

学习汇报

崔岩

生成root文件

- 将之前subJOB.sh注释掉的代码取消注释，重新进行编译，提交后台运行。

```
[ 87%] Building CXX object CMakeFiles/mini_analysis.dir/publicfs/atlas/atlasnew/SUSY/users/cuiyan/GitLab/Mini
[ 93%] Building CXX object CMakeFiles/mini_analysis.dir/publicfs/atlas/atlasnew/SUSY/users/cuiyan/GitLab/Mini
[ 93%] Building CXX object CMakeFiles/mini_analysis.dir/publicfs/atlas/atlasnew/SUSY/users/cuiyan/GitLab/Mini
[100%] Linking CXX executable mini_analysis
[100%] Built target mini_analysis
jobs:0 /publicfs/atlas/atlasnew/SUSY/users/cuiyan/Training/1_Preselction/build
[21:43 cuiyan@lxslc712 cuiyan]$ cd ..
jobs:0 /publicfs/atlas/atlasnew/SUSY/users/cuiyan/Training/1_Preselction
[21:43 cuiyan@lxslc712 cuiyan]$ ls
build CMakeLists.txt config DiTauMET.cxx run subJOB.sh
jobs:0 /publicfs/atlas/atlasnew/SUSY/users/cuiyan/Training/1_Preselction
[21:43 cuiyan@lxslc712 cuiyan]$ unset PYTHONHOME
jobs:0 /publicfs/atlas/atlasnew/SUSY/users/cuiyan/Training/1_Preselction
[21:44 cuiyan@lxslc712 cuiyan]$ source AC
jobs:0 /publicfs/atlas/atlasnew/SUSY/users/cuiyan/Training/1_Preselction
[21:44 cuiyan@lxslc712 cuiyan]$ source subJOB.sh
CMake Deprecation Warning at CMakeLists.txt:2 (cmake_minimum_required):
  Compatibility with CMake < 2.8.12 will be removed from a future version of
  CMake.

  Update the VERSION argument <min> value or use a ...<max> suffix to tell
  CMake that the project does not need compatibility with older versions.

-- Configuring done
-- Generating done
-- Build files have been written to: /publicfs/atlas/atlasnew/SUSY/users/cuiyan/Training/1_Preselction/build
Consolidate compiler generated dependencies of target mini_analysis
[100%] Built target mini_analysis
INFO: Please make sure your job script(s) is(are) existing and excutable.
1781 job(s) submitted to cluster 23538034.
jobs:0 /publicfs/atlas/atlasnew/SUSY/users/cuiyan/Training/1_Preselction
```

生成root文件

将生成的root文件用hadd命令合并。

OpenSSH SSH client

```
sub.sh.1073
sub.sh.1073.err.23538034.1073
sub.sh.1073.out.23538034.1073
sub.sh.1074
sub.sh.1074.err.23538034.1074
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sub.sh.1079.err.23538034.1079
sub.sh.1079.out.23538034.1079
sub.sh.107.out.23538034.107
sub.sh.108
sub.sh.1080
sub.sh.1080.err.23538034.1080
sub.sh.1080.out.23538034.1080
sub.sh.1081
sub.sh.1081.err.23538034.1081
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sub.sh.1088.out.23538034.1088
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sub.sh.143.err.23538034.143
sub.sh.143.out.23538034.143
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sub.sh.1440
sub.sh.1440.err.23538034.1440
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sub.sh.1454.err.23538034.1454
sub.sh.1454.out.23538034.1454
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sub.sh.202.err.23538034.202
sub.sh.202.out.23538034.202
sub.sh.203
sub.sh.203.err.23538034.203
sub.sh.203.out.23538034.203
sub.sh.204
sub.sh.204.err.23538034.204
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sub.sh.205.out.23538034.205
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sub.sh.216.err.23538034.216
sub.sh.216.out.23538034.216
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sub.sh.217.err.23538034.217
sub.sh.217.out.23538034.217
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sub.sh.56.out.23538034.56
sub.sh.57
sub.sh.570
sub.sh.570.err.23538034.570
sub.sh.570.out.23538034.570
sub.sh.571
sub.sh.571.err.23538034.571
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sub.sh.936.err.23538034.936
sub.sh.936.out.23538034.936
sub.sh.937
sub.sh.937.err.23538034.937
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sub.sh.939.err.23538034.939
sub.sh.939.out.23538034.939
sub.sh.93.err.23538034.93
sub.sh.93.out.23538034.93
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sub.sh.940
sub.sh.940.err.23538034.940
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sub.sh.94.out.23538034.94
sub.sh.95
sub.sh.950
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sub.sh.950.out.23538034.950
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Z.4.root
Z.50.root
Z.51.root
Z.52.root
Z.53.root
Z.54.root
Z.55.root
Z.56.root
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Z.59.root
Z.5.root
Z.60.root
Z.61.root
Z.62.root
Z.63.root
Z.64.root
Z.65.root
Z.66.root
Z.67.root
Z.68.root
Z.69.root
Z.6.root
Z.70.root
Z.71.root
Z.72.root
Z.73.root
Z.74.root
Z.75.root
Z.76.root
Z.77.root
Z.78.root
Z.79.root
Z.7.root
Z.80.root
Z.81.root
Z.82.root
Z.83.root
Z.84.root
Z.85.root
Z.86.root
Z.87.root
Z.88.root
Z.89.root
Z.8.root
Z.90.root
Z.91.root
Z.92.root
Z.93.root
Z.94.root
Z.95.root
Z.96.root
```

```
TH1F* histHiggs = (TH1F*)Plotter::getHist(folder + "Higgs.root", name, Plotter::Block, higgsColor);
TH1F* histZ = (TH1F*)Plotter::getHist(folder + "Z.root", name, Plotter::Block, ZColor);
TH1F* histTop = (TH1F*)Plotter::getHist(folder + "Top.root", name, Plotter::Block, ttbarColor);
TH1F* histW = (TH1F*)Plotter::getHist(folder + "W.root", name, Plotter::Block, WColor);
TH1F* histMultiBoson = (TH1F*)Plotter::getHist(folder + "MultiBoson.root", name, Plotter::Block, dibosonColor);
TH1F* histQCD = (TH1F*)Plotter::getHist(folder + "QCD.root", name, Plotter::Block, QCDColor);
TH1F* histsig = (TH1F*)Plotter::getHist(folder + "300_150.root", name, Plotter::Dash, sig1Color);
TH1F* histsig2 = (TH1F*)Plotter::getHist(folder + "700_400.root", name, Plotter::Dash, sig2Color);
TH1F* histsig3 = (TH1F*)Plotter::getHist(folder + "1000_0.root", name, Plotter::Dash, sig3Color);
```

