ap_40MeV_posP posP_0 **Entries** 52015 -0.08299Mean 2500 **RMS** 0.2 χ^2 / ndf 3824 / 37 1311±11.5 Constant 2000 Mean -0.03041 ± 0.00072 Sigma 0.09811 ± 0.00087 1500 1000 500 -0.20.2 -0.40.4 0.6

ap_40MeV_loose_posP posP_1 700 **Entries** 4425 -0.003236Mean 0.04173 **RMS** 600 χ^2 / ndf 215.7 / 34 567 ± 12.3 Constant 500 Mean -0.00212 ± 0.00046 Sigma 0.02951 ± 0.00045 400 300 200 100 -0.40.2 0.4 0.6

ap_40MeV_L1L1_posP posP_2 300 **Entries** 1769 Mean -0.003216**RMS** 0.04332 250 χ^2 / ndf 82.17 / 25 Constant 250.3 ± 8.5 -0.002214 ± 0.000656 Mean 200 Sigma 0.02674 ± 0.00063 150 100 50 _0.6 -0.40.2 0.4 0.6

ap_40MeV_L1L2_posP posP_3 **Entries** 407 Mean -0.00190760 **RMS** 0.0341 χ^2 / ndf 22.55 / 19 51.23 ± 3.43 Constant 50 Mean -0.001454 ± 0.001538 Sigma 0.02997 ± 0.00132 40 30 20 10 0.6 -0.6 -0.40.2 0.4 0.6

ap_40MeV_L2L2_posP posP_4 50 **Entries** 304 Mean -9.939e-05 **RMS** 0.03565 χ^2 / ndf 29.77 / 20 40 Constant 39.92 ± 3.36 Mean 0.002118 ± 0.001794 Sigma 0.02745 ± 0.00163 30 20 10 0.6 -0.6 -0.40.2 0.4 0.6

ap_40MeV_L1L1_loose_posP posP_5 **Entries** 2324 350 Mean -0.002951**RMS** 0.04432 χ^2 / ndf 113.3 / 29 300 Constant 313.1 ± 9.4 -0.002269 ± 0.000598 Mean 250 Sigma 0.028 ± 0.001 200 150 100 50 _0.6 -0.40.2 0.4 0.6

ap_40MeV_L1L2_loose_posP posP_6 **Entries** 990 140 Mean -0.002603**RMS** 0.03863 120 χ^2 / ndf 45.44 / 27 116.2 ± 5.1 Constant 100 Mean -0.001879 ± 0.001056 Sigma 0.03239 ± 0.00094 80 60 40 20 0.6 -0.6 -0.40.2 0.4 0.6

ap_40MeV_L2L2_loose_posP posP_7 **Entries** 628 90 Mean -0.004396**RMS** 0.03977 80 χ^2 / ndf 56.5 / 29 80.67 ± 4.78 Constant 70 Mean -0.0005867 ± 0.0011826 Sigma 0.02826 ± 0.00119 60 50 40 30 20 10 0<u></u> −0.6 -0.40.2 0.4 0.6

ap_40MeV_L1L2_loose_extrap_posP posP_8 **Entries** 565 90 Mean -0.00230280 **RMS** 0.03987 χ^2 / ndf 32.12 / 25 70 Constant 65.83 ± 3.94 Mean -0.0006821 ± 0.0014071 60 Sigma 0.03223 ± 0.00133 50 40 30 20 10 -0.40.2 0.4 0.6

ap_40MeV_L2L2_loose_extrap_posP posP_9 **Entries** 443 70 Mean -0.003371**RMS** 0.04049 60 χ^2 / ndf 49.47 / 28 Constant 54.82 ± 4.04 Mean 0.0002595 ± 0.0014641 50 Sigma 0.02864 ± 0.00154 40 30 20 10 _0.6 -0.40.2 0.4 0.6