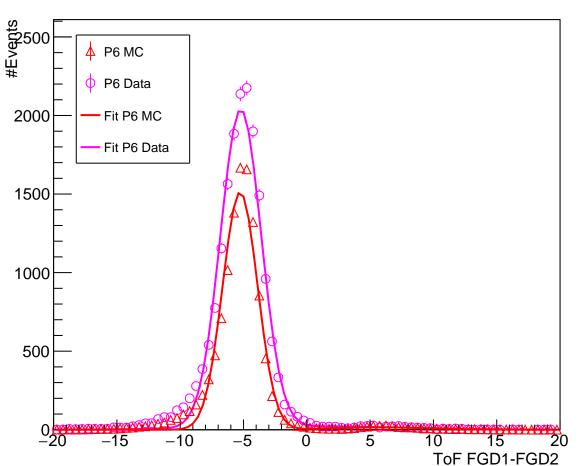
Fgd1Fwd_ToF_FGD1_FGD2



 χ^2 / ndf 1.146e+04 / 74

 1512 ± 5.6

 1.38 ± 0.00 14.93 ± 0.41

 6.029 ± 0.084

 3.902 ± 0.108

 -5.266 ± 0.004

p0

p1

p2

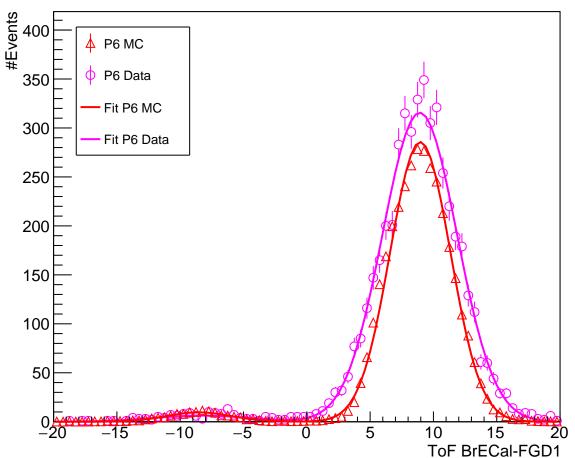
p3 p4

p5

802.2 / 70

 χ^2 / ndf

Fgd1Fwd_ToF_ECal_FGD1_track



 -3.811 ± 0.518 315.7 ± 5.8 8.921 ± 0.043 2.943 ± 0.035

74.76 / 68

 6.282 ± 0.898

 -8.272 ± 0.403

 χ^2 / ndf

p0

p1

p2

p3

p4

p5

p5

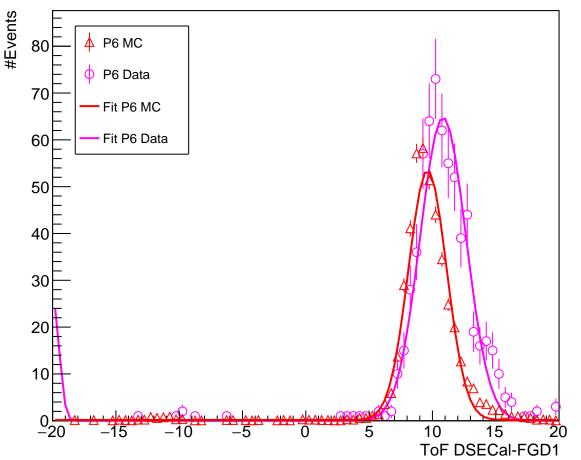
 $\begin{array}{lll} \chi^2 \, / \, \text{ndf} & 453.3 \, / \, 74 \\ \text{p0} & 9.566 \pm 0.318 \\ \text{p1} & -8.509 \pm 0.062 \\ \text{p2} & 2.557 \pm 0.057 \\ \text{p3} & 285.7 \pm 1.6 \\ \text{p4} & 8.962 \pm 0.011 \end{array}$

 2.381 ± 0.007

Fgd1Fwd_ToF_ECal_FGD1_shower χ^2 / ndf 49.12 / 66 p0 7.369 ± 0.935 **p1** -6.082 ± 0.400 #Events 70 p2 3.533 ± 0.410 ▲ P6 MC 52.05 ± 2.22 p3 P6 Data p4 8.705 ± 0.126 60 **p5** 3.44 ± 0.10 Fit P6 MC Fit P6 Data 50 40 30 χ^2 / ndf 285.6 / 74 p0 7.847 ± 0.249 20 -8.566 ± 0.091 p1 p2 3.365 ± 0.079 10 45.54 ± 0.58 p3 p4 8.397 ± 0.032 **p5** 2.939 ± 0.022 -15-10 10 15 -20 ToF BrECal-FGD1

