

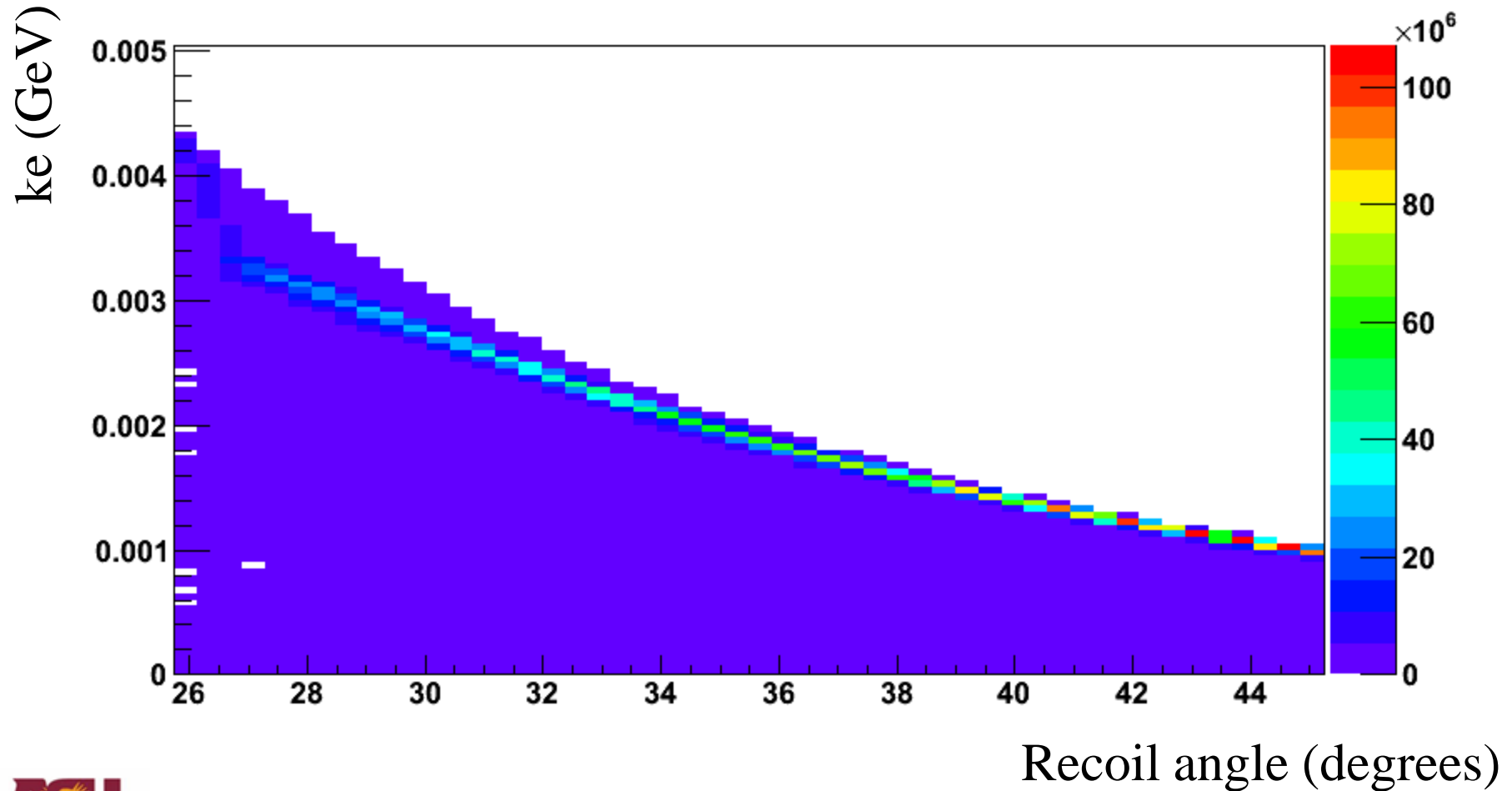
# Preliminary GEANT study of triplet polarimeter

