URL: http://cxc.harvard.edu/ciao3.4/set_data.html
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*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 dataspaces). 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 retrived 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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