

# SMEI SSW Install and Administration

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## 1 Introduction

This document describes the installation and administration of the SMEI software which is distributed as part of the SolarSoft collection. More information on SolarSoft can be obtained from <http://www.lmsal.com/solarsoft/> (My own experience is that only the “old” interface actually works).

### 1.1 Requirements

**A Unix or Linux Computer** All the descriptions here assume that you are using a Unix or Linux machine, there is no guarantee that the SMEI software will run on Windows.

**SolarSoft** The SMEI display software is only distributed as part of the SolarSoft package.

**IDL 5.6 or later** Some features of the SMEI software require routines introduced at version 5.6. A somewhat restricted version may run under 5.4 or 5.5.

**Encoders** For the various movie options, you will need `mpeg_encode` and/or `transcode` to be installed. The latter is the more useful.

## 2 Getting the SMEI component

The SMEI component of SolarSoft includes both the Birmingham display tools and a variety of tools from UCSD which are beyond the scope of this document.

In order to install and maintain a SolarSoft installation, you will need `perl` (which will certainly be present on any Linux system and most other Unix versions should also

have it) and the `mirror` package, which should also be available in the distribution for Linux and available for other Unix platforms.

The SMEI software depends on the core SolarSoft libraries so the `mirror` file needs to contain at least the packages `_solarsoft_gen` and `_solarsoft_smei_`. The mirror specification is best generated by using the download form on the SolarSoft web site.

To have regular updates to the packages add the following to your `crontab`:

```
30 7 * * * mirror /soft/solar/ssw/site/mirror/ssw_upgrade.mirror
```

where the path should be adjusted to suit your local installation. This version runs the job every day at 7:30am.

### 3 Making the data available

Obviously, in order to view the data you need to have them stored in a place that can be accessed.

The Aitoff and Fisheye images need to be in `$$SSWDB/smei/aitoff` or subdirectories thereof<sup>1</sup>. Symbolic links may be used to achieve this in any way. In order to speed up access to the data it is strongly recommended to run the `mk_imghdrtxt` procedure on each directory containing SMEI images to generate a text file listing the files in that directory. A canned procedure for the Birmingham directory structure (`do_mkhdr`) is provided in the `utils` directory this can be modified if your directory structure differs. If desired, the fits files may be compressed with `gzip`<sup>2</sup>.

The background models should be in `$$SSWDB/smei/Background_models` (again this may be a link to the real location). The most recent background models may be obtained via anonymous `rsync` at the URL `rsync://lnxl.sr.bham.ac.uk/Back.`

### 4 User configuration

To use SolarSoft, the user must have the following commands in his/her `.cshrc` file to be run for interactive shells:

```
setenv SSW /soft/solar/ssw
setenv SSW_INSTR "smei lasco eit"
source $$SSW/gen/setup/setup.ssw
```

where the value of `SSW` is the location where SolarSoft is installed at your site and `SSW_INSTR` is the list of instruments appropriate to your site.

It is not clear to me whether SolarSoft can be run from shells other than the C-shell.

If everything is correctly set up, then typing `sswidl` at the command prompt should start SolarSoft.

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<sup>1</sup>Alternatively, you can define the environment variable `SMEI_IMAGES` to point to the location of the images.

<sup>2</sup>`bzip2` can also be used but is much slower as a process must be spawned and the data read from a pipe. Also in my experience for typical SMEI fits files, `bzip2` produces slightly worse compression.