Fgd1Fwd_ToF_DSECal_FGD1_track χ^2 / ndf 209.1 / 44 p0 10.35 ± 94.22 #Exents p1 -11.52 ± 0.11 p2 0.1258 ± 0.2920 △ P6 MC p3 1032 ± 15.2 P6 Data p4 10.21 ± 0.02 1.551 ± 0.015 **p5** 1000 Fit P6 MC Fit P6 Data 800 600 χ^2 / ndf 2754 / 66 400 0.1943 ± 0.0156 $-8.818e-07 \pm 1.411e+01$ p2 843.2 ± 1.4 200 789.5 ± 1.3 p3 9.692 ± 0.005 p5 1.136 ± 0.003 10 15 ToF DSECal-FGD1

Fgd1Fwd_ToF_DSECal_FGD1_shower



 -19.93 ± 13.61 0.4648 ± 0.0008 64.76 ± 2.68

56.68 / 30

365.7 / 59

 0.1678 ± 0.0163

 53.32 ± 0.98

 24.99 ± 0.42

 10.84 ± 0.09 -1.812 ± 0.046

 χ^2 / ndf

p0

p1

p2

p3

p4

p5

p0

 χ^2 / ndf

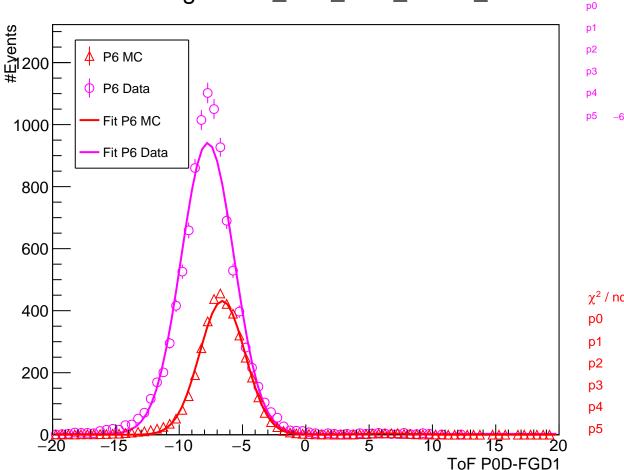
-1.817 ± 11.977 2.128e+04 ± 4.288e+06

p3

p5

 9.617 ± 0.023 1.505 ± 0.019

Fgd1Bwd_ToF_P0D_FGD1_track

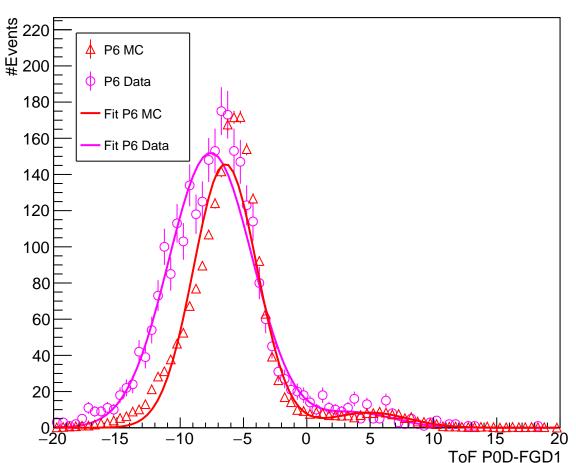


 938.2 ± 1.4 -7.753 ± 0.021 2.087 ± 0.015 2.813 ± 0.272 0.7457 ± 12.0341 $-6.993e+04 \pm 1.414e+00$ χ^2 / ndf 1258 / 71 431.5 ± 2.4 -6.595 ± 0.008 1.8 ± 0.0 4.165 ± 0.272 6.495 ± 0.076 1.622 ± 0.075

