Chandra X-ray Center

CIAO "Watch Out" Page

This page lists *noteworthy* items and issues about the CIAO 3.4 release. For the full list of known issues please review the:

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

Installing CIAO | General

CIAO 3.4 and CALDB 3.3.0 Released

The CIAO 3.4 and CALDB 3.3.0 releases primarily consist of changes related to the CTI corrections. The CTI-adjustment algorithm now accommodates the newly calibrated serial CTI on the back-illuminated CCDs. This is in addition to the continued support for parallel CTI. The CIAO release also contains two new tools for working with HRC data (`hrc_build_badpix`, `hrc_dtfstats`) and the ability to update WCS in non-Chandra images (`reproject_aspect`, `wcs_match`, `wcs_update`). Significant work has been done on the tool `psf_project_ray`, which has four new parameters. Plus the usual bug fixes to the Data Model library and several CIAO tools. Read the CIAO 3.4 release notes and CALDB 3.3.0 release notes for full details.

CALDB 3.3.0 is required for the proper operation of CIAO 3.4. Likewise, do not update to CALDB 3.3.0, unless you are using CIAO 3.4.

How CIAO 3.4 and CALDB 3.3.0 Affect Your Analysis

A section at the beginning of the CIAO 3.4 release notes highlights how CIAO 3.4 and CALDB 3.3.0 affect analyses that are in progress.

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 packaging of the `libgcc_s.so.1` file with CIAO 3.4 was changed so that Linux users will no longer get this error upon exiting *ChIPS*:

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

Most modern version of Linux come with the `libgcc_s.so.1` file already installed, so the version packaged with CIAO is named differently to avoid conflicts.

If you are using an older version of Linux with the Redhat 8 build, you may instead see the following error message when trying to run *ChIPS*:

```
unix% chips
chips: error while loading shared libraries: libgcc_s.so.1:
cannot open shared object file: No such file or directory
```

If you get this message, it means the file is not on your system. Rename the packaged file so that CIAO can access it:

```
unix% mv $ASCDS_INSTALL/lib/libgcc_s.so.1.save $ASCDS_INSTALL/lib/libgcc_s.so.1
```

ds9 on Mac OS X 10.2

CIAO 3.4 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 3.4 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 <u>obsvis</u> 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 <u>dmmerge bug page</u>.

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.

URL:
http://cxc.harvard.edu/ciao3.4/watchout.html
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