

How do I automatically name an LCIO file

SLIC's autoname feature can automatically name the output LCIO files using event metadata, such as the type of event or the simulator version. To activate autonaming, use the `-O` switch from the command line or the `/lcio/autoname` macro command.

This is an example of using the autoname feature from the command line.

```
slic -g ./MyDetector.lcdd -O -r 1
```

The output log shows that the file has been automatically named using the type of input event, the particle gun energy, and the name of the detector.

```
>>>> BeginRun <0>
Autoname set file name to <mu-_5GeV_SLIC_v2r0p7_MyDetectorName>
Creating new Lcio file <mu-_5GeV_SLIC_v2r0p7_MyDetectorName.slcio>
```

The autoname feature can be turned on at any time during an interactive session or in a run macro.

```
/lcio/autoname
```

The autoname command accepts an optional string containing an ordered list of fields, each of which specifies a chunk of the name. Use the built-in Geant4 help system to see which fields are available.

```
Idle> help /lcio/autoname

Command /lcio/autoname
Guidance :
Set autonaming parameters.
Valid autoname fields: application version geometry event eventNumber run binary physics date

Parameter : autoname
Parameter type : s
Omittable : True
```

Here is a description of each of the fields.

field	description	example
application	name of application	SLIC
version	SLIC's version string	v2r0p7
geometry	geometry tag from the LCDD header	MyDetectorName
event	description of the particle or name of StdHep file	mu-, pythia-ttbar
eventNumber	number of events from beamOn command	1
run	run number	1
binary	name of the slic binary	slic
physics	physics list	LCPhys
date	current date in format YYYY-MM-DD	2007-01-03

To customize the fields and their order, list the fields in order using the macro command.

```
/lcio/autoname application version geometry event eventNumber run binary physics date
```

This results in an output file with a name like this.

```
SLIC_v2r0p7_MyDetectorName_mu-_5GeV_1_0_slic_LCPhys_2007-01-03.slcio
```

Alternately, list the fields as an argument to the `-O` switch. This string must be quoted.

```
slic -g MyDetector.lcdd -O "application version geometry event eventNumber run binary physics date" -r 1
```