URL: http://cxc.harvard.edu/ciao3.3/watchout.html
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CIAO "Watch Out" Page

This page lists *noteworthy* items and issues about the CIAO 3.3 release. For the full list of known issues please review the:

- CIAO bug list
- *Sherpa* bug list
- CIAO Frequently Asked Questions page
- CXC HelpDesk

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CIAO 3.3 and CALDB 3.2.0 Released

The CIAO 3.3 software release includes significant changes in error calculations in `dmextract` and `dmgroup`. There are several new tools for reprojecting files and a new script for extracting ACIS spectra. Read the release notes for full details.

CALDB version 3.2.0 has also been released; see the release notes for details.

CIAO 3.3 requires that you have at least version 3.1.0 of the CALDB. We recommend that you upgrade to CALDB 3.2.0 in order for your analysis to keep pace with the current calibration standards.

Both CIAO and the CALDB have been patched since the initial releases. See the CIAO Download page for the newest available versions.

How CIAO 3.3 and CALDB 3.2.0 Affect Your Analysis

A section at the beginning of the CIAO 3.3 release notes highlights how CIAO 3.3 and CALDB 3.2.0 affect analyses that are in progress.

Updated: Removal of support for QPOE files in CIAO

The CXC will end the support of PROS−style QPOE files as of the CIAO 4 release. These files are currently only supported in the Solaris version of CIAO.

Installing CIAO

Support for gzip'ed files

Due to licensing restrictions we are unable to distribute CIAO with support for gzip'ed FITS files enabled. If you can comply − as an end user − with the terms of the GNU General Public License you can enable support for these files by using the configure switch

```
unix% ./configure --with-gz
```

at installation time. Please see the README file that comes with the CIAO distribution for further information.

XANADU environment variable

The CIAO startup scripts set the environment variable `XANADU` to point to the directory `$ASCDS_INSTALL/ots/lheasoft`. This may cause problems for users who have already set this variable to a different value. (For example, after CIAO has started, XSPEC will look for model data

files in $ASCDS_INSTALL/ots/lheasoft, which may be undesirable.)

To work around this issue, users can reset the XANADU variable after starting CIAO. It may be convenient to create an alias that does this automatically. For example, C−shell users can add an alias like this to their $HOME/.cshrc file:

```
alias ciao "source /path/to/ciao/bin/ciao.csh; setenv XANADU /correct/path/here"
```

libgcc_s.so.1 packaged with CIAO

The libgcc_s.so.1 file is packaged with CIAO for users who do not have it installed on their system. If the library is already installed on the system, a harmless warning is printed when exiting *ChIPS*:

```
chips> exit
libgcc_s.so.1 must be installed for pthread_cancel to work
```

To avoid this warning, rename the CIAO copy of the library ($ASCDS_INSTALL/lib/libgcc_s.so.1) and the version available on the system will be used in its place.

ds9 on Mac OS X 10.2

CIAO 3.3 contains ds9 v4.0b7, which runs on OS X 10.3 or higher. If you are using OS X 10.2, you will need to customize your installation to use ds9 v3.0.3 (also packaged with the CIAO 3.3 software).

```
unix% cd $ASCDS_INSTALL/ots/saord/ds9_dir
unix% mv ds9 ds9.4.0
unix% mv ds9.3.0.3 ds9
```

wget packaged with CIAO

The wget utility is packaged with CIAO as it is required for obsvis to function properly. It is named cxcwget in the tarfiles.

If wget is available on your system, CIAO uses that version. Otherwise, cxcwget is renamed to wget at the time of installation so that obsvis may use it when necessary.

Users should no longer have to manually rename the $ASCDS_INSTALL/contrib/bin/wget file.

General

Incorrect exposure time from merged event files

When multiple event files that have different ranges of exposure numbers (expno column) are merged, the output file will have more than one GTI block for each chip. This causes incorrect exposure values later in the analysis, as the CIAO tools cannot use multiple GTI blocks for a single chip.

Further details and a workaround to this problem are available on the dmmerge bug page.

Error Calculations in dmextract and dmgroup

There have been many changes to the error calculations in the dmextract and dmgroup tools.

◊ **Modified dmextract parameter values for calculating the statistical errors**

The parameter value "poisson" for calculating the statistical errors has been renamed to "gehrels" to reflect the Gehrels equation used with this option. The default setting for the error and bkgerror parameters is now error="gaussian".

◊ **Changes to the header keywords in PHA files created by dmextract**

The `POISSERR` keyword is linked to the error parameter setting. For error="gaussian", the PHA output file has `POISSERR=TRUE` and a `STAT_ERR` column ***is not*** created. For error="gehrels", the header in the PHA output file is set to `POISSERR=FALSE` and a `STAT_ERR` column ***is*** created.

◊ **Changes to the error calculations in GRP_STAT_ERR column by dmgroup**

If the `errcolumn` parameter is left blank (the default), `dmgroup` calculates the `GRP_STAT_ERR` column by assuming `SQRT(GRP_DATA)`.

Fixes to the region library bugs

A number of bugs have been fixed in CIAO 3.3 in the calculation of the areas of composite regions. For details on the changes, refer to the Libraries: regionlib section of the release notes.

Conflicts with Other Software Packages

There are some known conflicts between CIAO and other software or system libraries and tools. Issues not covered in this "Watch Out" page are listed on the "Other Software Packages" bug page.

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