Momentum range [0.20, 0.25] GeV hist_pion_0 22169 - Pion -1.086- Kaon 2.041 500 **Proton** 400 300 200 100

Momentum range [0.25, 0.30] GeV hist_pion_1 2500 67662 Pion -1.453 Kaon 1.326 **Proton** 2000 1500 1000 500

0 3

Momentum range [0.30, 0.35] GeV hist_pion_2 121503 Pion 4000 -0.6855 Kaon 1.192 3500 **Proton** 3000 2500 2000 1500 1000 500

Momentum range [0.35, 0.40] GeV hist_pion_3 218070 Pion -0.2236 5000 Kaon 1.025 **Proton** 4000 3000 2000 1000

Momentum range [0.40, 0.45] GeV hist_pion_4 369873 Pion 0.02705 Kaon 6000 0.8403 **Proton** 5000 4000 3000 2000 1000

Momentum range [0.45, 0.50] GeV hist_pion_5 16000 603495 Pion 0.03222 Kaon 14000 0.7146 **Proton** 12000 10000 8000 6000 4000 2000

Momentum range [0.50, 0.55] GeV hist_pion_6 40000 994621 Pion .05753 Kaon 35000 0.6153 **Proton** 30000 25000 20000 15000 10000 5000

Momentum range [0.55, 0.60] GeV hist_pion_7 525060 Pion 80000 0.04371 Kaon 0.556 70000 **Proton** 60000 50000 40000 30000 20000 10000

Momentum range [0.60, 0.65] GeV 140 × 10³ hist_pion_8 221261 Pion þ.03024 Kaon 0.5264 120 **Proton** 100 80 60 40 20 0 3

Momentum range [0.65, 0.70] GeV $\times 10^3$ hist_pion_9 180 707107 Pion 0.02781 Kaon 160 0.495 **Proton** 140 120 100 80 60 40 20

Momentum range [0.70, 0.75] GeV $\times 10^3$ hist_pion_10 004530 Pion 200 0.03321 Kaon 0.4739 180 **Proton** 160 140 120 100 80 60 40 20 0 = 3

Momentum range [0.75, 0.80] GeV $\times 10^3$ hist_pion_11 Pion þ.03617 Kaon 0.4629 **Proton**

Momentum range [0.80, 0.85] GeV $\times 10^3$ hist_pion_12 301055 Pion 220 0.04298 Kaon 0.4545 200 **Proton** 180 160 140 120 100 80 60 40 20 0^L

Momentum range [0.85, 0.90] GeV $\times 10^3$ hist_pion_13 324810 Pion 220 0.05249 Kaon 0.4675 200 **Proton** 180 160 140 120 100 80 60 40 20 0[□]

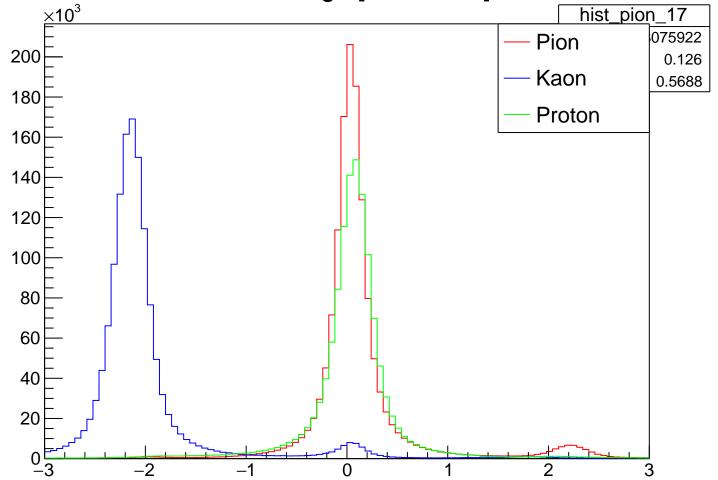
Momentum range [0.90, 0.95] GeV $\times 10^3$ hist_pion_14 Pion 0.08512 Kaon 0.536 **Proton**

Momentum range [0.95, 1.00] GeV $\times 10^3$ hist_pion_15 Pion 0.1144 Kaon 0.5846 **Proton**

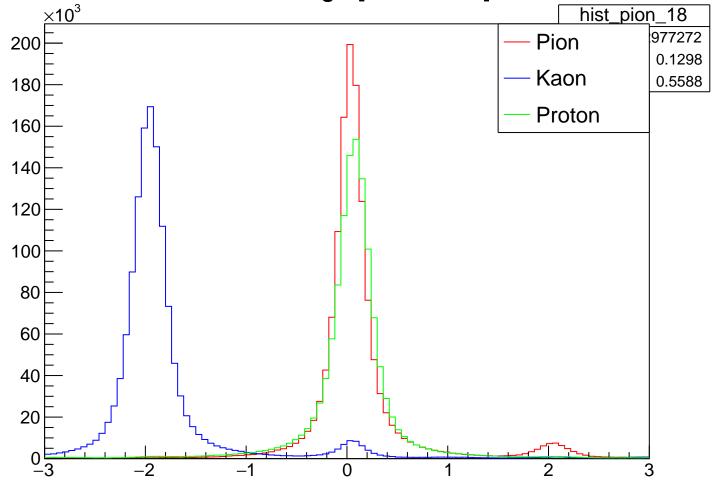
Momentum range [1.00, 1.05] GeV 220 × 10³ hist_pion_16 167427 Pion 0.1249 200 Kaon 0.5787 180 **Proton** 160 140 120 100 80 60 40 20

0 5

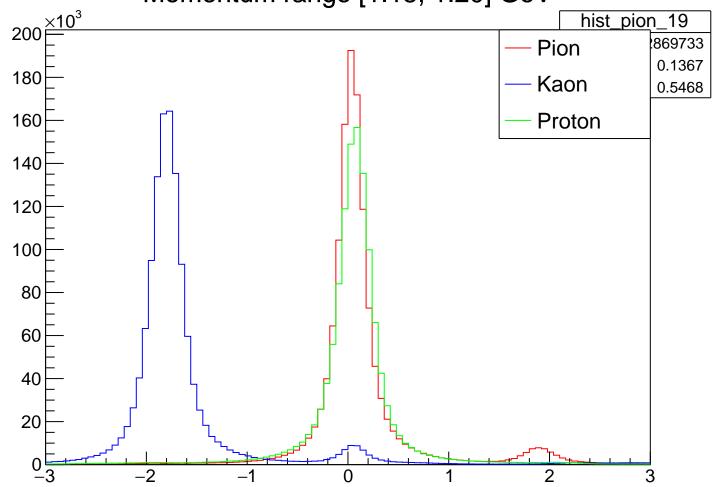
Momentum range [1.05, 1.10] GeV



Momentum range [1.10, 1.15] GeV

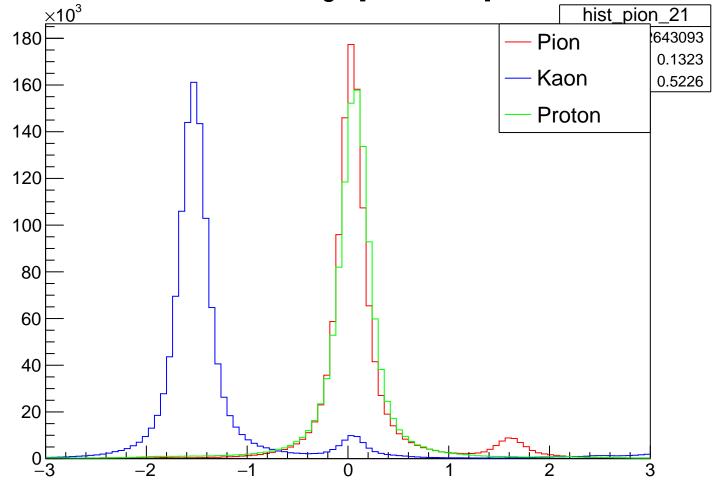


Momentum range [1.15, 1.20] GeV



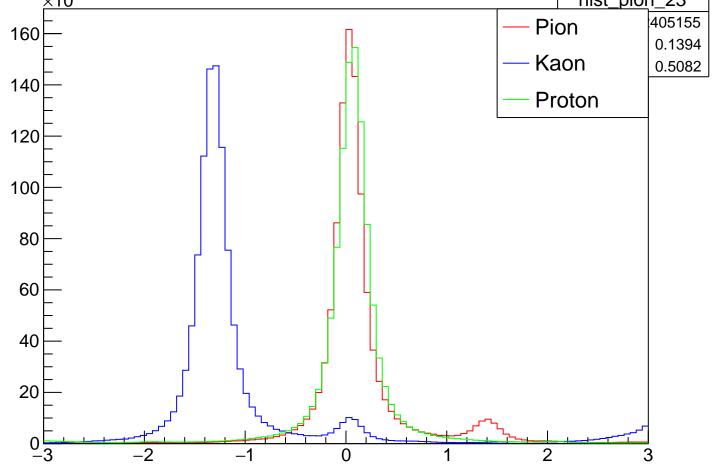
Momentum range [1.20, 1.25] GeV $\times 10^3$ hist_pion_20 758660 Pion 180 0.1359 Kaon 0.5327 160 **Proton** 140 120 100 80 60 40 20

Momentum range [1.25, 1.30] GeV



Momentum range [1.30, 1.35] GeV $\times 10^3$ hist_pion_22 522132 Pion 0.135 160 Kaon 0.5151 **Proton** 140 120 100 80 60 40 20

Momentum range [1.35, 1.40] GeV $\times 10^3$ hist_pion_23 405155 Pion 160 0.1394 Kaon 0.5082 140 **Proton** 120 100 80 60 40



Momentum range [1.40, 1.45] GeV 160 ×10³ hist_pion_24 Pion 288521 0.1432 Kaon 140 0.5043 **Proton** 120 100 80 60 40 20

0-3

Momentum range [1.45, 1.50] GeV $\times 10^3$ hist_pion_25 168959 Pion 0.1458 140 Kaon 0.5072 **Proton** 120 100 80 60 40 20

Momentum range [1.50, 1.55] GeV $\times 10^3$ hist_pion_26 052045 Pion 140 0.1519 Kaon 0.5152 120 **Proton** 100 80 60 40 20

Momentum range [1.55, 1.60] GeV $\times 10^3$ hist_pion_27 941605 Pion 0.1618 Kaon 120 0.5412 **Proton** 100 80 60 40 20

Momentum range [1.60, 1.65] GeV $\times 10^3$ hist_pion_28 832500 Pion 0.1853 120 Kaon 0.5883 **Proton** 100 80 60 40 20 0 5

Momentum range [1.65, 1.70] GeV $\times 10^3$ hist_pion_29 726369 Pion 120 0.2408 Kaon 0.6921 100 **Proton** 80 60 40 20 0 5

Momentum range [1.70, 1.75] GeV $\times 10^3$ hist_pion_30 626690 Pion 0.4208 Kaon 0.9401 100 **Proton** 80 60 40 20

Momentum range [1.75, 1.80] GeV $\times 10^3$ hist_pion_31 530603 Pion 0.8532 100 Kaon 1.261 **Proton** 80 60 40 20

Momentum range [1.80, 1.85] GeV ×10³ hist_pion_32 437904 Pion 100 1.214 Kaon 1.359 **Proton** 80 60 40 20 0_3

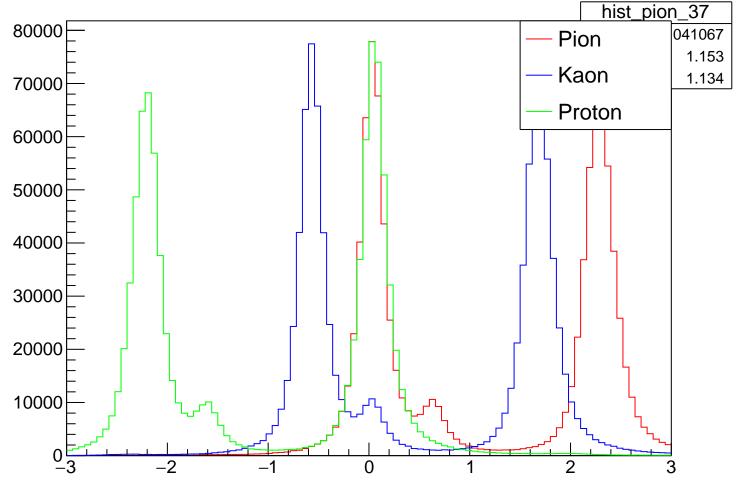
Momentum range [1.85, 1.90] GeV 100 ×10³ hist_pion_33 349236 Pion 1.324 Kaon 1.334 **Proton** 80 60 40 20 0_3

Momentum range [1.90, 1.95] GeV hist_pion_34 263485 Pion 90000 1.308 Kaon 1.284 80000 **Proton** 70000 60000 50000 40000 30000 20000 10000

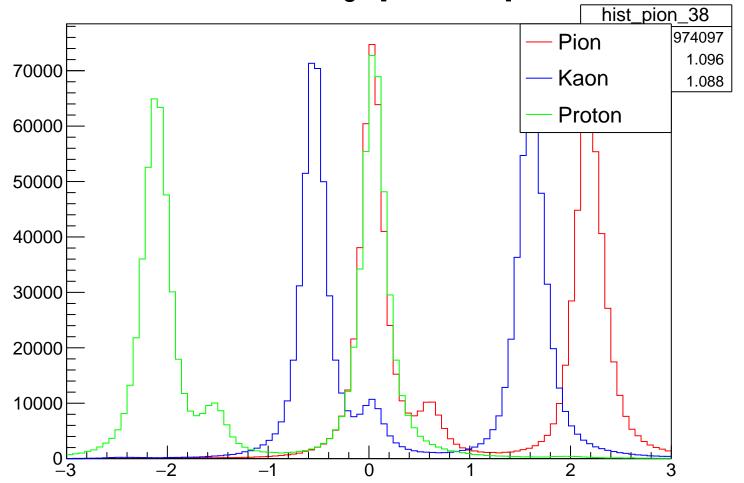
Momentum range [1.95, 2.00] GeV hist_pion_35 90000 183443 Pion 1.265 80000 Kaon 1.231 **Proton** 70000 60000 50000 40000 30000 20000 10000

