



 AHELP for CIAO 3.4

get_paramestreg

Context: [sherpa](#)

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Synopsis

Module functions to retrieve the value and statistic arrays from the most recent run of a parameter estimation method

Syntax

```
Struct_Type get_regunc()
Struct_Type get_regproj()

Error Return Value: NULL
```

Description

These functions retrieve information from the most recent run of the INTERVAL–UNCERTAINTY or run_intunc, and INTERVAL–PROJECTION or run_intproj parameter estimation methods, respectively.

Each returns a structure with seven fields:

- x0: the grid of values for one parameter;
- x1: the grid of values for the second parameter;
- y: the statistics as a function of parameter values;
- levels: an array containing the statistic value corresponding to each contour;
- name: a two–element array listing the parameter names;
- bfit: a two–element array listing the best–fit values of the parameters; and
- config: a Struct_Type variable containing the parameters used to calculate x0, x1, and y.

Example

Fit a dataset; get information about chi–square as a function of power–law amplitude p.ampl and slope p.gamma

```
sherpa> DATA spec.dat
sherpa> PARAMPROMPT OFF
```

```

sherpa> POLY[p]
sherpa> THAW p.c1 p.c2 p.c3
sherpa> SOURCE = p
sherpa> FIT
LVMQT: V2.0
LVMQT: initial statistic value = 82.2297
LVMQT: final statistic value = 62.2247 at iteration 3
      p.c0  61.4774
      p.c1  -0.380228
      p.c2   0.00993229
      p.c3  -7.01741e-05

sherpa> REGPROJ p.c0 p.c1
Region-Projection: computing grid size with covariance...done.
                  outer grid loop 20% done...
                  outer grid loop 40% done...
                  outer grid loop 60% done...
                  outer grid loop 80% done...

Minimum: 62.2247
Levels are: 64.5207 68.4057 74.0547
[...plot displayed...]
sherpa> regproj = get_regproj()
sherpa> print(regproj)
x0      = Float_Type[100]
x1      = Float_Type[100]
y       = Float_Type[100]
levels  = Float_Type[3]
name    = String_Type[2]
bfit    = Double_Type[2]
config  = sherpa_VisParEst_State

```

CHANGES IN CIAO 3.1

The structures returned by these functions contain additional fields – levels, name, bfit, and config – which are described above.

Bugs

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

See Also

sherpa

[berrors](#), [bsyserrors](#), [compute_errors](#), [compute_statistic](#), [covariance_errors](#), [ftest](#), [get_paramest](#), [get_paramestint](#), [get_paramestlim](#), [goodness](#), [interval-projection](#), [interval-uncertainty](#), [list_paramest](#), [mlr](#), [projection](#), [region-projection](#), [region-uncertainty](#), [restore_paramest](#), [run_paramest](#), [run_paramestint](#), [run_paramestlim](#), [run_paramestreg](#), [set_errors](#), [set_syserrors](#), [staterrors](#), [syserrors](#), [uncertainty](#)