



中国科学技术大学
University of Science and Technology of China

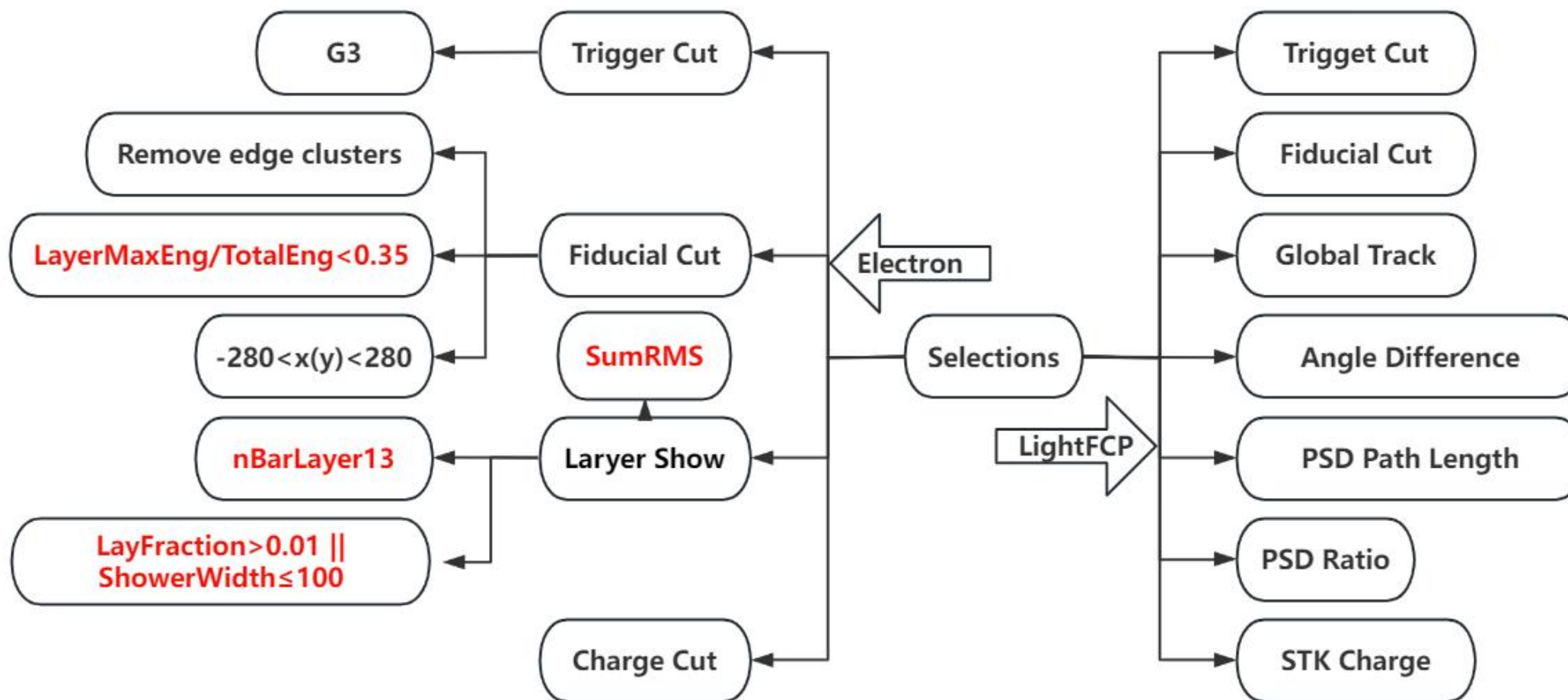
LightFCP

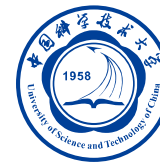
Rong Yi

2024/09/22



Selections





Selection: nBarLayer13

```
bool DmpBgoRecTool::GetnBarLayer13()
{
    int nBarLayer13=0;
    for(int ib=0;ib<22;ib++)
    {
        double Edep = fEvtBgoRec->GetEdep(13,ib);
        if(Edep>10) nBarLayer13++;
    }
    double EThreshold = 8*TMath::Log10(GetTotalEnergy()/1000.)-5;
    if(nBarLayer13<EThreshold) return true;
    else return false;
}
```

