



## Fitting

*Sherpa* provides extensive facilities for modeling and fitting data. The topics here range from basic fits using source spectra and responses to more advanced areas such as simultaneous fits to multiple datasets, accounting for the effects of pileup, and fitting spatial and grating data.

### • Spectral (1-D) Data

- ◆ [Introduction to Fitting PHA Spectra](#)
- ◆ [Changing the grouping scheme of a dataset within Sherpa](#)  
Uses: the `sherpa_utils.sl` S-Lang script
- ◆ [Introduction to Fitting ASCII Data with Errors: Single-Component Source Models](#)
- ◆ [Fitting PHA Data with Multi-Component Source Models](#)
- ◆ [Independent Background Responses](#)
- ◆ [Simultaneously Fitting Two Datasets](#)
- ◆ [Simulating 1-D Data: the Sherpa FAKEIT Command](#)
- ◆ [Simulating 1-D Data: the S-lang Script `simspec`](#)  
Uses: the `simspec` script
- ◆ [Simulation for Suzaku: Evaluate HXD systematic errors](#)
- ◆ [Using A Pileup Model](#)
- ◆ See also: a [comparison, for low pileup fractions, of the pileup models in Sherpa and XSpec](#) with that in ISIS.

### • Spatial (2-D) Data

- ◆ [Fitting FITS Image Data](#)  
Uses: the `sherpa_plotfns.sl` S-Lang script
- ◆ [Using an Exposure Map in Fitting Image Data](#)
- ◆ [Using a PSF Image as the Convolution Kernel](#)
- ◆ See also: the [Obtain and Fit a Radial Profile](#) thread

### • Grating Data

- ◆ [Fitting Grating Data](#)
- ◆ [Fitting Multiple Orders of HRC-S/LETG Data](#)
- ◆ [GUIDE: Fitting and Identifying Spectral Lines](#)

## Fitting Threads – CIAO 3.4