Analysis Progress

for the d_2^n analysis meeting

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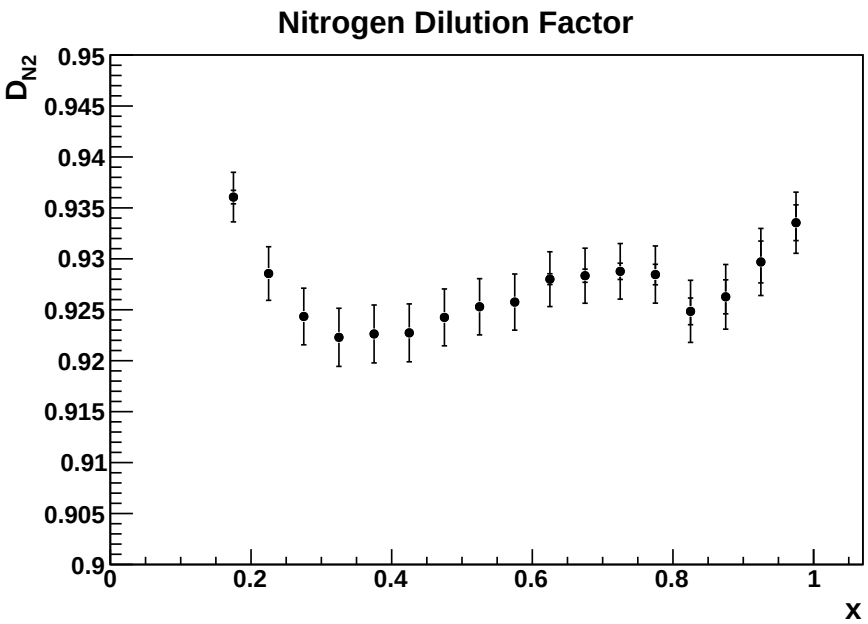
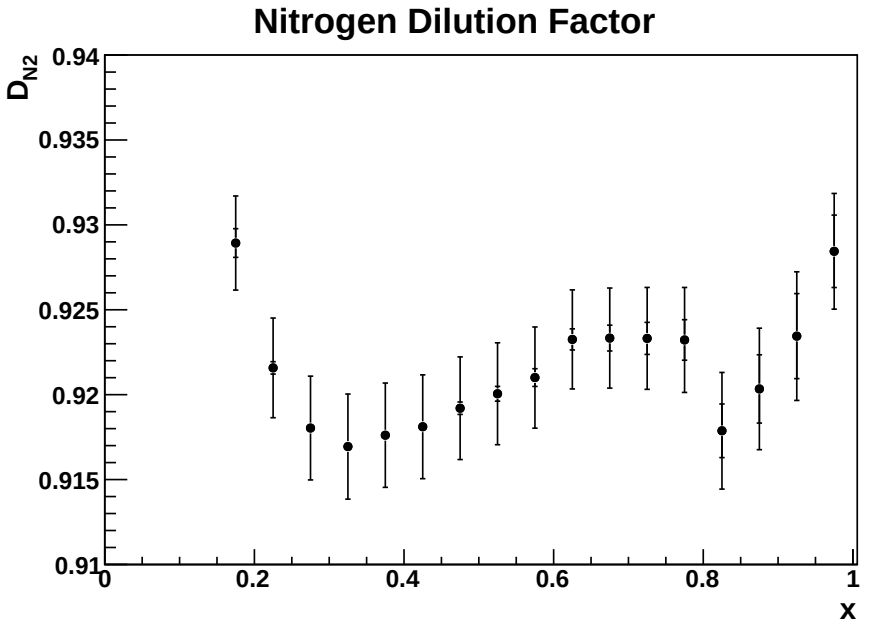
N_2 Dilution Factor

- Last time, Matt noticed a discrepancy in our N_2 dilution factors
- This arose largely from a bug in my code
- My dilution factor did not incorporate Čerenkov cuts
- (My asymmetries did and do)

Previous (no Čerenkov)



