

URL: http://cxc.harvard.edu/ciao3.4/bugs/lightcurve.html Last modified: 21 November 2006

## **Bugs: lightcurve**

This tool has been deprecated as of CIAO 3.0; use <u>dmextract</u> instead.

## **Bugs**

- 1. The background GTI is taken to be the same as the input GTI.
- 2. lightcurve can only properly deal with unrotated, rectangular regions.

If a circle (or any complex region) is given, the area calculated will be the area of a rectangle which completely includes this region (called the "bounding box"). This principally affects background–subtracted lightcurves by overestimating the contribution of the background. The final effect is to give artificially *high* count rates.

## Workarounds:

- 1. Obtain count rates with any region, using the tool <u>dmextract</u>.
- 2. If you *insist* on using lightcurve, one could obtain background subtracted lightcurves by extracting lightcurves for source and background *individually*. Then use <u>dmtcalc</u> to scale and subtract the background lightcurve from the source. Note that the scaling would need to account for the original error of casting a circle into a square.

The Chandra X–Ray Center (CXC) is operated for NASA by the Smithsonian Astrophysical Observatory. 60 Garden Street, Cambridge, MA 02138 USA. Smithsonian Institution, Copyright © 1998–2006. All rights reserved.

URL: <u>http://cxc.harvard.edu/ciao3.4/bugs/lightcurve.html</u> Last modified: 21 November 2006