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## Sherpa Publications

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Postscript versions of Chandra-related publications, grouped by subject, are available for download here (note that the files are `gzip`-compressed).

[General](#) | [Statistics](#)

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### 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*  
[SPIE\\_2001.ps.gz](#), 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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### General

*New Elements of Sherpa, CIAO's Modeling and Fitting Tool*

P. E. Freeman, S. Doe, A. Siemiginowska  
*ADASS X, ASP Conference Series, Vol. 238, p.483, 2001*  
[newsherpa.ps.gz](#), 4 pages

*Fitting and Modeling of AXAF Data with the ASC Fitting Application*

S. Doe, M. Ljungberg, A. Siemiginowska, W. Joye  
*ADASS VII, ASP Conference Series, Vol. 145, 1998*  
[ascfitting.ps.gz](#), 4 pages

*Fitting and Modeling in the ASC Data Analysis Environment*

S. Doe, A. Siemiginowska, W. Joye, J. McDowell  
*ADASS VI, ASP Conference Series, Vol. 125, 1997*  
[daenvironment.ps.gz](#), 4 pages

*AXAF Data Analysis Challenges*

A. Siemiginowska, *et al.*  
*Statistical Challenges in Modern Astronomy II, 1997*  
[challenges.ps.gz](#), 16 pages

*Advances in Chandra Data Analysis*

N. RA. Wolk, M. Noble, S. Doe  
[advances.ps.gz](#), 4 pages

## Statistics

### General

*Statistical Challenges in Astronomy*,  
E. D. Feigelson, G. J. Babu  
Springer–Verlag (publisher), 2003  
[amazon.com](http://amazon.com)

### Parameter Estimation and Model Comparison

*Energy Spectra of X–ray Clusters of Galaxies*

Y. Avni  
*ApJ*, 210, 642, 1976  
[energyspec.ps.gz](http://energyspec.ps.gz), 5 pages

*Parameter Estimation in Astronomy through Application of the Likelihood Ratio*

W. Cash  
*ApJ*, 228, 939, 1979  
[likelihood.ps.gz](http://likelihood.ps.gz), 9 pages

*Generation of Confidence Intervals for Model Parameters in X–ray Astronomy*

W. Cash  
*A&A*, 52,307, 1976  
[conf\\_intervals.ps.gz](http://conf_intervals.ps.gz), 2 pages

*Parameter Estimation in X–ray Astronomy*

M. Lampton, B. Margon, S. Bowyer  
*ApJ*, 208, 177, 1976  
[paramest.ps.gz](http://paramest.ps.gz), 14 pages

*Analyzing Gamma–ray Burst Spectral Data*

T. J. Loredo, R. I. Epstein  
*ApJ*, 336, 896, 1989  
[grb.ps.gz](http://grb.ps.gz), 24 pages

*Chi–squared and C Statistic Minimization for Low Count per Bin Data*

J. A. Nousek, D. R. Shue  
*ApJ*, 342, 1207, 1989  
[chisq\\_cstat.ps.gz](http://chisq_cstat.ps.gz), 5 pages

*Statistics, Handle with Care: Detecting Multiple Model Components with the Likelihood Ratio Test*

R. Protassov, D. A. van Dyk, A. Connors, V. L. Kashyap, A. Siemiginowska  
*ApJ*, 571, 545, 2002  
[astro-ph/0201547](http://astro-ph/0201547)

*Parameter Estimation in X–ray Astronomy using Maximum Likelihood*

K. Wachter, R. Leach, E. Kellogg  
*ApJ*, 230, 274, 1979  
[paramest2.ps.gz](http://paramest2.ps.gz), 17 pages

## X-ray Spectra and Detectors

*The Formal Underpinnings of the Response Functions Used in X-Ray Spectral Analysis*

J. E. Davis

*ApJ*, 548, 1010, 2001

[underpinnings.ps.gz](#), 22 pages

*The Analysis of X-ray Spectra*

P. Gorenstien, H. Gursky, G. Garmire

*ApJ*, 153, 885, 1968

[xray\\_spectra.ps.gz](#), 14 pages

*The Direct Deconvolution of X-ray Spectra*

S. M. Kahn, R. J. Blissett

*ApJ*, 238, 417, 1980

[deconvolution.ps.gz](#), 18 pages

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