# ctau 1000mm

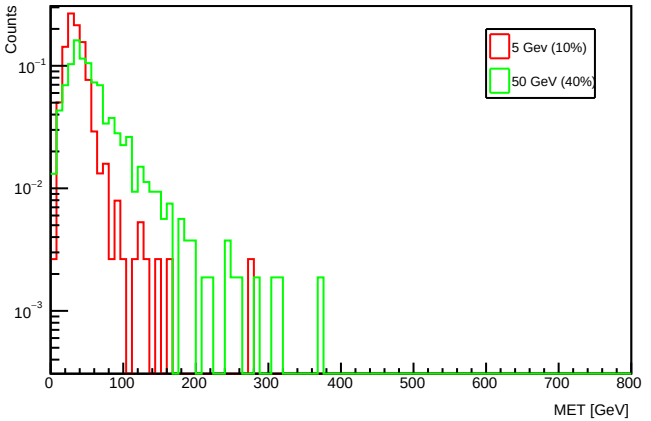
**Gen 5 Gev (10%): 378(c1:291(76.98%[76.98%]),c2:6(1.59%[2.06%]),c3:2(0.53%[33.33%]),c4:0(0.00%[0.00%]))**

**Reco 5 Gev (10%): 378(c1:220(58.20%[58.20%]),c2:5(1.32%[2.27%]),c3:2(0.53%[40.00%]),c4:0(0.00%[0.00%]))**

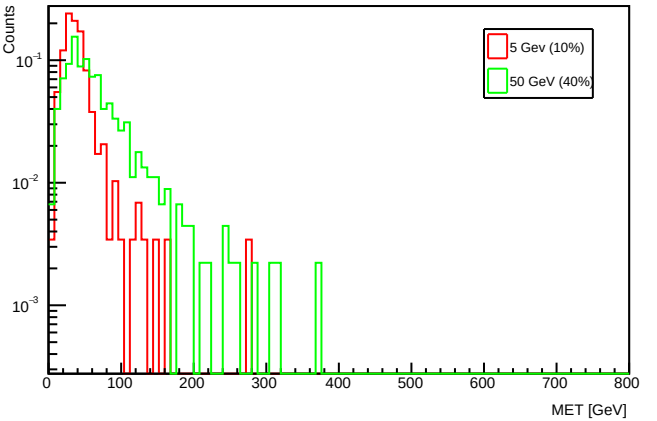
**Gen 50 GeV (40%): 533(c1:450(84.43%[84.43%]),c2:48(9.01%[10.67%]),c3:33(6.19%[68.75%]),c4:16(3.00%[48.48%]))**

**Reco 50 GeV (40%): 533(c1:403(75.61%[75.61%]),c2:46(8.63%[11.41%]),c3:36(6.75%[78.26%]),c4:10(1.88%[27.78%]))**

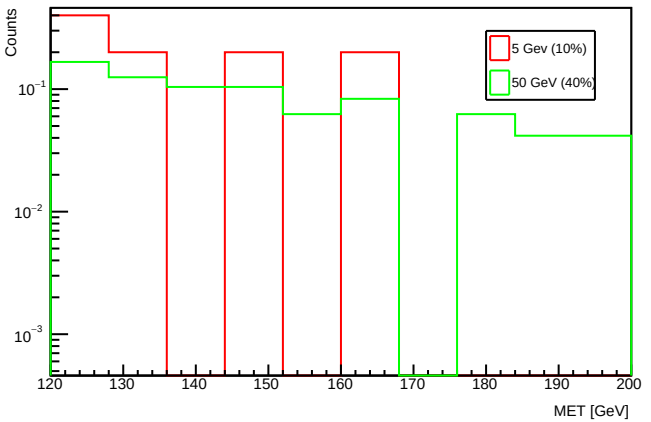
gen leading MET: no cuts



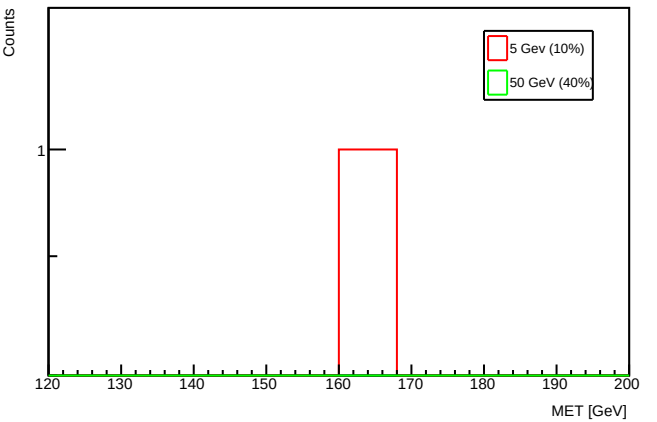

gen leading MET: n_jet >=1, j1pt > 30 GeV



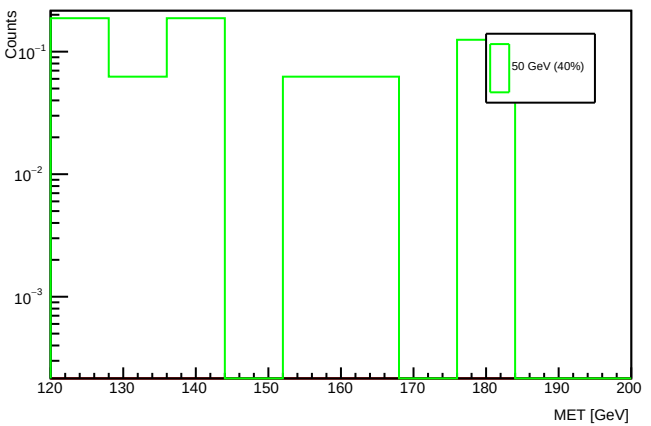

gen leading MET: MET > 120 GeV



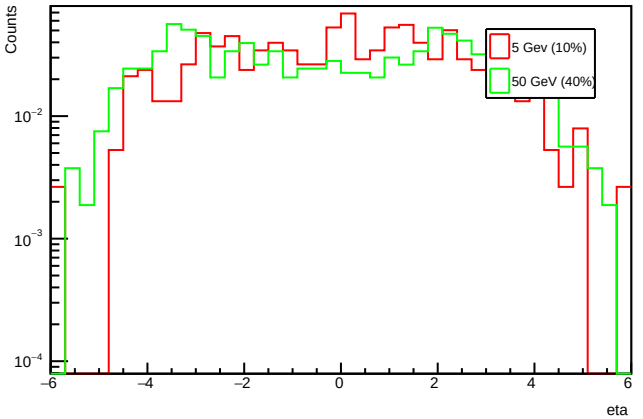

gen leading MET: j1pt >120, at most 2 jets w/ pt >30 GeV



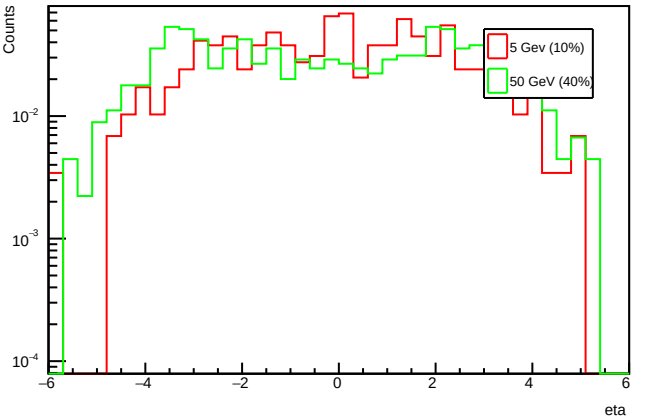

gen leading MET: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



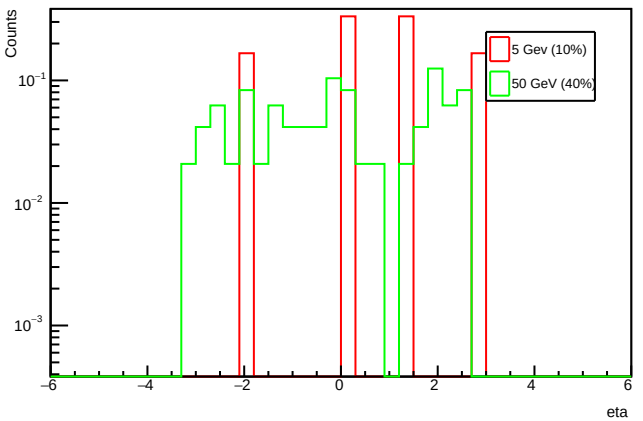
gen leading Met eta: no cuts



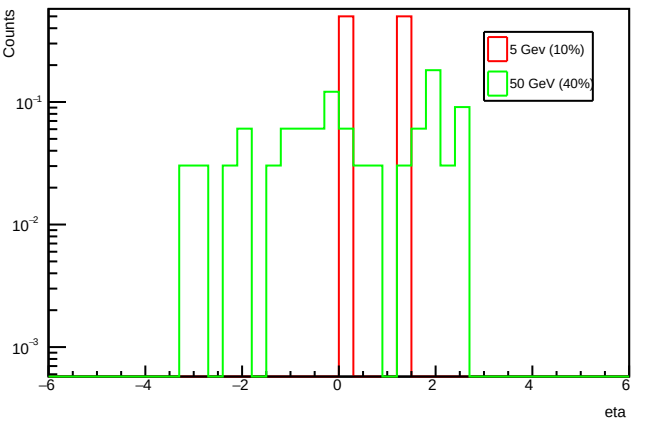

gen leading Met eta: n_jet >=1, j1pt > 30 GeV



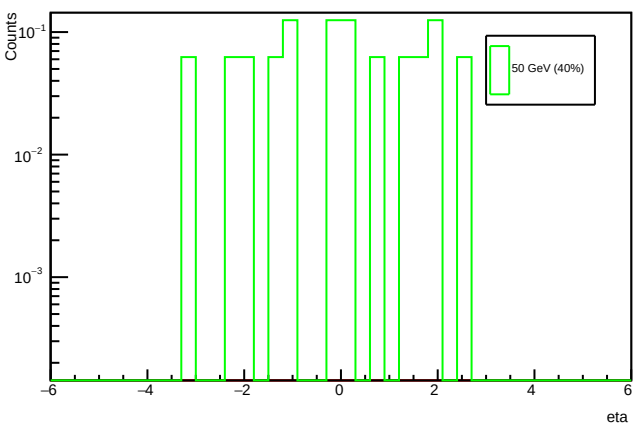

gen leading Met eta: MET > 120 GeV



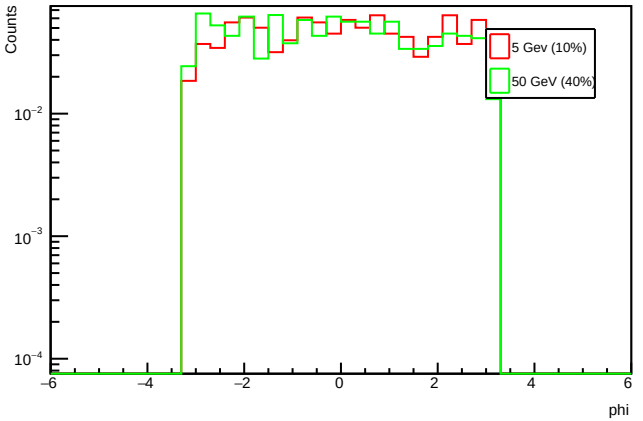

gen leading Met eta: j1pt >120, at most 2 jets w/ pt >30 GeV



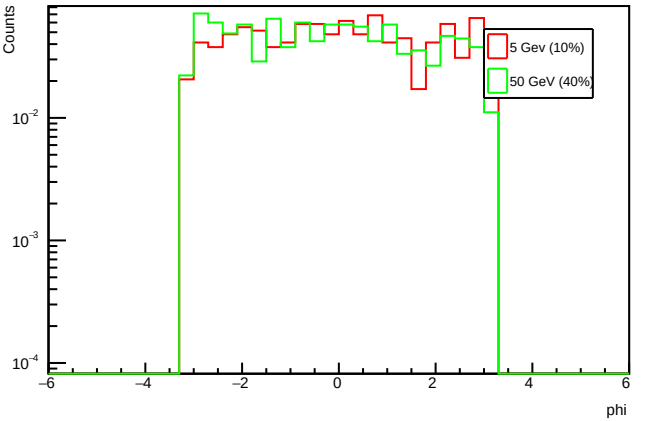

gen leading Met eta: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



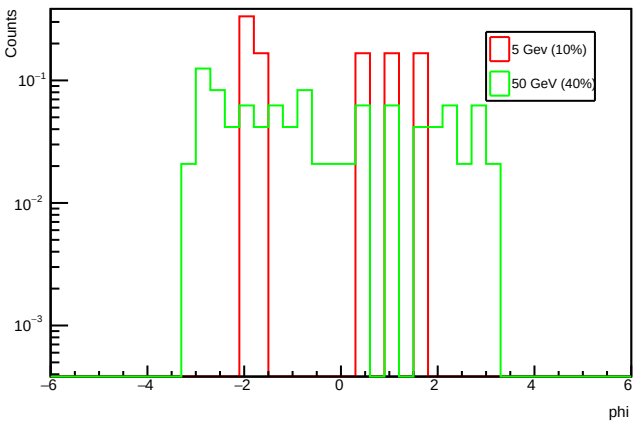
gen leading Met phi: no cuts



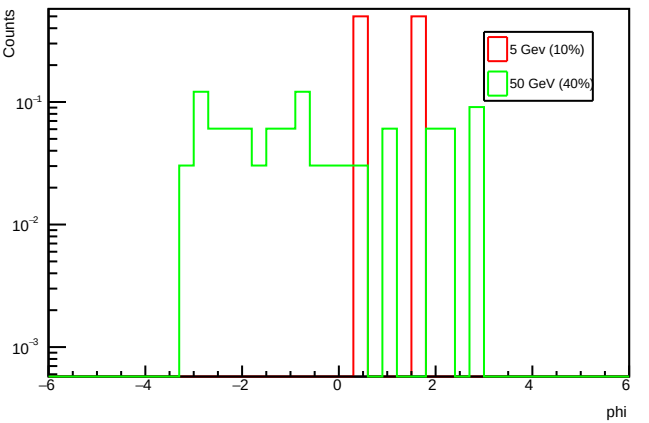

gen leading Met phi: n_jet >=1, j1pt > 30 GeV



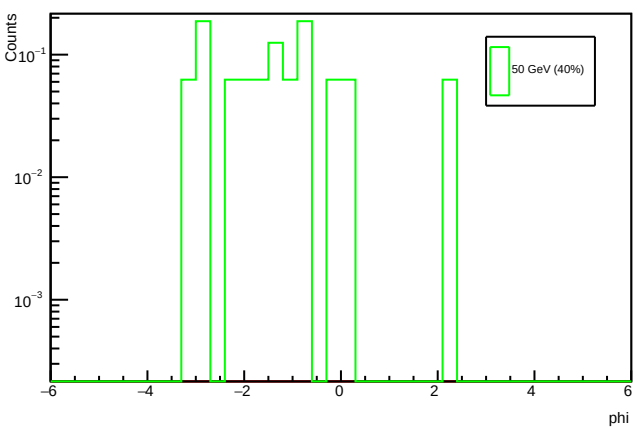

gen leading Met phi: MET > 120 GeV



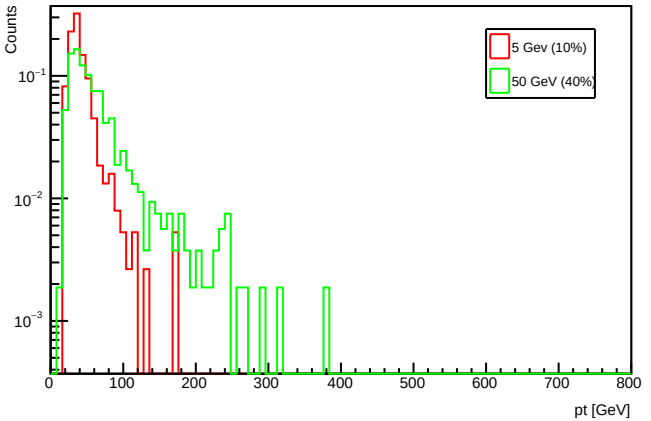

gen leading Met phi: j1pt >120, at most 2 jets w/ pt >30 GeV



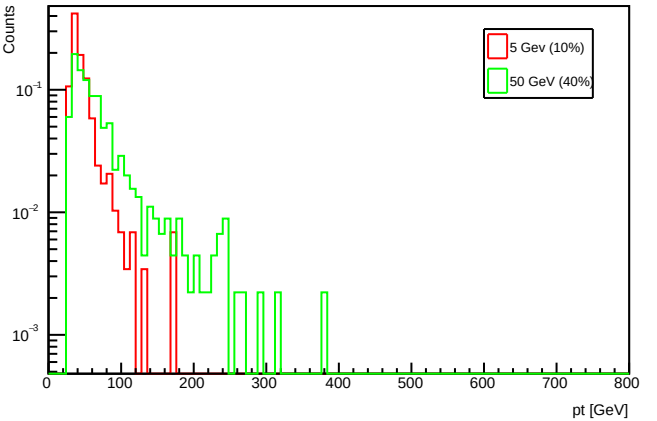

gen leading Met phi: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



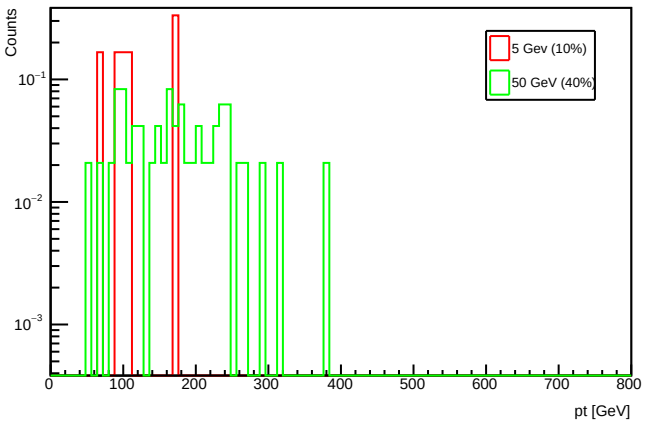
gen leading Jet pt: no cuts



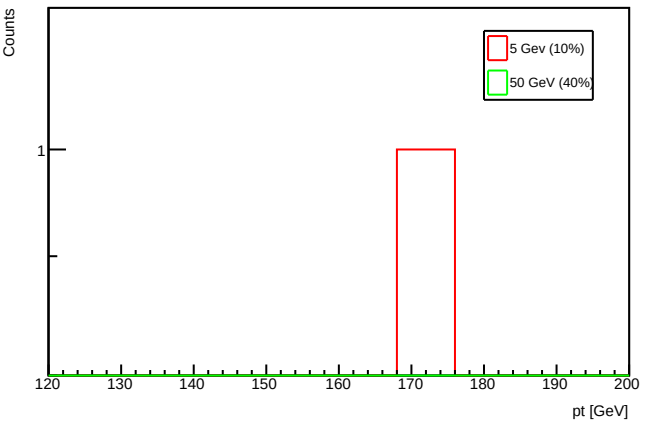

gen leading Jet pt: n_jet >=1, j1pt > 30 GeV



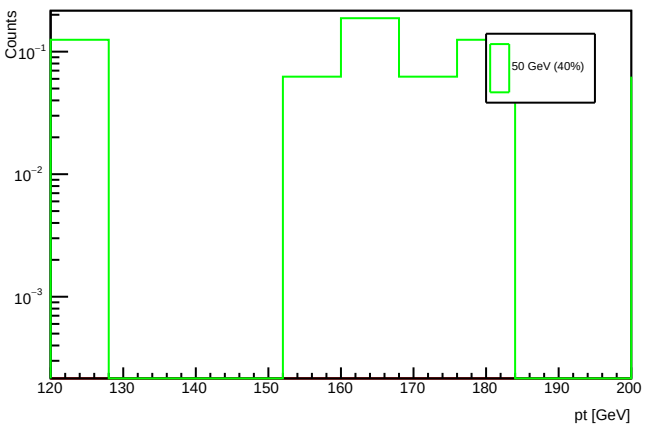

gen leading Jet pt: MET > 120 GeV



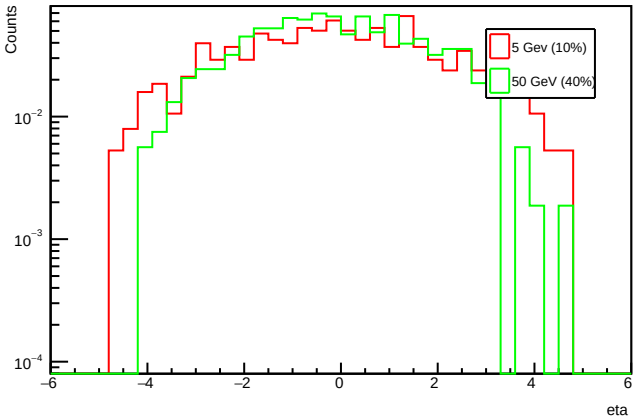

gen leading Jet pt: j1pt >120, at most 2 jets w/ pt >30 GeV



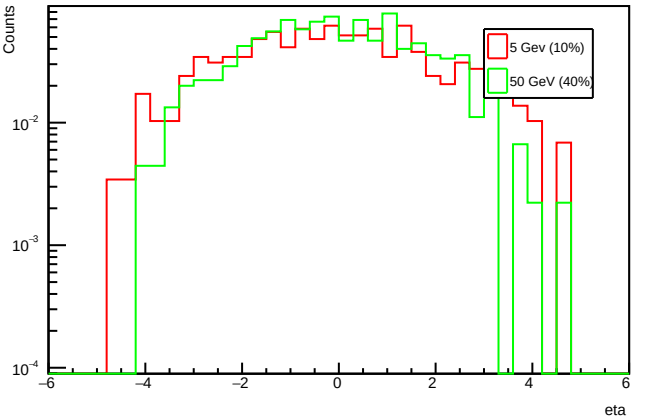

gen leading Jet pt: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



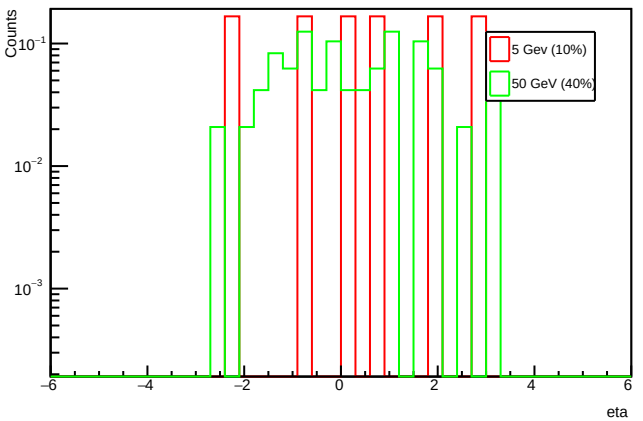
gen leading Jet eta: no cuts



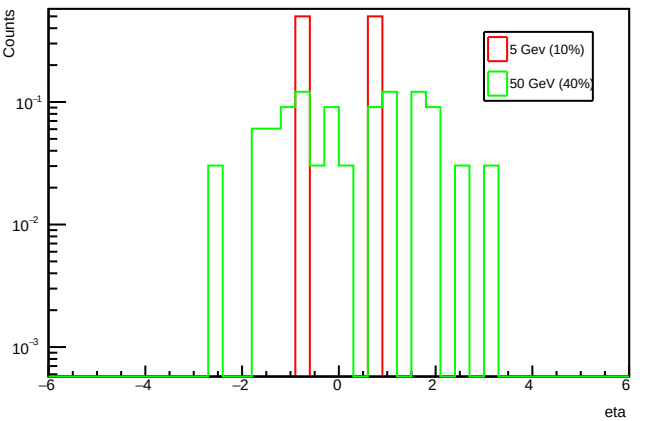

gen leading Jet eta: n_jet >=1, j1pt > 30 GeV



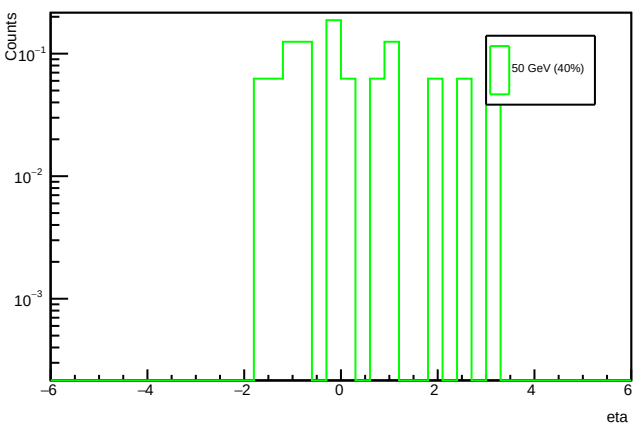

gen leading Jet eta: MET > 120 GeV



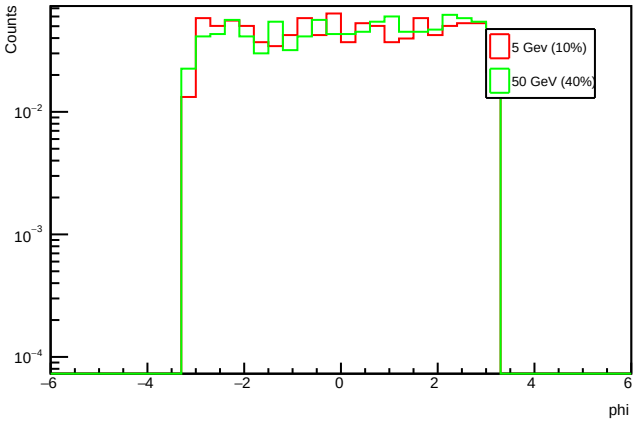

gen leading Jet eta: j1pt >120, at most 2 jets w/ pt >30 GeV



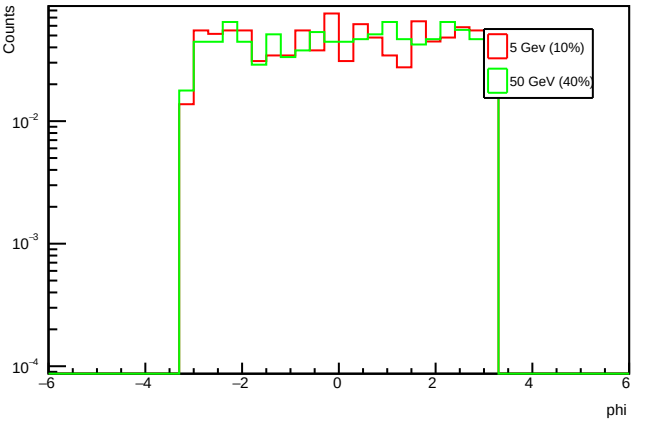

gen leading Jet eta: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



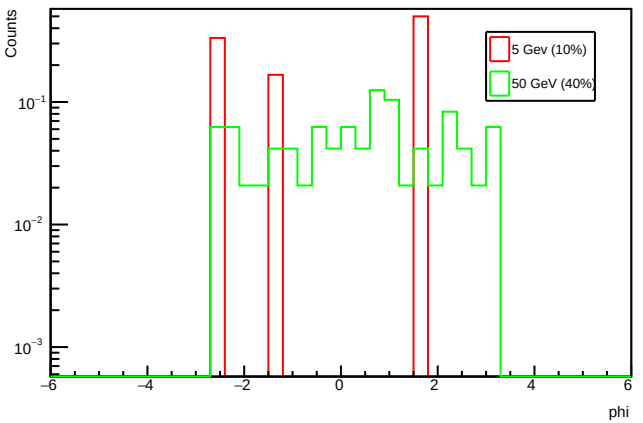
gen leading Jet phi: no cuts



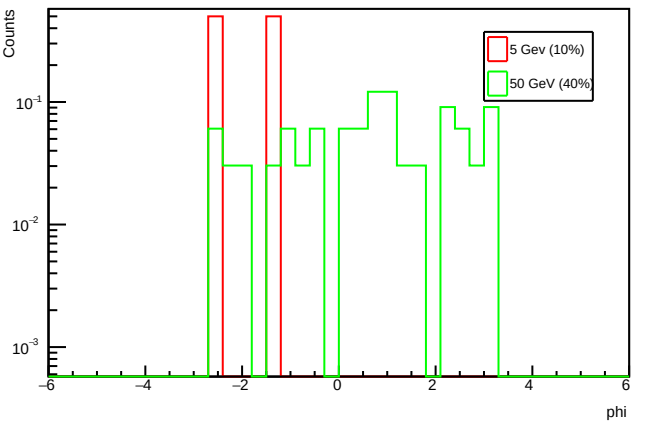

gen leading Jet phi: n_jet >=1, j1pt > 30 GeV



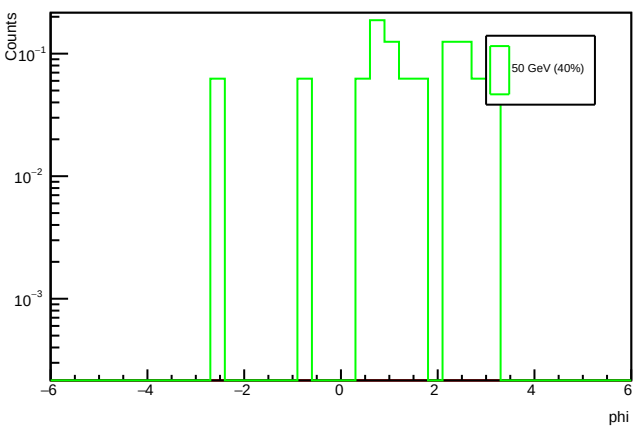

gen leading Jet phi: MET > 120 GeV



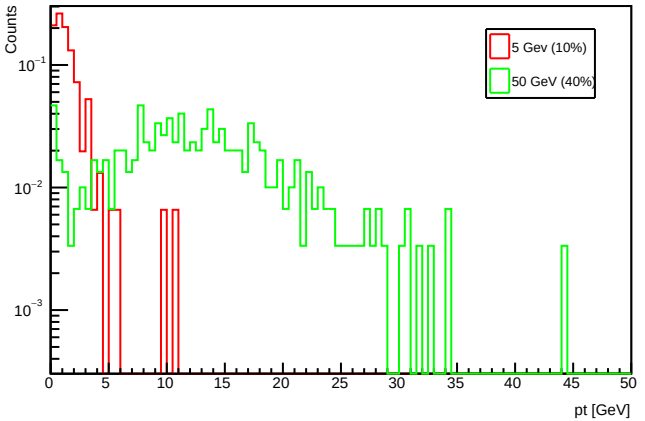

gen leading Jet phi: j1pt >120, at most 2 jets w/ pt >30 GeV



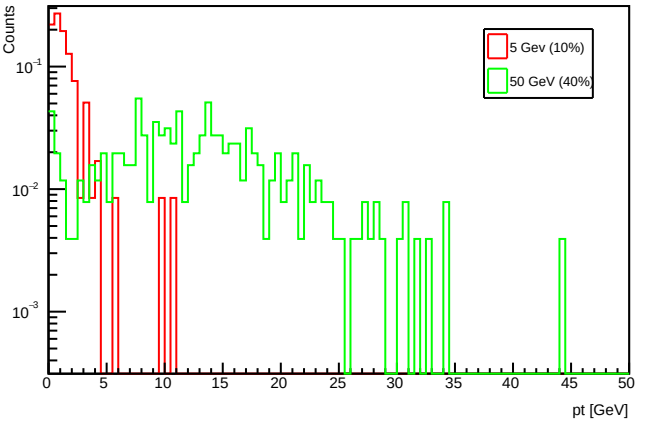

gen leading Jet phi: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



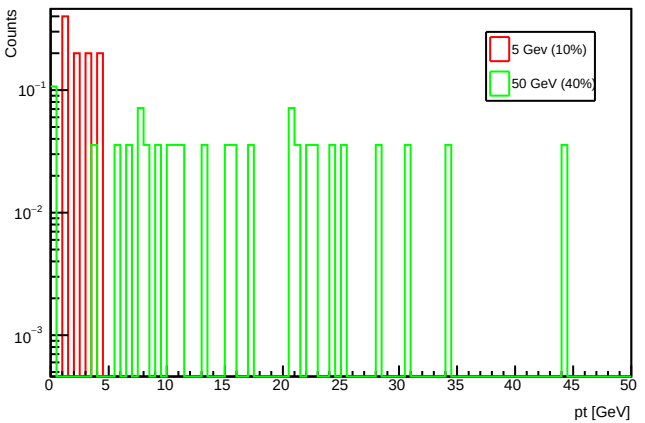
ctau 1000mm leading vs subleading Mu pt: no cuts



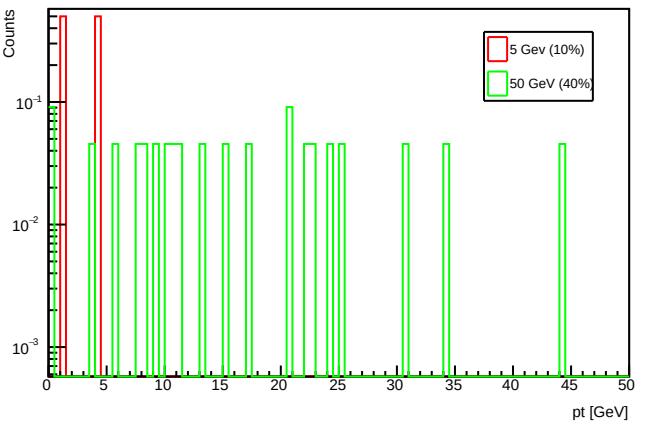

ctau 1000mm leading vs subleading Mu pt: n_jet >=1, j1pt > 30 GeV



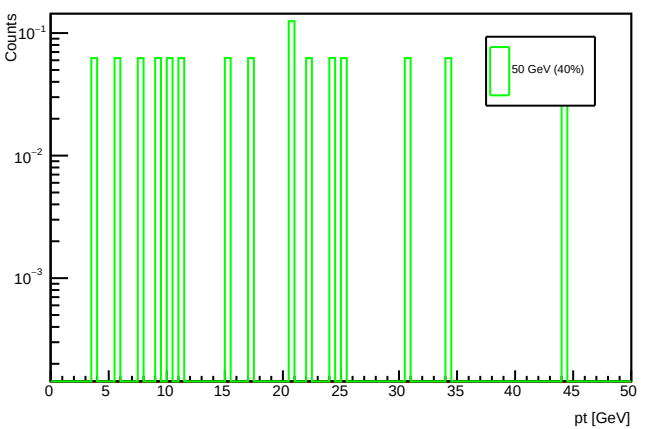

ctau 1000mm leading vs subleading Mu pt: MET > 120 GeV



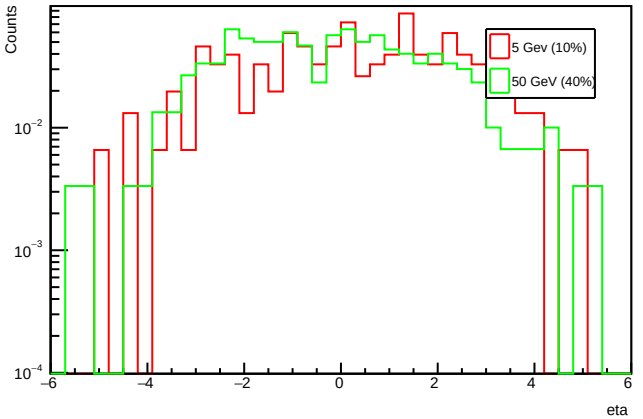

ctau 1000mm leading vs subleading Mu pt: j1pt >120, at most 2 jets w/ pt >30 GeV



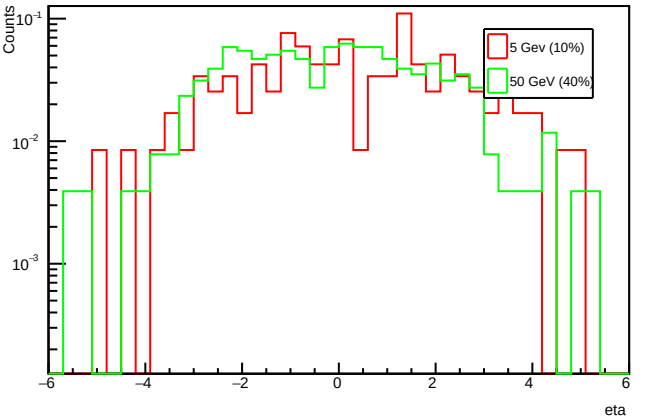

ctau 1000mm leading vs subleading Mu pt: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