Momentum range [2.00, 2.05] GeV hist_pion_36 110772 Pion 80000 1.209 Kaon 1.181 70000 **Proton** 60000 50000 40000 30000 20000 10000

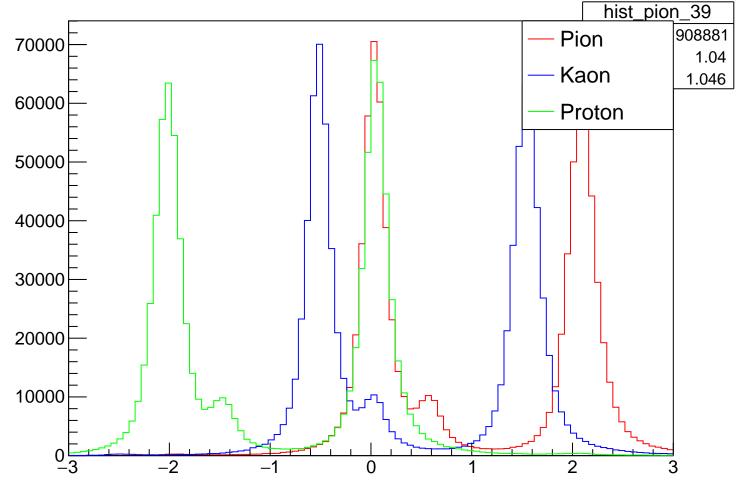
Momentum range [2.05, 2.10] GeV



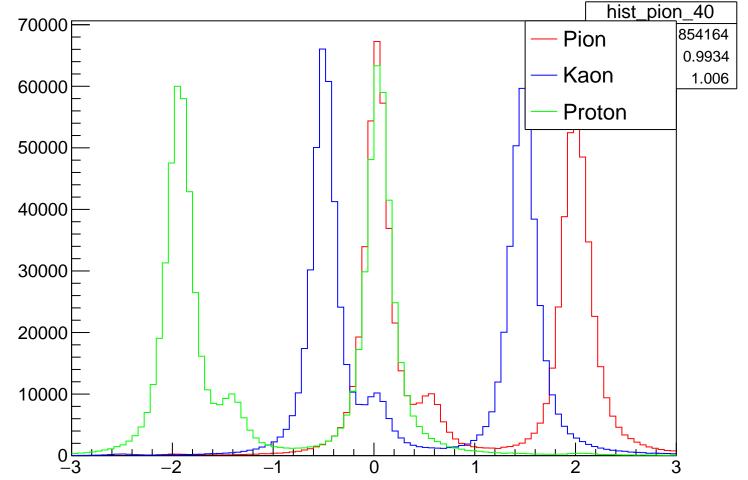
Momentum range [2.10, 2.15] GeV



Momentum range [2.15, 2.20] GeV



Momentum range [2.20, 2.25] GeV



Momentum range [2.25, 2.30] GeV hist_pion_41 796299 Pion 0.94 60000 Kaon 0.9685 **Proton** 50000 40000 30000 20000 10000

Momentum range [2.30, 2.35] GeV hist_pion_42 Pion 747442 60000 0.8971 Kaon 0.9326 **Proton** 50000 40000 30000 20000 10000

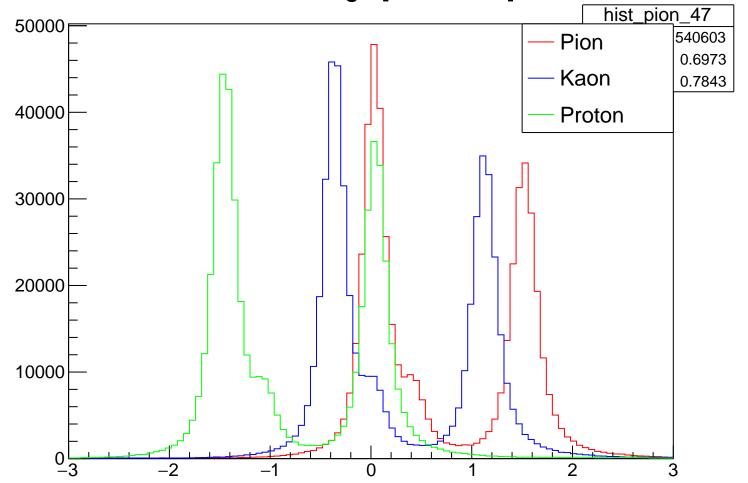
Momentum range [2.35, 2.40] GeV hist_pion_43 60000 699282 Pion 0.8543 Kaon 0.9001 50000 **Proton** 40000 30000 20000 10000

Momentum range [2.40, 2.45] GeV hist_pion_44 653883 Pion 0.8128 Kaon 50000 0.8688 **Proton** 40000 30000 20000 10000

Momentum range [2.45, 2.50] GeV hist_pion_45 613853 Pion 0.7685 50000 Kaon 0.8384 **Proton** 40000 30000 20000 10000

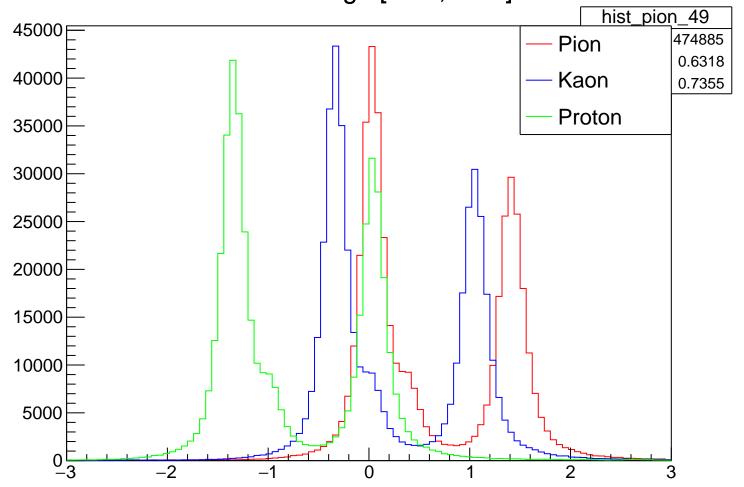
Momentum range [2.50, 2.55] GeV hist_pion_46 574733 50000 Pion 0.732 Kaon 0.811 **Proton** 40000 30000 20000 10000

Momentum range [2.55, 2.60] GeV



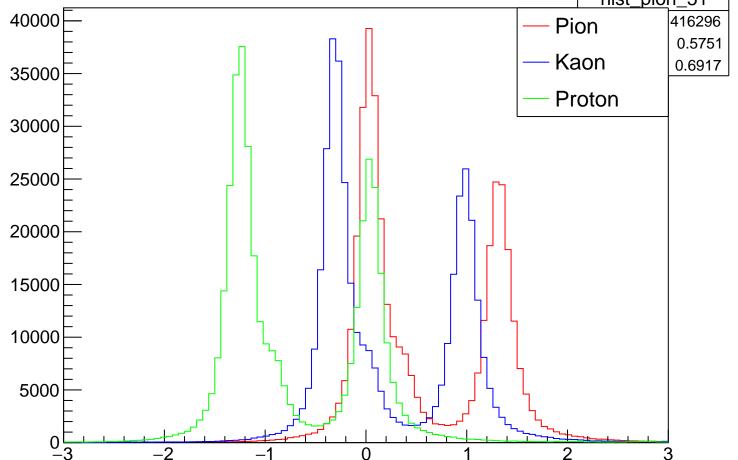
Momentum range [2.60, 2.65] GeV hist_pion_48 506545 Pion 45000 0.6657 Kaon 0.7612 40000 **Proton** 35000 30000 25000 20000 15000 10000 5000

Momentum range [2.65, 2.70] GeV



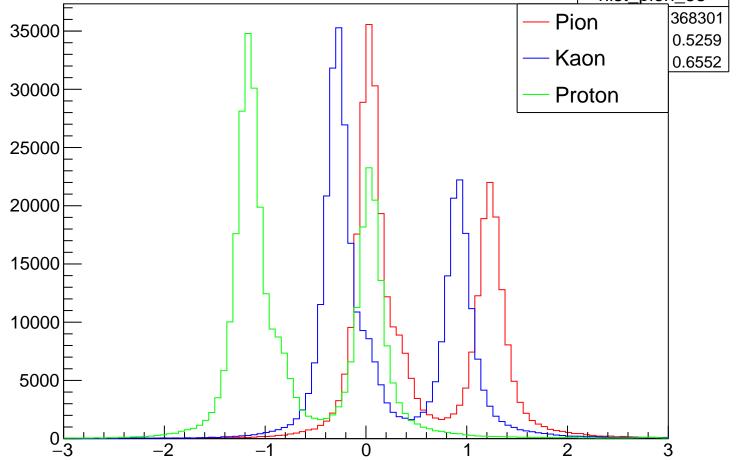
Momentum range [2.70, 2.75] GeV hist_pion_50 445287 Pion 40000 0.6053 Kaon 0.7146 35000 **Proton** 30000 25000 20000 15000 10000 5000

Momentum range [2.75, 2.80] GeV hist_pion_51 416296 Pion 0.5751 Kaon 0.6917 **Proton**

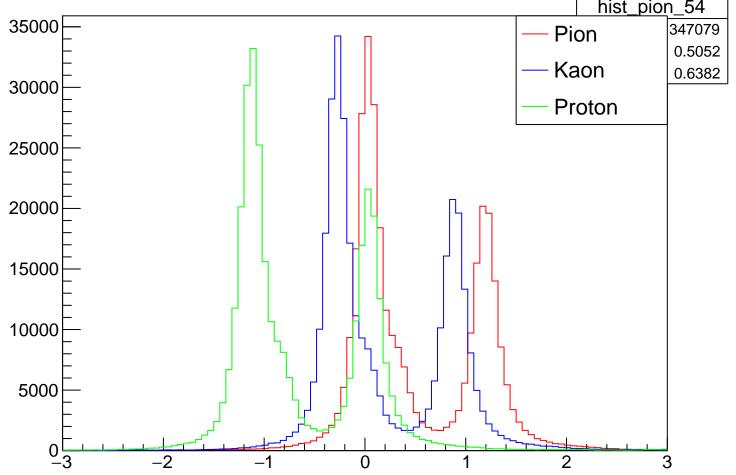


Momentum range [2.80, 2.85] GeV hist_pion_52 392431 Pion 0.5506 35000 Kaon 0.6742 **Proton** 30000 25000 20000 15000 10000 5000

Momentum range [2.85, 2.90] GeV hist_pion_53 368301 Pion 0.5259 Kaon 0.6552 **Proton**



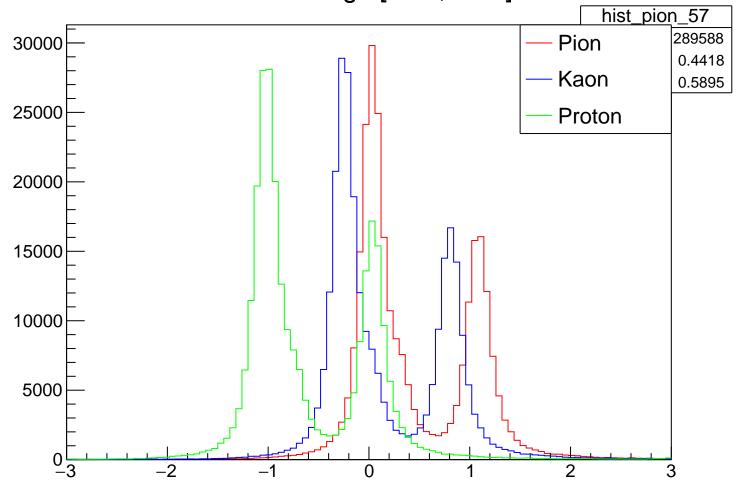
Momentum range [2.90, 2.95] GeV hist_pion_54 347079 Pion 0.5052 Kaon 0.6382 **Proton**



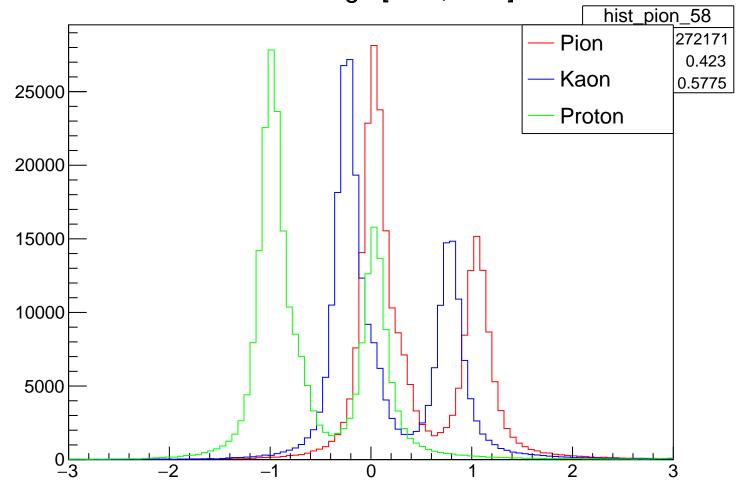
Momentum range [2.95, 3.00] GeV hist_pion_55 325912 Pion 0.4809 Kaon 30000 0.6202 **Proton** 25000 20000 15000 10000 5000

Momentum range [3.00, 3.05] GeV hist_pion_56 308594 Pion 30000 0.4586 Kaon 0.604 **Proton** 25000 20000 15000 10000 5000