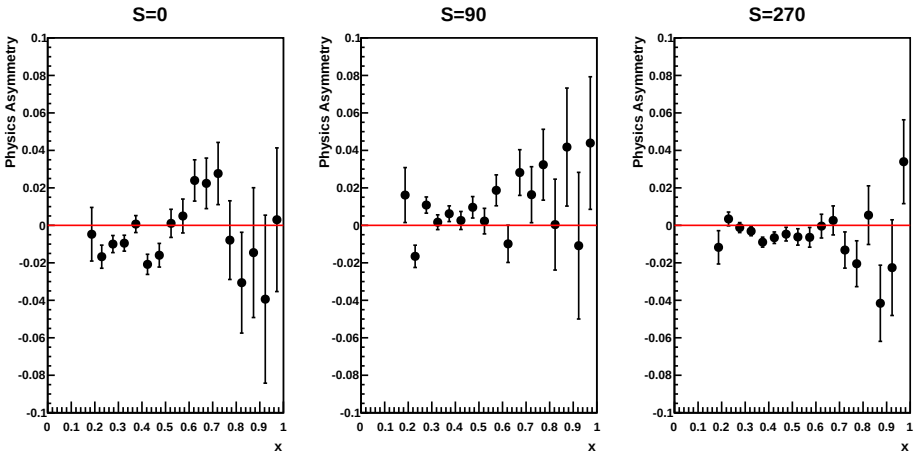
Corrected (with Čerenkov)



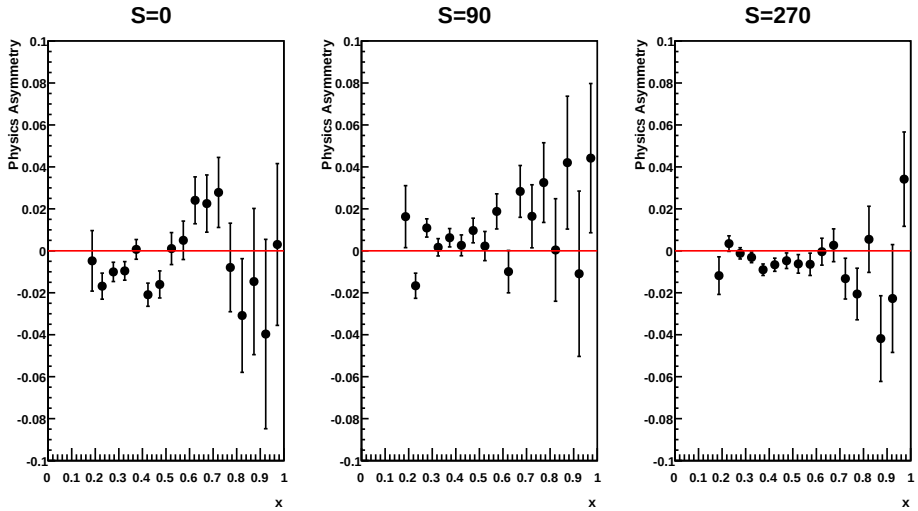
N_2 Dilution Factor (ii)

- This propagates to the physics asymmetry

Wrong

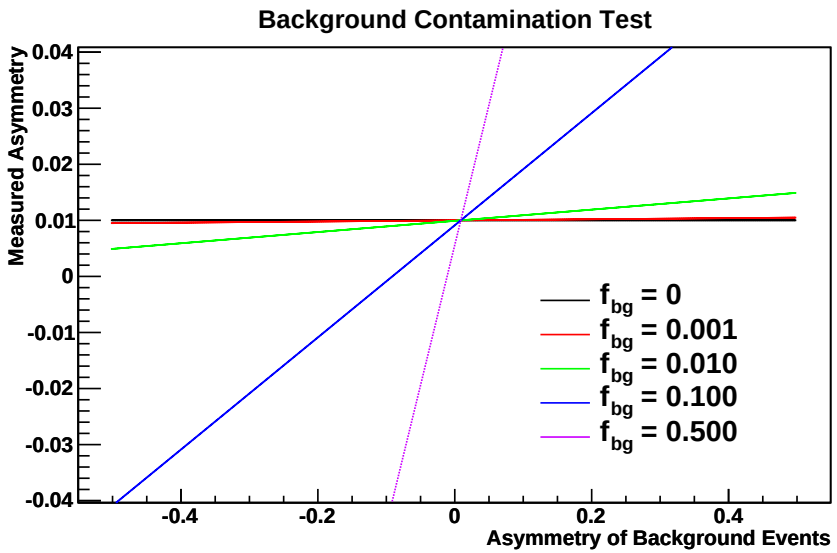


Right



Background Due to Misbinning

- Modeled effect of misbinning on measured asymmetry
- Take 100k electrons with $-$ helicity in the correct bin. Assume that this bin's real asymmetry is 1%.
- Now assume that what you really measure also includes electrons from a different bin with a different asymmetry
- If f_{bg} is the proportion of misbinned electrons in your sample ...



- Model measured asymmetry as $\sim A_{true} + f_{bg}\Delta A_{other}$