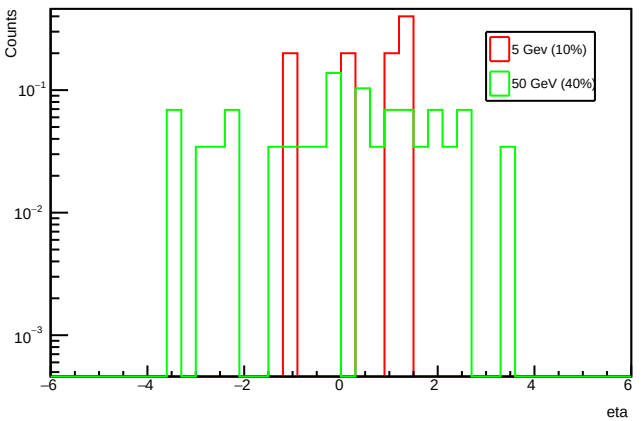
gen leading Mu eta: no cuts



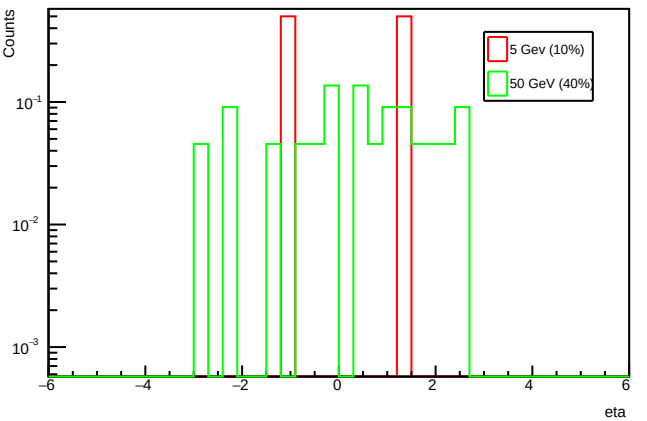

gen leading Mu eta: n_jet >=1, j1pt > 30 GeV



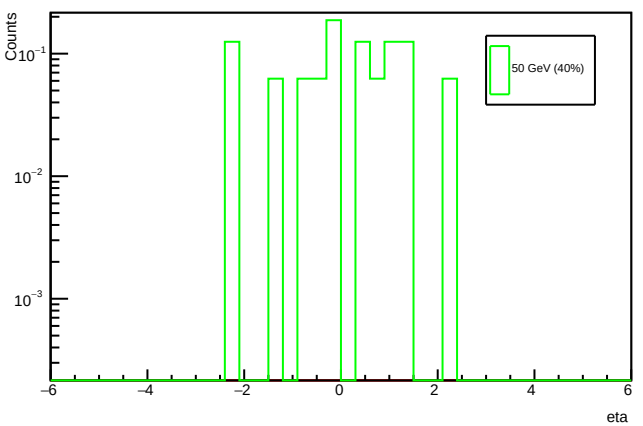

gen leading Mu eta: MET > 120 GeV



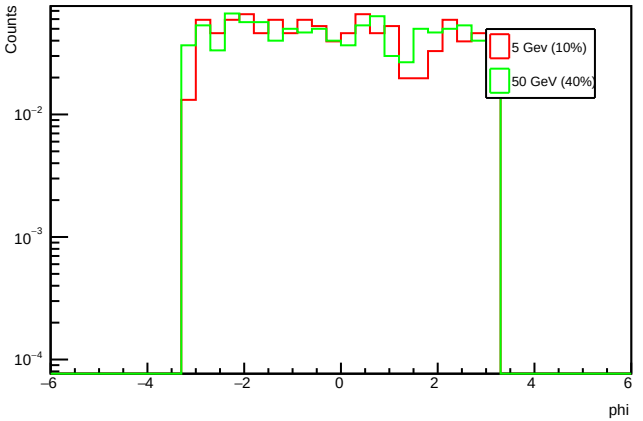

gen leading Mu eta: j1pt >120, at most 2 jets w/ pt >30 GeV



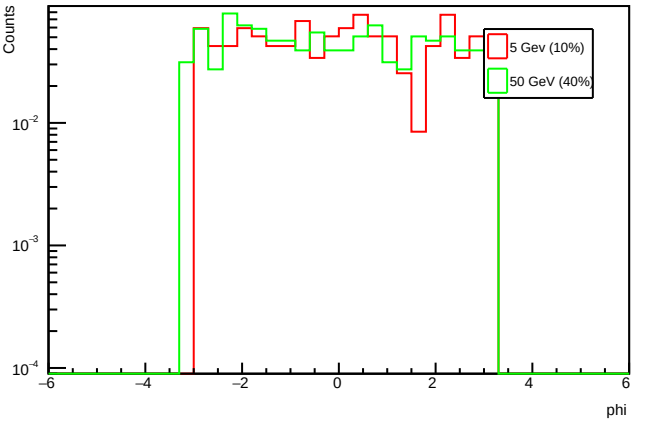

gen leading Mu eta: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



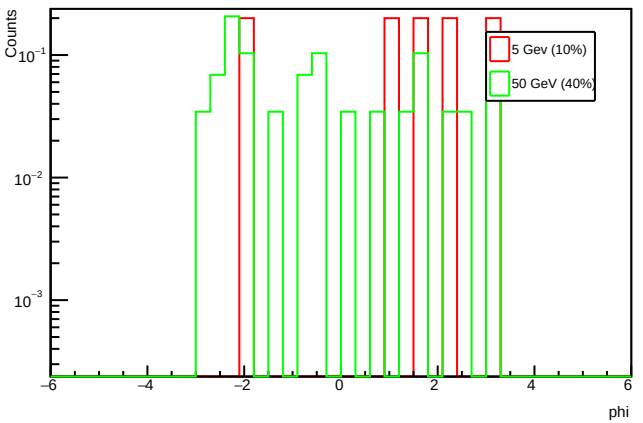
gen leading Mu phi: no cuts



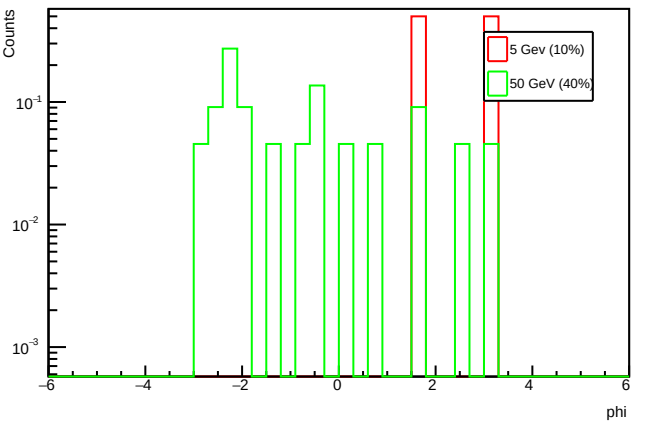

gen leading Mu phi: n_jet >=1, j1pt > 30 GeV



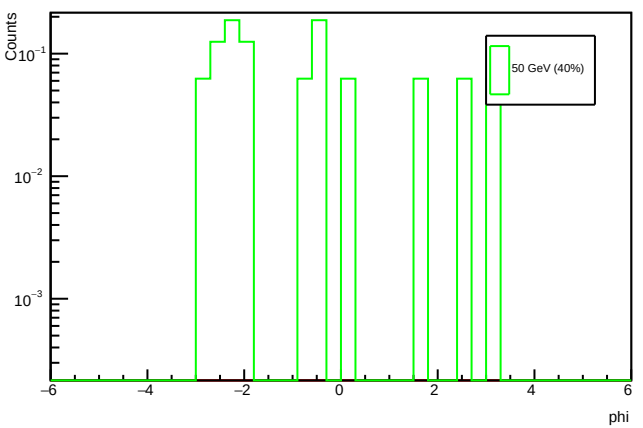

gen leading Mu phi: MET > 120 GeV



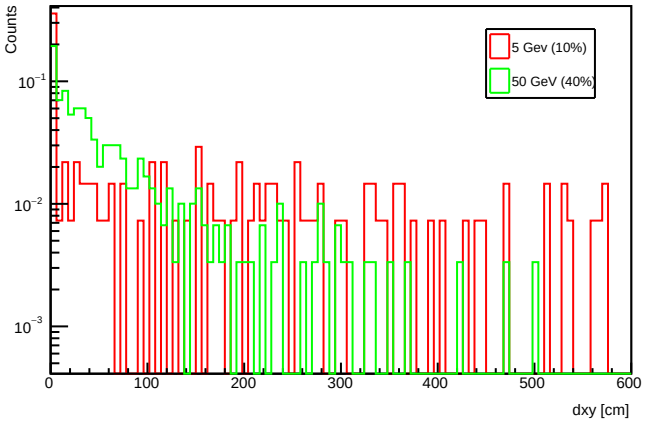

gen leading Mu phi: j1pt >120, at most 2 jets w/ pt >30 GeV



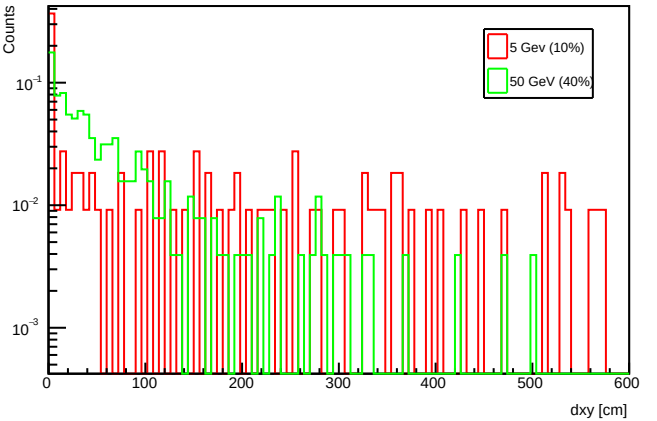

gen leading Mu phi: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



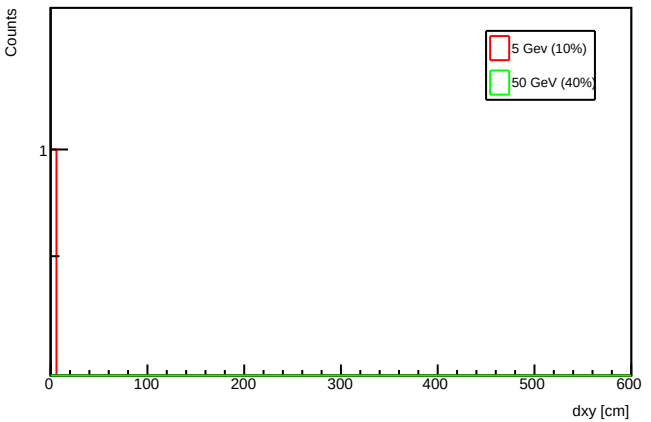
gen leading Mu vxy: no cuts



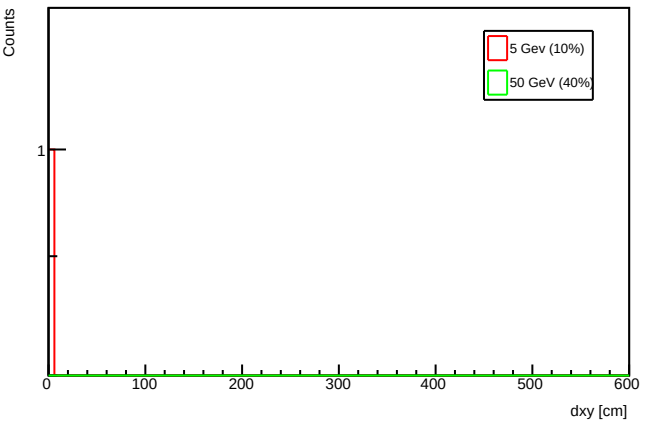

gen leading Mu vxy: n_jet >=1, j1pt > 30 GeV



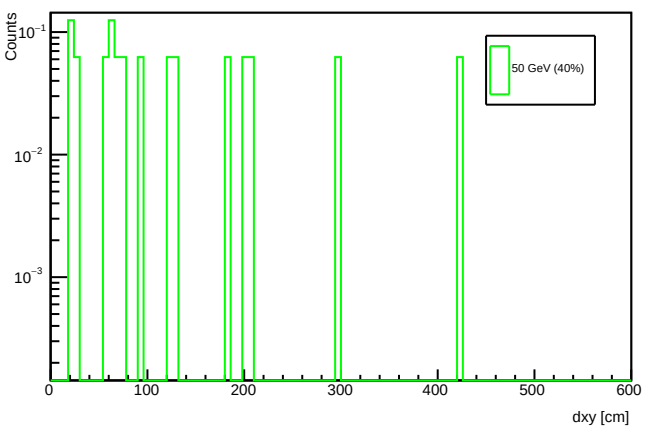

gen leading Mu vxy: MET > 120 GeV



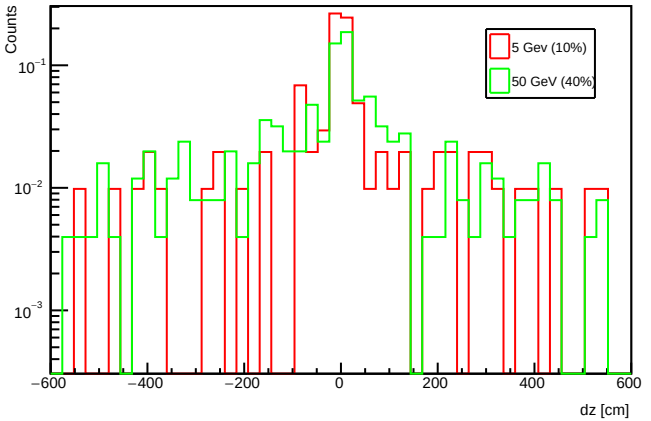

gen leading Mu vxy: j1pt >120, at most 2 jets w/ pt >30 GeV



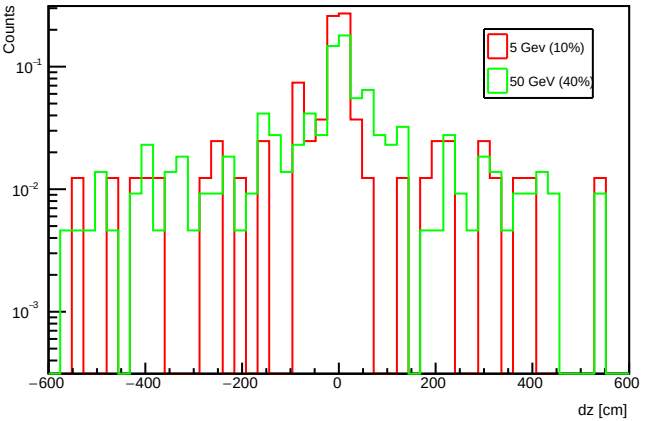

gen leading Mu vxy: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



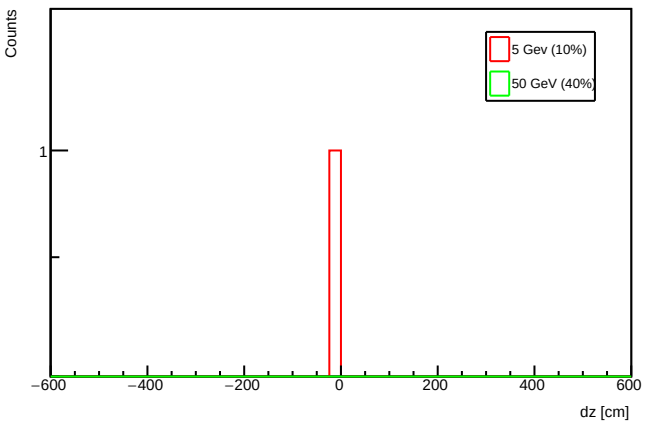
gen leading Mu vz: no cuts



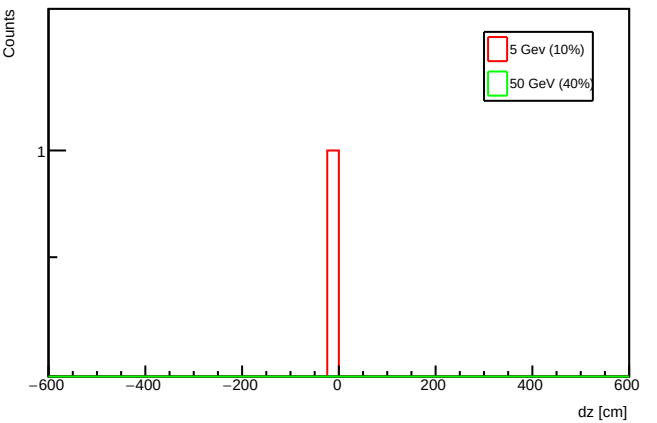

gen leading Mu vz: n_jet >=1, j1pt > 30 GeV



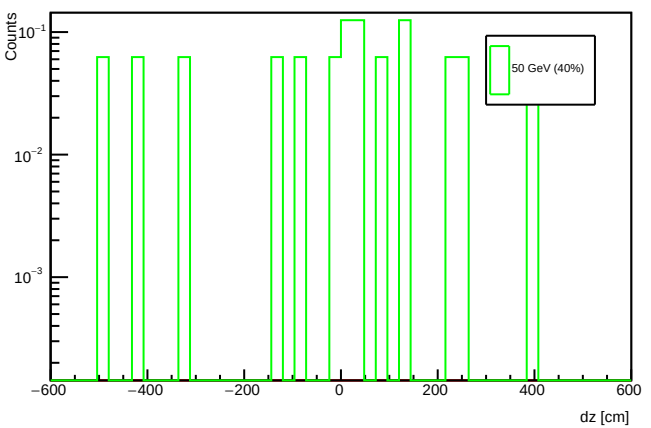

gen leading Mu vz: MET > 120 GeV



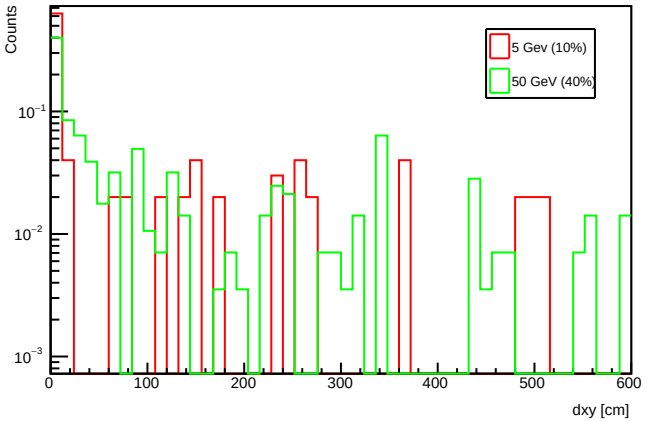

gen leading Mu vz: j1pt >120, at most 2 jets w/ pt >30 GeV



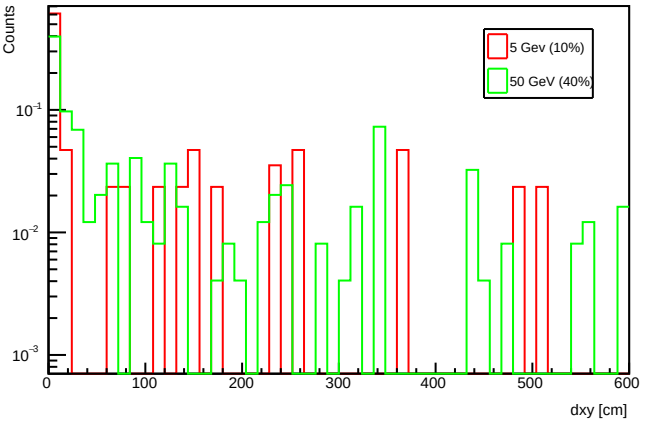

gen leading Mu vz: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



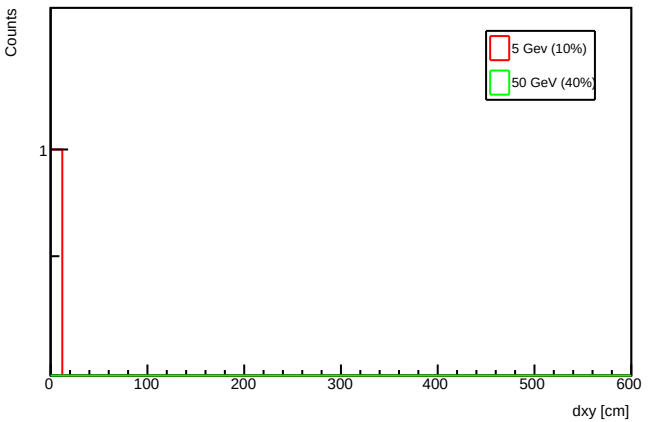
gen all Mu vxy: no cuts



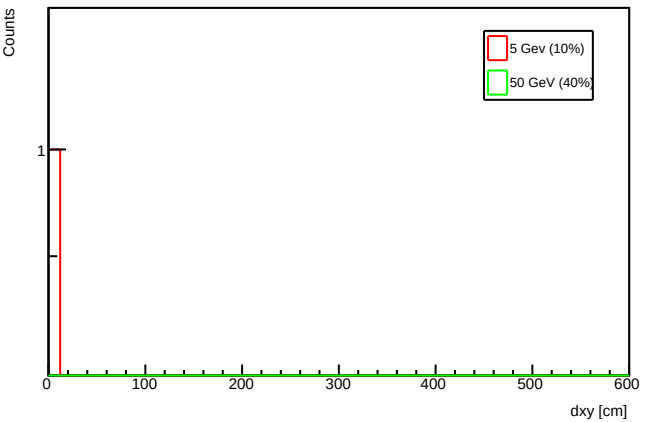

gen all Mu vxy: n_jet >=1, j1pt > 30 GeV



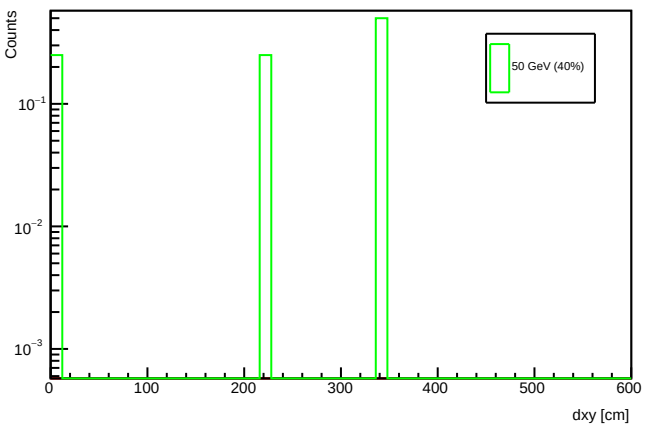

gen all Mu vxy: MET > 120 GeV



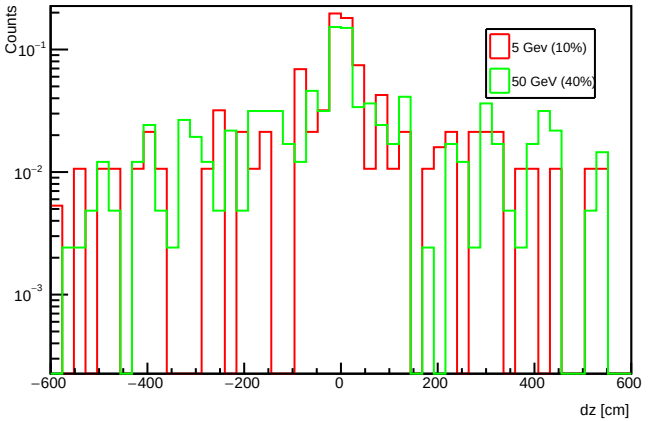

gen all Mu vxy: j1pt >120, at most 2 jets w/ pt >30 GeV



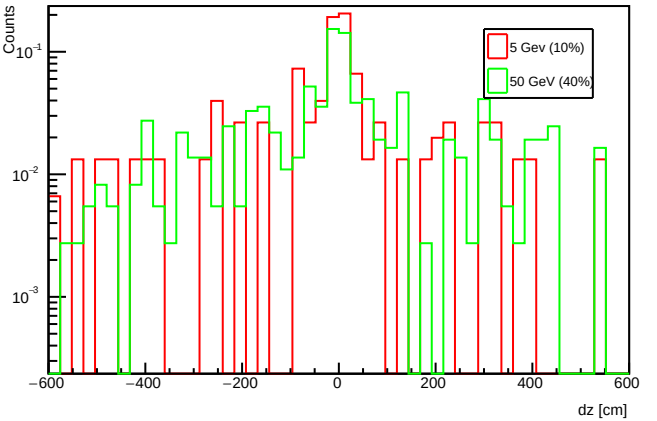

gen all Mu vxy: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



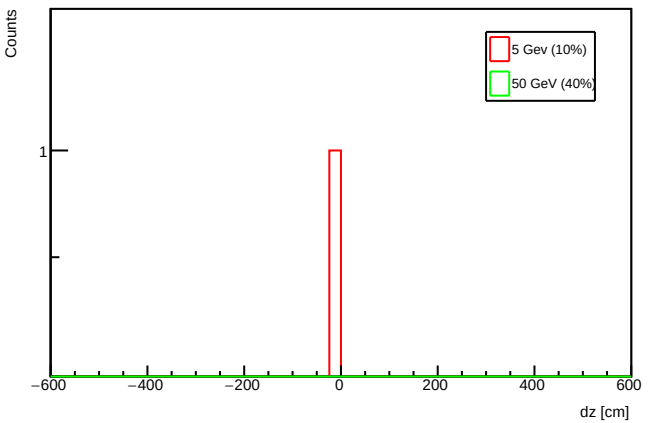
gen all Mu vz: no cuts



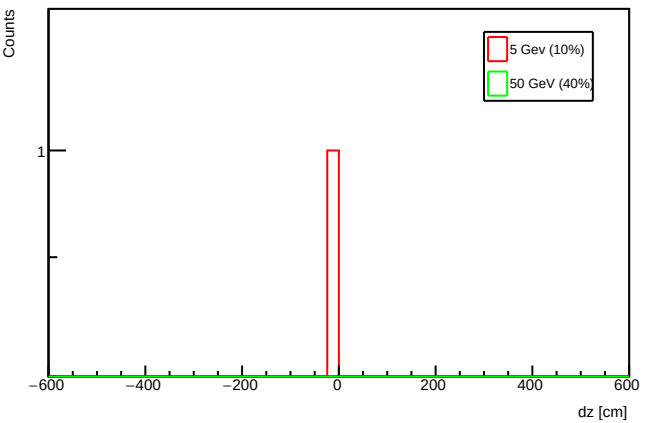

gen all Mu vz: n_jet >=1, j1pt > 30 GeV



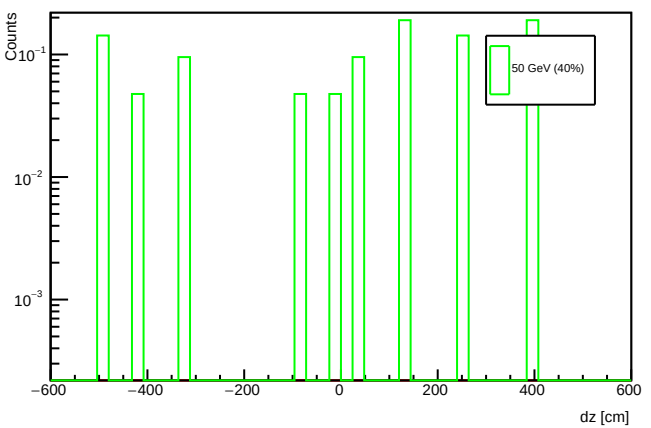

gen all Mu vz: MET > 120 GeV



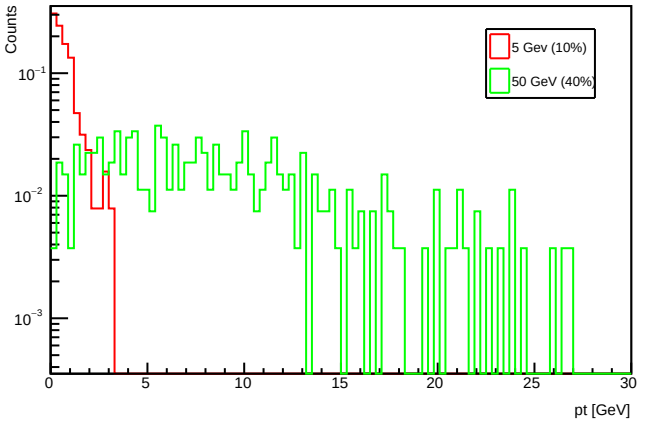

gen all Mu vz: j1pt >120, at most 2 jets w/ pt >30 GeV



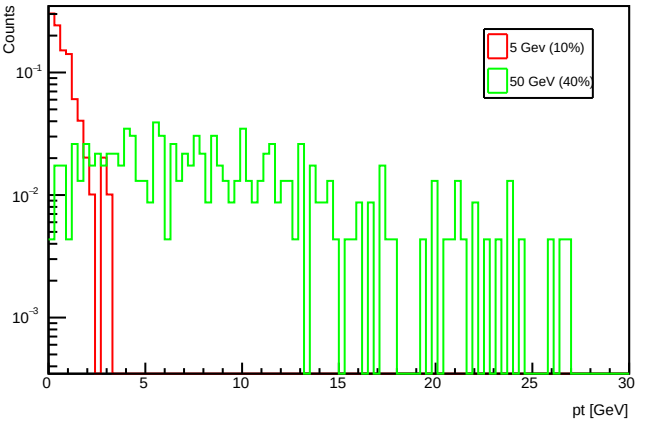

gen all Mu vz: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



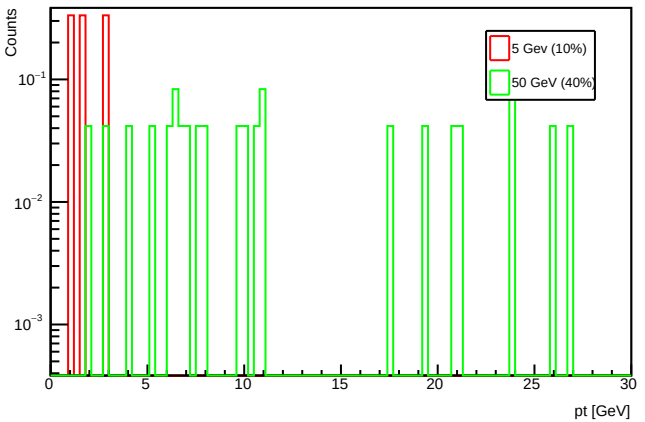
ctau 1000mm leading vs subleading Mu pt: no cuts



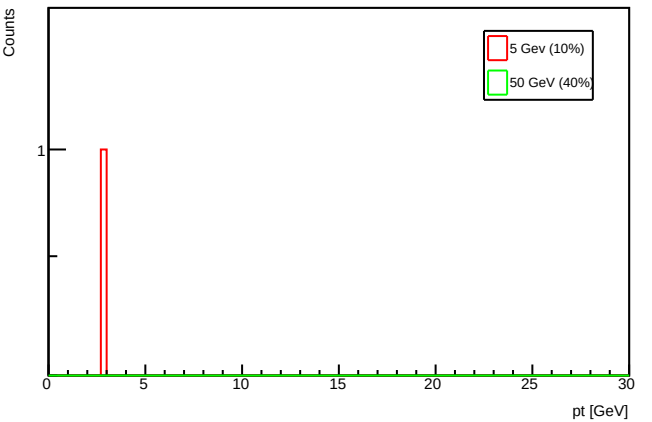

ctau 1000mm leading vs subleading Mu pt: n_jet >=1, j1pt > 30 GeV



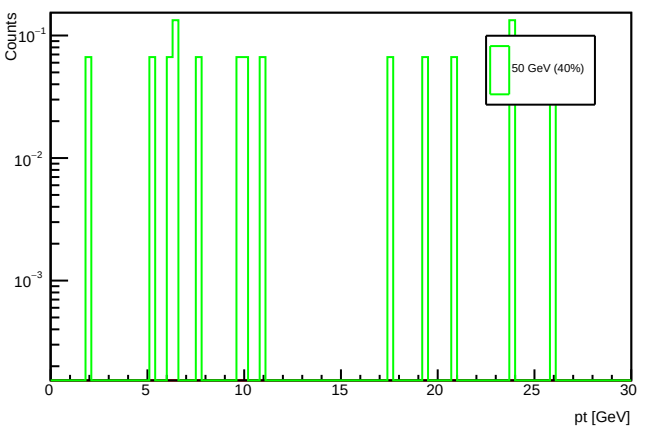

ctau 1000mm leading vs subleading Mu pt: MET > 120 GeV



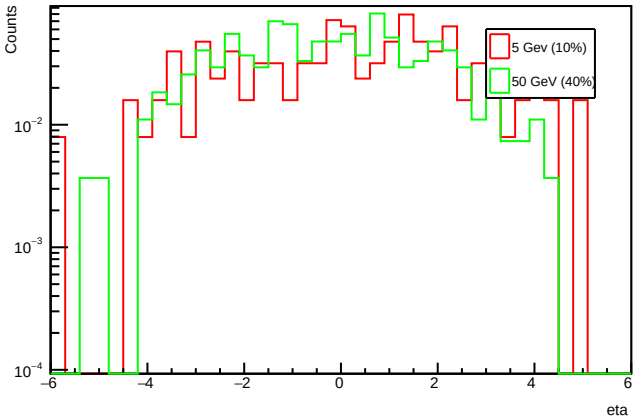

ctau 1000mm leading vs subleading Mu pt: j1pt >120, at most 2 jets w/ pt >30 GeV



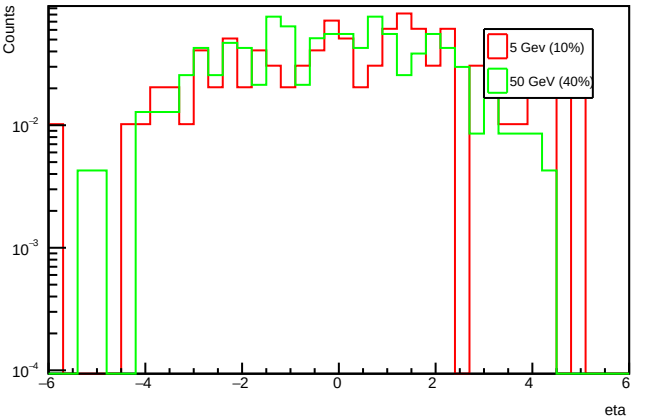

ctau 1000mm leading vs subleading Mu pt: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



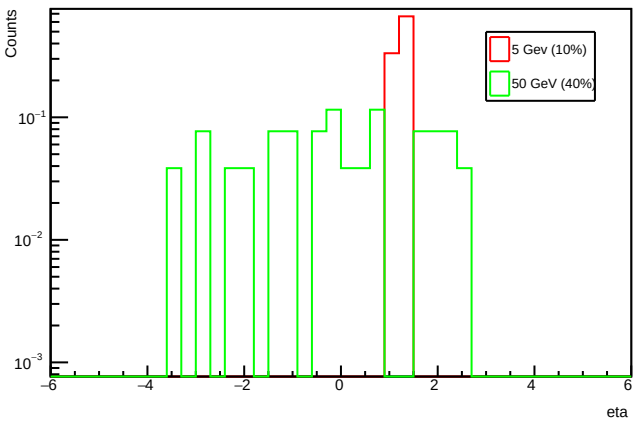
gen subleading Mu eta: no cuts



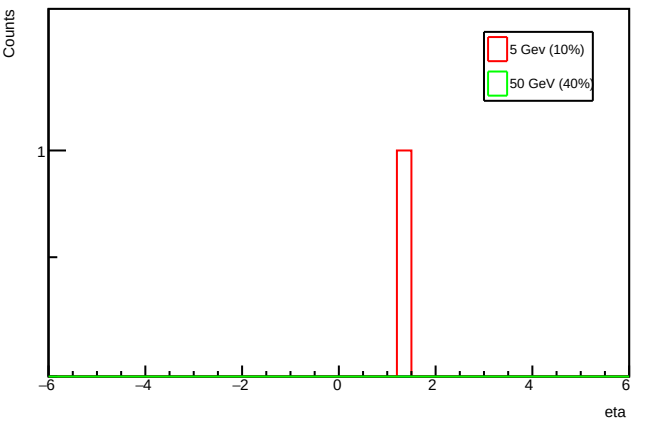

gen subleading Mu eta: n_jet >=1, j1pt > 30 GeV



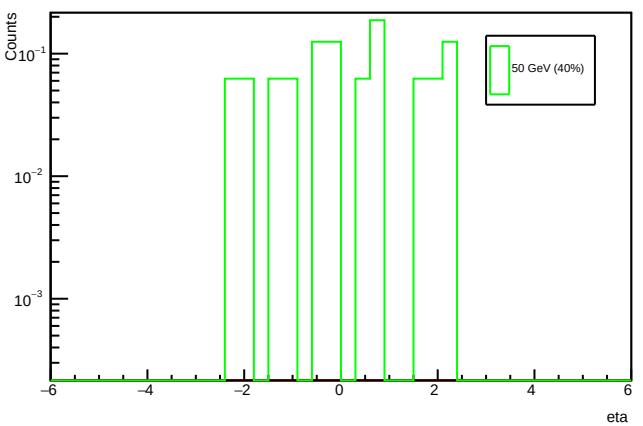

gen subleading Mu eta: MET > 120 GeV



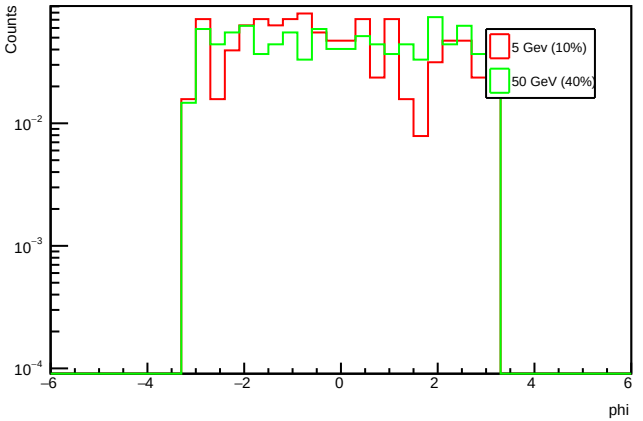

gen subleading Mu eta: j1pt >120, at most 2 jets w/ pt >30 GeV



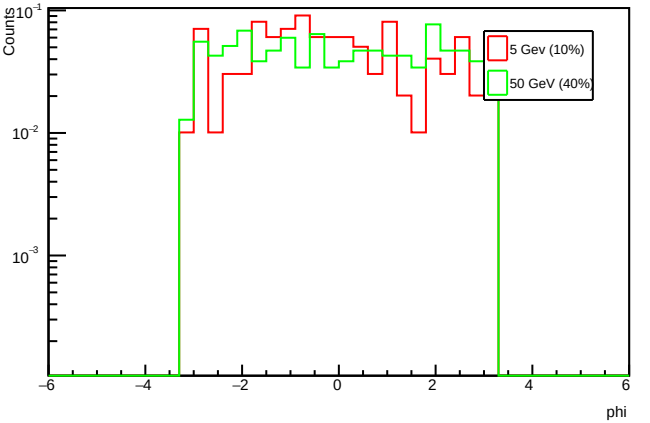

gen subleading Mu eta: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



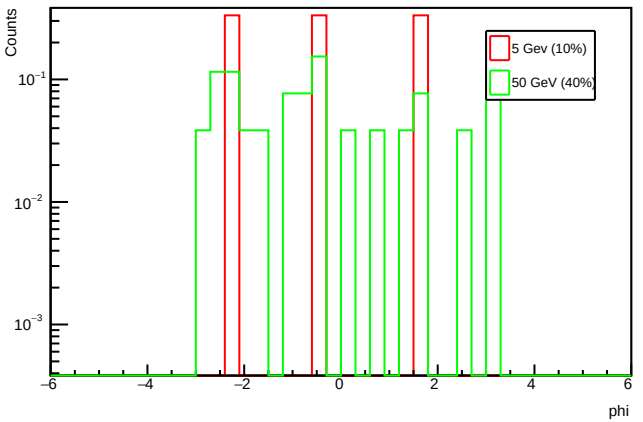
gen subleading Mu phi: no cuts



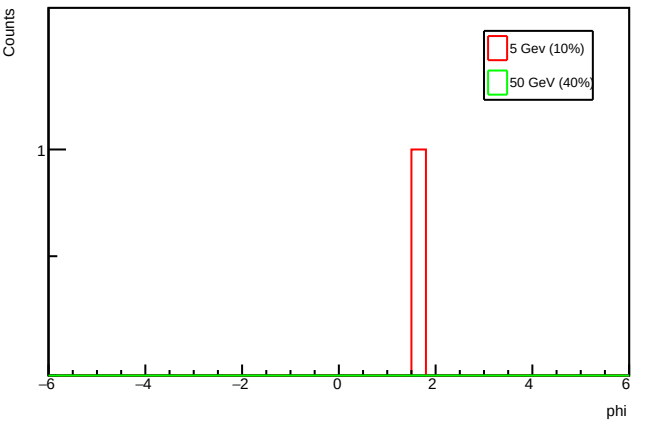

gen subleading Mu phi: n_jet >=1, j1pt > 30 GeV



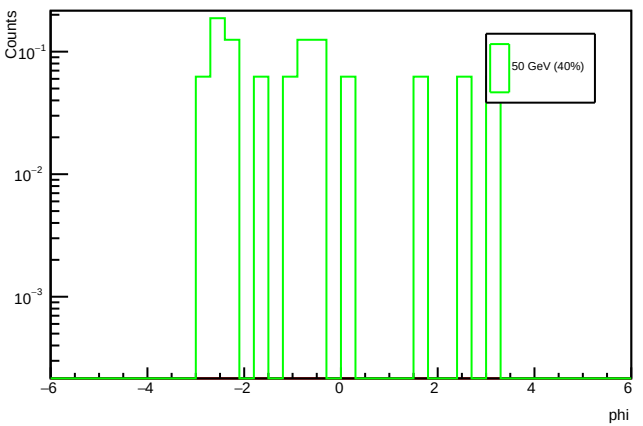

gen subleading Mu phi: MET > 120 GeV



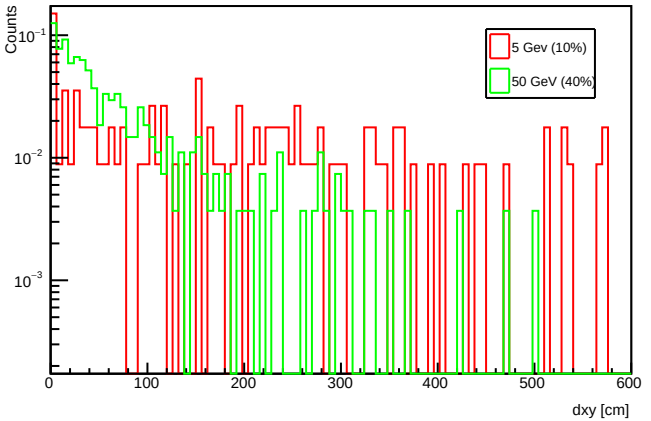

gen subleading Mu phi: j1pt >120, at most 2 jets w/ pt >30 GeV



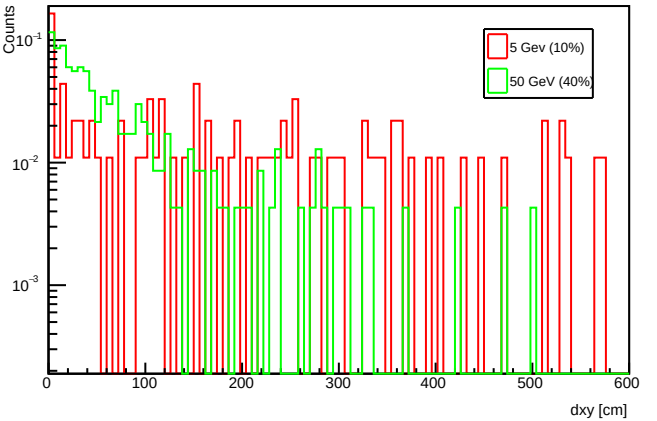

gen subleading Mu phi: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



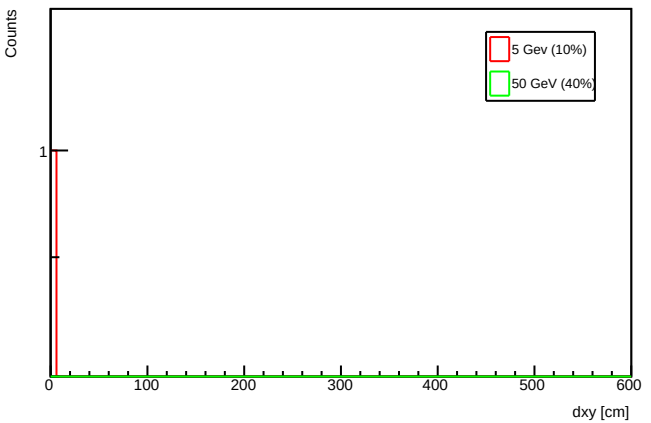
gen subleading Mu vxy: no cuts



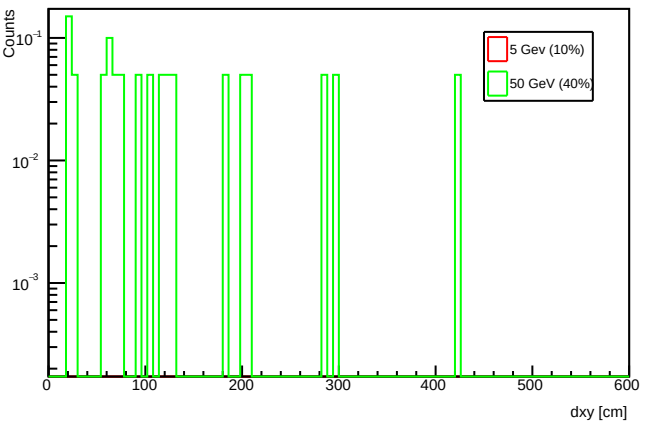

gen subleading Mu vxy: n_jet >=1, j1pt > 30 GeV



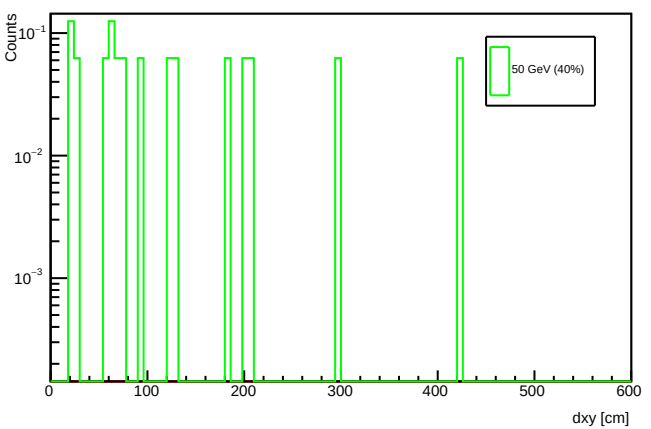

gen subleading Mu vxy: MET > 120 GeV



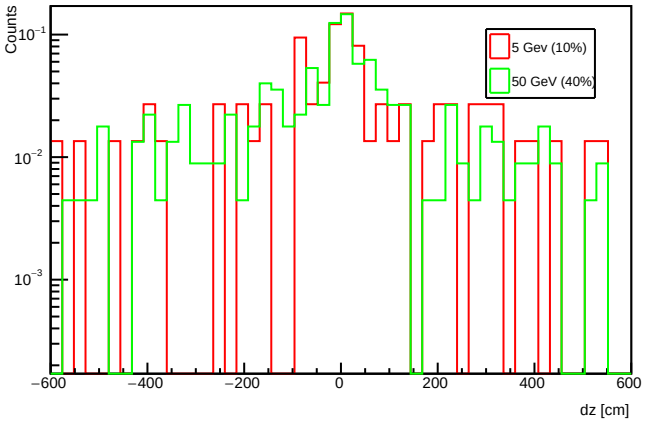

gen subleading Mu vxy: j1pt >120, at most 2 jets w/ pt >30 GeV



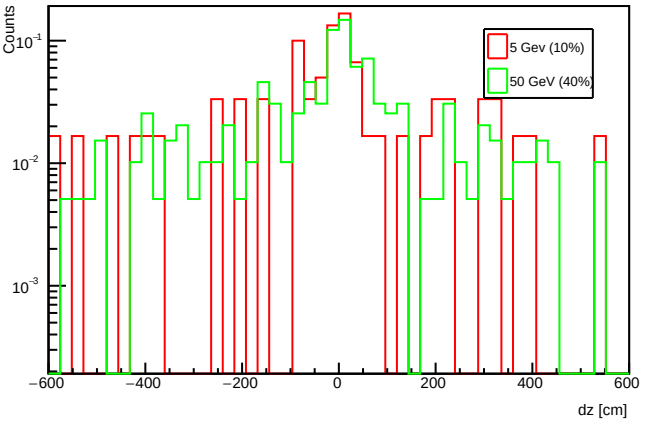

gen subleading Mu vxy: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



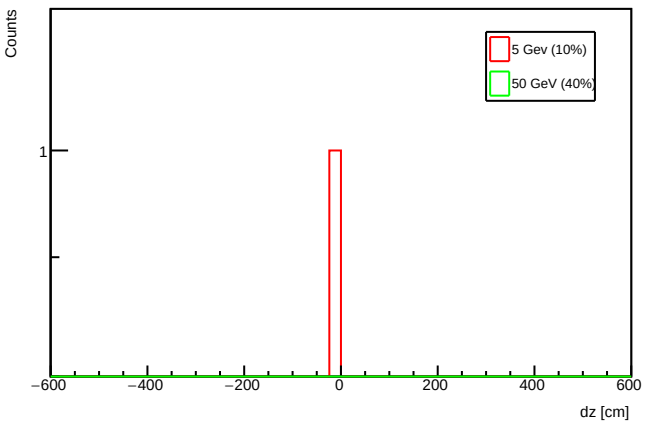
gen subleading Mu vz: no cuts



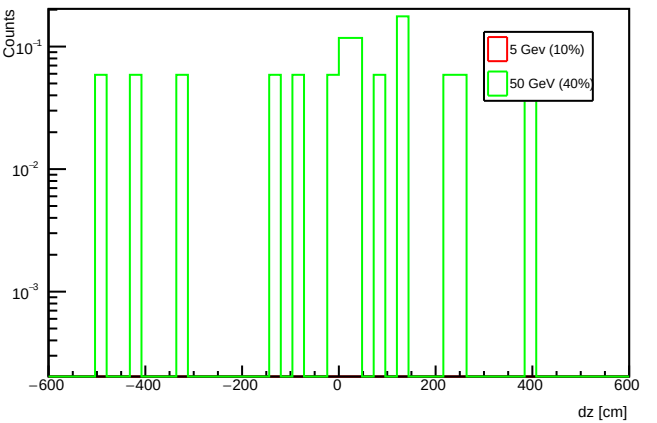

gen subleading Mu vz: n_jet >=1, j1pt > 30 GeV



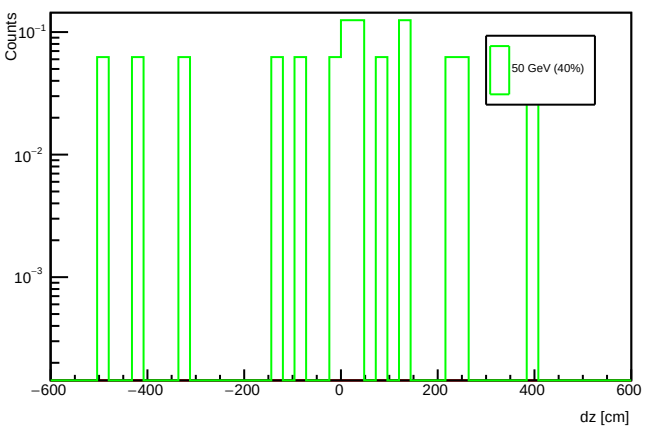

gen subleading Mu vz: MET > 120 GeV



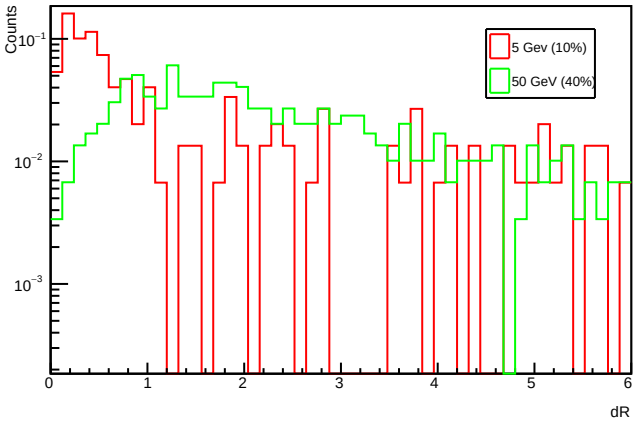

gen subleading Mu vz: j1pt >120, at most 2 jets w/ pt >30 GeV



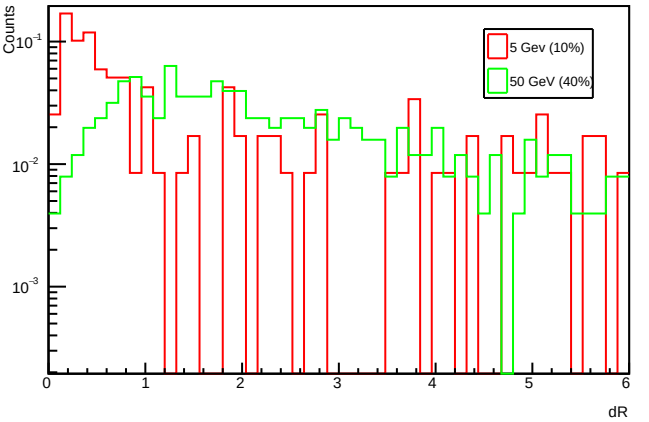

gen subleading Mu vz: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



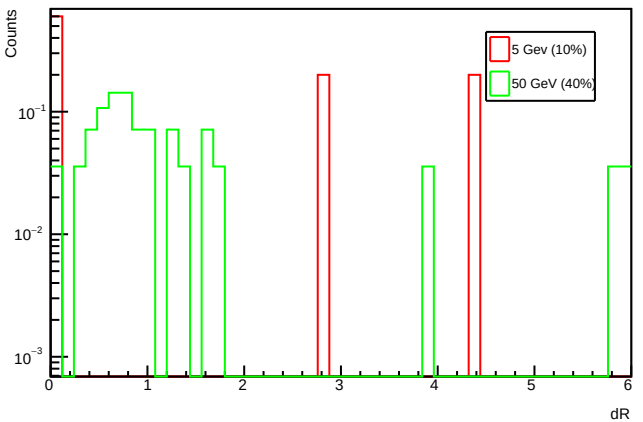
dR: gen leading mu and subleading mu: no cuts