Momentum range [3.05, 3.10] GeV



Momentum range [3.10, 3.15] GeV

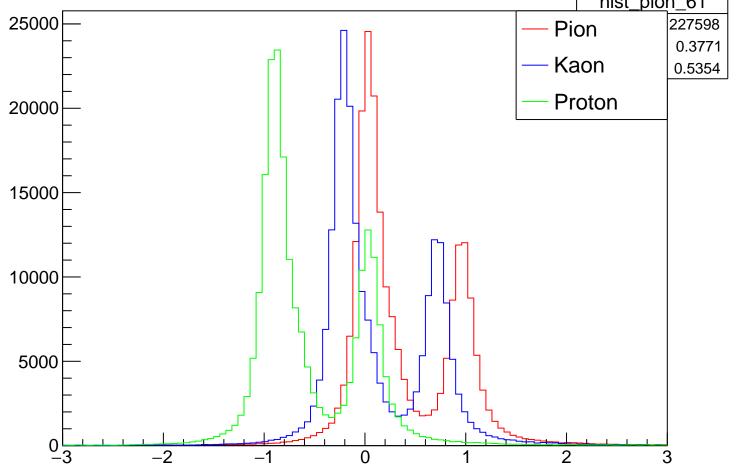


Momentum range [3.15, 3.20] GeV hist_pion_59 257882 Pion 0.4087 25000 Kaon 0.5605 **Proton** 20000 15000 10000 5000

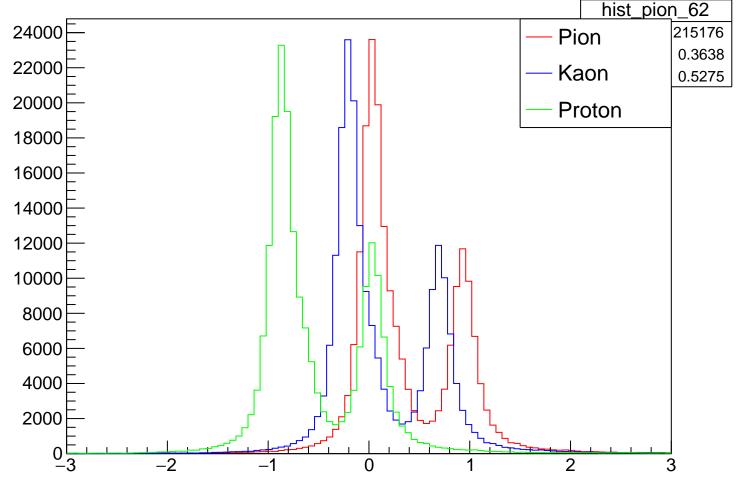
0 2

Momentum range [3.20, 3.25] GeV hist_pion_60 241944 Pion 25000 0.3912 Kaon 0.5502 **Proton** 20000 15000 10000 5000 0

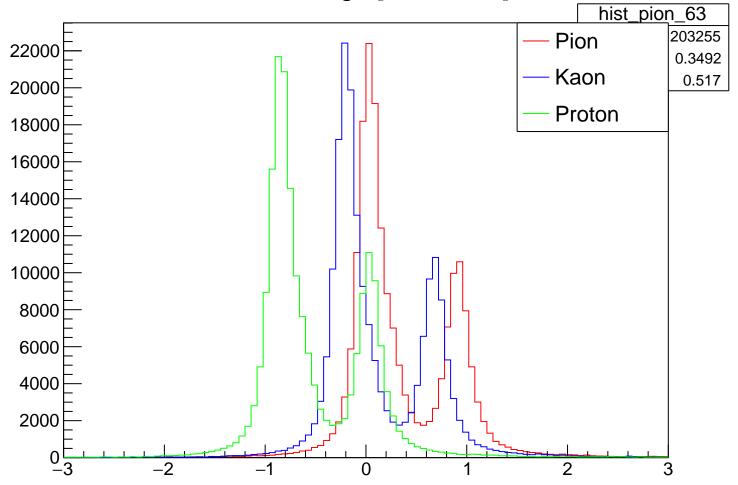
Momentum range [3.25, 3.30] GeV hist_pion_61 227598 Pion 0.3771 Kaon 0.5354 **Proton**



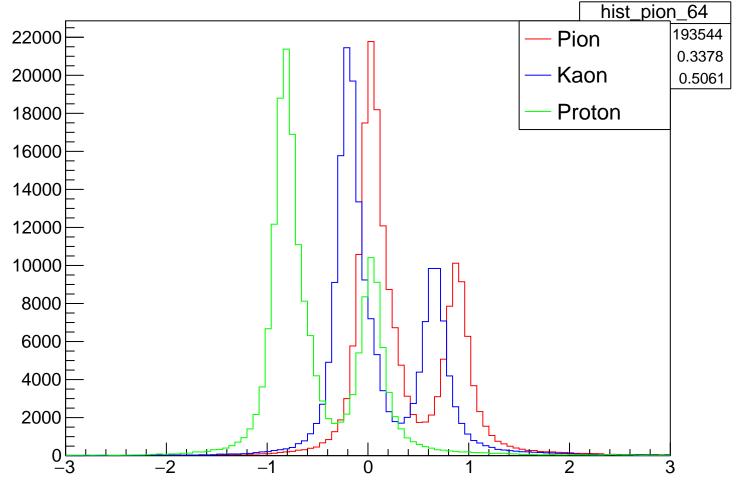
Momentum range [3.30, 3.35] GeV



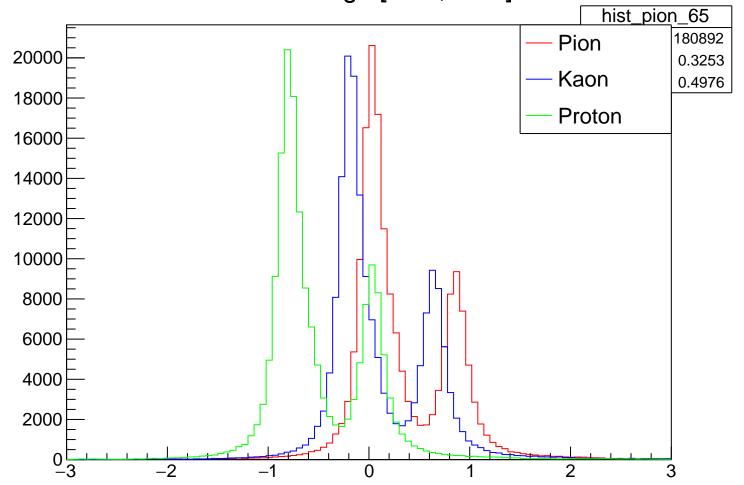
Momentum range [3.35, 3.40] GeV



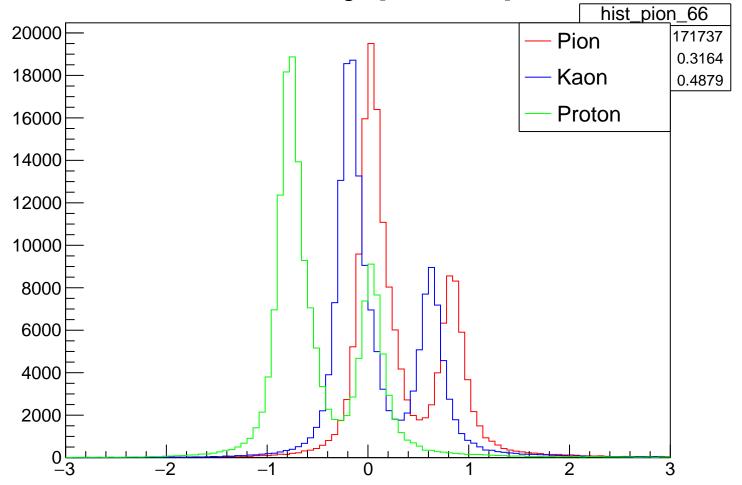
Momentum range [3.40, 3.45] GeV



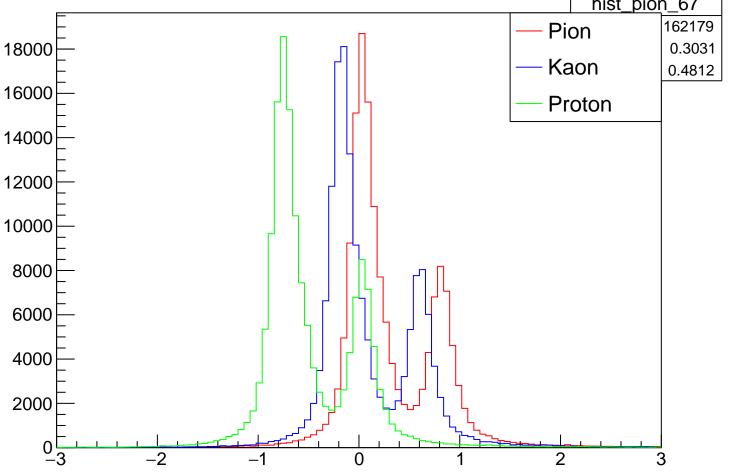
Momentum range [3.45, 3.50] GeV



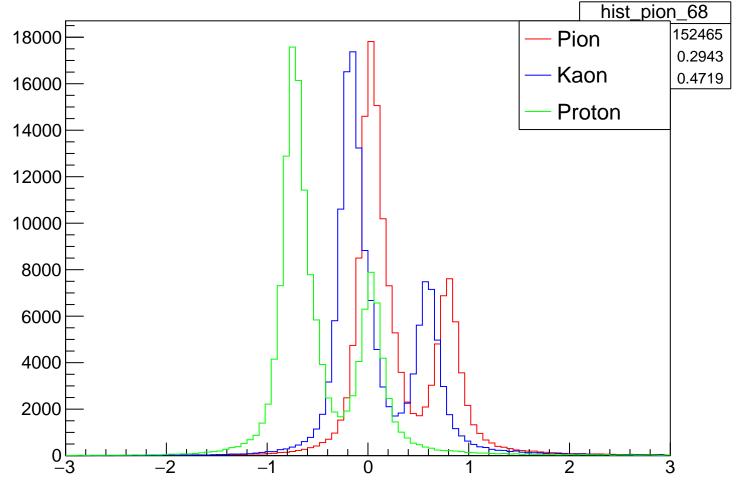
Momentum range [3.50, 3.55] GeV



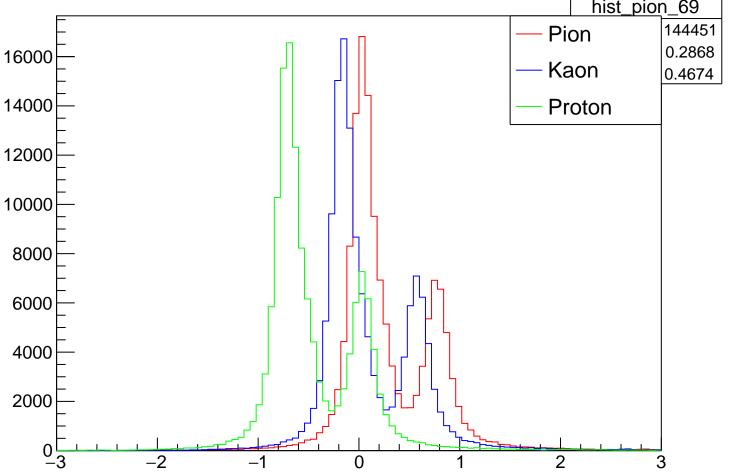
Momentum range [3.55, 3.60] GeV hist_pion_67 162179 Pion 0.3031 Kaon 0.4812 **Proton**



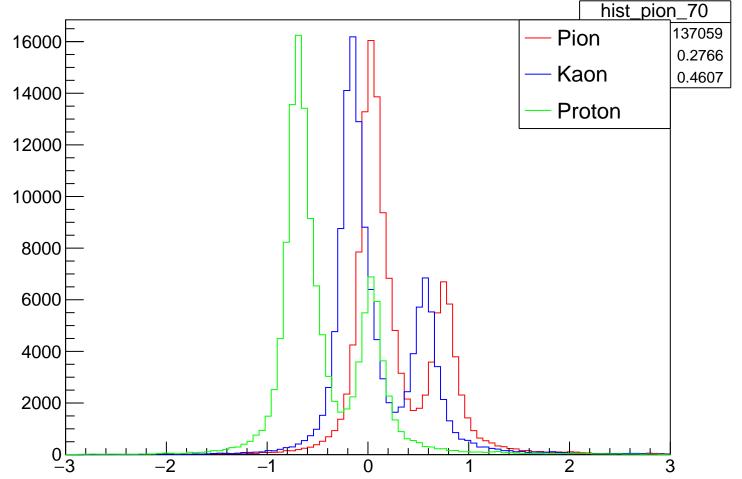
Momentum range [3.60, 3.65] GeV



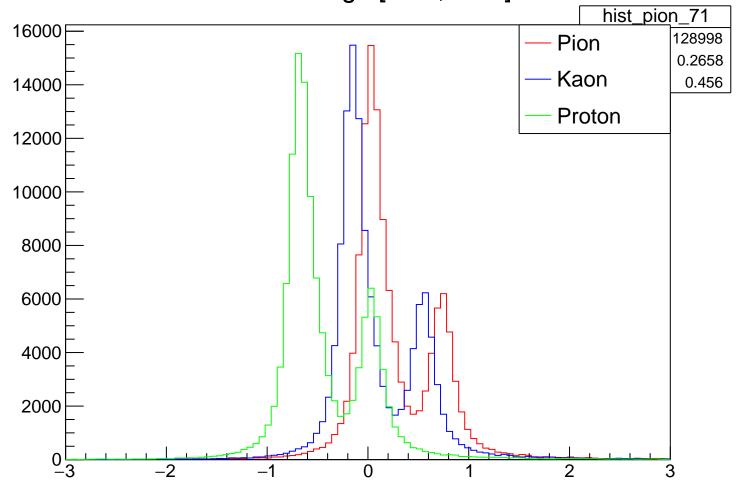
Momentum range [3.65, 3.70] GeV hist_pion_69 144451 Pion 0.2868 Kaon 0.4674 **Proton**



