URL: http://cxc.harvard.edu/ciao3.4/chimvar.html
Last modified: December 2006

AHELP for CIAO 3.4

chimvar

Context: sherpa

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Synopsis

Chi−square statistic with variance computed from model amplitudes.

Description

This statistic is equivalent to CHI DVAR, except that the variance is estimated using the background and source model amplitudes rather than the observed counts data:

```
sigma(i)^2 = S(i) + [A(S)/A(B)]^2 B(i,off) ,
```

where B(i,off) is the background model amplitude in bin i of the off−source region. See CHISQUARE for more information, including definitions of the quantities shown above.

Note on Background Subtraction

The background should not be subtracted from the data when this statistic is used. CHI MVAR underestimates the variance when fitting background−subtracted data.

Example

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

```
sherpa> STATISTIC CHI MVAR
sherpa> SHOW STATISTIC
Statistic:           Chi-Squared Model Variance
```

Bugs

See the Sherpa bug pages online for an up−to−date listing of known bugs.

See Also

sherpa

bayes, cash, chicvar, chidvar, chigehrels, chiprimini, chisquare, cstat, get_stat_expr, statistic, truncate, userstat

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