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M. Dugger, October 2011

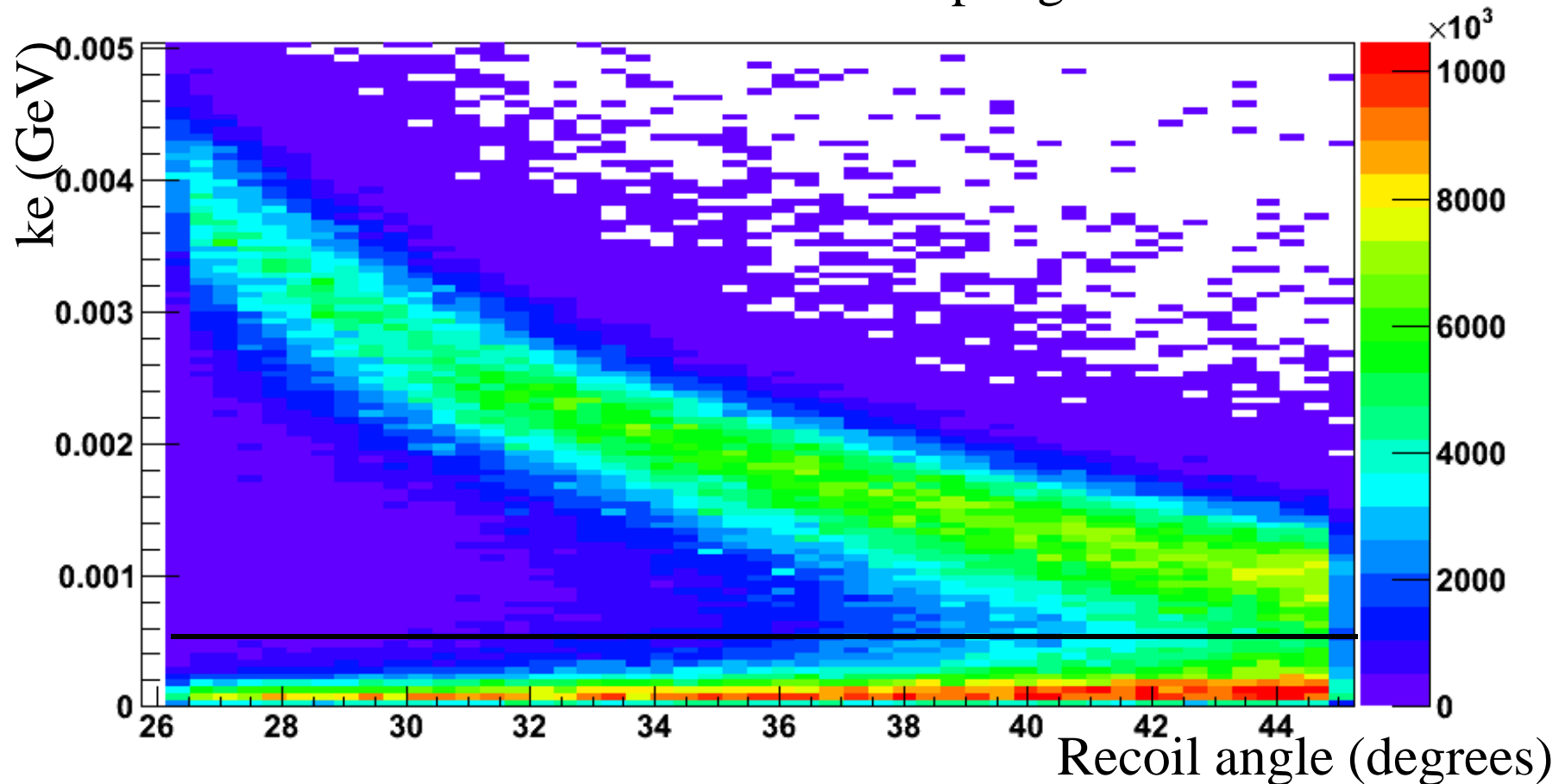


# Generated events with