



AHELP for CIAO 3.4

## get\_errors

Context: [sherpa](#)

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## Synopsis

Module functions to get the error estimates of source and background datasets.

## Syntax

```

Array_Type get_errors([Integer_Type])
Array_Type get_berrors([Integer_Type])
Array_Type get_full_errors([Integer_Type])
Array_Type get_full_berrors([Integer_Type])

Error Return Value: NULL

Arguments:

(1) data set number (default 1)
  
```

## Description

In a typical analysis involving module functions, a user will not seek to manipulate the axes (which are useful primarily for plotting), but to manipulate amplitudes (i.e.,  $y$  in the expression  $y = f(x_0, x_1, \dots, x_{(N-1)})$ .) A very simple example would be smoothing of data; a more complex example would be the setting of error estimates iteratively in a manner not supported by Sherpa. First the user would "get" the error array, then process it, then "set" it back into Sherpa.

These functions return arrays containing the current error estimates associated with input datasets. The ones without full in the name return arrays comprised of error estimates within the applied filter; those with full in the name retrieve the unfiltered error estimates.

(If the goal is to use these functions to manipulate data, and to set these data back into Sherpa, it is important not to change the filter in Sherpa between calling the get and set functions!)

Source and background error estimates may be displayed, e.g., via the Sherpa plotting commands LPLOT ERRORS and LPLOT BERRORS.

## Example

```

sherpa> DATA spec.dat
sherpa> e = get_errors(1)
  
```

```
sherpa> printarr(e,2)
8.72981
7.8374
sherpa> e[0] = 5
sherpa> () = set_errors(1,e)
sherpa> write errors
Write X-Axis: Bin  Y-Axis: Errors
      1          5
      2      7.8374
```

## Bugs

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

## See Also

*chandra*

[guide](#)

*sherpa*

[get analysis](#), [get arf axes](#), [get axes](#), [get coord](#), [get data](#), [get energy axes](#), [get filter](#),  
[get filter expr](#), [get fit](#), [get fluxed spectrum](#), [get ftest](#), [get metadata](#), [get photon axes](#),  
[get photon energy axes](#), [get photon wave axes](#), [get qvalue](#), [get raw axes](#), [get record](#), [get source](#),  
[get statistic](#), [get stats](#), [get syserrors](#), [get wave axes](#), [get weights](#), [record](#), [save](#), [write](#)

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URL:  
[http://cxc.harvard.edu/ciao3.4/get\\_errors.html](http://cxc.harvard.edu/ciao3.4/get_errors.html)  
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