Chandra X-ray Center

AHELP for CIAO 3.4

coord

Context: sherpa

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Synopsis

Specifies the coordinate system for use in fits to 2–D images.

Syntax

```
sherpa> COORD [<dataset range> | ALLSETS] [<arg>]

where <dataset range> = #, or more generally #:#,#:#,..., such that #
specifies a dataset number, and #:# represents an inclusive range of
datasets; one may specify multiple inclusive ranges by separating them
with commas. The default dataset is dataset number 1.
```

Description

<arg> is either:

COORD Command Arguments

Argument	Coordinate System
{IMAGE	LOGICAL}	Logical coordinates: the bin numbers (1, 2, 3...)
PHYSICAL	Physical coordinates: a linear transformation of logical coordinates.
{WCS	WORLD}	World coordinates (RA,dec).

Issuing the COORD command with no argument causes Sherpa to display the current setting for the specified dataset number(s).

Note that if, e.g., a source model is defined before a switch of coordinate systems, it will be necessary either to issue the GUESS command to reset the initial parameter values and their ranges to more appropriate values, or to reset the values by hand.

Example

Fit data in physical coordinates:

```
sherpa> DATA example_img2.fits
sherpa> NOTICE FILTER "circle(425,343,30)"
sherpa> PARAMPROMPT OFF
sherpa> SOURCE = GAUSS2D[g]
sherpa> COORD
Coordinate setting for dataset 1: logical
sherpa> COORD PHYSICAL
sherpa> GUESS SOURCE
sherpa> COORD
Coordinate setting for dataset 1: physical
sherpa> g.fwhm = 1
sherpa> FIT
 LVMQT: V2.0
 LVMQT: initial statistic value = 1289.82
 LVMQT: final statistic value = 1176.13 at iteration 12
            g.fwhm  2.39494
            g.xpos  4010.48
            g.ypos  3927.48
            g.ampl  40.3545
```

Bugs

See the Sherpa bug pages online for an up–to–date listing of known bugs.

See Also

chandra
> guide

sherpa
> autoest, back, berrors, bsyserrors, data, dataspace, fakeit, feffile, group, guess, is_subtracted, load, load_arf, load_ascii, load_back_from, load_backset, load_dataset, load_fitsbin, load_image, load_inst, load_inst_from, load_pha, load_pha2, load_rmf, read, set_analysis, set_axes, set_backscale, set_coord, set_data, set_exptime, set_subtract, set_weights, setback, setdata, subtract, ungroup, unsubtract, use

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