**Geant4 simulation** [Energy=5 GeV] [Energy=10 GeV] [Energy=20 GeV] [Energy=25 GeV] [Energy=50 GeV] ±350 ±350 . 350 ±350 . ⊒350 <E>=984.8 RMS=88.0 <E>=1989.6 RMS=130.7 <E>=4018.4 RMS=198.4 <E>=5030.8 RMS=222.2 <E>=10115.7 RMS=317.9 μ=1987.4 σ=130.1  $\mu = 983.2 \sigma = 87.1$  $\mu$ =4015.2  $\sigma$ =194.1  $\mu = 5026.5 \sigma = 220.3$  $\mu$ =10106.6  $\sigma$ =304.1 Weighted energy Weighted energy Weighted energy Weighted energy Weighted energy [Energy=75 GeV] [Energy=100 GeV] [Energy=125 GeV] [Energy=150 GeV] [Energy=175 GeV] ± 350 ±350 ±350 ∰350 ±350 <E>=15224.8 RMS=382.3 <E>=20319.7 RMS=442.4 <E>=25431.1 RMS=509.1 <E>=30542.3 RMS=583.3 <E>=35684.2 RMS=613.3 μ=15217.6 σ=375.4  $\mu$ =20300.7  $\sigma$ =463.6  $\mu = 25437.7 \sigma = 502.4$  $\mu$ =30536.1  $\sigma$ =579.5  $\mu$ =35642.8  $\sigma$ =643.9 22000 24000 Weighted energy Weighted energy Weighted energy Weighted energy Weighted energy [Energy=200 GeV] [Energy=250 GeV] [Energy=300 GeV] [Energy=500 GeV] ∰350 ∰350 <E>=40831.3 RMS=660.6 <E>=51055.4 RMS=754.8 <E>=61296.1 RMS=886.1 <E>=102246.1 RMS=1153.6 u=40815.8 σ=658.9 u=51073.8 σ=730.3  $\mu = 61295.1 \sigma = 812.5$  $\mu$ =102341.6  $\sigma$ =1041.4 

Weighted energy

Weighted energy

Weighted energy

Weighted energy