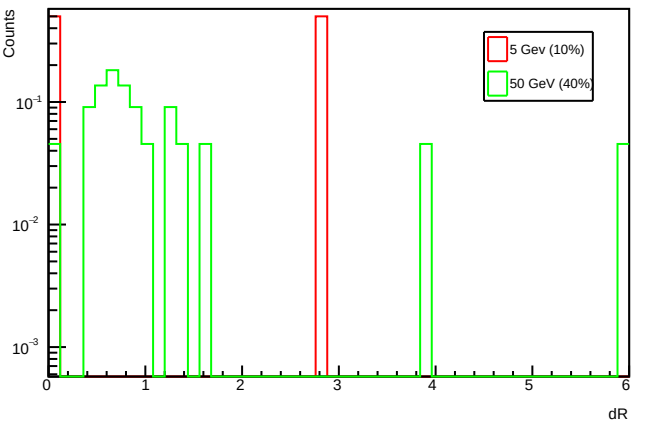

dR: gen leading mu and subleading mu: n_jet >=1, j1pt > 30 GeV



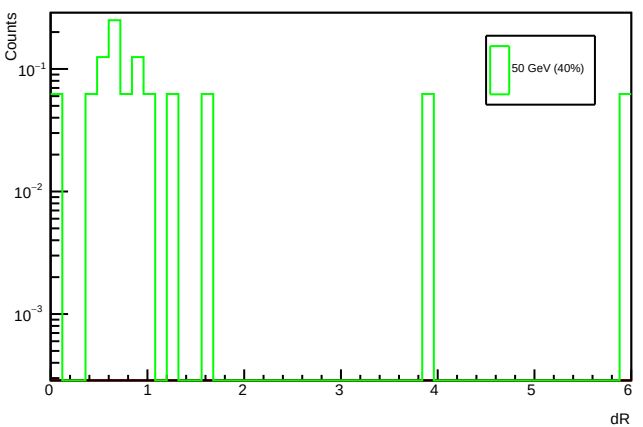

dR: gen leading mu and subleading mu: MET > 120 GeV



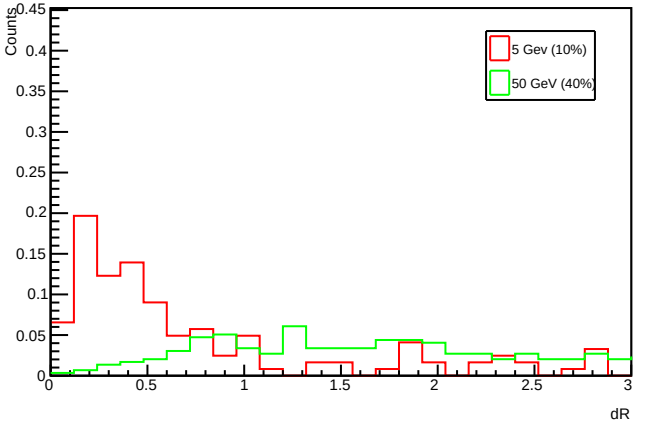

dR: gen leading mu and subleading mu: j1pt >120, at most 2 jets w/ pt >30 GeV



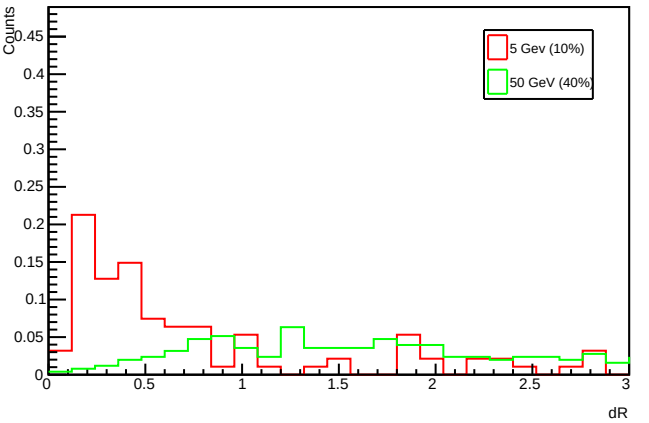

dR: gen leading mu and subleading mu: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



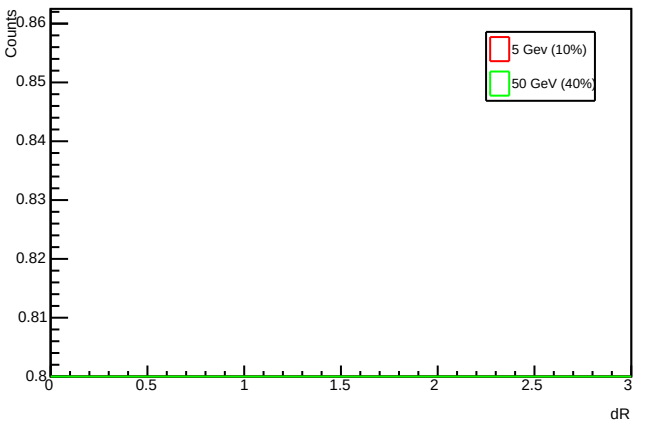
dR: gen leading mu and subleading mu: no cuts



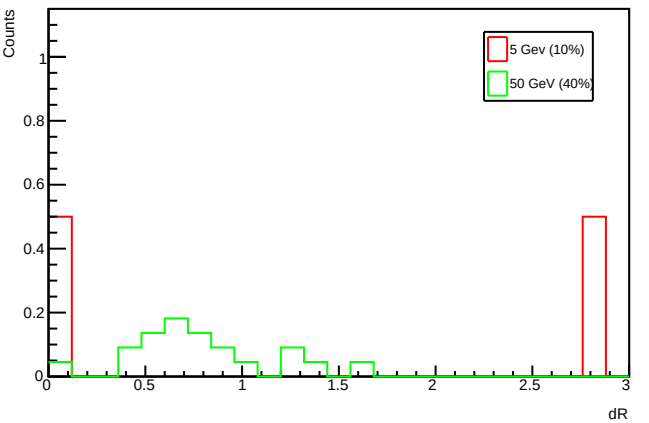

dR: gen leading mu and subleading mu: n_jet >=1, j1pt > 30 GeV



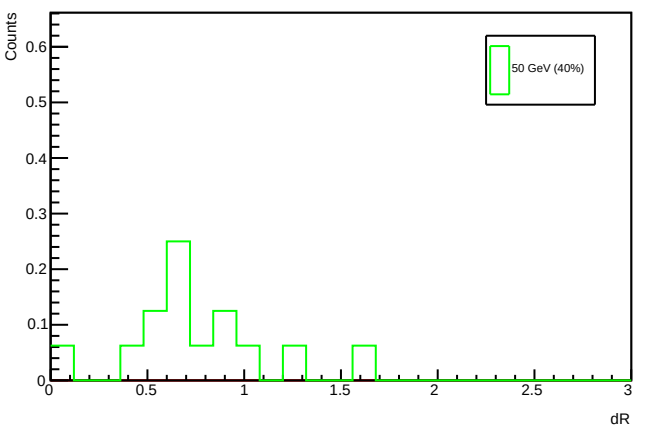

dR: gen leading mu and subleading mu: MET > 120 GeV



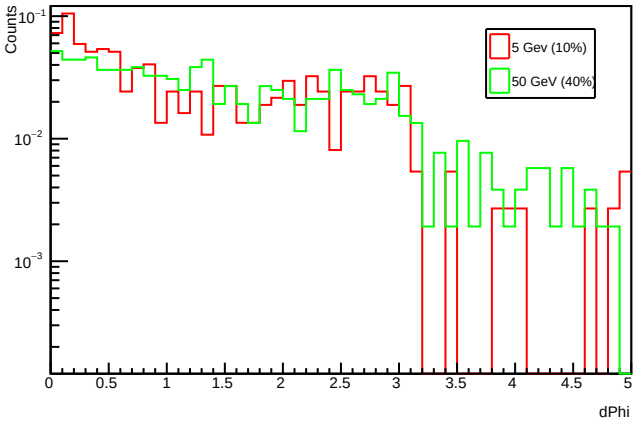

dR: gen leading mu and subleading mu: j1pt >120, at most 2 jets w/ pt >30 GeV



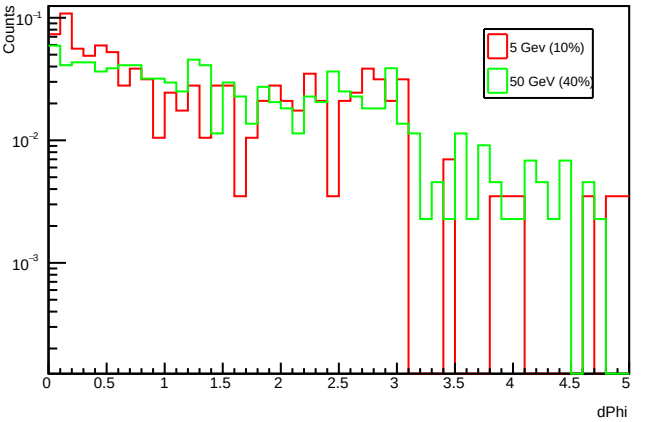

dR: gen leading mu and subleading mu: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



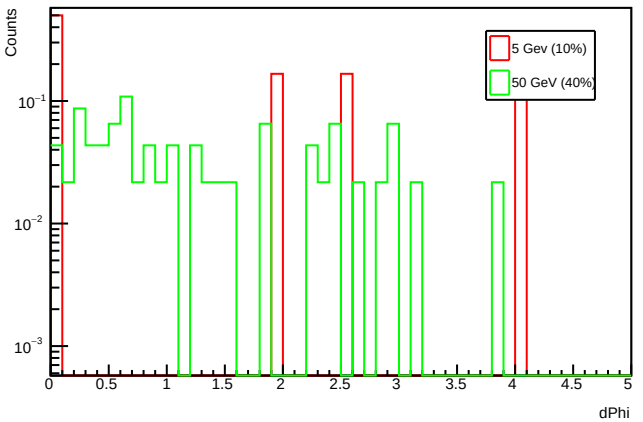
dPhi: gen MET and leading mu: no cuts



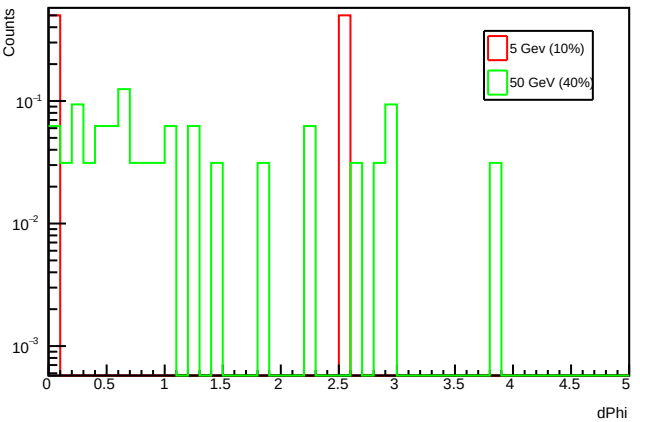

dPhi: gen MET and leading mu: n_jet >=1, j1pt > 30 GeV



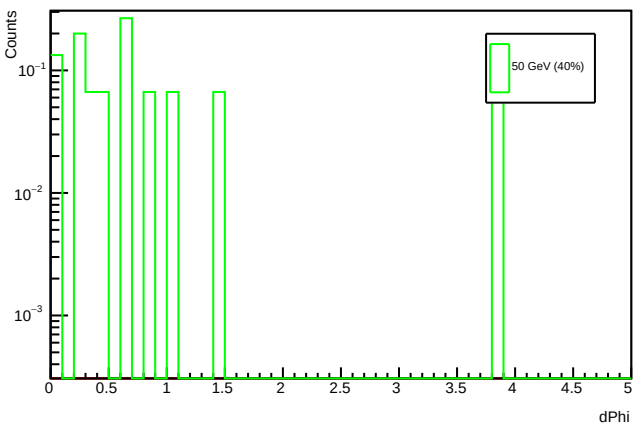

dPhi: gen MET and leading mu: MET > 120 GeV



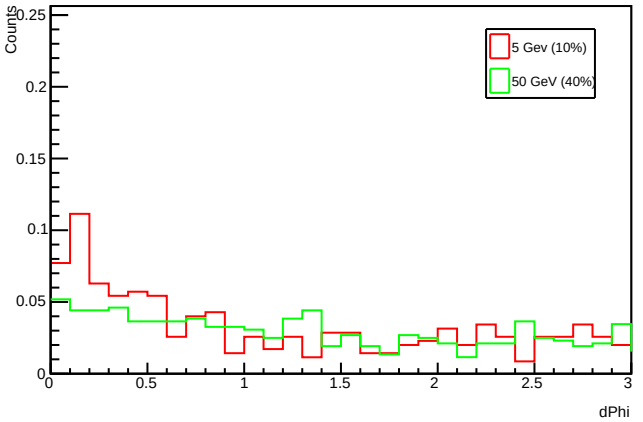

dPhi: gen MET and leading mu: j1pt >120, at most 2 jets w/ pt >30 GeV



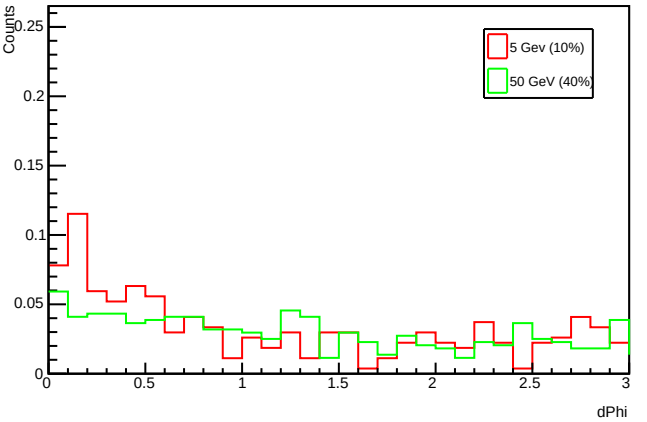

dPhi: gen MET and leading mu: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



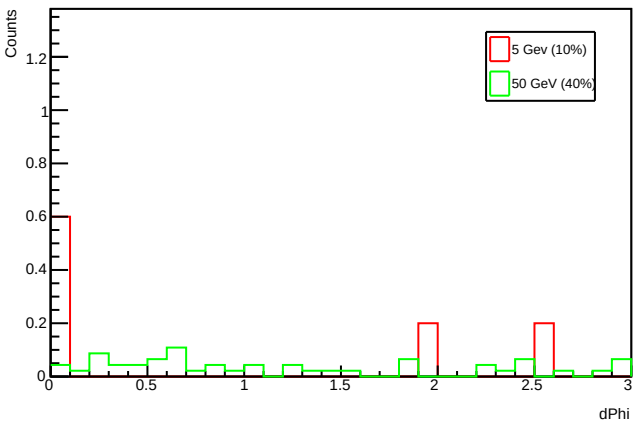
dPhi: gen MET and leading mu: no cuts



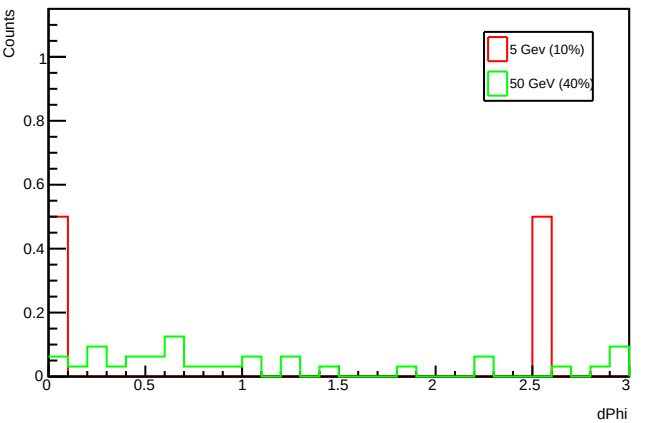

dPhi: gen MET and leading mu: n_jet >=1, j1pt > 30 GeV



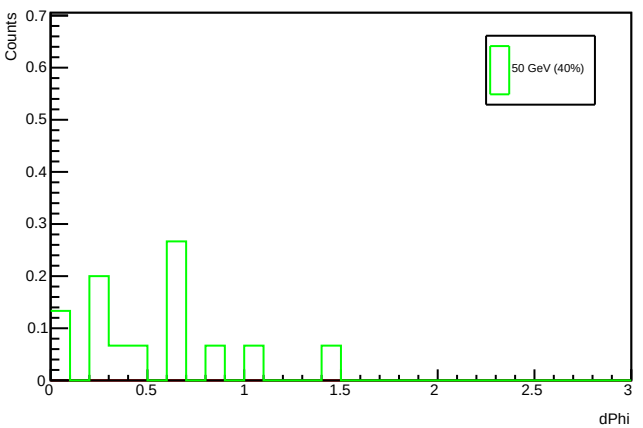

dPhi: gen MET and leading mu: MET > 120 GeV



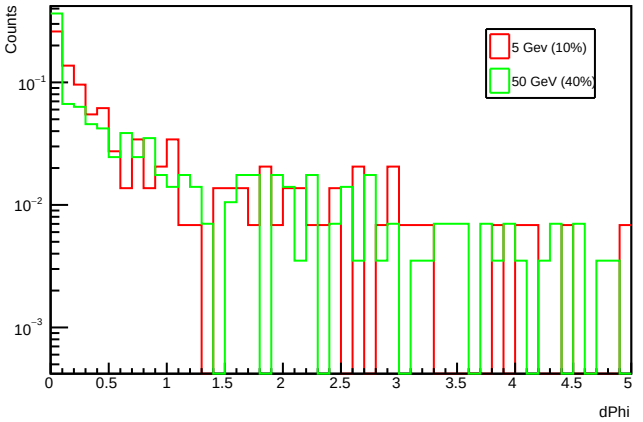

dPhi: gen MET and leading mu: j1pt >120, at most 2 jets w/ pt >30 GeV



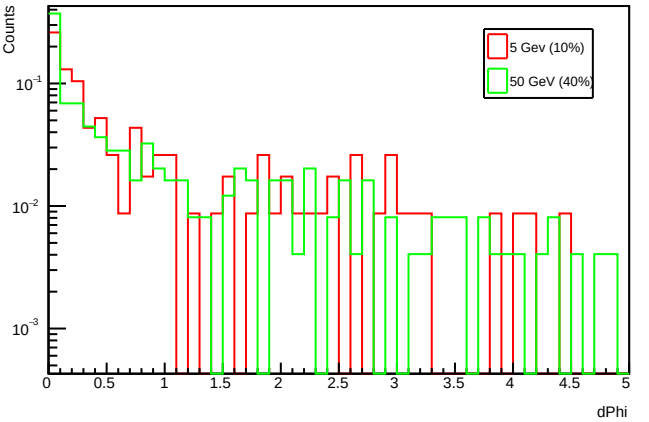

dPhi: gen MET and leading mu: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



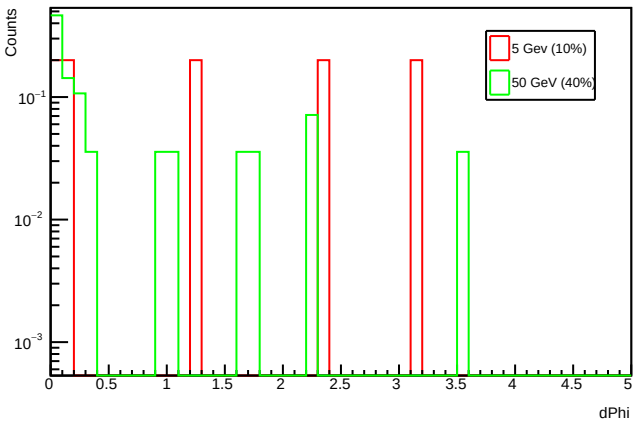
dPhi: gen leading mu and subleading mu: no cuts



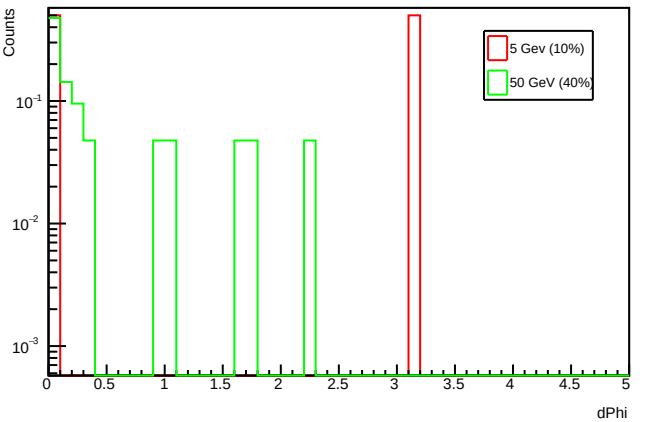

dPhi: gen leading mu and subleading mu: n_jet >=1, j1pt > 30 GeV



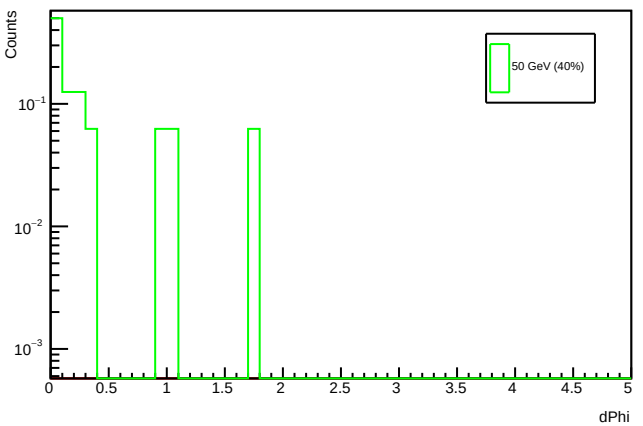

dPhi: gen leading mu and subleading mu: MET > 120 GeV



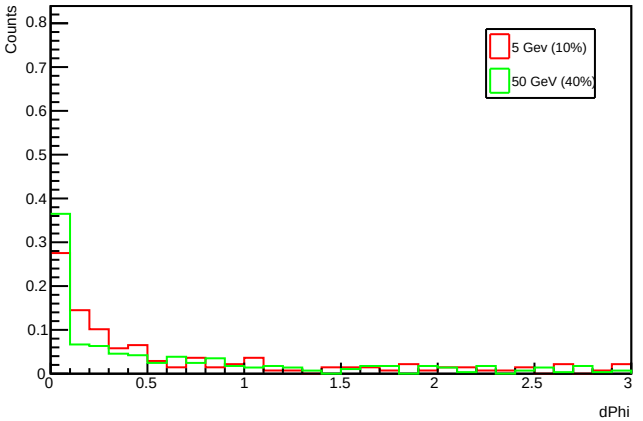

dPhi: gen leading mu and subleading mu: j1pt >120, at most 2 jets w/ pt >30 GeV



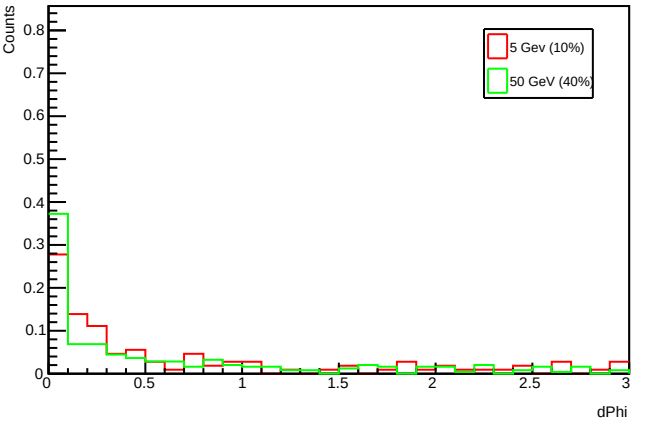

dPhi: gen leading mu and subleading mu: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



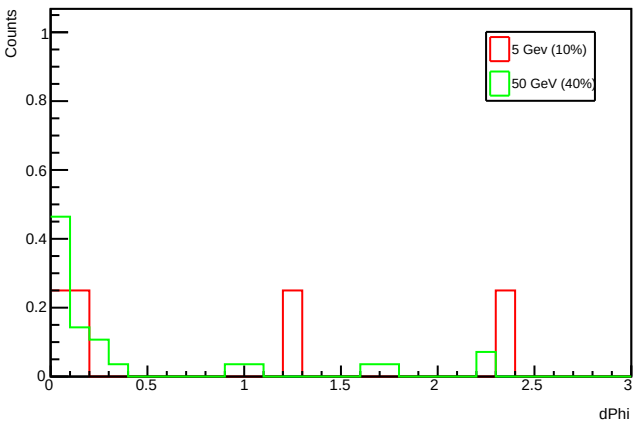
dPhi: gen leading mu and subleading mu: no cuts



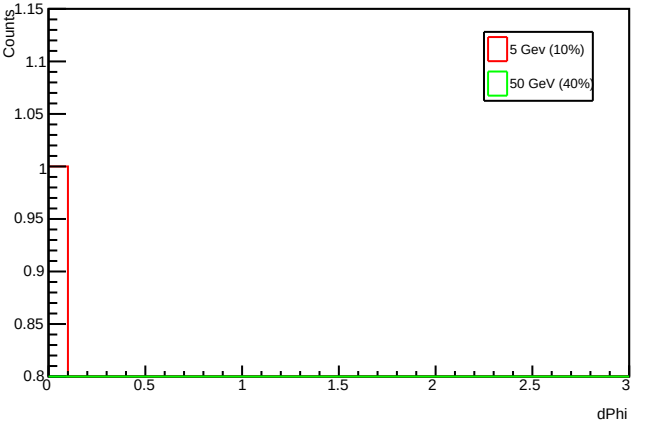

dPhi: gen leading mu and subleading mu: n_jet >=1, j1pt > 30 GeV



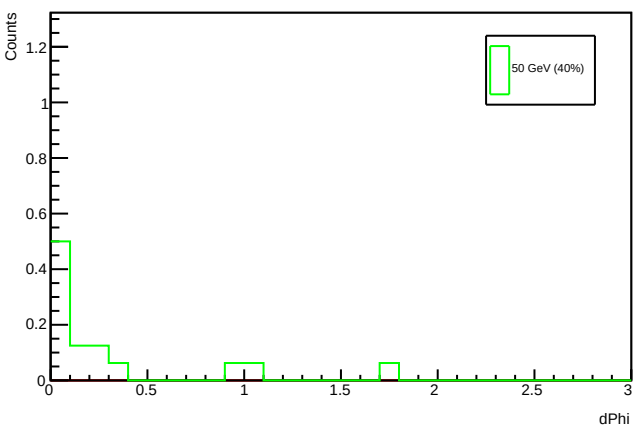

dPhi: gen leading mu and subleading mu: MET > 120 GeV



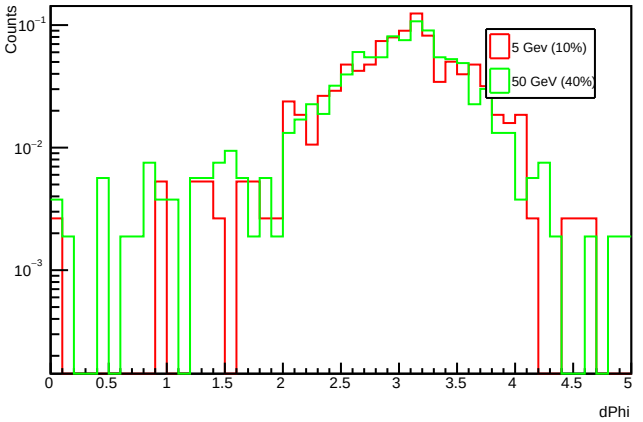

dPhi: gen leading mu and subleading mu: j1pt >120, at most 2 jets w/ pt >30 GeV



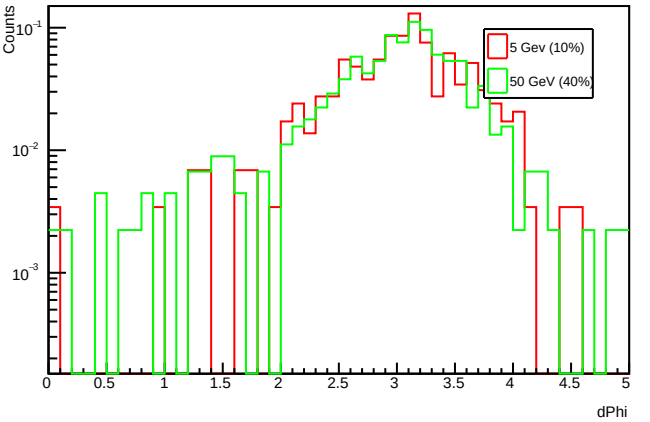

dPhi: gen leading mu and subleading mu: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



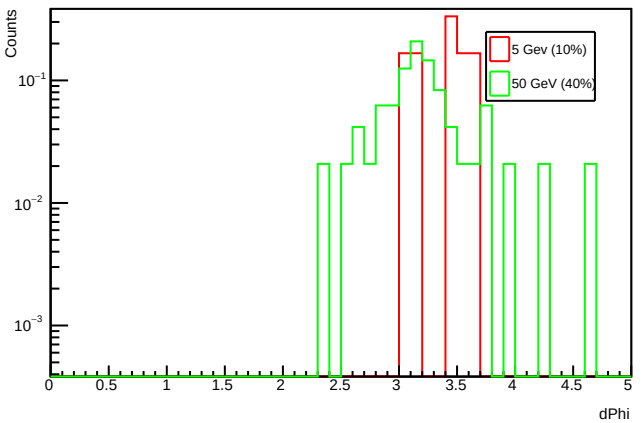
dPhi: gen MET and leading jet: no cuts



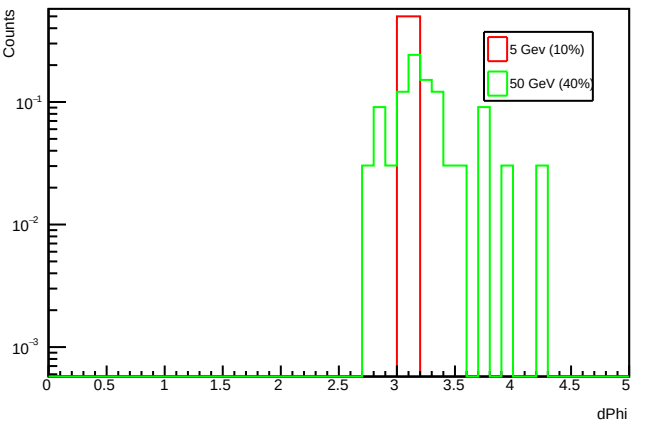

dPhi: gen MET and leading jet: n_jet >=1, j1pt > 30 GeV



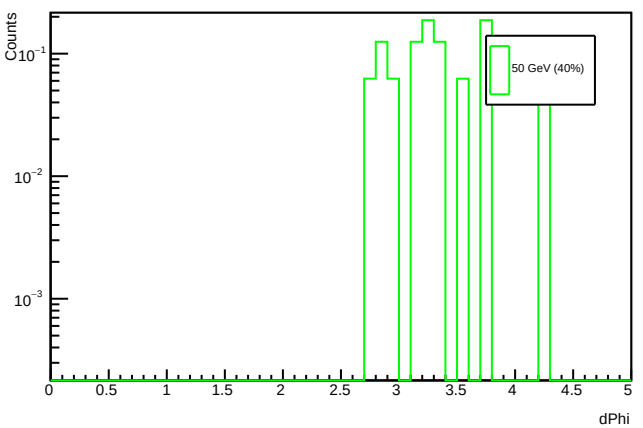

dPhi: gen MET and leading jet: MET > 120 GeV



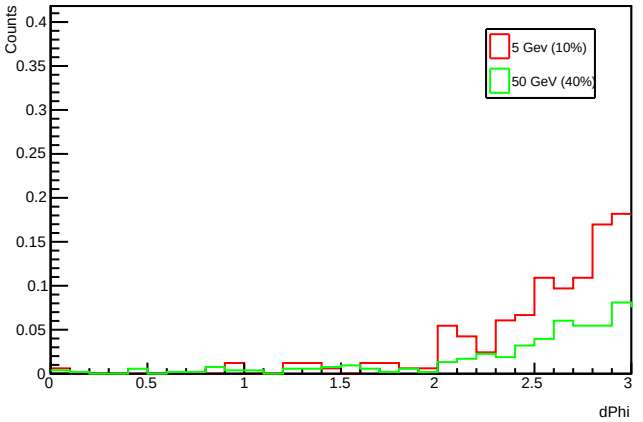

dPhi: gen MET and leading jet: j1pt >120, at most 2 jets w/ pt >30 GeV



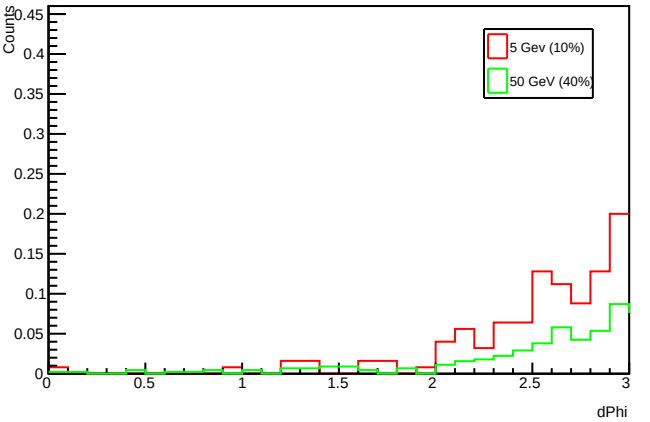

dPhi: gen MET and leading jet: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



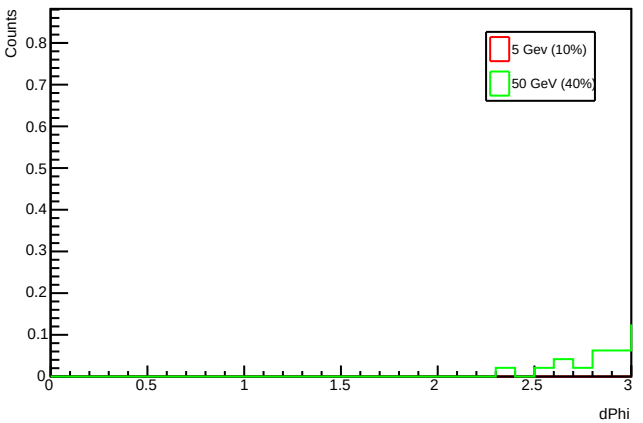
dPhi: gen MET and leading jet: no cuts



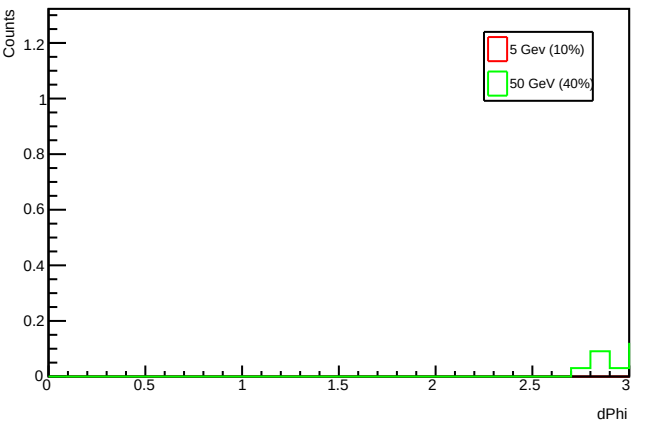

dPhi: gen MET and leading jet: n_jet >=1, j1pt > 30 GeV



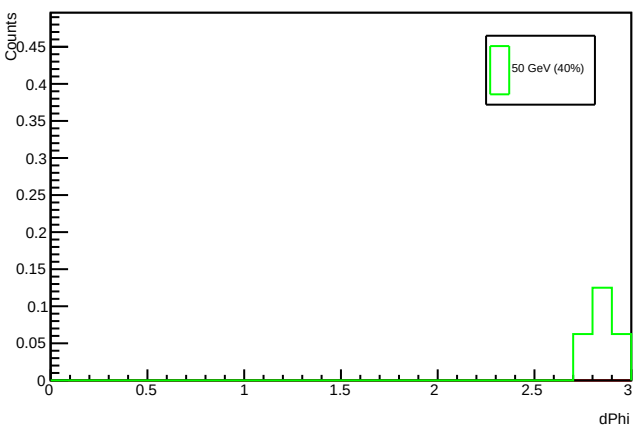

dPhi: gen MET and leading jet: MET > 120 GeV



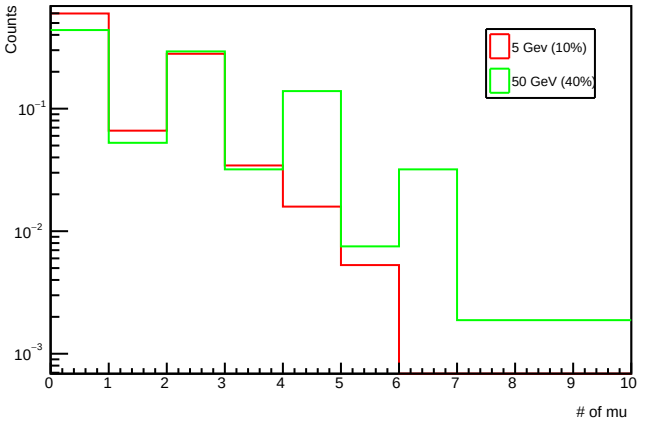

dPhi: gen MET and leading jet: j1pt >120, at most 2 jets w/ pt >30 GeV



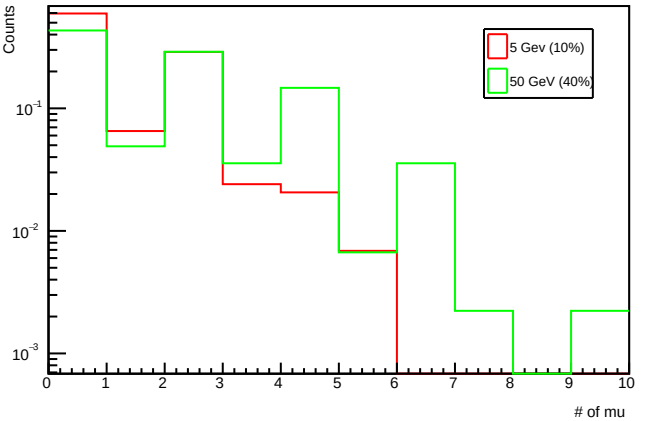

dPhi: gen MET and leading jet: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



