

Digitization

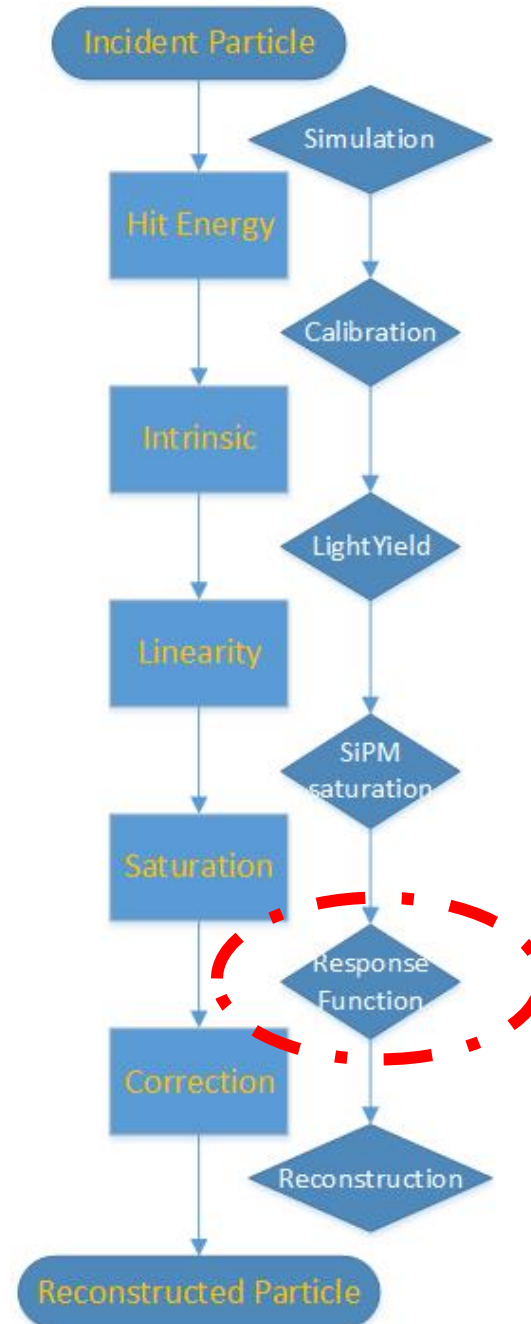
——牛亚洲

11/25/2018

SimplifiedGeo-ScintECAL

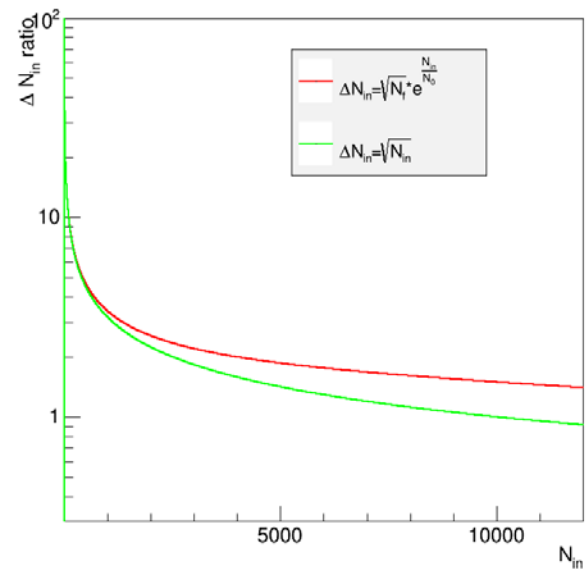
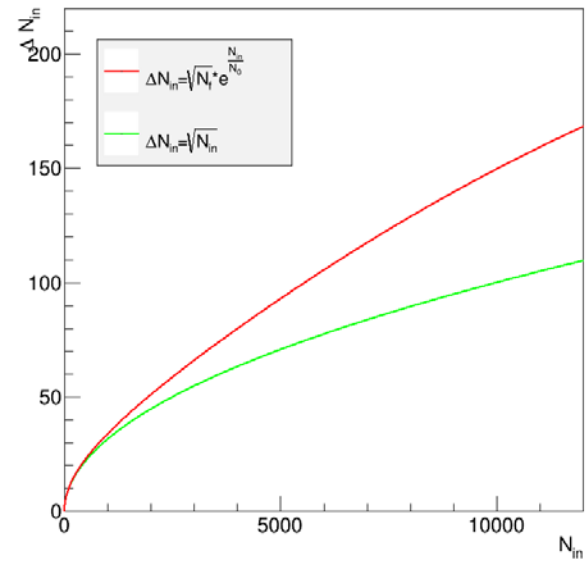
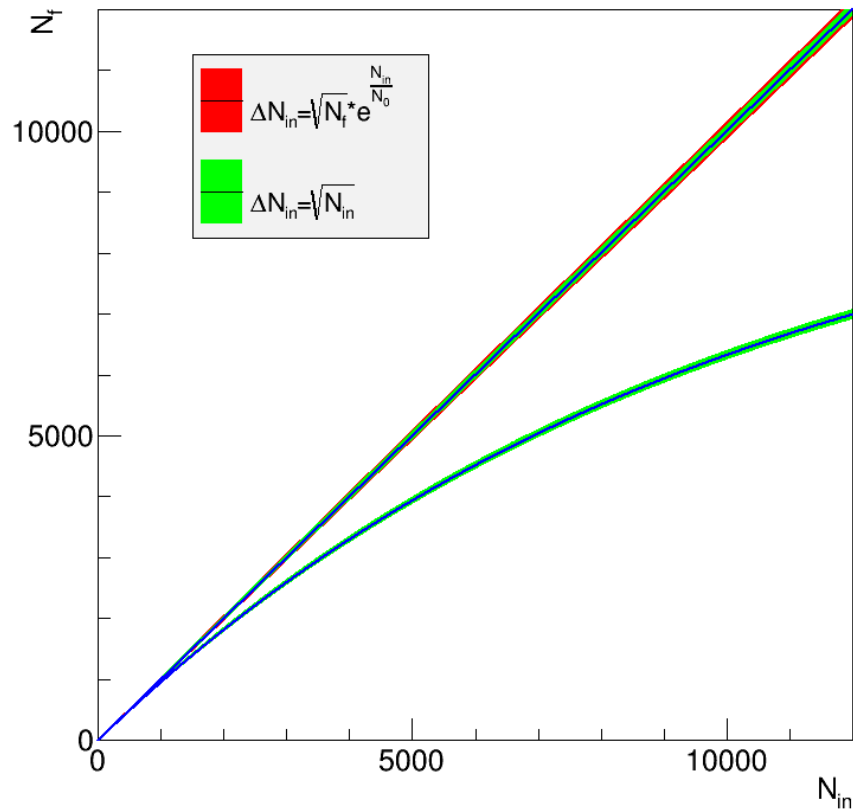
- Layer: 30
