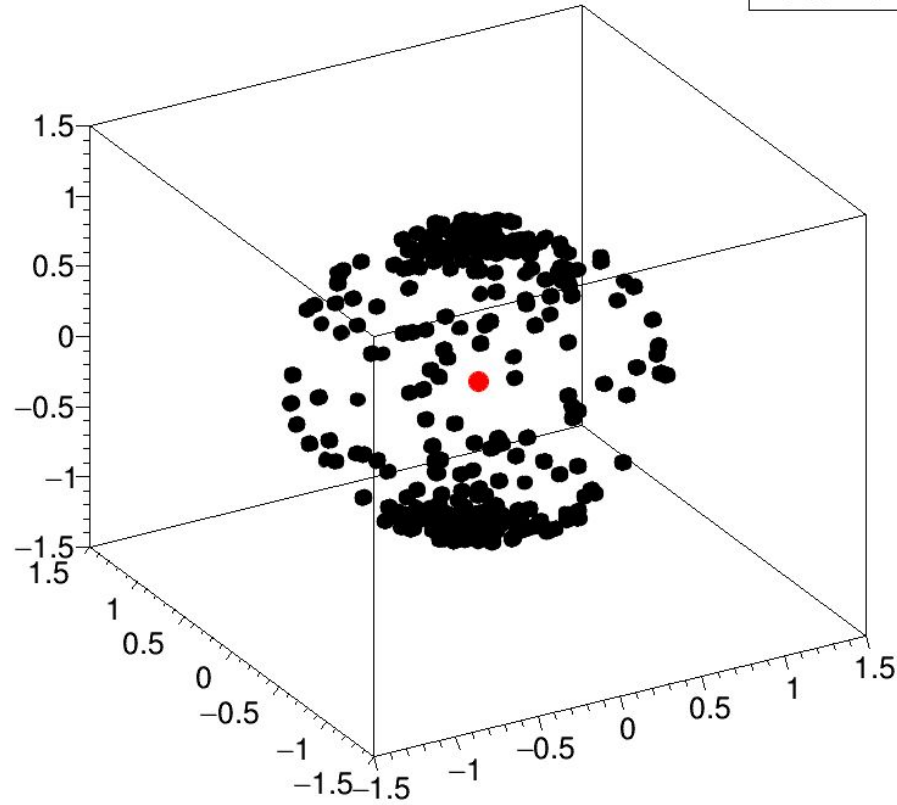