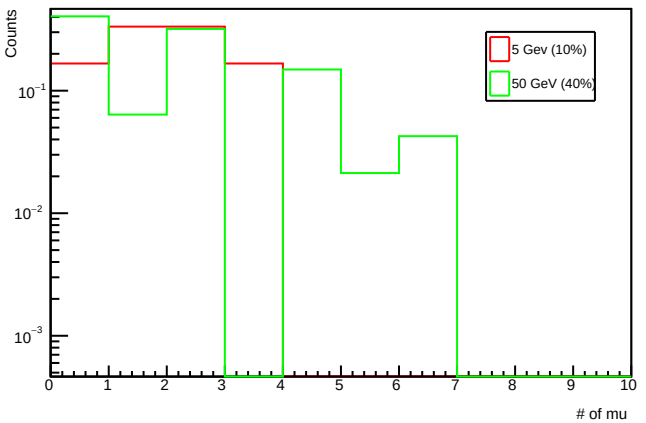
gen number of mu: no cuts



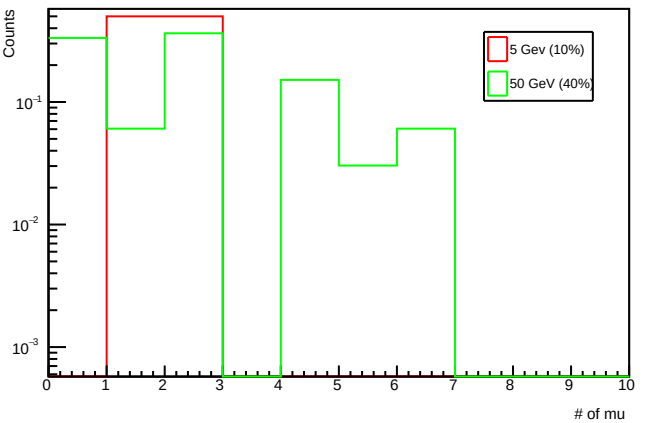

gen number of mu: n_jet >=1, j1pt > 30 GeV



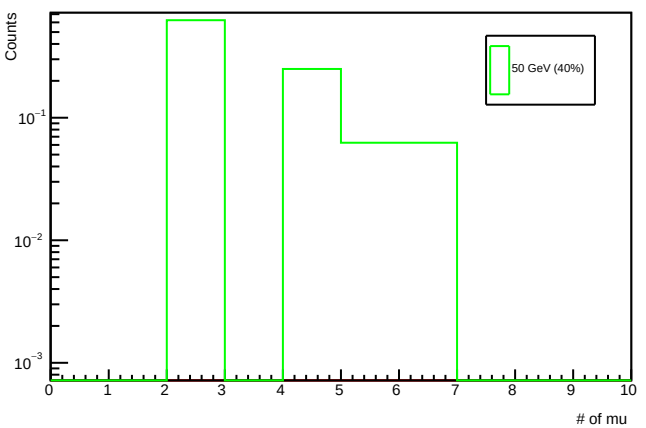

gen number of mu: MET > 120 GeV



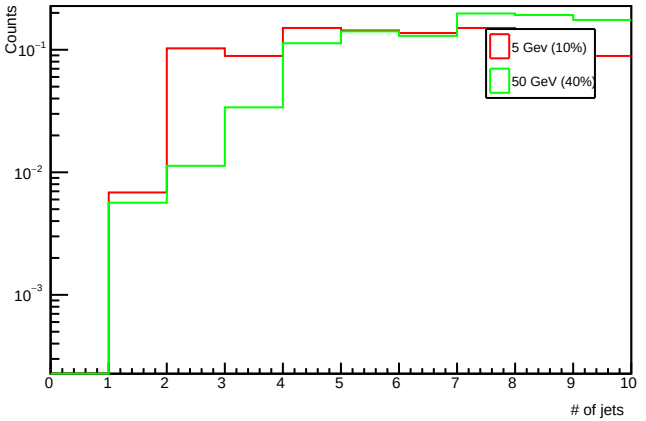

gen number of mu: j1pt >120, at most 2 jets w/ pt >30 GeV



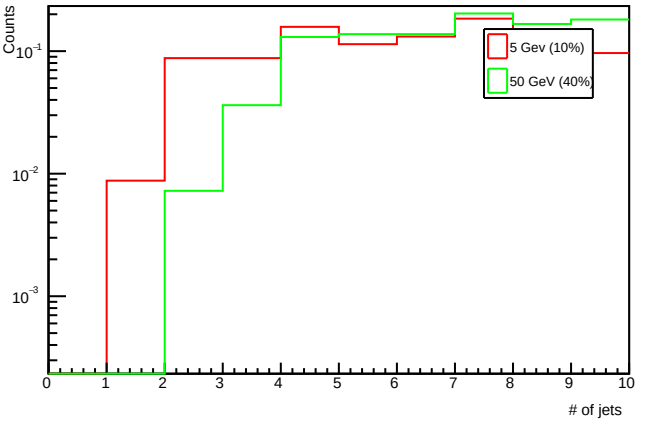

gen number of mu: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



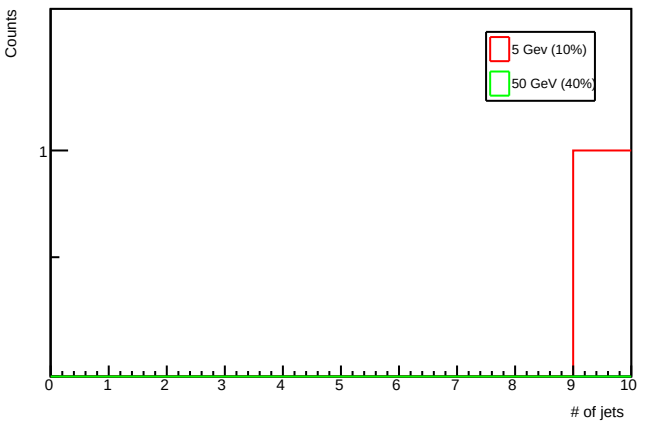
gen number of jets: no cuts



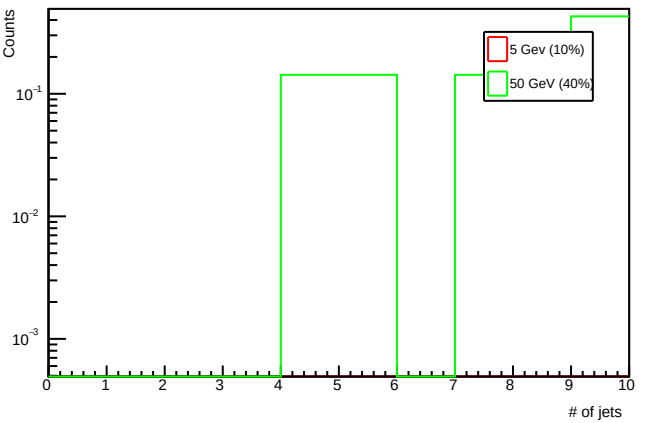

gen number of jets: n_jet >=1, j1pt > 30 GeV



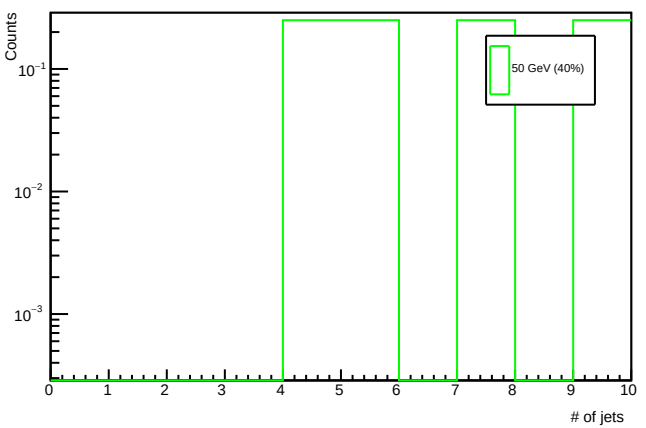

gen number of jets: MET > 120 GeV



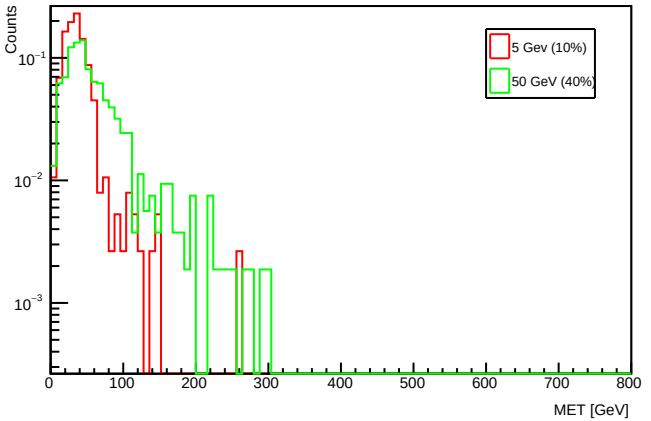

gen number of jets: j1pt >120, at most 2 jets w/ pt >30 GeV



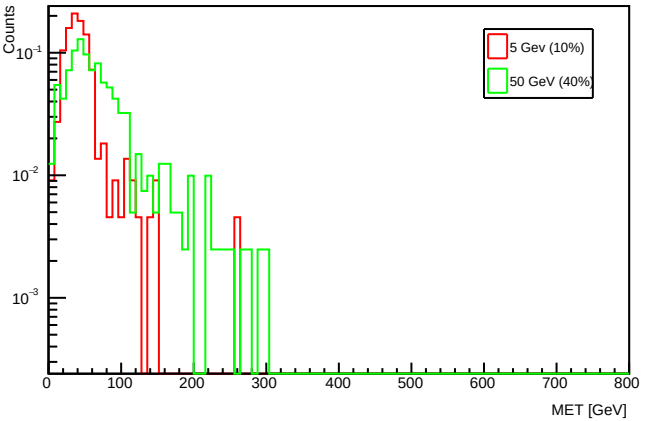

gen number of jets: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



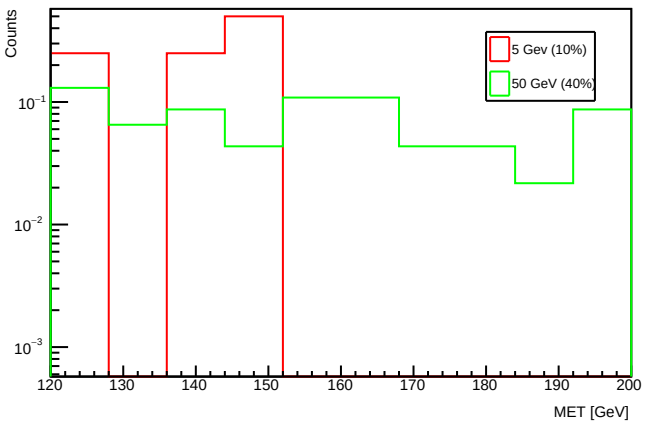
reco leading MET: no cuts



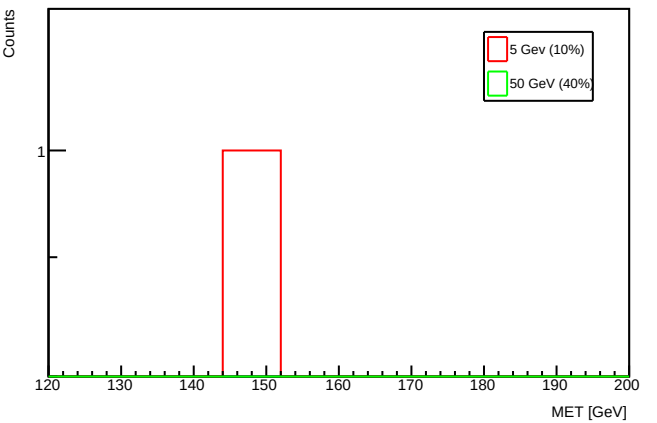

reco leading MET: n_jet >=1, j1pt > 30 GeV



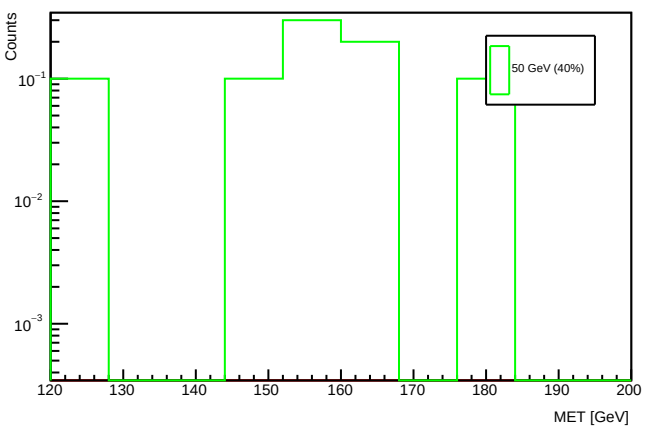

reco leading MET: MET > 120 GeV



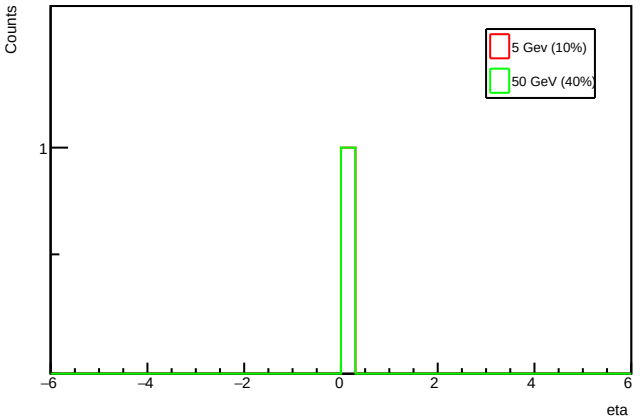

reco leading MET: j1pt >120, at most 2 jets w/ pt >30 GeV



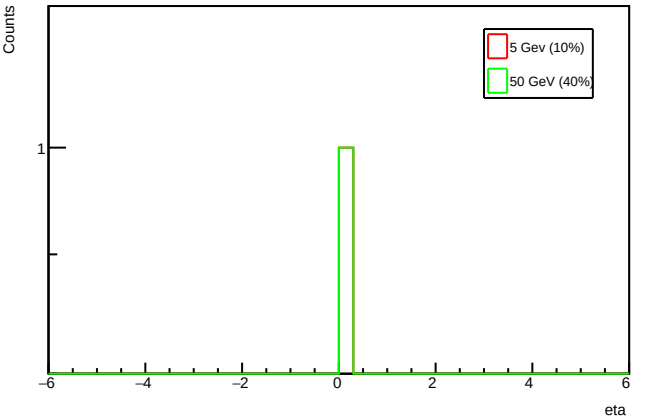

reco leading MET: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



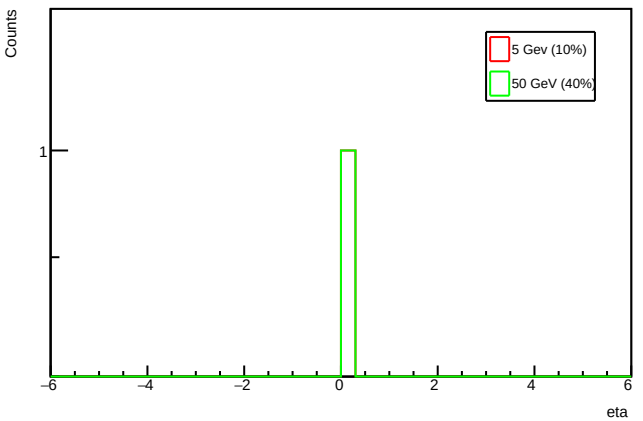
reco leading Met eta: no cuts



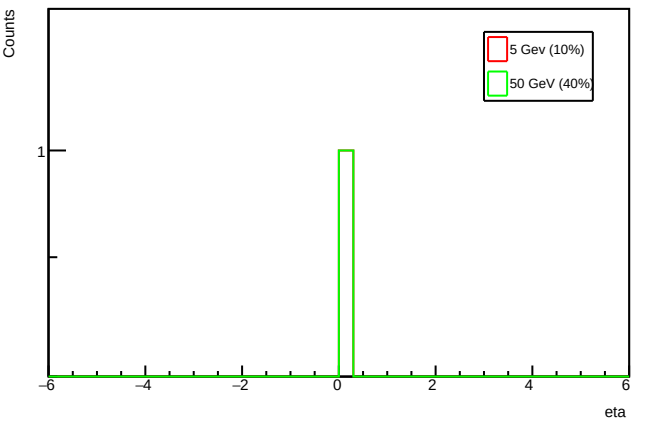

reco leading Met eta: n_jet >=1, j1pt > 30 GeV



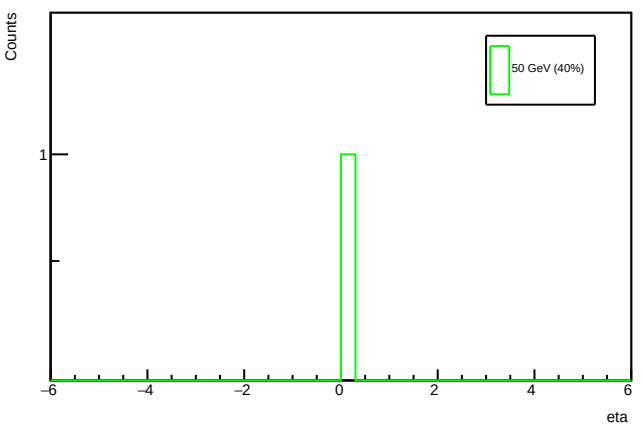

reco leading Met eta: MET > 120 GeV



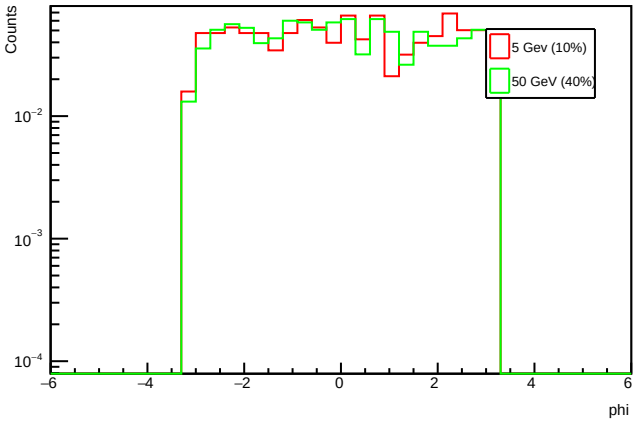

reco leading Met eta: j1pt >120, at most 2 jets w/ pt >30 GeV



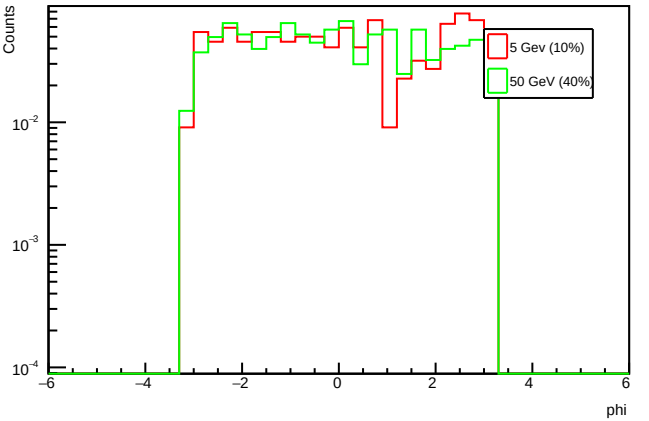

reco leading Met eta: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



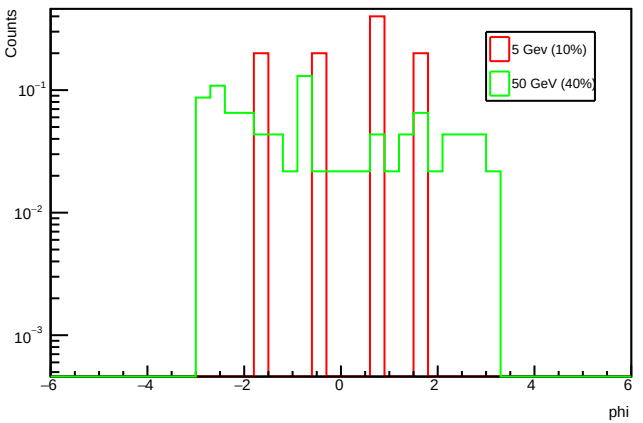
reco leading Met phi: no cuts



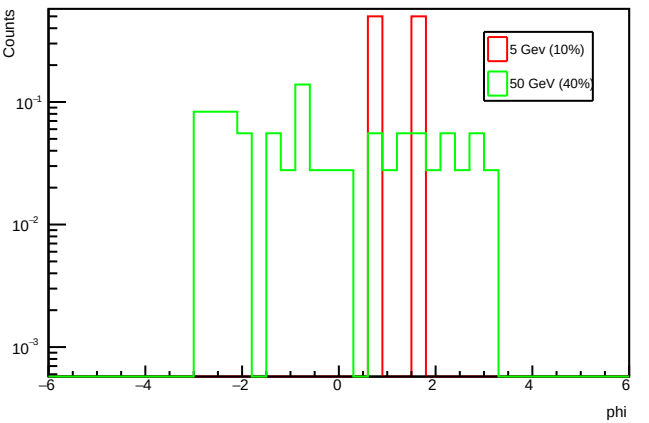

reco leading Met phi: n_jet >=1, j1pt > 30 GeV



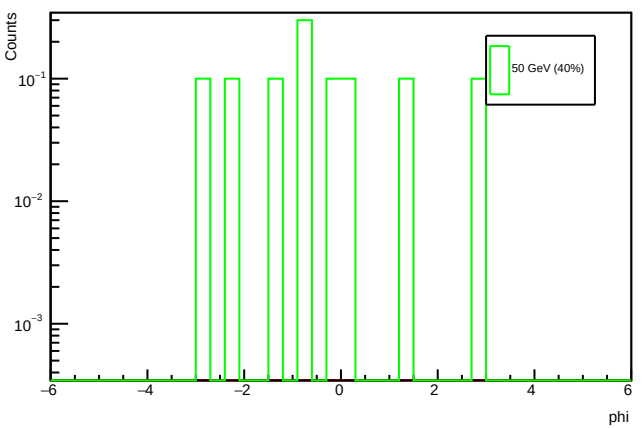

reco leading Met phi: MET > 120 GeV



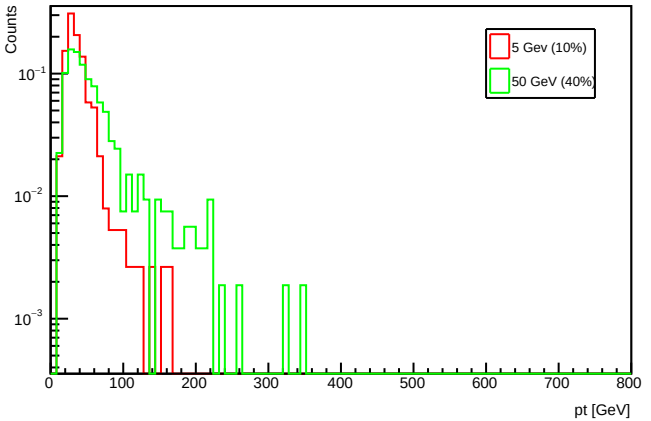

reco leading Met phi: j1pt >120, at most 2 jets w/ pt >30 GeV



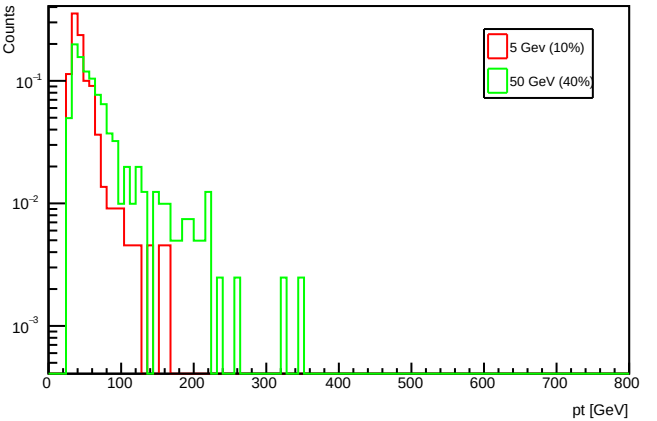

reco leading Met phi: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



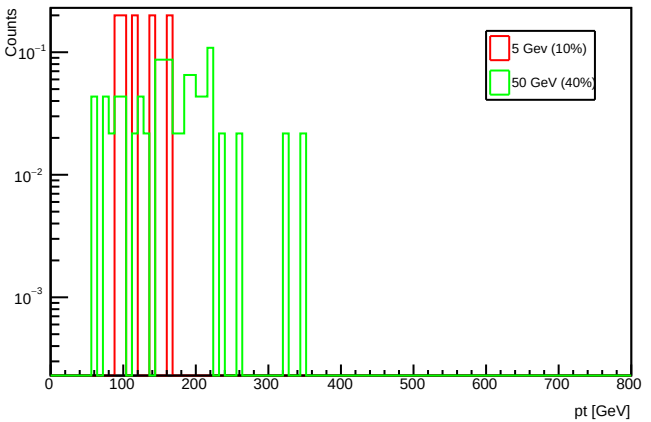
reco leading Jet pt: no cuts



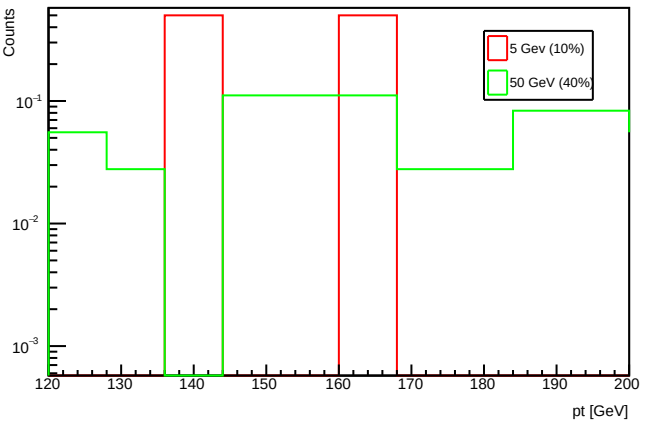

reco leading Jet pt: n_jet >=1, j1pt > 30 GeV



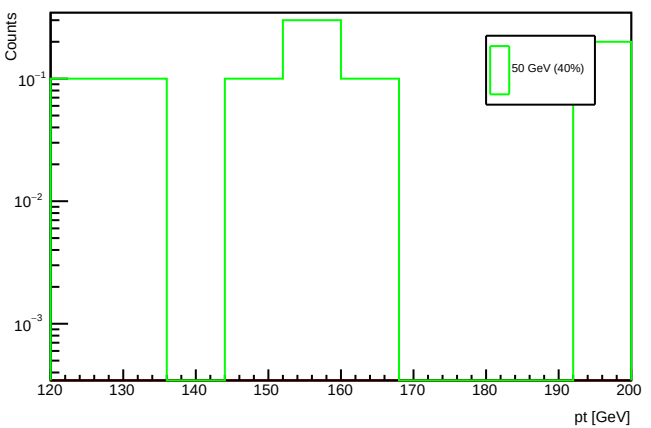

reco leading Jet pt: MET > 120 GeV



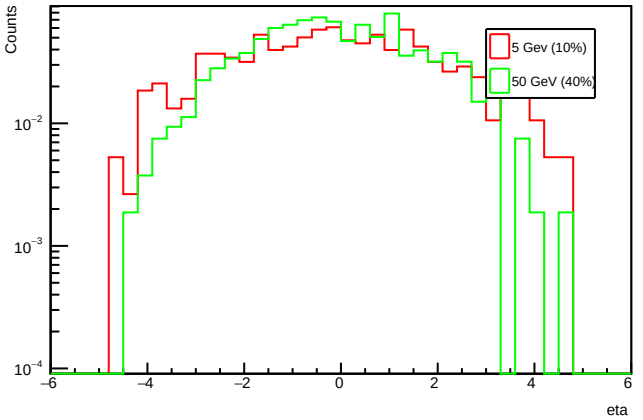

reco leading Jet pt: j1pt >120, at most 2 jets w/ pt >30 GeV



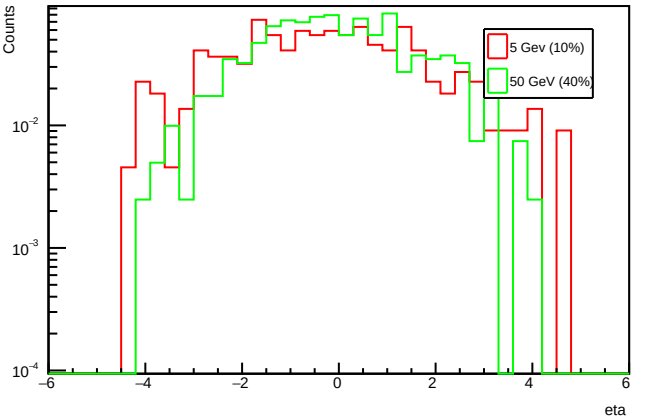

reco leading Jet pt: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



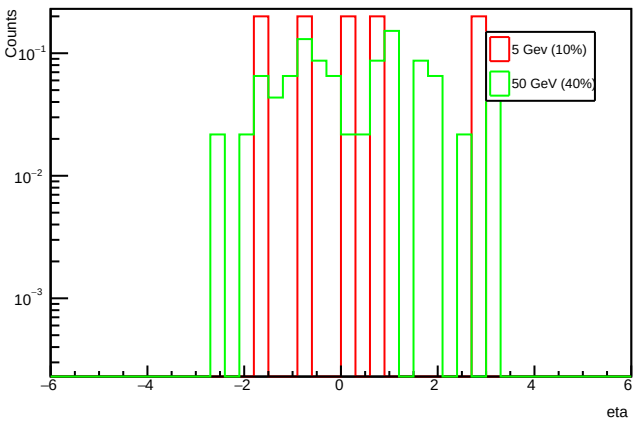
reco leading Jet eta: no cuts



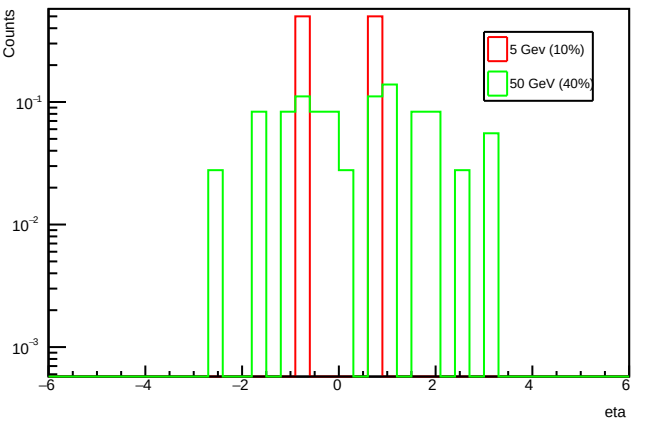

reco leading Jet eta: n_jet >=1, j1pt > 30 GeV



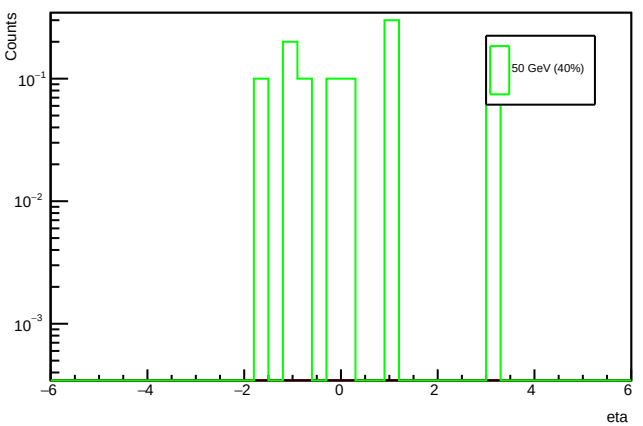

reco leading Jet eta: MET > 120 GeV



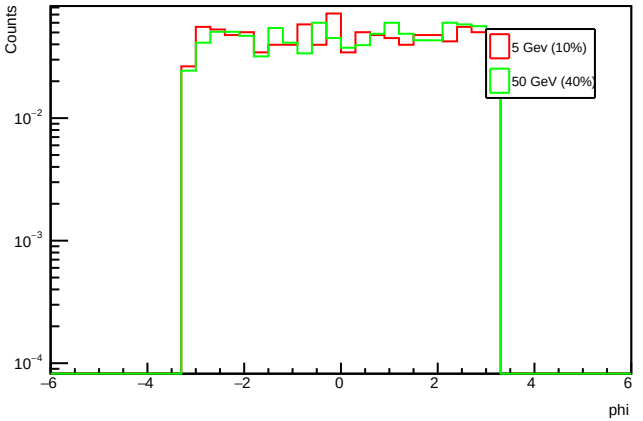

reco leading Jet eta: j1pt >120, at most 2 jets w/ pt >30 GeV



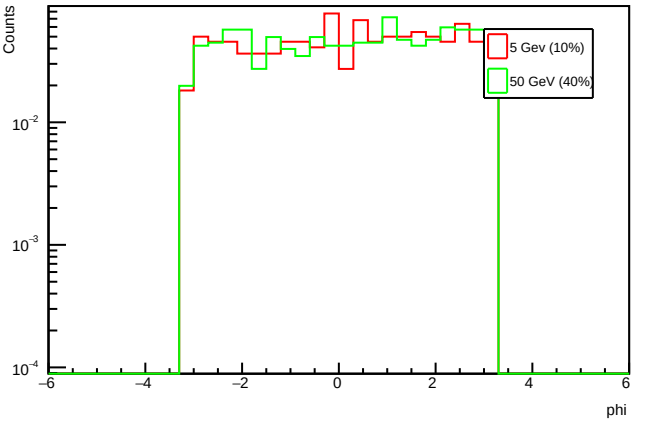

reco leading Jet eta: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



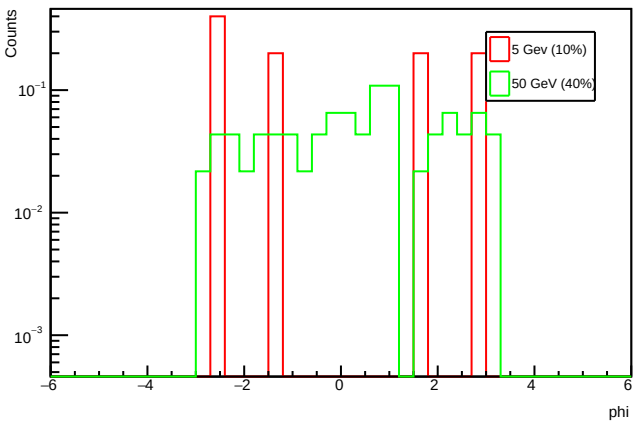
reco leading Jet phi: no cuts



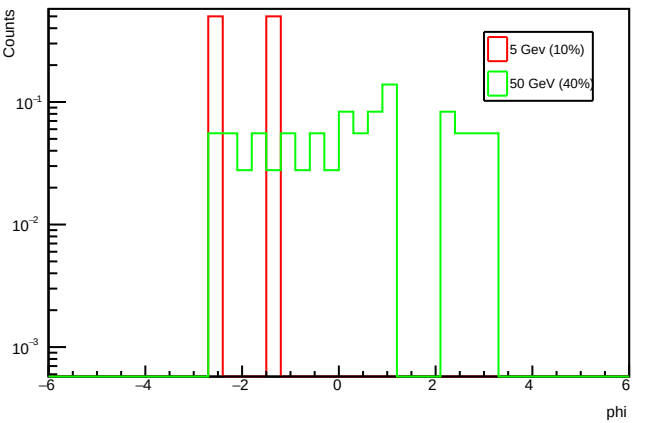

reco leading Jet phi: n_jet >=1, j1pt > 30 GeV



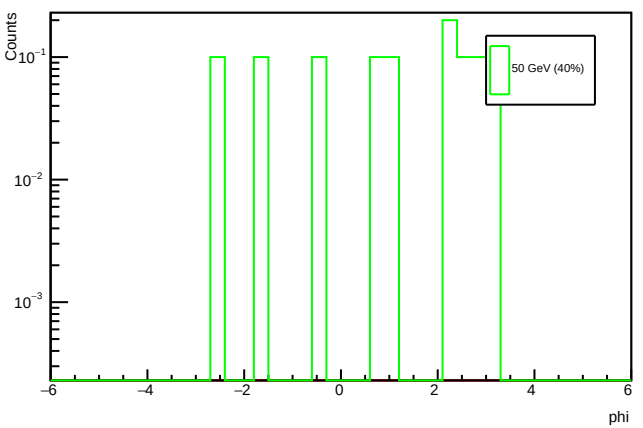

reco leading Jet phi: MET > 120 GeV



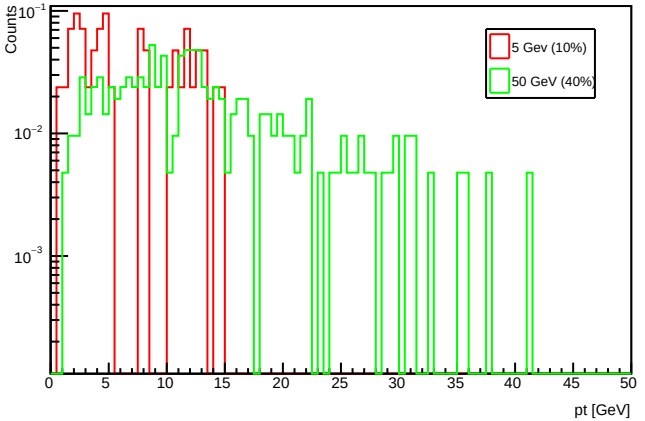

reco leading Jet phi: j1pt >120, at most 2 jets w/ pt >30 GeV



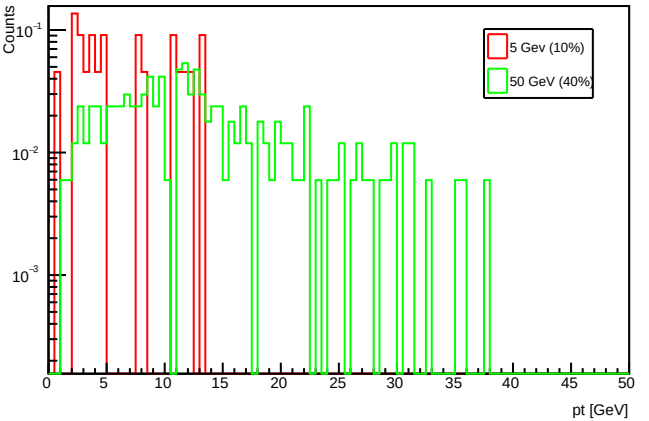

reco leading Jet phi: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



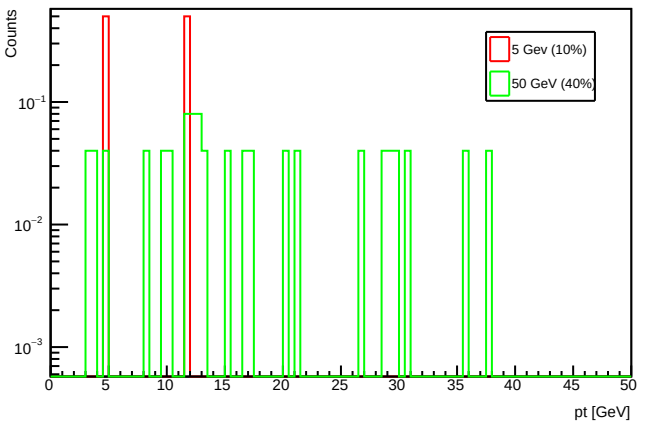
