ap\_28MeV\_loose\_posP posP\_0 250 **Entries** 1644 Mean 0.001172 **RMS** 0.04526  $\chi^2$  / ndf 61.88 / 28 200 Constant  $209.6 \pm 7.1$ Mean  $-0.0009269 \pm 0.0007557$ Sigma  $0.02993 \pm 0.00068$ 150 100 50 0.6 -0.6 -0.40.2 0.4 0.6

ap\_28MeV\_L1L1\_posP posP\_1 100 **Entries** 651 Mean 0.001462 **RMS** 0.04763  $\chi^2$  / ndf 80 26.78 / 24  $88.8 \pm 4.6$ Constant Mean  $-0.001243 \pm 0.001132$ Sigma  $0.02782 \pm 0.00095$ 60 40 20 0.6 -0.6 -0.40.2

0.4

0.6

ap\_28MeV\_L1L2\_posP posP\_2 **Entries** 119 18 Mean -0.003438**RMS** 0.03357 16  $\chi^2$  / ndf 16.16 / 16 Constant  $13.54 \pm 1.98$ 14 Mean  $-0.001144 \pm 0.003111$ Sigma  $0.03036 \pm 0.00334$ 12 10 8 6 4 2 0.6 -0.6 -0.4-0.20.2 0.4 0.6

ap\_28MeV\_L2L2\_posP posP\_3 **Entries** 65 12 Mean 0.005383 **RMS** 0.02854 10  $\chi^2$  / ndf 13.78 / 11  $6.927 \pm 1.290$ Constant Mean  $-0.001148 \pm 0.005297$ 8 Sigma  $0.03089 \pm 0.00477$ 6 4 2 0.6 -0.6 -0.4-0.20.2 0.4 0.6

ap\_28MeV\_L1L1\_loose\_posP posP\_4 **Entries** 962 Mean 0.002588 140 **RMS** 0.04817  $\chi^2$  / ndf 47.49 / 27 120 Constant  $124.3 \pm 5.6$ Mean  $-0.0006926 \pm 0.0009684$ 100 Sigma  $0.02907 \pm 0.00090$ 80 60 40 20 0.6 -0.6 -0.40.2 0.4 0.6

ap\_28MeV\_L1L2\_loose\_posP posP\_5 **Entries** 419 Mean -0.000548750 **RMS** 0.04577  $\chi^2$  / ndf 18.05 / 20 Constant  $49.14 \pm 3.30$ 40 Mean  $-0.001481 \pm 0.001676$ Sigma  $0.03255 \pm 0.00150$ 30 20 10 0.6 -0.6 -0.4-0.20.2 0.4 0.6

ap\_28MeV\_L2L2\_loose\_posP posP\_6 **Entries** 130 25 Mean -0.0002667**RMS** 0.03203  $\chi^2$  / ndf 15.66 / 14 20 Constant  $17.16 \pm 1.99$ Mean  $0.0003473 \pm 0.0025634$ Sigma  $0.02672 \pm 0.00193$ 15 10 5 0.6 -0.6 -0.2-0.40.2 0.4 0.6

ap\_28MeV\_L1L2\_loose\_extrap\_posP posP\_7 **Entries** 171 25 Mean 0.0009126 **RMS** 0.03458  $\chi^2$  / ndf 13.33 / 16 20 Constant  $19.79 \pm 2.11$ Mean  $0.001669 \pm 0.002611$ Sigma  $0.03189 \pm 0.00234$ 15 10 5 -0.6 -0.20.2 -0.40.4 0.6