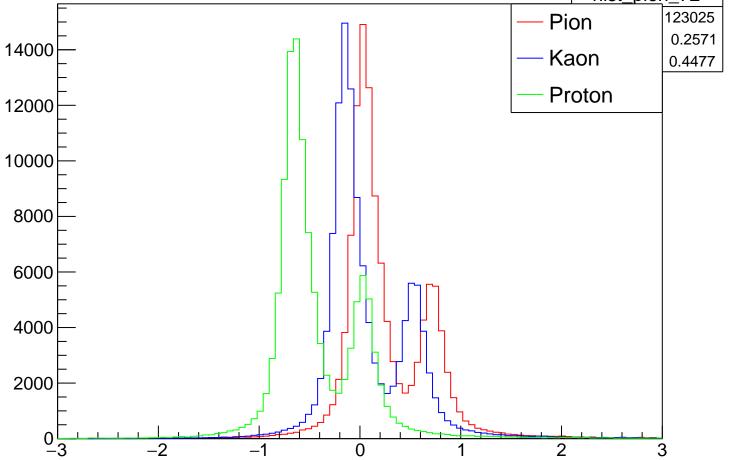
Momentum range [3.70, 3.75] GeV



Momentum range [3.75, 3.80] GeV



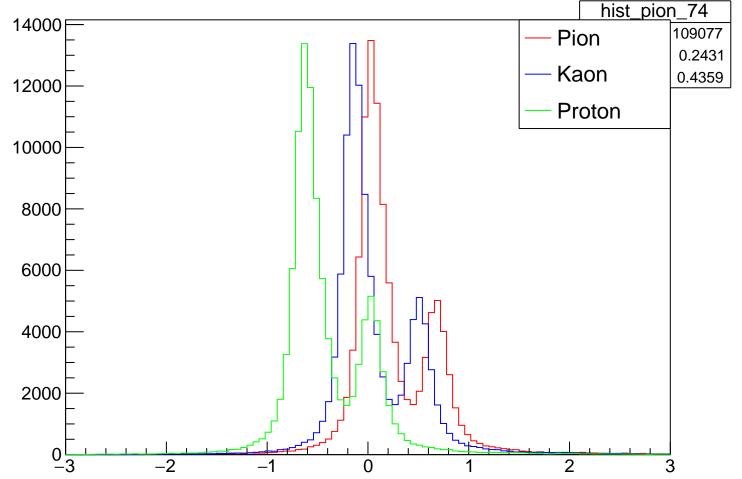
Momentum range [3.80, 3.85] GeV hist_pion_72 123025 Pion 0.2571 Kaon 0.4477 **Proton**



Momentum range [3.85, 3.90] GeV hist_pion_73 116779 Pion 14000 0.2514 Kaon 0.4436 12000 **Proton** 10000 8000 6000 4000 2000

0<u>L</u>

Momentum range [3.90, 3.95] GeV



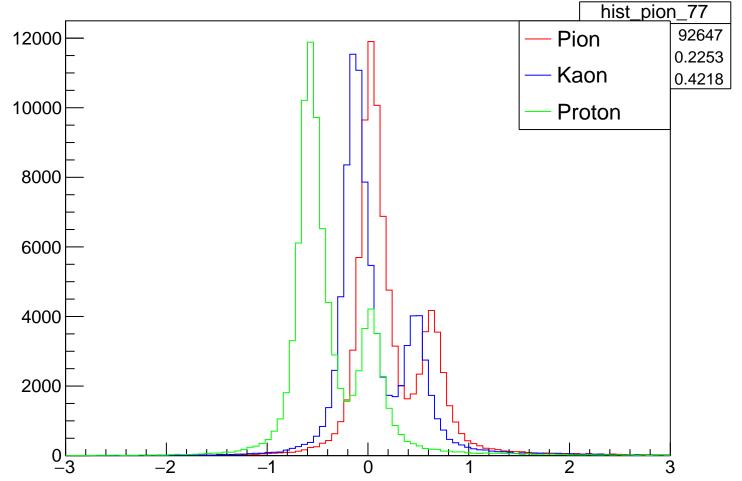
Momentum range [3.95, 4.00] GeV hist_pion_75 103548 Pion 0.237 12000 Kaon 0.431 **Proton** 10000 8000 6000 4000 2000

 0^{L}

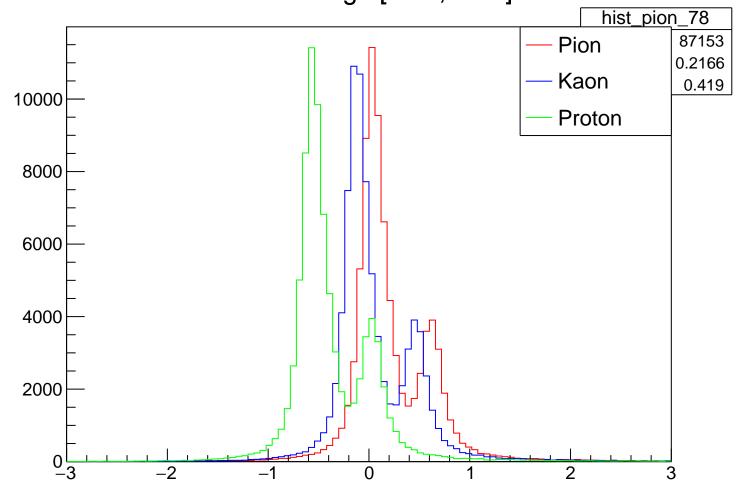
Momentum range [4.00, 4.05] GeV hist_pion_76 Pion 97780 12000 0.2291 Kaon 0.4253 **Proton** 10000 8000 6000 4000 2000

 0^{L}

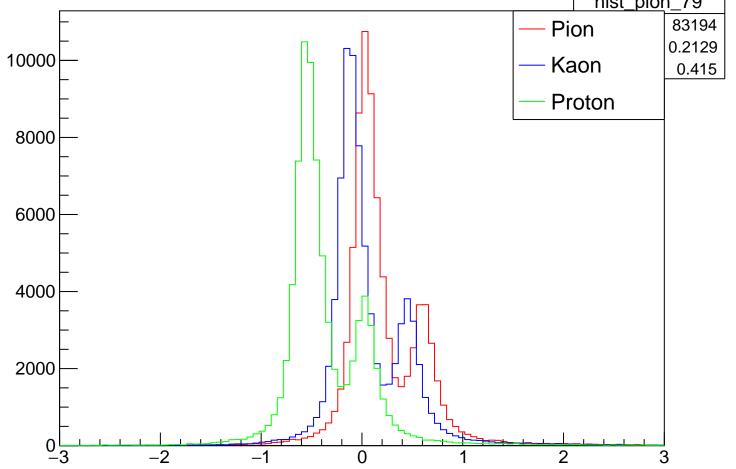
Momentum range [4.05, 4.10] GeV



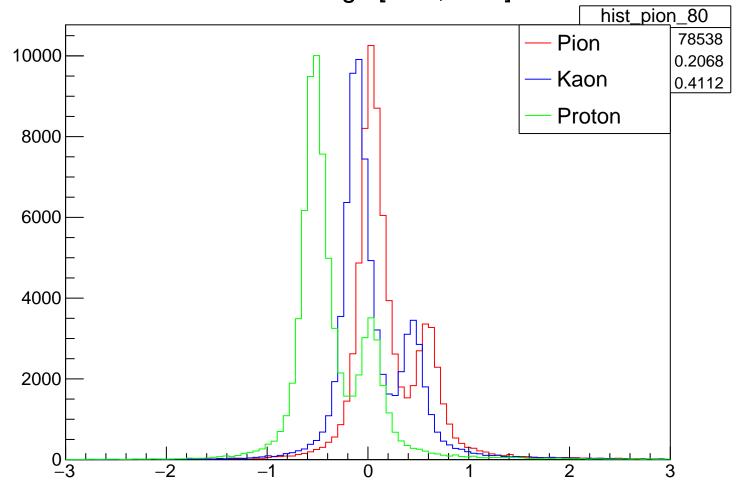
Momentum range [4.10, 4.15] GeV



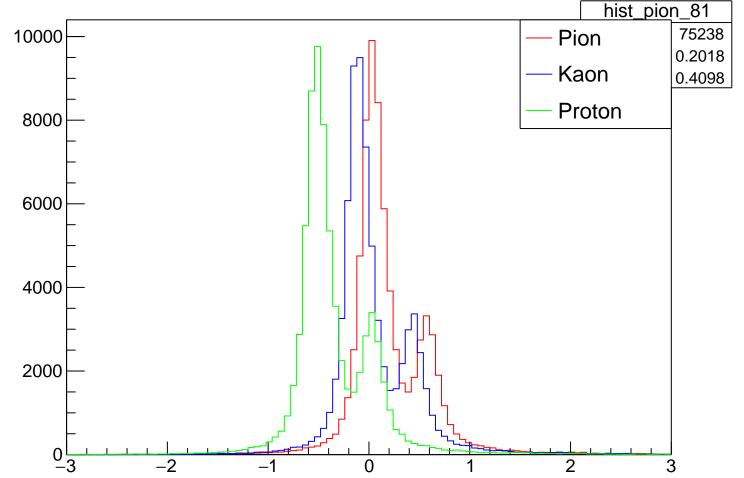
Momentum range [4.15, 4.20] GeV hist_pion_79 83194 Pion 0.2129 Kaon 0.415 **Proton**



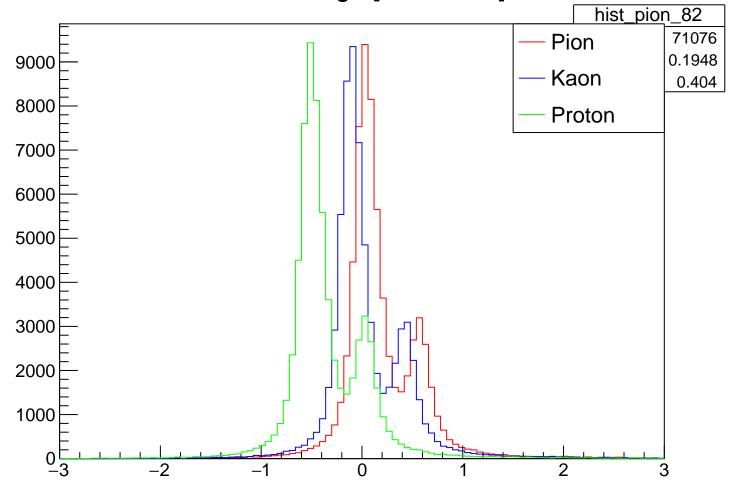
Momentum range [4.20, 4.25] GeV



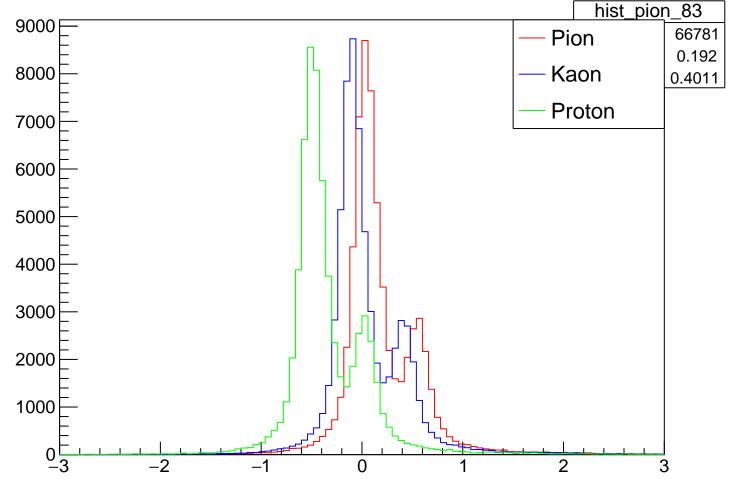
Momentum range [4.25, 4.30] GeV



Momentum range [4.30, 4.35] GeV

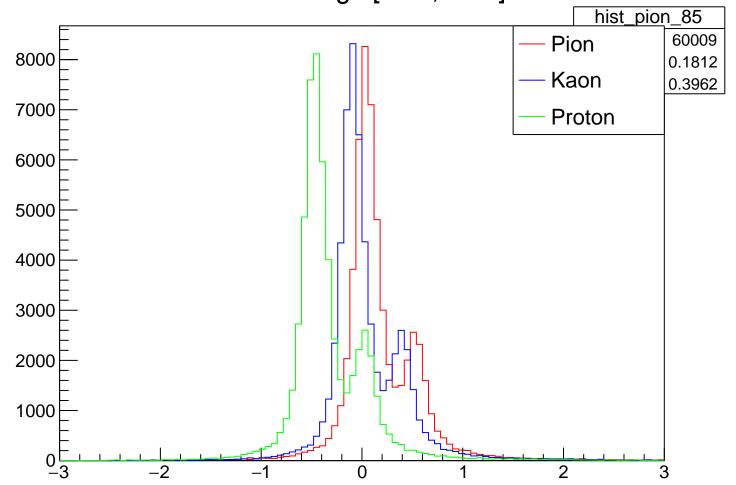


Momentum range [4.35, 4.40] GeV

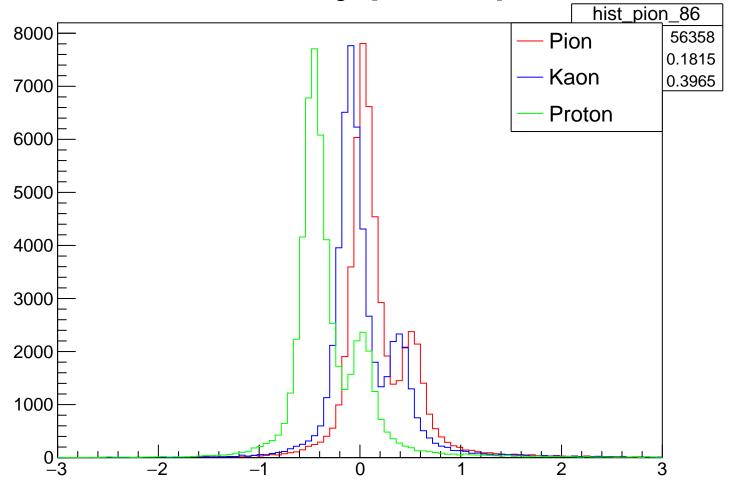


Momentum range [4.40, 4.45] GeV hist_pion_84 63306 Pion 0.1863 8000 Kaon 0.3999 7000 **Proton** 6000 5000 4000 3000 2000 1000