no losses in converter (with matched pairs: within 1 GeV)

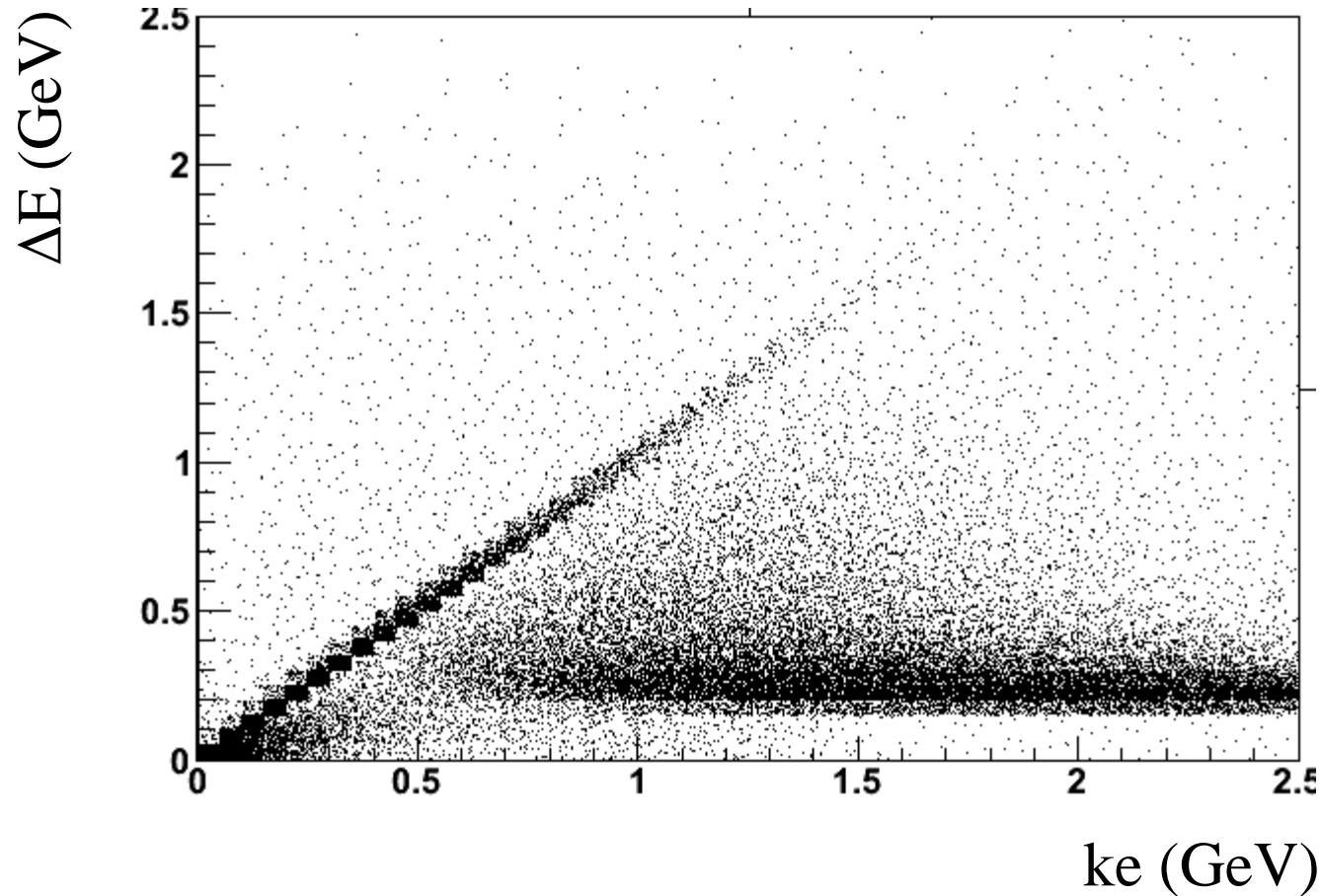


# Generated events with energy losses in