Weekly Updates On nu e Meeting

Closure Check For The ME Flux Fitting

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Hampton University

April 17, 2013

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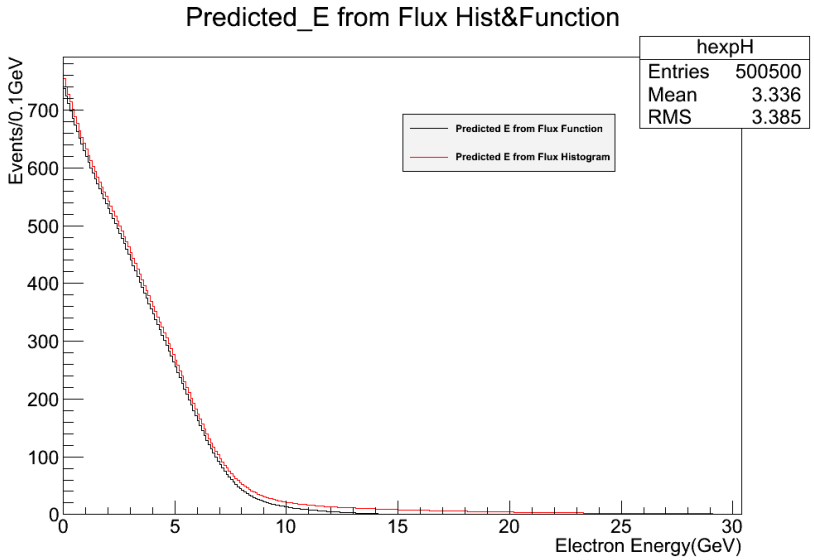
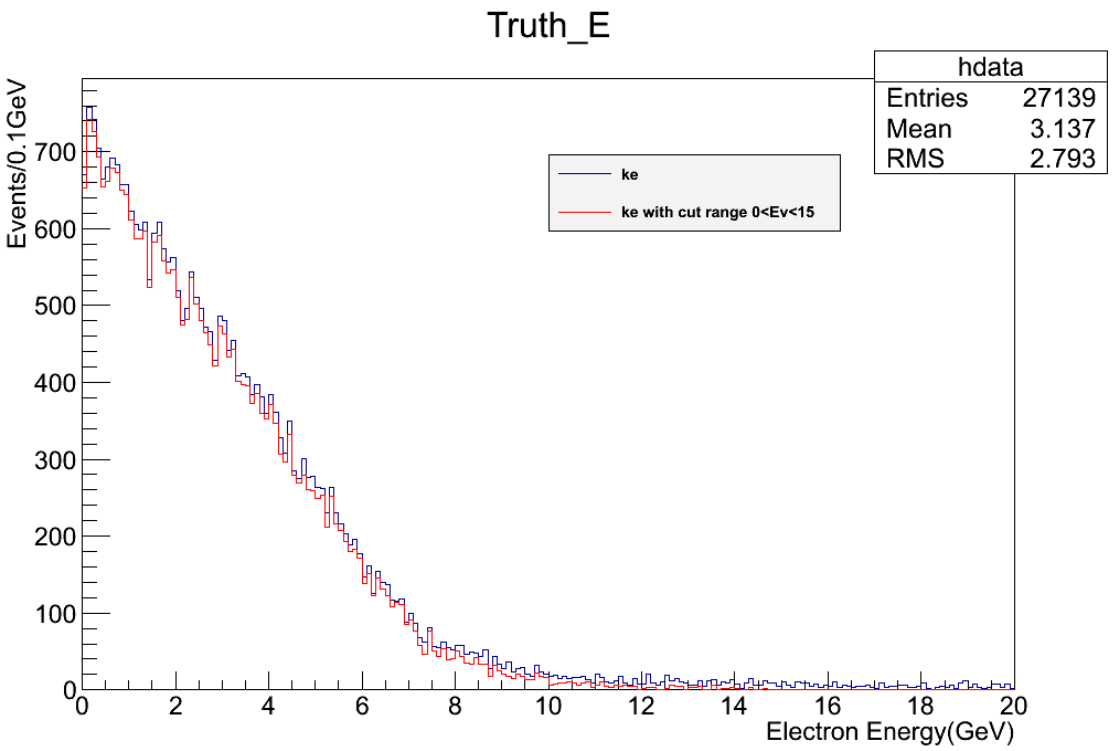
Compare Plots of Electron Energy from Flux Histo and Flux Function



