



CIAO's Modeling & Fitting Application

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NEW *The Chandra X-Ray Center released version 4.0 of the Chandra Interactive Analysis of Observations (CIAO) software package on 14 December 2007.*

CIAO 4.0 is a full installation of the CIAO software. It features an experimental (beta) version of the new Sherpa, the CIAO modeling and fitting package. Details and documentation on the new system are available from the [Sherpa Beta website](#).

CIAO 3.4 is still fully supported.

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](#).

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