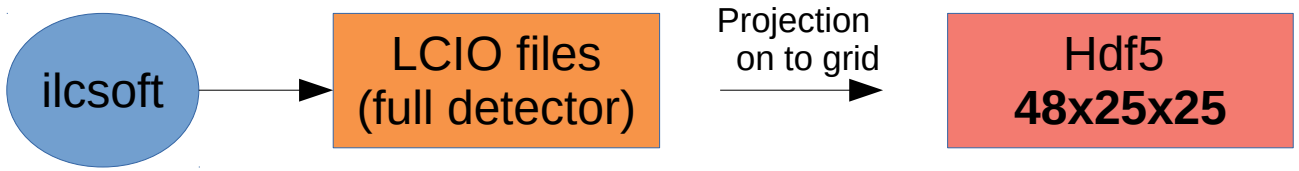
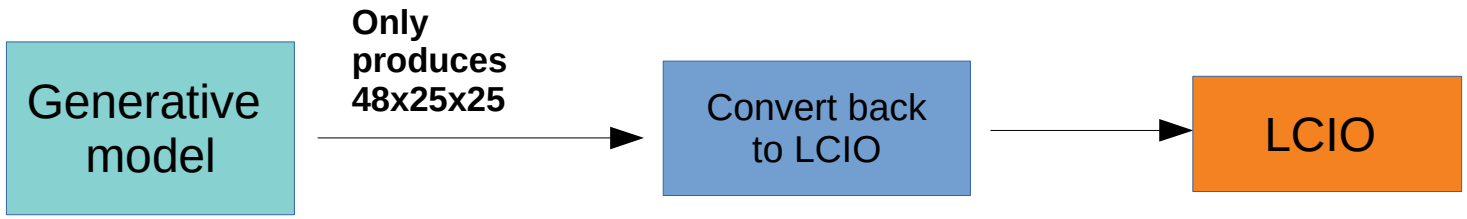
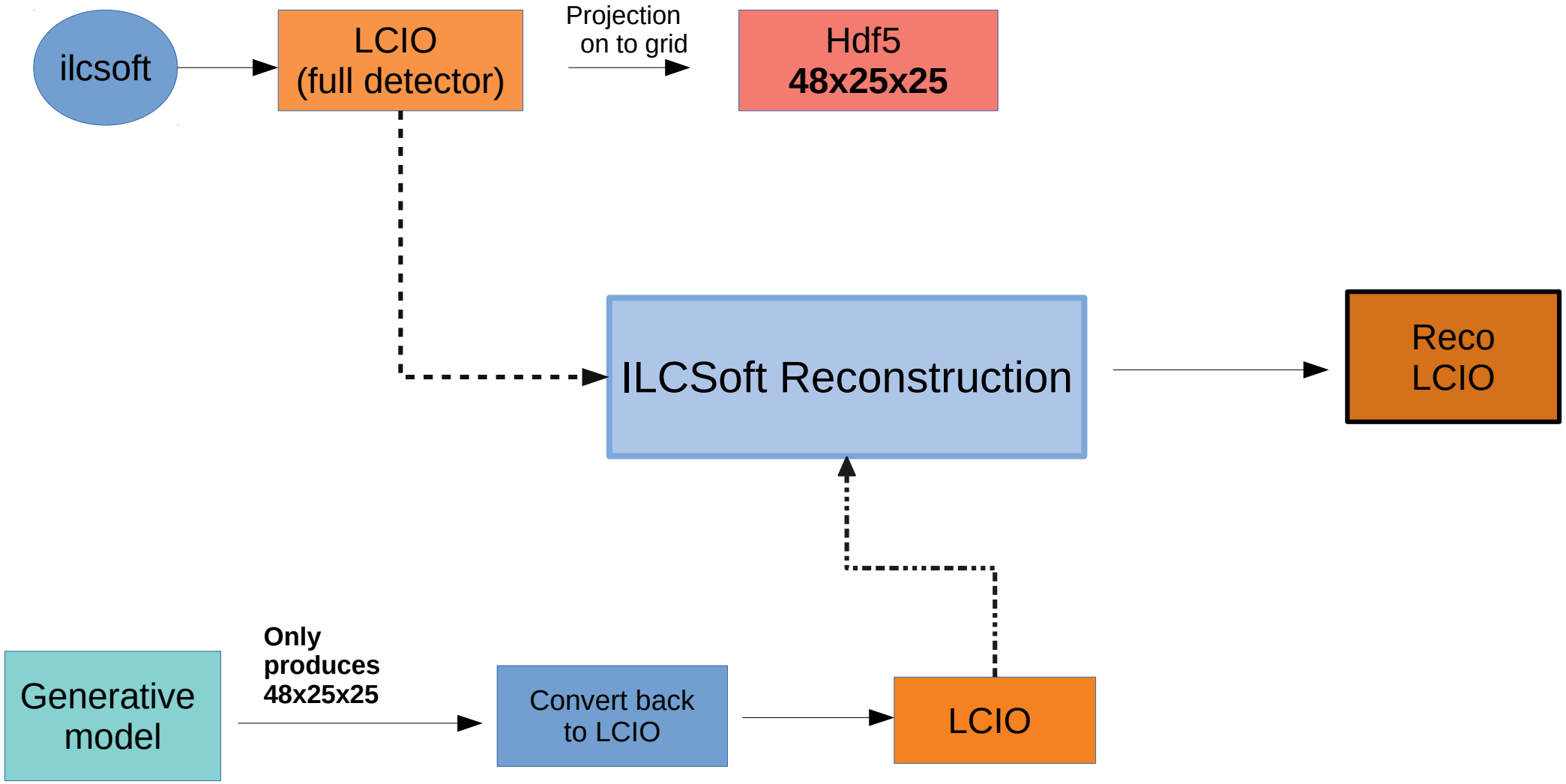
Pion Reconstruction (Data Flow)

