



AHELP for CIAO 3.4

## get\_data

Context: [sherpa](#)

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## Synopsis

Module functions to get the amplitudes of source and background datasets.

## Syntax

```

Array_Type get_data([Integer_Type])
Array_Type get_back([Integer_Type])
Array_Type get_full_data([Integer_Type])
Array_Type get_full_back([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  $y$ -values of the input datasets. The ones without full in the name return arrays comprised of data within the applied filter; those with full in the name retrieve the unfiltered datasets.

(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 data may be displayed, e.g., via the Sherpa plotting commands L PLOT DATA and L PLOT BACK.

## Example

```
sherpa> data example.dat
sherpa> d = get_data(1)
sherpa> printarr(d,2)
59
46
sherpa> d[0] = 80
sherpa> () = set_data(1,d)
sherpa> write data
Write X-Axis: Bin   Y-Axis: Flux (Counts)
           1       80
           2       46
```

## 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 energy axes](#), [get errors](#), [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\\_data.html](http://cxc.harvard.edu/ciao3.4/get_data.html)  
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