

GSI Data status and general info



Alberto Mengarelli INFN Bologna

Performance meeting 17/05/2018

GSI Data location:

- Copies of the RAW data taken at GSI are present at:
 - GSI asarti LUSTRE dir
 - TIER3 /gpfs_data/local/foot/**DataGSI/**
 - All the DAQ, WD and VTX streams for each RUN

Signicant RUNS:

<http://arpg-serv.ing2.uniroma1.it/elog/FOOTGsi2019/>

elog

- From General elog and Daq elog:
 - run 2210, 2211, 2212 Beam ON, NO Target.
 - run 2239, 2240, 2241 (BM HV scan 1800,1850,1900) Beam ON, WITH Target.
 - run 2242 Scintillator calibration, Beam ON, NO Target.

Build Files:

- Build on event trigger data, significant run are in:

- TIER3 /gpfs_data/local/foot/DataGSI_build/

```
rw-r--r-- 1 amengarelli foot-t3 462727752 10 mag 14.26 data_built.2210.physics_foot.daq.VTX.1.dat
rw-r--r-- 1 amengarelli foot-t3 451829500 10 mag 14.25 data_built.2210.physics_foot.daq.WD.1.dat
rw-r--r-- 1 amengarelli foot-t3 863614716 10 mag 14.39 data_built.2211.physics_foot.daq.VTX.1.dat
rw-r--r-- 1 amengarelli foot-t3 826351968 10 mag 14.38 data_built.2211.physics_foot.daq.WD.1.dat
rw-r--r-- 1 amengarelli foot-t3 1352582500 10 mag 14.33 data_built.2212.physics_foot.daq.VTX.1.dat
rw-r--r-- 1 amengarelli foot-t3 1280293416 10 mag 14.33 data_built.2212.physics_foot.daq.WD.1.dat
rw-r--r-- 1 amengarelli foot-t3 316639352 9 mag 10.43 data_built.2239.physics_foot.daq.VTX.1.dat
rw-r--r-- 1 amengarelli foot-t3 480957284 9 mag 10.10 data_built.2239.physics_foot.daq.WD.1.dat
rw-r--r-- 1 amengarelli foot-t3 314207208 9 mag 10.43 data_built.2240.physics_foot.daq.VTX.1.dat
rw-r--r-- 1 amengarelli foot-t3 474300336 9 mag 10.10 data_built.2240.physics_foot.daq.WD.1.dat
rw-r--r-- 1 amengarelli foot-t3 303465316 9 mag 10.43 data_built.2241.physics_foot.daq.VTX.1.dat
rw-r--r-- 1 amengarelli foot-t3 470609248 9 mag 10.10 data_built.2241.physics_foot.daq.WD.1.dat
rw-r--r-- 1 amengarelli foot-t3 2558706588 10 mag 14.26 data_built.2242.physics_foot.daq.VTX.1.dat
rw-r--r-- 1 amengarelli foot-t3 2559434248 9 mag 10.11 data_built.2242.physics_foot.daq.WD.1.dat
```

- WD = Daq + WD

- VTX = Daq + WD + VTX

- Build data after matching (Mauro slides), significant run are in:

- TIER3 /gpfs_data/local/foot/DataGSI_match/

```
ridolfi foot-t3 463002356 16 mag 10.06 data_built.2210.physics_foot.daq.VTX.1.dat
ridolfi foot-t3 450933588 16 mag 10.06 data_built.2210.physics_foot.daq.WD.1.dat
ridolfi foot-t3 858967504 16 mag 10.06 data_built.2211.physics_foot.daq.VTX.1.dat
ridolfi foot-t3 820709756 16 mag 10.06 data_built.2211.physics_foot.daq.WD.1.dat
ridolfi foot-t3 1342061484 16 mag 10.06 data_built.2212.physics_foot.daq.VTX.1.dat
ridolfi foot-t3 1268538500 16 mag 10.06 data_built.2212.physics_foot.daq.WD.1.dat
ridolfi foot-t3 480357312 16 mag 10.06 data_built.2239.physics_foot.daq.VTX.1.dat
ridolfi foot-t3 480087736 16 mag 10.06 data_built.2239.physics_foot.daq.WD.1.dat
ridolfi foot-t3 473935852 16 mag 10.06 data_built.2240.physics_foot.daq.VTX.1.dat
ridolfi foot-t3 473519552 16 mag 10.07 data_built.2240.physics_foot.daq.WD.1.dat
ridolfi foot-t3 474626564 16 mag 10.22 data_built.2241.physics_foot.daq.VTX.1.dat
ridolfi foot-t3 2539358160 16 mag 10.07 data_built.2242.physics_foot.daq.VTX.1.dat
ridolfi foot-t3 2538350252 16 mag 10.07 data_built.2242.physics_foot.daq.WD.1.dat
```