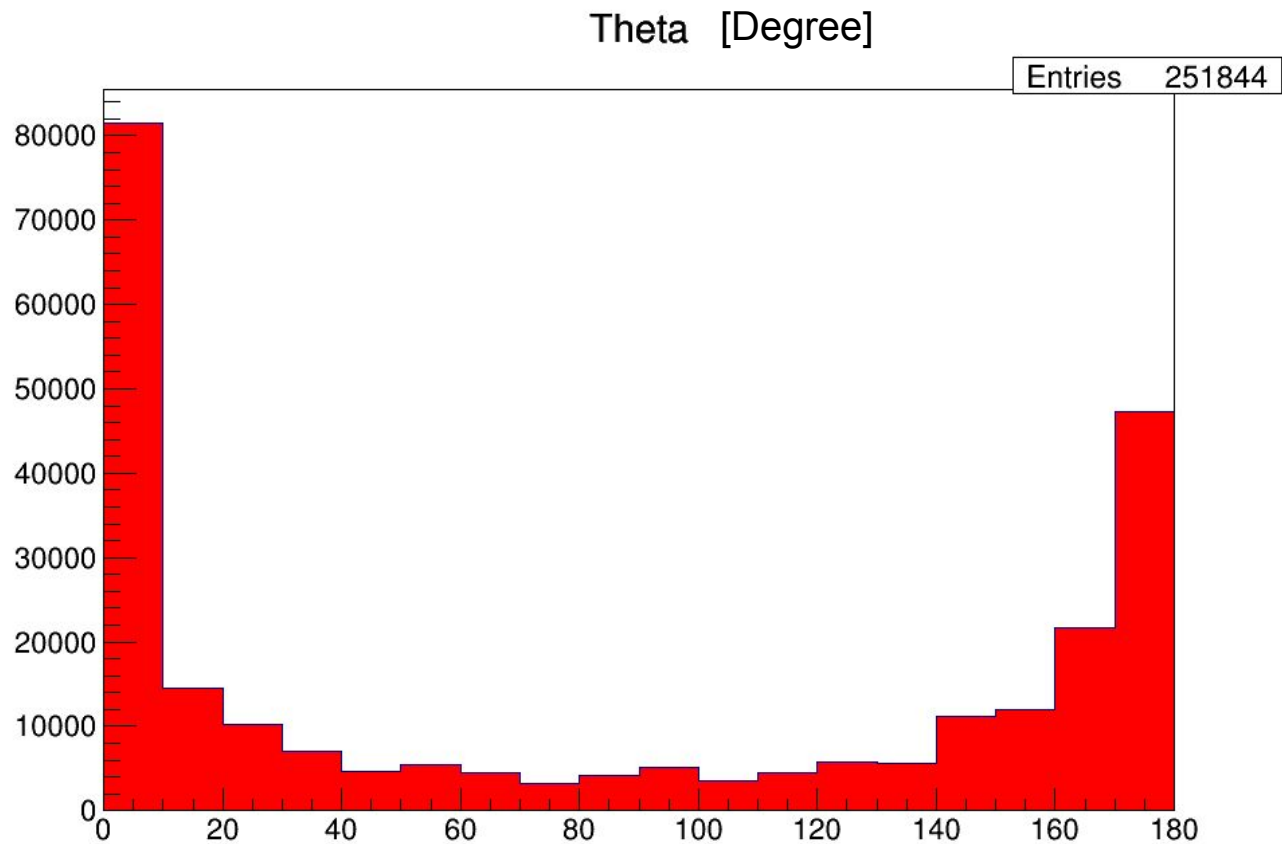# URQMD in SPDROOT

