PicoDST Request of PWG Disk Space

Disk space

Files: PicoDst files
Size: 100TB. Given the expected speed of MuDst production, we propose a staged approach, i.e. to start with 30 TB, and add 30 TB per month till 100 TB.

Production information

Year: 2014
Period: day 77 - 167
Species: Au+Au
Energy: 200 GeV
Trigger: AuAu_200_production_low/mid/high_2014
Production: P15ic
Library: SL15ic
Data stream: st_physics, st_mtd

Physics analyses

This is the Au+Au 200 GeV data set taken in Run14. A minimum but also complete set of event- and track-level variables are saved in these PicoDST files, to facilitate heavy flavor physics measurements, including open charm hadrons, non-photonic electrons, single muons, e-mu correlations, J/psi and Upsilon in di-electron and di-muon channels. Heavy Flavor physics related triggers, especially those with the HFT and MTD, are included.

PicoDst production

Triggers:

- st_physics stream
  450050, 450060 // vpdmb-5-p-nobsmd-hlt
  450005, 450015, 450025 // vpdmb-5-p-nobsmd

450014, 450024 // VPDMB-5-nobsmd
450008, 450018 // VPDMB-5
450010, 450020 // VPDMB-30
450013, 450023 // VPD-ZDC-novtx-mon
450009, // vpdmb-5-p-nobsmd-ssd-hlt
450012, 450022 // ZDC-mon
450011, 450021 // MB-mon
450103, // Central-5
450201, 450211 // BHT1*VPDMB-30
450202, 450212 // BHT2*VPDMB-30
450203, 450213 // BHT3

- st_mtd stream

450601, 450611, 450621, 450631, 450641 // dimuon
450604, // dimuon-30-hft
450605, 450606 // dimuon-5-hft
450602, 450612, 450622, 450632, 450642 // e-mu
450600, 450610, 450620, 450630, 450640 // single-muon

Event-level cuts:

- RefMult>=0
- |Vx|>1e-5, |Vy|>1e-5, |Vz|>1e-5
- |Vz|<100cm
- sqrt(Vx*Vx+Vy*Vy)<2cm

Vertex selection:

- If VzVpd is available and |VzVpd|<100cm, choose the vertex with highest rank and within |Vz-VpdVz|<3cm.
- If VzVpd is not available, or NO vertex with |Vz-VpdVz|<3cm, choose the default PV (first in MuDst).

Track-level cuts:

- all global tracks, 0 <= flag <= 1000
- pT (global) > 0.1 GeV/c
- nHitsFit(kTpcId) >= 15
- nHitsFit(kTpcId)/nHitsPoss(kTpcId) > 0.52
- gDCA < 10 cm

File description

Here is a list of branches in the PicoDst tree:

Branch name	Usage
StPicoEvent	Global characteristic of the event, e.g. nprimary vertex, reference multiplicity, event plane, etc.
StPicoEmcTrigger	Trigger information for HT triggers.
StPicoMtdTrigger	Trigger information for MTD triggers.
StPicoTrack	Global tracks satisfying a minimal set of quality cuts. If present, momentum of the corresponding primary track is also stored.
StPicoBTofPidTraits	PID information from TOF.
StPicoEmcPidTraits	PID information from EMC.
StPicoMtdPidTraits	PID information from MTD.
StPicoBTOWHit	EMC tower hits, which can be used for clusterization.
StPicoMtdHit	MTD hits with timing information.

Details about what variables are can be found in:
http://rnc.lbl.gov/~xdong/SoftHadron/picoDst.html
http://www.star.bnl.gov/protected/lfspectra/marr/documents/PicoDst.pdf

Production source codes are in CVS repository
$CVSROOT/offline/users/dongx/pico/source