Using a Surrogate CALDB

Recipes from the RXTE Cook Book

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Introduction

CALDB, in its entirety, is a hierarchical multi-mission database of calibration files and software that conform to OGIP standards. When CALDB is set up on your system, ftools requiring calibrations can find and use the corresponding files transparently. Although its local installation has obvious benefits, CALDB takes up a lot of disk space.

Fortunately, as explained in this recipe, you can enjoy the convenience of a local CALDB without its volume by using the Cal directory on your XTE data tape, or by installing the cal1.tar file as a surrogate CALDB and keeping it up to date following the simple procedures explained below. If you already have the *current* calibration directory from a recent tape and want to use that, see the first section on linking your Cal directory. If you don't have a Cal directory or need to up-date an old one, see the second section on updating.

Linking your Cal directory to CALDB

If you have AO2 or later data (or reprocessed AO1 data), you should have an FD/Cal directory in your database. Under that, Day0000 contains all of the XTE calibration files. (The other directories, e.g. AO1/Cal contain only links to the Day0000 directory.) This is where you can point the CALDB variable and where you can put any XTE calibration updates (see below.)

If you have the older processed data with a cal directory underneath each ObsId, you do not want to use it because it is guaranteed to be out of date. Instead, create the full directory structure starting with FD, then AOn and Cal. Under AOn will go the proposal directories, and under Cal will go the Day0000 directory. Once you've made these directories, follow the steps below to install the latest calibration files.

Linking in your calibration directory with the CALDB system allows you to take advantage of the CALDB options in calibration Ftools without having to bring over the entire HEASARC CALDB. It is a simple and straightforward procedure of setting the correct environment variables:

```
setenv XFDB /blah/blah/FD
```

giving the full path to the top of your XTE database. Then

```
setenv CALDB $XFDB/Cal/Day0000
setenv CALDBCONFIG $CALDB/caldb.config
setenv CALDBALIAS ./
```

or simply download the XTECALDB file (found on the ftp://legacy.gsfc.nasa.gov/xte/calib_data site) , and then

```
source XTECALDB
```

where the XTECALDB file does the same thing for you.

Now, the calibration tools will find the correct files under Day0000 when you use the "caldb" option. You might want to put these lines in your .login rather than remembering to type them in before you run a caltool.

If you want to be able to see the calibration files in XDF for a given ObsId, go to that ObsIds directory and type:

```
rm -r cal
ln -s $CALDB cal
```

Updating your Cal directory

In the Cal/Day0000 subdirectory, there should be a file the name of which is a date, like "1997June18". At the legacy.gsfc.nasa.gov FTP site you will find the calibration tar file cal1.tar which should have a similar creation date. If the date at the ftp site is more recent than the one in your database, it is time to renew following the recipe.

Directories:

As discussed above, you should either have or create the FD/Cal/Day0000 directories in your XTE database. (This isn't absolutely necessary, of course, but these recipes assume the structure is there. If you want to do it another way, set your calibration database environment variables accordingly following the example below.)

Steps:

1. Download **`cal1.tar`** by anonymous FTP from legacy.gsfc.nasa.gov, directory `xte/calib_data` (binary transfer!).

2. Set the environment variable XFDB giving the full path to the top of your XTE database, i.e. the FD directory:

   ```
   setenv XFDB /blah/blah/FD
   ```

3. Go into the Day0000 directory, delete its old contents, and untar the cal1.tar file (giving the path to wherever you downloaded it):.

```
cd $XFDB/Cal
rm -rf Day0000
tar xvf /...path.../cal1.tar
```

4. Set the appropriate environment variables either by hand:

```
setenv CALDB $XFDB/Cal/Day0000
setenv CALDBCONFIG $CALDB/caldb.config
setenv CALDBALIAS ./
```

   or by using the XTECALDB file found in the same directory on the FTP site:

```
source XTECALDB
```

5. Create (if it does not already exist) the top level FMI file. For instance,

```
cd $XFDB
cp AO1/P00033/FMI .
recofmi dirpath=$XFDB level=2 delete=yes
```

   (For details, see the Database Management recipe.)

An alternative for the steps 3 and 4, if you prefer to install the `cal1` file in directory `/foo/bar`, independently from your XTE database:

3.
```
cd /foo/bar
tar xvf /cal1.tar
```

4.
```
setenv CALDB /foo/bar
setenv CALDBCONFIG $CALDB/caldb.config
setenv CALDBALIAS ./
```

NOTE: In either case you may want to include steps 2 and 4 in your `.login` file so that these variables are set automatically when you log in.

If you have a question about RXTE, please send email to one of our help desks. This page is maintained by the RXTE GOF and was last modified on Friday, 19-Jun-1998 17:59:58 EDT.

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