converter (carbon: $10^{-4}$ radiation lengths)

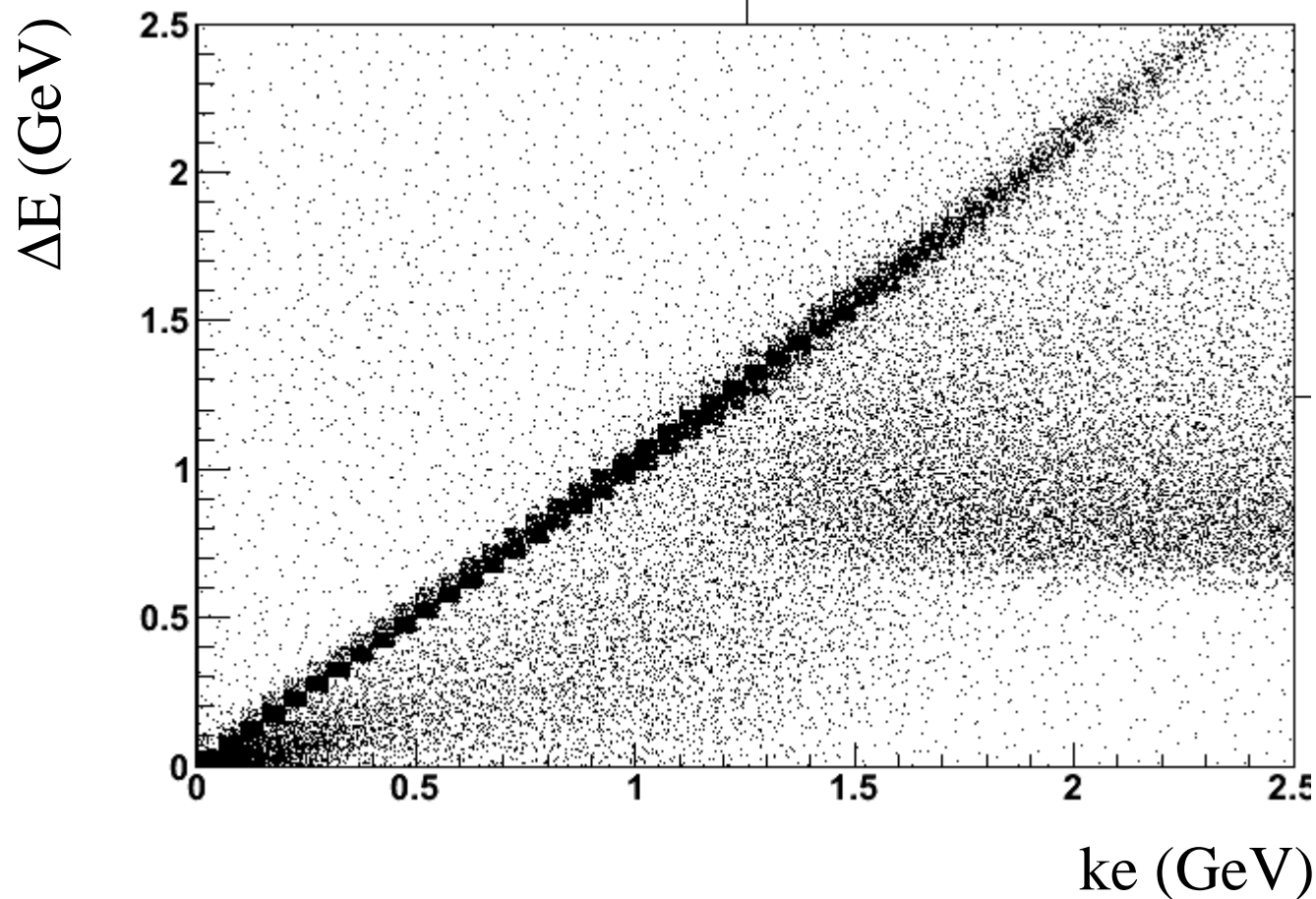
- Would like to make a cut accepting  $ke > 0.5$  MeV