Compare Plots of Electron Energy Original and for Ev Range 0-15 GeV



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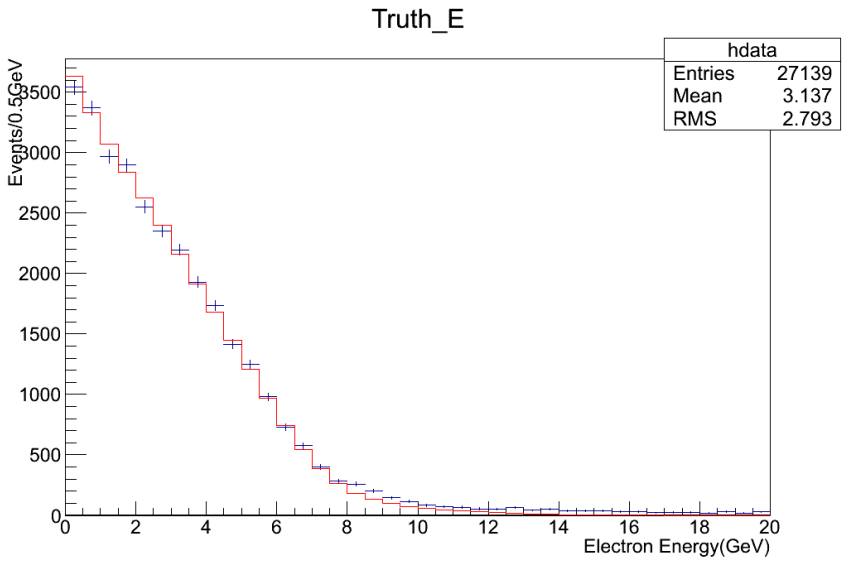
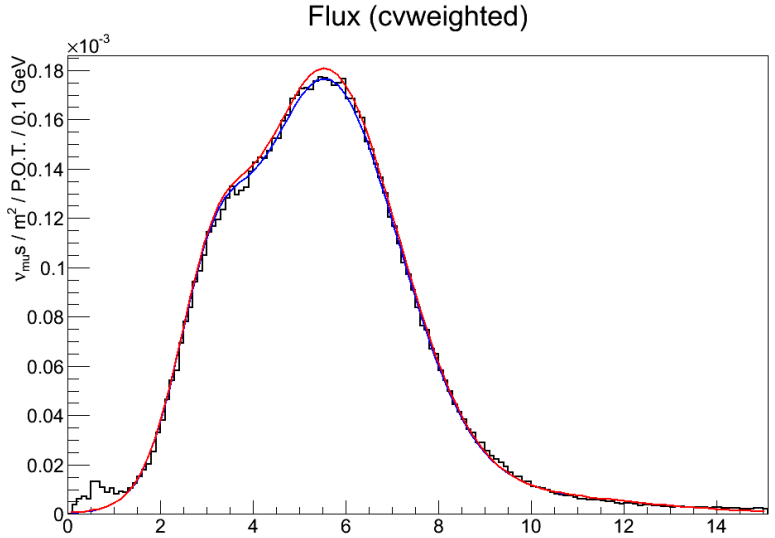
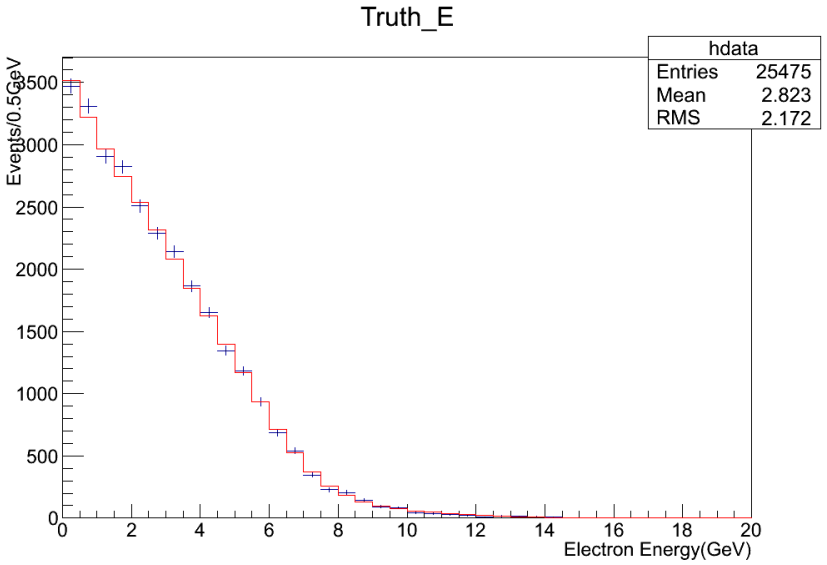
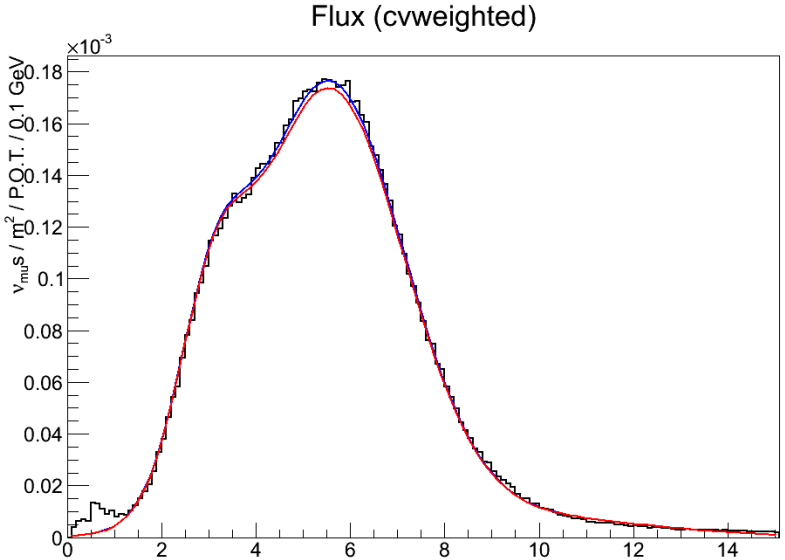
Fitting Genie Sample in Neutrino Energy Range

200e20 POT, CVW, different bin-size, a1=1.728e-04, Bottom Plots shows 0~15GeV cut on Ev range









