Chandra X-ray Center

Bugs: lc_clean.sl

`lc_clean.sl` is not a CIAO tool; it is a script which is available for download from the Scripts page.

There are currently no known bugs.

A list of bugs fixed in CIAO 3.4 is included at the end of this document.

Bugs fixed in CIAO 3.4

The following is a list of bugs that were fixed in the CIAO 3.4 software release.

1. *Use of time information by `dmgti`, which is called by `lc_clean.sl`, causes filter to appear shifted.*

   `dmgti` uses the TIMEPIXR and TIMEDEL keywords to modify the TIME column when creating GTI files. TIMEPIXR defines whether or not the TIME column should be taken to mean the beginning (TIMEPIXR=0), the middle (TIMEPIXR=0.5) or end (TIMEPIXR=1) of the bin. TIMEDEL records the time resolution of the data; this is the bin size between rows for a binned dataset or the resolution of the time stamp for event lists. Refer to "ahelp chandra times" for further details on the time information in Chandra data.

   The way that `dmgti` uses the time information may result in a filter that appears shifted from the expected times for files where TIMEPIXR is not equal to 0. This is generally seen when creating filters for lightcurves.

   Workaround:

   To get the desired filter when working with lightcurves, rename the TIME_MIN column in the lightcurve input to dmgti to TIME. This means that the GTI filter will actually be determined using the TIME_MIN values.

   Assume that the original lightcurve created by dmextract is called "lc.fits". This dmcopy command

   1. copies the TIME column to TIME_ORIG
   2. copies the TIME_MIN column to TIME
   3. copies the rest of the columns ("*") to the output file as–is

   ```
   unix% dmcopy "lc.fits[cols TIME_ORIG=TIME,TIME=TIME_MIN,*]" lc_cols_new.fits
   ```

   Then use the new lightcurve file as input to `lc_clean.sl`.

   For more information on working with lightcurves, refer to the CIAO Timing Threads.