↓ 电子和质子的“界线”

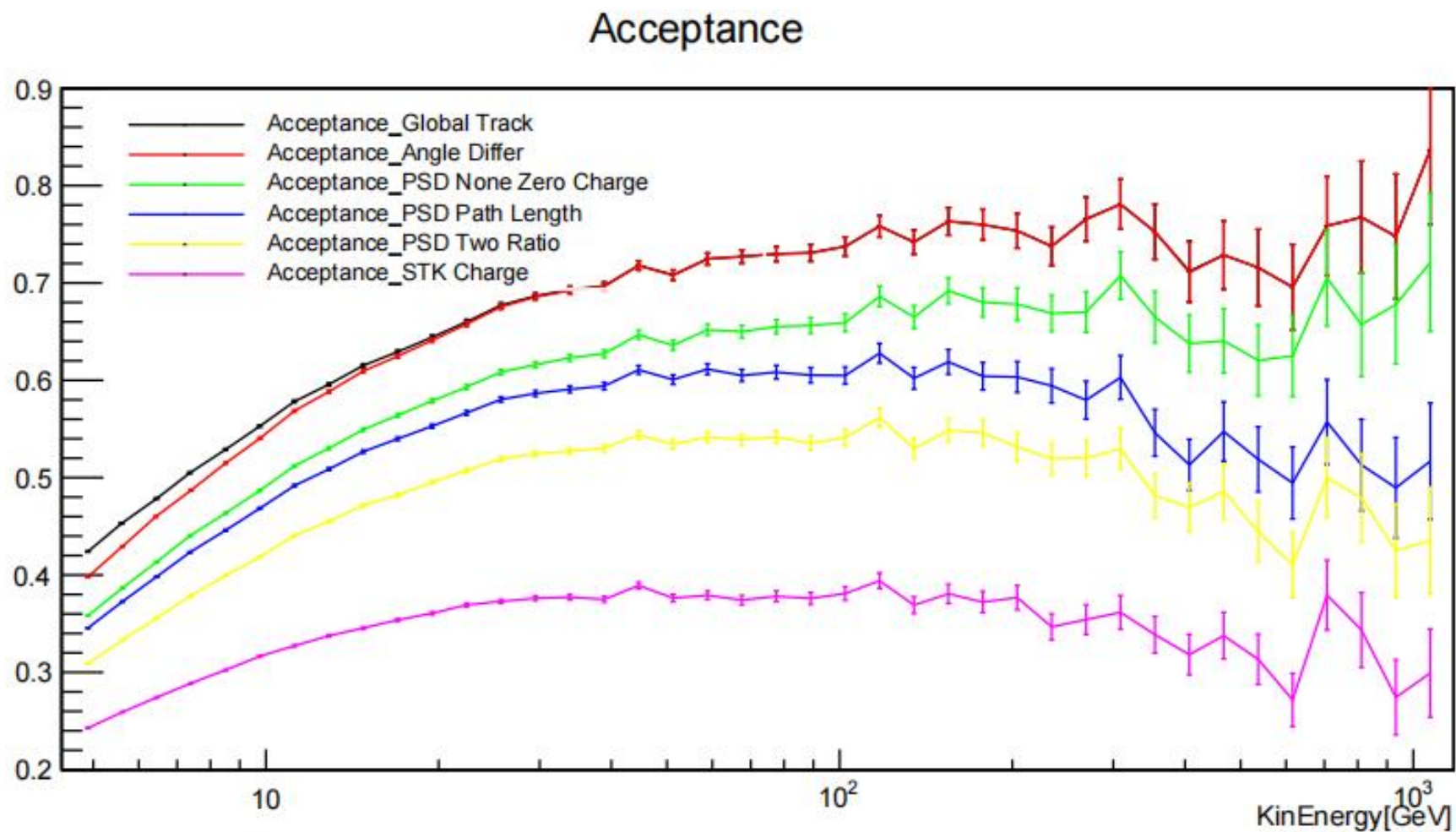


Selection: SumRMS

```
for(int il=0;il<14;il++)
{
  LayFra[il]=GetLayFraction(il);
  ShowerWidth[il]=GetShowerWidth(il);
  if(LayFra[il]>0.01&&ShowerWidth[il]>=100) 去除非MIPs的影响
  {
    judge2=false;
    break;
  }
}
double CosBgoAngle = (fEvtBgoRec->GetTrajectoryDirection2D()).CosTheta();
double TotEng = GetTotalEnergy()/1000.;
double SumRMS = GetSumRMS();
if(SumRMS<=270.-100.*TMath::Power(CosBgoAngle,6.)&&TotEng<100.) judge3 = false;
if(SumRMS<=800.-600.*TMath::Power(CosBgoAngle,1.2)&&TotEng>=100.&&TotEng<250.) judge4 = false;
if(judge1==false||judge2==false||judge3==false||judge4==false)
  judge=false;
return judge;
}
```