Updated 9 Pars Independent Fitting On Genie Sample

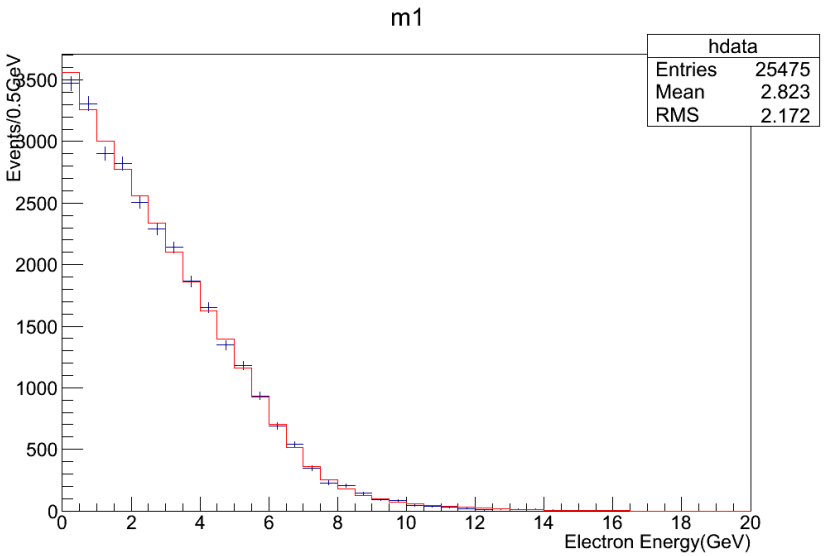
0.5GeV bin-size; Fit range 0-20GeV; 200e20 POT; CV_Weighted; Fit one at one time, fix others

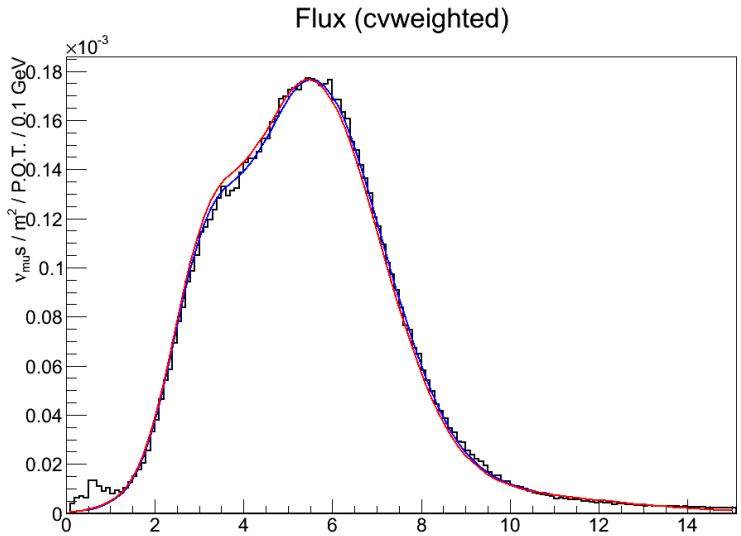
200e20POT	a1	m1	s1	a2	m2	s2	a3	m3	s3
FluxFunc	1.728e-4	5.518	1.601	6.177e-5	3.061	0.738	8.656e-6	9.232	2.814
TMinuitFit	1.770e-4	5.662	1.661	6.740e-5	3.563	0.832	12.632e-6	11.814	4.555
FittingError	0.079e-4	0.160	0.083	2.155e-5	1.165	0.390	0.034e-6	1.414	0.110
TMinuitFit	1.700e-4	5.459	1.572	5.496e-5	2.844	0.654	7.410e-6	8.749	2.511
FittingError	0.078e-4	0.019	0.022	1.620e-5	1.093	0.117	0.037e-6	0.039	0.287

