xyz guide

UCD Nuclear Physics Group

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Abstract

This is a guide to using the software developed by Juan Romero. The software allows us to create plots, 1D or 2D, for various words (variables) in picoDST. This code is a more robust version of plotTree_flow.C.

original date: mid 2002

1 necessary files

First you need the files. On `PDSF` type

```
cp -r ~romero/minitemplate/xyz.C ~/yourdir/
cp -r ~romero/minitemplate/y0templatexyz.lsf ~/yourdir/
cp -r ~romero/minitemplate/yallxyz.scr ~/yourdir/
```

where `yourdir` is the directory you want to work in.

2 set up

Before beginning the analysis, you need the data. In directory `runs`, we will create a file that points to the data. First locate the data on `PDSF` and do

```
ls /auto/path/to/data/.../somedir/ > runs/runs_something.txt
```

You may have to add a line to the file, and then you should have a file that looks like...

```
/auto/stardata/starspec3/flow_pDST_production/reco/minBias22GeVZDC/
2329088
2329089
2329091
2329092
...
```

create a directory called **fits**

```
mkdir fits
```

then

1. edit **y0templatexyz.lsf**

- change e-mail in the header (only need to do once), the system will notify you when a batch job is done
- set up cuts
- choose (the **.txt** file you created in previous section) in section `set filetxt = .`
- set which variable(s) to plot in `set toPlot = .`

2. edit **yallxyz.scr**

- change run method near the end of file: *bsub* is for submitting a batch run (a lot of files, will run in background); *source* is for running right away (a test run with just a few files, you see progress on screen)

3. now you are ready to run, do
`source yallxyz.scr`
and follow instructions.
commands for batch jobs:
- type `bjobs` to see run status
- type `bkill jobID` to end a job

4. once finished, subdirectories and files will be created in `fits` directory, with the name according what you specify in the previous step. The filename will be **xyz.rootsave**

3 root4star

root4star is a STAR environment of ROOT software. We use root4star to look at plots.

combinexyz.C is our main script. Here are examples:

- to plot what you create,
```
.x combinexyz.C("fits/py0t1/pi/","xyz.rootsave","","","xyz")
```
- to plot ratios,
```
.x combinexyz.C("fits/ny0t1/pi/","xyz.rootsave","fits/py0t1/pr/","","d","xyz")
```

When you run one of the above scripts, the code will spit out the default command. It contains a full set of parameters. You can adjust this.