Chandra X-ray Center

CIAO's Modeling & Fitting Application

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These are the webpages relative to Sherpa in the CIAO 3.4 release (18 December 2006). They are no longer actively updated however the CXC will continue limited support to CIAO 3.4 for the near future.

A complete new version of Sherpa is included in CIAO 4.1, released on 15 December 2008. This version gives users full access to internal data structures - within the Python and S-lang environments - that allows a great flexibility in data analysis and modeling. The About the Sherpa Release page highlights new items and outlines differences in comparison to Sherpa 3.4.

Sherpa in CIAO 3.4

The Chandra X-Ray Center introduced version 3.4 of the CIAO software package on 18 December 2006.

There was no development done on *Sherpa* for CIAO 3.4.

About *Sherpa*

Sherpa, CIAO's generalized modeling and fitting engine, allows users to construct complex models and to fit models to data in *N* dimensions. It has a library of optimization methods and fit statistics. *Sherpa* is "domain independent", i.e. it does not require particular axes to be fit. It is also mission independent, with no particular tie to Chandra data. For example, it has been used to analyze HST spectra.

Sherpa supports S-Lang, an interpreted programming language that can be used for scripting and data manipulation. Existing S-Lang scripts and utilities are available for download on the CIAO scripts page.

The GUIDE package within *Sherpa* links *Sherpa* results (stored in a MDL file) to the ATOMDB, enabling the identification of spectral lines and the use of their properties in further fitting.

In order to run *Sherpa*, you must download and install CIAO.

Citing *Sherpa* in a Publication

If you are writing a paper and would like to cite *Sherpa*, we recommend the following paper:

Sherpa: a mission-independent data analysis application
P. E. Freeman, S. Doe, A. Siemiginowska

SPIE Proceedings, Vol. 4477, p.76, 2001
PostScript file, 12 pages

The specific version of CIAO and CALDB (if applicable) used for the analysis should be mentioned as well. Further guidelines are available from the Acknowledgment of Use of Chandra Resources.

URL:
http://cxc.harvard.edu/sherpa3.4/index.html
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