262.1 / 56

 χ^2 / ndf

Fgd1Bwd_ToF_P0D_FGD1_shower



p4 3.788 ± 0.503 p5 3.076 ± 0.512

p0

p1

p2

p3

 χ^2 / ndf

p0

p1

p2

p3

p4

p5

112.3 / 60

 152 ± 4.0

 -7.585 ± 0.074

 3.334 ± 0.066

 8.285 ± 1.197

1727 / 73

 145.8 ± 1.4

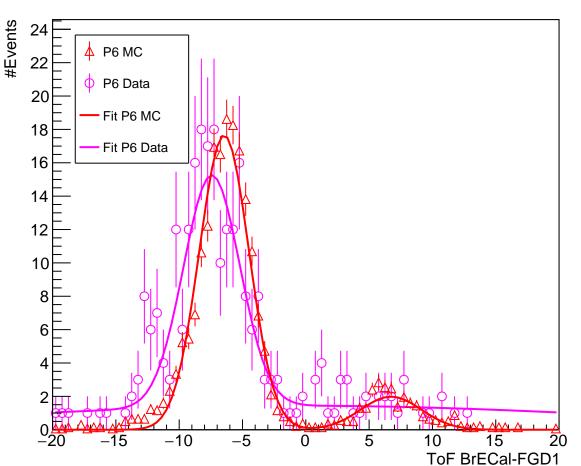
 -6.436 ± 0.018

 2.508 ± 0.018 8.383 ± 0.256

 4.943 ± 0.109

 3.04 ± 0.08

Fgd1Bwd_ToF_ECal_FGD1_track



p1 -7.433 ± 0.224 p2 2.23 ± 0.21 p3 1.434 ± 0.302 p4 $1.64e-06 \pm 2.00e+01$ p5 24.7 ± 19.5

32.72 / 48

160 / 65

 17.65 ± 0.49

 -6.45 ± 0.04

 1.963 ± 0.036

 6.732 ± 0.143

 2.407 ± 0.155

 1.98 ± 0.16

 13.88 ± 1.57

 χ^2 / ndf

 χ^2 / ndf

p0

p1

p2

p3

p4

p5

p0

Fgd1Bwd_ToF_ECal_FGD1_shower χ^2 / ndf p0 #Events p1 20 p2 ▲ P6 MC 18 р3 P6 Data p4 16 **p5** Fit P6 MC Fit P6 Data 14 12 10 8 6 p0 **p1** 4 p2 p3 2 p4 **p5** -10-5 5 15 ToF BrECal-FGD1