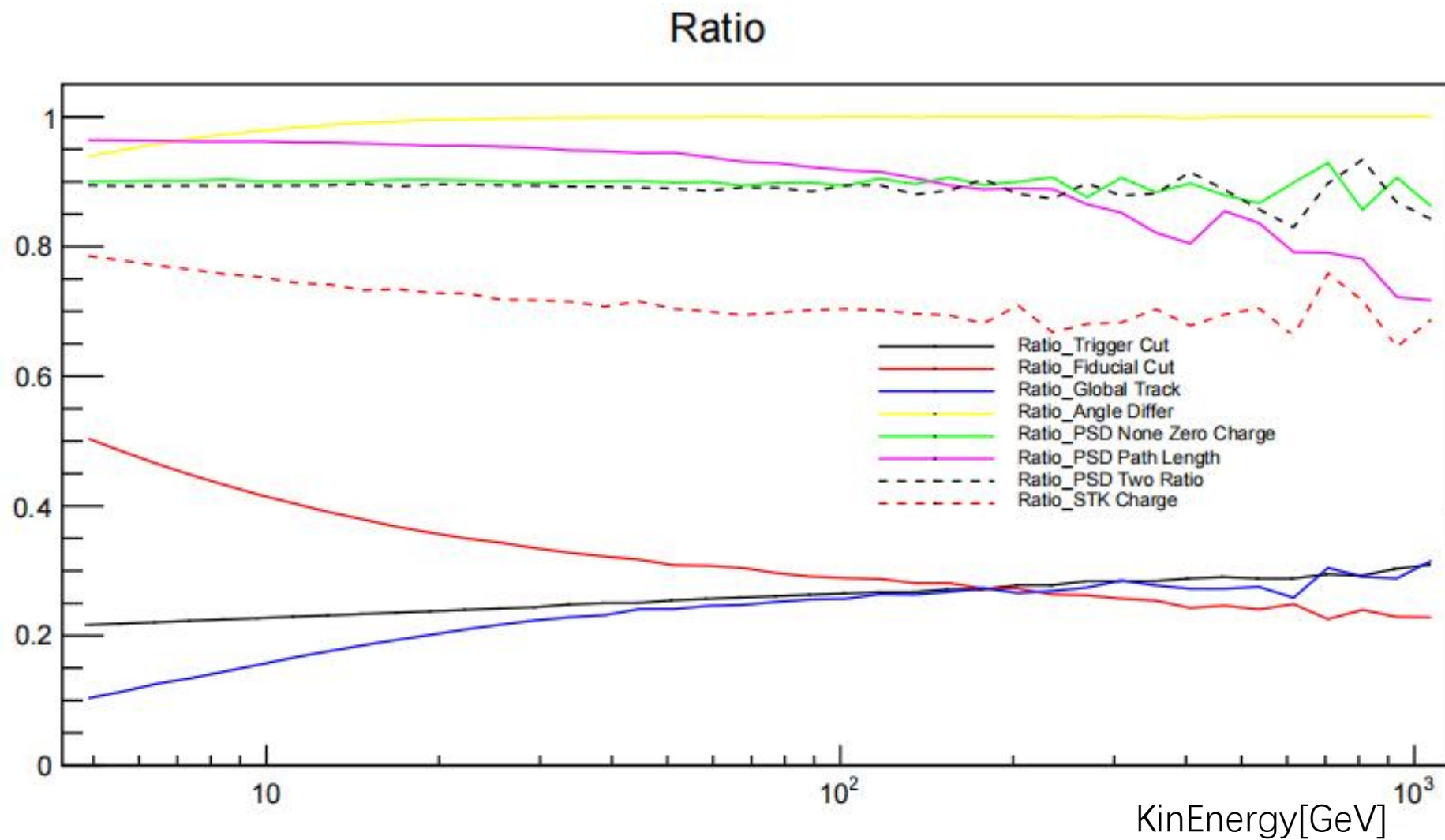


CutFlow: LightFCP





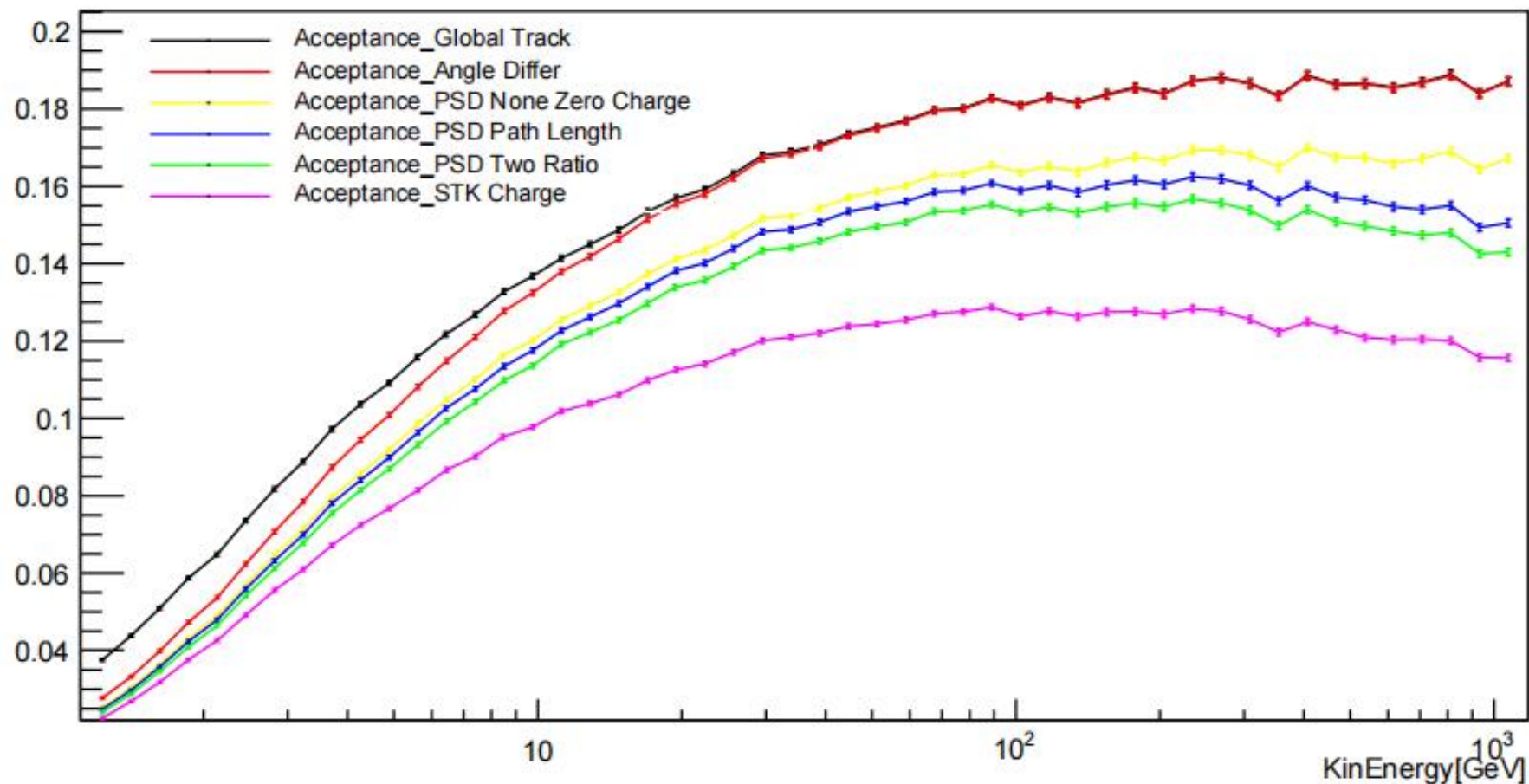
