



AHELP for CIAO 3.4

chicvar

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Synopsis

Chi-square statistic with constant variance computed from the counts data.

Description

In some applications, analysts have seen fit to assume that the variance is constant for each bin. For this choice of statistic, the variance is assumed to be the mean number of counts, or

$$\sigma(i)^2 = (1/N) * (\sum_{j=1}^N N(j,S) + [A(S)/A(B)]^2 N(j,B) ,$$

where N is the number of on-source (and off-source) bins included in the fit. The background term appears only if a background region is specified and background subtraction is done.

See CHISQUARE for more information, including definitions of the quantities shown above.

Example

Specify the fitting statistic and then confirm it has been set.

```
sherpa> STATISTIC CHI CVAR
sherpa> SHOW STATISTIC
Statistic:                Chi-Squared Constant Variance
```

Bugs

See the [Sherpa bug pages](#) online for an up-to-date listing of known bugs.

See Also

sherpa

[bayes](#), [cash](#), [chidvar](#), [chigehrels](#), [chimvar](#), [chiprimini](#), [chisquare](#), [cstat](#), [get_stat_expr](#), [statistic](#), [truncate](#), [userstat](#)

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URL:
<http://cxc.harvard.edu/ciao3.4/chicvar.html>
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