- Geometry: Barrel + Endcap
- Scint: $5mm \times 45mm \times 2mm$
- Absorber(W): $2.8mm$
- PCB: $2mm$

Digitization

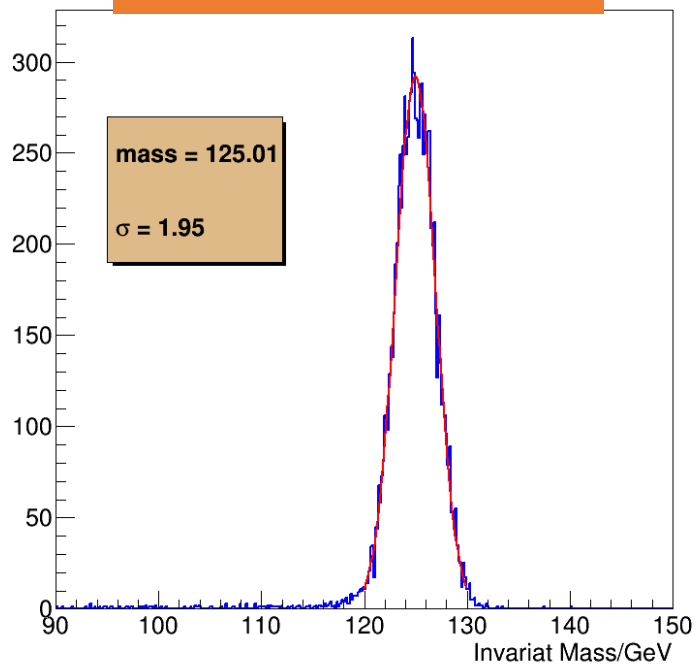


$$N_{fired} = N_0 \cdot \left(1 - e^{-\frac{N_{in} \cdot \epsilon}{N_0}}\right)$$