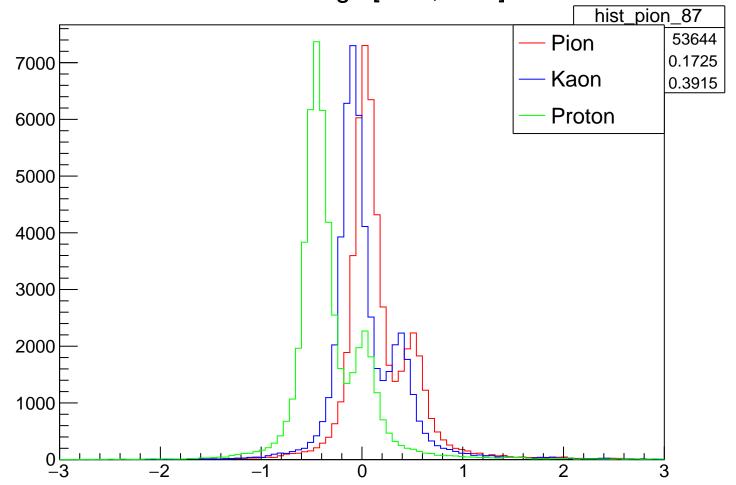
Momentum range [4.45, 4.50] GeV



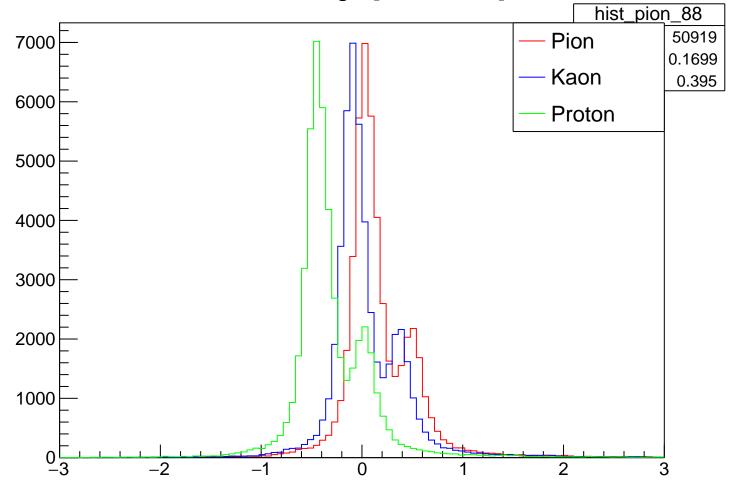
Momentum range [4.50, 4.55] GeV



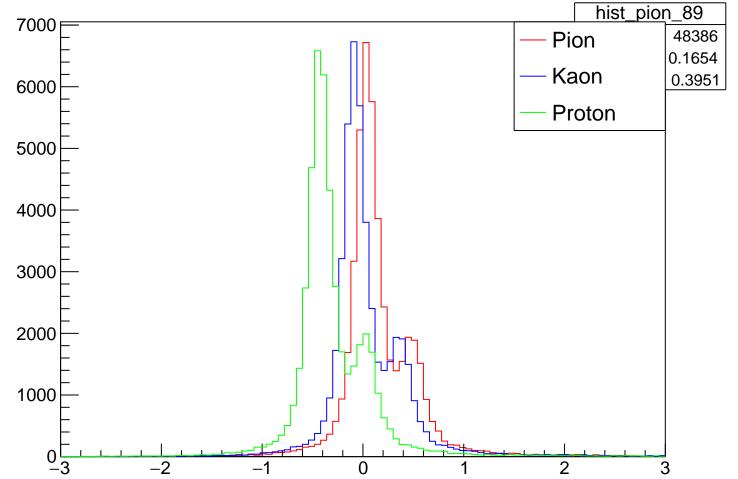
Momentum range [4.55, 4.60] GeV



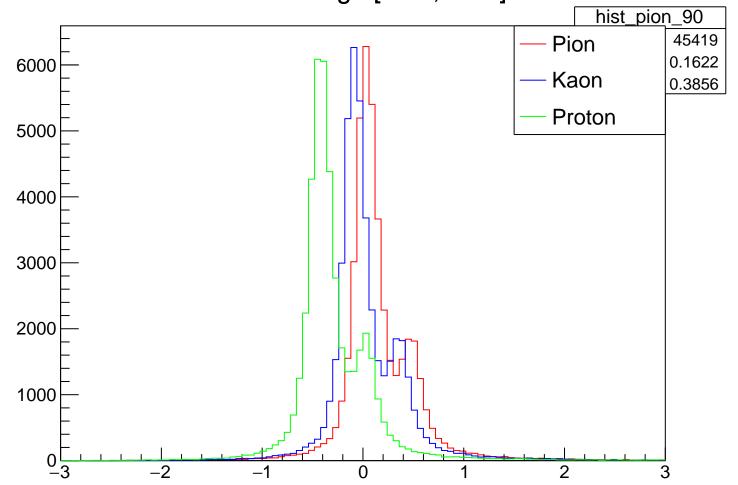
Momentum range [4.60, 4.65] GeV



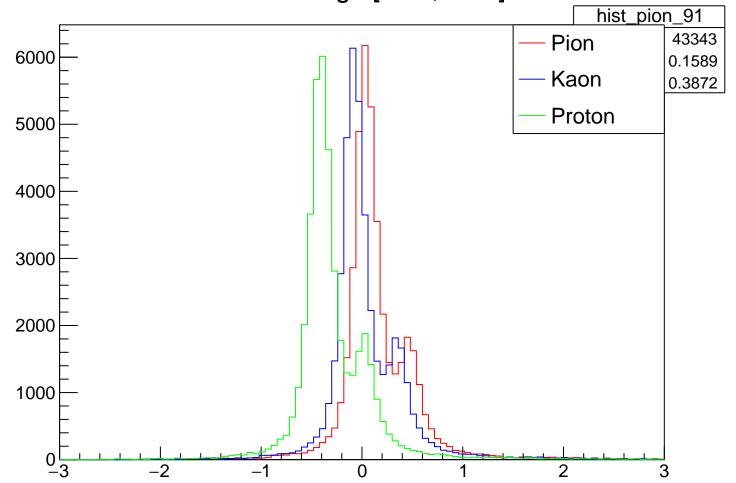
Momentum range [4.65, 4.70] GeV



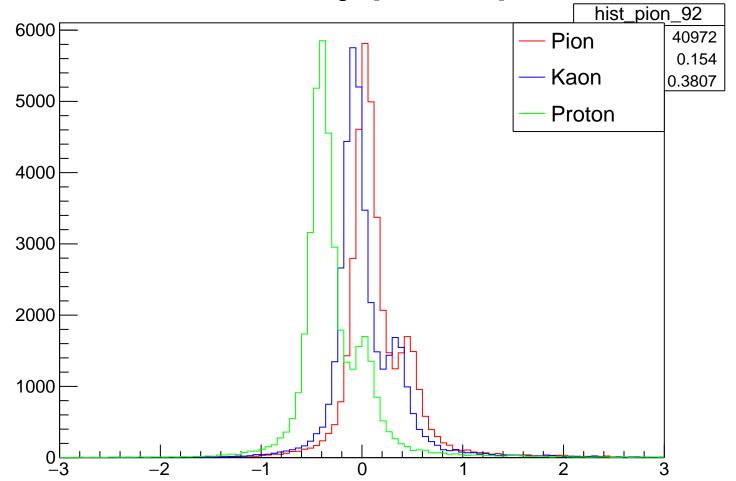
Momentum range [4.70, 4.75] GeV



Momentum range [4.75, 4.80] GeV



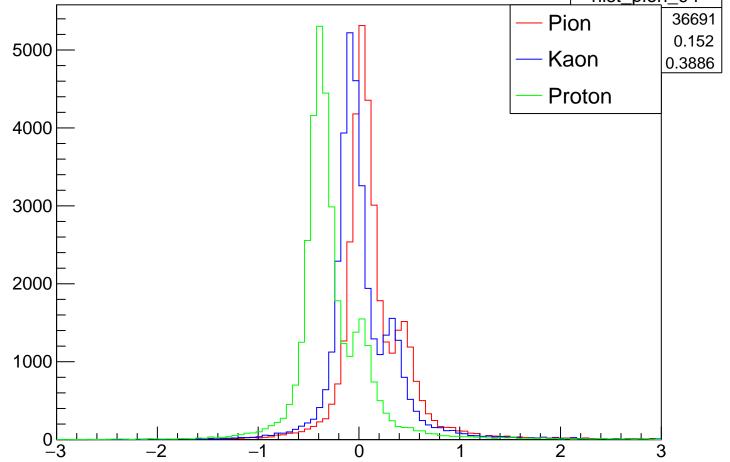
Momentum range [4.80, 4.85] GeV



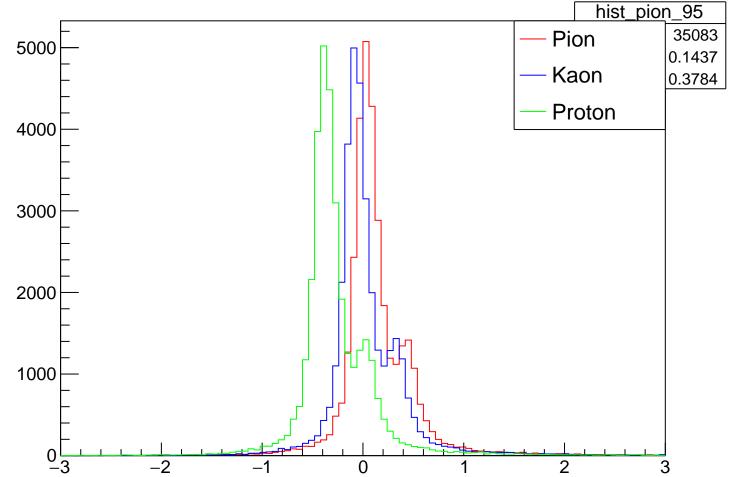
Momentum range [4.85, 4.90] GeV hist_pion_93 39234 Pion 0.1559 Kaon 0.391 5000 **Proton** 4000 3000 2000 1000

0<u>L</u>

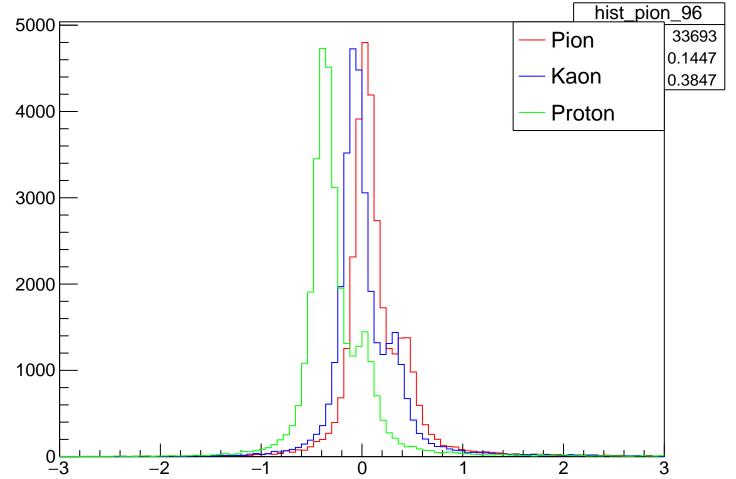
Momentum range [4.90, 4.95] GeV hist_pion_94 Pion 36691 0.152 Kaon 0.3886 **Proton**



