

TOF P vs Tracker P, cut 1 (pass) TOF P vs Tracker P, cut 1 (fail) pass_cut 1 fail cut 1 at TOF1 (MeV/c) Entries 32235 BC **Entries** 200.8 Mean x Mean x Mean y Mean y 221.3 at TOF1 RMS x 26.87 RMS x RMS y 25.56 RMS y 120 240 240 100 220 220 80 200 200 60 40 180 180 20 160 160 160 180 200 220 240 260 280 300 160 180 200 220 240 260 280 300 P at TKU (MeV/c) P at TKU (MeV/c)

TOF P vs Tracker P, cut 2 (pass) TOF P vs Tracker P, cut 2 (fail) pass_cut 2 fail cut 2 at TOF1 (MeV/c) Entries 32235 BC **Entries** 200.8 Mean x Mean x Mean y Mean y 221.3 at TOF1 RMS x 26.87 RMS x RMS y 25.56 RMS y 120 240 240 100 220 220 80 200 200 60 40 180 180 20 160 160 160 180 200 220 240 260 280 300 160 180 200 220 240 260 280 300 P at TKU (MeV/c) P at TKU (MeV/c)

TOF P vs Tracker P, cut 3 (pass) TOF P vs Tracker P, cut 3 (fail) pass_cut 3 fail_cut 3 at TOF1 (MeV/c) Entries 31374 BC Entries 861 200.8 Mean x Mean x Mean y 221.3 Mean y at TOF1 RMS x 26.87 RMS x 25.56 RMS y RMS y 0.0 120 240 0.0 240 100 220 220 80 -0.(200 200 60 -0.0 40 180 180 -0.0 20 H_0.(160 160 160 180 200 220 240 260 280 300 160 180 200 220 240 260 280 300 P at TKU (MeV/c) P at TKU (MeV/c)

TOF P vs Tracker P, cut 4 (pass) TOF P vs Tracker P, cut 4 (fail) pass_cut 4 fail_cut 4 at TOF1 (MeV/c) Entries 31374 BC Entries 861 200.8 Mean x Mean x Mean y 221.3 Mean y at TOF1 RMS x 26.87 RMS x 25.56 RMS y RMS y 0.0 120 240 0.0 240 100 220 220 80 -0.(200 200 60 -0.0 40 180 180 -0.0 20 H_0.(160 160 160 180 200 220 240 260 280 300 160 180 200 220 240 260 280 300 P at TKU (MeV/c) P at TKU (MeV/c)

TOF P vs Tracker P, cut 5 (pass) TOF P vs Tracker P, cut 5 (fail) pass_cut 5 fail cut 5 at TOF1 (MeV/c) Entries 32235 BC **Entries** 200.8 Mean x Mean x Mean y Mean y 221.3 at TOF1 RMS x 26.87 RMS x RMS y 25.56 RMS y 120 240 240 100 220 220 80 200 200 60 40 180 180 20 160 160 160 180 200 220 240 260 280 300 160 180 200 220 240 260 280 300 P at TKU (MeV/c) P at TKU (MeV/c)

TOF P vs Tracker P, cut 6 (pass) TOF P vs Tracker P, cut 6 (fail) pass_cut 6 fail cut 6 at TOF1 (MeV/c) Entries 32235 BC **Entries** 200.8 Mean x Mean x Mean y Mean y 221.3 at TOF1 RMS x 26.87 RMS x RMS y 25.56 RMS y 120 240 240 100 220 220 80 200 200 60 40 180 180 20 160 160 160 180 200 220 240 260 280 300 160 180 200 220 240 260 280 300 P at TKU (MeV/c) P at TKU (MeV/c)

TOF P vs Tracker P, cut 7 (pass) TOF P vs Tracker P, cut 7 (fail) fail cut 7 pass_cut 7 at,TOF1 (MeV/c) Entries 31700 535 Entries Mean x 203.7 Mean x 200.7 Mean y Mean y 226.3 221.3 C at TOF1 RMS x 26.88 RMS x 25.6 RMS y 25.56 RMS y 24.93 3.5 120 240 240 100 2.5 220 220 200 200 60 1.5 40 180 180 20 0.5 160 160 160 180 200 220 240 260 280 300 160 180 200 220 240 260 280 300 P at TKU (MeV/c) P at TKU (MeV/c)