Decoded match files:

- SHOE Root files output of the match data are in:
 - TIER3 /gpfs_data/local/foot/DataGSI_match/

```
34425826 16 mag 10.03 run_2210_match_20k.root
78715475 16 mag 10.03 run_2211_match_60k.root
129097904 16 mag 09.42 run_2212_match_160k.root
13597001 16 mag 10.03 run_2239_match_20k.root
17684267 16 mag 10.03 run_2240_match_20k.root
129463113 16 mag 10.03 run_2242_match_200k.root
```

- Produced RUNNING:

```
DecodeRaw -in
/gpfs_data/local/foot/DataGSI_match/data_built.2211.physics_foot.daq.VTX.1.dat -out
run_2210_match_20k.root -his -ntu -trk -nev 20000
```

- Root files contain for all events: control plots, quantities after tracking and reconstruction by SHOE stored in a tree

Flat Ntuple production from SHOE tree

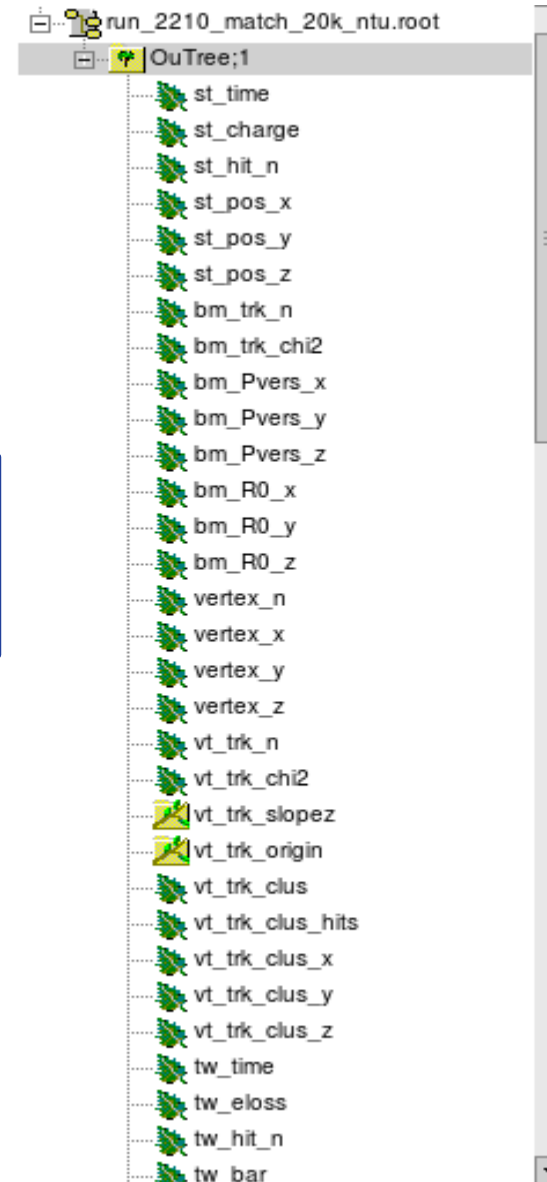
- Printout a flat and light ntuple for fast analysis outside SHOE framework

ON GIT

https://baltig.infn.it/asarti/shoe/blob/newgeom_v1.0/Reconstruction/fullrec/macros/PrintFlatNtupleRaw.C

Stored in TIER3 /gpfs_data/local/foot/**DataGSI_ntuple/**

```
amengarelli foot-t3 3904841 16 mag 10.16 run_2210_match_20k_ntu.root
amengarelli foot-t3 9611650 16 mag 10.17 run_2211_match_60k_ntu.root
amengarelli foot-t3 15902364 16 mag 10.11 run_2212_match_160k_ntu.root
amengarelli foot-t3 4144028 16 mag 10.18 run_2239_match_20k_ntu.root
amengarelli foot-t3 4024276 16 mag 10.18 run_2240_match_20k_ntu.root
amengarelli foot-t3 31028137 16 mag 10.19 run_2242_match_200k_ntu.root
```



- The “OutTree” contains branches with the quantities from the single detector to perform the preliminary analysis in Roberto’s talk