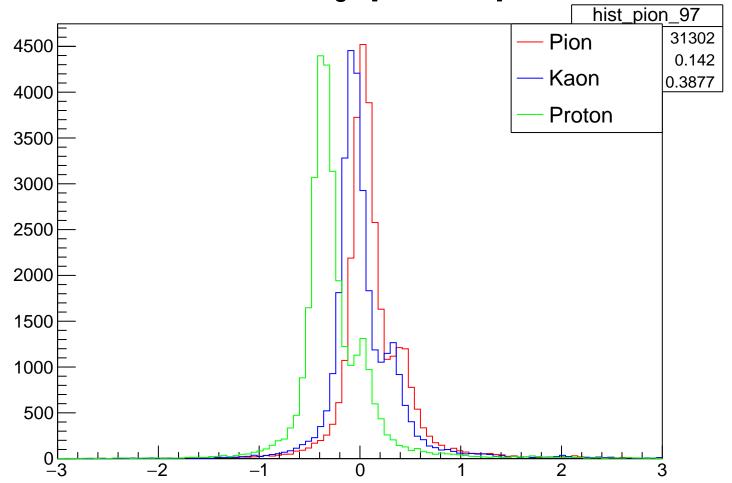
Momentum range [4.95, 5.00] GeV



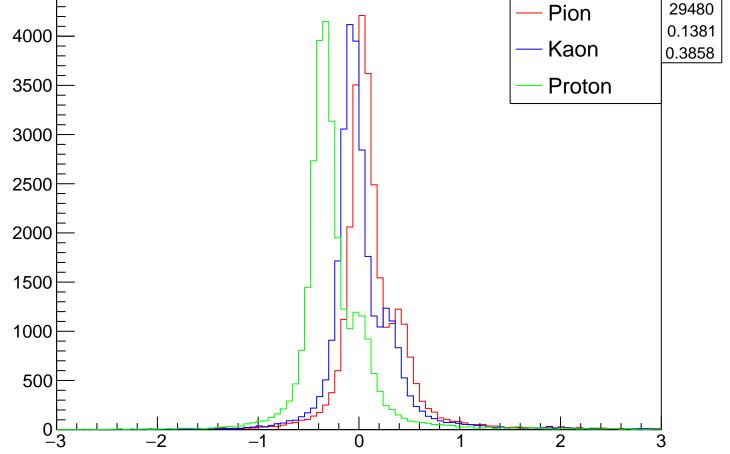
Momentum range [5.00, 5.05] GeV



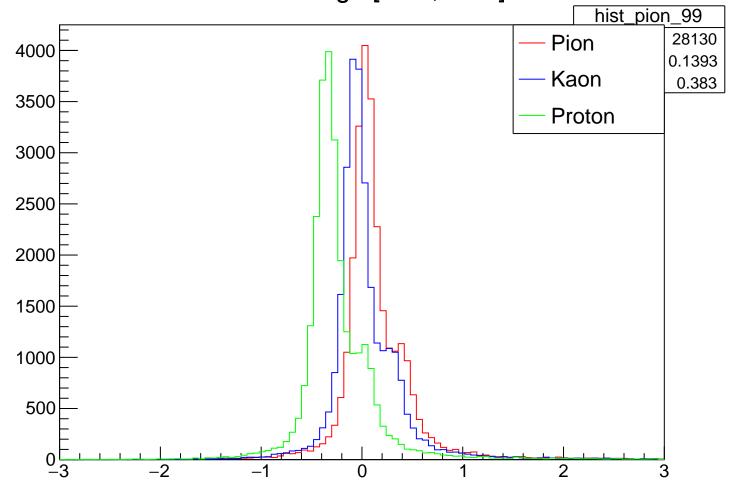
Momentum range [5.05, 5.10] GeV



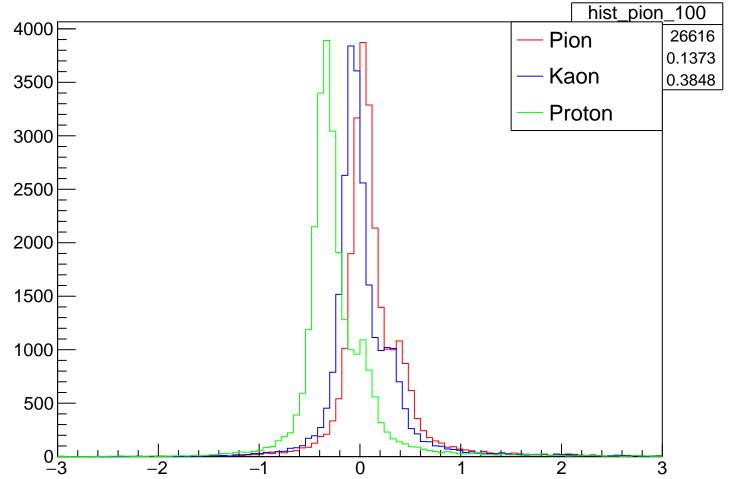
Momentum range [5.10, 5.15] GeV hist_pion_98 Pion 29480 0.1381 Kaon 0.3858 **Proton**



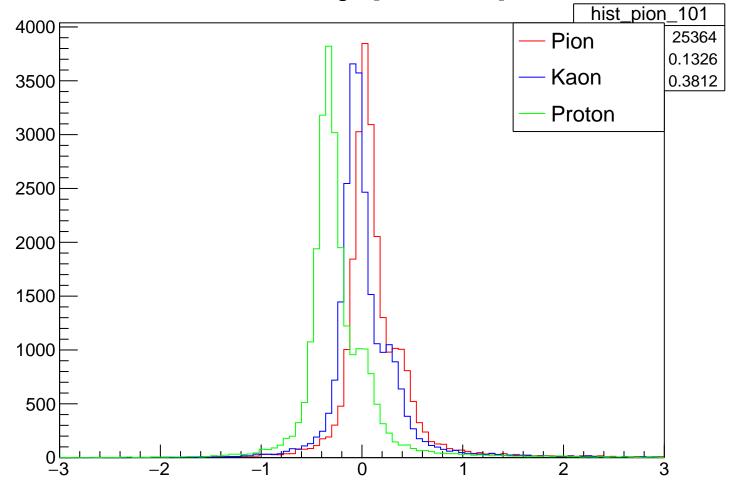
Momentum range [5.15, 5.20] GeV



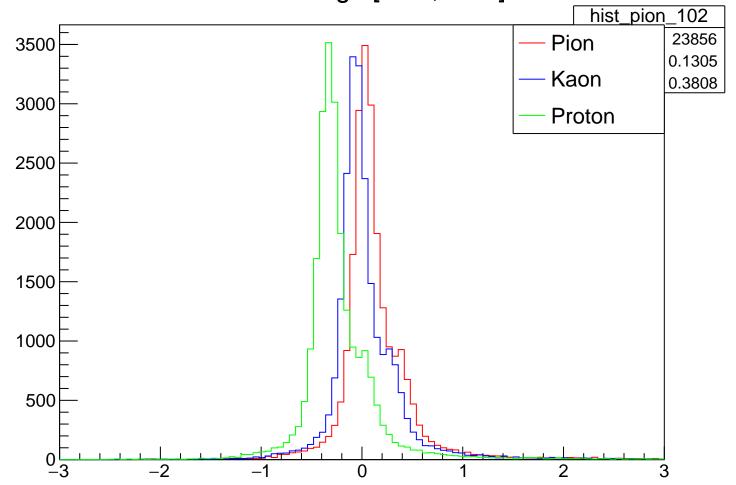
Momentum range [5.20, 5.25] GeV



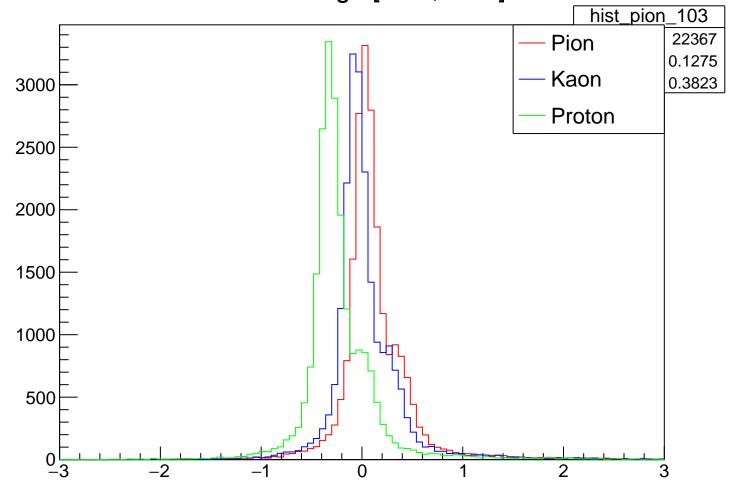
Momentum range [5.25, 5.30] GeV



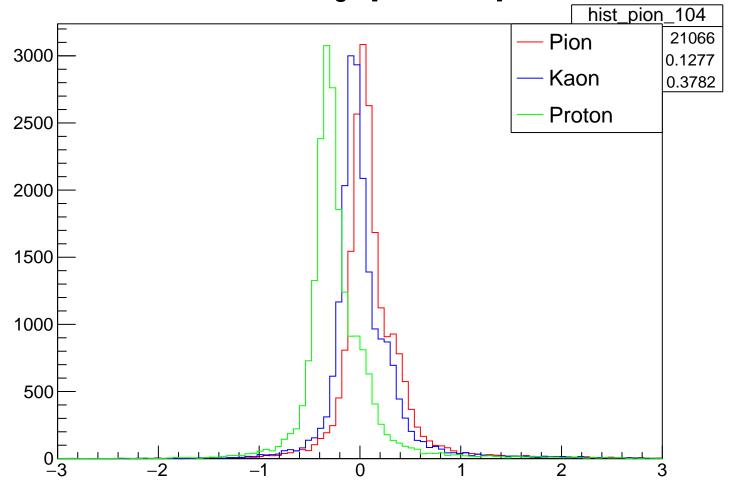
Momentum range [5.30, 5.35] GeV



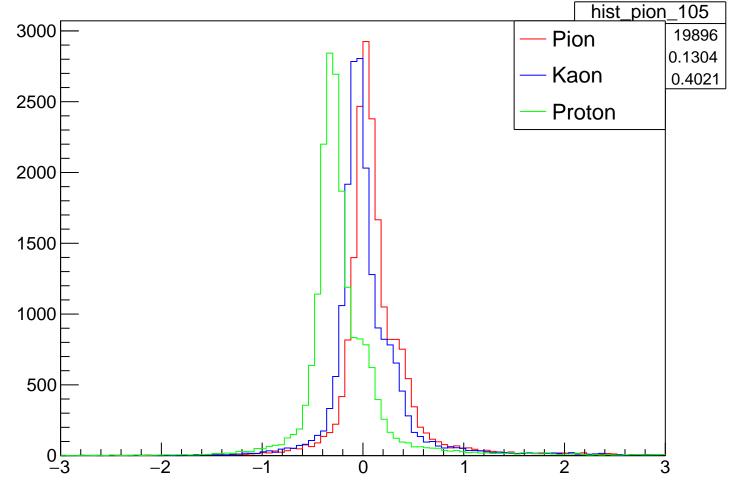
Momentum range [5.35, 5.40] GeV



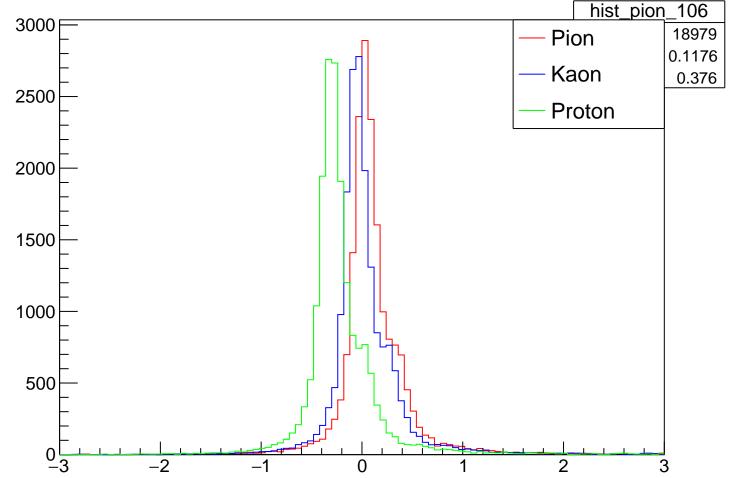
Momentum range [5.40, 5.45] GeV



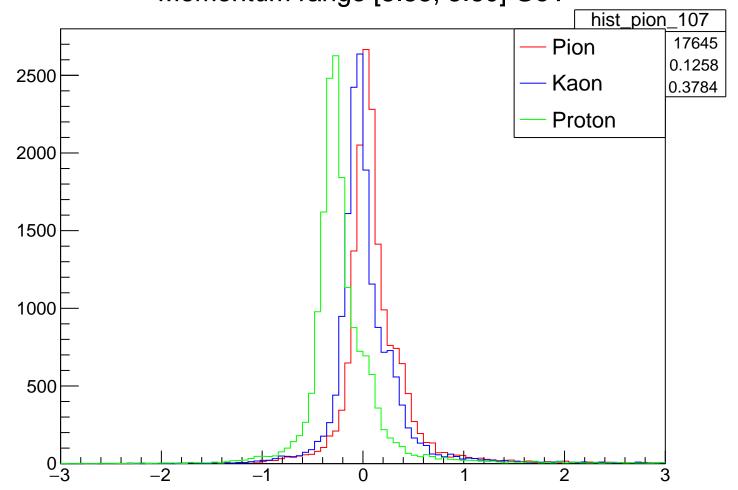
Momentum range [5.45, 5.50] GeV



Momentum range [5.50, 5.55] GeV



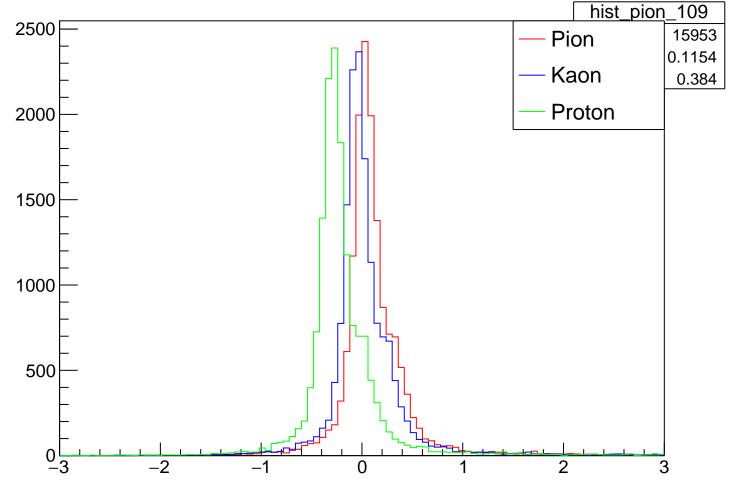
Momentum range [5.55, 5.60] GeV



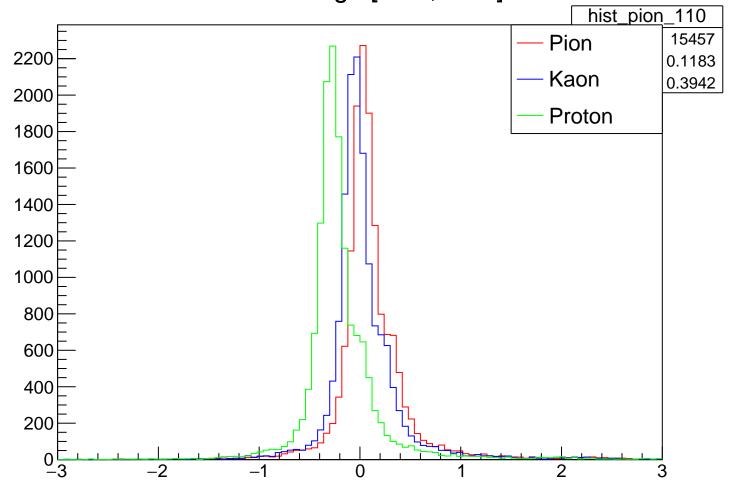
Momentum range [5.60, 5.65] GeV hist_pion_108 Pion 17258 2500 0.1169 Kaon 0.3726 **Proton** 2000 1500 1000 500

