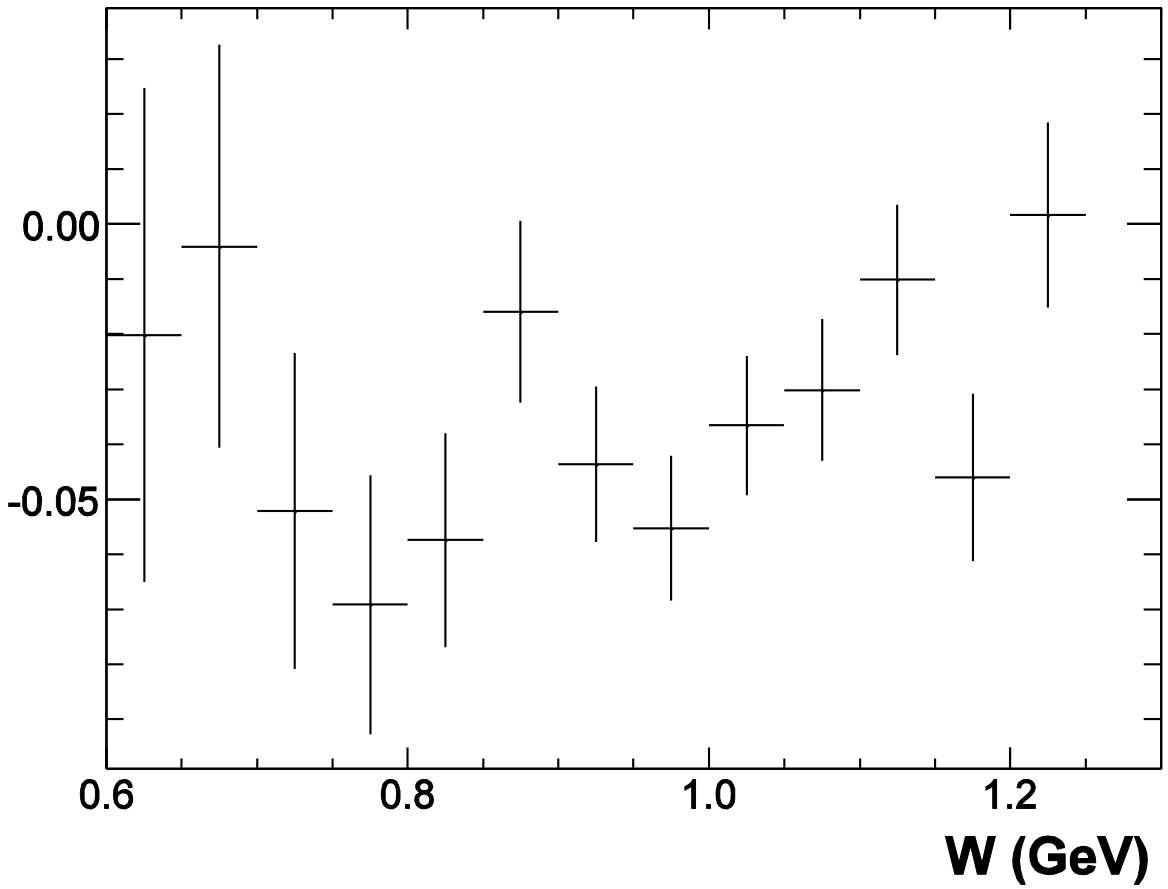
ResultsComparison2

Jon Miller

Asymmetry Versus W



Kinematic 3 Cuts

Name	Preliminary	New Seamus	New Jon
X Fidicual			| x - 0.2 | < 1.8
Y Fidicual			| y + 0.183 | < 0.6
Time/Ppar	-0.4 < Ppar < 0.4	-0.4 < Ppar < 0.4	| t | < 1.0
Invariant Mass	0.7 < W < 1.05	.7 < W < 1.05	| W - 0.825 | < 0.225
Qperp/Pperp	Pperp < 0.15	Pperp < 0.15	Qperp < 0.15
Missing Mass	MM < 2	MM < 2 ??	MM < 2
Beam Trip	NA	????	B Current > 3

Added beam current to the analysis. Also expanded range to get background counts.

Kinematic 3 Purity Factor

Name	Preliminary	New Seamus	New Jon
Hydrogen Ratio	0.016 \pm 0.002	0.016 \pm 0.003	0.019 \pm 0.002
Helium Ratio	0.092 \pm 0.002	0.071 \pm 0.001	0.092 \pm 0.004
Nitrogen Ratio	0.123 \pm 0.028	0.103 \pm 0.018	0.144 \pm 0.025
Dp	0.905 \pm 0.063	0.841 \pm 0.065	0.828 \pm 0.057
Ratio n as p	????	2.247 \pm 2.675	1.376 \pm 1.751
Ratio n as n	0.72 \pm 0.95	0.442 \pm 0.352	0.480 \pm 0.177

I include a change in the nitrogen effective ratio. This drops my Dp by ~0.02. I might also be slightly different in other aspects.

Kinematic 3 Results

Name	Preliminary	New Seamus	New Jon
Araw	-0.026 \pm 0.008	-0.0512 \pm 0.0079	-0.0419 \pm 0.0076
Counts	15325	15467	12009
Pnucl	0.478 \pm 0.020	0.477 \pm 0.021	0.4751 \pm 0.02
Pbeam	0.835 \pm 0.011	0.835 \pm 0.011	0.835 \pm 0.011
Pn	0.86 \pm 0.02	0.86 \pm 0.02	0.86 \pm 0.02
Dback	0.993 \pm 0.004	0.992 \pm 0.004	0.9883 \pm 0.0044
Aback	-0.00046 \pm 0.0008	-0.00003 \pm 0.0007	-0.00004 \pm 0.0044
Dp	0.905 \pm 0.063	0.841 \pm 0.065	0.828 \pm 0.057
Ap	-0.00017 \pm 0.00004	-0.0004 \pm 0.0001	-0.0004 \pm 0.0001
DN2	0.947 \pm 0.006	0.940 \pm 0.008	0.946 \pm 0.001
Aphys	-0.117 \pm 0.036 (0.012)	-0.283 \pm 0.041 (0.031)	-0.167 \pm 0.038 (0.019)

Including beam trips reduces the counts by ~5000.

Kinematic 3 GEn

Name	Preliminary	New Seamus	New Jon
Aphys	-0.117 \pm 0.036 (0.012)	-0.283 \pm 0.041 (0.031)	-0.167 \pm 0.038 (0.019)
T0	0.034	0.041	0.0395
T1	0.721	0.701	0.7104
T2	-0.019	-0.021	-0.0206
T3	-0.432	-0.384	-0.3858
T4	0.011	0.011	0.0109
T5	0.262	0.213	0.2121
Q2	3.47	3.46	3.48
λ	-0.213 \pm 0.057	-0.521 \pm 0.106	-0.302 \pm 0.060 (0.031)
GMn	-0.055 \pm 0.001	-0.055 \pm 0.001	-0.056 \pm 0.001
GEn	0.012 \pm 0.003 (0.001)	0.029 \pm 0.005 (0.004)	0.017 \pm 0.003 (0.002)

Adding beam trips did not change the final by more than 0.0002, the main component of the change has to do with more precise background.