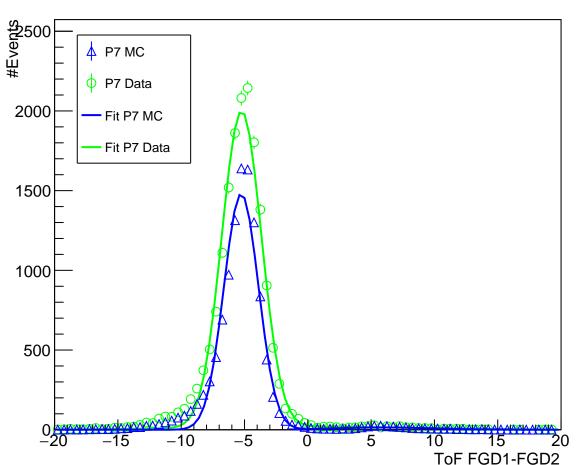
Fgd1Fwd_ToF_FGD1_FGD2



 1.563 ± 0.012 p2 p3 18.72 ± 1.12 $1.066e-10 \pm 2.012e-02$ p4 p5 -8.96 ± 0.34 χ^2 / ndf 1.142e+04 / 73 p0 1480 ± 5.5 -5.258 ± 0.004 p1 p2 1.366 ± 0.004 р3 14.16 ± 0.37 p4 6.013 ± 0.083

 3.842 ± 0.097

759 / 68

 1985 ± 21.8

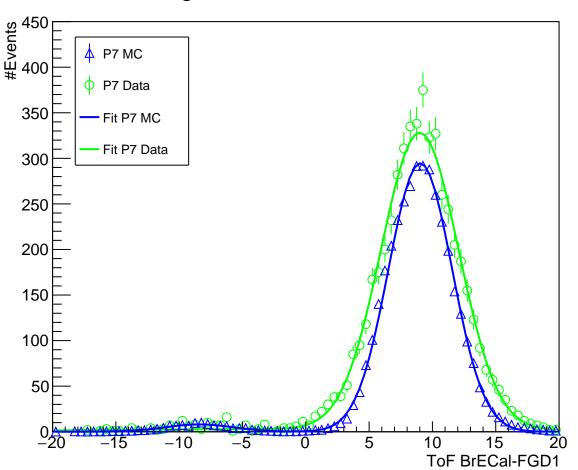
 -5.23 ± 0.01

 χ^2 / ndf

p0

p5

Fgd1Fwd_ToF_ECal_FGD1_track



-5.292e-09 ± 1.255e+01 p2 -16.36 ± 4.27 p3 325.7 ± 5.9 9.004 ± 0.046 **p5** 3.059 ± 0.037 χ^2 / ndf 406.6 / 72 p0 8.003 ± 0.280 p1 -8.405 ± 0.071 p2 2.703 ± 0.063

 294.6 ± 1.6

 9.043 ± 0.012

 2.513 ± 0.008

97.65 / 65

 3.057 ± 0.451

 χ^2 / ndf

p0

p3

p4

p5

Fgd1Fwd_ToF_ECal_FGD1_shower χ^2 / ndf p0 p1 #Events p2 ▲ P7 MC p3 60 P7 Data p4 **p5** Fit P7 MC 50 Fit P7 Data 40 30 χ^2 / ndf 20 p0 p1 p2 10 p3 p4 **p5** -10 10 15 ToF BrECal-FGD1

 -6.558 ± 0.430 3.6 ± 0.4

79.79 / 68

 6.648 ± 0.860

 42.84 ± 2.04

279.1 / 74

 7.795 ± 0.257

 -8.75 ± 0.09

 3.348 ± 0.083

 36.12 ± 0.55

 8.008 ± 0.037

 2.869 ± 0.028

04 8.501 ± 0.139 05 3.569 ± 0.123

 3.569 ± 0.123

Fgd1Fwd_ToF_DSECal_FGD1_track #Events 000 ▲ P7 MC P7 Data 1000 Fit P7 MC Fit P7 Data ₩ 800 600 400 200 10 15 ToF DSECal-FGD1