 -6.585 ± 0.326 3.395 ± 0.260 1.665 ± 0.479 6.617 ± 2.406 4.732 ± 3.413

28.22 / 44

 13.09 ± 1.14

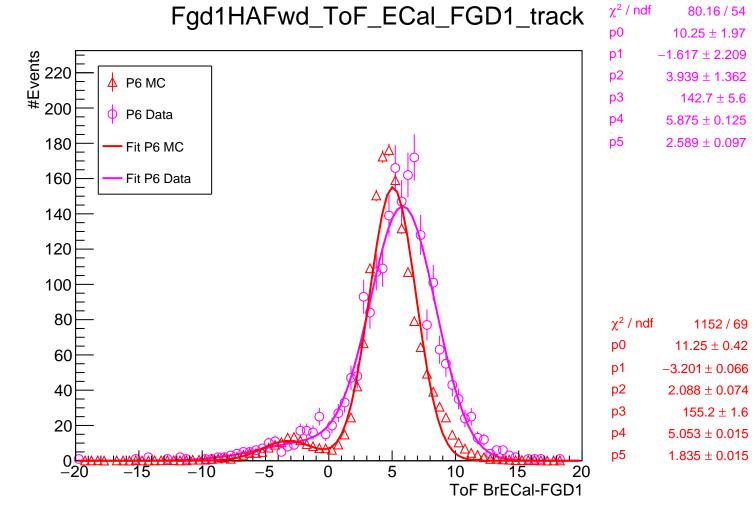
 χ^2 / ndf 207 / 62 13.21 ± 0.41

> -6.622 ± 0.060 2.403 ± 0.055

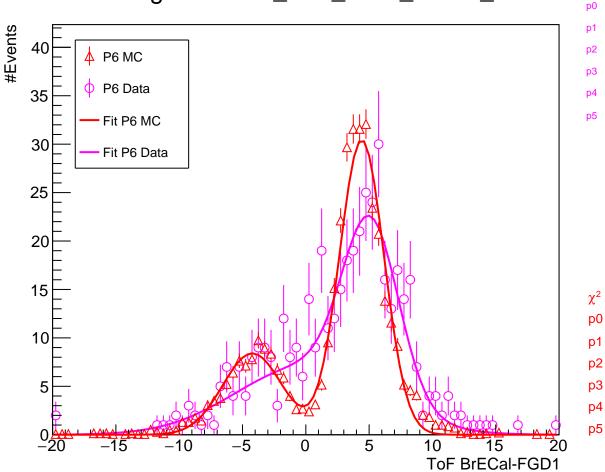
 1.326 ± 0.117

 5.729 ± 0.183

 2.421 ± 0.155



Fgd1HAFwd_ToF_ECal_FGD1_shower



 $\begin{array}{lll} \chi^2 \, / \, \text{ndf} & 252.2 \, / \, 62 \\ \text{p0} & 8.399 \pm 0.315 \\ \text{p1} & -4.222 \pm 0.075 \\ \text{p2} & 2.348 \pm 0.073 \\ \text{p3} & 30.45 \pm 0.70 \end{array}$

 4.416 ± 0.033

 1.758 ± 0.031

50.68 / 51

 7.048 ± 1.108

 5.589 ± 0.620

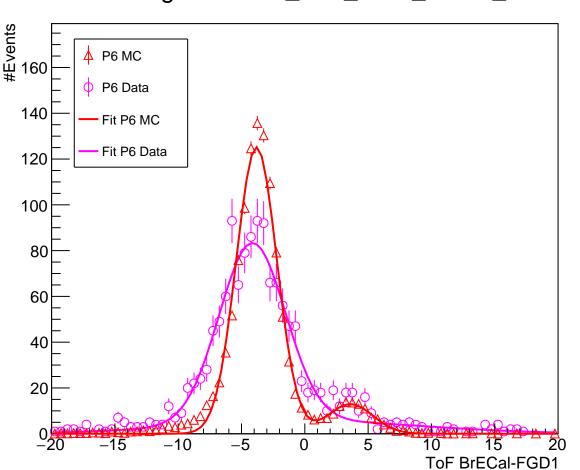
 17.93 ± 1.98

 5.127 ± 0.276

 2.21 ± 0.24

-2.289e-10 ± 2.361e-01

Fgd1HABwd_ToF_ECal_FGD1_track



p0 78.36 ± 3.51 p1 -4.154 ± 0.103 p2 2.619 ± 0.104 p3 5.536 ± 1.236 p4 $8.881e-09 \pm 1.762e-01$ p5 9.264 ± 1.451

