

Jet Energy Resolution Validation

Shuo Han, Minqia Li, Kaili Zhang, Hao Zhu

1 IHEP

ParticleGun

- Generate Single μ^+ Process Using ParticleGun.
 - 100 events.
 - One events has a extra PFO(K^0).
 - Next Step: Generate samples at different data point(2GeV, 5GeV, 10GeV, 20GeV, 50GeV, 100GeV) and compare the PFO performance.

```
root [2] MET->Scan("MCP_E:PFO_E:PFO_PID98")
*****
*      Row      * Instance *      MCP_E *      PFO_E * PFO_PID98 *
*****
*          0 *          0 * 5.0011162 * 4.9946017 *          13 *
*          1 *          0 * 5.0011160 * 5.0010776 *          13 *
*          2 *          0 * 5.0011162 * 5.0014772 *          13 *
*          3 *          0 * 5.0011160 * 4.996099 *          13 *
*          43 *          0 * 5.0011162 * 5.0022025 *          13 *
*          44 *          0 * 5.0011162 * 5.0112104 *          13 *
*          45 *          0 * 5.0011164 * 4.9990029 *          13 *
*          45 *          1 *          * 0.0560046 *         130 *
*          46 *          0 * 5.0011162 * 5.0071048 *          13 *
*          47 *          0 * 5.0011160 * 5.0052638 *          13 *
*          48 *          0 * 5.0011162 * 4.9989776 *          13 *
```

```
from Configurables import HepMCRdr
from Configurables import GenPrinter

gun = GtGunTool("GtGunTool")
gun.PositionXs = [0]
gun.PositionYs = [0]
gun.PositionZs = [0]
gun.Particles = ["mu-"]
gun.EnergyMins = [5]
gun.EnergyMaxs = [5]
gun.ThetaMins = [60]
gun.ThetaMaxs = [120]
gun.PhiMins = [0]
gun.PhiMaxs = [360]
genprinter = GenPrinter("GenPrinter")

stdheprdr = StdHepRdr("StdHepRdr")
#stdheprdr.Input = "{hep_path}"
#stdheprdr.Input = "/cefs/higgs/zha
stdheprdr.StartIndex = 100
```