 -8.75 ± 1.11 -0.09928 ± 0.02829 1015 ± 15.6 10.24 ± 0.02 1.546 ± 0.015

 χ^2 / ndf 1.127e+04 / 63

 2.041 ± 1.019

 1.128 ± 1.000

 9.387 ± 14.104

 1.225 ± 1.019

 535.3 ± 1.0

 -0.731 ± 10.607

226.1 / 45

 -49.71 ± 7.18

 χ^2 / ndf

p0

p1

p2

p3

p4

p5

p0

p1 p2

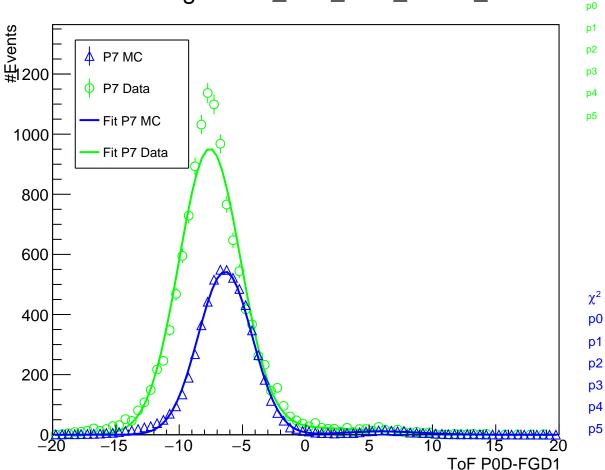
p3 p4

p5

χ^2 / ndf Fgd1Fwd_ToF_DSECal_FGD1_shower p0 1.6 ± 0.7 90 **p1** -6.799 ± 3.571 #Events p2 -6.121 ± 3.267 ▲ P7 MC 80 p3 61.07 ± 3.33 P7 Data p4 10.98 ± 0.10 p5 2.047 ± 0.079 70 Fit P7 MC Fit P7 Data 60 50 40 χ^2 / ndf 725.5 / 62 30 3.436 ± 0.064 p0 -6.725 ± 0.043 20 **p1** p2 -0.189 ± 0.017 59.08 ± 1.11 p3 10 p4 9.455 ± 0.023 **p5** 1.457 ± 0.019 -10 10 15 ToF DSECal-FGD1

51.92 / 33

Fgd1Bwd_ToF_P0D_FGD1_track



 -7.594 ± 0.025 2.428 ± 0.023 22.68 ± 1.60 1.765e-10 ± 1.120e-01 5.464 ± 0.260 χ^2 / ndf 1924 / 74 542.8 ± 2.5

 -6.372 ± 0.008

 2.131 ± 0.007

 11.03 ± 0.36

 6.079 ± 0.077

 2.986 ± 0.087

358.6 / 67

 943.2 ± 12.3

 χ^2 / ndf

Fgd1Bwd_ToF_P0D_FGD1_shower χ^2 / ndf p0 200 #Events p1 p2 ▲ P7 MC 180 p3 P7 Data p4 160 p5 Fit P7 MC 140 Fit P7 Data 120 100 80 60 p0 p1 40 20 **p5** -10-5 ToF P0D-FGD1

 3.219 ± 0.064 5.06 ± 0.94 4.198 ± 0.535 2.79 ± 0.60

113.7 / 62

 139.8 ± 3.8

 -7.534 ± 0.073

 χ^2 / ndf 1641 / 70 126.6 ± 1.3 -6.472 ± 0.020

p2 2.465 ± 0.019 4.423 ± 0.185

p3

p4

 4.734 ± 0.152

 3 ± 0.1

Fgd1Bwd_ToF_ECal_FGD1_track χ^2 / ndf p0 30 #Events p1 p2 ▲ P7 MC P7 Data 25 Fit P7 MC Fit P7 Data 20 15 10 5 MINIMALA -10-5 15

