ap_80MeV_loose_posP posP_0 220 **Entries** 1573 Mean -0.001439200 **RMS** 0.05039 180 χ^2 / ndf 77.8 / 29 Constant 184.8 ± 6.8 160 -0.002168 ± 0.000834 Mean Sigma 140 0.03192 ± 0.00084 120 100 80 60 40 20 0.6 -0.6 -0.40.2 0.4 0.6

ap_80MeV_L1L1_posP posP_1 90 **Entries** 585 0.003172 Mean 80 0.05981 **RMS** χ^2 / ndf 30.77 / 22 70 68.65 ± 4.01 Constant -0.00118 ± 0.00139 Mean 60 Sigma 0.0314 ± 0.0012 50 40 30 20 10 0.6 -0.6 -0.40.2 0.4 0.6

ap_80MeV_L1L2_posP posP_2 **Entries** 37 Mean -0.003763**RMS** 0.0261 6 χ^2 / ndf 4.017 / 9 Constant 4.615 ± 1.107 5 Mean -0.003063 ± 0.006010 Sigma 0.02984 ± 0.00636 4 3 2 -0.4-0.20.2 0.4 0.6

ap_80MeV_L2L2_posP posP_3 **Entries** 23 6 -0.001934Mean 0.02665 **RMS** 5 χ^2 / ndf 7.952 / 7Constant 1.704 ± 0.734 -0.00649 ± 0.03366 Mean 4 Sigma 0.06235 ± 0.08243 3 2 0.6 -0.6 0.2 -0.40.4 0.6

ap_80MeV_L1L1_loose_posP posP_4 140 **Entries** 1003 Mean 0.001159 **RMS** 0.05497 120 χ^2 / ndf 53 / 26 115.1 ± 5.5 Constant 100 Mean -0.002928 ± 0.001074 Sigma 0.03242 ± 0.00111 80 60 40 20 0.6 -0.6 -0.40.2 0.4 0.6

ap_80MeV_L1L2_loose_posP posP_5 30 **Entries** 238 Mean -0.01018**RMS** 0.04081 25 χ^2 / ndf 28 / 20 28.16 ± 2.62 Constant Mean -0.004227 ± 0.002167 20 Sigma 0.03008 ± 0.00198 15 10 5 0.6 -0.6 -0.4-0.20.2 0.4 0.6

ap_80MeV_L2L2_loose_posP posP_6 22 **Entries** 140 20 Mean -0.001426**RMS** 0.03928 18 χ^2 / ndf 18.39 / 18 Constant 17.59 ± 2.15 16 Mean -0.0006961 ± 0.0026247 14 Sigma 0.02785 ± 0.00239 12 10 8 6 4 2 _0.6 -0.20.2 -0.40.4 0.6

ap_80MeV_L1L2_loose_extrap_posP posP_7 **Entries** 143 18 Mean -0.01273**RMS** 0.04044 16 χ^2 / ndf 19.83 / 17 17.08 ± 2.05 Constant 14 Mean -0.004044 ± 0.002775 Sigma 0.02915 ± 0.00249 12 10 8 6 4 2 _0.6 -0.4-0.20.2 0.4 0.6

ap_80MeV_L2L2_loose_extrap_posP posP_8 **Entries** 100 14 Mean -0.0007329**RMS** 0.03385 12 χ^2 / ndf 8.544 / 13 Constant 11.46 ± 1.67 10 Mean 0.009034 ± 0.006132 Sigma 0.03639 ± 0.00597 8 6 4 2 0.6 -0.6 -0.4-0.20.2 0.4 0.6