PDS TABLE EXPLORER

A web-based visualization tool for viewing, filtering, and downloading PDS3 and PDS4 table data
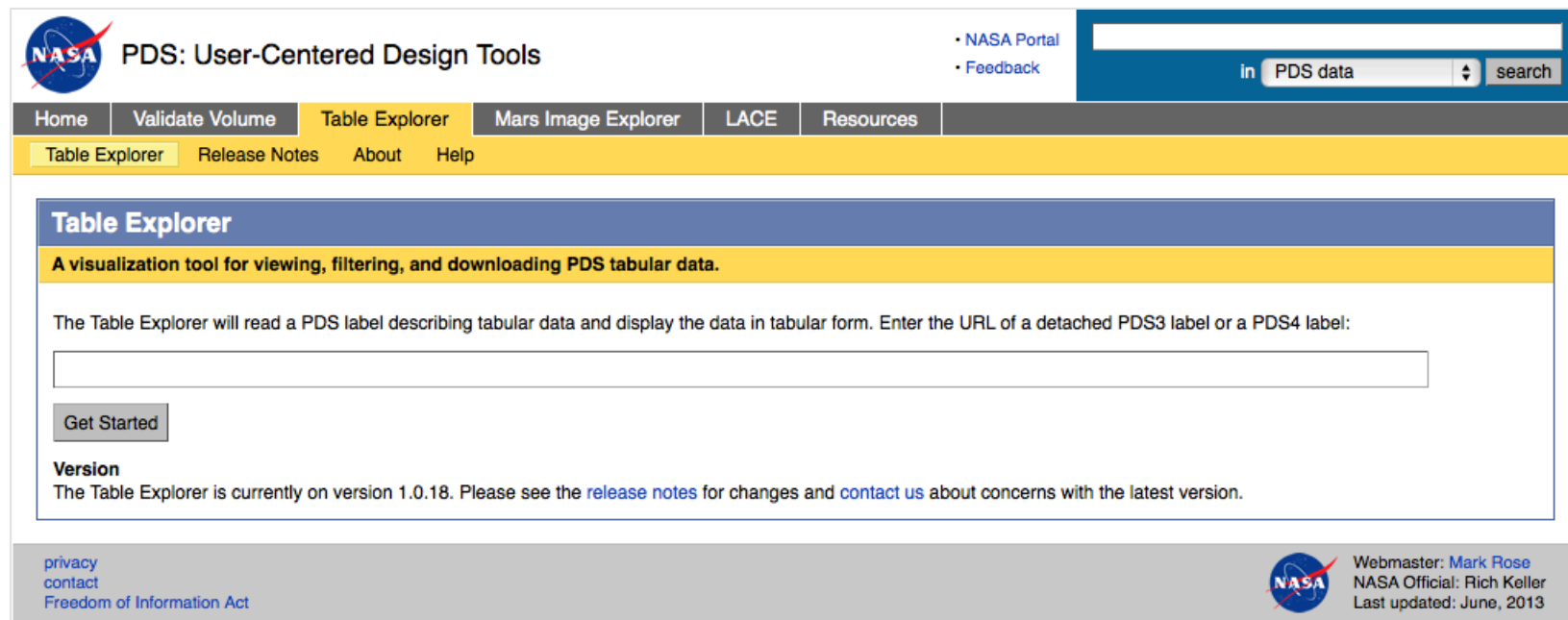
PDS User-Centered Design team

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:

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

PDS Table Explorer User Interface

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: 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
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
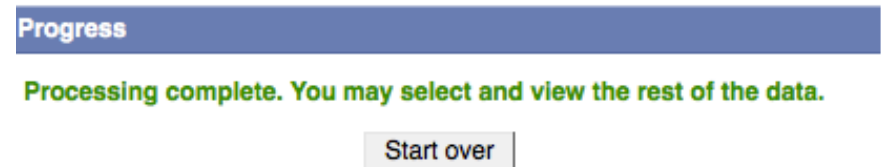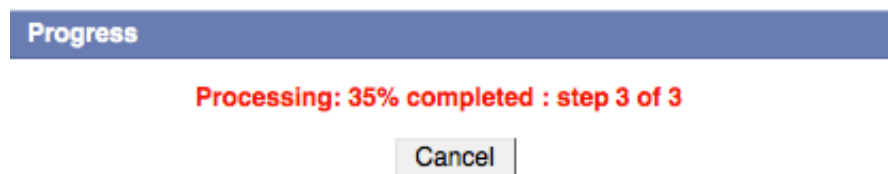
3. File and Status Info Pane

Displays current data processing progress and informative status messages
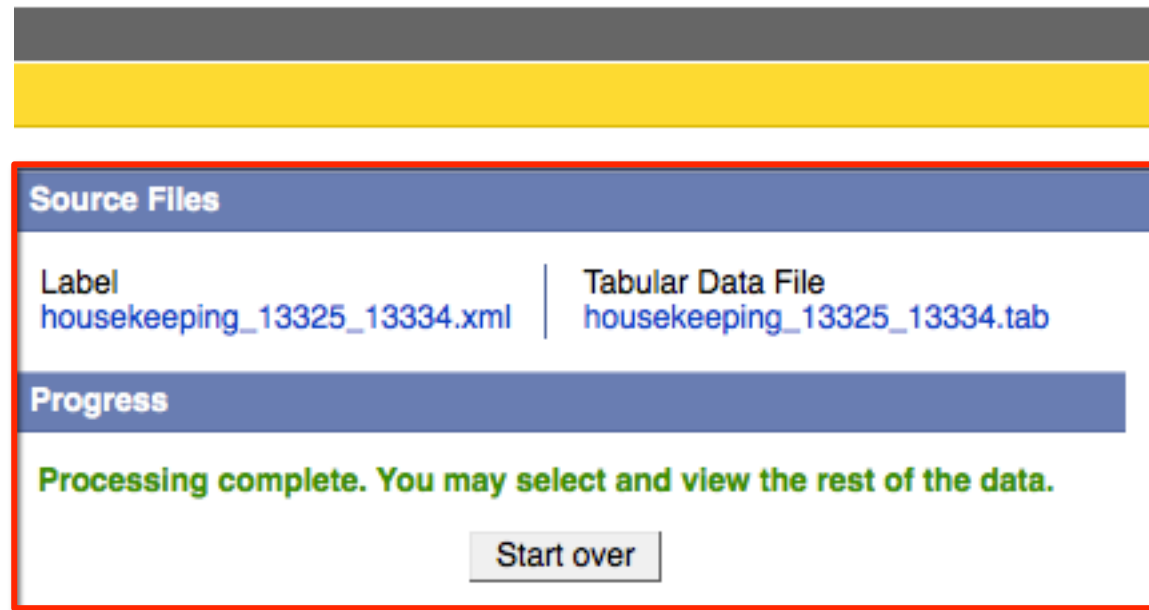
Typical status messages shown:

Other User Interface Features

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

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/

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