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

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Synopsis

Controls the integration of model components.

Syntax

```
sherpa> <modelname> INTEGRATE {ON | OFF}

where <modelname> is a name that has been given to a model component by
the user.
```

Description

Models are integrated over bins in energy−space or wavelength−space (before being folded through an instrument), or over bins in counts−space (if no instrument model is specified). If the OFF option is chosen then, for non−binned data the model values at the entered data points are used, while for binned data the model values at the left side of the bin are used in the fitting.

This command cannot be applied to XSPEC source models or to instrument models. Also, changing the integration status of a model component will have no affect if the data are not binned.

One can use the SHOW command to determine whether a model component is currently being integrated.

The user must be careful not to define an unacceptable mixture of additive/integrated and multiplicative/non−integrated model components, such as by adding two model components with different integration statuses. Sherpa will issue a warning when it detects such an unacceptable mixture.

See also the Sherpa Manual, Chapter "Sherpa Models", Subsection "Source Model Integration".

Example 1

Turn off integration for a model component:

```
sherpa> POW[modelc]
modelc.gamma parameter value [0]
modelc.ref parameter value [1]
modelc.ampl parameter value [1]
```

```
sherpa> modelc INTEGRATE OFF
```

Example 2

Turn off integration for a power−law model component:

```
sherpa> POWLAW1D[p]
sherpa> SHOW p
powlaw1d[p]  (integrate: on)
    Param    Type      Value         Min         Max                Units
    -----    ----      -----         ---         ---                -----
 1  gamma thawed          0          -10          10
 2    ref frozen          1-3.4028e+38 3.4028e+38
 3   ampl thawed          1         1e-20 3.4028e+38
sherpa> p INTEGRATE OFF
sherpa> SHOW p
powlaw1d[p]  (integrate: off)
    Param    Type      Value         Min         Max                Units
    -----    ----      -----         ---         ---                -----
 1  gamma thawed          0          -10          10
 2    ref frozen          1-3.4028e+38 3.4028e+38
 3   ampl thawed          1         1e-20 3.4028e+38
```

Bugs

See the Sherpa bug pages online for an up−to−date listing of known bugs.

See Also

sherpa

autoest, background, create, create_model, createparamset, fit, freeze, get_defined_models, get_model_params, get_models, get_num_par, get_par, get_stackexpr, getx, gety, guess, instrument, is_paramset, jointmode, kernel, lineid, linkparam, mdl, modelexpr, modelstack, nestedmodel, noise, paramprompt, paramset, pileup, rename, run_fit, set_par, set_paramset, set_stackexpr, source, thaw, truncate, unlink