 0^{L}

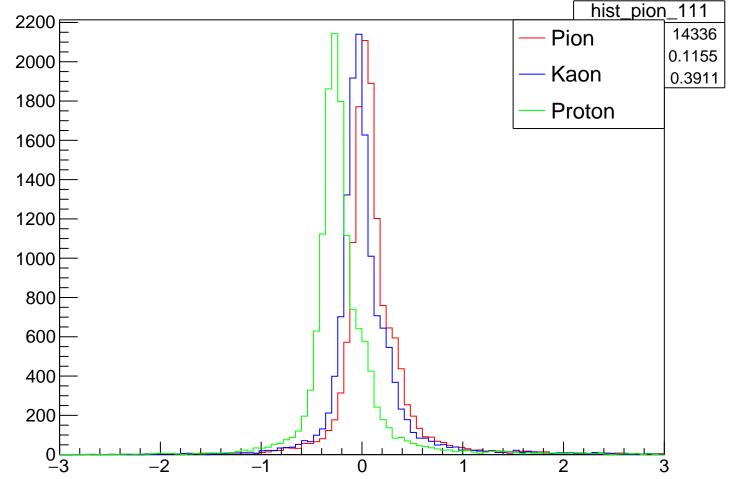
Momentum range [5.65, 5.70] GeV



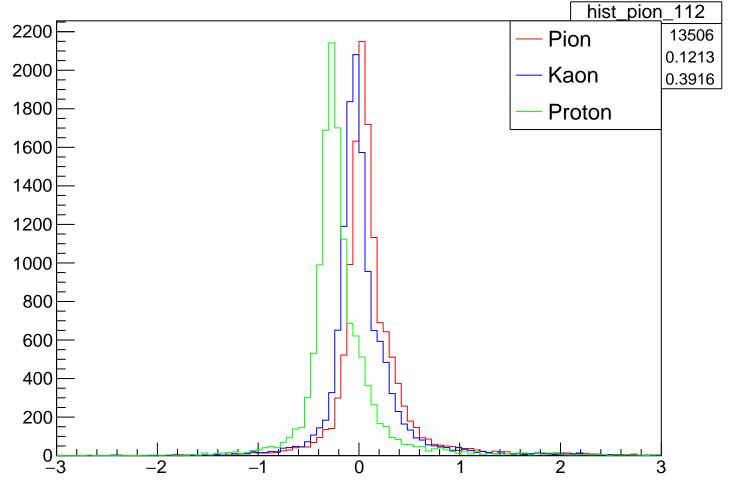
Momentum range [5.70, 5.75] GeV



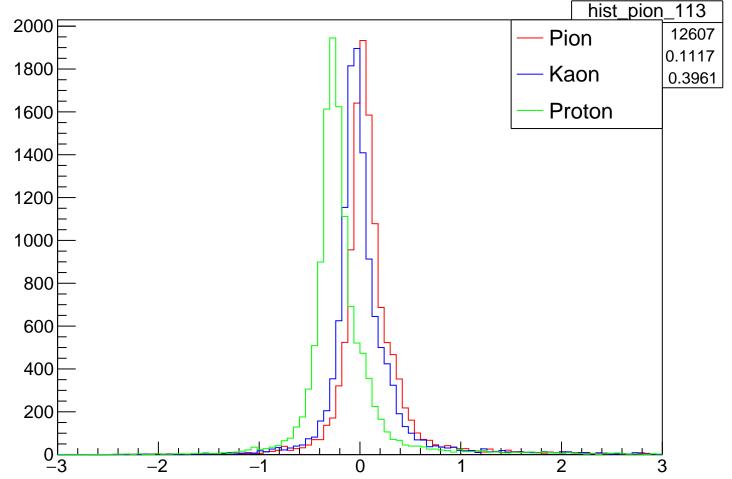
Momentum range [5.75, 5.80] GeV



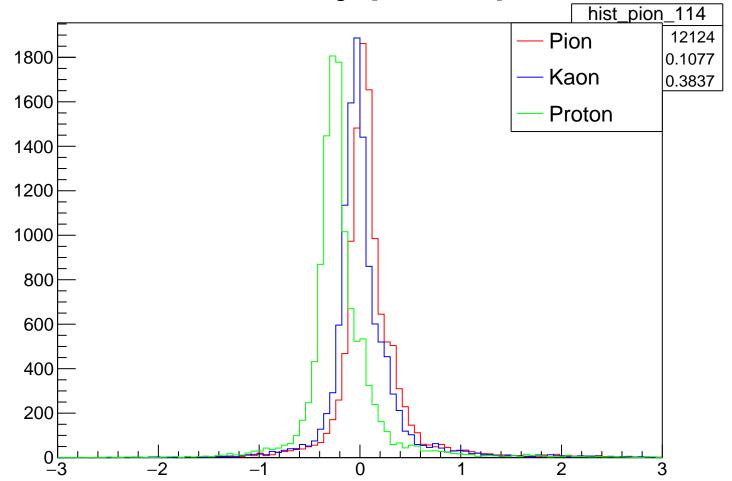
Momentum range [5.80, 5.85] GeV



Momentum range [5.85, 5.90] GeV

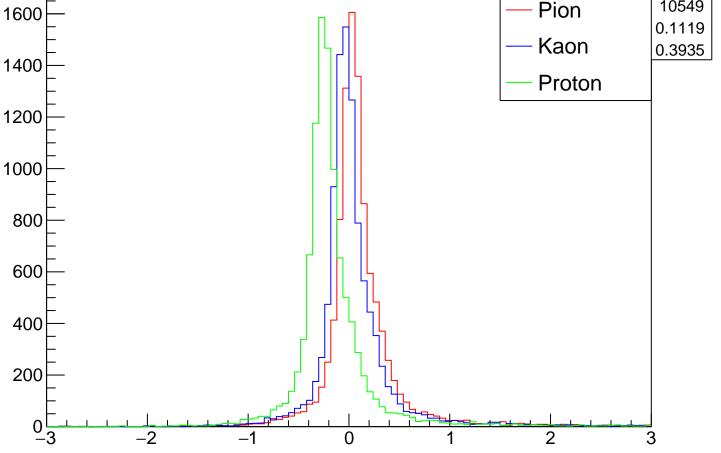


Momentum range [5.90, 5.95] GeV

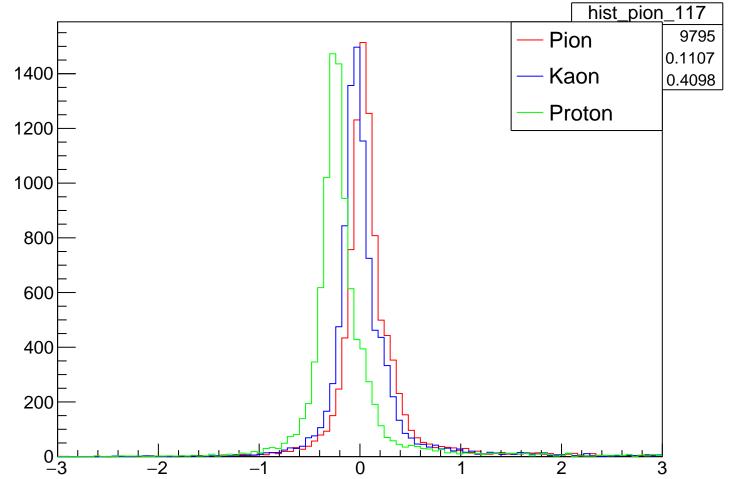


Momentum range [5.95, 6.00] GeV hist_pion_115 11184 Pion 0.1125 1600 Kaon 0.4083 1400 **Proton** 1200 1000 800 600 400 200

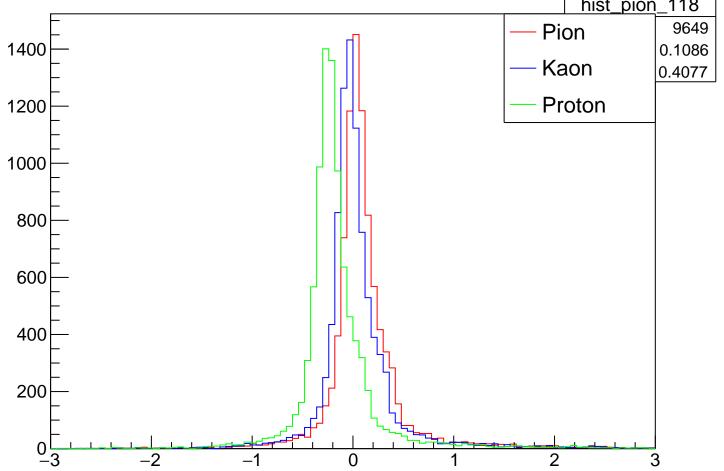
Momentum range [6.00, 6.05] GeV hist_pion_116 10549 Pion 0.1119 Kaon 0.3935 **Proton**



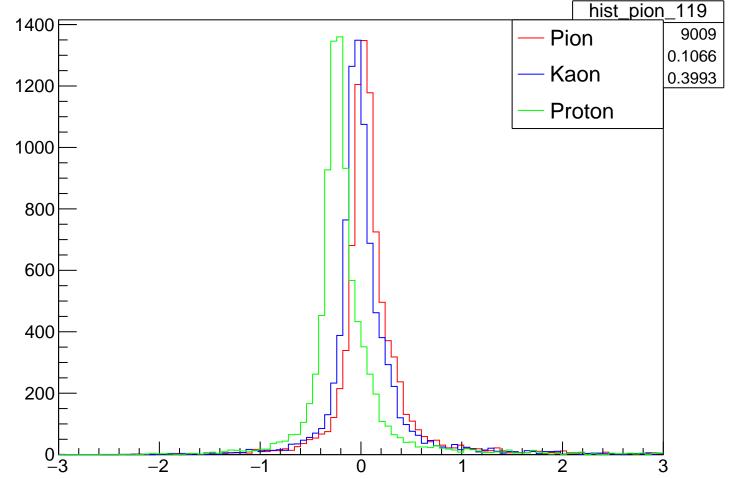
Momentum range [6.05, 6.10] GeV



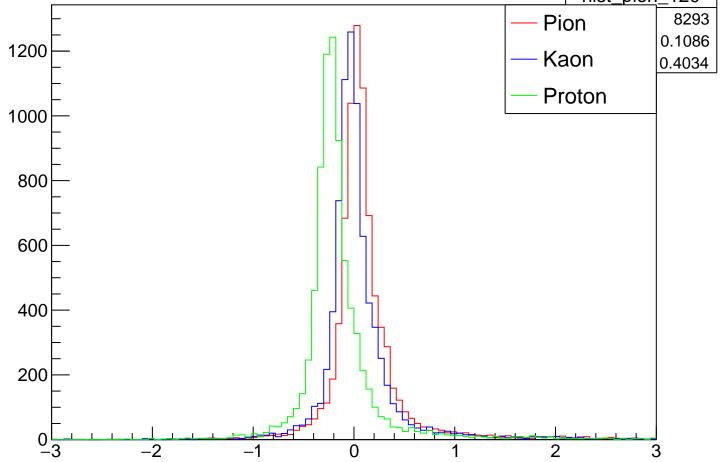
Momentum range [6.10, 6.15] GeV hist_pion_118 Pion 9649 0.1086 Kaon 0.4077 **Proton**



Momentum range [6.15, 6.20] GeV



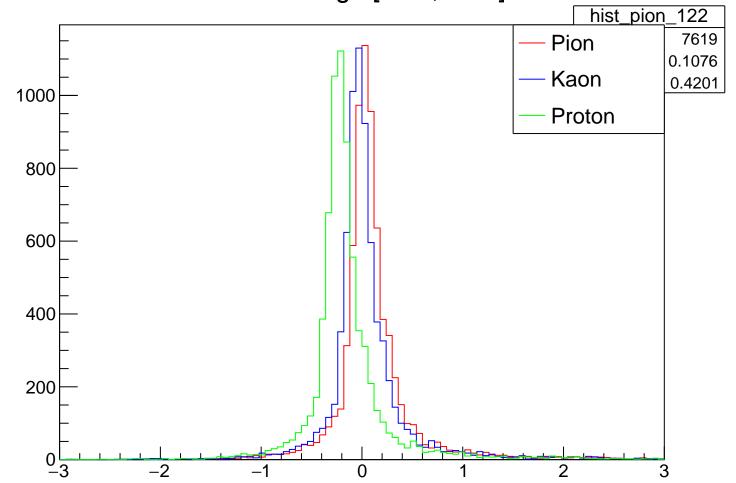
Momentum range [6.20, 6.25] GeV hist_pion_120 Pion 8293 0.1086 Kaon 0.4034 **Proton**



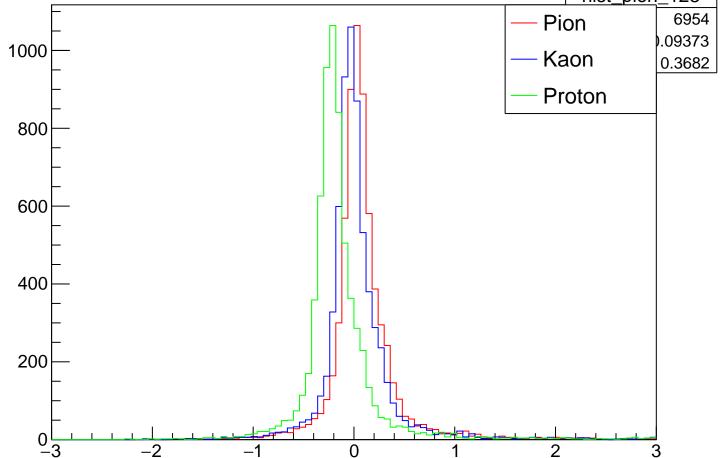
Momentum range [6.25, 6.30] GeV hist_pion_121 Pion 7995 0.1095 1200 Kaon 0.406 **Proton** 1000 800 600 400 200

