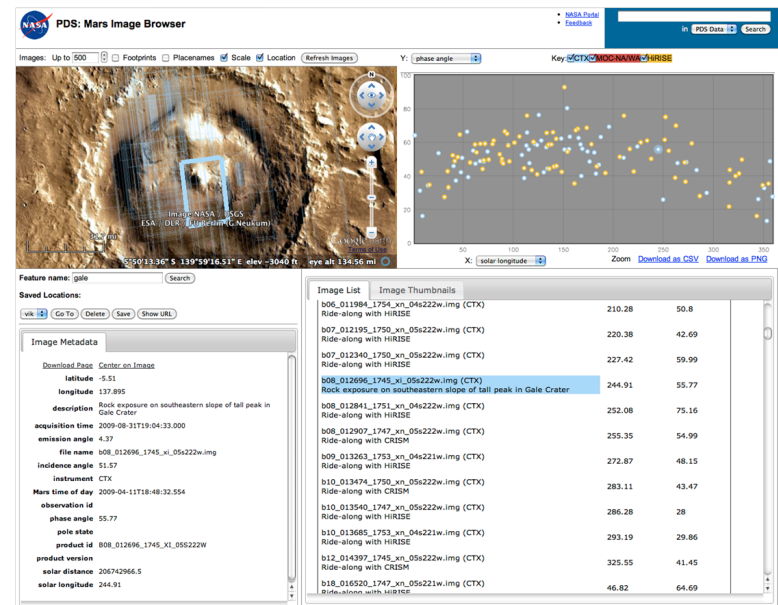
Other Available UCD Tools

LACE: Web-based structured editor for authoring PDS4 labels.

<http://pdstools.arc.nasa.gov/lace/>

Home	Validate Volume	Table Explorer	Resources
Validate Volume	Release Notes	Troubleshooting	About

Volume Explorer (ASTROM_0001)	Element Details	Options
<ul style="list-style-type: none"> ASTROM_0001 <ul style="list-style-type: none"> DATA <ul style="list-style-type: none"> DATAINFO.TXT SPICE <ul style="list-style-type: none"> DATAINFO.TXT HST01111994_01032002.LBL HST25041990_27021999.LBL VOLDESC.CAT 	<p>Name ASTROM_0001 (validated in 00:00:01)</p> <p>Size 63 Files, 7 Folders (1.197 MB) While the file navigator only displays files for whom errors, new values, or dictionary changes appear, the number of files and overall size is accurate for the entire volume.</p> <p>Problems 0 errors, 6 warnings, 0 info</p> <p>Test Results</p> <ul style="list-style-type: none"> Labels Parseable - All documents that should be labels were able to be evaluated as labels. Label Syntax Valid - All labels were syntactically valid. Labels Valid Against Dictionary - All labels are valid against the current PDS data dictionary. Valid Values - All values are non-empty and meet dictionary constraints such as length, type, format, and presence in a given list if applicable. Valid Keys - All keys are defined in the dictionary. Valid Objects - Object definitions are valid and contain only the required or optional children or properties. Valid Pointers - All pointers have the appropriate naming convention, point to a file that exists, and do not result in a circular reference if an "include" type pointer. Valid Line Lengths - All labels have valid line lengths. Note that this does not test for fixed line lengths at this time. It only tests for lines in excess of 80 chars. Valid Line Endings - All labels end in the appropriate line ending, CRLF. Valid Indexes - All indexed labels exist, all labels are indexed if required to be, and no labels are indexed if located in folders that do not require indexing. Products Labeled - All products have an associated label if required. Valid Tables - Tables match the table definitions in the associated labels. This only checks that the number of columns is consistent and the first row values can be cast to the types specified. Required Resources Exist - All required documents and folders are present in the volume. 	<p>generate report</p> <p>re-validate</p>



Mars Image Explorer: Tool to find, view and compare a set of images taken in the vicinity of a selected point of interest on Mars.

<http://pdstools.arc.nasa.gov/imagebrowser/search.html>

Volume validator: Tool to identify errors in PDS data sets and allows users to drill-down to see file-specific issues for correction.

<http://pdstools.arc.nasa.gov/pdsWeb/Validator>