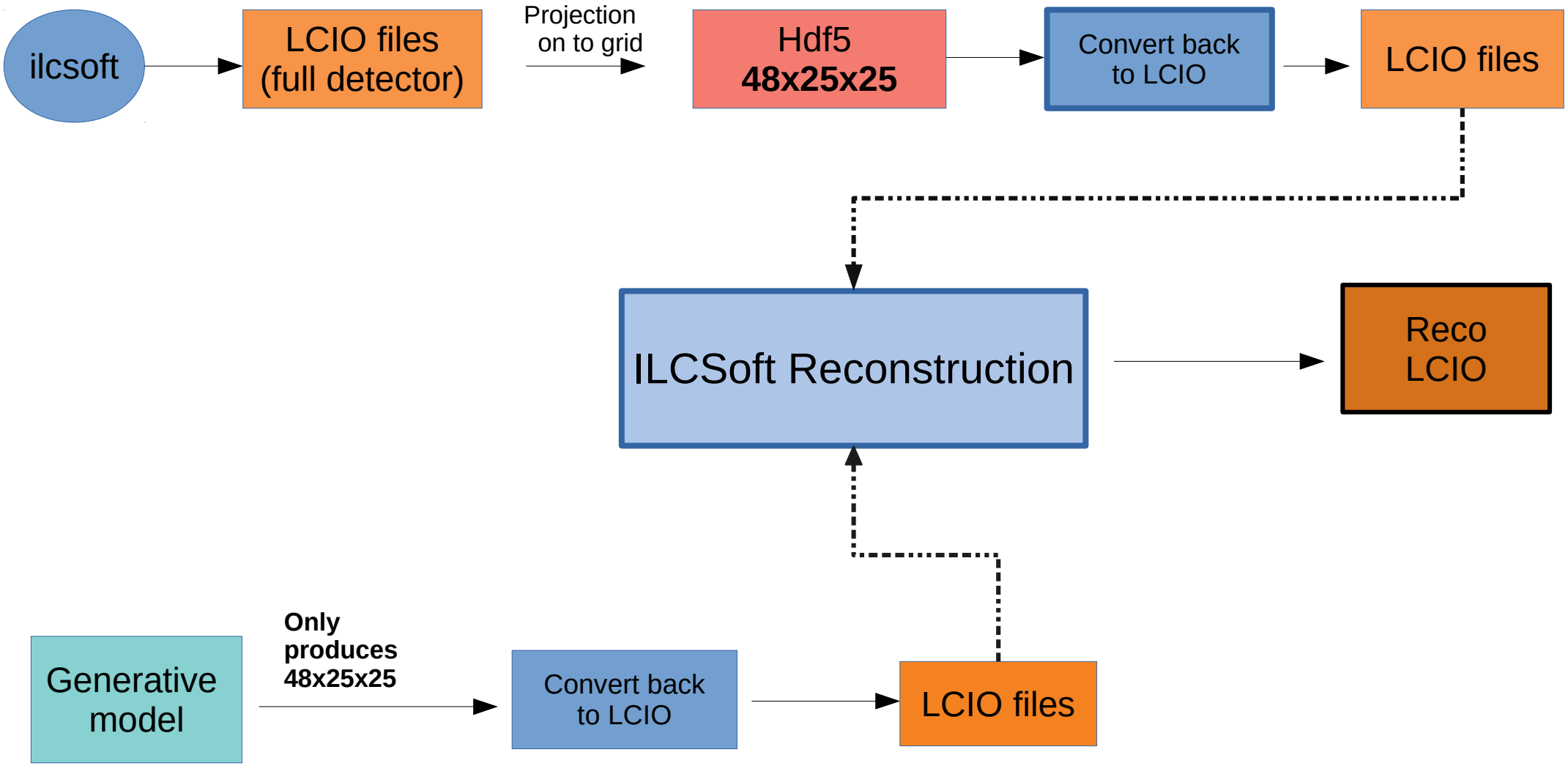




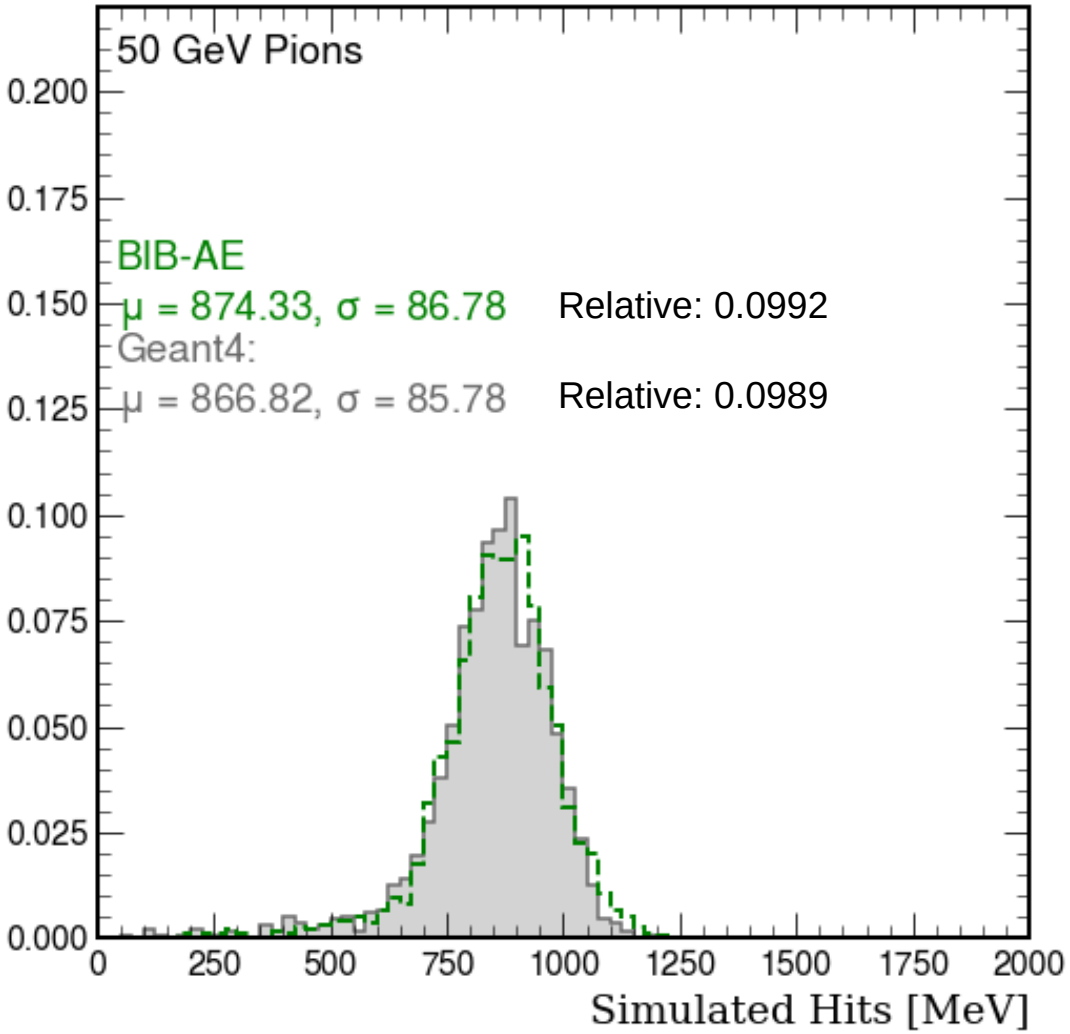