设置环境变量

- 运行draw.C要设置环境变量，在.bashrc中输入如下命令

```
export C_INCLUDE_PATH=/publicfs/atlas/atlasnew/SUSY/users/cuiyan/GitLab/MiniAnalysis/include:/publicfs/atlas/atlasnew/SUSY/users/cuiyan/GitLab/MiniAnalysis/src:$C_INCLUDE_PATH
export LD_LIBRARY_PATH=/publicfs/atlas/atlasnew/SUSY/users/cuiyan/GitLab/MiniAnalysis/lib:$LD_LIBRARY_PATH
export CPLUS_INCLUDE_PATH=/publicfs/atlas/atlasnew/SUSY/users/cuiyan/GitLab/MiniAnalysis/include:/publicfs/atlas/atlasnew/SUSY/users/cuiyan/GitLab/MiniAnalysis/src:$CPLUS_INCLUDE_PATH
export LIBRARY_PATH=/publicfs/atlas/atlasnew/SUSY/users/cuiyan/GitLab/MiniAnalysis/lib:$LIBRARY_PATH
```

生成直方图

修改draw.c代码，填入root文件路径

```
void draw(const std::string name) {  
    std::string folder = "/publicfs/atlas/atlasnew/SUSY/users/cuiyan/Training/1_Preselction/run/";  
  
    SetAtlasStyle();  
}
```

生成直方图

setupATLAS

lsetup "root 6.22.00-x86_64-centos7-gcc8-opt"

source run.sh

```
jobs:0 /publicfs/atlas/atlasnew/SUSY/users/cuiyan/Data_mc
[23:48 cuiyan@lxslc708 cuiyan]$ source run.sh

Processing draw.C("MT2_N_1")...

Applying ATLAS style settings...

Warning in <TH1F::Sumw2>: Sum of squares of weights structure already created
Warning in <TH1F::Sumw2>: Sum of squares of weights structure already created
Warning in <TH1F::Sumw2>: Sum of squares of weights structure already created
Warning in <TH1F::Sumw2>: Sum of squares of weights structure already created
Warning in <TH1F::Sumw2>: Sum of squares of weights structure already created
Warning in <TH1F::Sumw2>: Sum of squares of weights structure already created
Warning in <TH1F::Sumw2>: Sum of squares of weights structure already created
Warning in <TH1F::Sumw2>: Sum of squares of weights structure already created
Warning in <TH1F::Sumw2>: Sum of squares of weights structure already created
Warning in <TH1F::Sumw2>: Sum of squares of weights structure already created
Warning in <TH1F::Sumw2>: Sum of squares of weights structure already created
Info in <TCanvas::Print>: png file MT2_N_1.png has been created
Info in <TCanvas::Print>: pdf file MT2_N_1.pdf has been created
jobs:0 /publicfs/atlas/atlasnew/SUSY/users/cuiyan/Data_mc
[23:48 cuiyan@lxslc708 cuiyan]$ ls
draw.C  MT2_N_1.pdf  MT2_N_1.png  run.sh
jobs:0 /publicfs/atlas/atlasnew/SUSY/users/cuiyan/Data_mc
```


生成直方图