blue–without Ev range cut

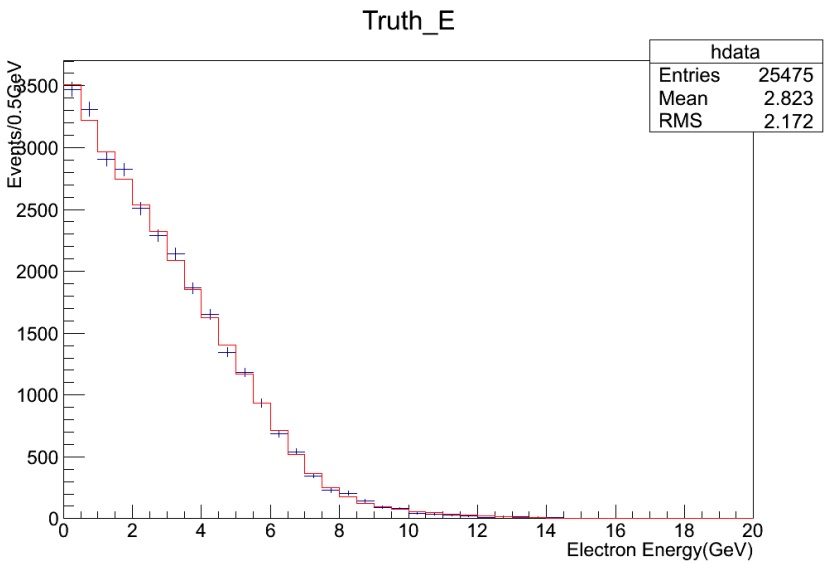
black–with Ev $<$ 15 GeV cut

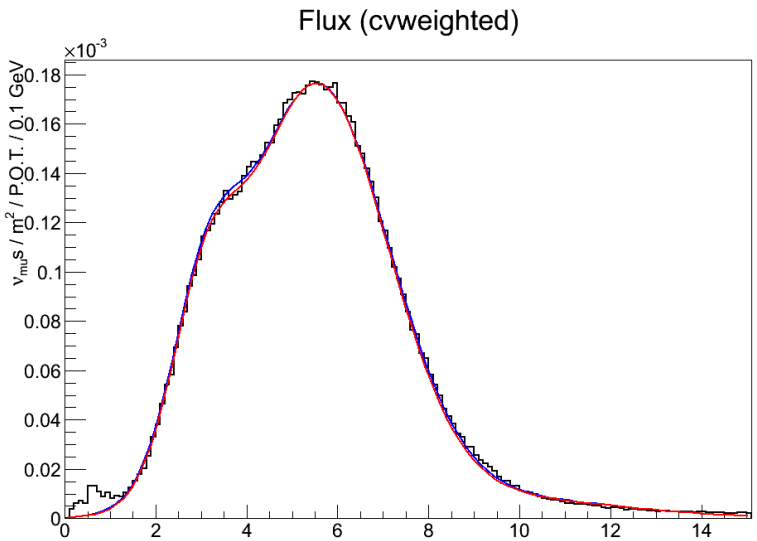
Fitting Ke Plots & Flux Fit Result for m1



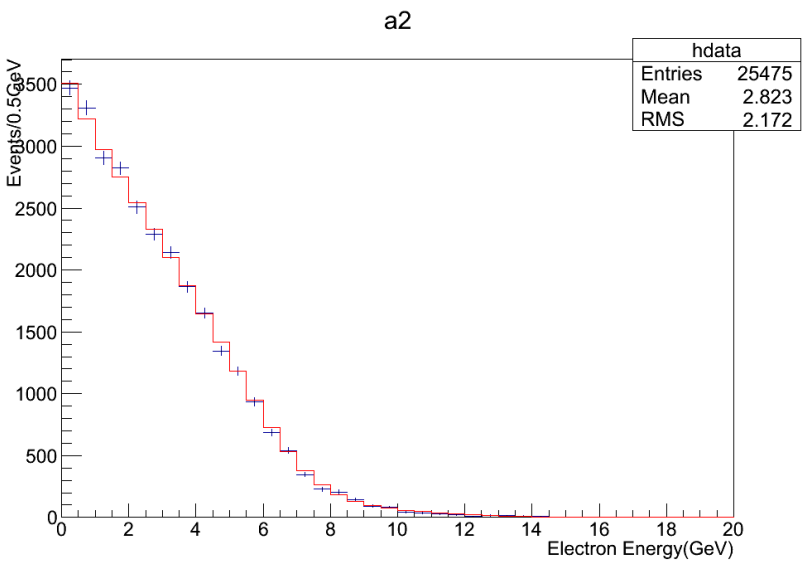


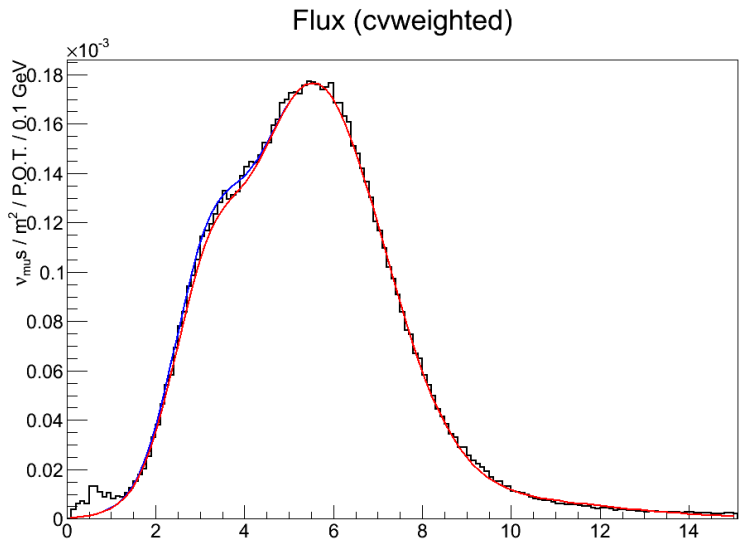
Fitting Ke Plots & Flux Fit Result for s1



