Chandra X-ray Center

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