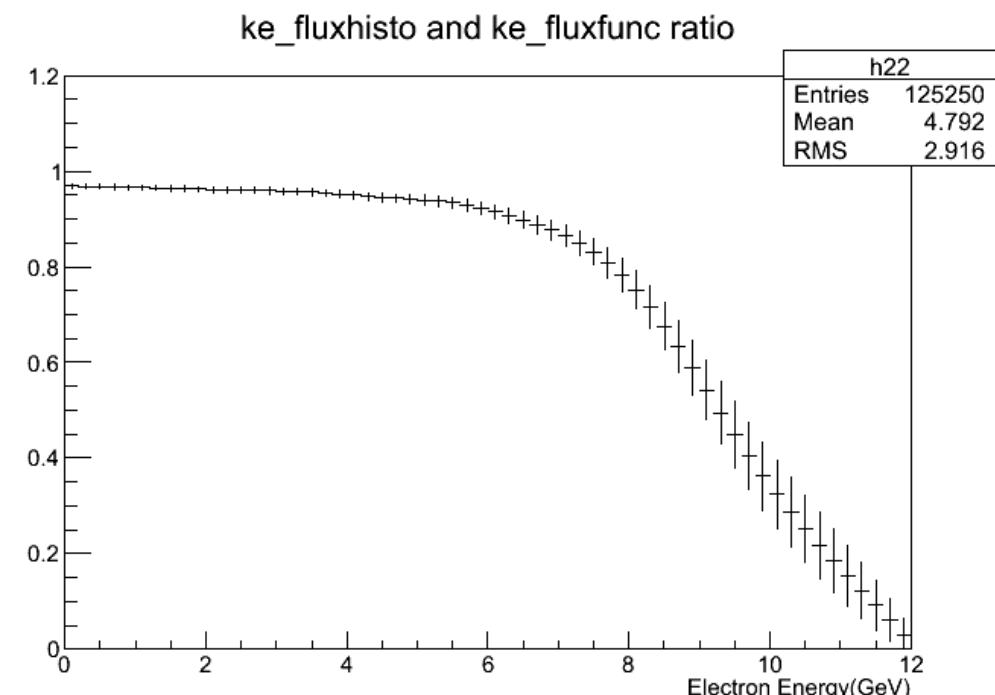
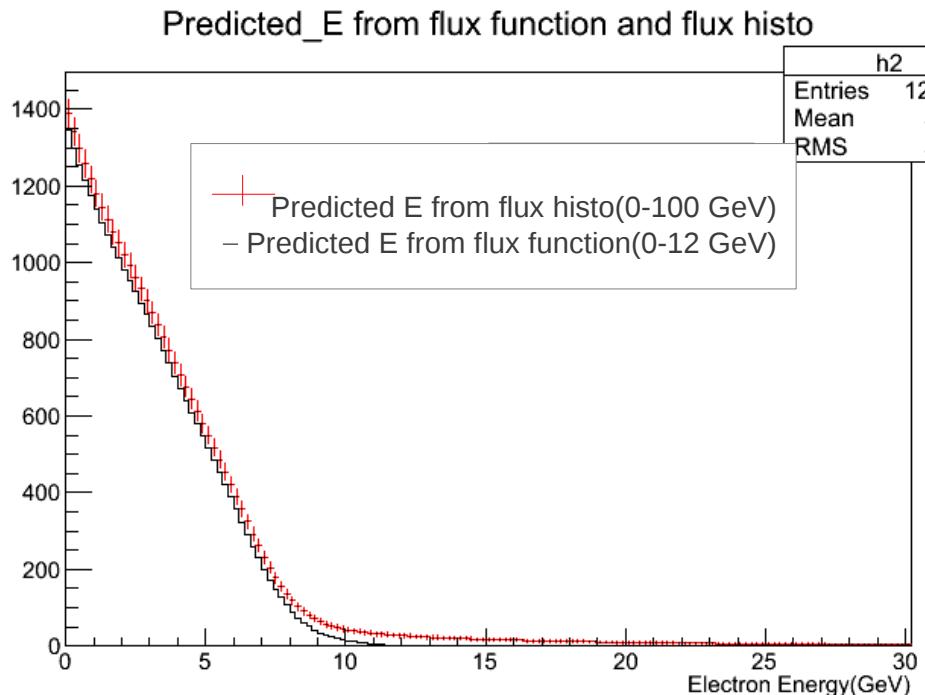