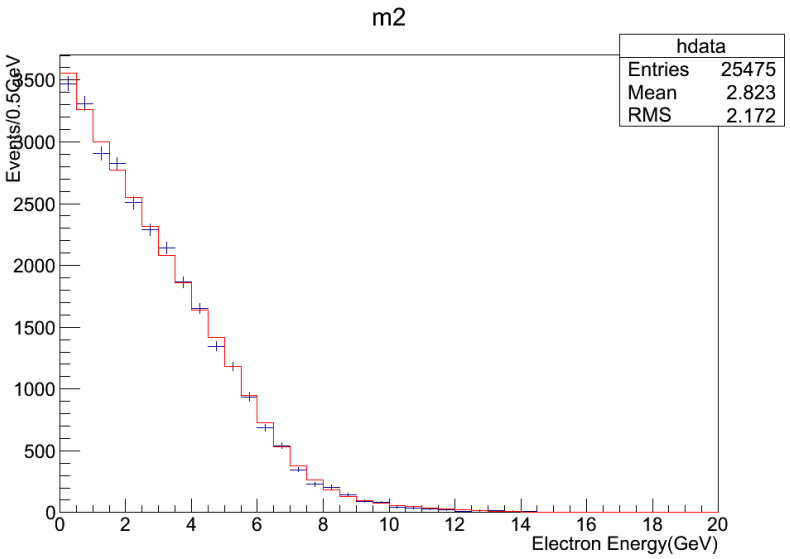


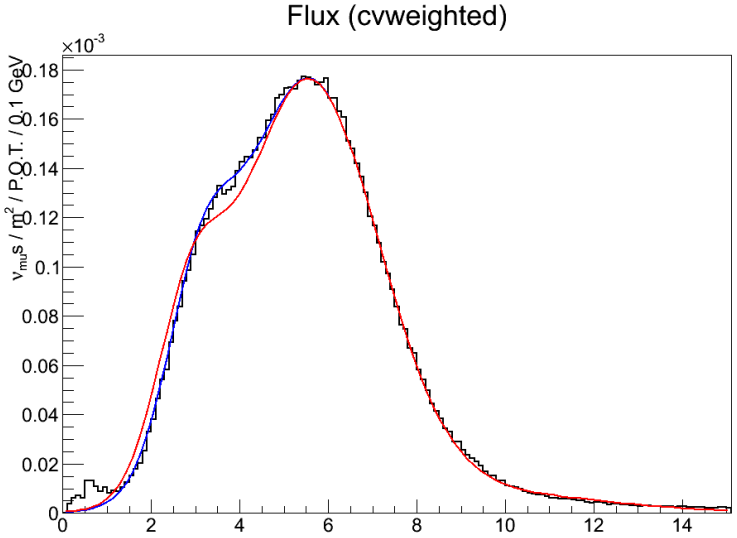
Fitting Ke Plots & Flux Fit Result for a2



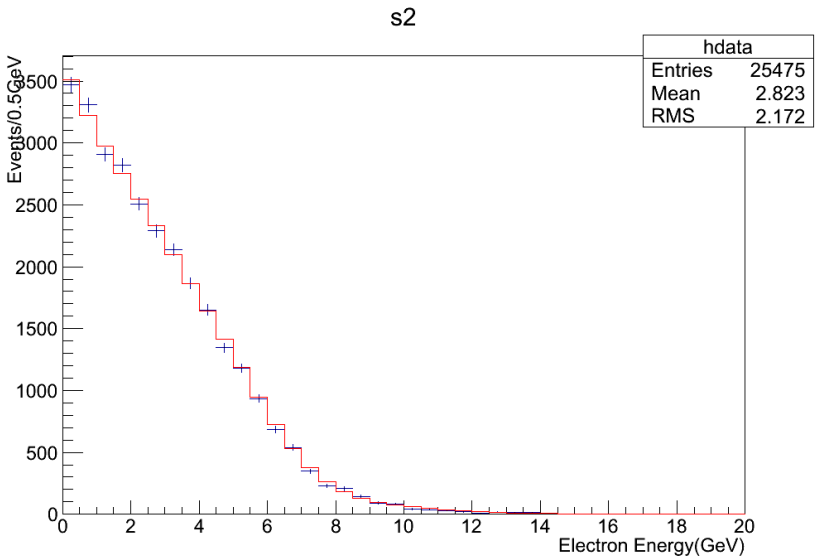


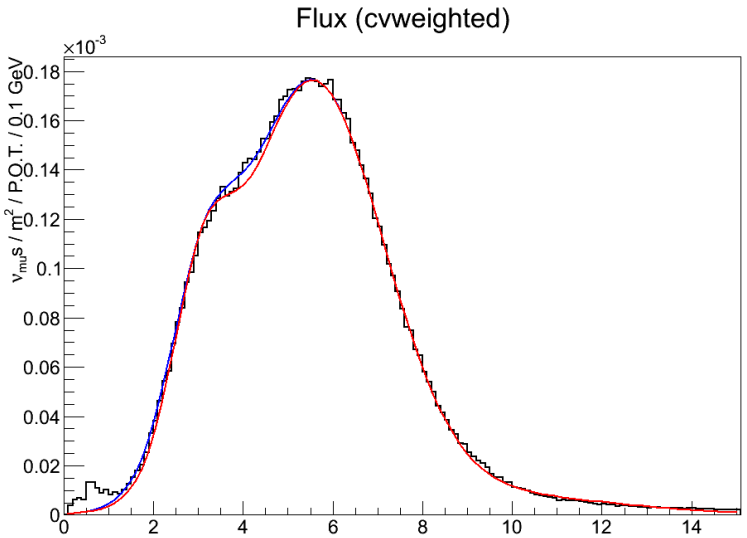
Fitting Ke Plots & Flux Fit Result for m2