Pion Reconstruction (Data Flow)



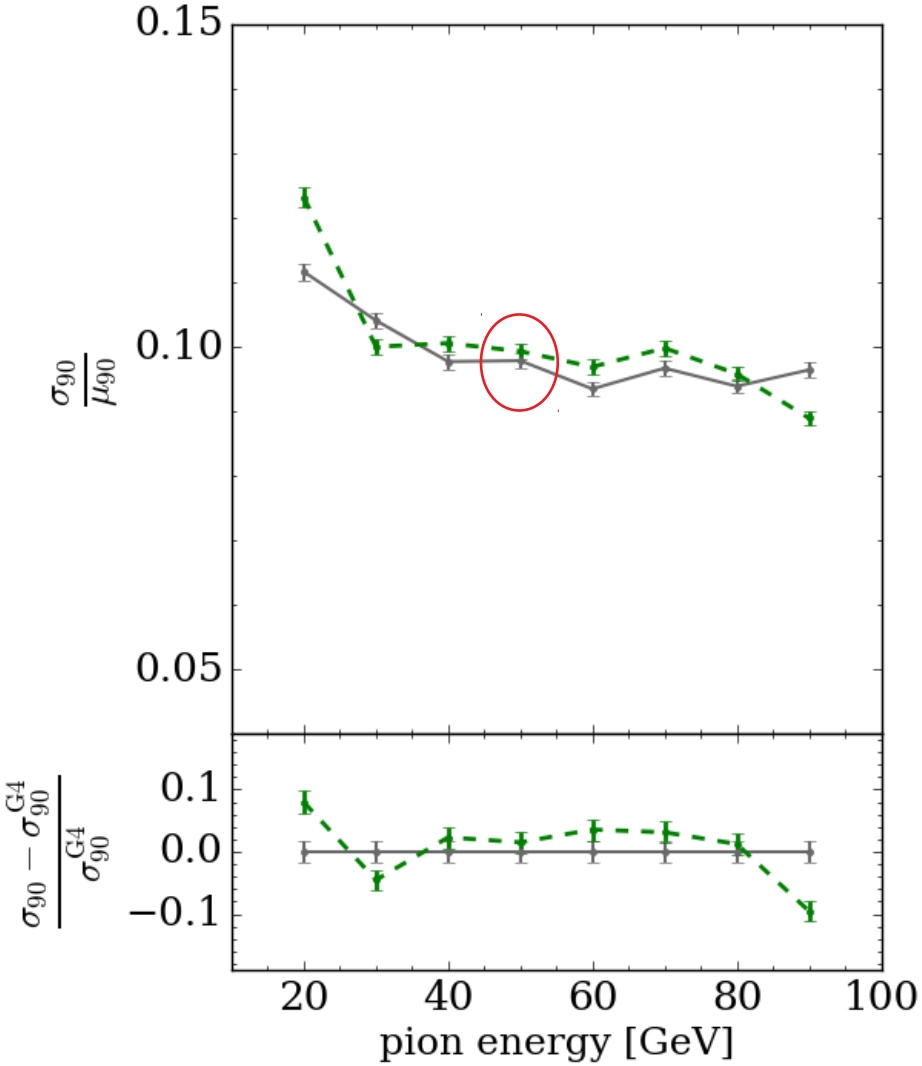
Pion Reconstruction (Data Flow)