reco leading Mu pt: no cuts



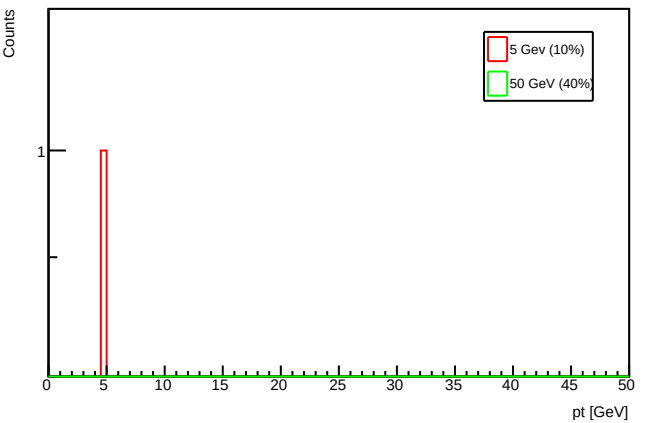

reco leading Mu pt: n_jet >=1, j1pt > 30 GeV



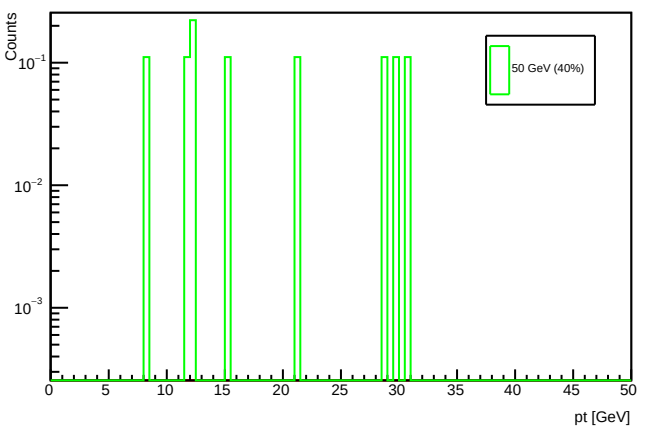

reco leading Mu pt: MET > 120 GeV



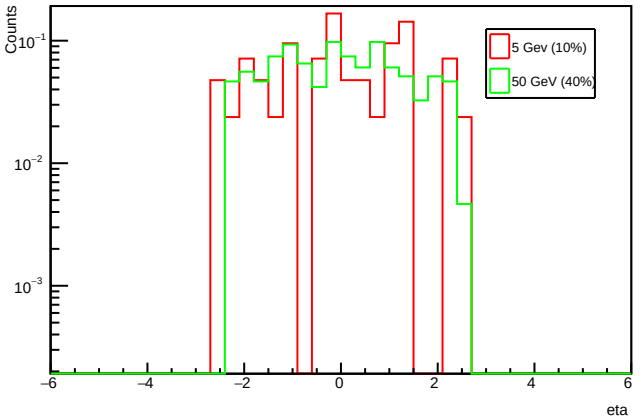

reco leading Mu pt: j1pt >120, at most 2 jets w/ pt >30 GeV



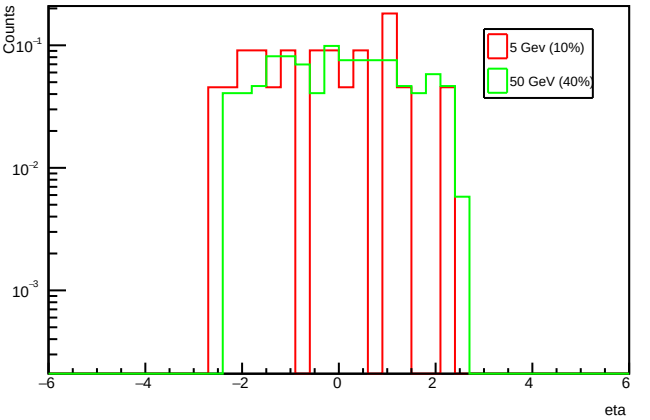

reco leading Mu pt: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



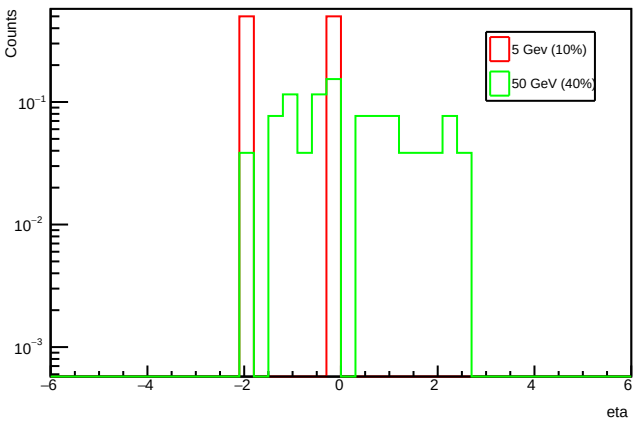
reco leading Mu eta: no cuts



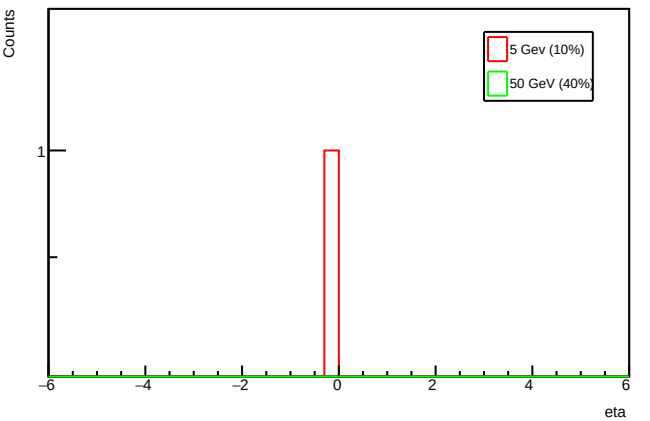

reco leading Mu eta: n_jet >=1, j1pt > 30 GeV



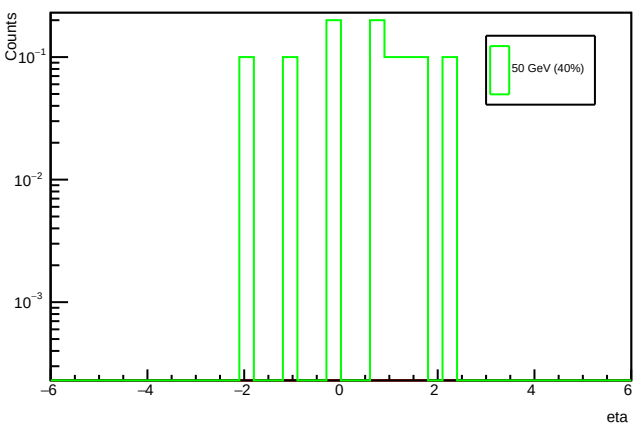

reco leading Mu eta: MET > 120 GeV



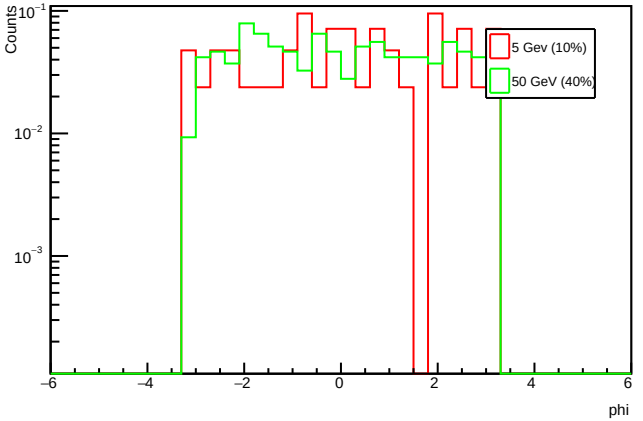

reco leading Mu eta: j1pt >120, at most 2 jets w/ pt >30 GeV



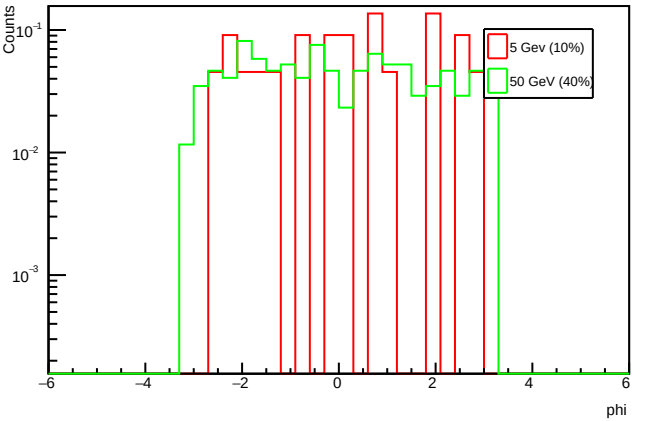

reco leading Mu eta: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



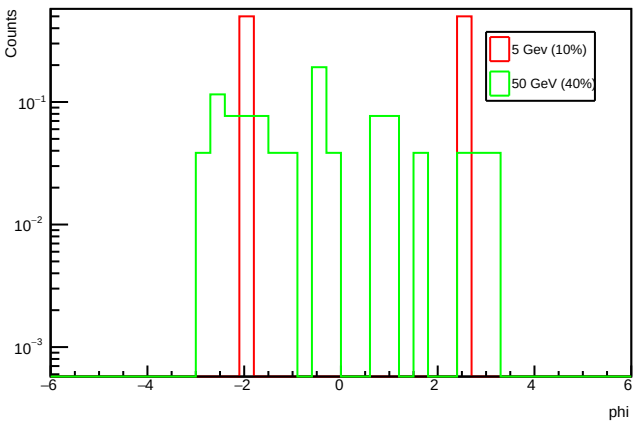
reco leading Mu phi: no cuts



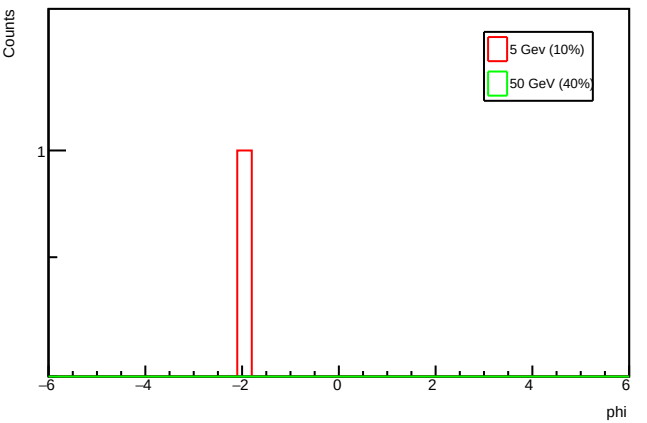

reco leading Mu phi: n_jet >=1, j1pt > 30 GeV



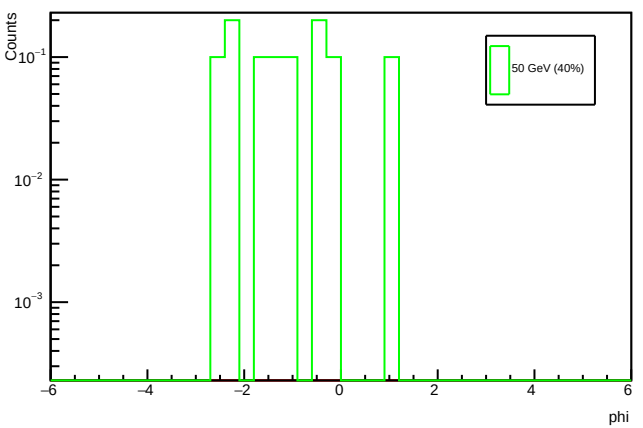

reco leading Mu phi: MET > 120 GeV



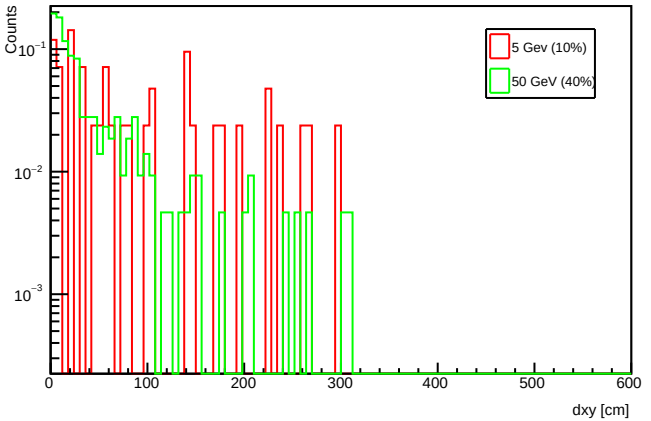

reco leading Mu phi: j1pt >120, at most 2 jets w/ pt >30 GeV



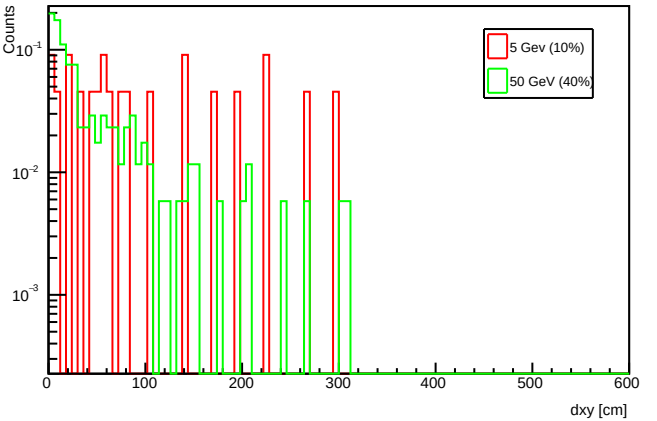

reco leading Mu phi: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



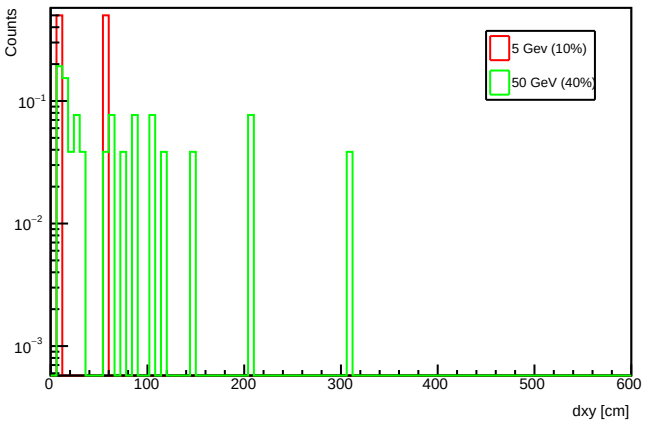
reco leading Mu vxy: no cuts



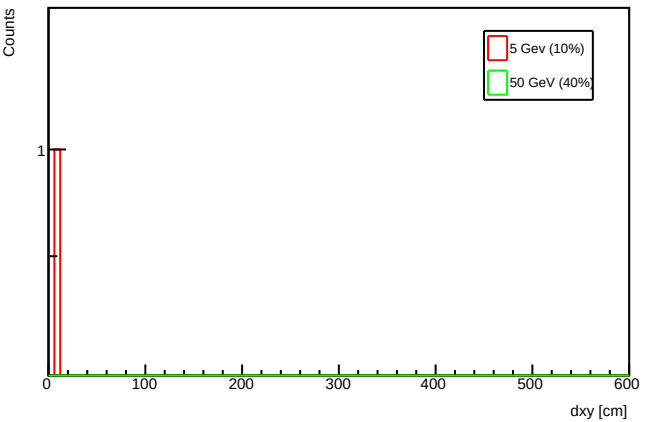

reco leading Mu vxy: n_jet >=1, j1pt > 30 GeV



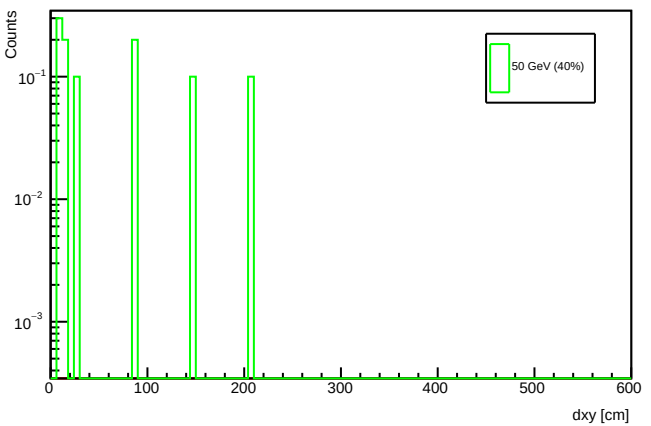

reco leading Mu vxy: MET > 120 GeV



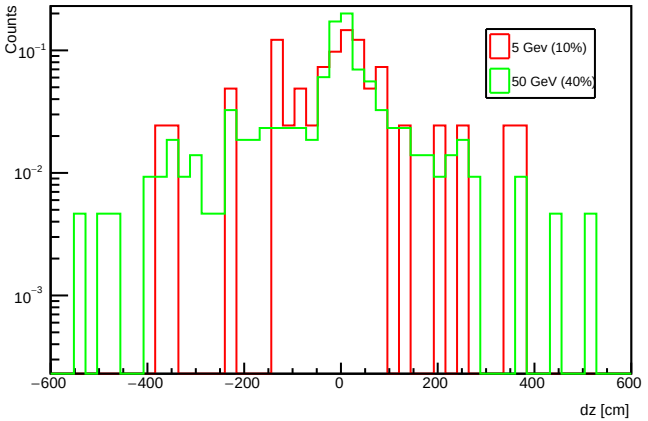

reco leading Mu vxy: j1pt >120, at most 2 jets w/ pt >30 GeV



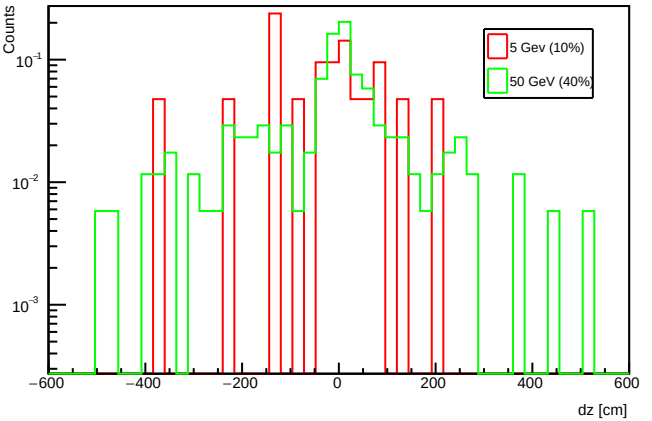

reco leading Mu vxy: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



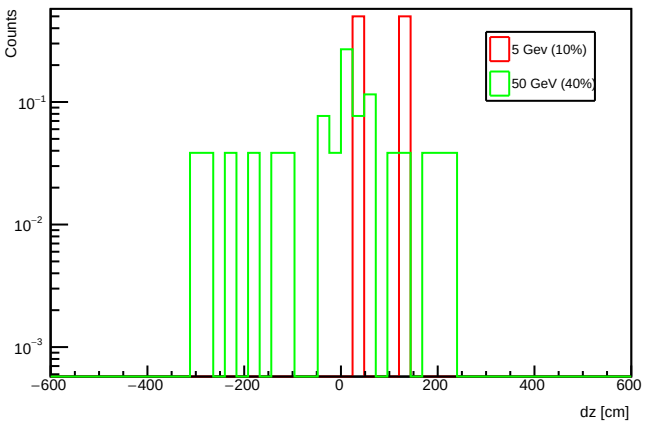
reco leading Mu vz: no cuts



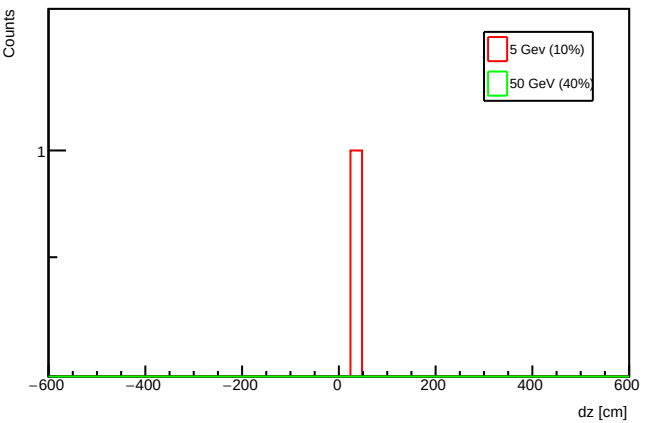

reco leading Mu vz: n_jet >=1, j1pt > 30 GeV



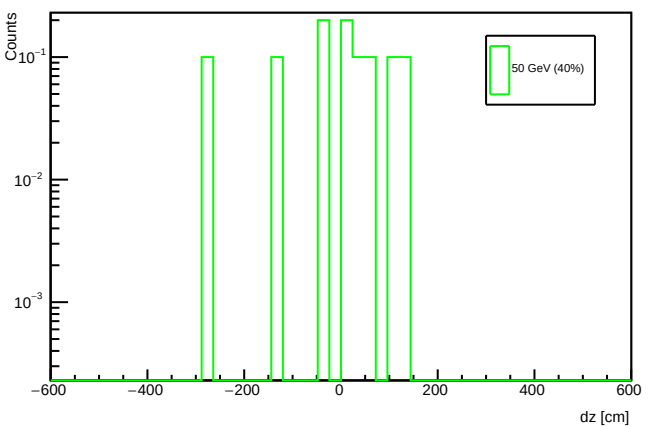

reco leading Mu vz: MET > 120 GeV



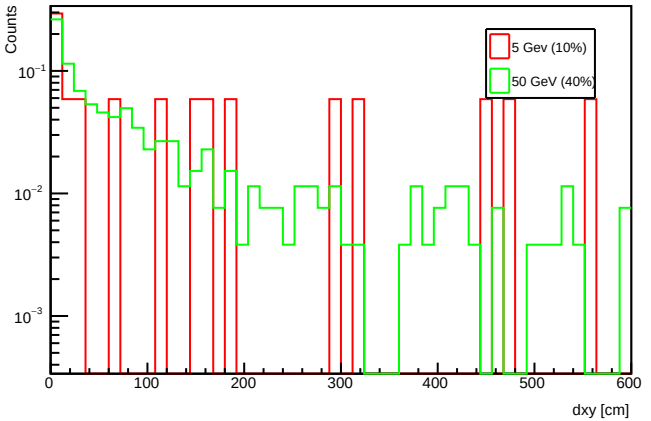

reco leading Mu vz: j1pt >120, at most 2 jets w/ pt >30 GeV



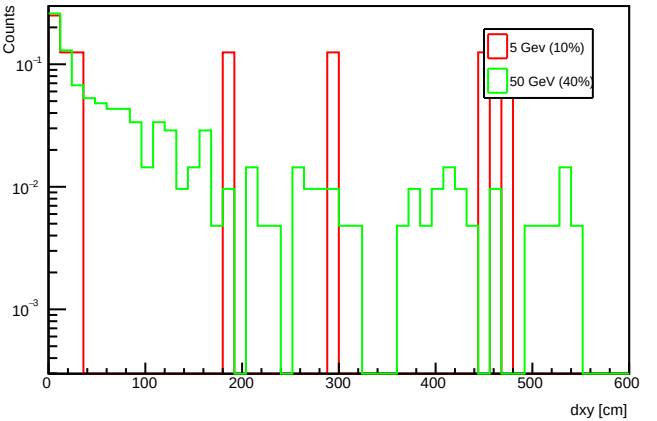

reco leading Mu vz: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



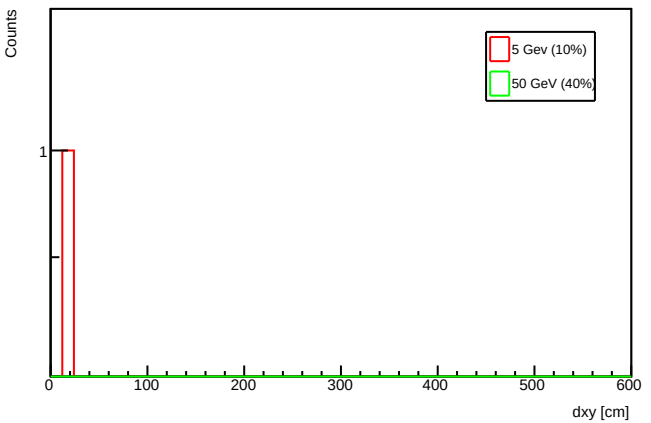
reco all Mu vxy: no cuts



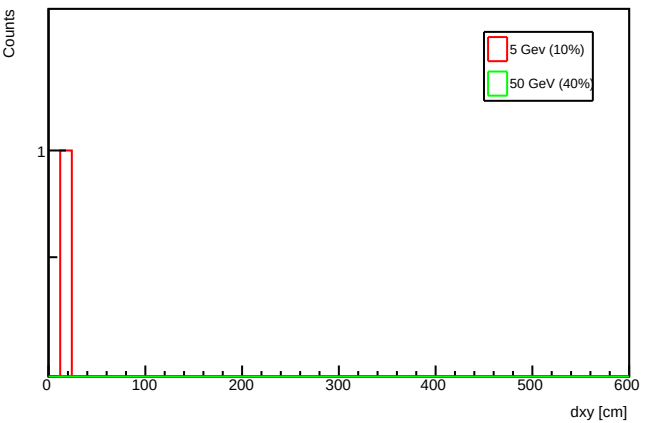

reco all Mu vxy: n_jet >=1, j1pt > 30 GeV



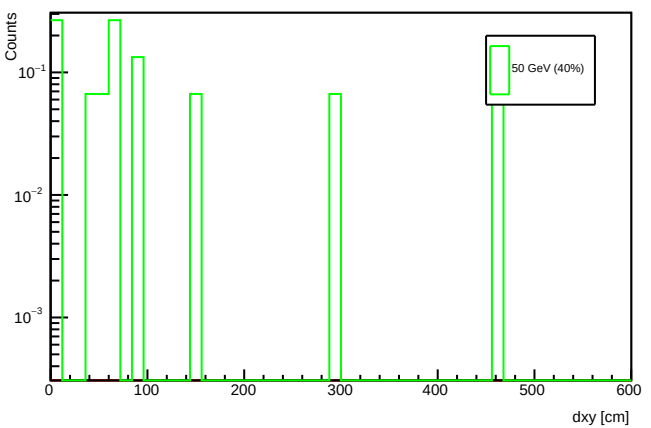

reco all Mu vxy: MET > 120 GeV



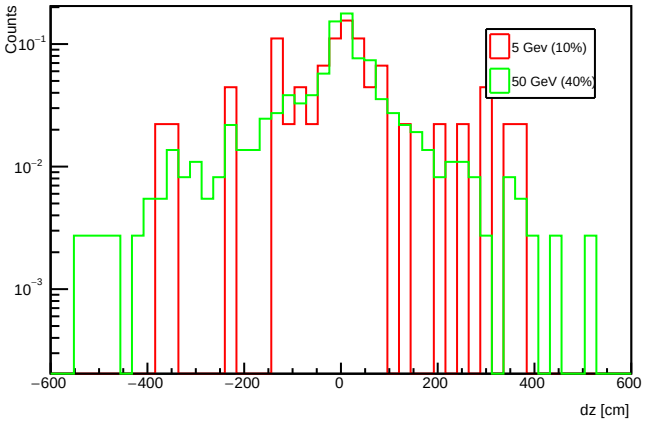

reco all Mu vxy: j1pt >120, at most 2 jets w/ pt >30 GeV



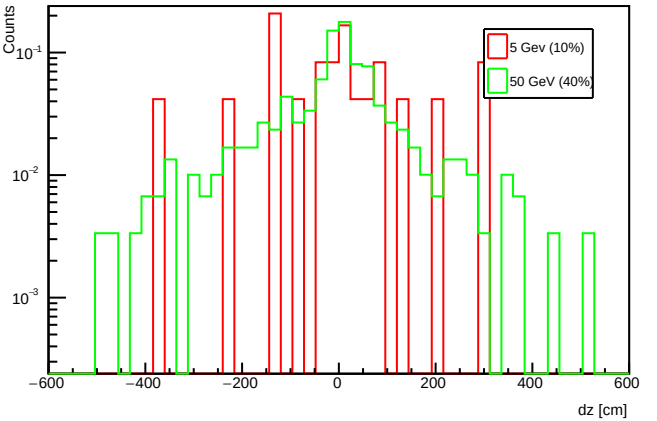

reco all Mu vxy: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



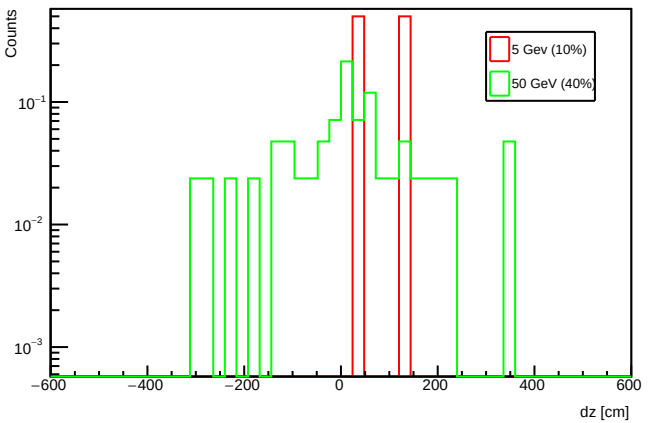
reco all Mu vz: no cuts



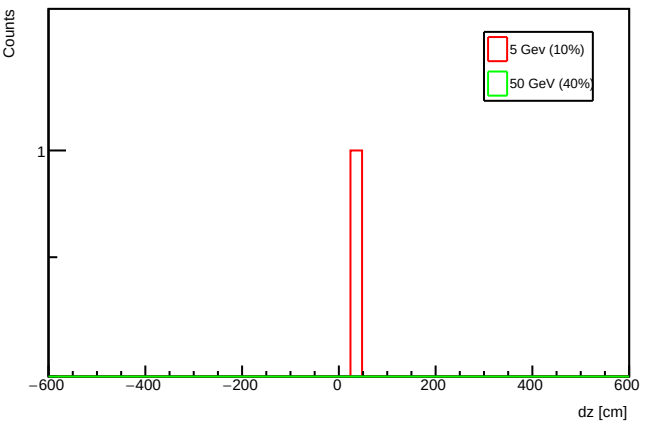

reco all Mu vz: n_jet >=1, j1pt > 30 GeV



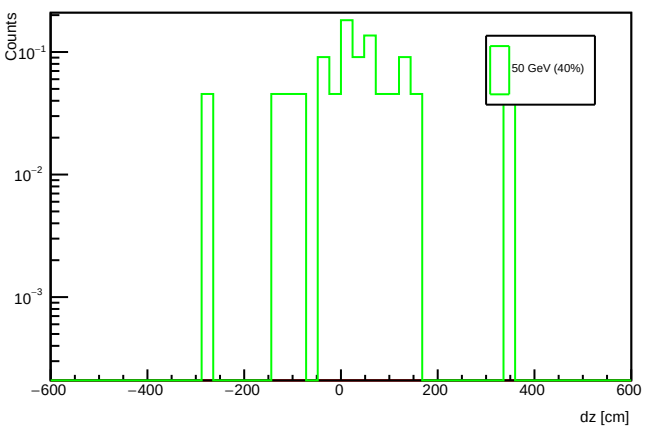

reco all Mu vz: MET > 120 GeV



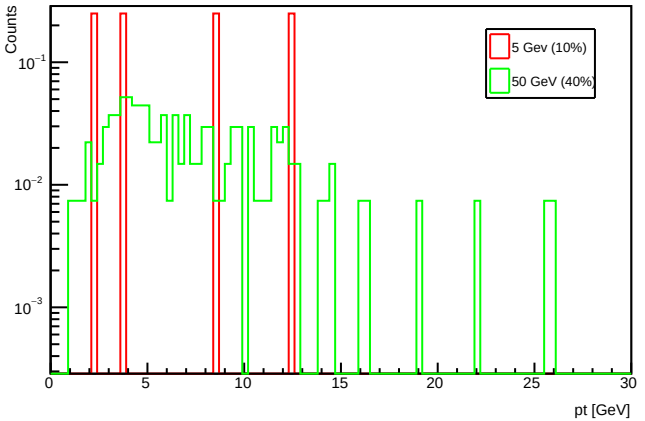

reco all Mu vz: j1pt >120, at most 2 jets w/ pt >30 GeV



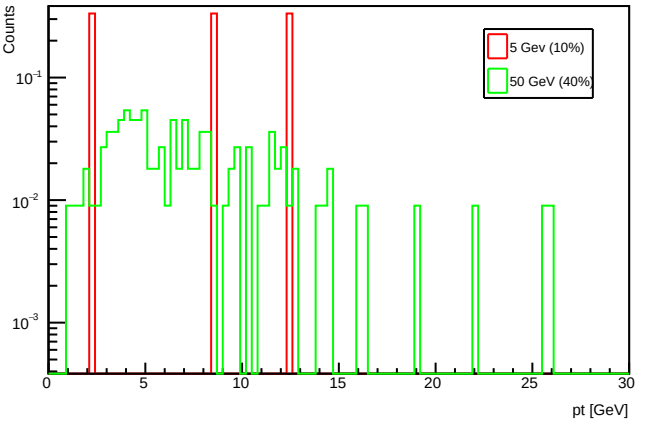

reco all Mu vz: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



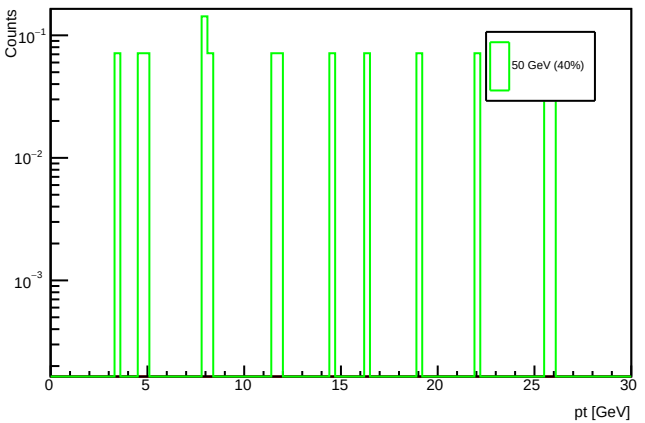
ctau 1000mm leading vs subleading Mu pt: no cuts



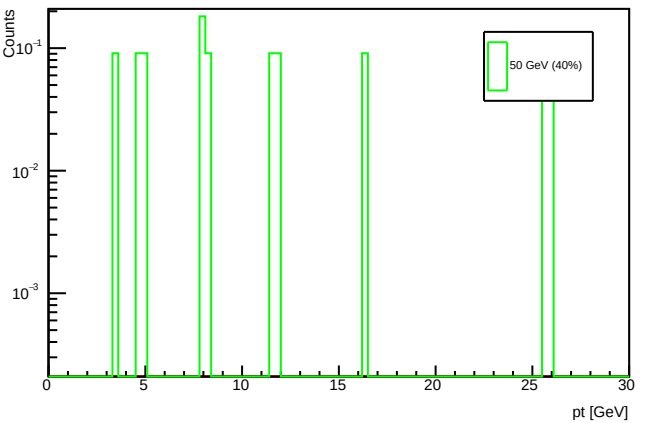

ctau 1000mm leading vs subleading Mu pt: n_jet >=1, j1pt > 30 GeV



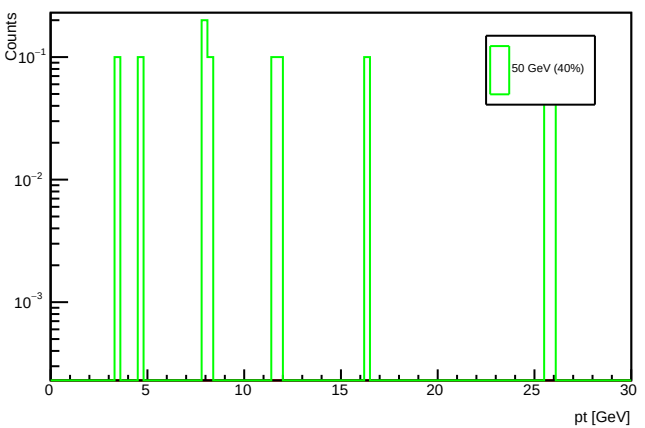

ctau 1000mm leading vs subleading Mu pt: MET > 120 GeV



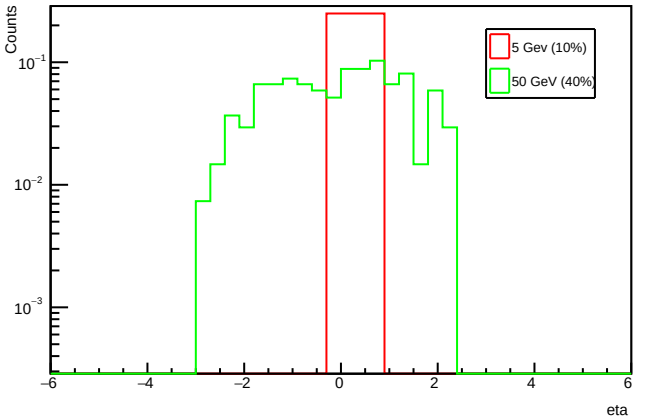

ctau 1000mm leading vs subleading Mu pt: j1pt >120, at most 2 jets w/ pt >30 GeV



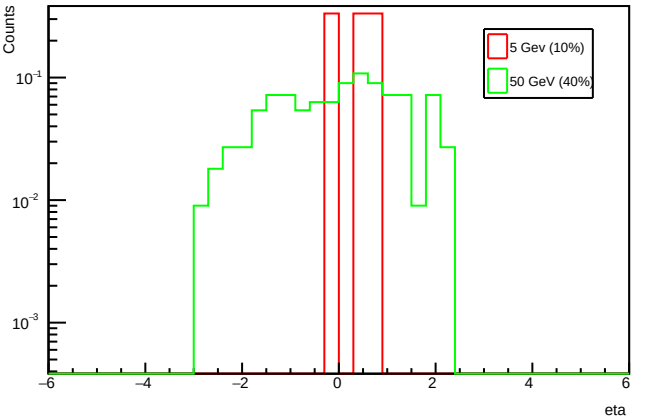

ctau 1000mm leading vs subleading Mu pt: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