94.92 / 66

670.4 / 64

 125.2 ± 1.5

 -3.811 ± 0.014

 1.603 ± 0.014 12.93 ± 0.45

 3.605 ± 0.055

 1.786 ± 0.054

 χ^2 / ndf

 χ^2 / ndf

p0

p1

p2

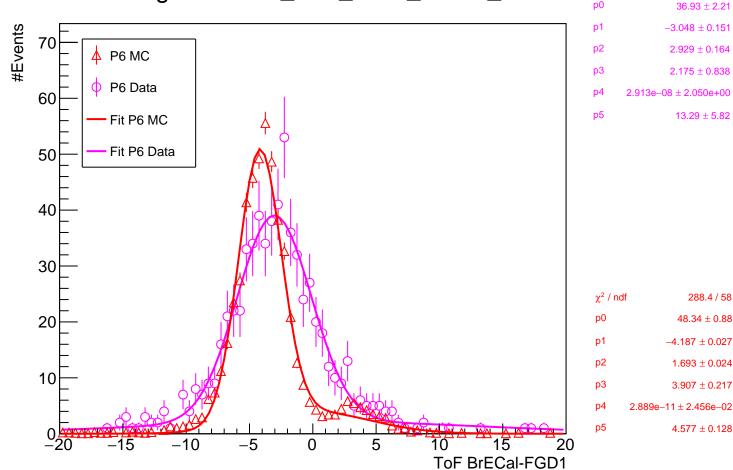
p3

p4

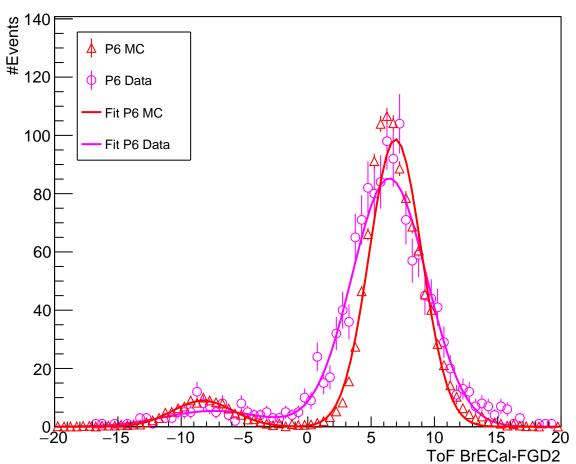
p5

Fgd1HABwd_ToF_ECal_FGD1_shower

26.92 / 48



Fgd2Fwd_ToF_ECal_FGD2_track



 $\begin{array}{ccc} p2 & 3.885 \pm 0.673 \\ p3 & 85.26 \pm 3.31 \\ p4 & 6.432 \pm 0.087 \\ p5 & 2.944 \pm 0.084 \end{array}$

73.72 / 61

595.1 / 72

 8.902 ± 0.302

 -8.282 ± 0.063

 2.431 ± 0.056

 98.69 ± 1.10

 6.927 ± 0.020

 2.066 ± 0.015

 5.42 ± 0.79

 -7.444 ± 0.575

 χ^2 / ndf

 χ^2 / ndf

p0

p1

p2

р3

p4

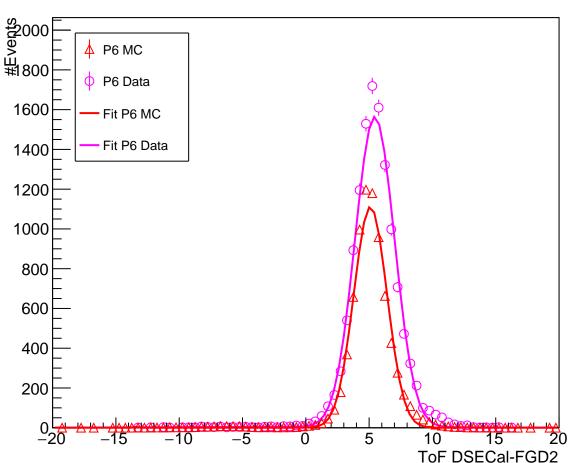
p5

p0

p1

χ^2 / ndf Fgd2Fwd_ToF_ECal_FGD2_shower 66.28 / 62 p0 5.663 ± 0.685 #Events p1 -5.834 ± 1.014 50 p2 4.889 ± 0.940 ▲ P6 MC 30.27 ± 1.84 p3 P6 Data p4 6.181 ± 0.207 40 **p5** 3.166 ± 0.180 Fit P6 MC Fit P6 Data 30 20 χ^2 / ndf 227.2 / 71 p0 7.638 ± 0.268 -8.144 ± 0.083 **p1** 10 p2 3.184 ± 0.085 р3 32.81 ± 0.61 p4 6.436 ± 0.034 **p5** 2.291 ± 0.029 -10 -5 10 15 ToF BrECal-FGD2

Fgd2Fwd_ToF_DSECal_FGD2_track



 $\begin{array}{ccc} p0 & 4.94 \pm 0.63 \\ p1 & -3.17e - 09 \pm 1.65e - 01 \\ p2 & 9.857 \pm 1.361 \\ p3 & 1560 \pm 19.3 \\ p4 & 5.447 \pm 0.015 \end{array}$