status on 14-06-2024
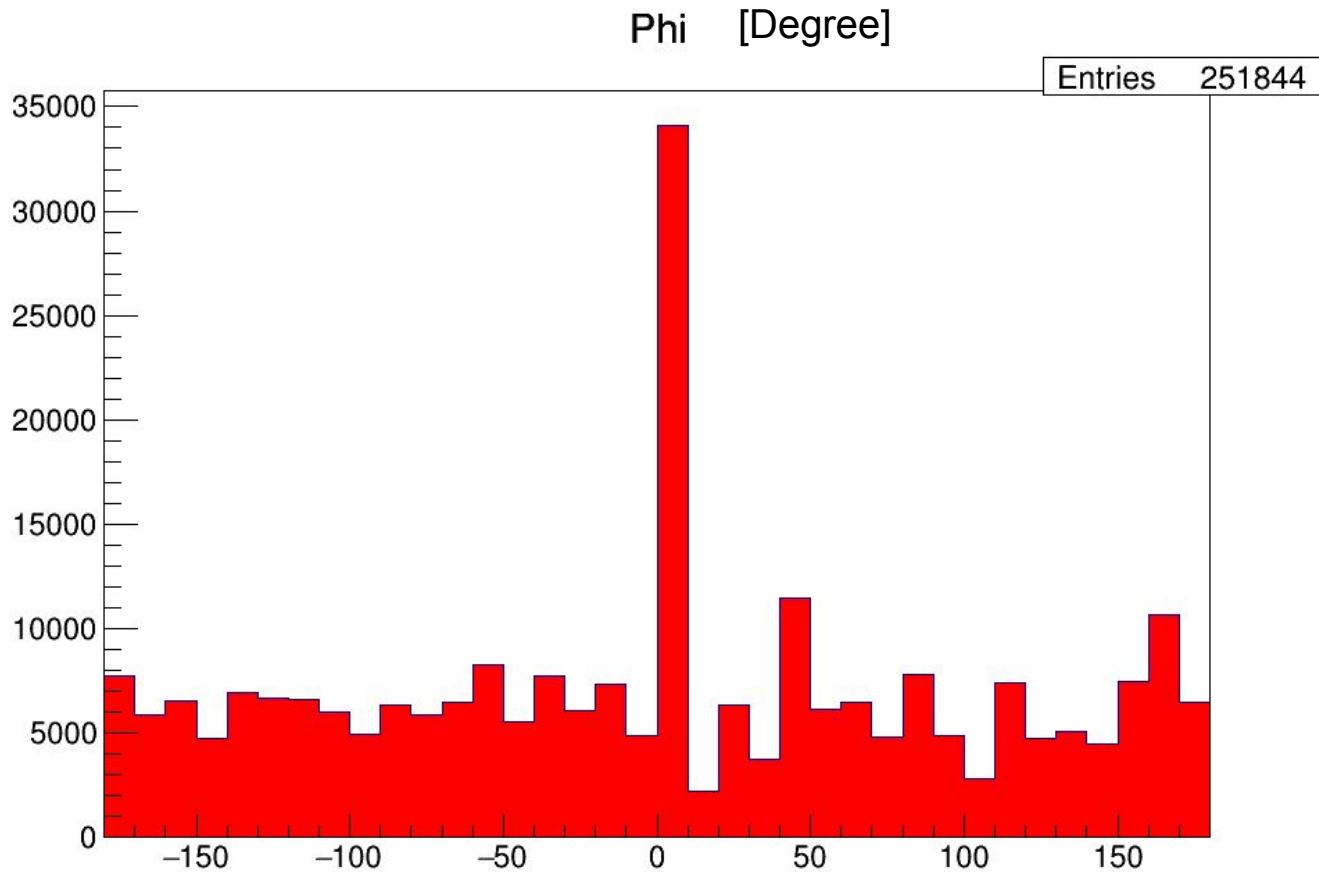
Current status

- URQMD is installed and checked to be working inside docker container
- Test sample with 1000 events is obtained in .f13 format

randomly choosen impact parameter: CTOption(5) is set to 1

CTOption(27)=   0 is changed to   0 (reference frame (1=target, 2=projectile, else=cms)   )

no. of collisions =   0.9 (per event)

final particles   =   13.6 (per event)