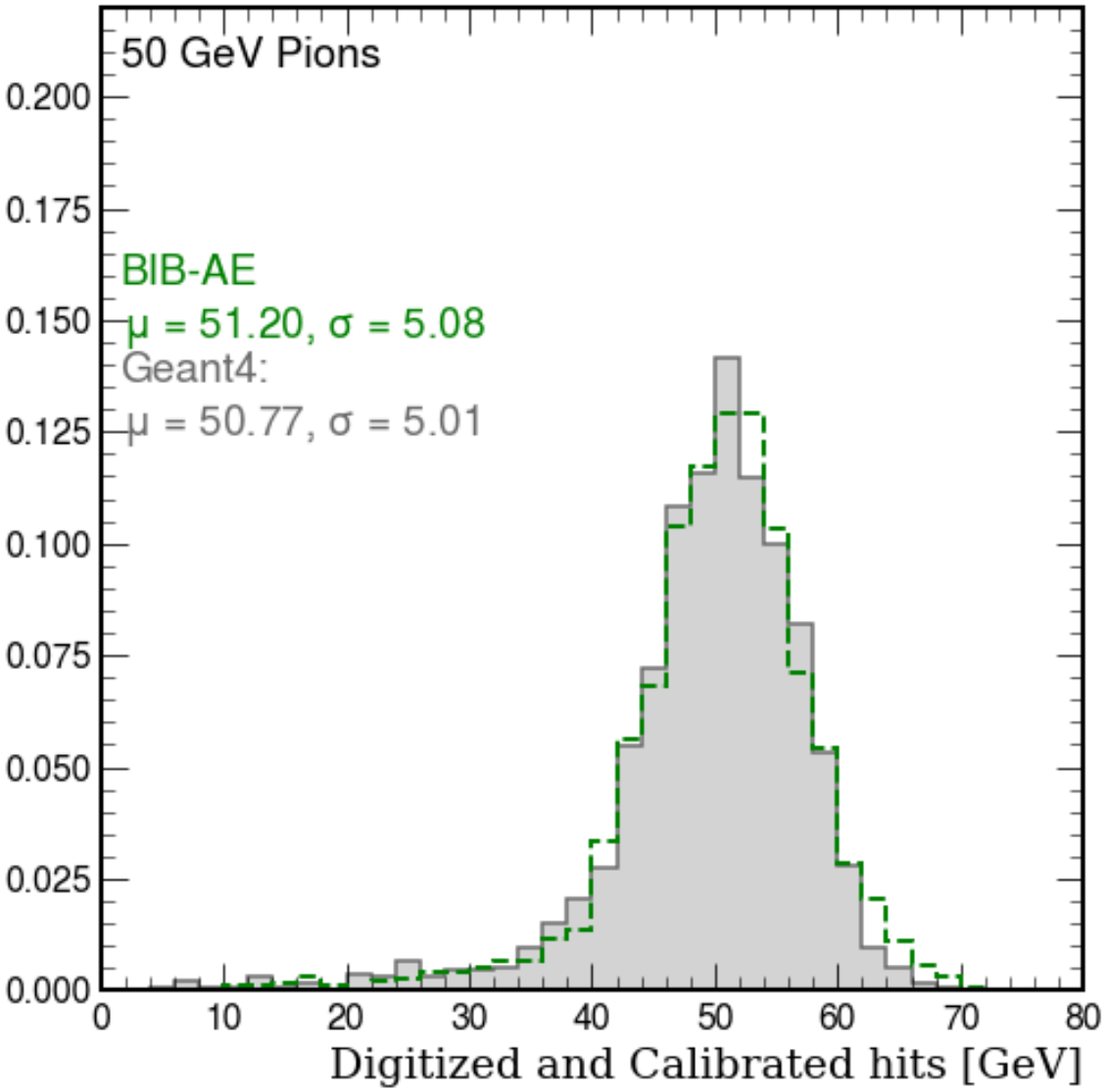
Pion Reconstruction: Agreement on *SIM Level*