Constraining The ME Flux Fitting Tool Developing Weekly Updates

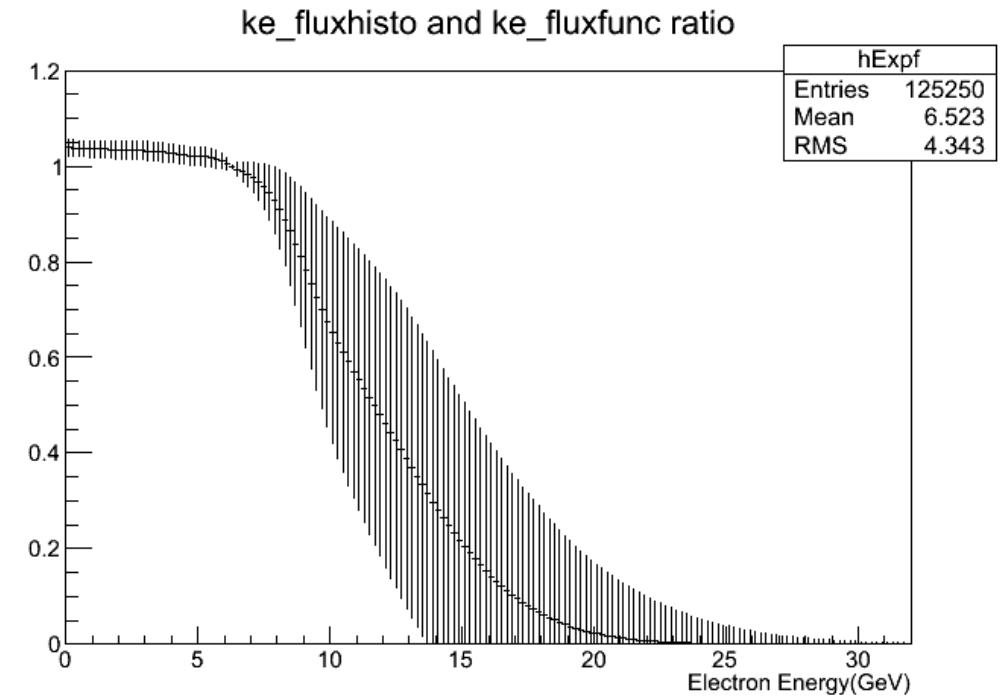
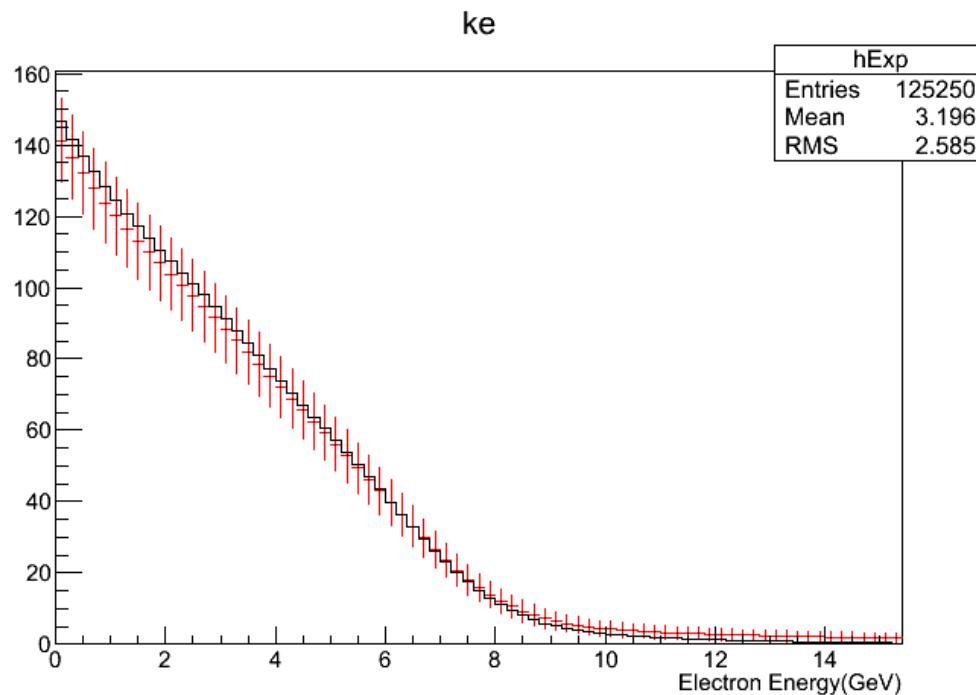
Wenting Tan
Hampton University
24th Oct 2012

Compare Electron Spectrum for Flux Histo(0-100 GeV) and Flux Function(0-12 GeV)