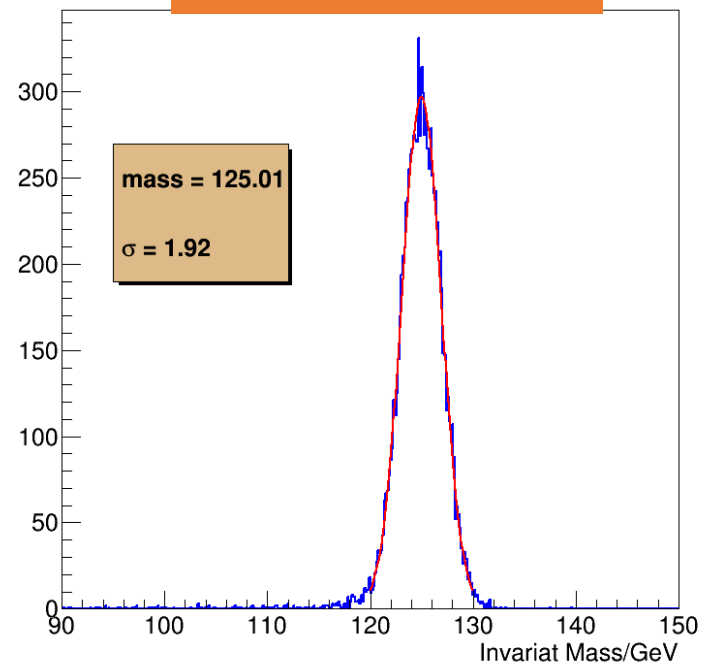
$$\Delta N_f = \epsilon \Delta N_{in} e^{-\frac{N_{in} \cdot \epsilon}{N_0}}$$