Plot from Sascha



Pion Reconstruction: Digitizer and calibration



Relative Resolution $\frac{\sigma_{90}}{\mu_{90}}$

	SIM	Digi	PFO
Geant4	9.89%	9.86%	
BIB-AE	9.92%	9.92%	

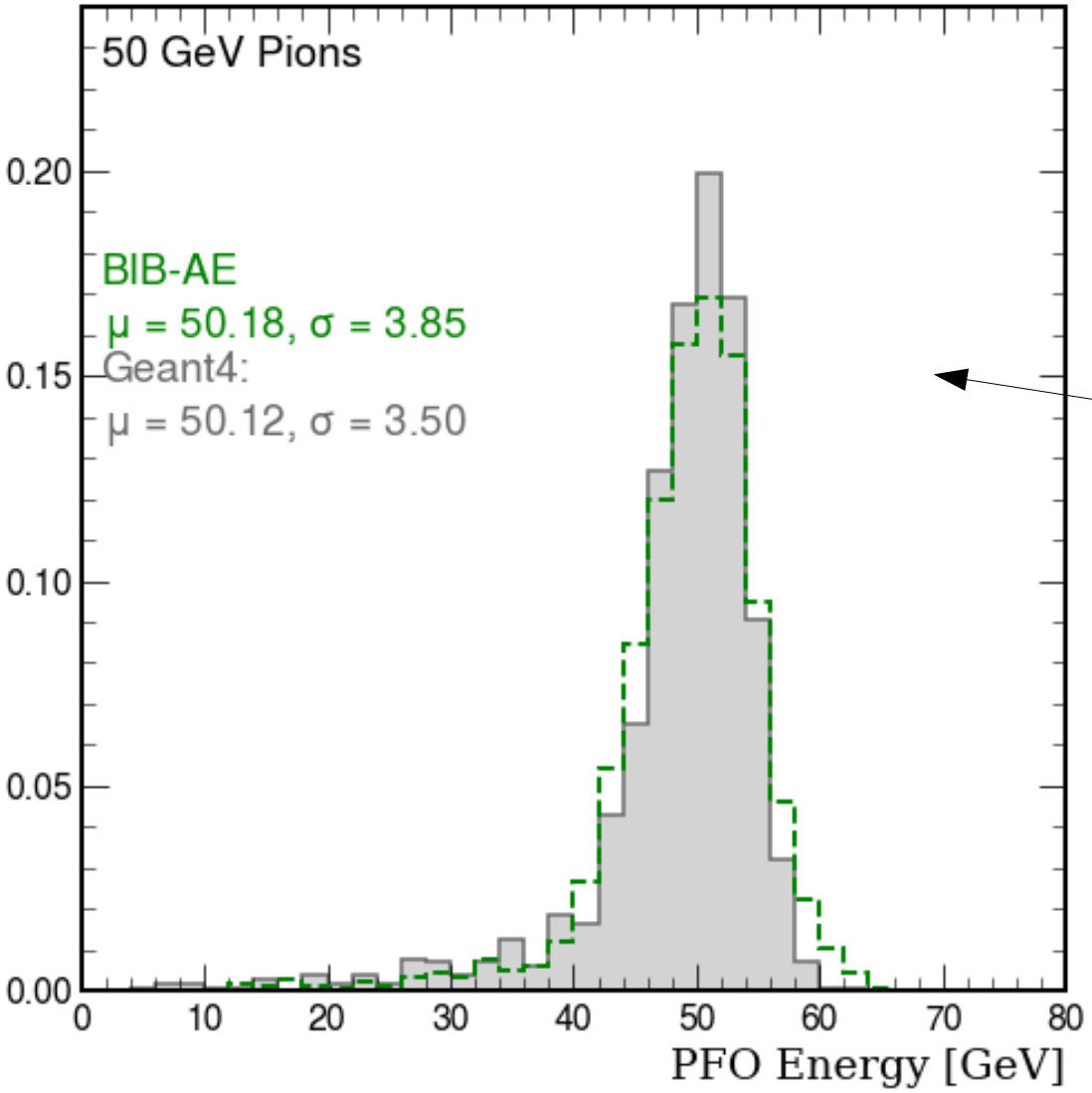
AHcalDigi.xml

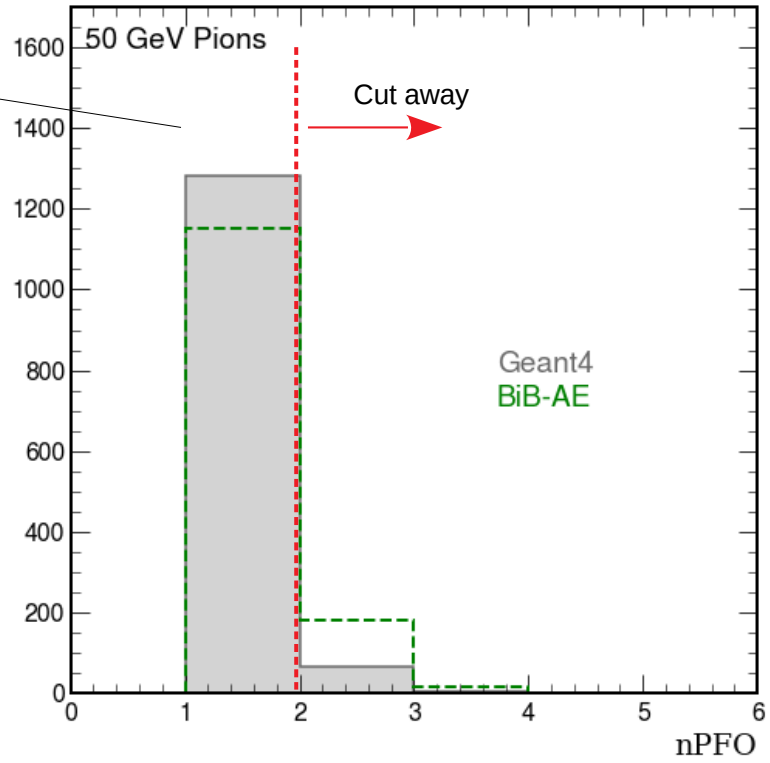
```
<group name="HcalDigi">

  <!--### the Hcal barrel ###-->
  <!-- digitisation -->
  <processor name="MyHcalBarrelDigi" type="RealisticCaloDigiScinPpd">
    <parameter name="inputHitCollections"> HcalBarrelRegCollection </parameter>
    <parameter name="outputHitCollections"> HcalBarrelCollectionDigi </parameter>
    <parameter name="outputRelationCollections"> HcalBarrelRelationsSimDigi </parameter>
    <parameter name="threshold"> 0.5 </parameter>
    <parameter name="thresholdUnit"> MIP </parameter>
    <parameter name="timingCut"> 0  </parameter>
    <!-- the ave energy deposition of a MIP in the scint -->