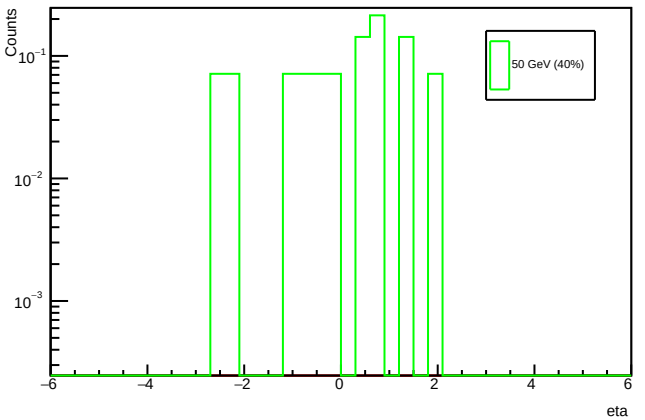
reco subleading Mu eta: no cuts



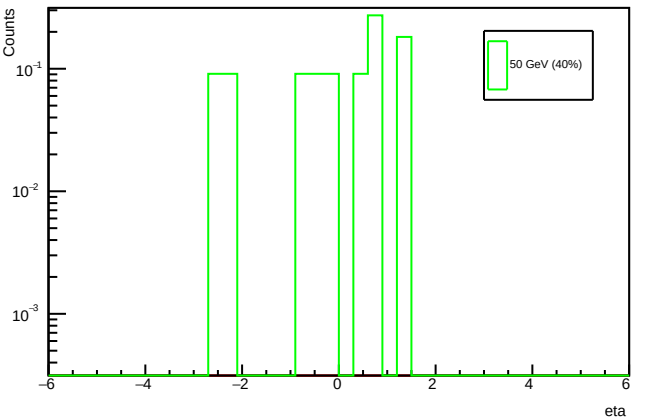

reco subleading Mu eta: n_jet >=1, j1pt > 30 GeV



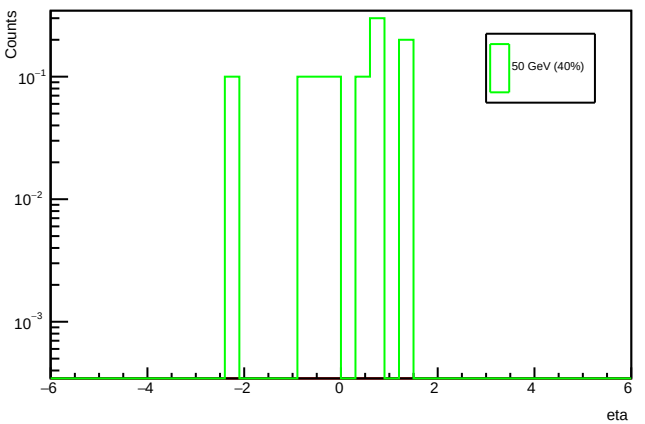

reco subleading Mu eta: MET > 120 GeV



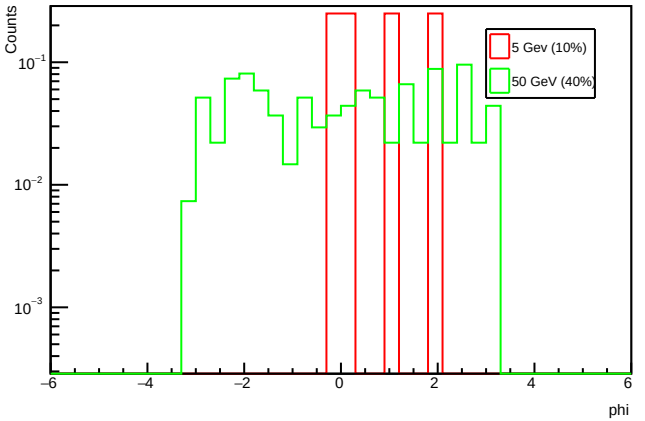

reco subleading Mu eta: j1pt >120, at most 2 jets w/ pt >30 GeV



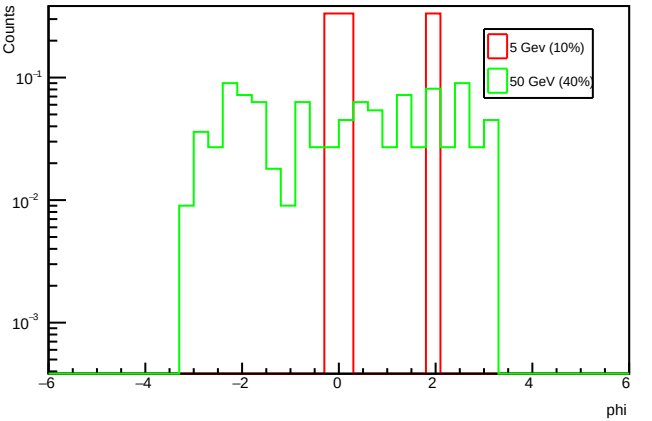

reco subleading Mu eta: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



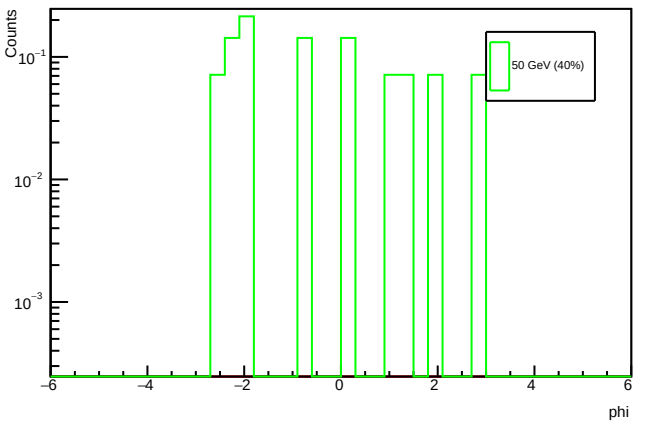
reco subleading Mu phi: no cuts



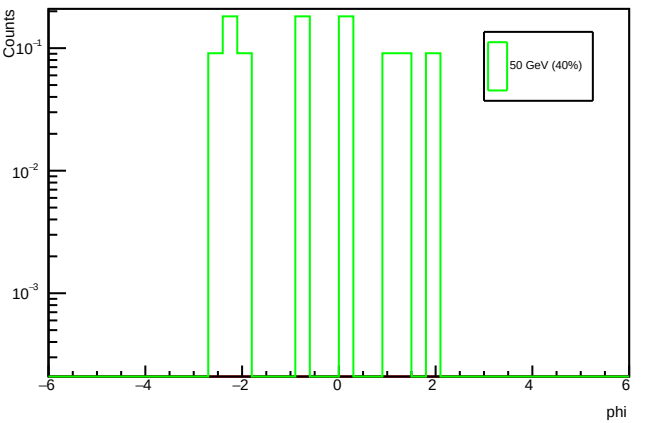

reco subleading Mu phi: n_jet >=1, j1pt > 30 GeV



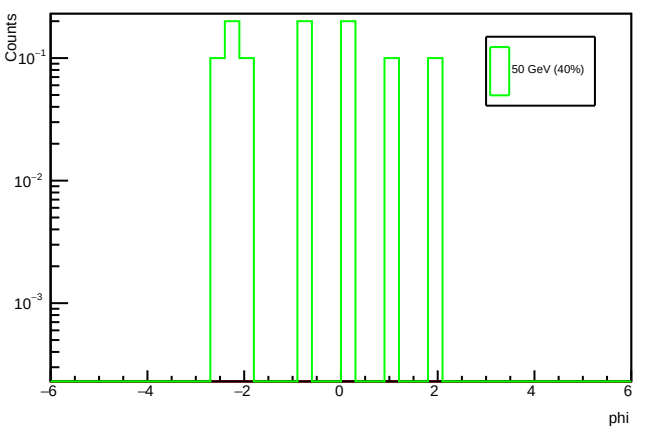

reco subleading Mu phi: MET > 120 GeV



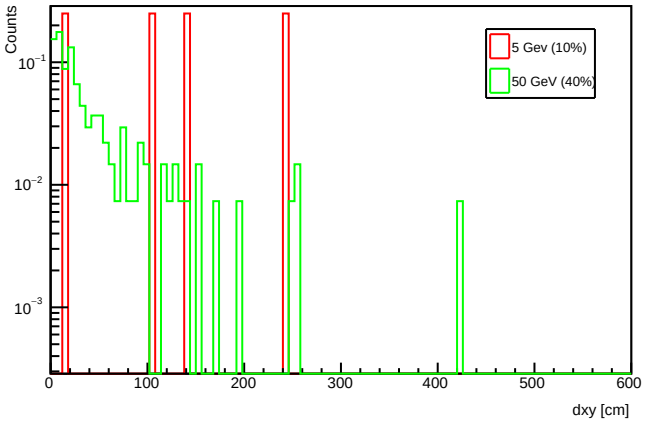

reco subleading Mu phi: j1pt >120, at most 2 jets w/ pt >30 GeV



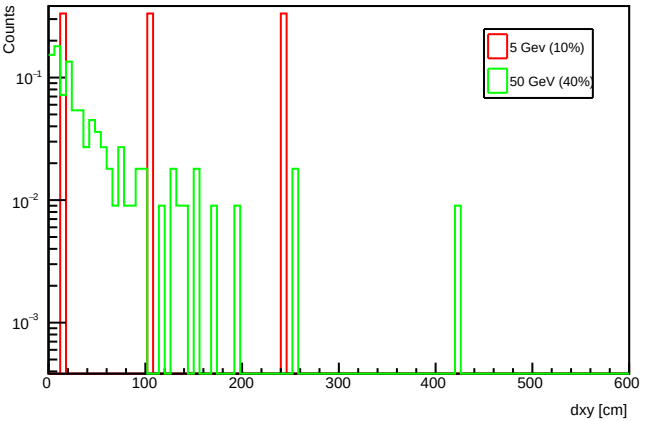

reco subleading Mu phi: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



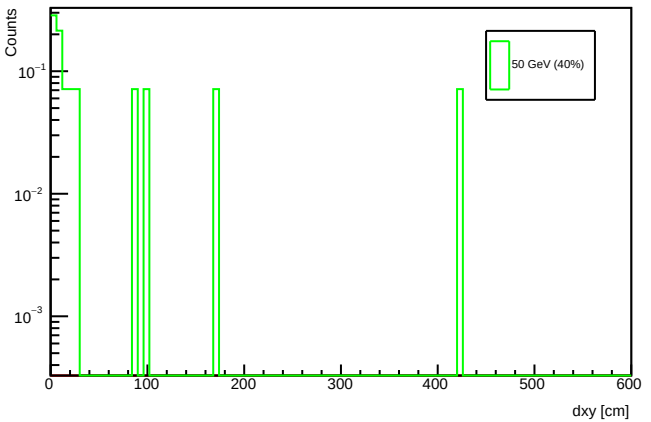
reco subleading Mu vxy: no cuts



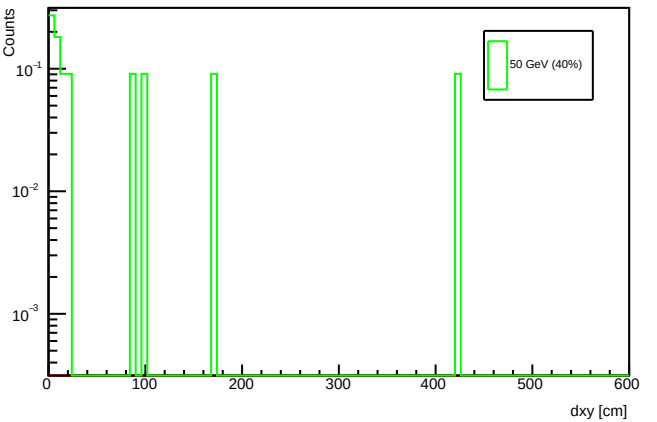

reco subleading Mu vxy: n_jet >=1, j1pt > 30 GeV



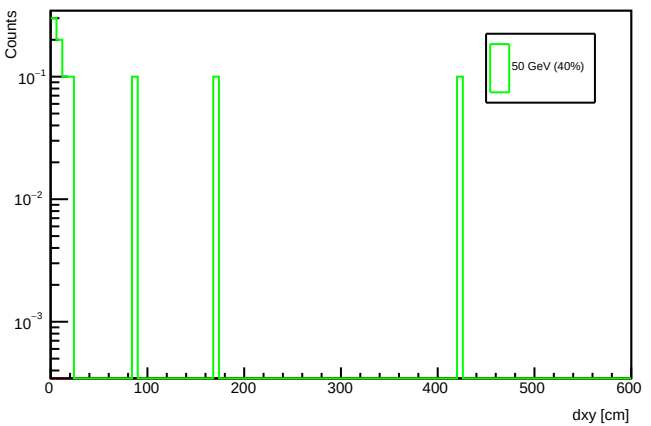

reco subleading Mu vxy: MET > 120 GeV



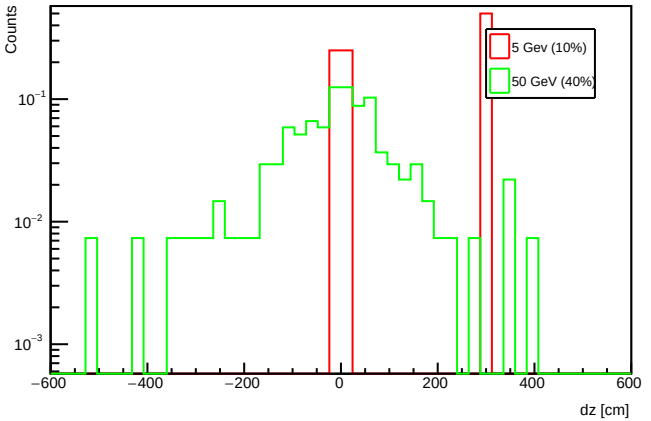

reco subleading Mu vxy: j1pt >120, at most 2 jets w/ pt >30 GeV



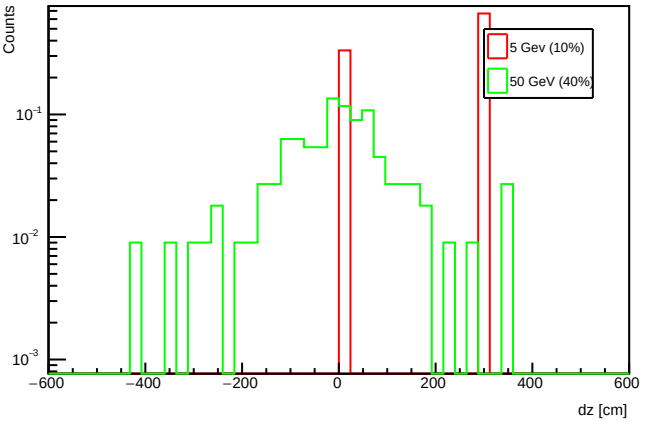

reco subleading Mu vxy: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



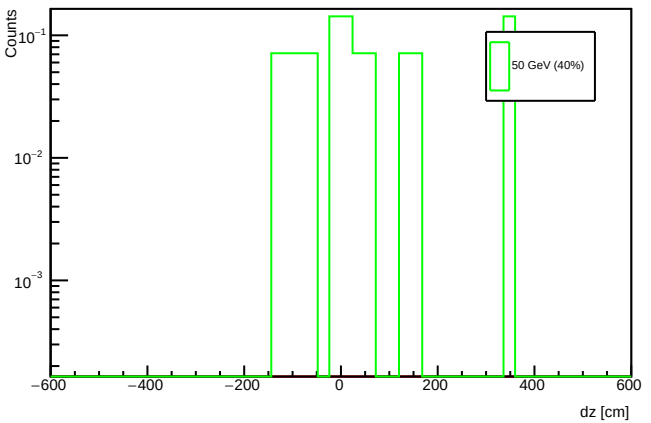
reco subleading Mu vz: no cuts



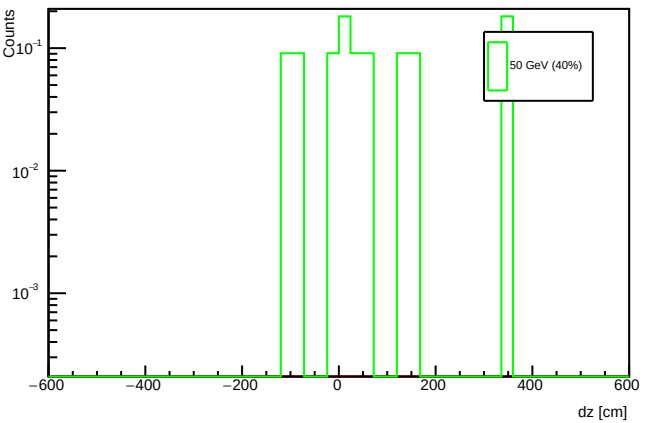

reco subleading Mu vz: n_jet >=1, j1pt > 30 GeV



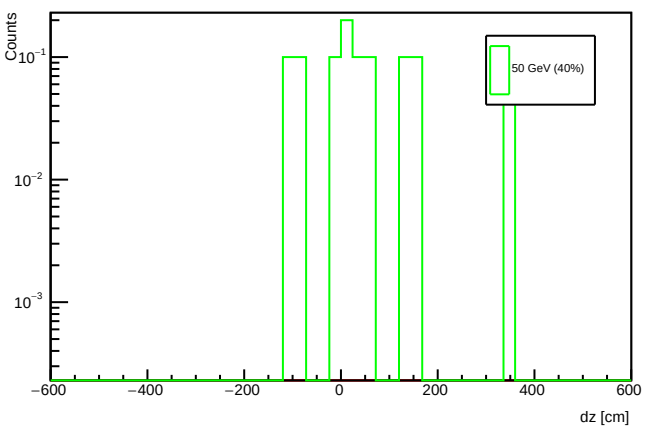

reco subleading Mu vz: MET > 120 GeV



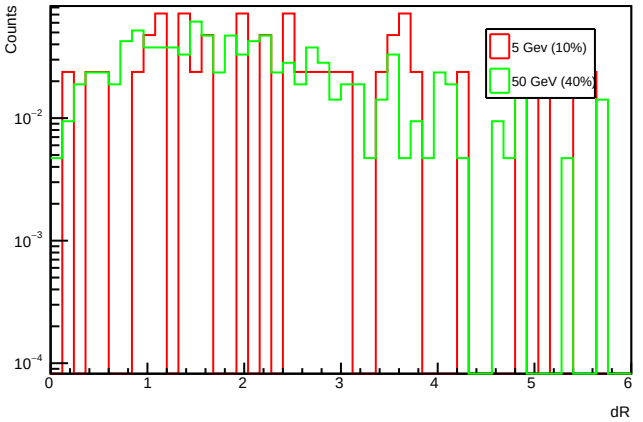

reco subleading Mu vz: j1pt >120, at most 2 jets w/ pt >30 GeV



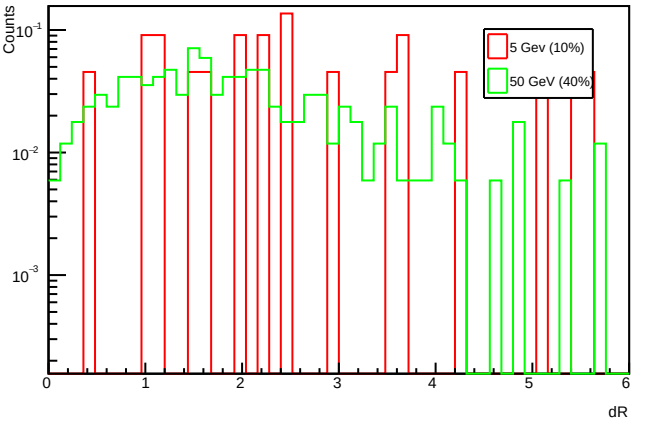

reco subleading Mu vz: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



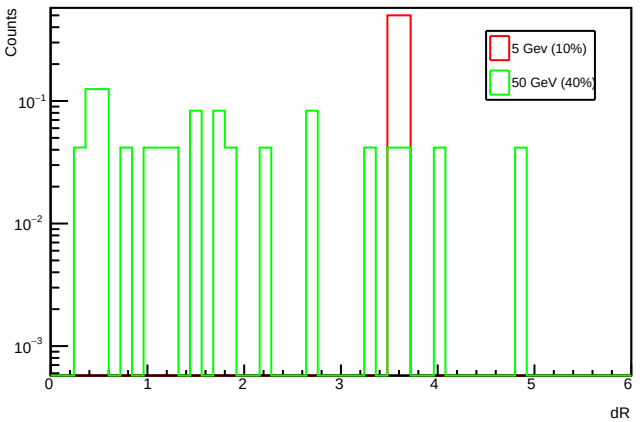
dR: reco leading mu and subleading mu: no cuts



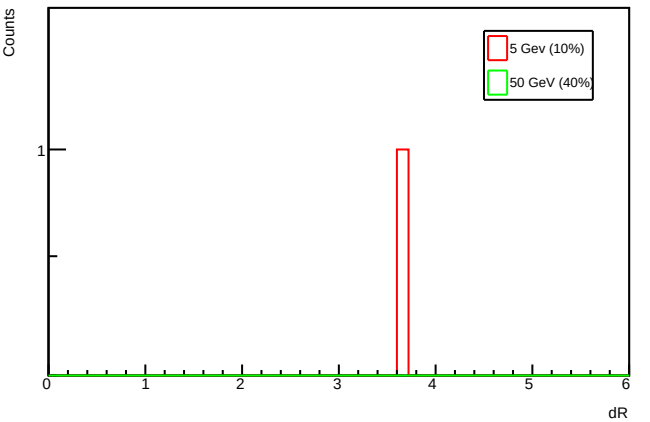

dR: reco leading mu and subleading mu: n_jet >=1, j1pt > 30 GeV



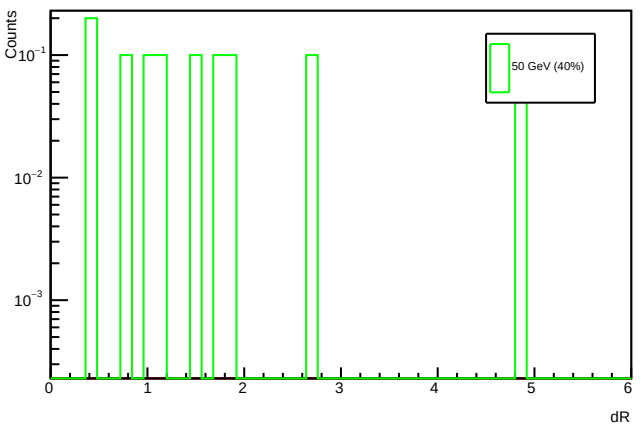

dR: reco leading mu and subleading mu: MET > 120 GeV



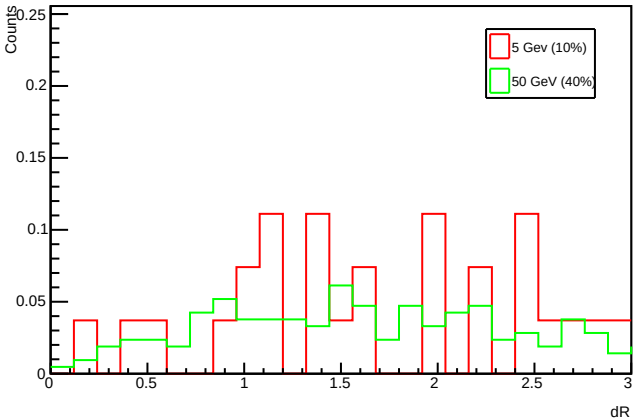

dR: reco leading mu and subleading mu: j1pt >120, at most 2 jets w/ pt >30 GeV



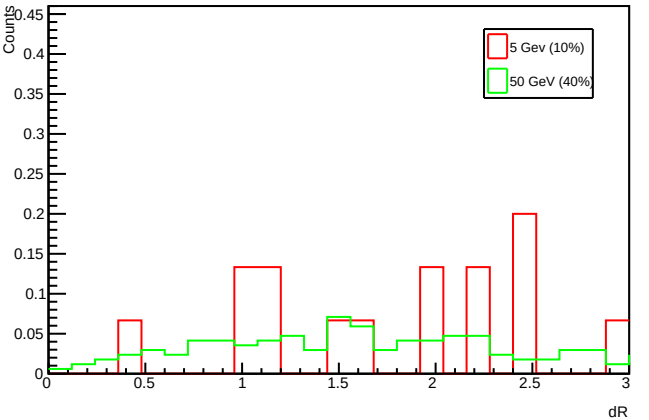

dR: reco leading mu and subleading mu: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



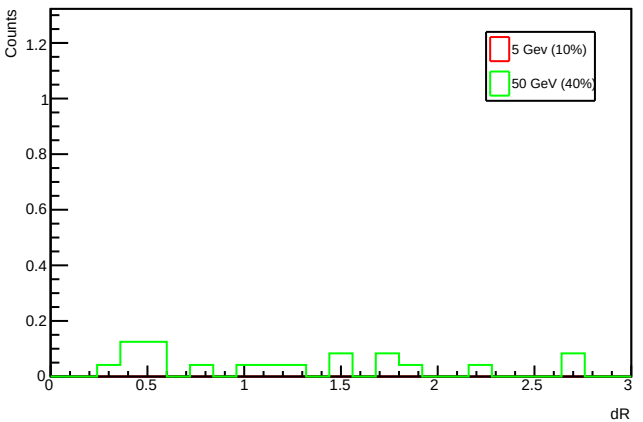
dR: reco leading mu and subleading mu: no cuts



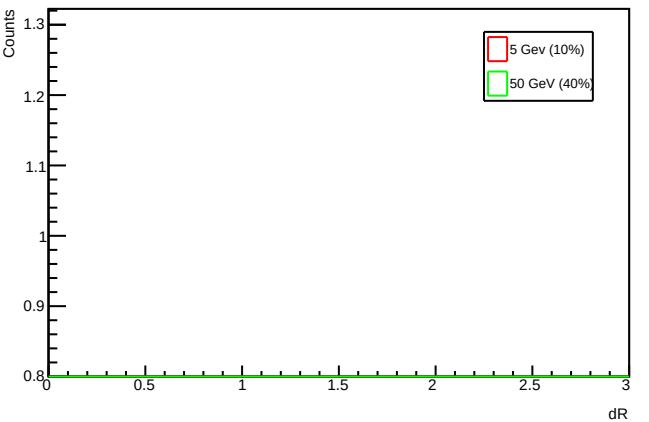

dR: reco leading mu and subleading mu: n_jet >=1, j1pt > 30 GeV



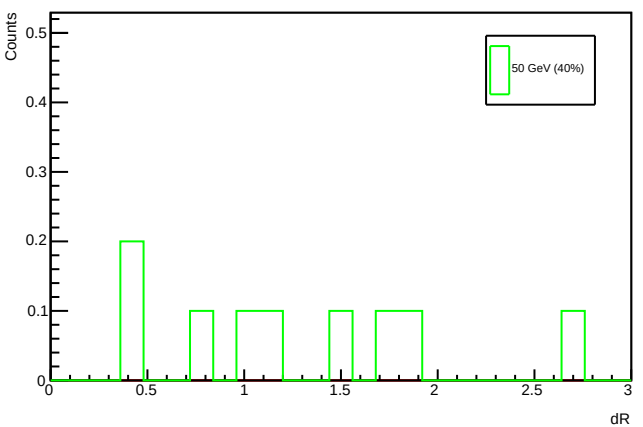

dR: reco leading mu and subleading mu: MET > 120 GeV



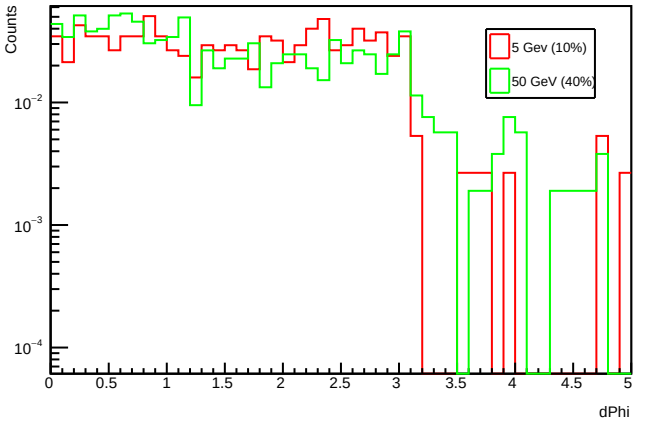

dR: reco leading mu and subleading mu: j1pt >120, at most 2 jets w/ pt >30 GeV



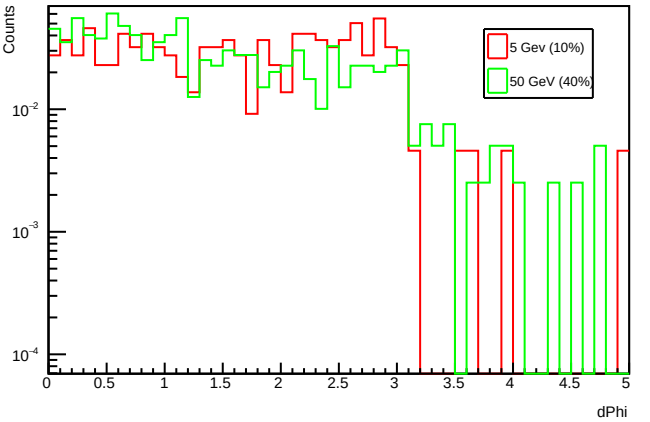

dR: reco leading mu and subleading mu: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



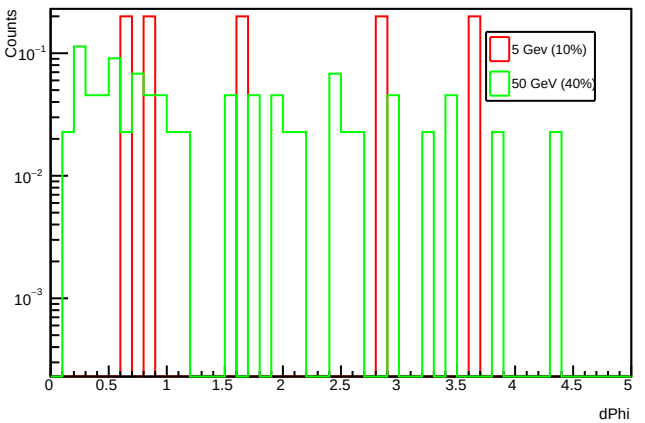
dPhi: reco MET and leading mu: no cuts



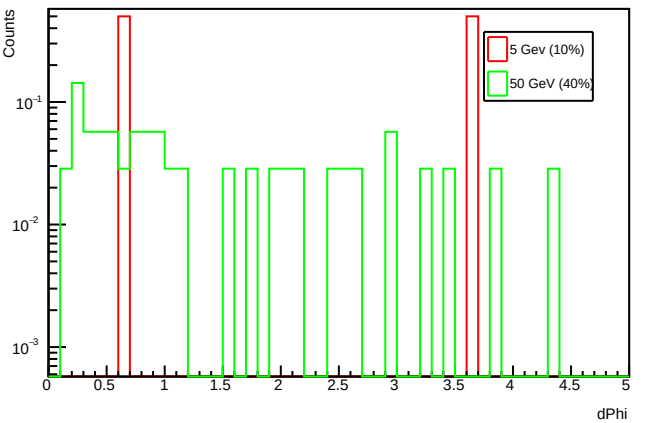

dPhi: reco MET and leading mu: n_jet >=1, j1pt > 30 GeV



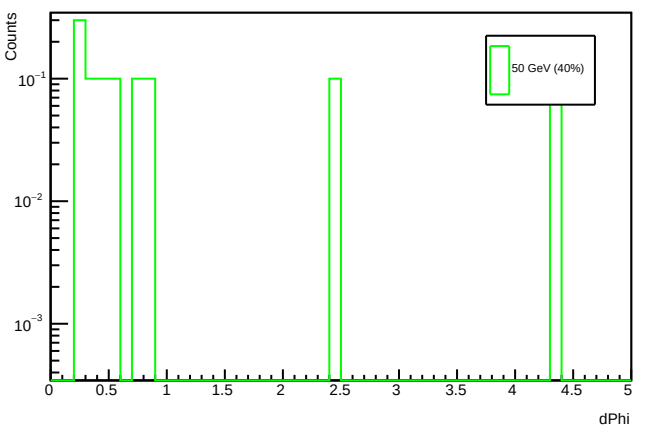

dPhi: reco MET and leading mu: MET > 120 GeV



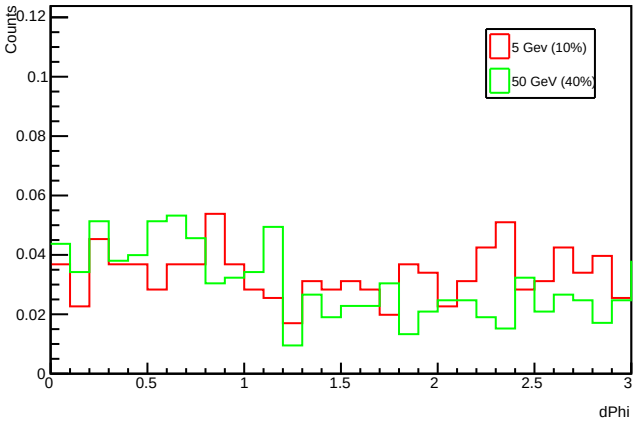

dPhi: reco MET and leading mu: j1pt >120, at most 2 jets w/ pt >30 GeV



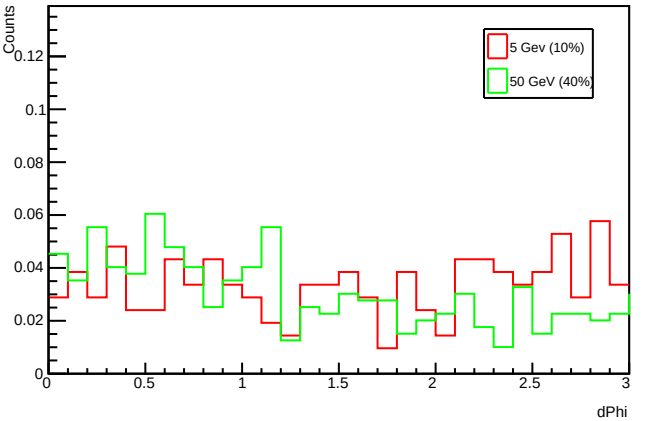

dPhi: reco MET and leading mu: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



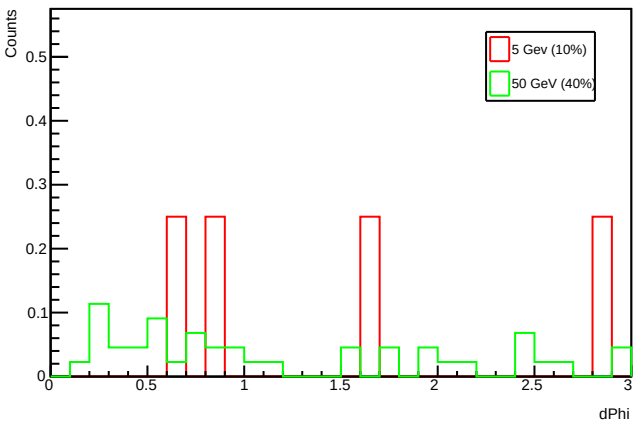
dPhi: reco MET and leading mu: no cuts



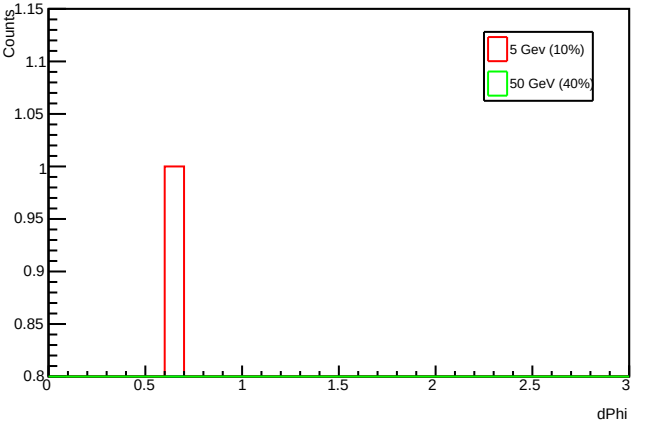

dPhi: reco MET and leading mu: n_jet >=1, j1pt > 30 GeV



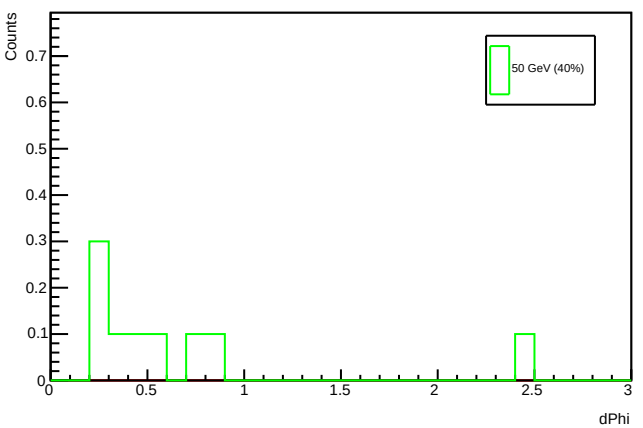

dPhi: reco MET and leading mu: MET > 120 GeV



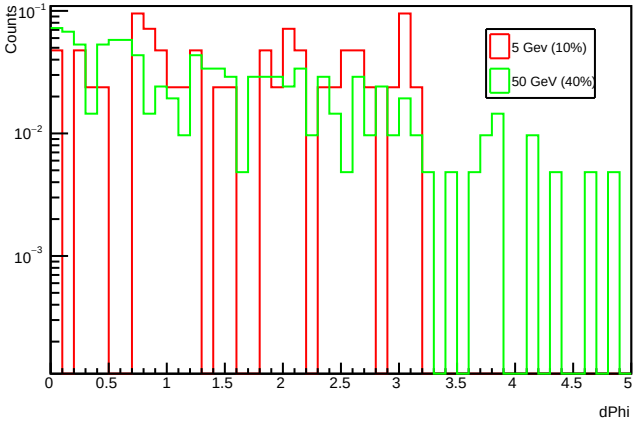

dPhi: reco MET and leading mu: j1pt >120, at most 2 jets w/ pt >30 GeV



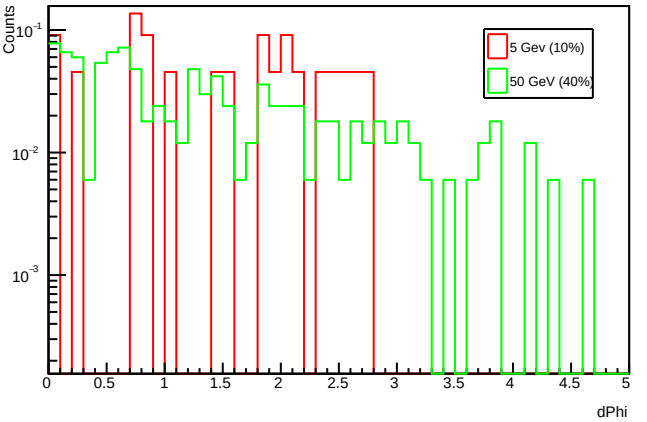

dPhi: reco MET and leading mu: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



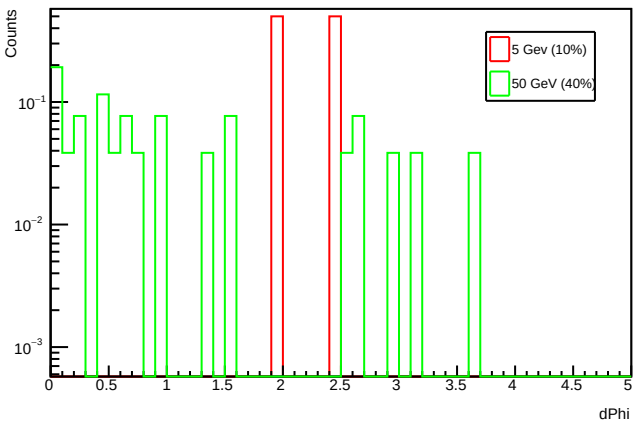
dPhi: reco leading mu and subleading mu: no cuts



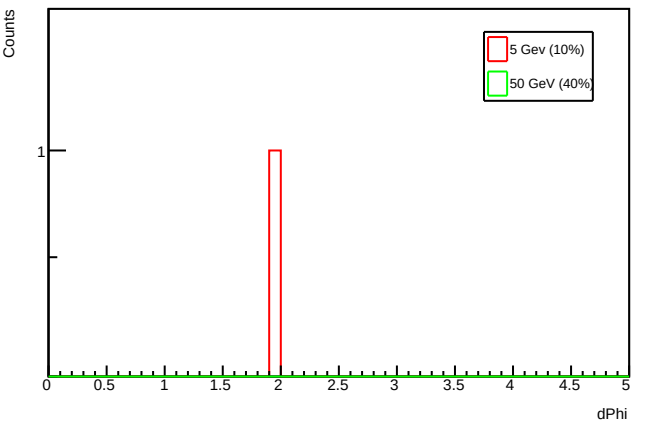

dPhi: reco leading mu and subleading mu: n_jet >=1, j1pt > 30 GeV



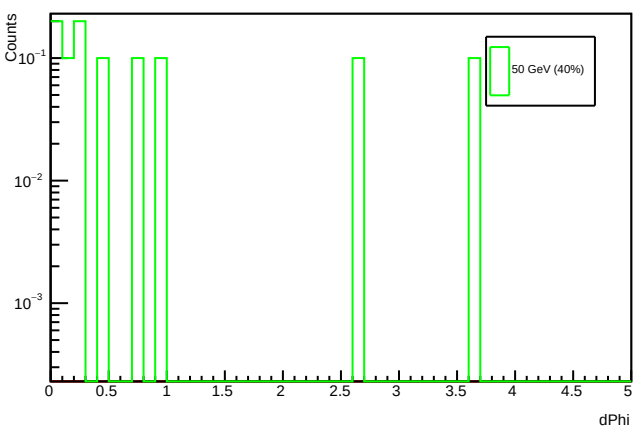

dPhi: reco leading mu and subleading mu: MET > 120 GeV



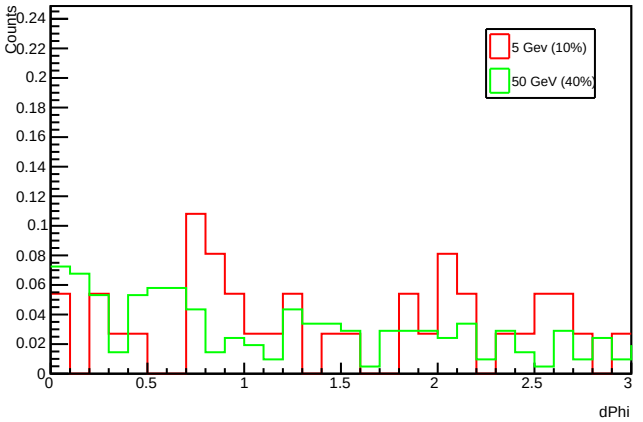

dPhi: reco leading mu and subleading mu: j1pt >120, at most 2 jets w/ pt >30 GeV



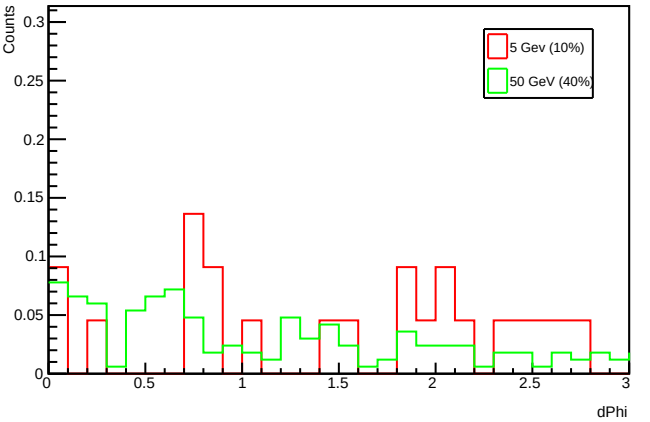

dPhi: reco leading mu and subleading mu: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



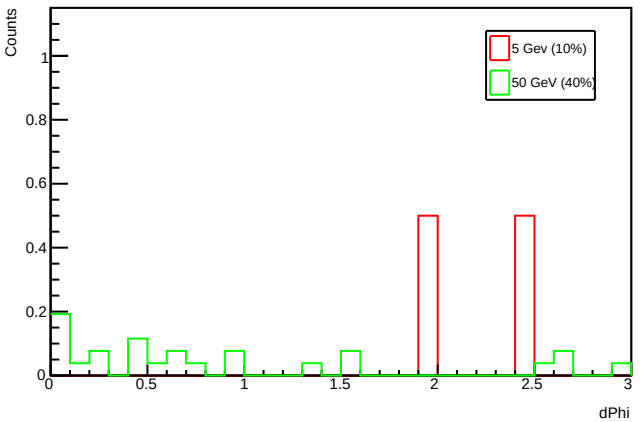
dPhi: reco leading mu and subleading mu: no cuts



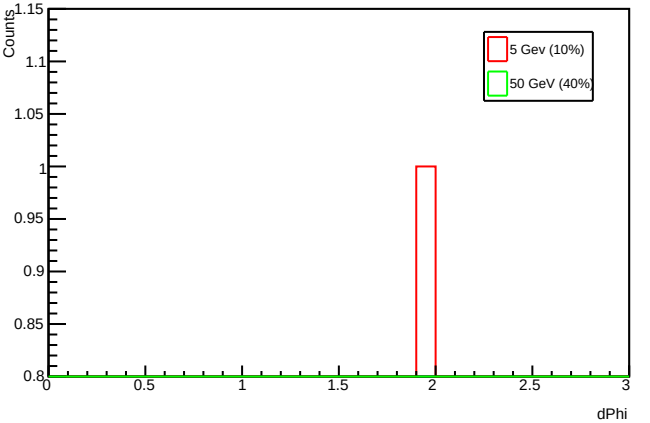

dPhi: reco leading mu and subleading mu: n_jet >=1, j1pt > 30 GeV



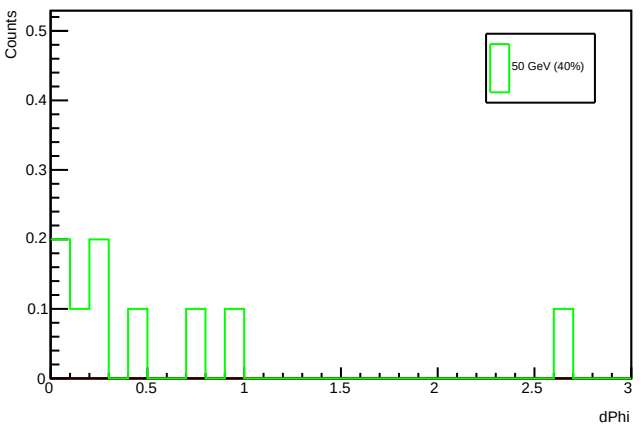

dPhi: reco leading mu and subleading mu: MET > 120 GeV



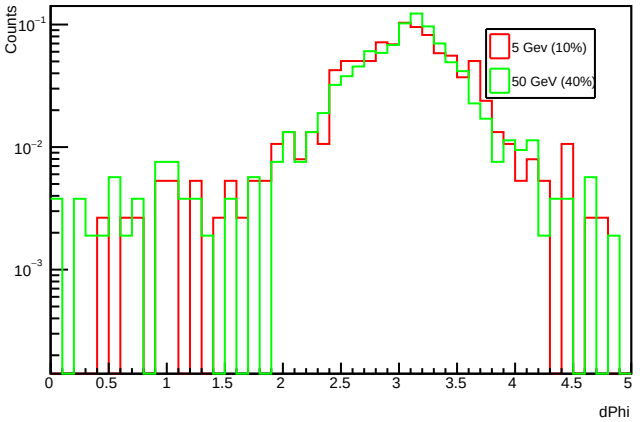

dPhi: reco leading mu and subleading mu: j1pt >120, at most 2 jets w/ pt >30 GeV



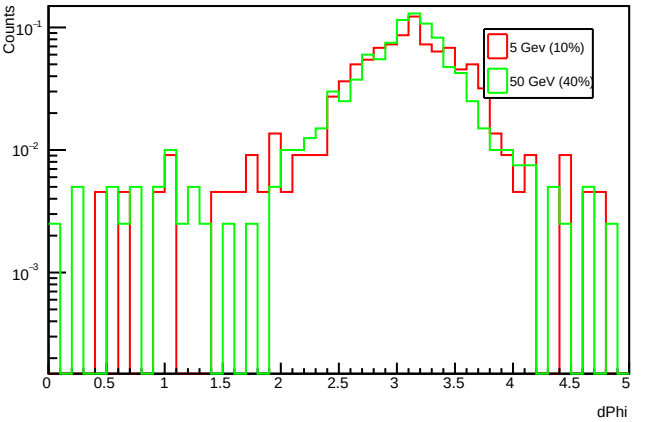

dPhi: reco leading mu and subleading mu: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