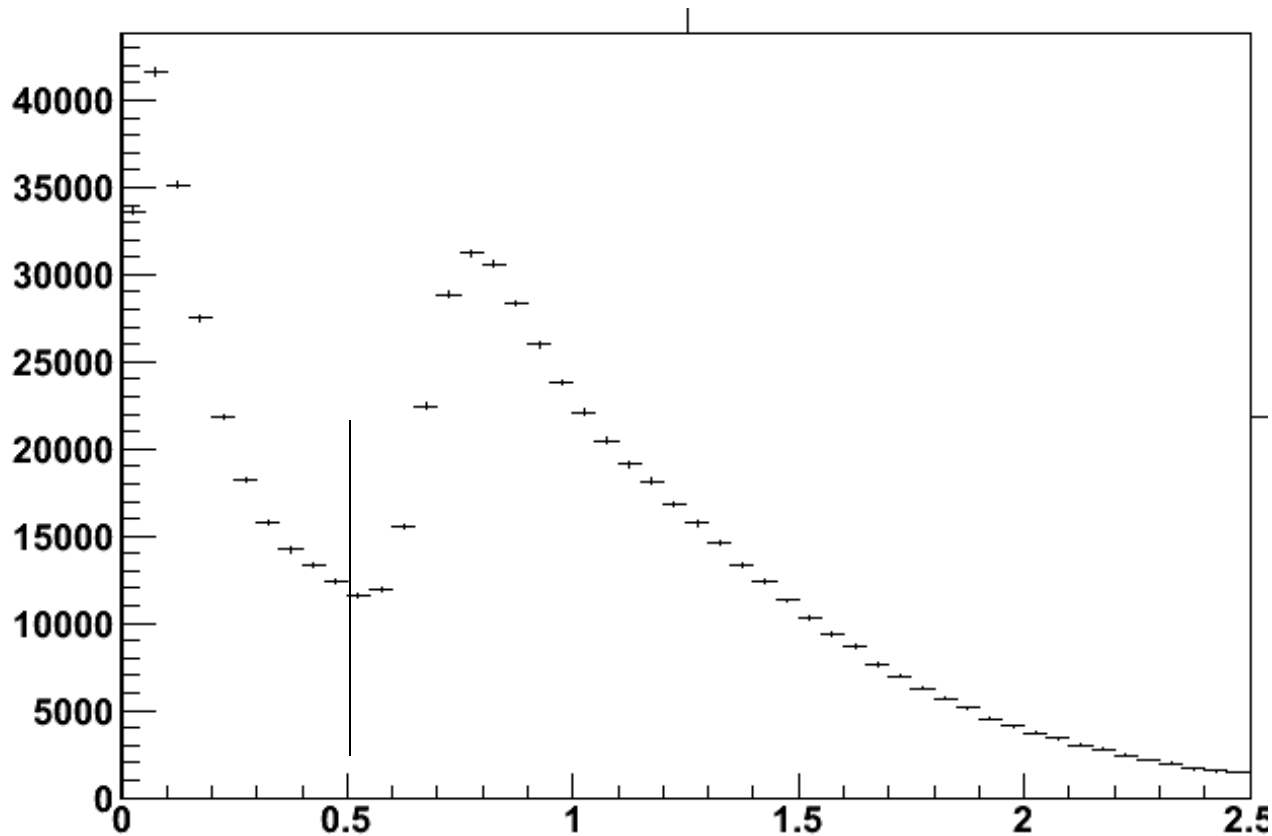
# Energy deposited in 300 micron silicon ring detector versus kinetic energy