0<u>L</u>

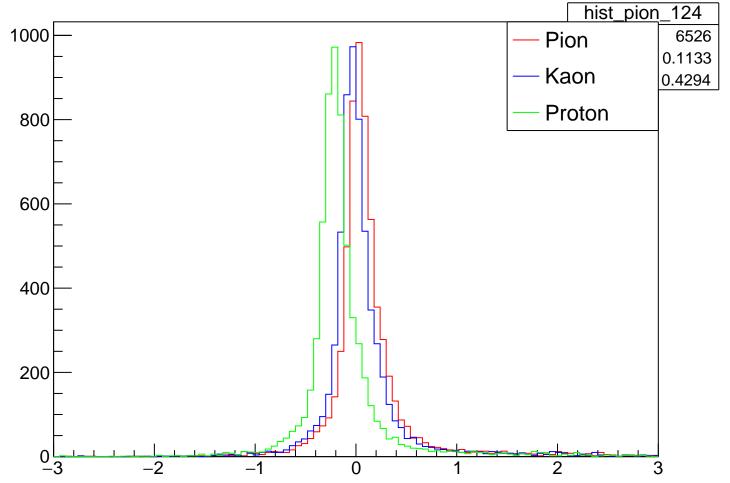
Momentum range [6.30, 6.35] GeV



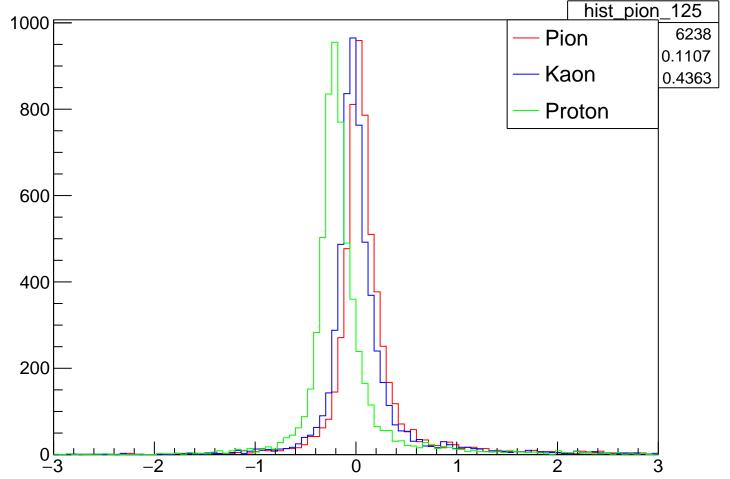
Momentum range [6.35, 6.40] GeV hist_pion_123 Pion 6954 .09373 Kaon 0.3682 **Proton**



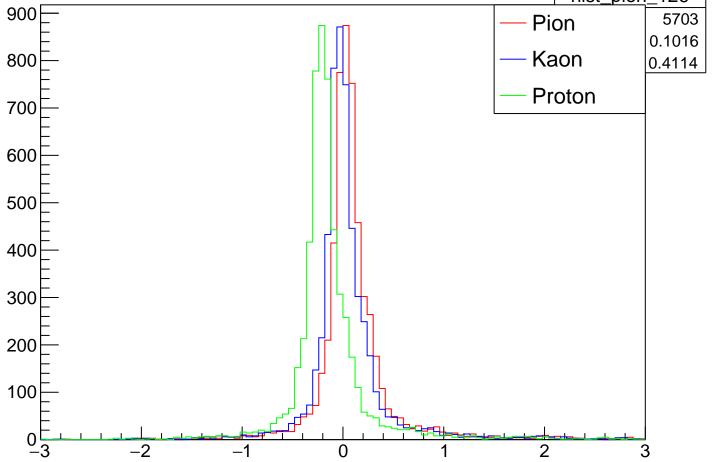
Momentum range [6.40, 6.45] GeV



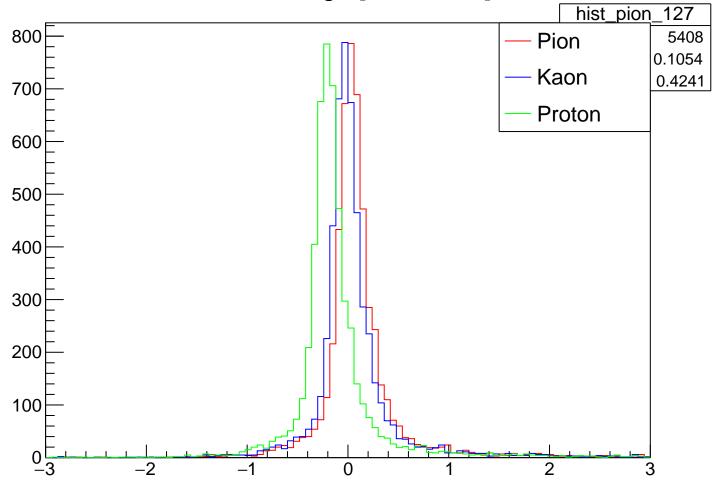
Momentum range [6.45, 6.50] GeV



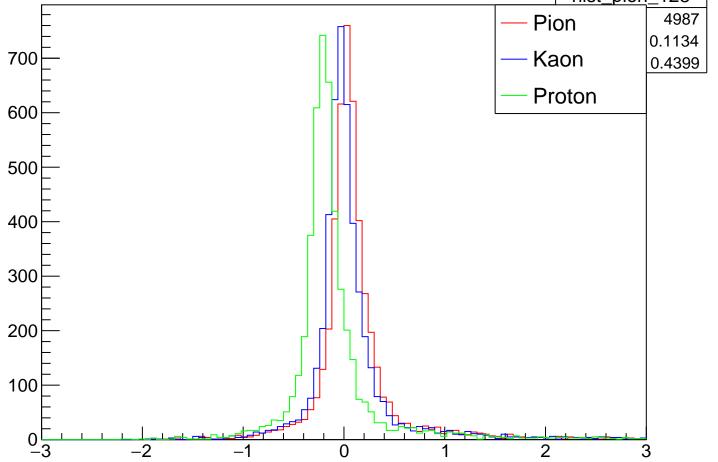
Momentum range [6.50, 6.55] GeV hist_pion_126 Pion 5703 0.1016 Kaon 0.4114 **Proton**



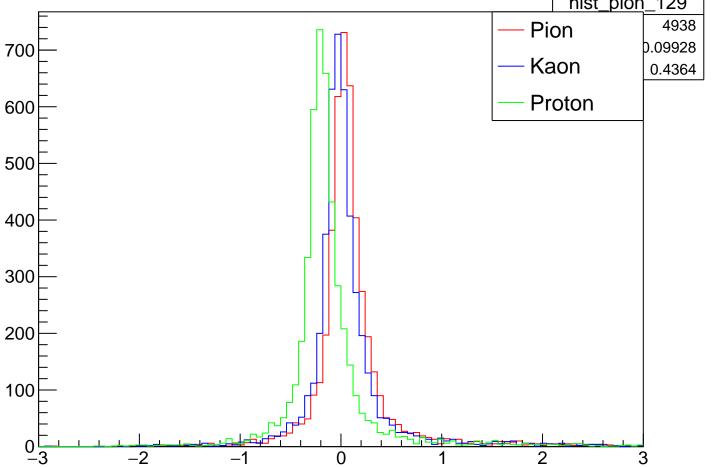
Momentum range [6.55, 6.60] GeV



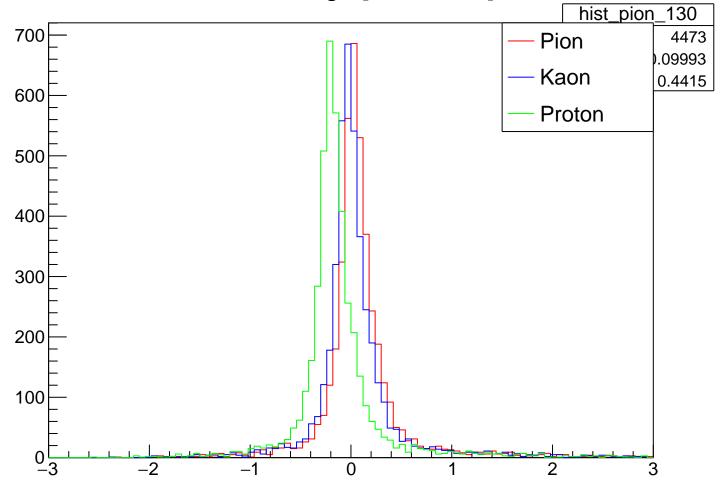
Momentum range [6.60, 6.65] GeV hist_pion_128 Pion 4987 0.1134 Kaon 0.4399 **Proton**



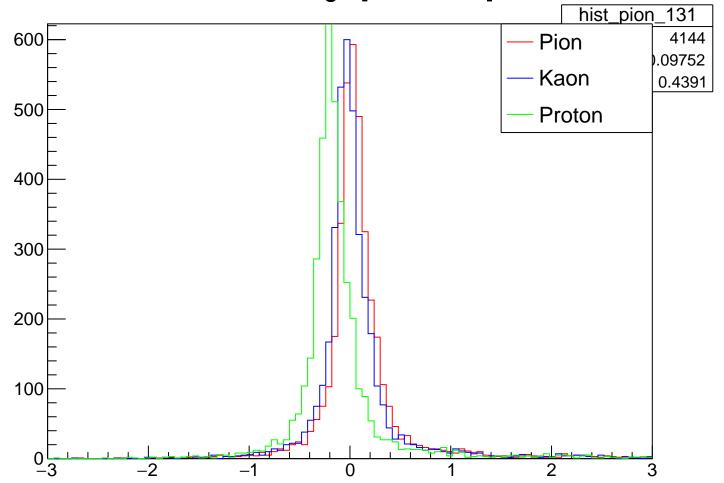
Momentum range [6.65, 6.70] GeV hist_pion_129 4938 Pion b.09928 Kaon 0.4364 **Proton**



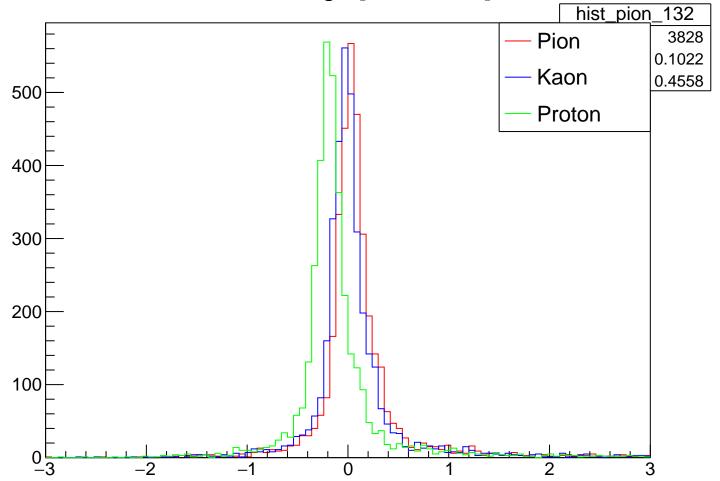
Momentum range [6.70, 6.75] GeV



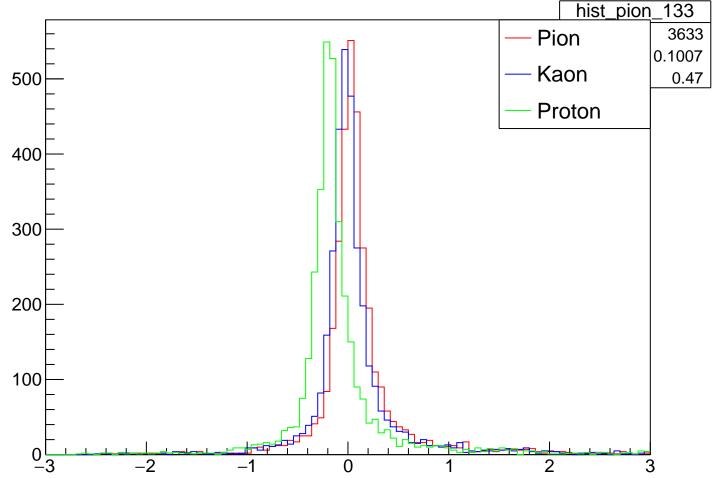
Momentum range [6.75, 6.80] GeV



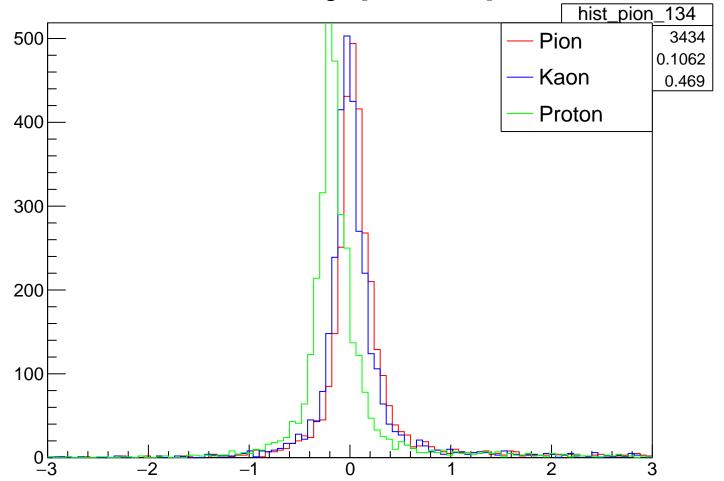
Momentum range [6.80, 6.85] GeV



Momentum range [6.85, 6.90] GeV



Momentum range [6.90, 6.95] GeV



Momentum range [6.95, 7.00] GeV hist_pion_135 Pion 3148 0.1138 Kaon 0.4436 **Proton**