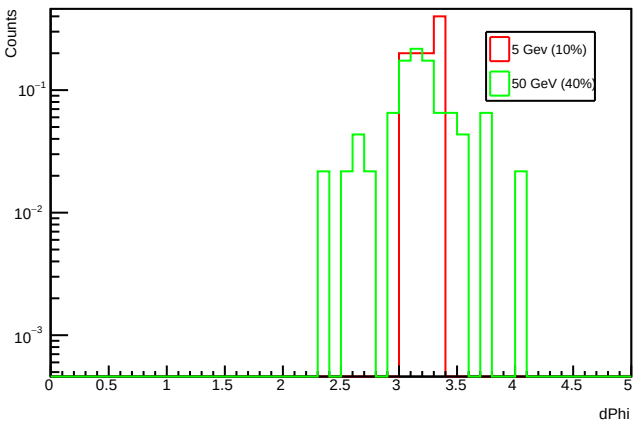
dPhi: reco MET and leading jet: no cuts



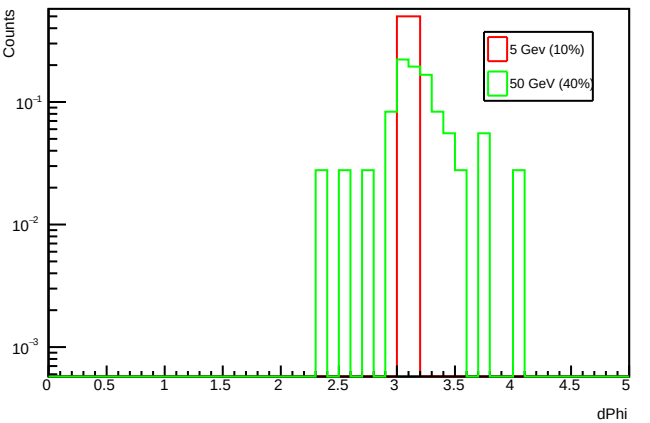

dPhi: reco MET and leading jet: n_jet >=1, j1pt > 30 GeV



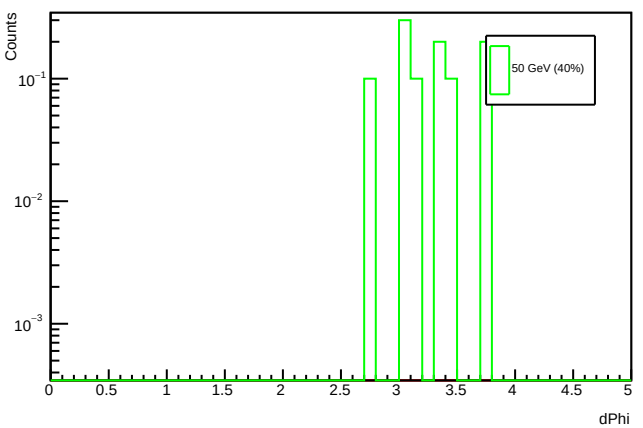

dPhi: reco MET and leading jet: MET > 120 GeV



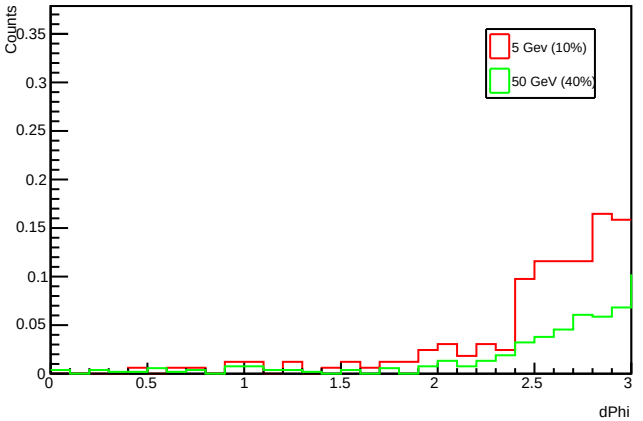

dPhi: reco MET and leading jet: j1pt >120, at most 2 jets w/ pt >30 GeV



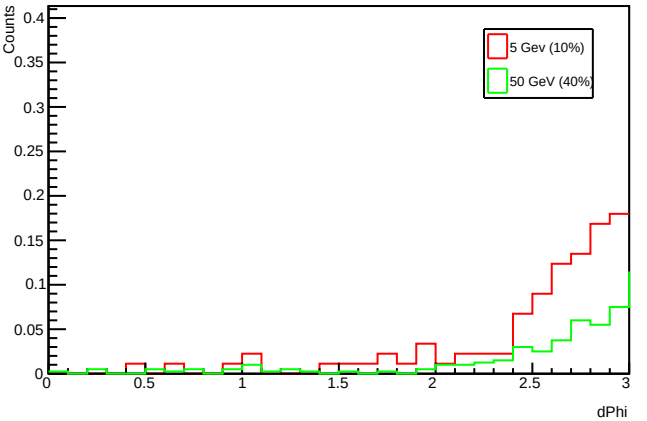

dPhi: reco MET and leading jet: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



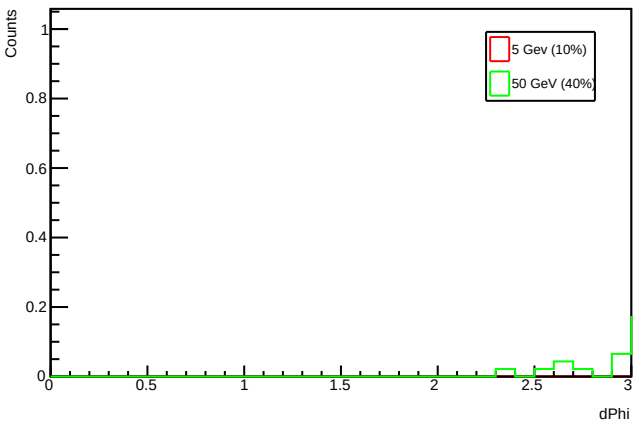
dPhi: reco MET and leading jet: no cuts



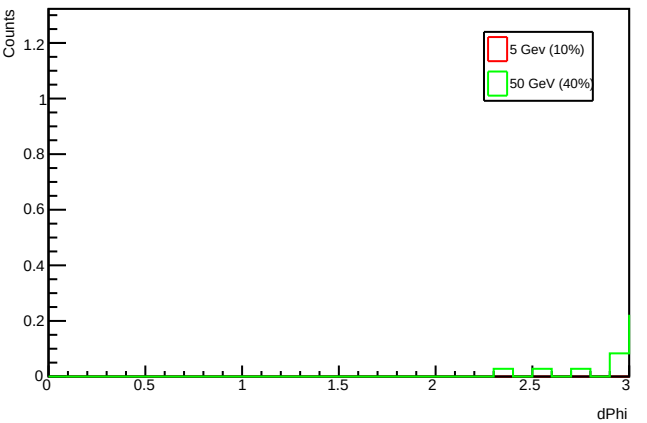

dPhi: reco MET and leading jet: n_jet >=1, j1pt > 30 GeV



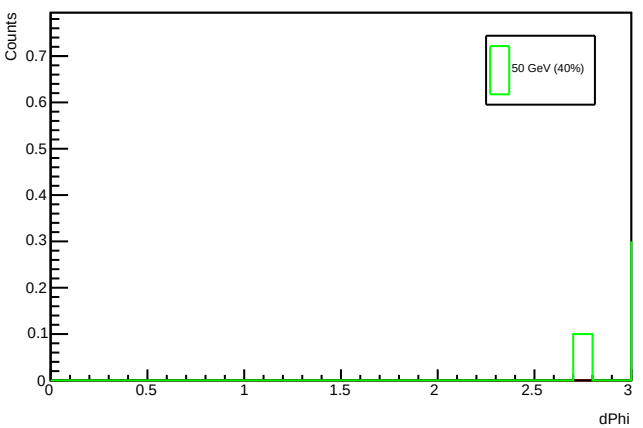

dPhi: reco MET and leading jet: MET > 120 GeV



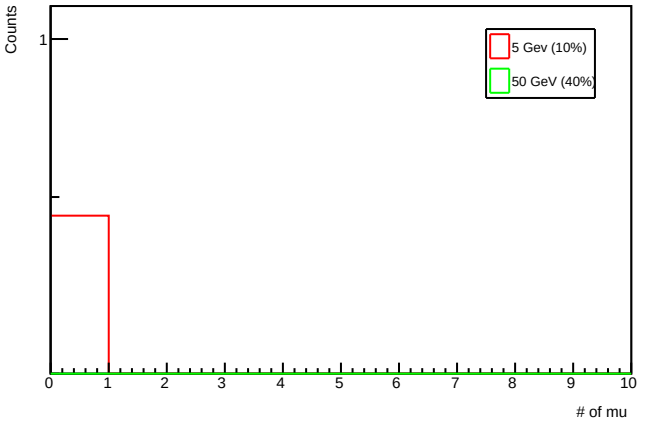

dPhi: reco MET and leading jet: j1pt >120, at most 2 jets w/ pt >30 GeV



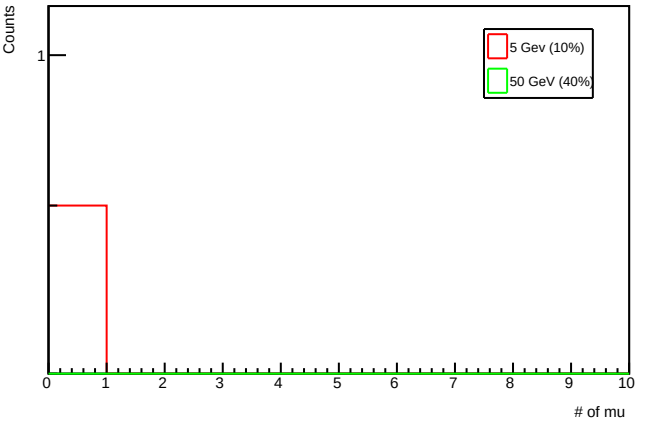

dPhi: reco MET and leading jet: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



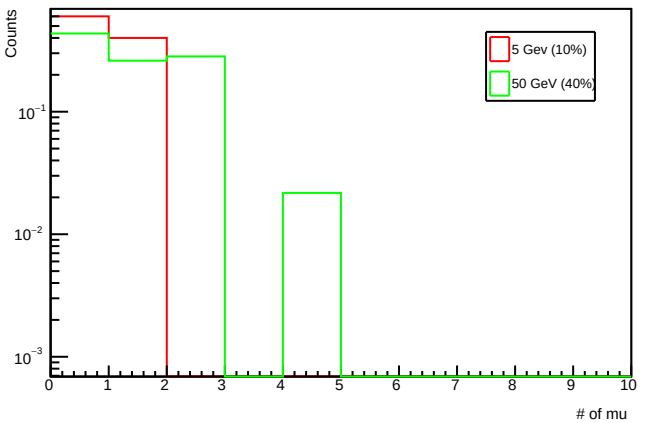
reco number of mu: no cuts



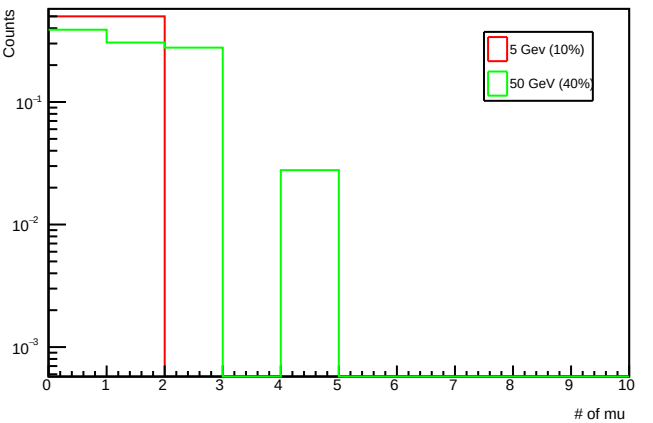

reco number of mu: n_jet >=1, j1pt > 30 GeV



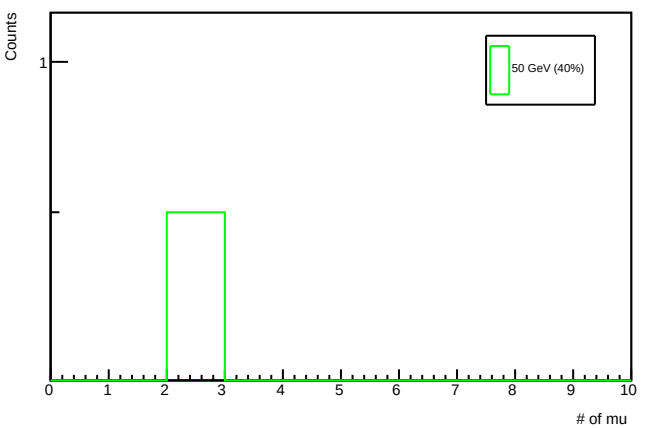

reco number of mu: MET > 120 GeV



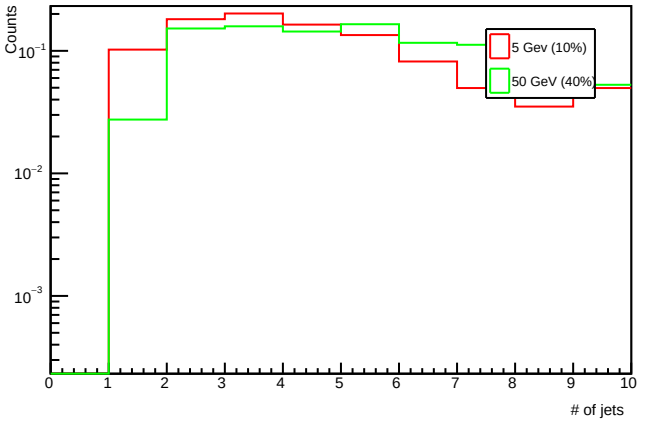

reco number of mu: j1pt >120, at most 2 jets w/ pt >30 GeV



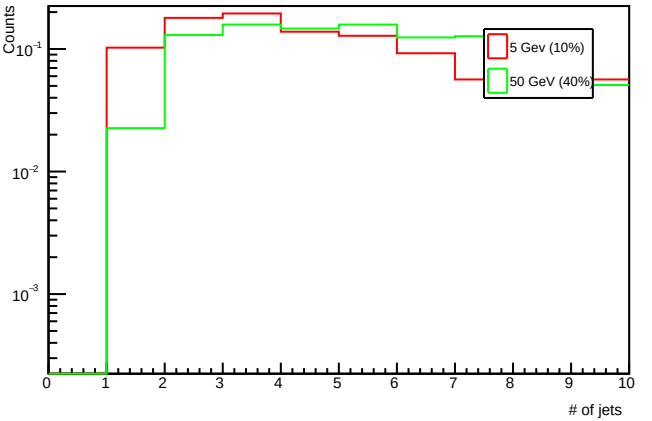

reco number of mu: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



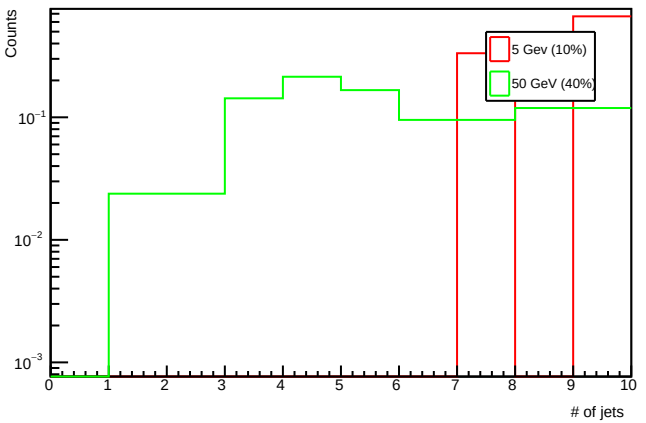
reco number of jets: no cuts



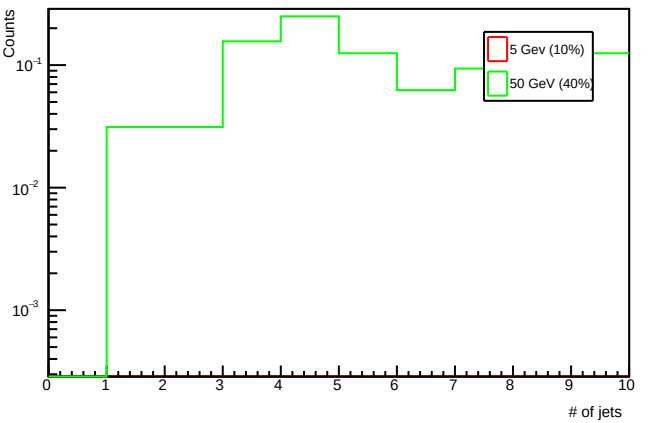

reco number of jets: n_jet >=1, j1pt > 30 GeV



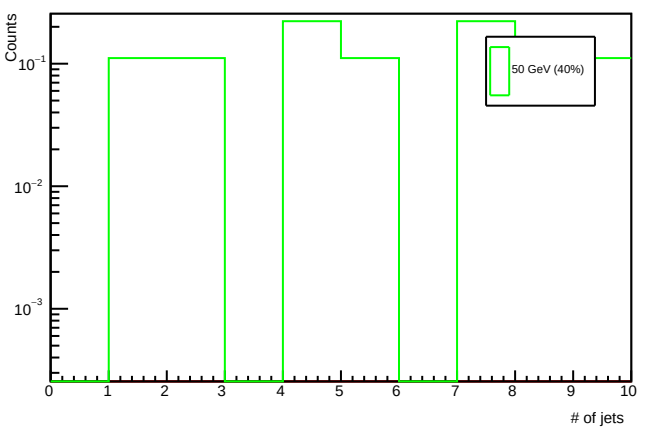

reco number of jets: MET > 120 GeV



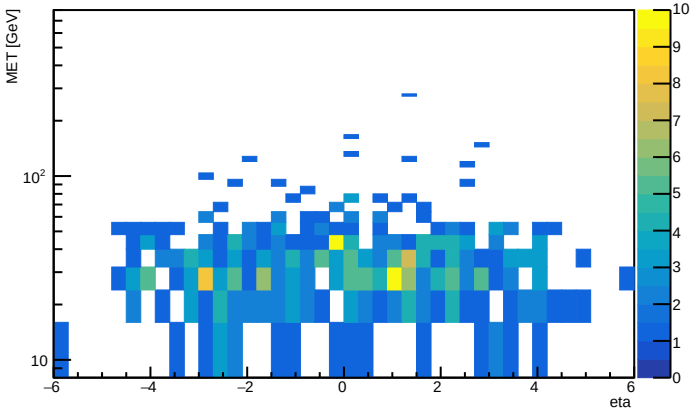

reco number of jets: j1pt >120, at most 2 jets w/ pt >30 GeV



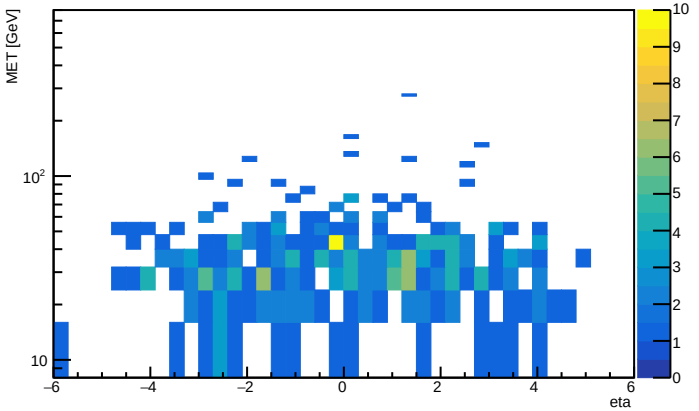

reco number of jets: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



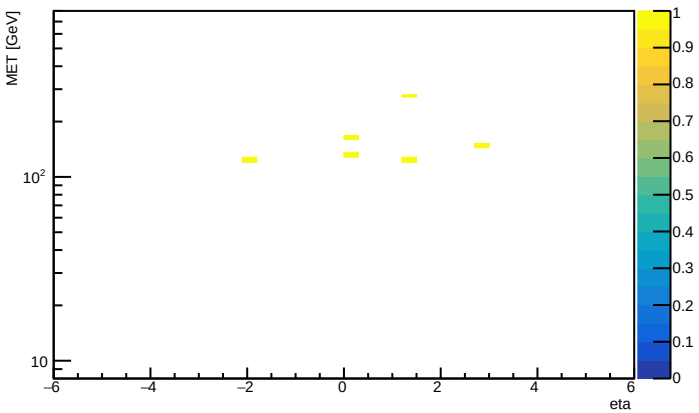
5 Gev (10%) ctau 1000mm gen leading Met eta vs pt: no cuts



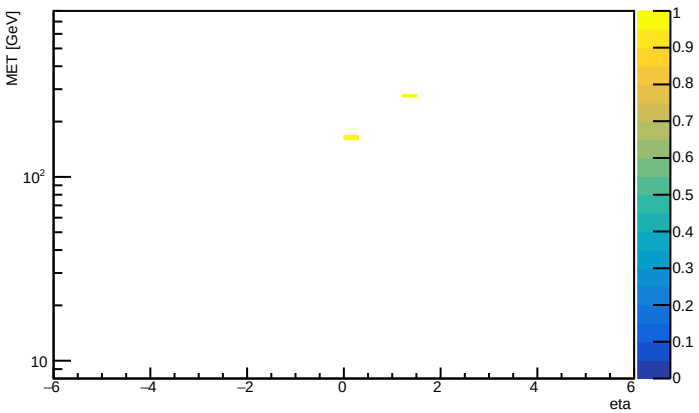

5 Gev (10%) ctau 1000mm gen leading Met eta vs pt: n_jet >=1, j1pt > 30 GeV



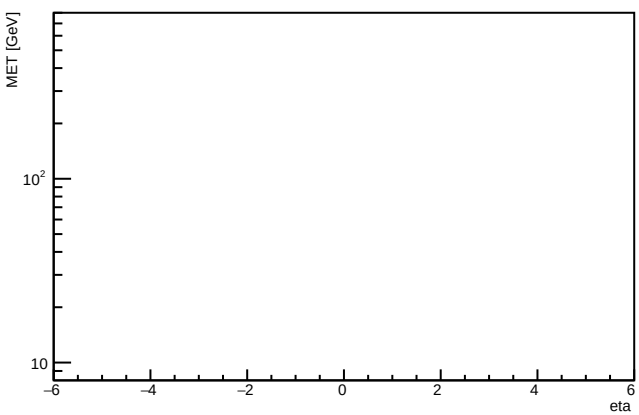

5 Gev (10%) ctau 1000mm gen leading Met eta vs pt: MET > 120 GeV



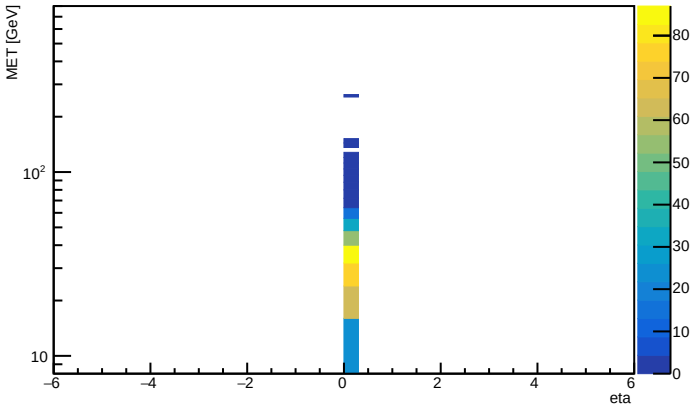

5 Gev (10%) ctau 1000mm gen leading Met eta vs pt: j1pt >120, at most 2 jets w/ pt >30 GeV



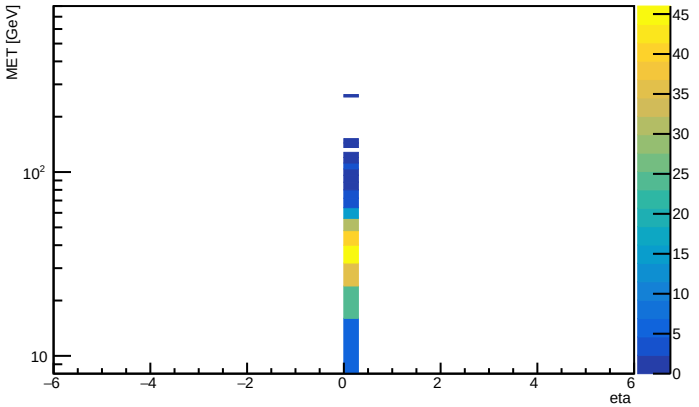

5 Gev (10%) ctau 1000mm gen leading Met eta vs pt: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



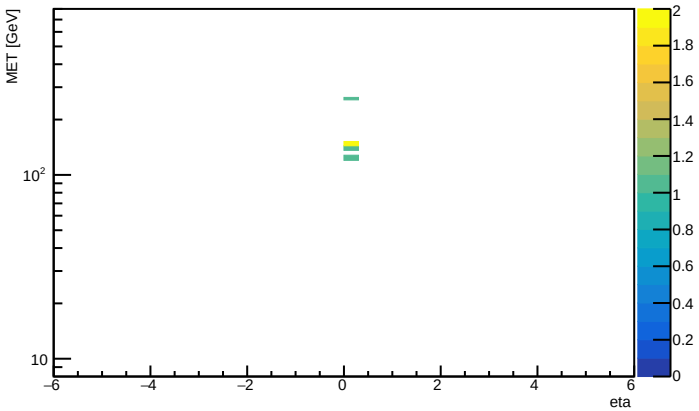
5 Gev (10%) ctau 1000mm reco leading Met eta vs pt: no cuts



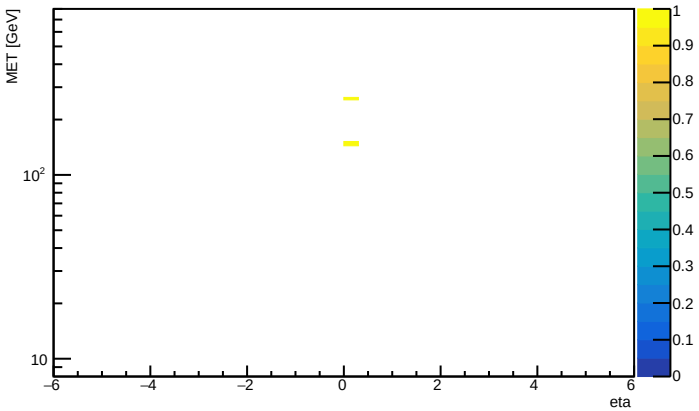

5 Gev (10%) ctau 1000mm reco leading Met eta vs pt: n_jet >=1, j1pt > 30 GeV



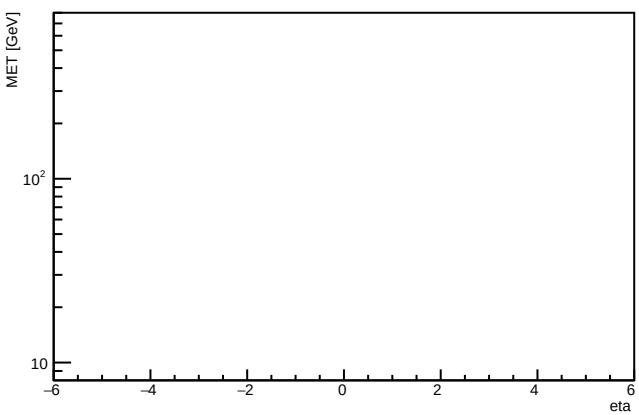

5 Gev (10%) ctau 1000mm reco leading Met eta vs pt: MET > 120 GeV

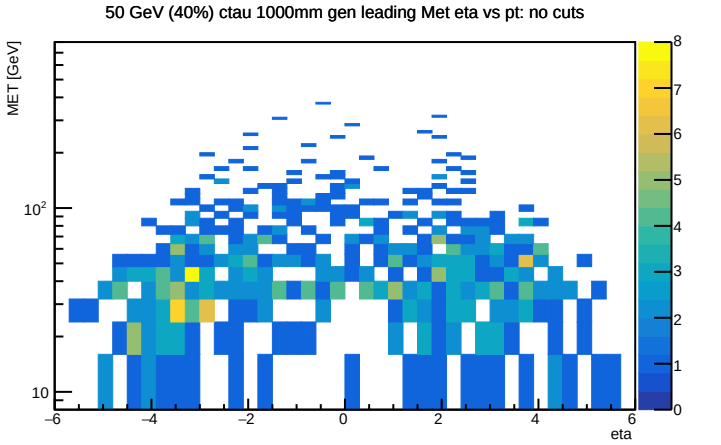


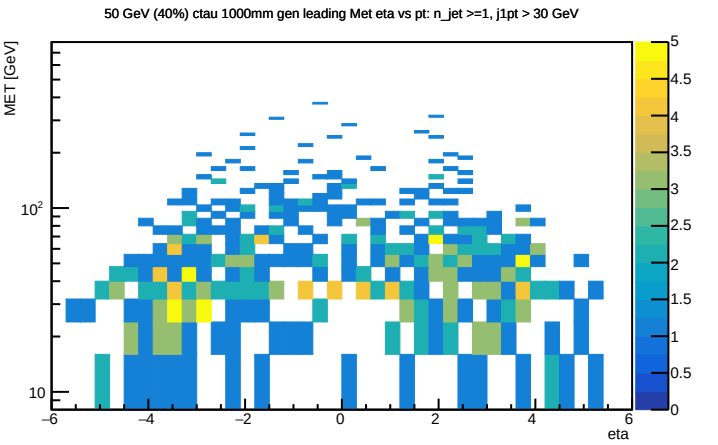

5 Gev (10%) ctau 1000mm reco leading Met eta vs pt: j1pt >120, at most 2 jets w/ pt >30 GeV

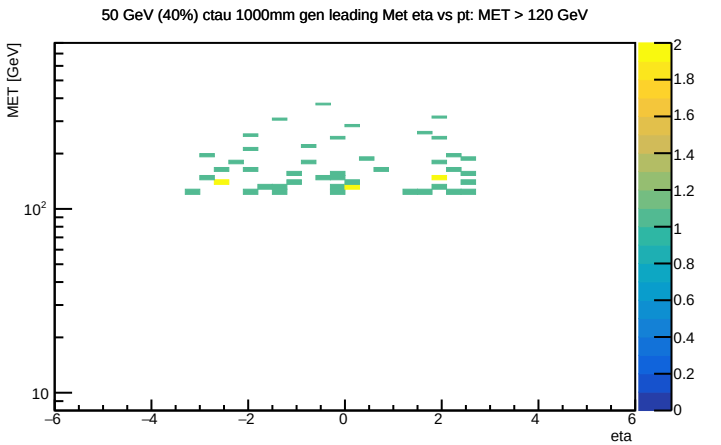


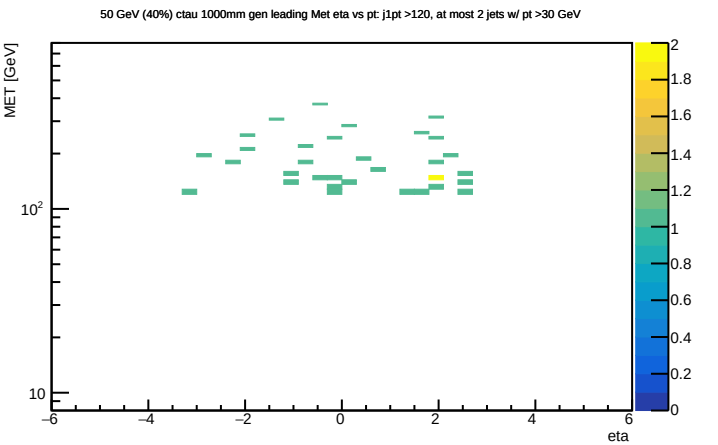

5 Gev (10%) ctau 1000mm reco leading Met eta vs pt: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4

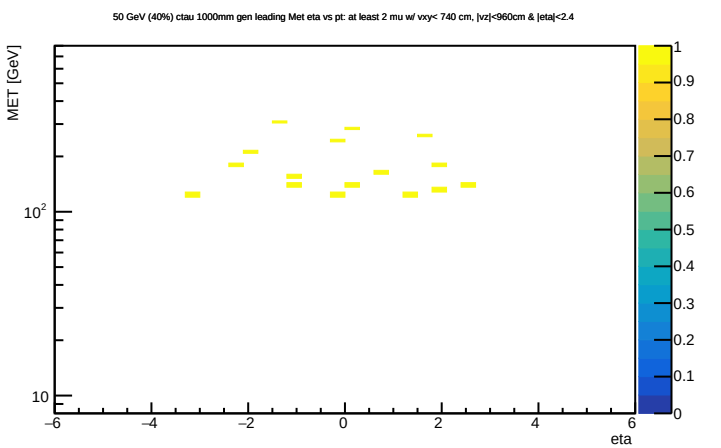



50 GeV (40%) ctau 1000mm gen leading Met eta vs pt: no cuts
MET [GeV]
eta

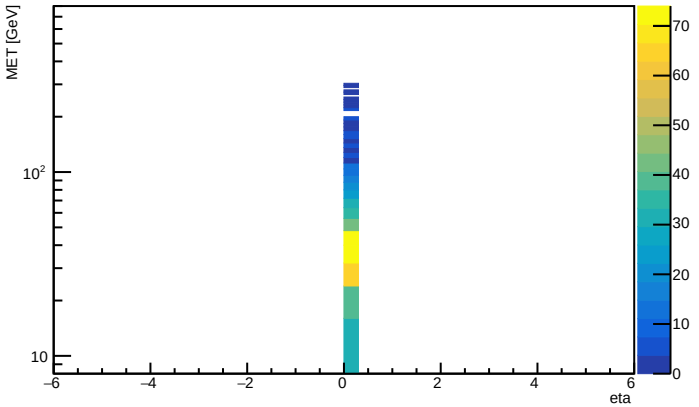

50 GeV (40%) ctau 1000mm gen leading Met eta vs pt: n_jet >=1, j1pt > 30 GeV
MET [GeV]
eta


50 GeV (40%) ctau 1000mm gen leading Met eta vs pt: MET > 120 GeV
MET [GeV]
eta

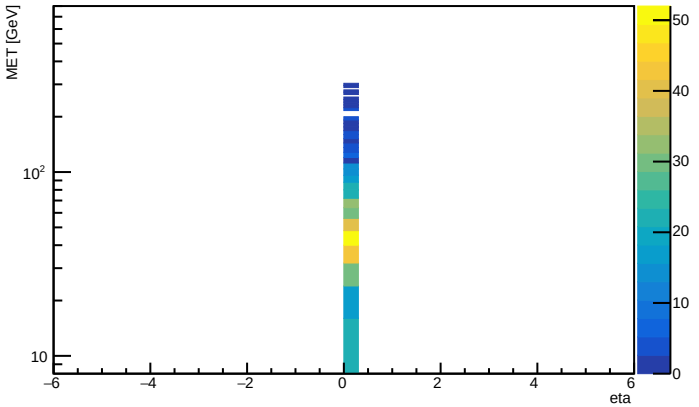

50 GeV (40%) ctau 1000mm gen leading Met eta vs pt: j1pt >120, at most 2 jets w/ pt >30 GeV
MET [GeV]
eta


50 GeV (40%) ctau 1000mm gen leading Met eta vs pt: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4
MET [GeV]
eta

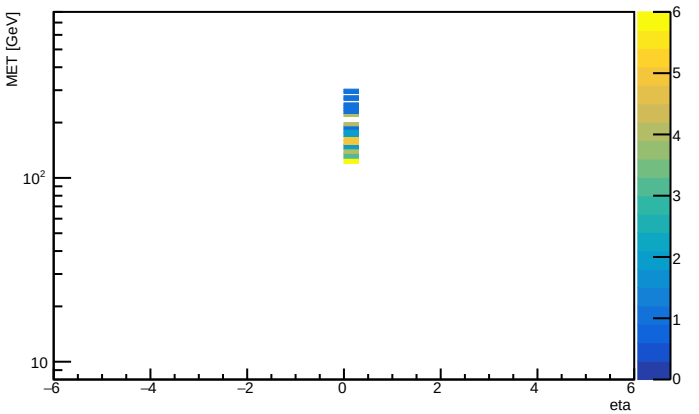
50 GeV (40%) ctau 1000mm reco leading Met eta vs pt: no cuts



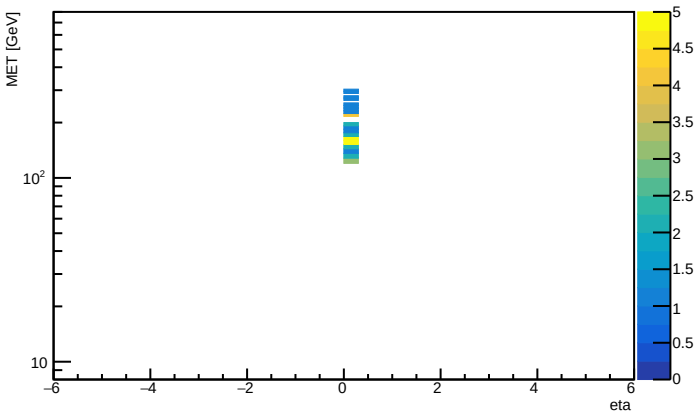

50 GeV (40%) ctau 1000mm reco leading Met eta vs pt: n_jet >=1, j1pt > 30 GeV



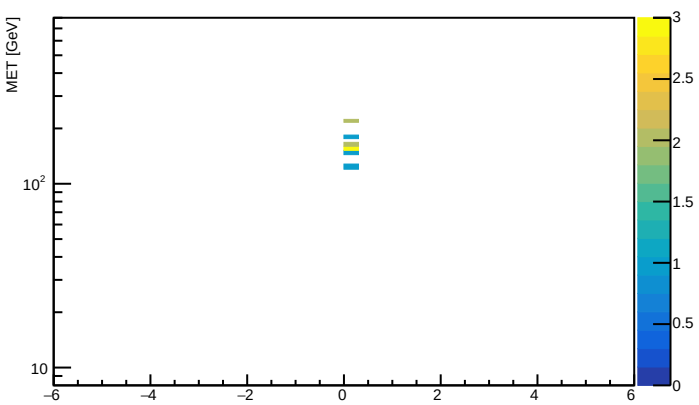

50 GeV (40%) ctau 1000mm reco leading Met eta vs pt: MET > 120 GeV



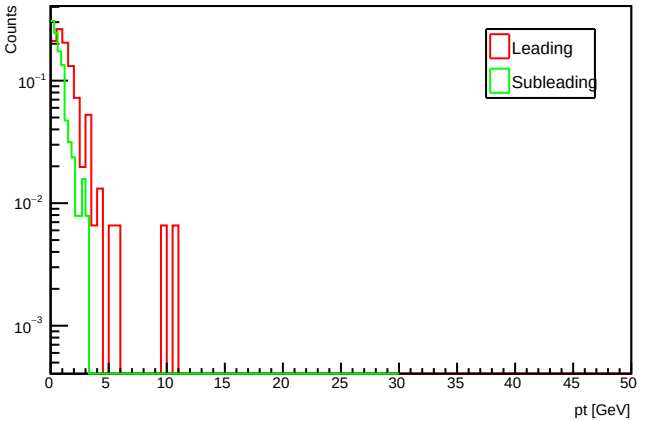

50 GeV (40%) ctau 1000mm reco leading Met eta vs pt: j1pt >120, at most 2 jets w/ pt >30 GeV



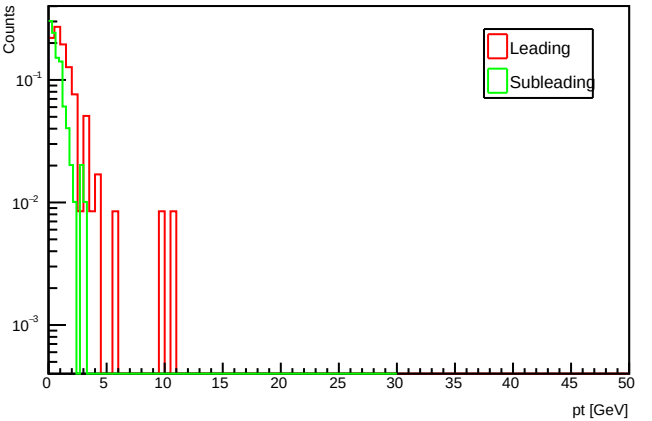

50 GeV (40%) ctau 1000mm reco leading Met eta vs pt: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



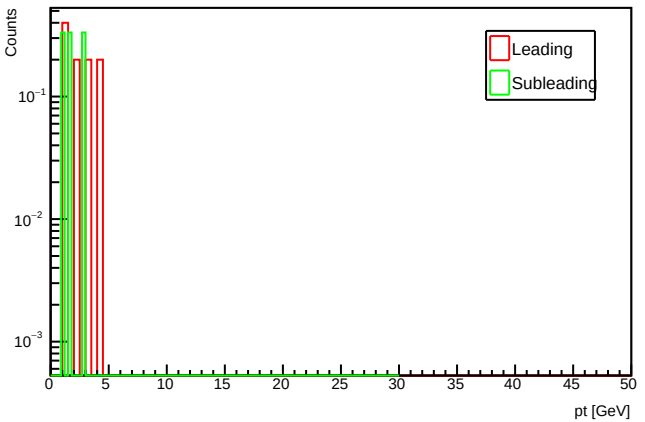
5 Gev (10%) leading vs subleading Mu pt: no cuts