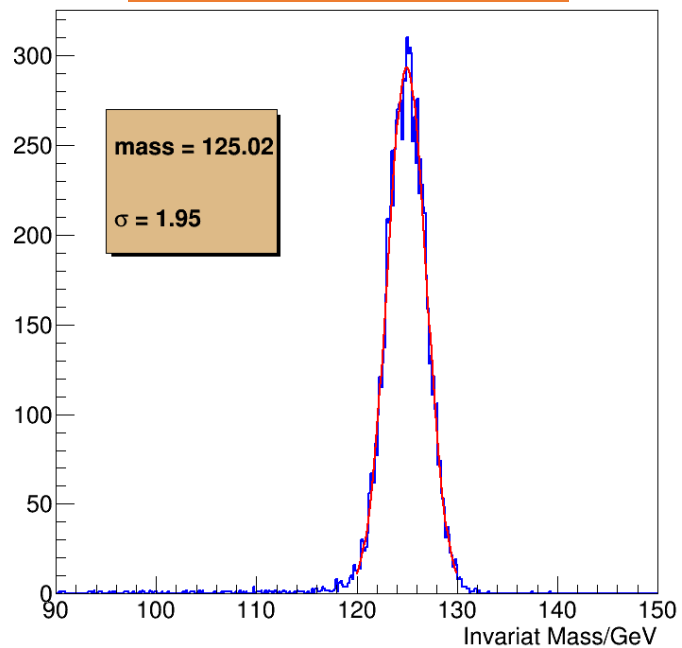
Intrinsic invariant mass



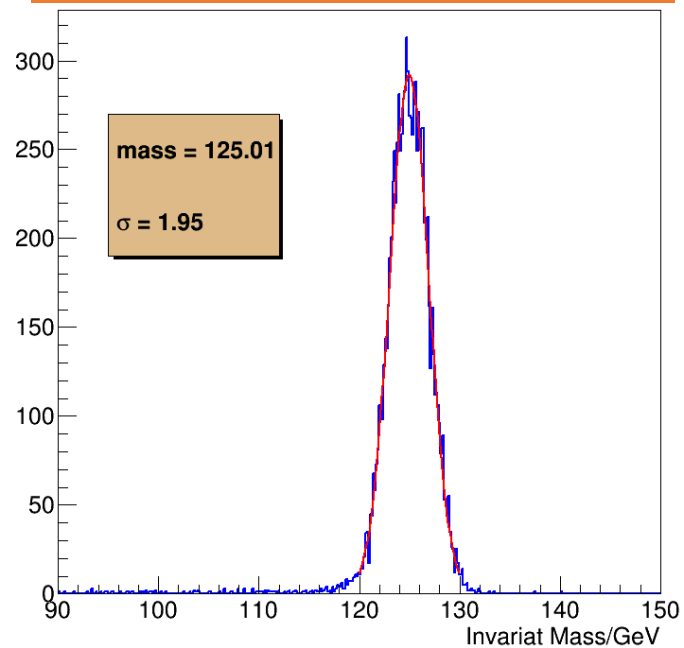
Linearity w/o smear



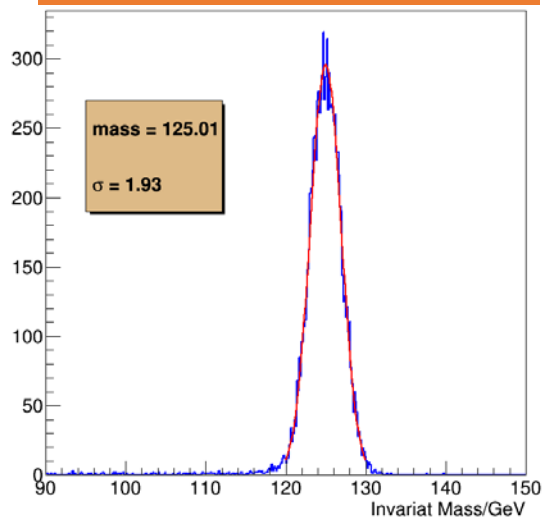
Linearity with smear



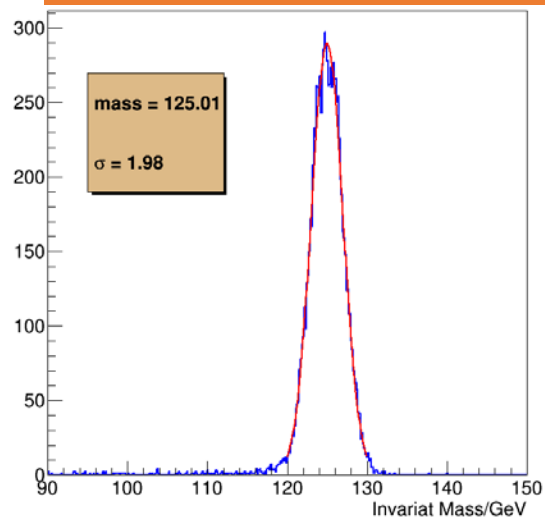
Correction with Theory smear



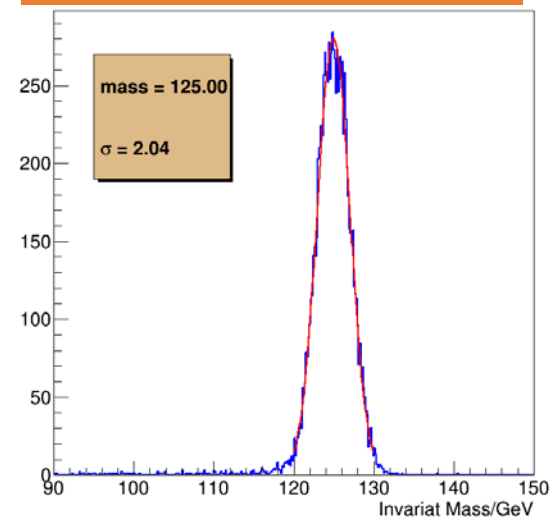
Correction with 1% smear



Correction with 3% smear



Correction with 5% smear



	Intrinsic	Linearity w/o smear	Linearity w/ smear	Theory smear
Mass				
Sigma	1.95	1.92	1.95	1.95

Arbor with SSA