

# Running SLIC at SLAC

Along with other software for LCD research, a common distribution of the SLIC simulator package is available for SLAC Unix users.

## Access to NFS

 Access to SLAC NFS can be requested from the [Unix Administration List](#). (Of course, you must already have a SLAC Unix account to get NFS access.)

Open a connection to a SLAC Unix machine.

```
ssh [YOURACCOUNT]@iris.slac.stanford.edu
```

Replace **YOURACCOUNT** with your actual SLAC Unix account.

Now, switch to the bash shell.

```
bash
```


You need to setup the project environment to access the common software distribution.

```
source /nfs/slac/g/lcd/mc/prj/bin/prj.sh
```

Now, you should be able to run slic from \$PRJ\_BIN.

```
slic [arguments]
```

## SLIC Command Line Interface

 The SLIC command line interface maps directly to Geant4 macro commands.

To see available command line options, invoke the *help* command.


```
slic --help
```

There are a number of different ways to run SLIC, including purely macro or command-line driven.

For instance, here is a command to load the SDJan03 test geometry and start an interactive terminal.

```
slic -g $PRJ_DIST/slic/current/examples/sdjan03/SDJan03.lcdd -n
```

## LCDD files for Common Detectors

 The LCDD files for common detectors such as SiD are kept at [/nfs/slac/g/lcd/mc/prj/data/detectors](#), which should be accessible from the SLAC Linux machines.

Now, in order to have a work area for your SLIC usage, checkout the package from CVS.

```
export CVSROOT=:pserver:anonymous@cvs.freehep.org:/cvs/lcd
cvs co slic
cd slic
```

Within this directory, you will be able to write LCIO files.

This is an example of visualizing a single muon event in the SDJan03 test detector using GPS. From your slic directory, execute the following commands.

```
slic -g examples/sdjan03/SDJan03.lcdd -n
Idle>/control/execute macros/vis_gl.mac
Idle>/control/execute macros/gps.mac
Idle>/run/beamOn
```

You could also dump a heprep.

```
Idle>/control/execute macros/heprep2.mac
```

Or you may want to check for overlaps in the detector.

```
Idle>/geometry/test/recursive_test
```

A purely macro-driven job can be executed from the slic directory like so.

```
slic macros/sdjan03_dbg.mac
```

You can dump this event using an LCIO utility.

```
lcio-dumpevent outfile.slcio 0 0
```

In general, a minimalist SLIC session will be started as follows.

```
slic -g /path/to/geometry/file -n
```

The `-n` will start an interactive session.

Alternately, you may start up in interactive mode and manually input all required commands.

```
slic -n
Idle>/lcdd/setURI examples/sdjan03/SDJan03.lcdd
Idle>/run/initialize
```

An input file in StdHep or LCIO format can be specified with the `-i` option or using the `/generator/filename` command from the `PreInit>` prompt. When you call `/run/beamOn`, the events from this file will be used as input to the simulator.

Batch job submission



Here is a set of commands that may be useful for batch submission.

```
slic -g geom_file -i input_file -p path_for_output_file -o output_file -s #_events_to_skip -r #_events
```