Check the long high
energy tail effects

Electron KE from Full Range Function(0-100 GeV) and Flux Histogram



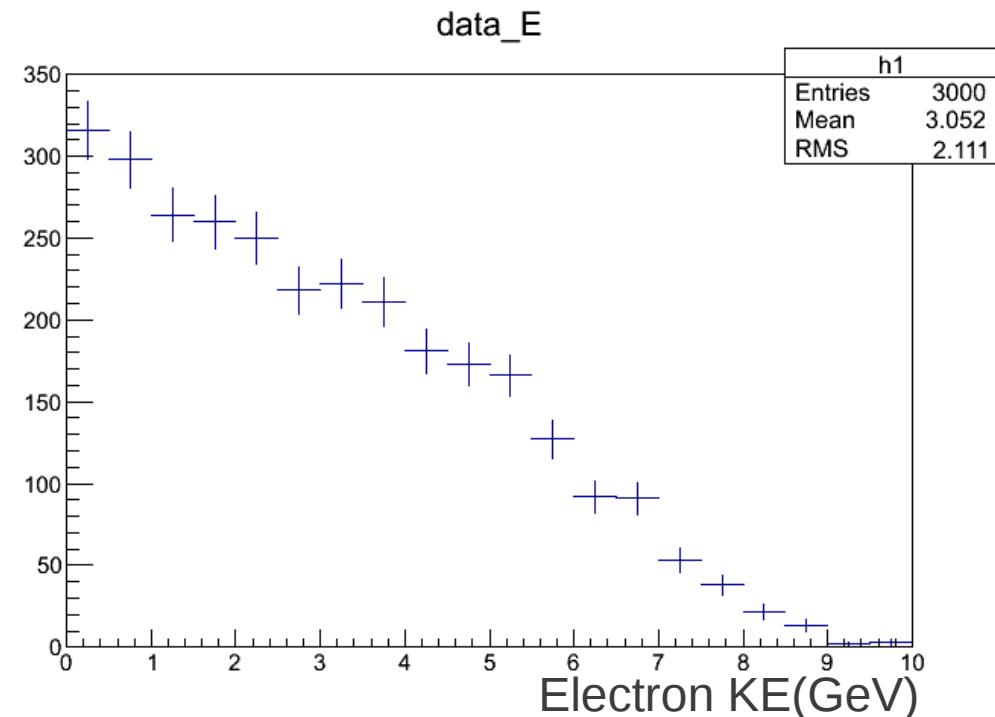
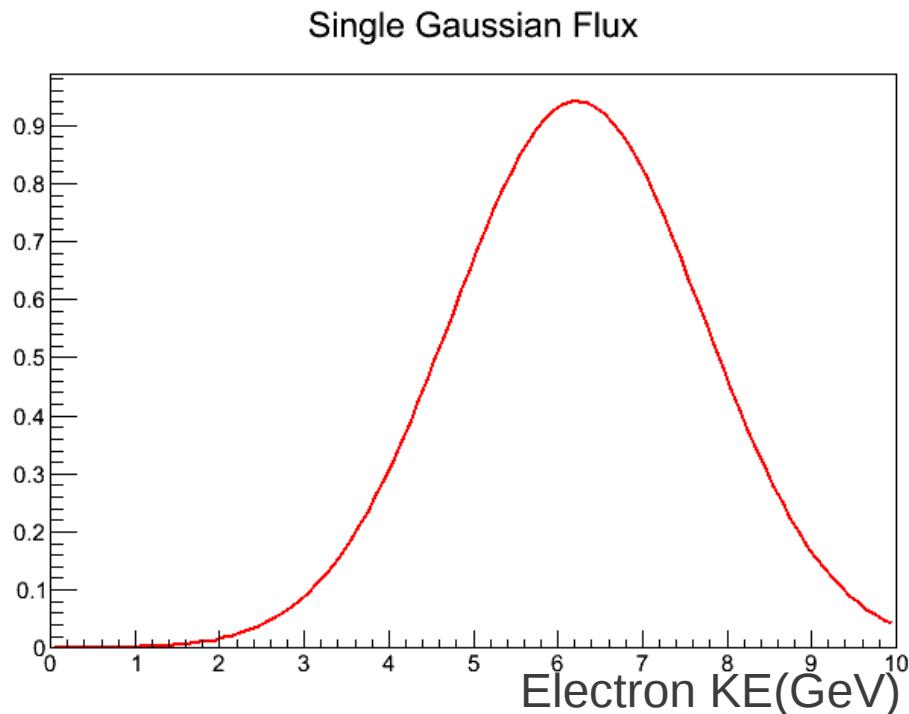
Predicted electron KE from flux histo



Predicted electron KE from Function Flux

Single Gaussian Flux Fitting

Peak, Mean Fixed



Single Gaussian flux
Fix Peak , Center
Sigma is unknown

model

Electron Energy data

```
f1->SetParameter(0,0.942149);  
f1->SetParameter(1,6.23012);  
f1->SetParameter(2,1.48794),
```

Assuming the third parameter is blind,
only know the range:[0.5,2.5]