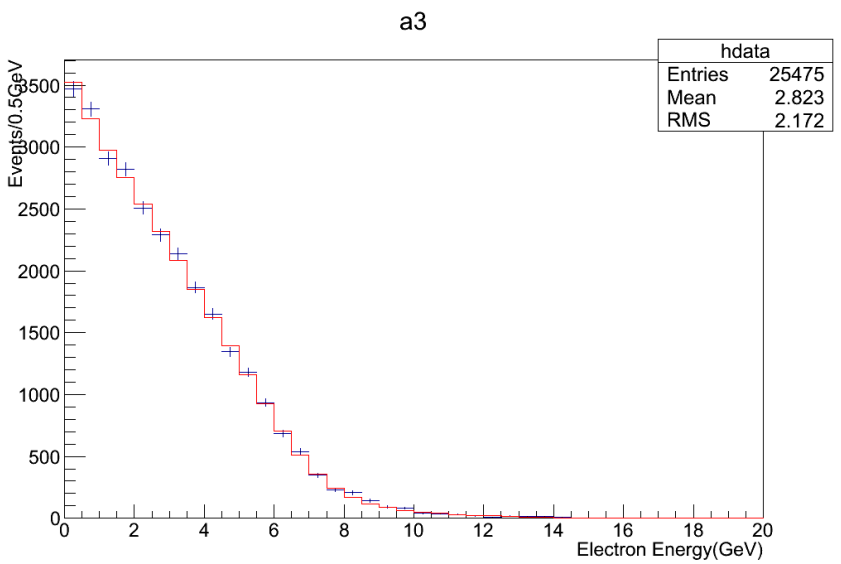
Fitting Ke Plots & Flux Fit Result for s2

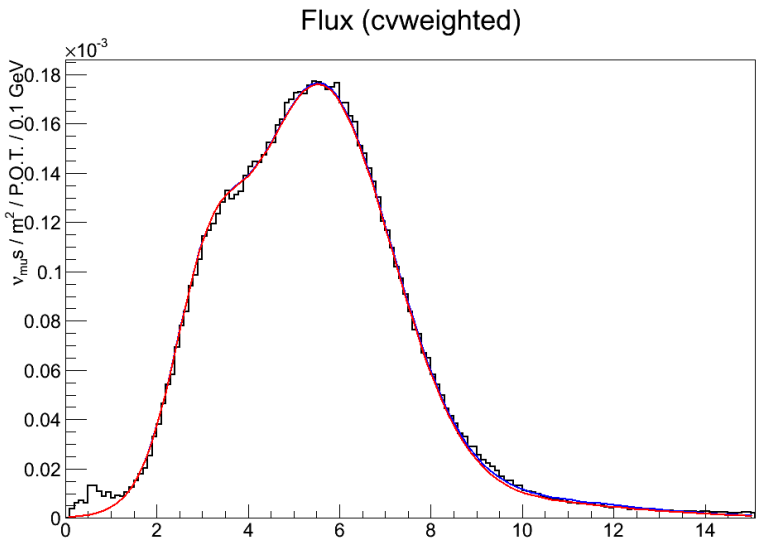




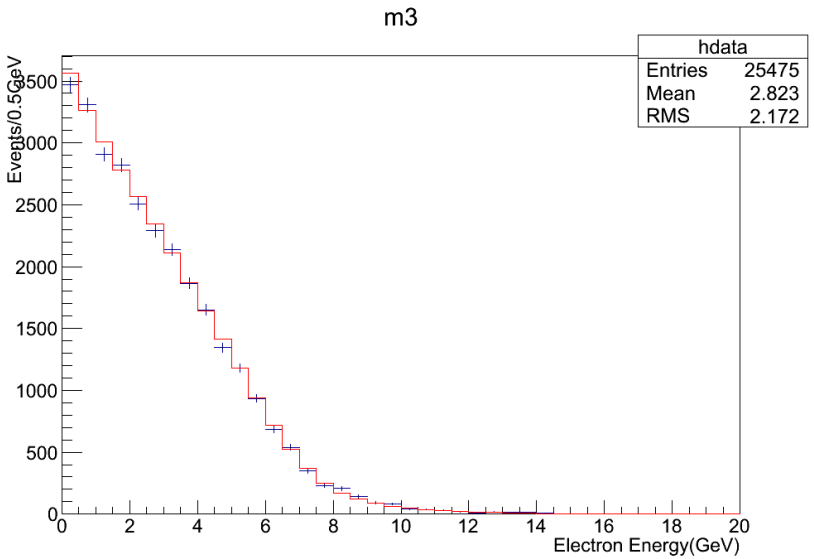
x

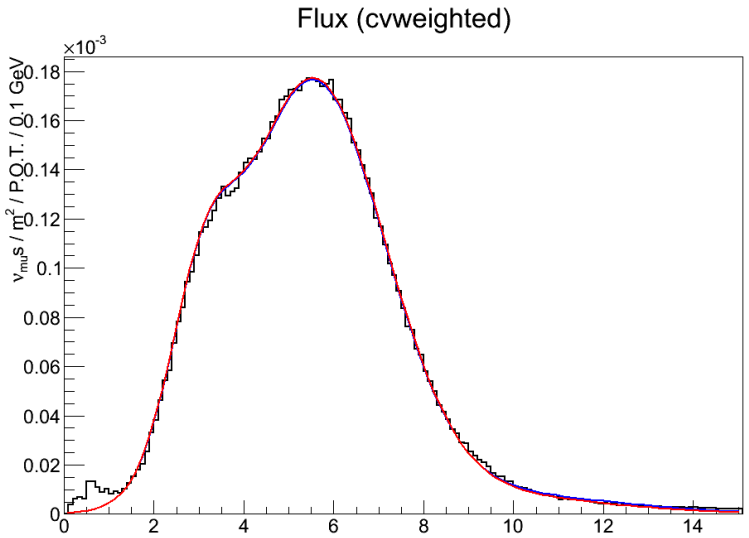
Fitting Ke Plots & Flux Fit Result for a3



