



 AHELP for CIAO 3.4

splot

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Synopsis

Causes the specified 2–D data to be displayed, with a surface plot, via ChIPS.

Syntax

```
sherpa> SPLOT [<num_plots>] <arg_1> [# [ID]] [<arg_2> [# [ID]] ...]
```

<num_plots> specifies the number of plotting windows to open within the ChIPS pane (default 1); that number sets the number of subsequent arguments. For each subsequent argument, # specifies the number of the dataset (default dataset number is 1), and the ID modifier is used for displaying background datasets, and then if and only if the Sherpa state object variable multiback is set to 1, i.e., if more than one background dataset is to be associated with a single source dataset. The ID modifier may be any unreserved string (e.g., A, foo, etc.), i.e., a string that is not a parsable command.

Description

The argument <arg_n> may be any of the following:

SPLOT Command Arguments

Argument	Displays
{{DATA DCOUNTS} {BACK BDCOUNTS}}	The source background data values
{ERRORS BERRORS}	The estimated total errors for the source background data values
{SYSERRORS BSYSERRORS}	The assigned systematic errors for the source background data values
{STATERRORS BSTATERRORS}	The estimated statistical errors for the source background data values
{{MODEL MCOUNTS} {BMODEL BMCOUNTS}}	The (convolved) source background model amplitudes
{DELCHI BDELCHI}	The sigma residuals of the source background fit: (data – model)/error
{RESIDUALS BRESIDUALS}	The absolute residuals of the source background fit: (data – model)
{RATIO BRATIO}	The ratio (data/model) for source background

{CHI SQU BCHISQU}	The contributions to the chi-square statistic from each source background data point
{STATISTIC BSTATISTIC}	The contributions to the current statistic from each source background data point
{WEIGHT BWEIGHT}	The statistic weight value assigned to each source background data point
{FILTER BFILTER}	The mask value (0 1) for each source background data point
<sherpa_model_stack>	The (unconvolved) model amplitudes for the specified model stack (SOURCE, {BACKGROUND BG}, or [B]NOISE)
<model_stack>	The (unconvolved) model amplitudes for the specified user-defined model stack
<sherpa_modelname>	The (unconvolved) amplitudes of the specified model component (e.g., GAUSS2D)
<modelname>	The (unconvolved) amplitudes of the specified model component (e.g., g)
{EXPMAP BEXPMAP}	The unfiltered source background 2-D EXPMAP file contents
{PSF BPSF}	The unfiltered source background 2-D PSF file contents

If there is no open plotting window when an SPLIT command is given, one will be created automatically.

If one issues the SPLIT following filtering, note the following: arbitrarily filtered data cannot be passed from Sherpa to ChIPS for display; the data grid must be rectangular. Therefore, surface plots are created in three steps: (1) the smallest possible rectangle is drawn around the noticed data; (2) within this rectangle, the <data to image> is transformed to <data to image> * filter; and (3) these transformed data are sent off to ChIPS for display.

The appearance of plots generated with this command can be changed by modifying the fields of certain state objects. See the ahelp for Sherpa or for sherpa.plot for more information.

NOTE: all ChIPS commands may be used from within Sherpa to modify plot characteristics. In order to view these changes, the REDRAW command must be issued.

The Display chapter of the Sherpa Manual has more information regarding data display capabilities, including modifying various plot characteristics.

Example 1

Display 2-D data with a surface plot:

```
sherpa> DATA 3 example2Da.dat ASCII 1 2 3
sherpa> SPLIT DATA 3
```

The SPLIT command plots dataset number 3 as a surface plot. Dataset number 3 must be a 2-D dataset.

Example 2

Display 2-D datasets with surface plots in multiple windows:

```
sherpa> DATA 1 example2Db.dat ASCII 1 2 3
```

```
sherpa> SPLOT 2 DATA 1 DATA 3
```

This command displays a surface plot of dataset number 1 (example2Db.dat) in the first window, and a surface plot of dataset number 3 (example2Da.dat) in the second window.

Bugs

See the [Sherpa bug pages](#) online for an up-to-date listing of known bugs.

See Also

sherpa

[close](#), [cplot](#), [fefplot](#), [getx](#), [gety](#), [image](#), [lplot](#), [open](#), [oplot](#), [ploty](#)

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URL:
<http://cxc.harvard.edu/ciao3.4/splot.html>
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