Vary sigma of the input flux, from 0.5 to 2.5

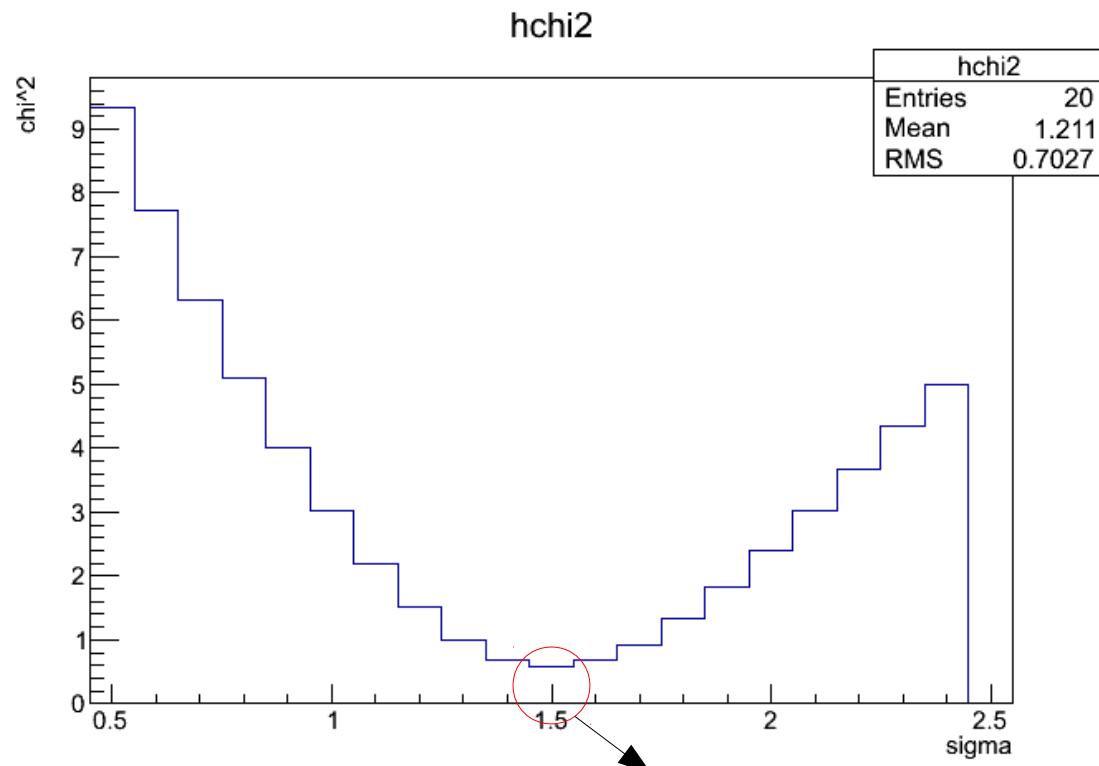
Electron Energy histograms.