    <parameter name="calibration_mip">${HcalBarrelMip}</parameter>
    <parameter name="ppd_mipPe"> 15 </parameter>
    <parameter name="ppd_npix"> 2000 </parameter>
    <parameter name="ppd_npix_uncert"> 0 </parameter>
    <parameter name="ppd_pix_spread"> 0 </parameter>
    <parameter name="CellIDLayerString"> layer </parameter>
  </processor>
  <!-- reconstruction -->
  <processor name="MyHcalBarrelReco" type="RealisticCaloRecoScinPpd">
    <parameter name="inputHitCollections"> HcalBarrelCollectionDigi </parameter>
    <parameter name="inputRelationCollections"> HcalBarrelRelationsSimDigi </parameter>
    <parameter name="outputHitCollections"> HcalBarrelCollectionRec </parameter>
    <parameter name="outputRelationCollections"> HcalBarrelRelationsSimRec </parameter>
```

Pion Reconstruction: PFO Energy

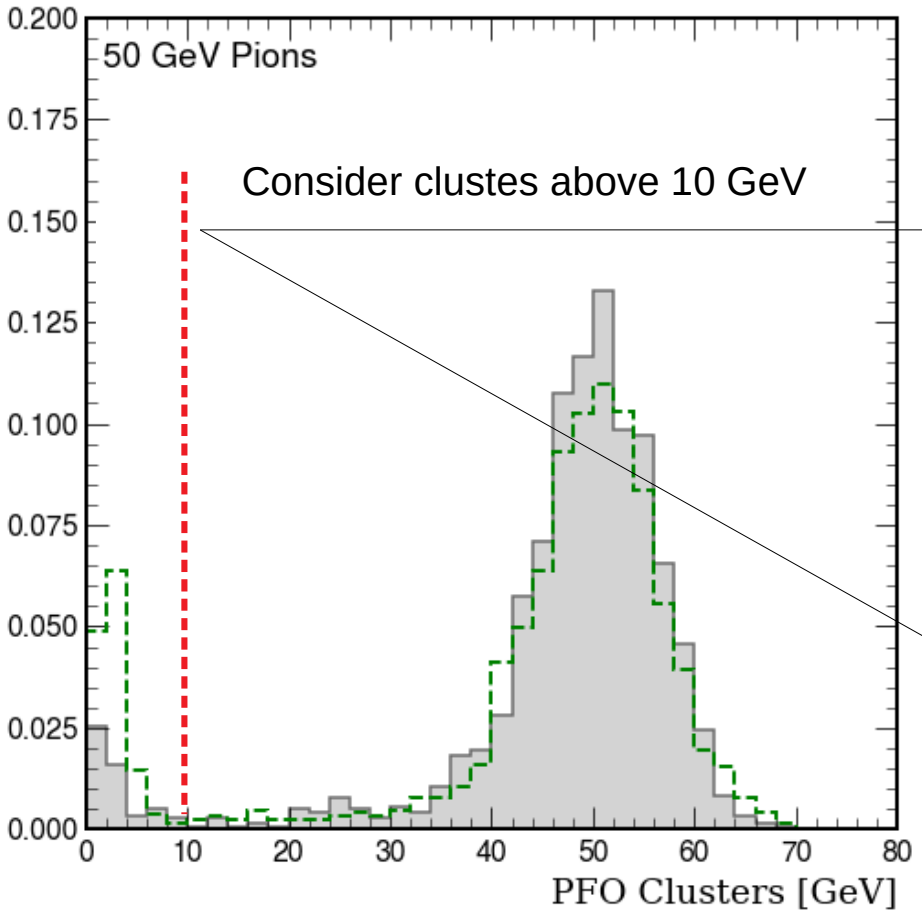
Relative Resolution $\frac{\sigma_{90}}{\mu_{90}}$