282.3 / 50

 1.558 ± 0.013

4474 / 65

 60.22 ± 0.02

 1112 ± 0.0

 5.101 ± 0.001

 1.311 ± 0.001

 -13.49 ± 13.58

 -0.04212 ± 0.61316

 χ^2 / ndf

p5

 χ^2 / ndf

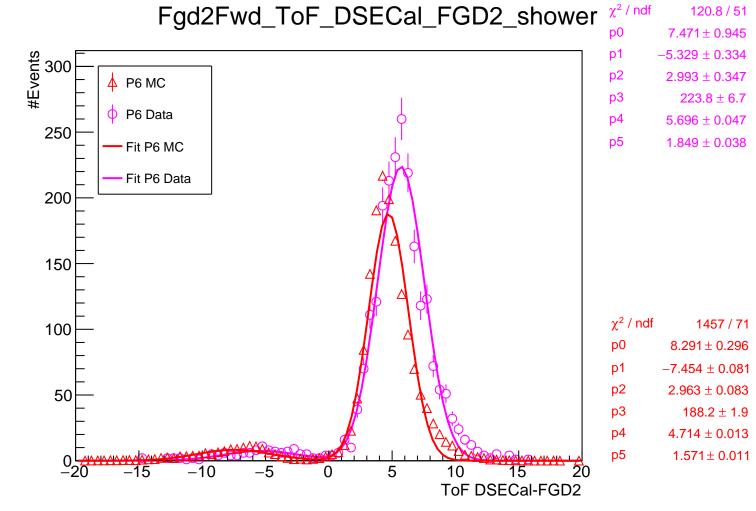
p0

p1

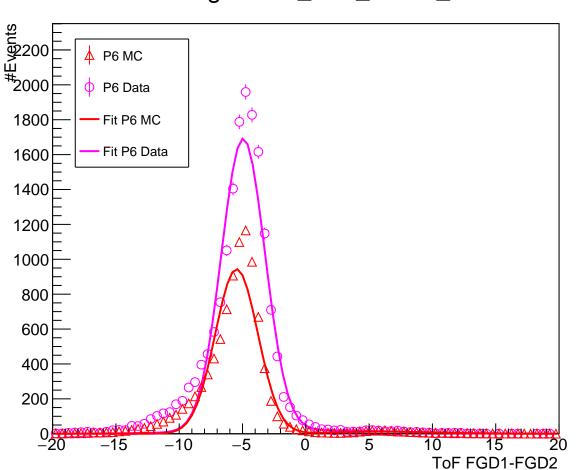
p2

p3

p4 p5



Fgd2Bwd_ToF_FGD1_FGD2



p1 -4.947 ± 0.017 p2 1.724 ± 0.017 p3 19.9 ± 1.4 p4 1.11e-12 ± 1.63e-02 **p5** 7.323 ± 0.284

1492 / 69

 1677 ± 21.2

 χ^2 / ndf

p0

p0 943.9 ± 4.3 p1 -5.467 ± 0.007 p2 1.685 ± 0.006

 χ^2 / ndf 1.416e+04 / 74

 11.74 ± 0.36 p3 p4

p5

 6.133 ± 0.083

 3.73 ± 0.11

Fgd2Bwd_ToF_ECal_FGD2_track χ^2 / ndf p0 200 #Events **p1** ▲ P6 MC 180 P6 Data 160 Fit P6 MC 140 Fit P6 Data 120 100 80 60 40 20 -15 -10-5

p2 2.988 ± 0.059 p3 2.961 ± 0.579 p4 7.403 ± 0.762 **p5** -4.111 ± 0.947 χ^2 / ndf 429.8 / 71 p0 148.6 ± 1.3 p1 -8.492 ± 0.015

> 2.241 ± 0.012 4.976 ± 0.230

> 7.454 ± 0.082

 2.281 ± 0.069

p2

p3

p4

p5

ToF BrECal-FGD2

82.4 / 60

 120 ± 3.7

 -8.519 ± 0.075

Fgd2Bwd_ToF_ECal_FGD2_shower χ^2 / ndf p0 70_F **p1** #Events p2 ▲ P6 MC р3 60 P6 Data p4 **p5** Fit P6 MC 50 Fit P6 Data 40 30 20 10 -15 -10 -5

 3.9 ± 0.1 1.549 ± 0.381 8.731 ± 1.913 3.712 ± 1.258 χ^2 / ndf 383.5 / 64 p0 48.1 ± 0.6 p1 -8.947 ± 0.034 p2 3.06 ± 0.03 2.804 ± 0.172 p3 p4 6.734 ± 0.119 p5 2.275 ± 0.096