Data Ke

Chi² Plot

Fitting

Minimum Chi²

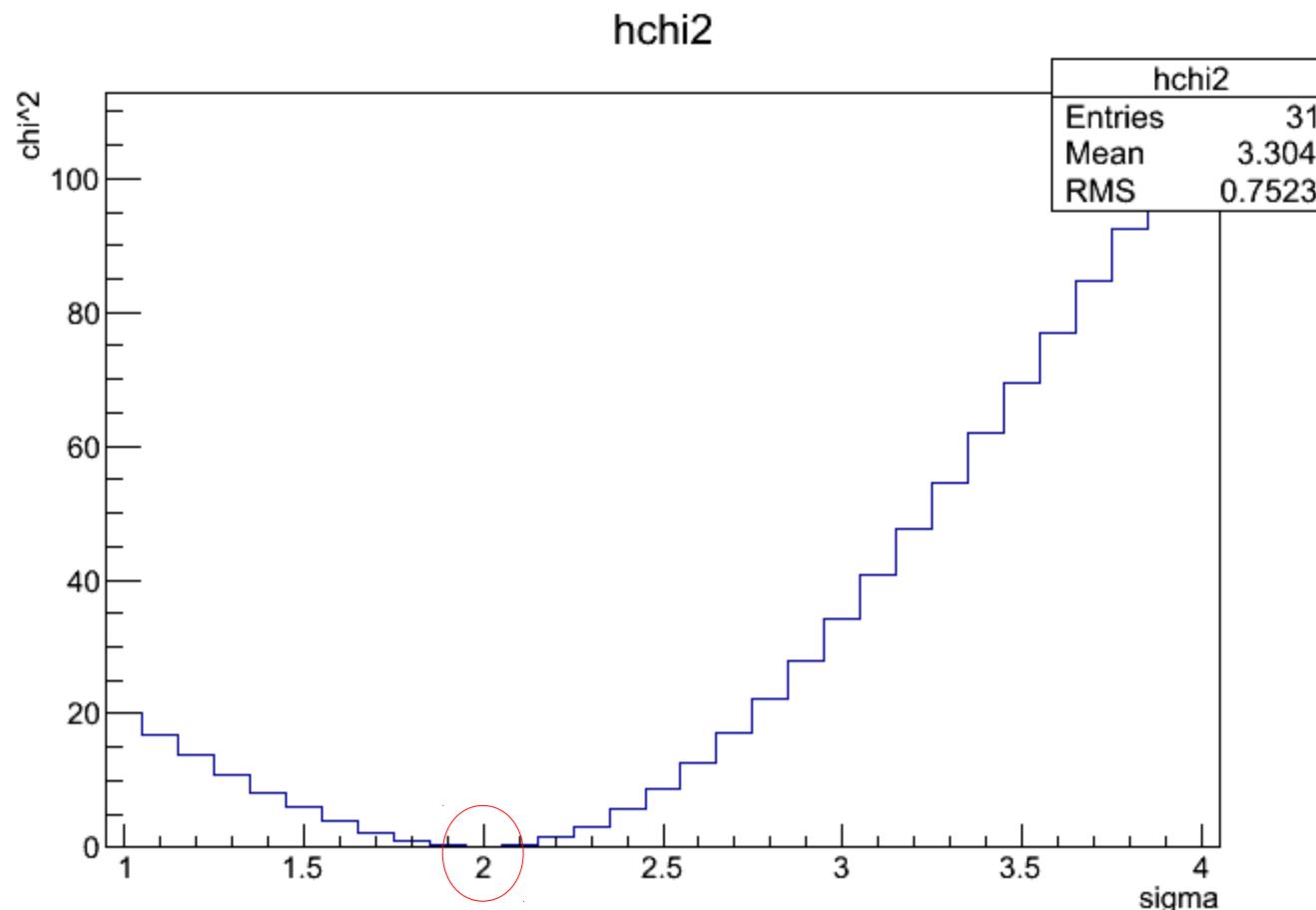


Chi² minimum:
sigma=1.5

sigma

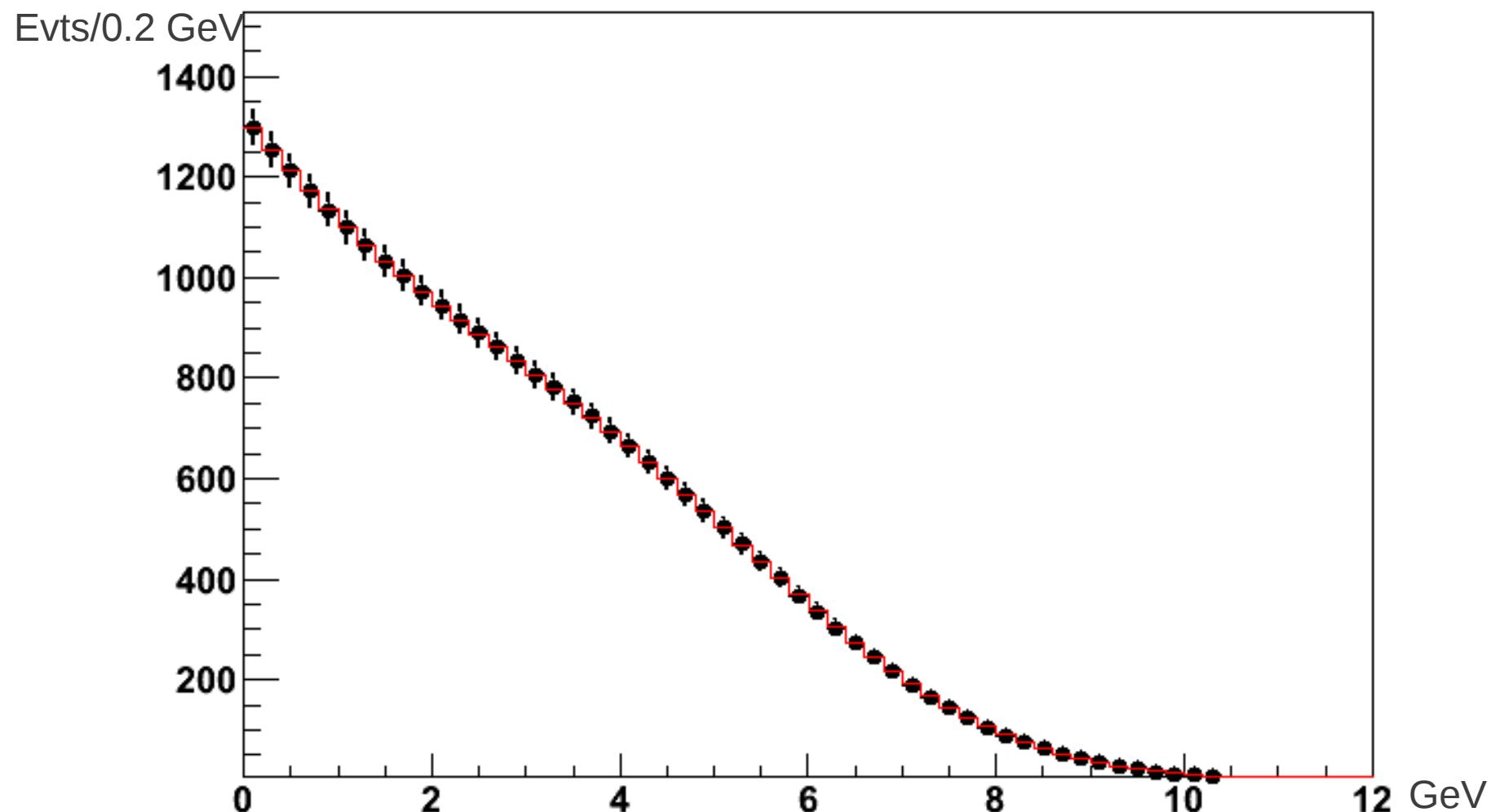
Data 2: Blind Single Gaussian

NO.	NAME	VALUE	ERROR	SIZE	DERIVATIVE
// 1	Constant	1.74797e+17	1.02987e+08	0.00000e+00	-1.91963e-10
// 2	Mean	5.64249e+00	9.64815e-10	-0.00000e+00	9.39362e+05
// 3	Sigma	blind			