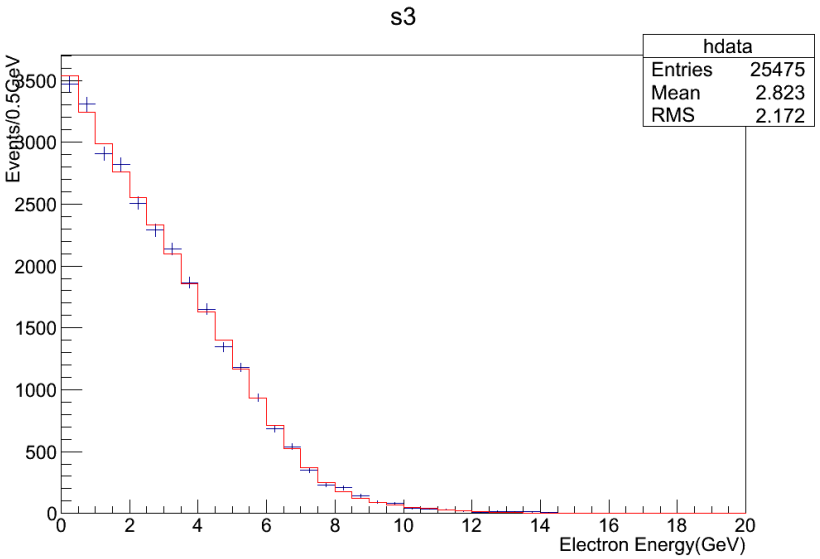


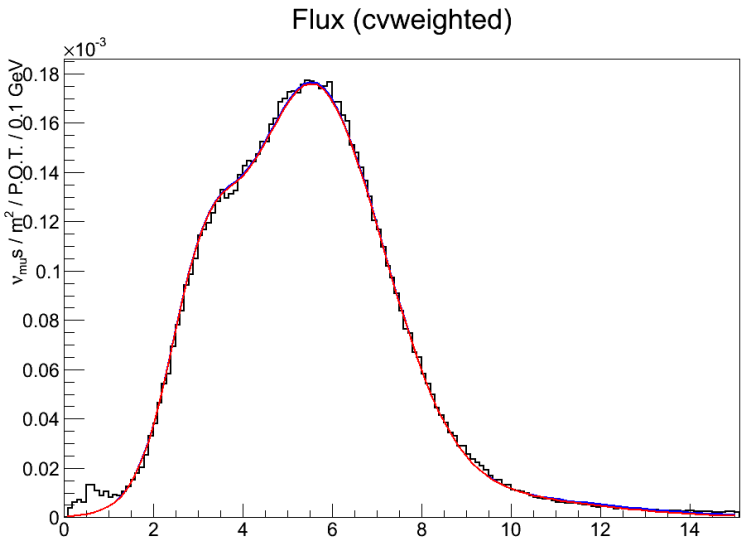
Fitting Ke Plots & Flux Fit Result for m3