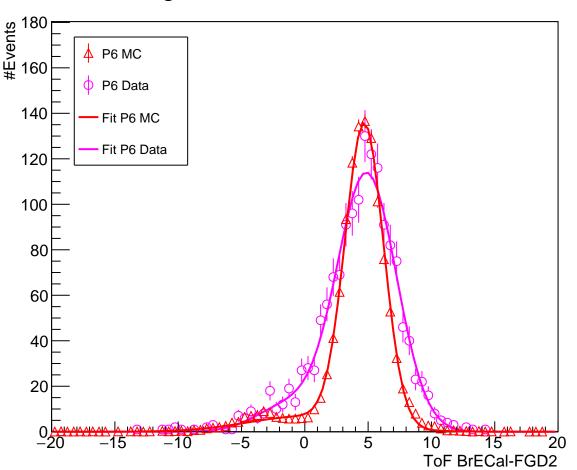
ToF BrECal-FGD2

77.93 / 56

 47.67 ± 2.03

 -7.932 ± 0.146

Fgd2HAFwd_ToF_ECal_FGD2_track



p1 -1.194 ± 1.940 p2 2.583 ± 1.113 p3 113.3 ± 5.0 p4 4.89 ± 0.22 **p5** 2.346 ± 0.133

272.4 / 66

 6.755 ± 0.242

 4.506 ± 0.077 132 ± 1.5

 4.702 ± 0.014

 1.515 ± 0.012

 $-2.003e-10 \pm 2.336e-02$

40.47 / 42

 11.67 ± 3.32

 χ^2 / ndf

 χ^2 / ndf

p0

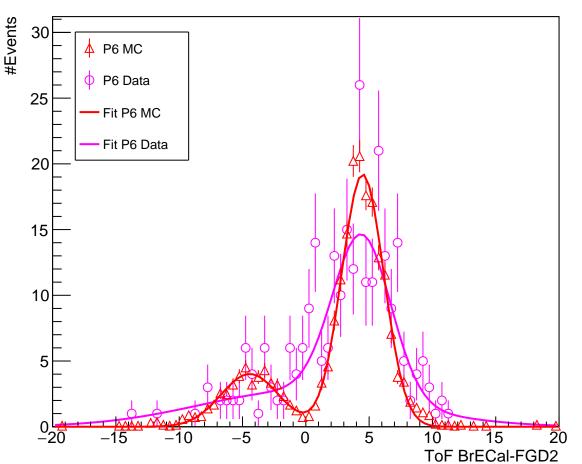
p2

p3

p5

p0

Fgd2HAFwd_ToF_ECal_FGD2_shower



 4.415 ± 0.310 2.296 ± 0.386

39.99 / 35

 2.702 ± 0.908

 7.904 ± 2.268

 12.42 ± 1.63

90.79 / 53

 4.014 ± 0.209

 -4.429 ± 0.103

 2.283 ± 0.089

 4.492 ± 0.038

 1.663 ± 0.033

 19.21 ± 0.54

 -0.5037 ± 3.9442

 χ^2 / ndf

p0

p1

p2

p3

p4

p5

 χ^2 / ndf

p0

p1 p2

p3

p4 p5

Fgd2HABwd_ToF_ECal_FGD2_track χ^2 / ndf 69.78 / 56 p0 101.1 ± 3.6 160 #Events **p1** -4.359 ± 0.080 p2 2.746 ± 0.071 △ P6 MC p3 8.002 ± 1.796 140 P6 Data p4 4.807 ± 0.266 **p5** 1.519 ± 0.366 Fit P6 MC 120 Fit P6 Data 100 80 60 χ^2 / ndf 489.5 / 67 p0 118.5 ± 1.2 40 p1 -4.711 ± 0.017 p2 2.044 ± 0.014 20 9.428 ± 0.364 p3 p4 4.017 ± 0.066 **p5** 1.85 ± 0.06 0<u>20</u> -10-5 -15 ToF BrECal-FGD2

χ^2 / ndf Fgd2HABwd_ToF_ECal_FGD2_shower 45.85 / 45 p0 24.66 ± 1.75 #Events **p1** -3.483 ± 0.190 45 p2 2.984 ± 0.177 ▲ P6 MC p3 1.657 ± 0.608 40 P6 Data p4 6.497 ± 1.496 **p5** 3.204 ± 1.887 35 Fit P6 MC Fit P6 Data 30 25 20 χ^2 / ndf 237.1 / 55 15 p0 25.29 ± 0.57 -5.095 ± 0.040 10 p1 p2 2.254 ± 0.037 2.086 ± 0.185 p3 5 p4 4.341 ± 0.127 **p5** 1.669 ± 0.121 -10 -5 15 ToF BrECal-FGD2