OGIP Calibration Memo CAL/ASD/93-021

HOW TO INSTALL AN ASCA CALIBRATION DATABASE

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Last Update: 1993 Sep 30

SUMMARY

This document describes the installation of an OGIP Calibration Database. Intended audience: Guest Observers and institutions performing data analysis in conjunction with the OGIP.

How to Get this Document

A current version of this document can be obtained via anonymous ftp from:

`legacy.gsfc.nasa.gov` (128.183.8.233).

from within the directory `/caldb/docs/asca`

The TeX version of this document is named `cal_asd_93_021.tex` while the Postscript version is called `cal_asd_93_021.ps`

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Contents

1 How to Use this Document

This document should be used as a step-by-step guide for installing an OGIP Calibration Database (caldb) for the *ASCA* mission. If the installer follows these instructions, s/he will end up with a exact duplicate of the Primary *ASCA* caldb at ISAS. In addition, no editing of site dependent files will be necessary and the database will be fully functional at the end of this installation. Modifying any of these steps may require additional edits to some site dependent files. Please contact any member of the OGIP caldb team if you choose to modify this installation procedure or if you need additional assistance.

This document is UNIX/ULTRIX specific. VMS users should contact the OGIP Calibration Database for additional instructions.

At the writting of this document, "mirror" software is not available for automatic installation and maintenance of an *ASCA* caldb. Please check with the *ASCA* caldb to see if this software is available before reading this document.

2 Creating the Caldb Directory Structure

Even though the directory structure of an OGIP caldb is very flexible and is capable of handling almost any configuration, we recommend (at least initially) that *ASCA* Calibration Databases have the structure described below. If your site requires a directory structure different from the one described here, please contact a member of the OGIP caldb team and they will be glad to help you create a suitable database.

The general idea for this section is to duplicate exactly the directory structure of the Primary *ASCA* Calibration Site at ISAS.

2.1 Choosing a Location

Begin by choosing a location for your local Calibration Database that has enough room to hold all the data and extra room to expand. Check with the ISAS or OGIP Calibration Database to see what their current disk space requirements are for *ASCA* calibration data.

Once you have chosen a location, create a directory there called "caldb".

For example, the Calibration Database at NASA/Goddard Space Flight Center was placed within our anonymous ftp area. Thus, the physical location of our calibration database is `/FTP/caldb`. You may want yours to be `/asca_stuff/caldb` or something similar.

2.2 Root Level Link

Create a root level link called `/caldb` which points to the real location of your local caldb using the command:
`unix>` **ln -s path /caldb** *this makes a soft link*
where **path** is the real path to the Calibration Database.

By using a root level link, the entire calibration database can be moved without disruption to users by simply redefining the root level link. The link at GSFC points to `/FTP/caldb`,
i.e. an "`ls -l /caldb`" command yields:

```
lrwxrwxrwx 1 root 10 Jul 28 07:50 /caldb -> /FTP/caldb
```

where the link was ceated using the command:
`unix>` **ln -s /FTP/caldb /caldb**

2.3 The Software Directories

Create the software directory under `/caldb` by executing the commands:
`unix>` **cd /caldb** *move to the* `/caldb` *directory*
`unix>` **mkdir software** *make a new directory called* `software`
The software directory will later contain files accessed by calibration database software supplied by the OGIP.

Create the tools directory under `/caldb/software` by executing the commands:
`unix>` **cd /caldb/software** *move to the* `/caldb/software` *directory*
`unix>` **mkdir tools** *make a new directory called* `tools`
This directory will contain the files necessary to set up the caldb Environment Variables, which are required by certain tasks to allow access to the calibration files.

2.4 The Documents Directories

(The docs directory and it's contents are not strictly required. The user may optionally disregard all of this sub-section without affecting the functionality of the Calibration Database.)

Create the documents directory under `/caldb` by executing the commands:
`unix>` **cd /caldb**
`unix>` **mkdir docs**
`unix>` **cd /caldb/docs**
`unix>` **mkdir asca**
These directories will contain documents related to the maintenance of the caldb and memos pertaining to *ASCA* calibration issues.