empty events   :   573 = 57.3%

- Existing macro TestUrqmd.C in SPDROOT package is modified to read events from test sample and create .root output file
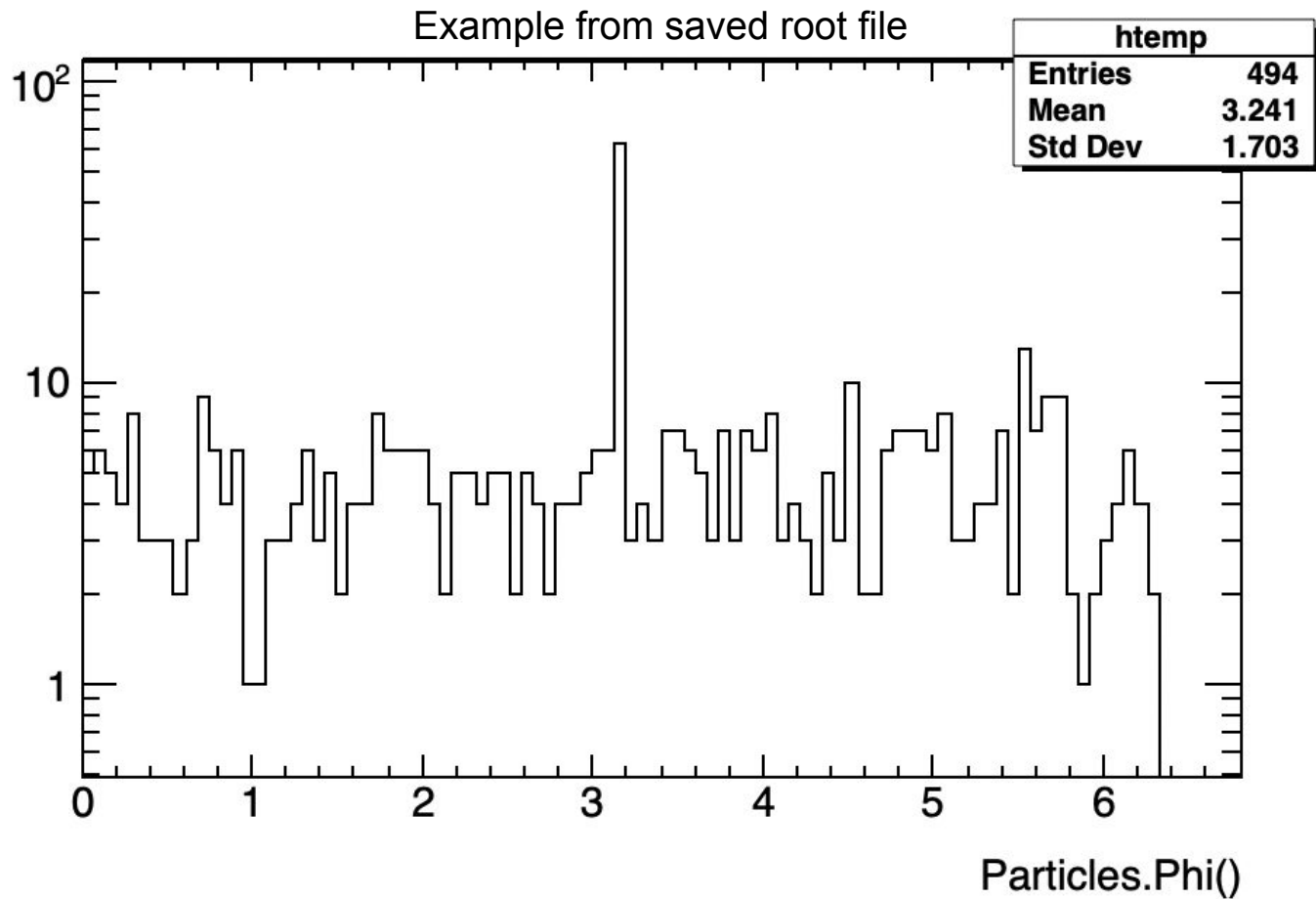- First histograms are obtained

