URL: http://cxc.harvard.edu/ciao3.4/errors.html
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AHELP for CIAO 3.4

errors

Context: sherpa

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Synopsis

Defines an expression to be used to specify the statistical errors for source data.

Syntax

```
sherpa> ERRORS [<dataset range> | ALLSETS] = <errorExpr>

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 1.
```

Description

The error expression, <errorExpr>, may be composed of one, or more (algebraically−combined) of the following elements:

Component:	Description:
DATA	An input dataset
numericals	Numerical values
operators	+ − * / ( )

A few things to note:

- Error expressions cannot be defined without first reading in a source dataset.
- The errors can be specified in an input file; see READ ERRORS for more information.
- If the errors are not defined using ERRORS or input using READ ERRORS, then they are computed as defined for the current statistic; see the documentation on the command STATISTIC.

See the related command SYSERRORS.

The errors are accessible to the Sherpa/S−Lang module user via the functions get_errors and set_errors.

Example 1

Define an expression to be used for the errors. They are set to one−half of the data value in each bin.

```
sherpa> DATA example.dat
sherpa> ERRORS = (0.5)*(DATA)
```

Example 2

Define an expression to be used for the errors. They are set to be the sum of the datum and 2.7 in each bin.

```
sherpa> DATA example.dat
sherpa> ERRORS 1 = DATA + 2.7
```

Bugs

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

See Also

sherpa

berrors, bsyserrors, compute_errors, compute_statistic, covariance, ftest, get_paramest, get_paramestint, get_paramestlim, get_paramestreg, goodness, interval−projection, interval−uncertainty, list_paramest, mlr, projection, region−projection, region−uncertainty, restore_paramest, run_paramest, run_paramestint, run_paramestlim, run_paramestreg, set_errors, set_syserrors, staterrors, syserrors, uncertainty

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