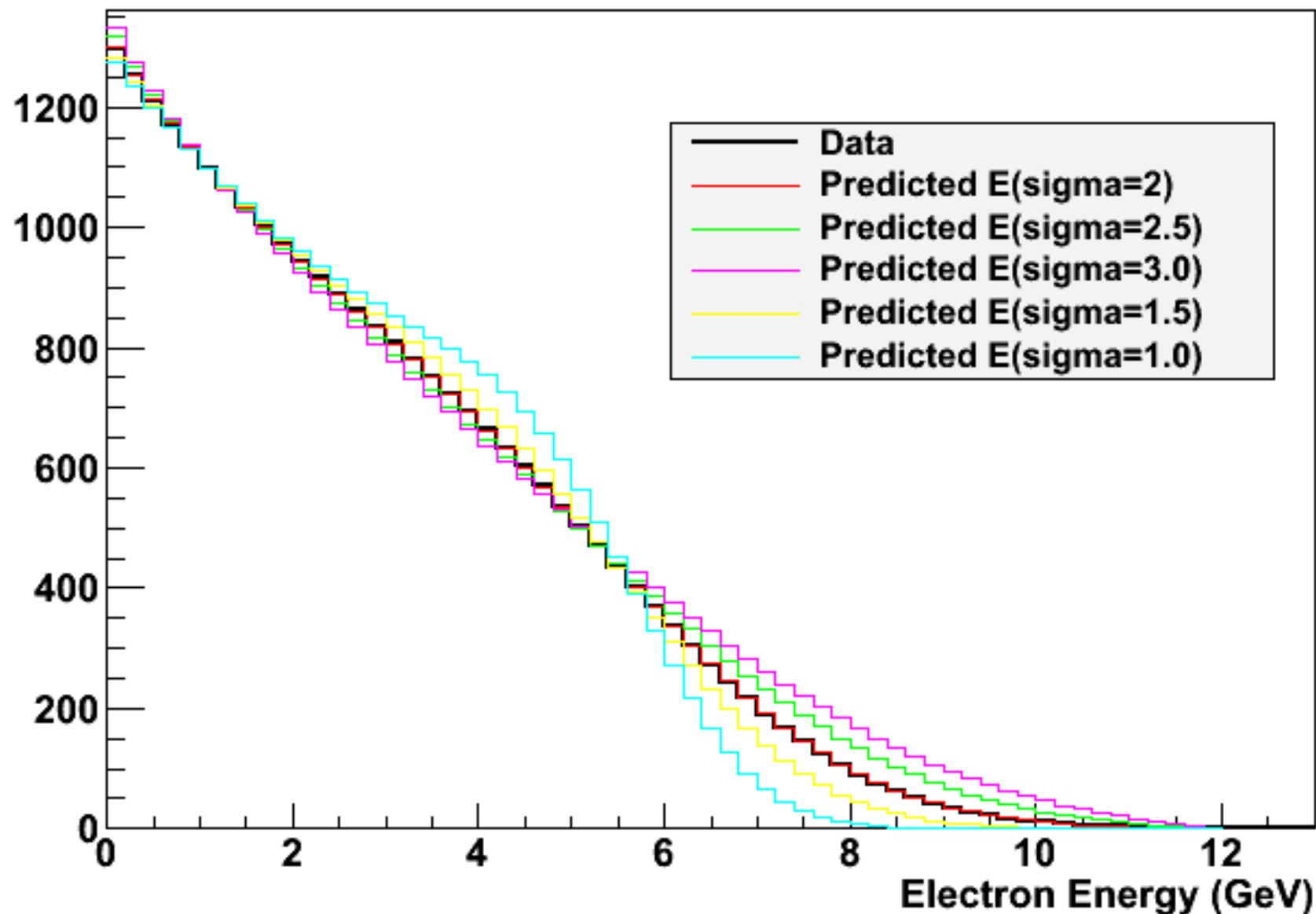


Chi^2 minimum: sigma=2.0

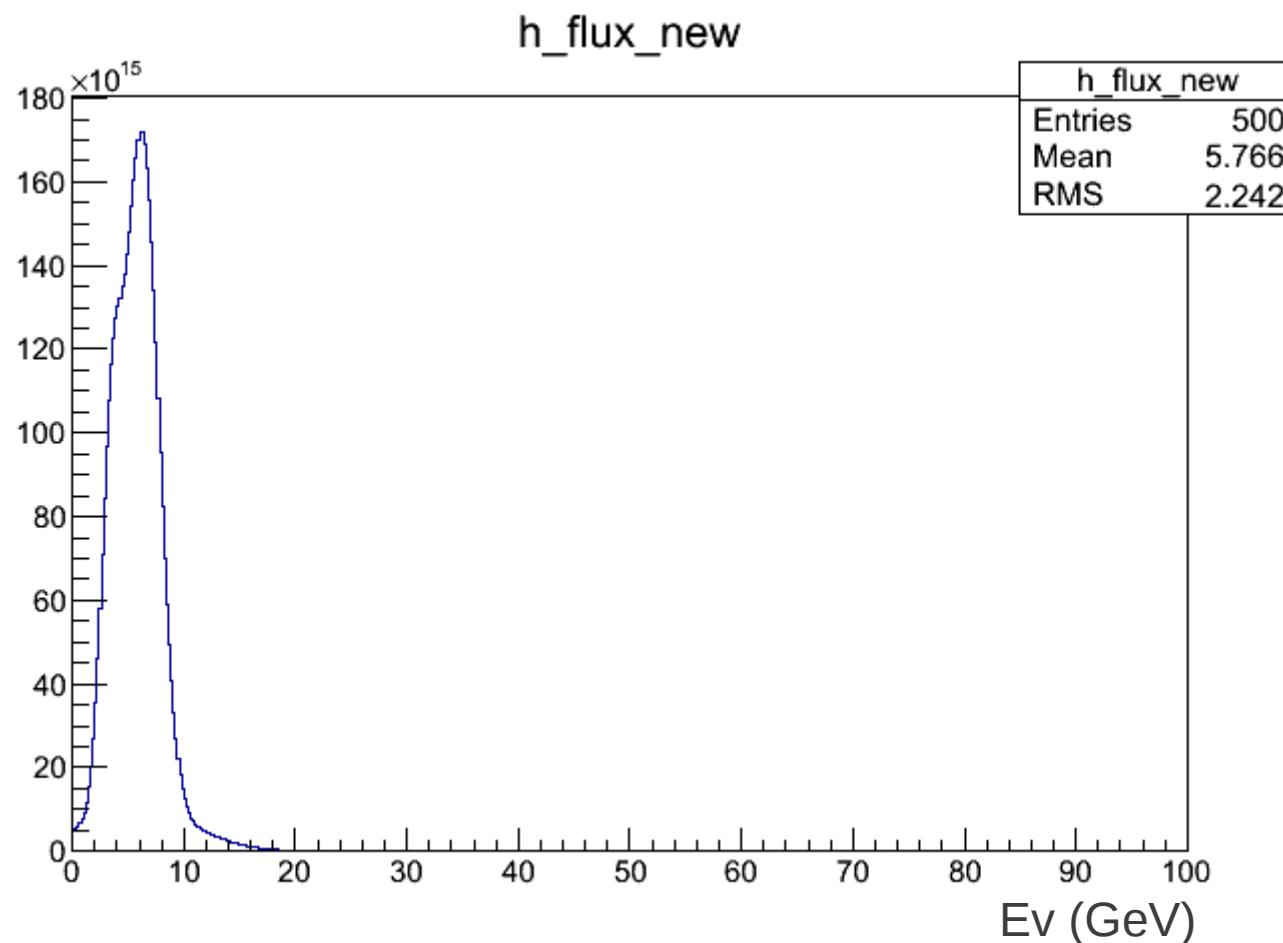
Data and Fitting ke plot



Data and Predicts



