

E02-013 Analysis Update

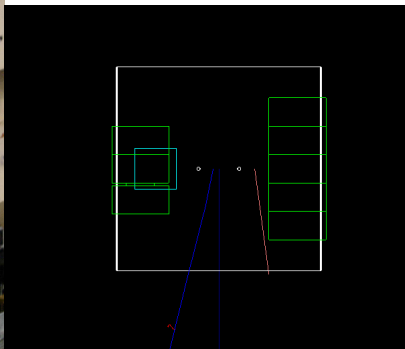
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March 25, 2009

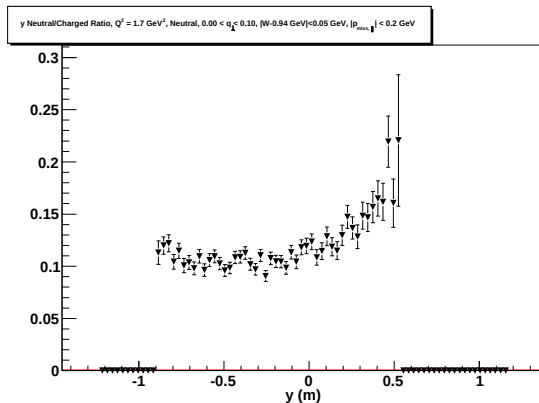
- ▶ Added in more material around target to MC
- ▶ Continuing to evaluate against data

Monte Carlo Developments

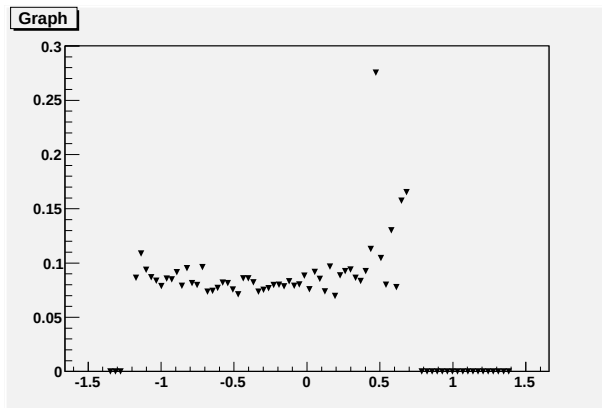
Added target box hole covered with G10 and lead bricks



Had unexplained y dependence in ratio

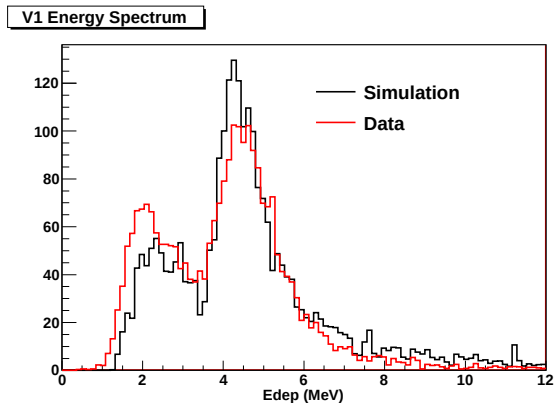


Simulation takes on similar behavior with these additions

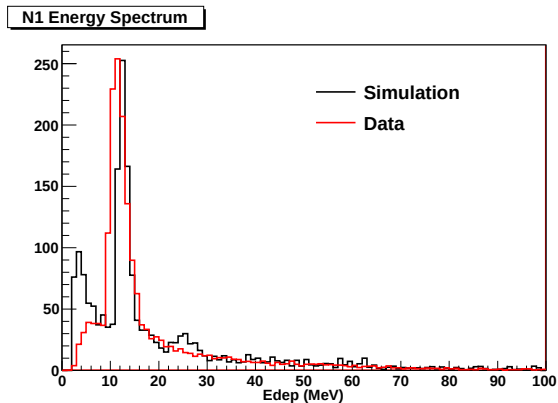


- Energy Deposition looks better

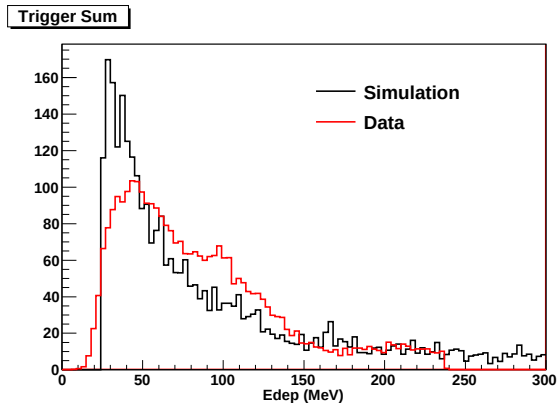
Veto 1:



Neutron Arm Plane 1:



Trigger sums



- ▶ May need correlated background?
- ▶ Still missing Birk and QE

	Data	Sim.
V1 Eff	0.975	0.964
V2 Eff	0.978	0.967
Elas. N1 w/ Any Veto	0.983	0.979
Elas. Cluster w/ Any Veto	0.960	0.982

Monte Carlo Developments

- ▶ ^3He NA response
- ▶ Run without inelastics!!!

	Data	Sim.
Un/Ch (^3He)	0.121 ± 0.001	0.111
Un/Ch (H_2)	0.032 ± 0.001	0.002
n Purity	0.747 ± 0.017	0.781
$\eta_p^{(n)} / \eta_p^{(p)}$	0.032 ± 0.001	0.025
$\eta_n^{(p)} / \eta_p^{(p)}$	0.236 ± 0.210	0.110
$\eta_n^{(n)} / \eta_p^{(p)}$	0.496 ± 0.045	0.464
$\eta_p^{(n)} / \eta_n^{(n)}$	0.064 ± 0.006	0.054
$f = N_p / N_n$	2.15	2.19
n det. eff.	-	0.432
p det. eff.	-	0.477
n/p		0.91

To Do

- ▶ Run with Birk and QE applied to energy deposition
- ▶ Trigger from discriminator sums
- ▶ Run with inelastics
- ▶ Compare to data with various cuts
- ▶ Do for kin3, 2