x,y,z coordinates

Entries   251844

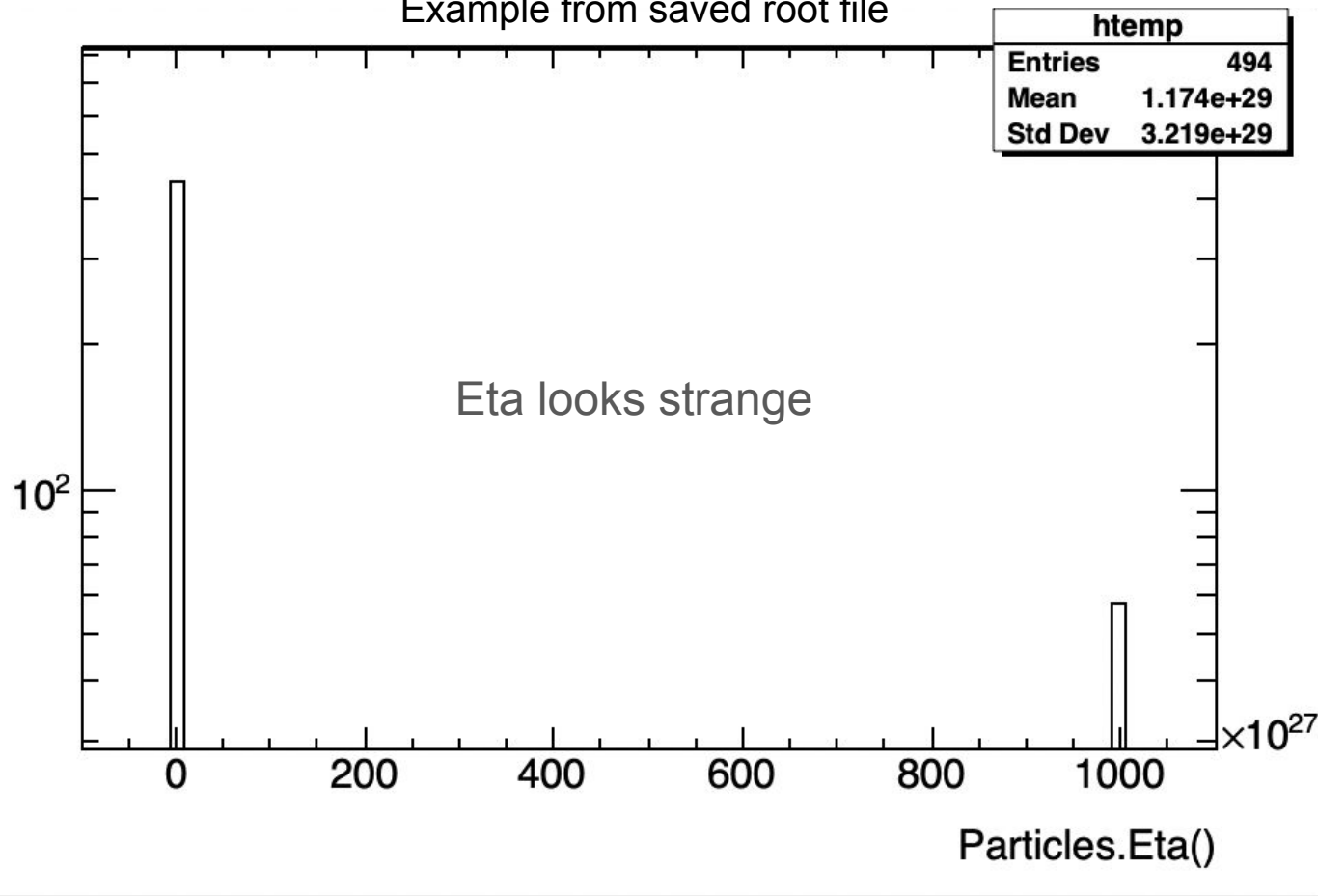MEPhI SPD physics meeting 14-06-24

Phi [Degree]

Entries 251844

MEPhI SPD physics meeting 14-06-24

Example from saved root file

htemp	
Entries	494
Mean	3.241
Std Dev	1.703

Particles.Phi()

MEPhI SPD physics meeting 14-06-24

Example from saved root file

htemp	
Entries	494
Mean	1.174e+29
Std Dev	3.219e+29

Eta looks strange

10^2

$\times 10^{27}$

0   200   400   600   800   1000

Particles.Eta()

Issues

Errors and warnings to investigate:

-E SpdUrqmdGenerator: Wrong event header
-W SpdUrqmdGenerator: PID 0 charge 0 not found in table (2000)
-W SpdUrqmdGenerator: PID 0 charge 1 not found in table (3000)
-W SpdUrqmdGenerator: PID 0 charge -1 not found in table (1000)

Yesterday spdroot/docker(unknown yet) started to freeze during saving when saving plots.
Butch mode didn't help. Worked on Tuesday, nothing has changed.

Further steps

- To check if root file is recorded correctly, since Eta distribution looks strange.
- Find a way to use saved events for simulation and reconstruction.