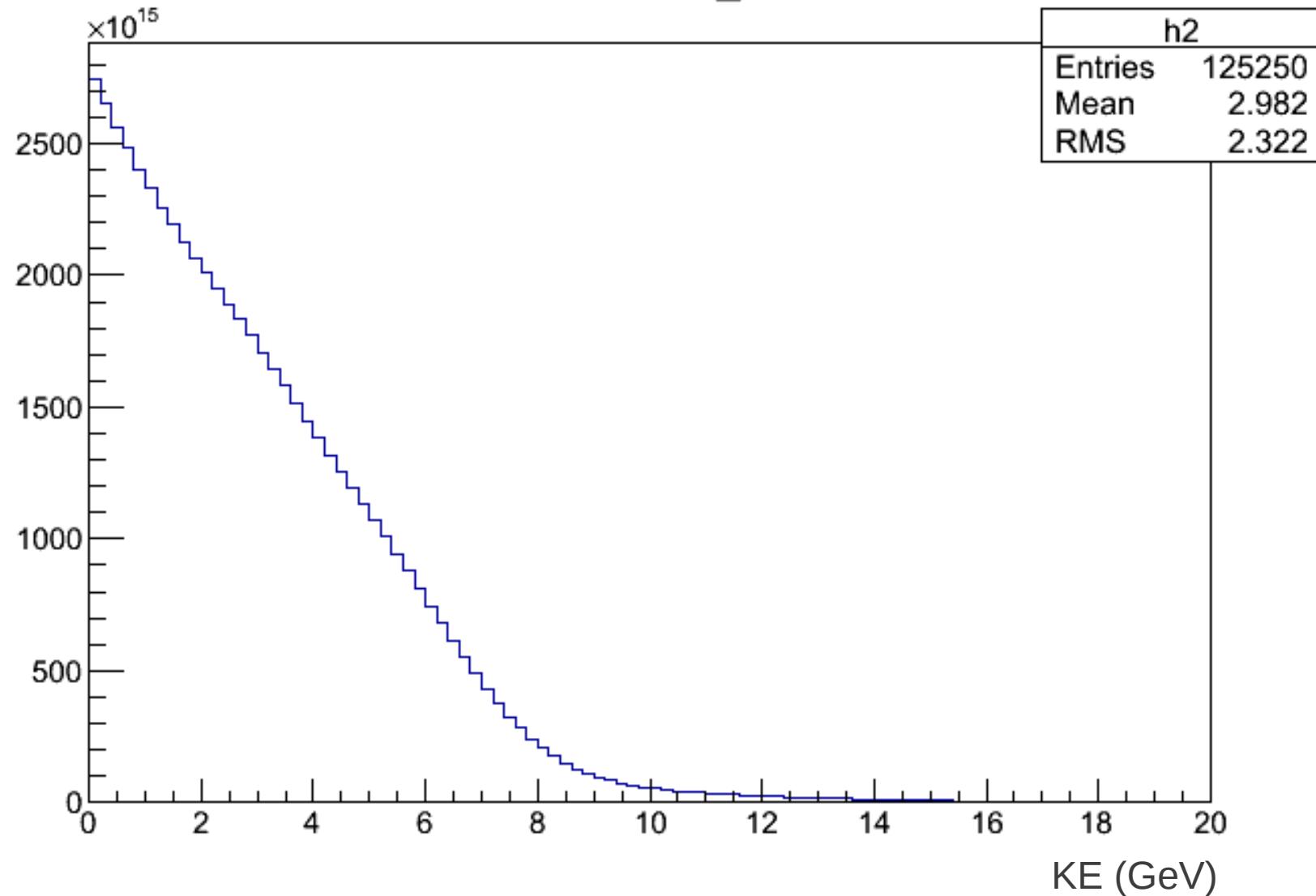
3 Gaussian Flux



Name	Value
a1	1.61001e+17
m1	6.22941e+00
s1	1.48879e+00
a2	7.73112e+16
m2	3.50168e+00
s2	9.22362e-01
a3	1.02081e+16
m3	5.84647e+00