TOF P vs Tracker P, cut 8 (pass) TOF P vs Tracker P, cut 8 (fail) fail cut 8 pass_cut 8 at,TOF1 (MeV/c) Entries 32082 30 Entries Mean x 210.7 Mean x 200.8 Mean y Mean y 231.2 221.3 at TOF1 RMS x 26.87 RMS x 28.15 RMS y 25.55 RMS y 25.87 120 240 240 1.2 100 220 220 0.8 200 200 60 0.6 40 180 180 0.4 20 0.2 160 160 160 180 200 220 240 260 280 300 160 180 200 220 240 260 280 300 P at TKU (MeV/c) P at TKU (MeV/c)

TOF P vs Tracker P, cut 9 (pass) TOF P vs Tracker P, cut 9 (fail) pass_cut 9 fail_cut 9 at TOF1 (MeV/c) MeV/c3 08 80 Entries 4533 Entries 200.9 Mean x 199.7 Mean x Mean y Mean y 219.9 221.6 ASTOF1 RMS x 26.14 RMS x 30.94 RMS y 25.11 RMS y 28.1 P at TKU (MeV/c) P at TKU (MeV/c)

TOF P vs Tracker P, cut 10 (pass) TOF P vs Tracker P, cut 10 (fail) pass_cut 10 fail cut 10 at TOF1 (MeV/c) Entries 31374 BC 861 Entries 200.8 Mean x Mean x Mean y 221.3 Mean y at TOF1 RMS x 26.87 RMS x 25.56 RMS y RMS y 0.0 120 240 0.0 240 100 220 220 80 -0.(200 200 60 -0.0 40 180 180 -0.0 20 H_0.(160 160 160 180 200 220 240 260 280 300 160 180 200 220 240 260 280 300 P at TKU (MeV/c) P at TKU (MeV/c)

TOF P vs Tracker P, cut 11 (pass) TOF P vs Tracker P, cut 11 (fail) pass_cut 11 fail cut 11 at,TOF1 (MeV/c) 300 300 80 80 Entries 31021 Entries 1214 Mean x 200.7 Mean x 205 Mean y 221.3 **C** Mean y 227.2 at TOF1 RMS x 26.53 RMS x 26.87 RMS y 25.55 RMS y 25.39 3.5 120 240 240 100 2.5 220 220 200 200 60 1.5 40 180 180 20 0.5 160 160 160 180 200 220 240 260 280 300 160 180 200 220 240 260 280 300 P at TKU (MeV/c) P at TKU (MeV/c)

TOF P vs Tracker P, cut 12 (pass) TOF P vs Tracker P, cut 12 (fail) pass_cut 12 fail_cut 12 at TOF1 (MeV/c) MeV/c3 08 80 Entries 5500 Entries 200.9 Mean x 200.1 Mean x Mean y Mean y 220.4 221.5 ASTOF1 RMS x 26.14 RMS x 30.7 RMS y 25.1 RMS y 28.02 P at TKU (MeV/c) P at TKU (MeV/c)

TOF P vs Tracker P, cut 13 (pass) TOF P vs Tracker P, cut 13 (fail) pass_cut 13 fail_cut 13 at TOF1 (MeV/c) MeV/c3 08 80 Entries 6418 Entries Mean x 201.5 Mean x 200.6 Mean y 221.4 Mean y at TOF1 RMS x 25.88 IC RMS x 31.17 RMS y 25.09 RMS y 27.68 P at TKU (MeV/c) P at TKU (MeV/c)

TOF P vs Tracker P, cut 14 (pass) TOF P vs Tracker P, cut 14 (fail) pass_cut 14 fail_cut 14 at TOF1 (MeV/c) MeV/c3 08 80 Entries 6418 Entries Mean x 201.5 Mean x 200.6 Mean y 221.4 Mean y at TOF1 RMS x 25.88 IC RMS x 31.17 RMS y 25.09 RMS y 27.68 P at TKU (MeV/c) P at TKU (MeV/c)