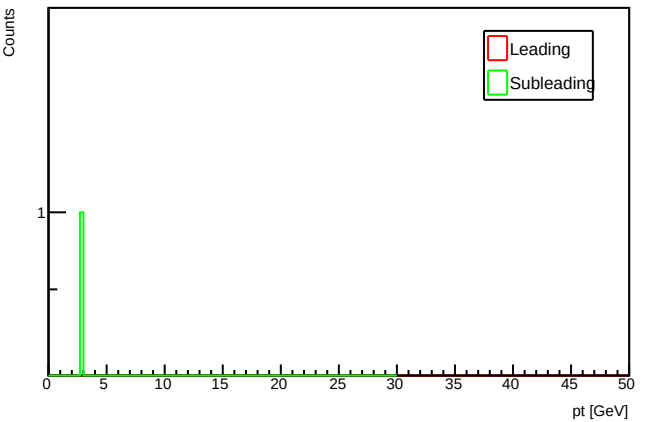

5 Gev (10%) leading vs subleading Mu pt: n_jet >=1, j1pt > 30 GeV



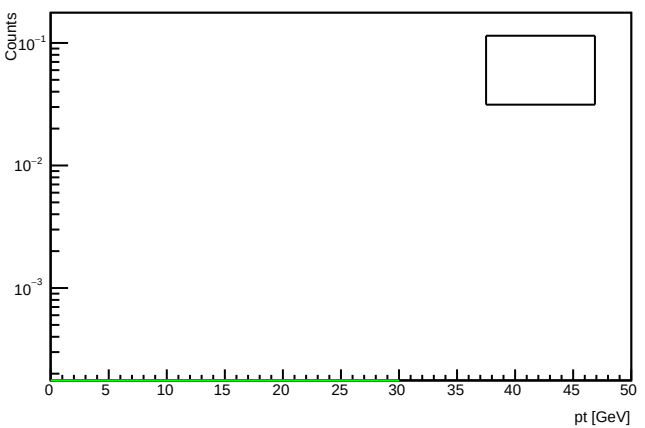

5 Gev (10%) leading vs subleading Mu pt: MET > 120 GeV



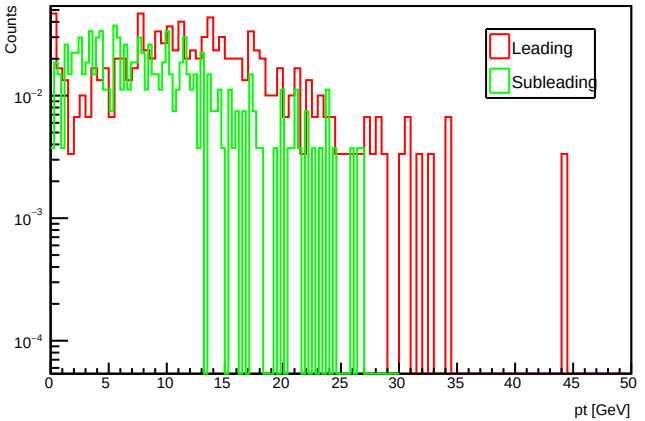

5 Gev (10%) leading vs subleading Mu pt: j1pt >120, at most 2 jets w/ pt >30 GeV



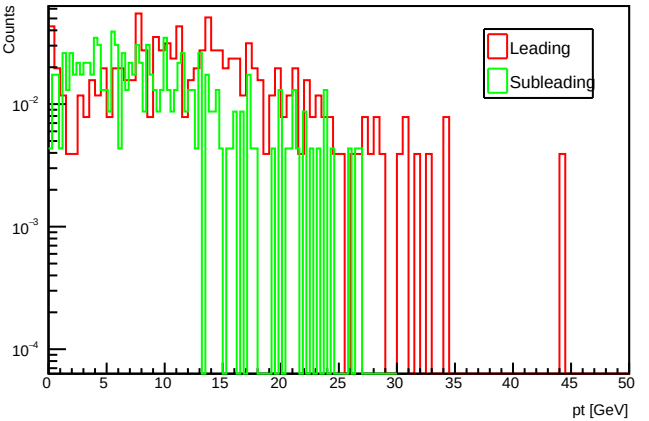

5 Gev (10%) leading vs subleading Mu pt: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4



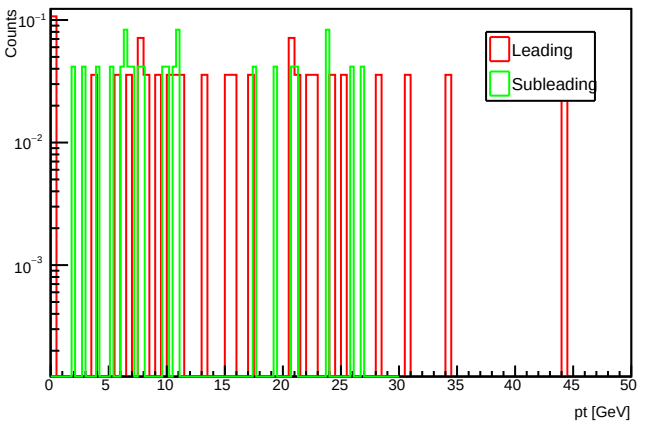
50 GeV (40%) leading vs subleading Mu pt: no cuts



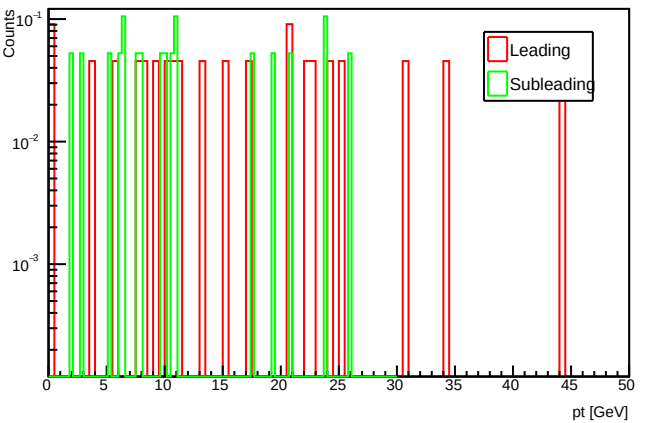

50 GeV (40%) leading vs subleading Mu pt: n_jet >=1, j1pt > 30 GeV



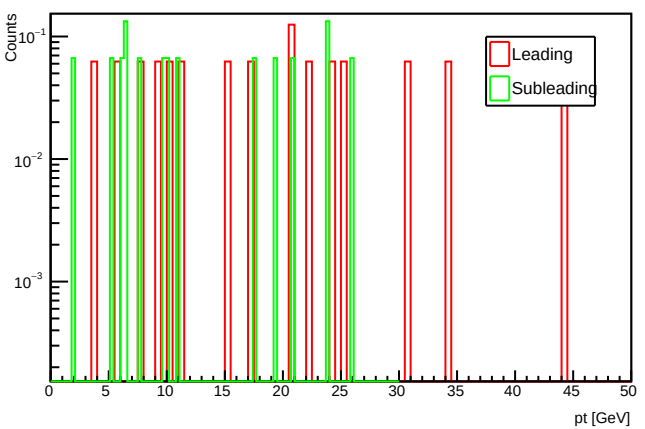

50 GeV (40%) leading vs subleading Mu pt: MET > 120 GeV



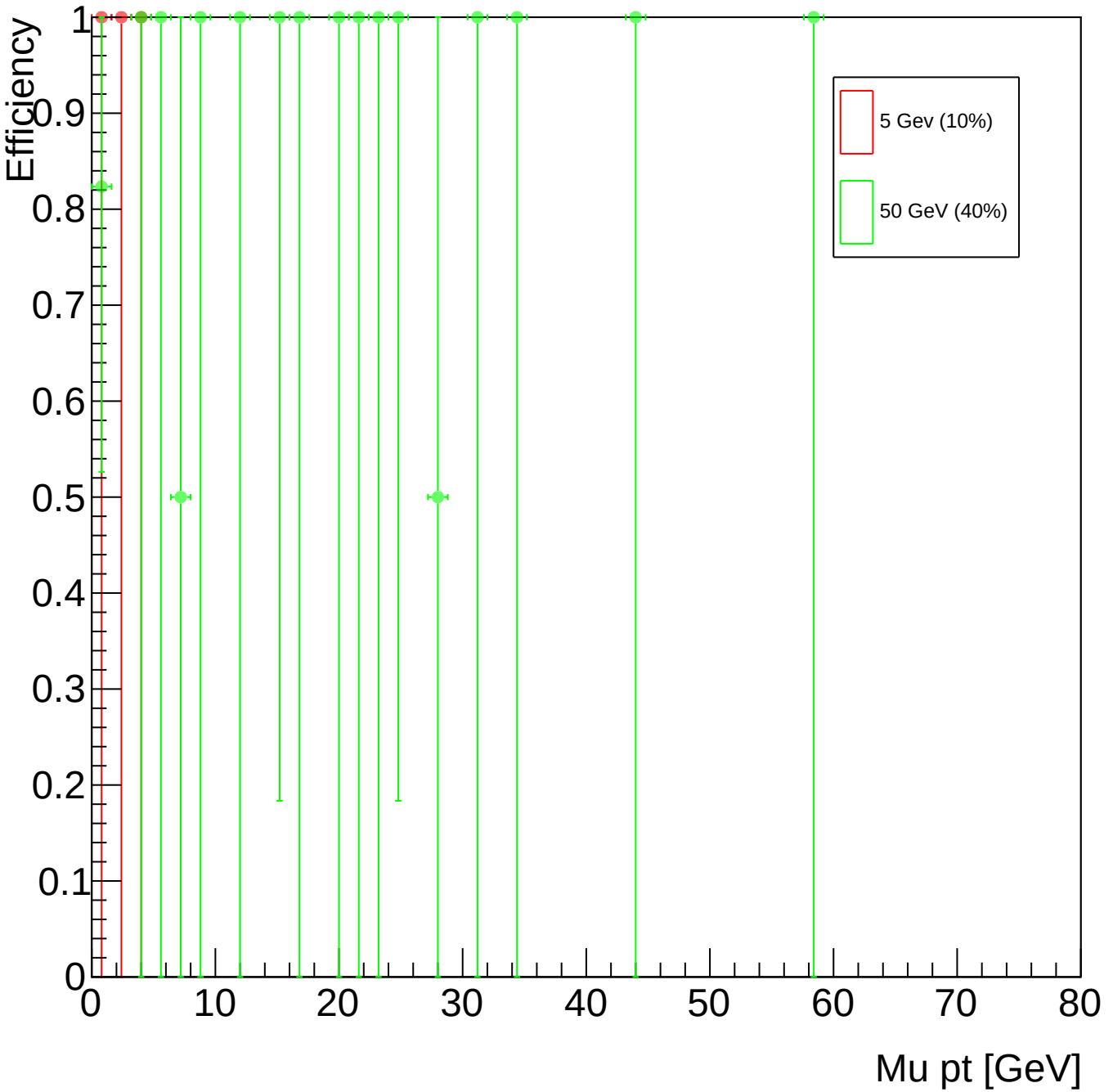

50 GeV (40%) leading vs subleading Mu pt: j1pt >120, at most 2 jets w/ pt >30 GeV

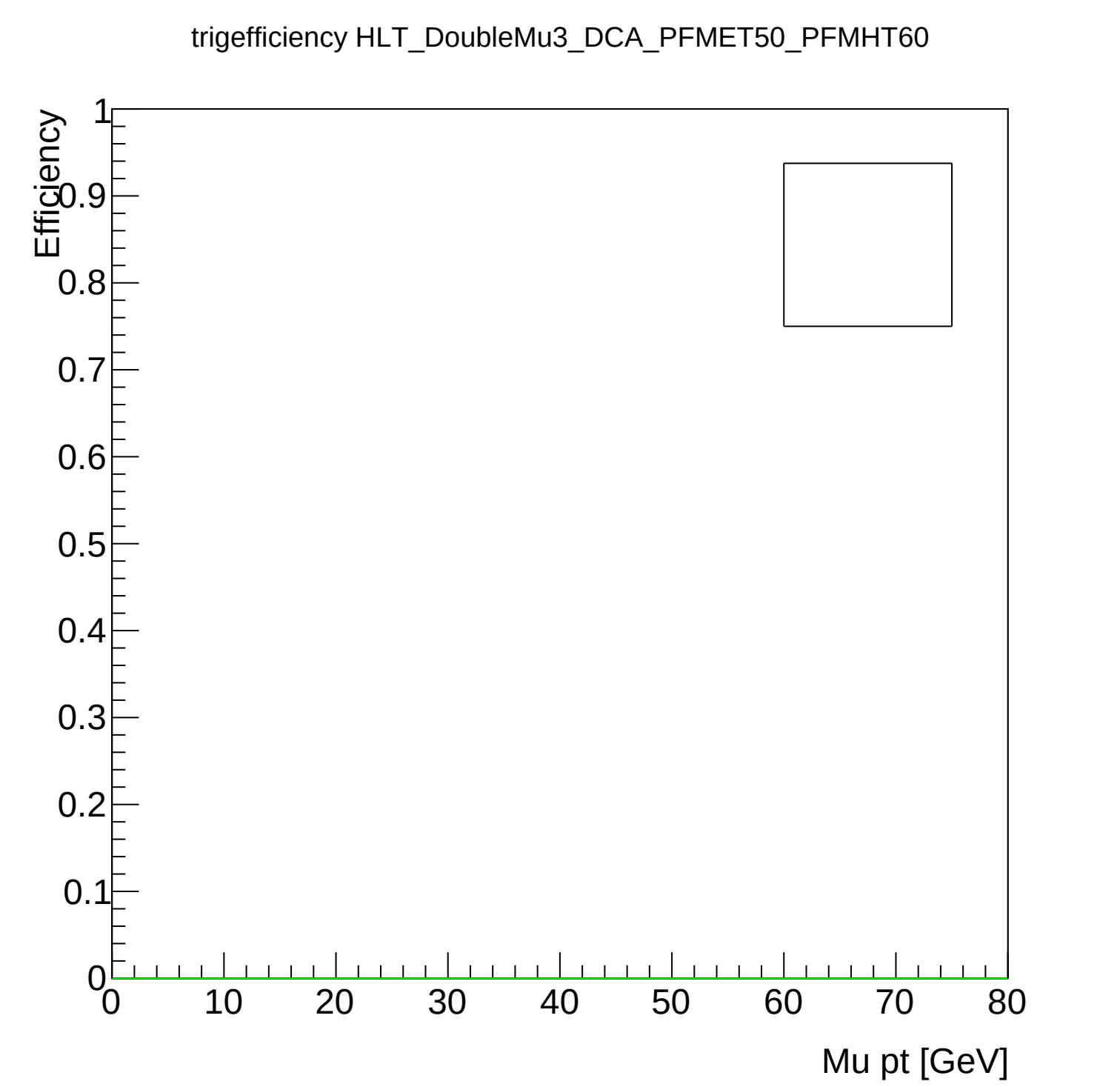


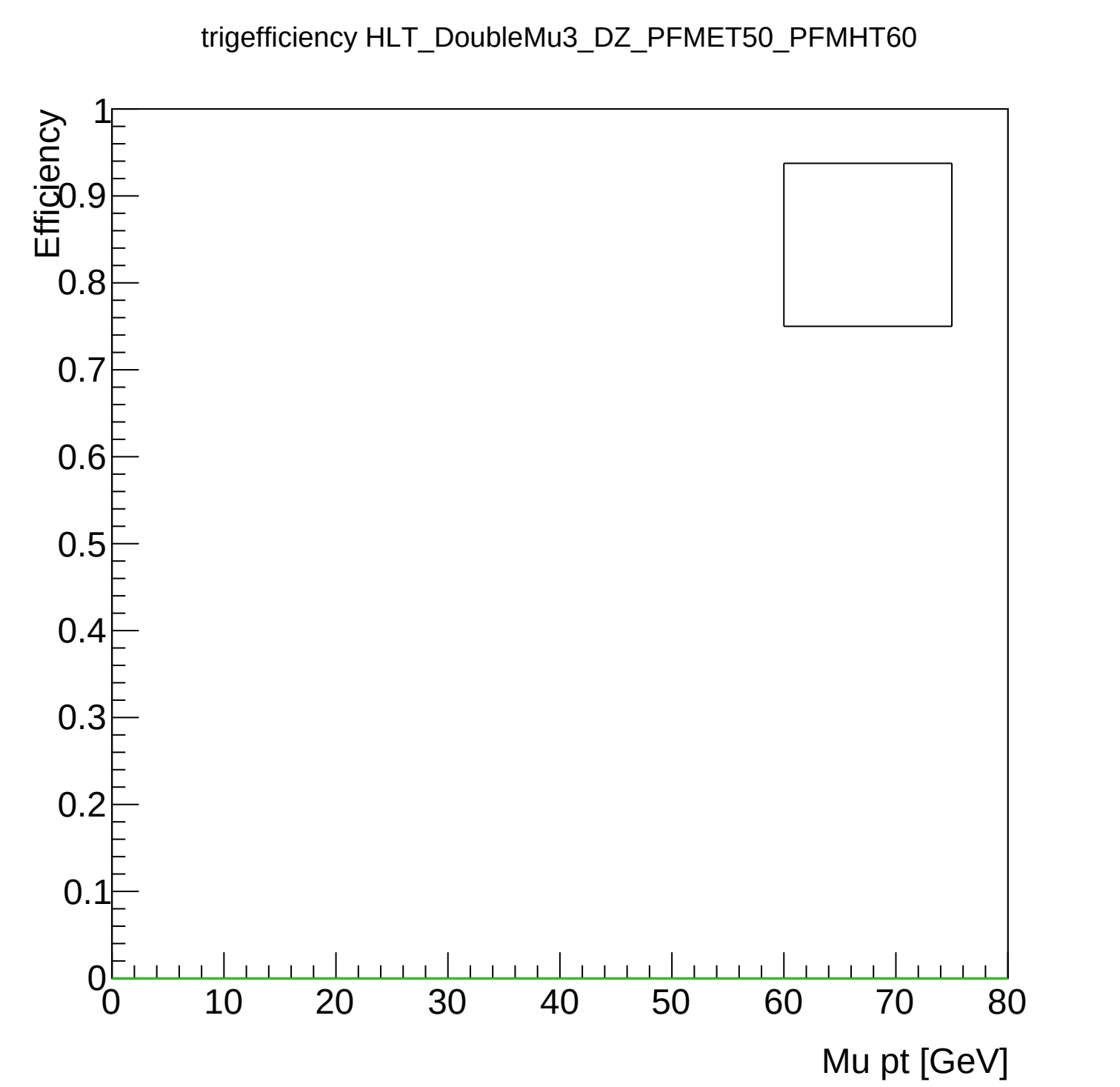

50 GeV (40%) leading vs subleading Mu pt: at least 2 mu w/ vxy< 740 cm, |vz|<960cm & |eta|<2.4

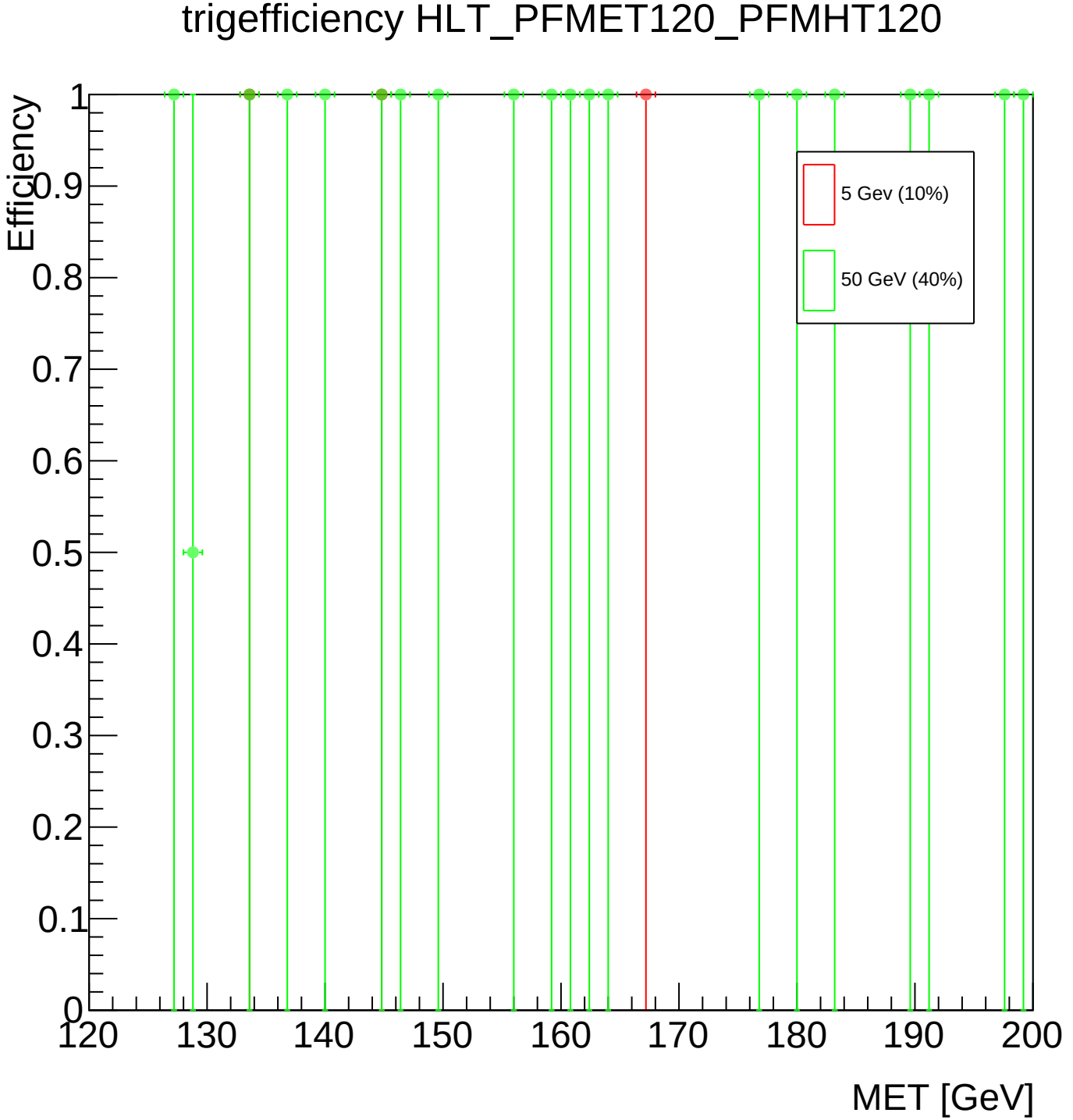


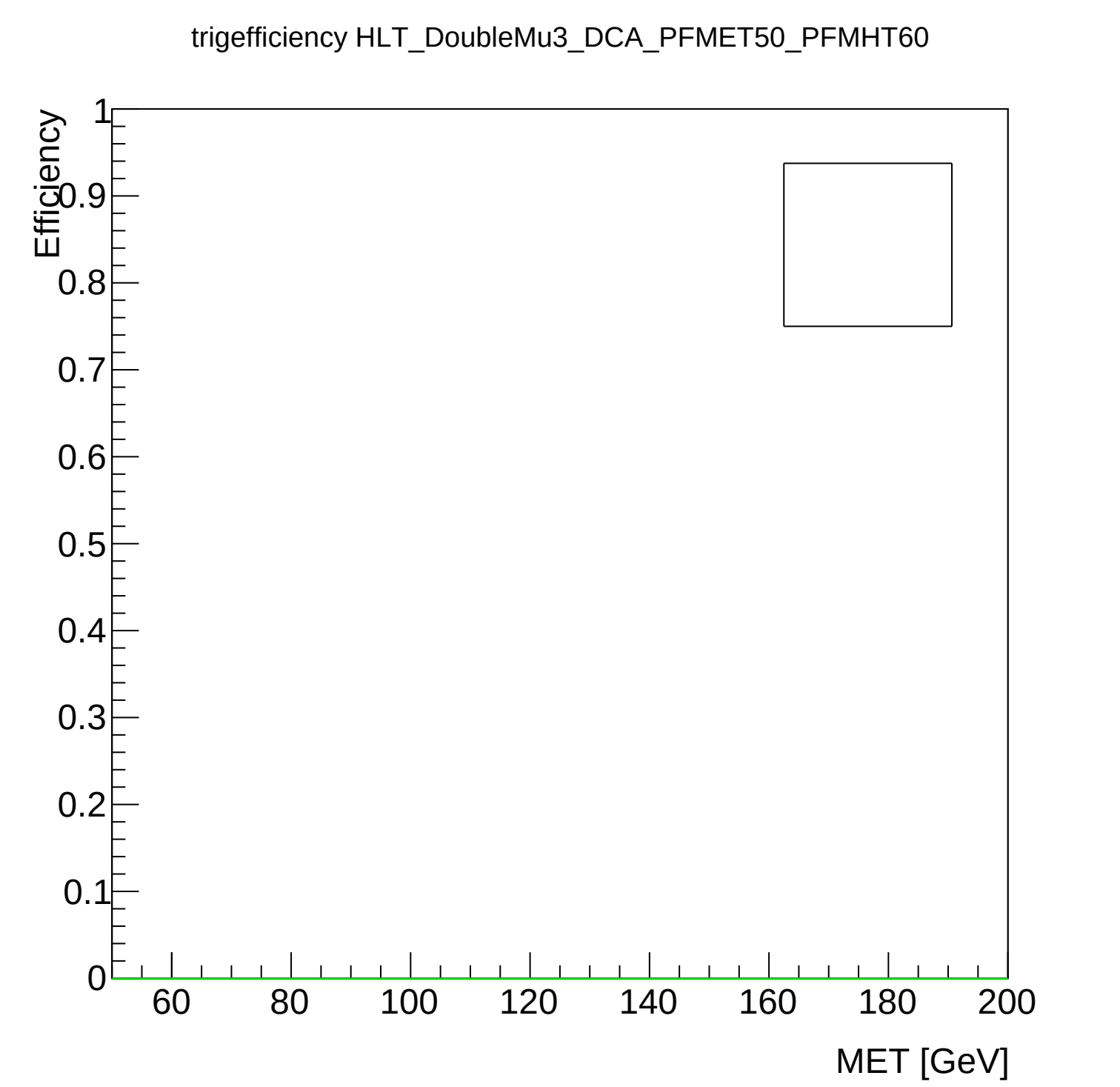
# efficiencies

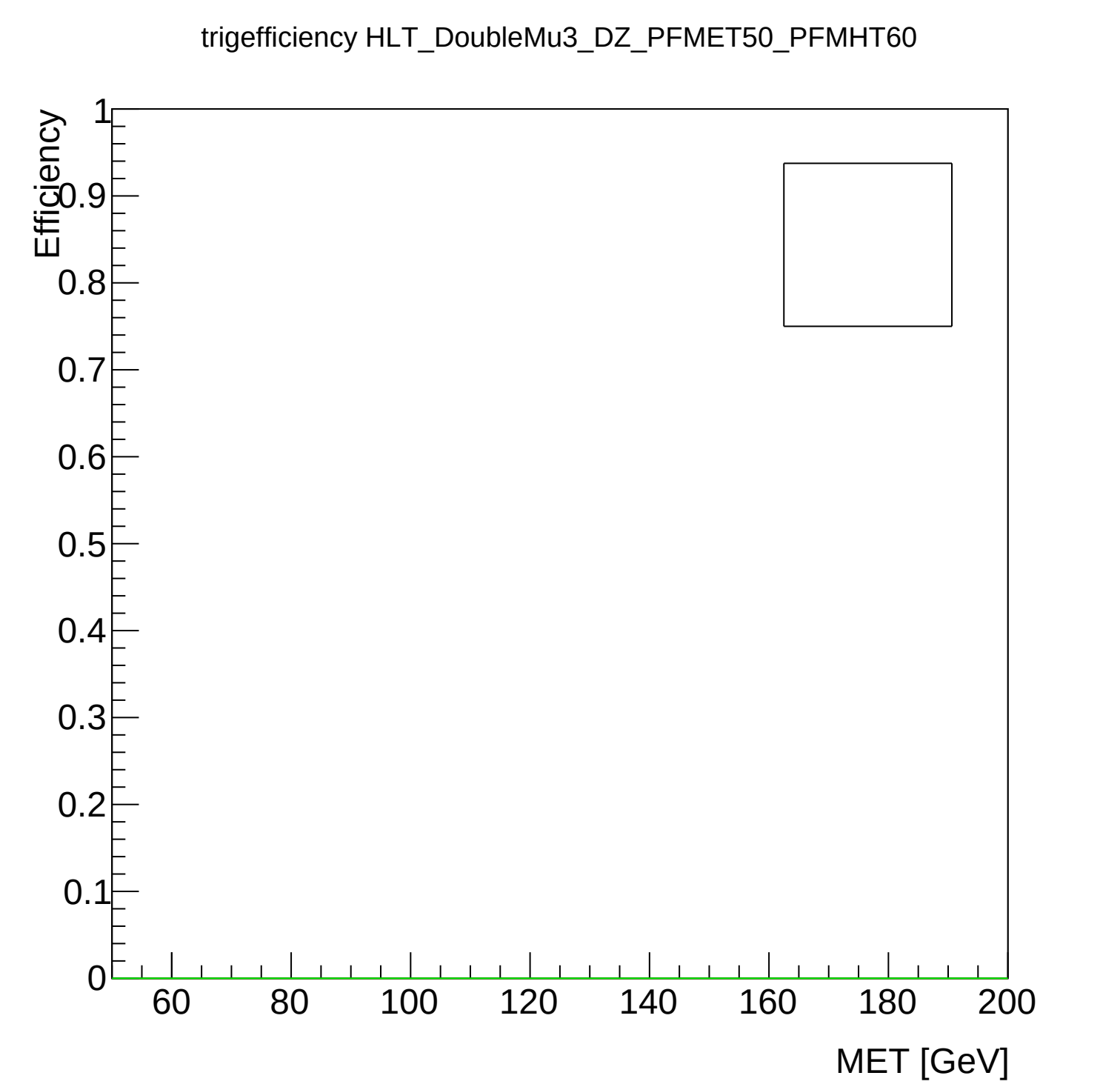

trigefficiency HLT_PFMET120_PFMHT120
Efficiency
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
10
20
30
40
50
60
70
80
Mu pt [GeV]
5 Gev (10%)
50 GeV (40%)

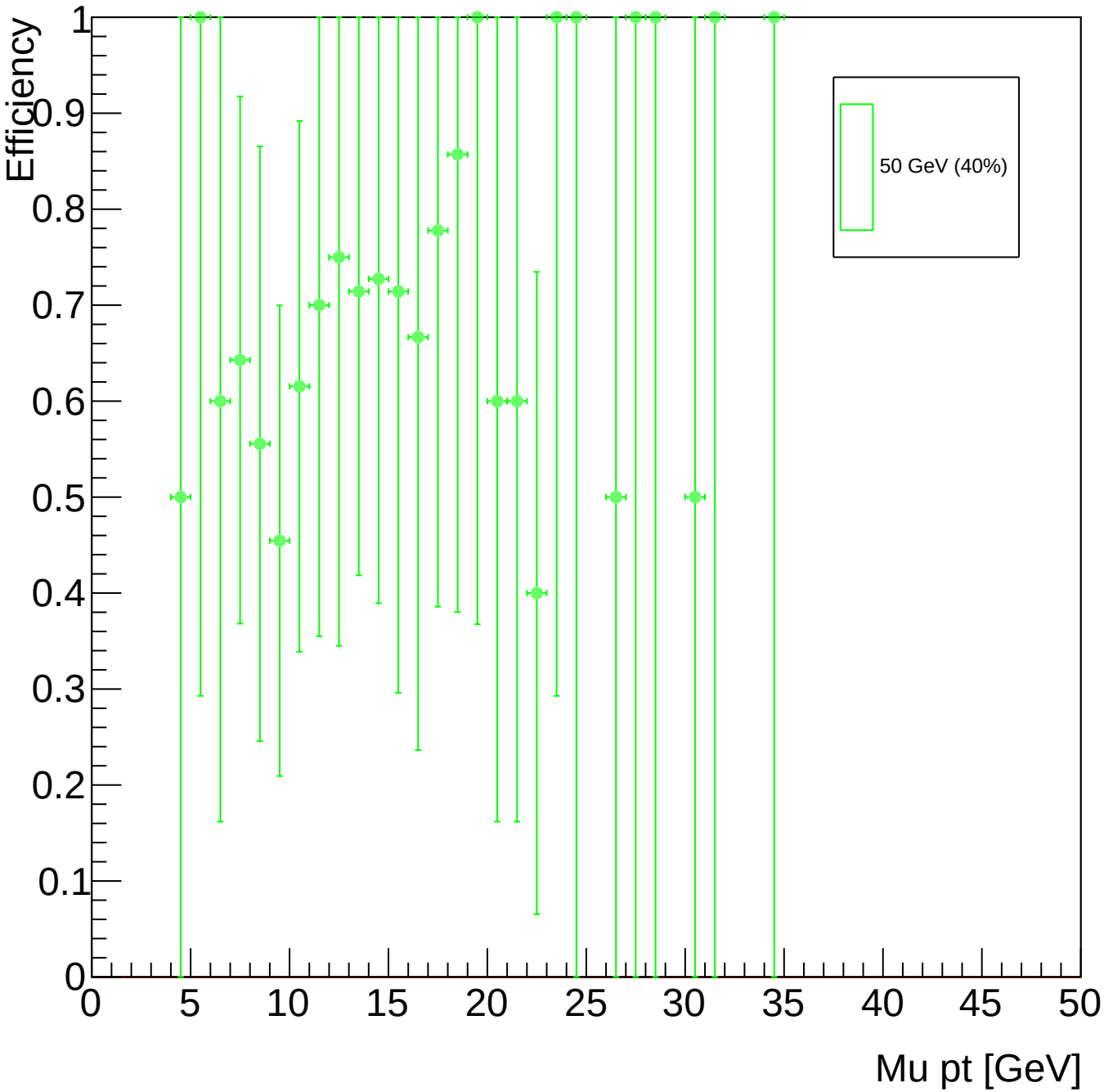

trigefficiency HLT_DoubleMu3_DCA_PFMET50_PFMHT60
Efficiency
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
10
20
30
40
50
60
70
80
Mu pt [GeV]

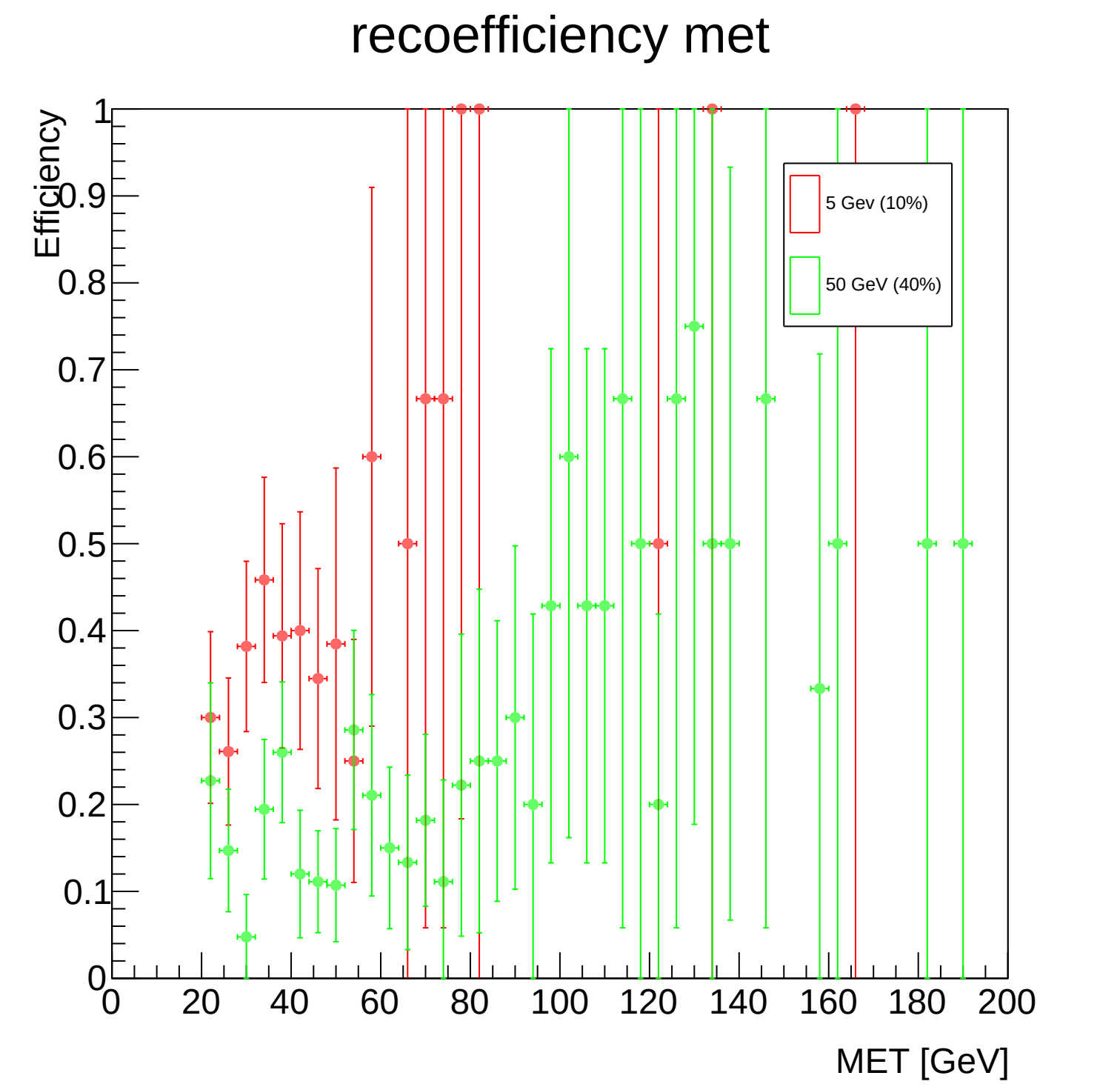

trigefficiency HLT_DoubleMu3_DZ_PFMET50_PFMHT60
Efficiency
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
10
20
30
40
50
60
70
80
Mu pt [GeV]

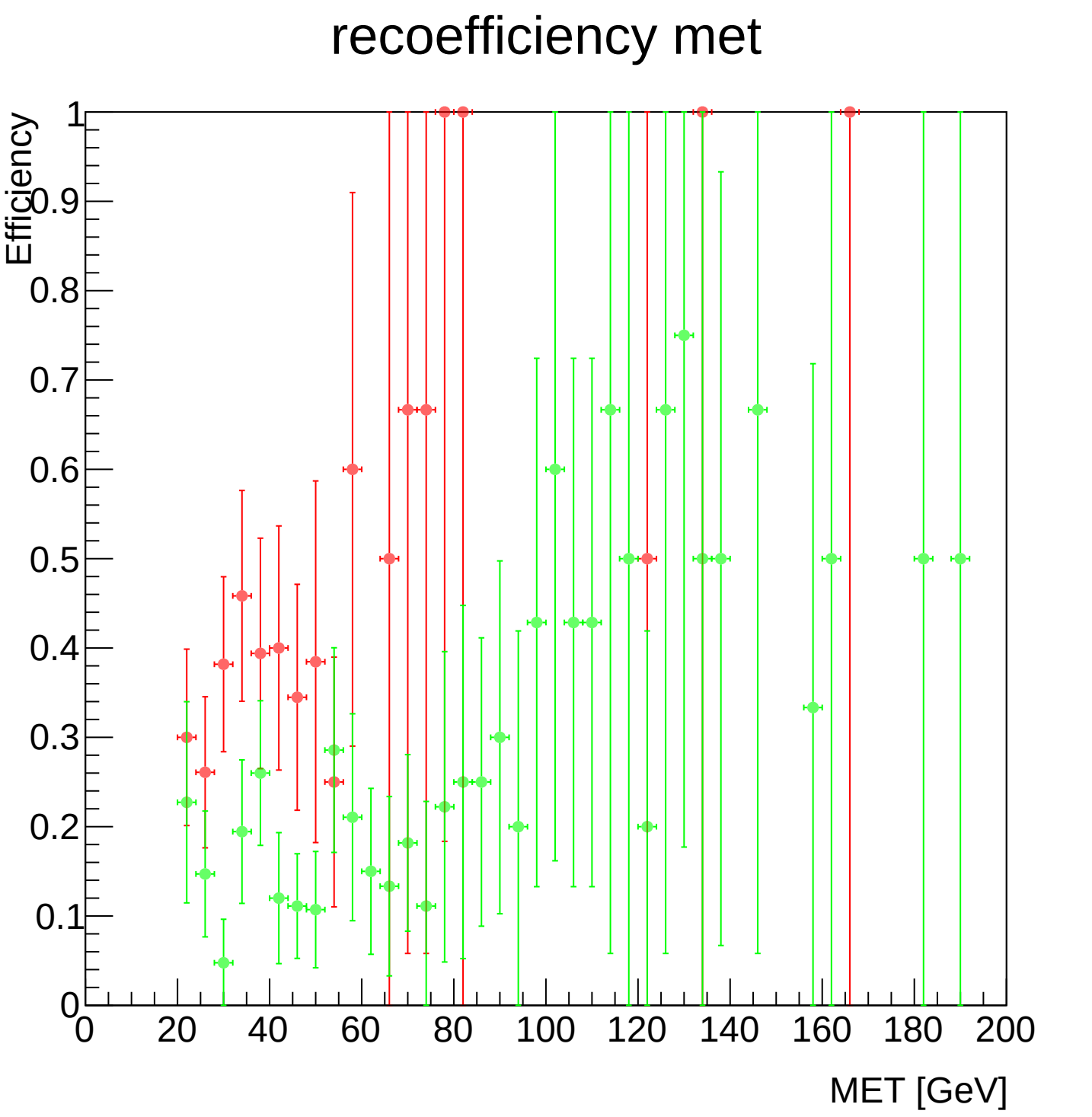

trigefficiency HLT_PFMET120_PFMHT120
Efficiency
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
120
130
140
150
160
170
180
190
200
MET [GeV]
5 Gev (10%)
50 GeV (40%)


trigefficiency HLT_DoubleMu3_DCA_PFMET50_PFMHT60
Efficiency
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
60
80
100
120
140
160
180
200
MET [GeV]


trigefficiency HLT_DoubleMu3_DZ_PFMET50_PFMHT60
Efficiency
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
60
80
100
120
140
160
180
200
MET [GeV]


recoefficiency mu
Efficiency
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
5
10
15
20
25
30
35
40
45
50
Mu pt [GeV]
50 GeV (40%)


recoefficiency met
Efficiency
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
20
40
60
80
100
120
140
160
180
200
MET [GeV]
5 Gev (10%)
50 GeV (40%)


recoefficiency met
Efficiency
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
20
40
60
80
100
120
140
160
180
200
MET [GeV]