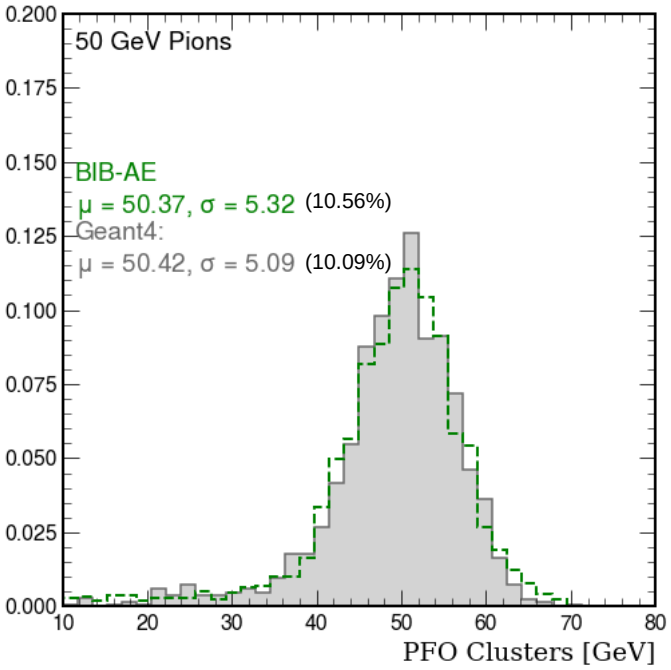
	SIM	Digi	PFO
Geant4	9.89%	9.86%	6.98%
BIB-AE	9.92%	9.92%	7.67%