Fitting Ke Plots & Flux Fit Result for s3





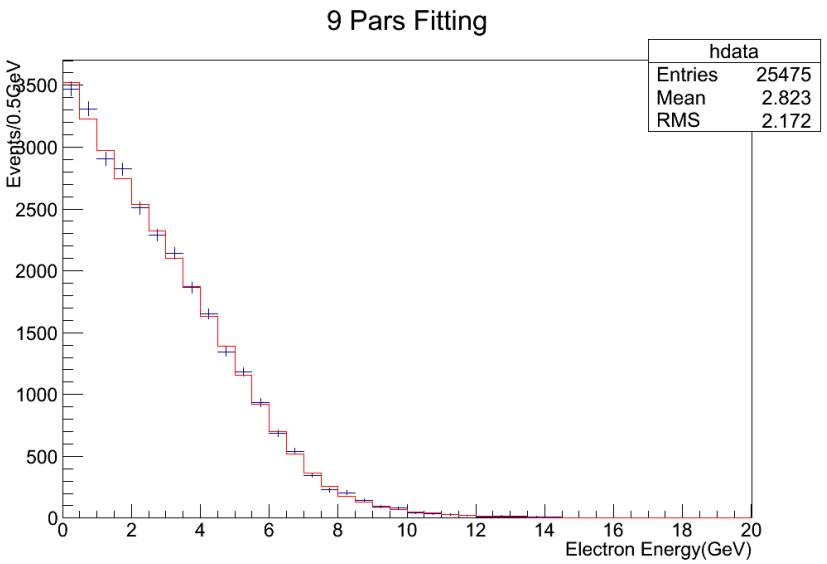
Fitting 9 Pars Simultaneously

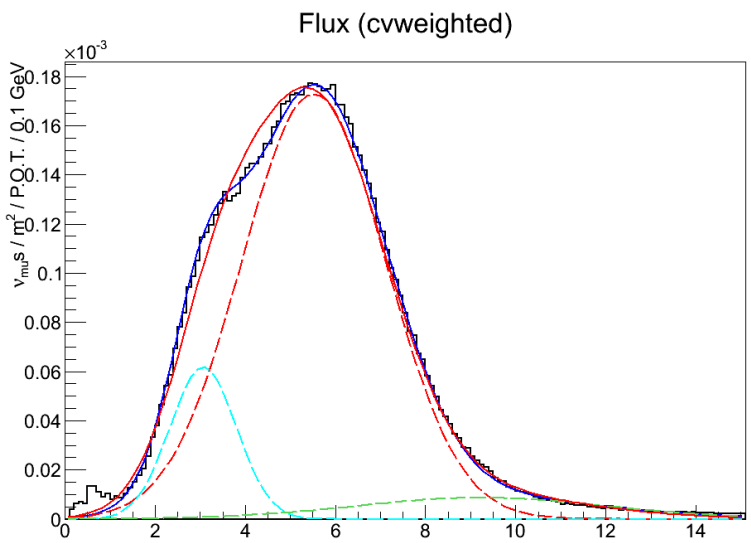
200e20POT	a1	m1	s1	a2	m2	s2	a3	m3	s3
FluxFunc	1.728e-4	5.518	1.601	6.177e-5	3.061	0.738	8.656e-6	9.232	2.814
TMinuitFit	1.710e-4	5.200	1.989	6.715e-5	-18.583	-1.902	2.434e-6	12.396	6.962
FittingError	0.010e-4	0.163	0.003	0.001e-5	1.414	1.414	0.014e-6	0.046	0.032
TMinuitFit	1.646e-4	5.467	1.593	4.986e-5	3.282	0.974	11.955e-6	8.402	2.676
FittingError	0.011e-4	0.025	0.002	0.289e-5	1.769	0.163	0.077e-6	0.049	0.035

blue–without Ev range cut

black–with Ev $<$ 15 GeV cut

9 Pars Simultaneously Fitting Plots

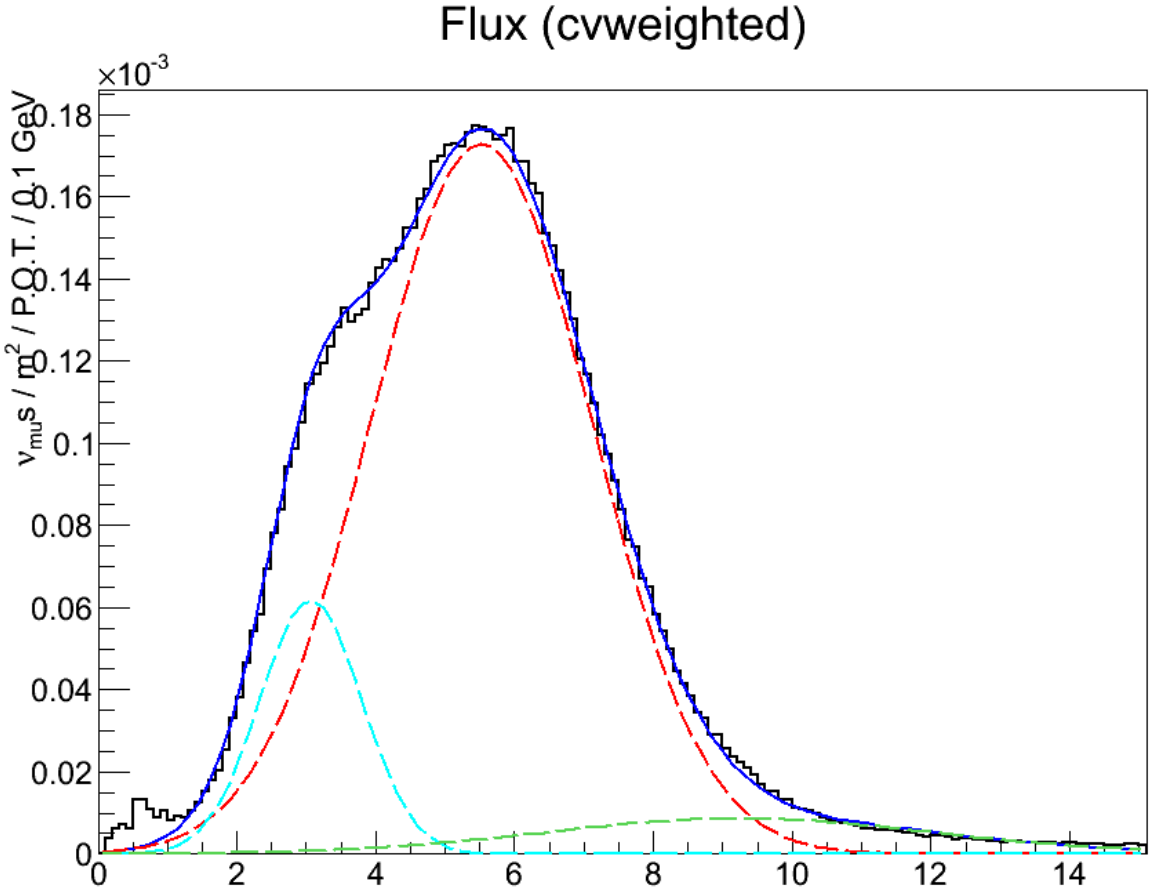




Backups

Parameterize New Flux Histogram

3 Gaussian, 9 parameters, Fit Range 0-15 GeV



par	value
a1	1.728e-04
m1	5.518
s1	1.601
a2	6.177e-05
m2	3.061
s2	0.738
a3	8.656e-06
m3	9.232
s3	2.814