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AHELP for CIAO 3.4   **get_weights**   Context: sherpa

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Synopsis

Module functions to get the statistical weights of source and background datasets.

Syntax

```
Array_Type get_weights([Integer_Type])
Array_Type get_bweights([Integer_Type])
Array_Type get_full_weights([Integer_Type])
Array_Type get_full_bweights([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 $y = f(x\_0, x\_1,...,x\_(N-1))$.) 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 statistical weights associated with input datasets. The ones without full in the name return arrays comprised of statistical weights within the applied filter; those with full in the name retrieve the unfiltered statistical weights.

(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 statistical weights may be displayed, e.g., via the Sherpa plotting commands LPLOT WEIGHTS and LPLOT BWEIGHTS.

Example

```
sherpa> DATA spec.dat
sherpa> w = get_weights(1)
```

```
sherpa> printarr(w,2)
1
1
sherpa> e[0] = 0.5
sherpa> () = set_weights(1,e)
sherpa> write weights
Write X-Axis: Bin  Y-Axis: Errors
           1          0.5
           2           1
```

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_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, record, save, write