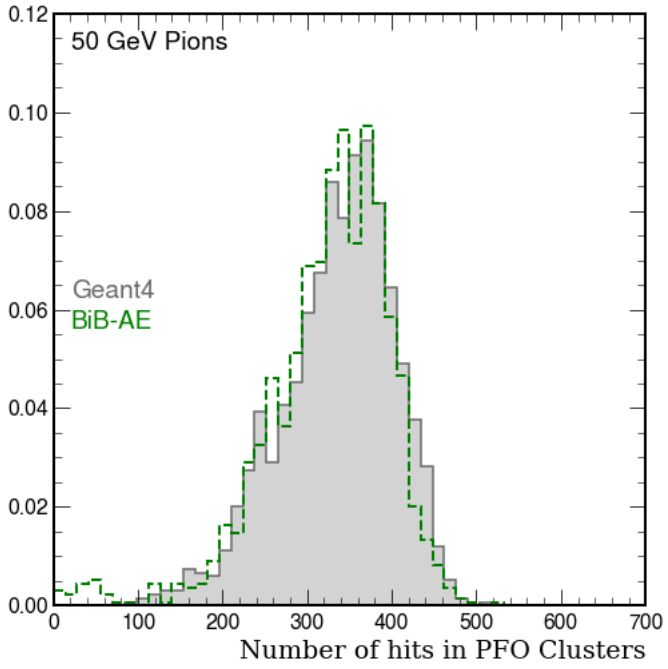




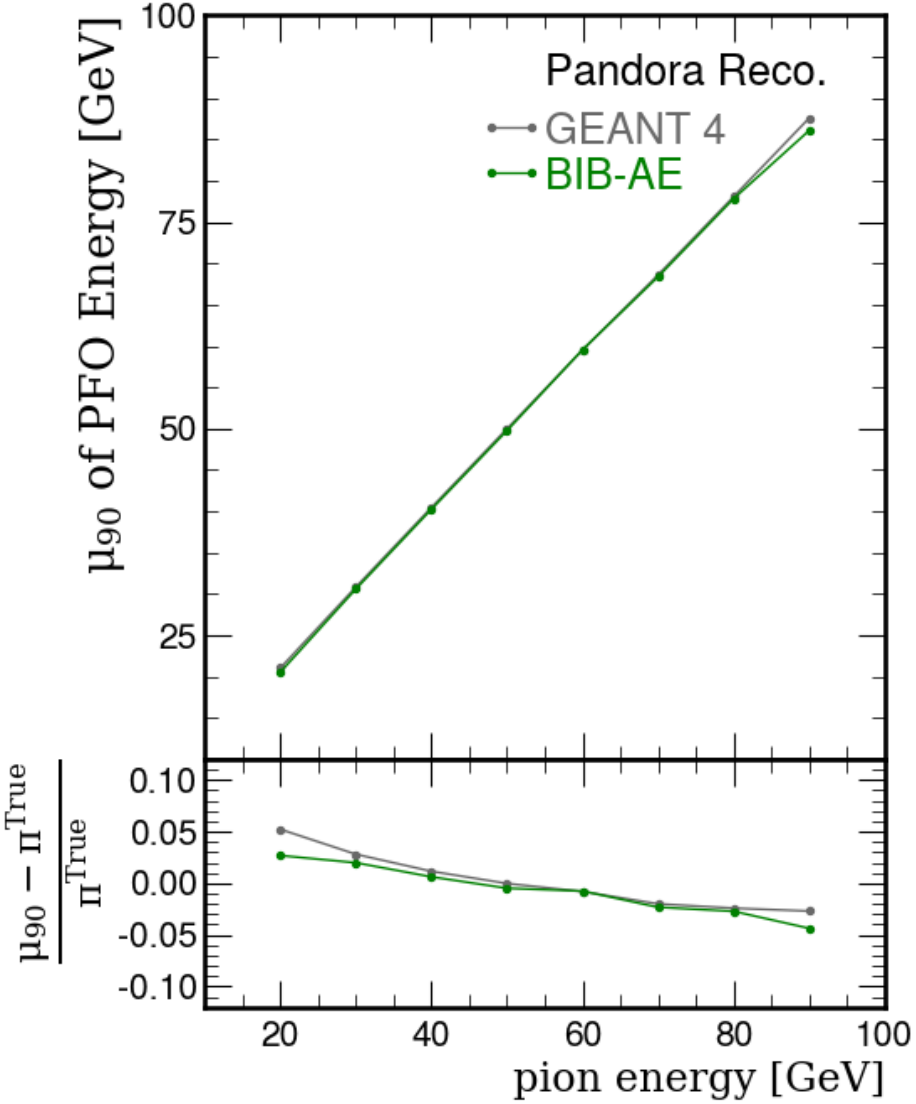
Pion Reconstruction: PFO Clusters

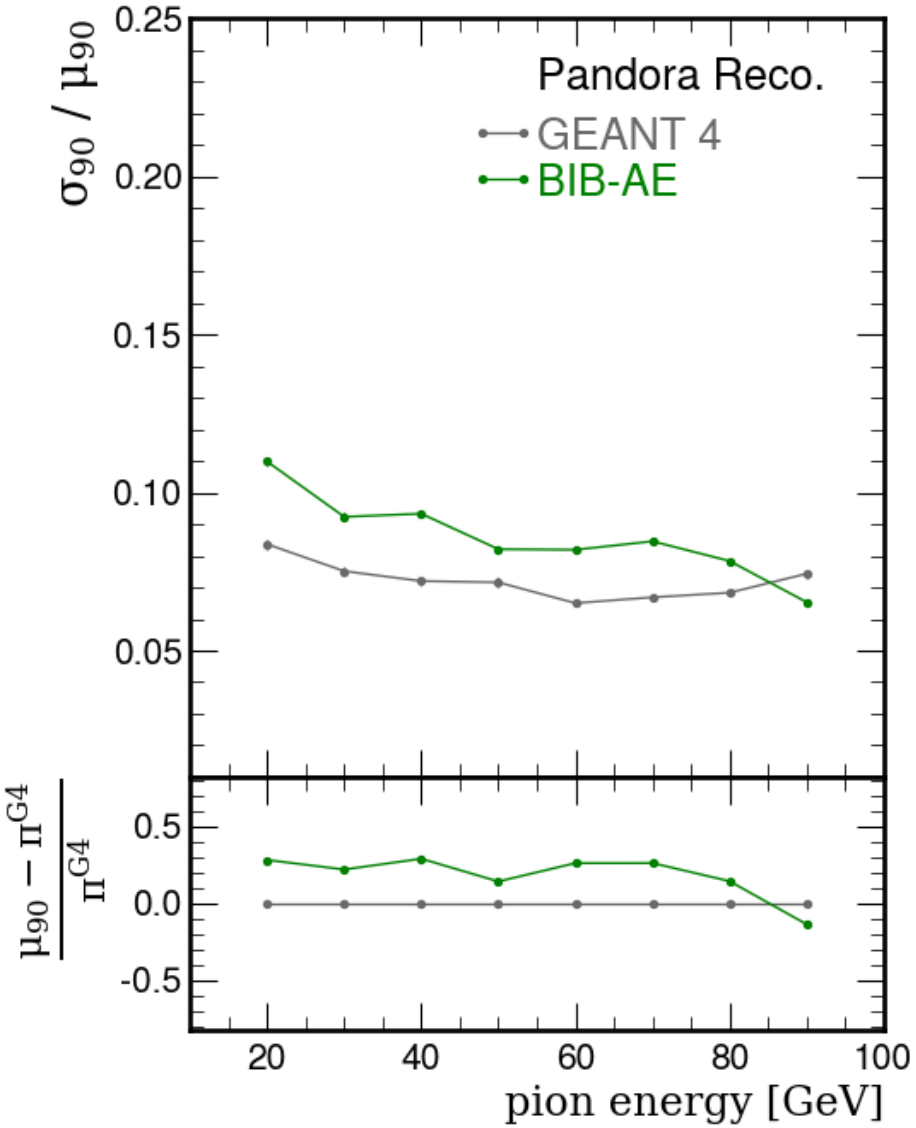






Linearity and resolution for all energies





Thank you