# Energy deposited in 1000 micron silicon ring detector versus kinetic energy



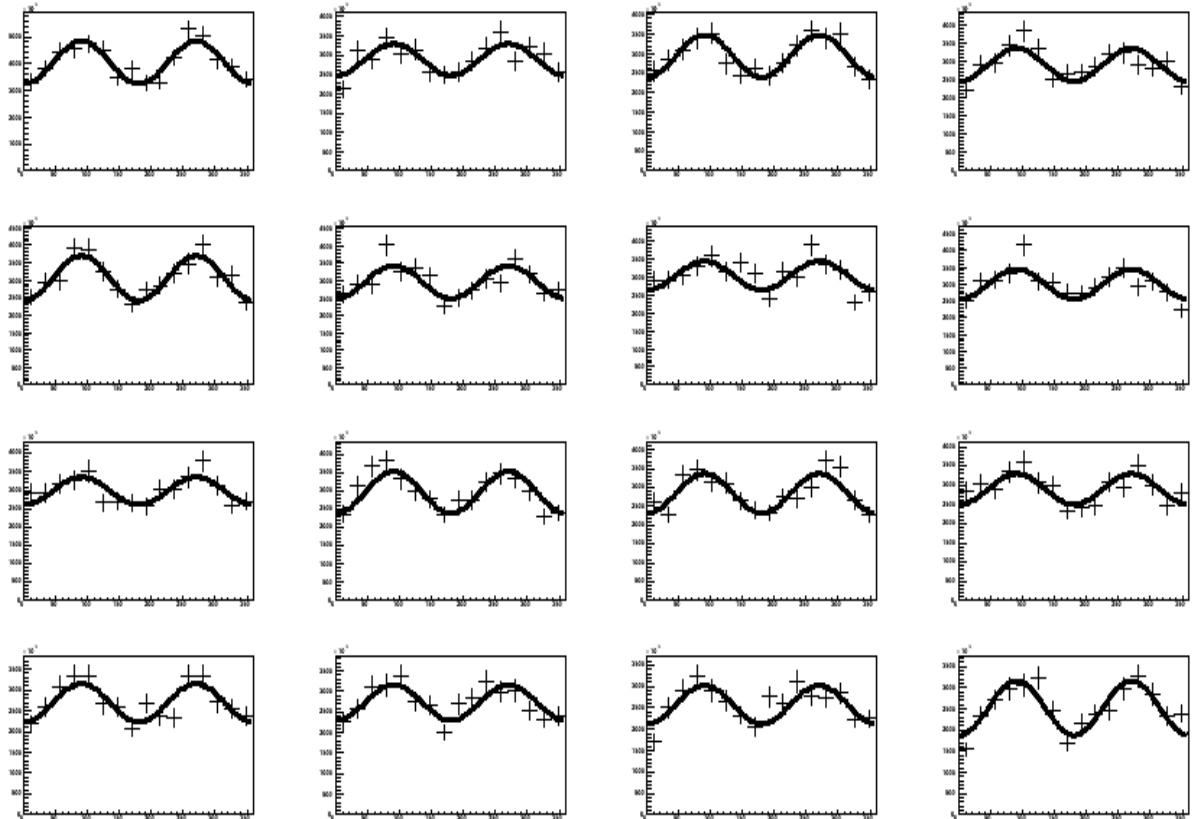
# Energy deposited in 1000 micron silicon



# Sample of triplet asymmetry fits

- No cut on energy deposited

- Fit function:  
 $A[1 + B\cos(2\varphi)]$



# Triplet asymmetry fit results

Zero order fit:

No cut:  $17.1 \pm 0.7 \%$

0.5 MeV cut:  $20.7 \pm 0.9 \%$