CutFlow: LightFCP





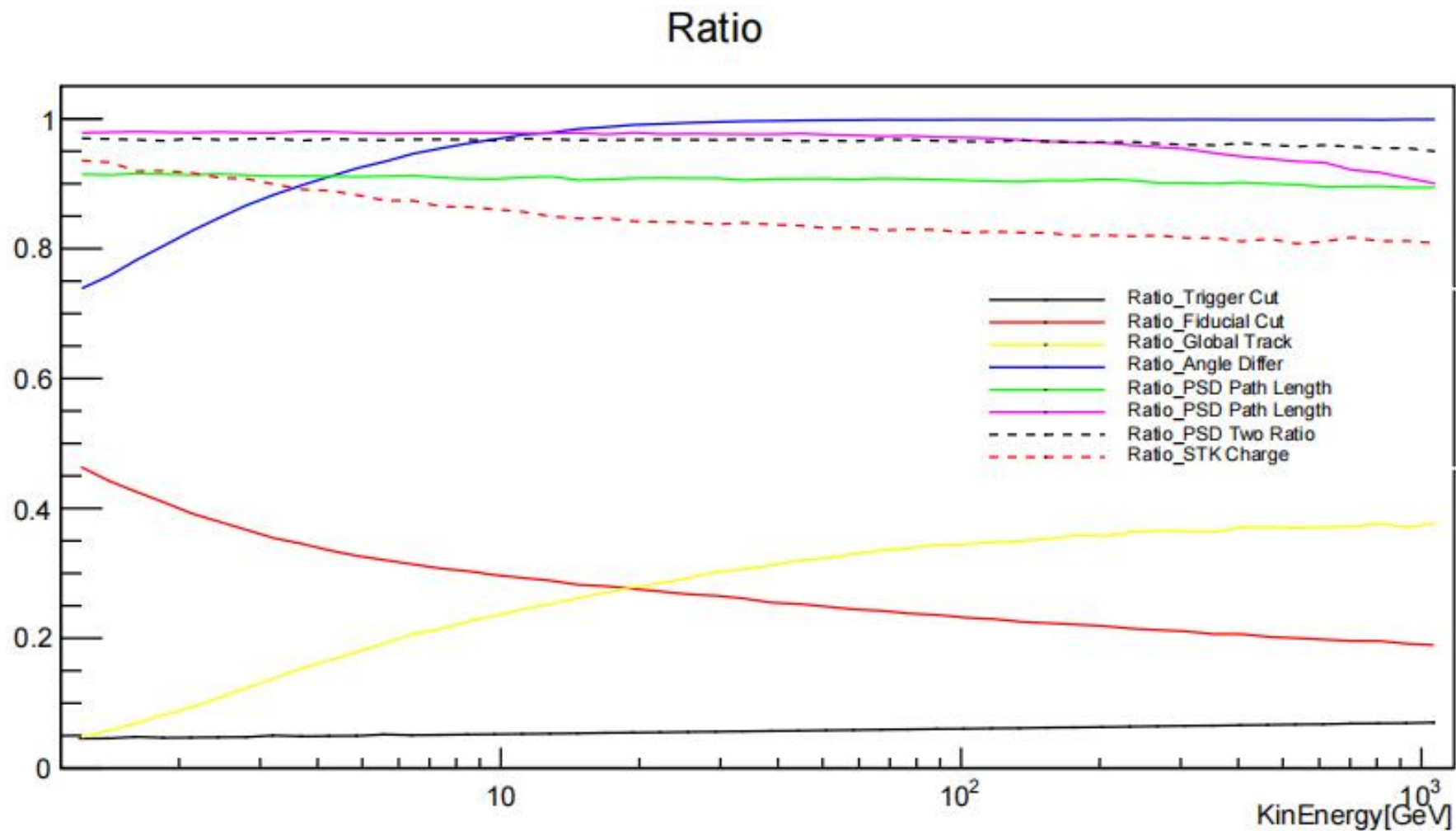
CutFlow: Electron

Acceptance





CutFlow: Electron



Confusions



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Unit: mm

