



AHELP for CIAO 3.4

## set\_data

Context: [sherpa](#)

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## Synopsis

Set source and background data using the S-lang module function in Sherpa.

## Syntax

```
Integer_Type set_data([Integer_Type, ]Array_Type)
Integer_Type set_back([Integer_Type, ]Array_Type)
```

Success/Error Return Values: 1/0

Arguments:

- (1) Dataset number (default 1)
- (2) An array of source/background data amplitudes

Note that if only one argument is provided, it is assumed to be an array, and the dataset is assumed to be dataset 1.

## Description

The `set_data` and `set_back` functions allow the user to assign new source and background data amplitudes (for example number of counts) (i.e., the y values in  $y = f(x)$ ) to Sherpa datasets.

Note that:

- The input array length must match the number of bins in the filtered dataset; consequently, if one's goal is to use these functions in data manipulation, it is important not to change the filter in Sherpa between any call to, e.g., `get_data` and `set_data`!
- The input array is typecast to match the type of its associated dataspace (see, e.g., `set_axes` for a definition of dataspace). For instance, if dataset 3 is of `Double_Type`, then when `set_data(3,<array>)` is run, the array is typecast to `Double_Type` if necessary.

## Example

Retrieve data from Sherpa, process it, and replace:

```

sherpa> DATA spec.dat
sherpa> d = get_data(1)
sherpa> print(d)
2
8
12
20
18
27
....
sherpa> d -= 10
sherpa> print(d)
-8
-2
2
10
8
17
....
sherpa> () = set_data(,d)

```

In this example, data are read into Sherpa in the first command and the counts values are retrieved using `get_data`. Then, 10 counts are subtracted off every element of the array `d`; the new array is then sent to Sherpa, where it overwrites the old array. `print` command shows the first numbers of the array values.

## 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](#), [coord](#), [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 exptime](#), [set subtract](#), [set weights](#), [setback](#), [setdata](#), [subtract](#), [ungroup](#), [unsubtract](#), [use](#)

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URL:  
[http://cxc.harvard.edu/ciao3.4/set\\_data.html](http://cxc.harvard.edu/ciao3.4/set_data.html)  
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