



SAS startup thread

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What we need?

- To initialize the SAS software
- Make our data available for processing



New SAS installation (since version 7.1.2)

- Download
- Untar sas_N.N.N-OS.tgz,
e.g. sas_9.0.0-darwin9.7.0.tgz
- Move it to install place, e.g. /top_dir
- ./install.sh
- /top_dir/xmmsas_YYYYMMDD_HHMM,
e.g. /top_dir/xmmsas_20090615_1803
- Initialization (shown for csh/tcsh):
 - source ./setsas.csh
 - source
/top_dir/xmmsas_YYYYMMDD_HHMM/setsas.csh



Workshop initialization

- **. \$HOME/setsas.sh (sh/bash/ksh)**
- **source \$HOME/setsas.csh (csh/tcsh)**
- **Only if setsas.(c)sh files do not exist, execute :**
 - **/sas/bin/confsas**



What is an ODF?

- **Observation Data File (ODF)**: The set of files obtained from an XMM Observation.
- These files contain information on the science exposures for each instrument used, modes, filters, etc.
- To know where to find the ODF , SAS will use **`$$SAS_ODF`**



What is a CIF?

- For each **ODF** and observation date, we need to generate a **Calibration Index File (CIF)**, that will take the appropriate **Current Calibration Files (CCFs)** from a repository
- This is done only once unless you know that new **CCFs** have been issued
- The program to create the **CIF** is **cifbuild**



Creating the CIF

Choose your work directory (files will be created within it)
e.g.: `mkdir /home/<user>/my_work`

SAS_ODF

Set it to where you have your observation data files
e.g.: `setenv SAS_ODF /home/<user>/sasdata/<my_obs>`

cifbuild

- Creates the `ccf.cif` file (FITS file with binary extension CALINDEX).
- `withccfpath=no` : avoids putting absolute paths of calibration files (default option)
- `ccf.cif` can be viewed with FITSIO `fv`.

```
setenv SAS_CCF ccf.cif
```



Creating the summary file

odfingest

The resulting file, ***SUM.SAS**, is an update of ***SUM.ASC** (coming with the **ODF**), with all the required information to process the data with SAS (modes, filters, etc).

Built only once unless you change the data

```
setenv SAS_ODF `ls -1 *SUM.SAS`
```