

# Using GSIM

## Running GSIM

a simple command will take you to the MCEEP directory (environments are set in ~/.cshrc)

```
/lustre/expphy/work/halla/e07006/Erez/gsim/simulate
```

```
> $GoGSIM
```

run GSIM by using the control shell script

```
> ./Control.sh
```

control is edited so that it runs on the desired run number.

## Control layout

```
#!/bin/sh
```

```
for RunNumber in 87
do
  File="run00$RunNumber"
  # File="run00$1"    # if we wish to run on a user argument
  rm -f WriteTree/*.root
  GsimBatch.csh $File
  source ~/.cshrc
  make_root $File
  ./make_tree.sh $File
  echo "$File Done!"
done
```

## GsimBatch layout - the main running routine

```
#!/bin/csh -f

echo "Running GSIM with $1"

# Deleting Previous archives
rm -f InputFile anamonhist histfile logfile outfile1 outfile_* recsis_*.txt gpp_* gsim_*

# Environmental variables setting
source /group/clas/builds/environment.csh

setenv RECSIS_RUNTIME /group/clas/clsrc/recsis/runtime

# Setting run index
setenv CLAS_CALDB_RUNINDEX calib.RunIndex
setenv RECSIS_RUNTIME /group/clas/clsrc/recsis/runtime
setenv CLAS_PARMS /u/home/claseg2/CLAS_PARMS

# GSIM - running simulation
# gsim_bat -ffread ffreed_gsim.in -mcin $1.evt -bosout gsim_$1.bos >& gsim_$1.txt
/u/home/baraks/bin/Linux64RHEL6/gsim_bat -ffread ffreed_gsim.in -mcin $1.evt -
bosout gsim_$1.bos >& gsim_$1.txt
echo "GSIM Done to gsim_$1.bos"

# GPP - smearing simulated data
setenv CLAS_CALDB_RUNINDEX calib_user.RunindexLorenzo
# /u/home/claseg2/bin/LinuxRHEL6_pass1/gpp -POx1f -Y -ogpp_$1.bos -a1.2 -b0.86 -
c0.87 -f1. -R41447 gsim_$1.bos >& gpp_$1.txt
echo "GPP Done to gpp_$1.bos"
/u/home/baraks/bin/Linux64RHEL6/gpp -POx1f -Y -ogpp_$1.bos -a1.2 -b0.86 -c0.87 -f1. -
R41447 gsim_$1.bos >& gpp_$1.txt

# setting run index
setenv CLAS_CALDB_RUNINDEX calib.RunIndex
ln -s gpp_$1.bos InputFile

# Reconstruction system
/u/home/claseg2/bin/LinuxRHEL6/user_ana -t ./recsis_eg2.tcl >& recsis_$1.txt
mv outfile1 outfile_$1
echo "RECSIS Done to outfile_$1"
```

## make\_root layout - converting to ROOT tree

```
./WriteRootDst -GSIM -o gsim_output_$(1).root outfile_$(1)  
echo "WriteRootDst performed to gsim_output_$(1).root"
```

## make\_tree layout - writing ROOT tree with clas-tools

```
#!/bin/sh  
  
#setenv rootfile gsim_output_$(1).root  
mv gsim_output_$(1).root WriteTree/  
cd WriteTree  
write_tree_with_gsim  
echo "write_tree_with_gsim performed"  
  
mv ntuple.root GSIM_$(1).root  
mv GSIM_$(1).root ~/  
rm WriteTree/*.(root) -f  
echo "Finished! find GSIM_$(1).root in ~/"  
cd ..  
echo "now in $(pwd)"
```