2.5 The Data Directories

Create the data directory under `/caldb` by executing the commands:
`unix>` **cd /caldb**
`unix>` **mkdir data**
`unix>` **cd /caldb/data**
`unix>` **mkdir asca**

Create the instrument directories by executing the commands:
`unix>` **cd /caldb/data/asca**
`unix>` **mkdir gis**
`unix>` **mkdir mis**
`unix>` **mkdir sis**
`unix>` **mkdir xrt**

Create the BCF and CPF subdirectories in each instrument directory by executing the commands: `unix>` **cd /caldb/data/gis**
`unix>` **mkdir bcf**
`unix>` **mkdir cpf**
`unix>` **cd /caldb/data/mis**
`unix>` **mkdir bcf**
`unix>` **mkdir cpf**
`unix>` **cd /caldb/data/sis**
`unix>` **mkdir bcf**
`unix>` **mkdir cpf**
`unix>` **cd /caldb/data/xrt**
`unix>` **mkdir bcf**
`unix>` **mkdir cpf**
All Basic Calibration Files will be contained in the `bcf` directories and all Calibration Product Files will be contained in the `cpf` directories.

Table 1: Locations of ASCA calibration files

Local Directory	**ISAS Directory**
/caldb/software/tools	/caldb/software/tools
/caldb/docs/caldb	/caldb/docs/caldb
/caldb/docs/asca	/caldb/docs/asca
/caldb/data/gis/bcf	/caldb/data/gis/bcf
/caldb/data/gis/cpf	/caldb/data/gis/cpf
/caldb/data/mis/bcf	/caldb/data/mis/bcf
/caldb/data/mis/cpf	/caldb/data/mis/cpf
/caldb/data/sis/bcf	/caldb/data/sis/bcf
/caldb/data/sis/cpf	/caldb/data/sis/cpf
/caldb/data/xrt/bcf	/caldb/data/xrt/bcf
/caldb/data/xrt/cpf	/caldb/data/xrt/cpf

3 Populating your new Caldb

Each of the directories created in Section 2 now needs to be populated with files. Table 1 describes where the files for these directories can be obtained. The left hand column lists the directories which should exist in your Calibration Database. The right hand column lists the directories in the Primary ASCA Calibration Database that contain the files to be transferred. For example, the directory `/caldb/software/tools` should be populated from the directory `/caldb/software/tools`. The installer should ftp to the required directories at ISAS retrieve all the files in those directories. An explanation of how to ftp to the ISAS machine xray follows.

The Primary *ASCA* Calibration Database is located on the ISAS machine `xray.astro.isas.ac.jp`. The installer can ftp to this site if they have an account on this machine. The commands to be executed for connecting to this machine are:

To initiate ftp, type the following (boldface) commands at your local computer operating system prompt (comments appear in italics):

`unix>` **ftp xray.astro.isas.ac.jp** *start an ftp session*
`Name:` **username** *enter your ISAS username*
`Password:` **password** *enter your ISAS password*
`ftp>` **binary** *set binary transfer mode for ftp*

The commands necessary for transferring all the files from `directoryA` on the ISAS machine to `directoryB` on your local machine are:

`ftp>` **cd directoryA** *move to* `directoryA` *on ISAS machine*
`ftp>` **lcd directoryB** *move to* `directoryB` *on local machine*

`ftp>` **mget *** *transfer all files from ISAS to local machine*
`ftp>` **quit** *exit the ftp session*

For example, to populate the Calibration Database directory `/caldb/software/tools`, one would execute the commands:

```
unix>ftp xray.astro.isas.ac.jp
Name: . . .
Password: . . .
ftp> binary
ftp> cd /caldb/software/tools
ftp> lcd /caldb/software/tools
ftp> mget *
ftp> quit
```

This section completes the final step in duplicating the Primary *ASCA* Calibration Database.