s3	4.86736

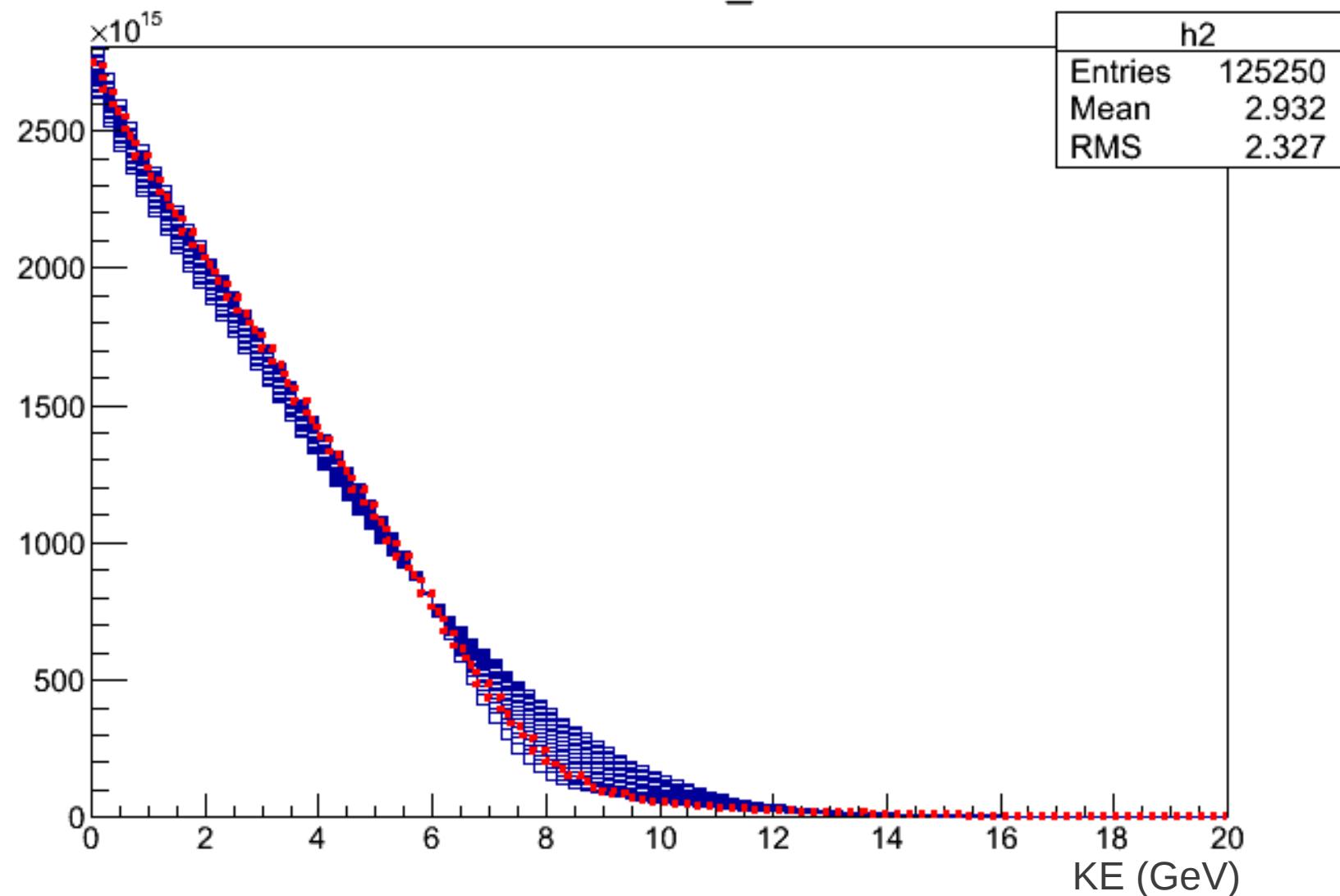
Electron Energy Data

Predicted_E



Vary Sigma1: 1.0-3.0
Step: 0.1
Fix other 8 pars

Predicted_E



Chi2 for S1