 2.4 ± 0.2 p3 1.687 ± 0.389 p4 0.1722 ± 18.7180 **p5** 14.72 ± 5.81 χ^2 / ndf 189.3 / 67 p0 20.44 ± 0.51 -6.549 ± 0.042 **p1** p2 2.174 ± 0.037 2.968 ± 0.167 p3 p4 6.879 ± 0.121 **p5** 2.725 ± 0.106

ToF BrECal-FGD1

40.71 / 46

 15.09 ± 1.54

 -8.092 ± 0.230

Fgd1Bwd_ToF_ECal_FGD1_shower χ^2 / ndf p0 #Events p1 20 p2 ▲ P7 MC p3 18 P7 Data p4 16 **p5** Fit P7 MC Fit P7 Data 14 12 10 8 χ^2 / ndf 6 p0 **p1** 4 p2 p3 2 p4 **p5** -10-55 15 ToF BrECal-FGD1

 2.897 ± 0.289 1.566 ± 0.515 0.5831 ± 14.3593

26.86 / 46

 12.39 ± 1.29

 -6.386 ± 0.303

 14.88 ± 8.11

 -6.867 ± 0.069 2.816 ± 0.061

158.5 / 66

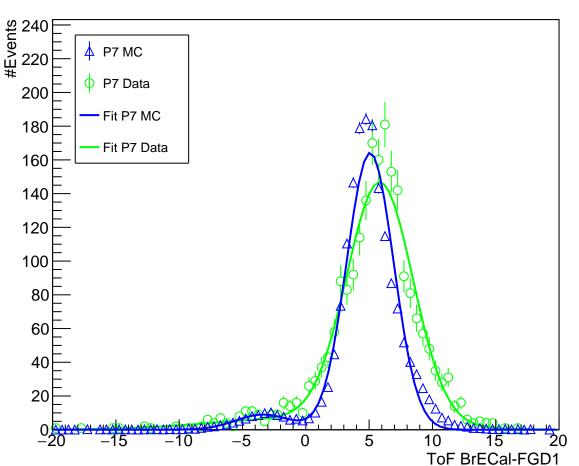
 10.97 ± 0.33

 1.491 ± 0.131

 6.001 ± 0.174

 2.353 ± 0.159

Fgd1HAFwd_ToF_ECal_FGD1_track



 $-5.984e-10 \pm 2.450e-01$

78.92 / 51

 6.981 ± 1.230

 7.137 ± 1.084

 5.857 ± 0.075

 2.604 ± 0.065

1059 / 69

 164.3 ± 1.6

 141.8 ± 4.5

 χ^2 / ndf

p0

p2

p3

p4

p5

 χ^2 / ndf p0

 8.992 ± 0.343

 -3.359 ± 0.077 2.168 ± 0.077

p1 p2

p3

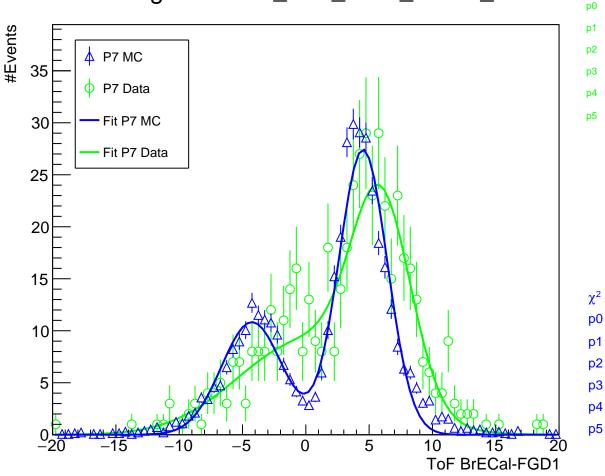
p4

p5

 5.08 ± 0.01

 1.853 ± 0.014

Fgd1HAFwd_ToF_ECal_FGD1_shower



 χ^2 / ndf 337.8 / 67

47.05 / 50

 5.4 ± 0.6

 19.01 ± 2.07

 5.938 ± 0.265

 2.351 ± 0.236

 8.985 ± 1.159

-3.201e-10 ± 2.952e-01

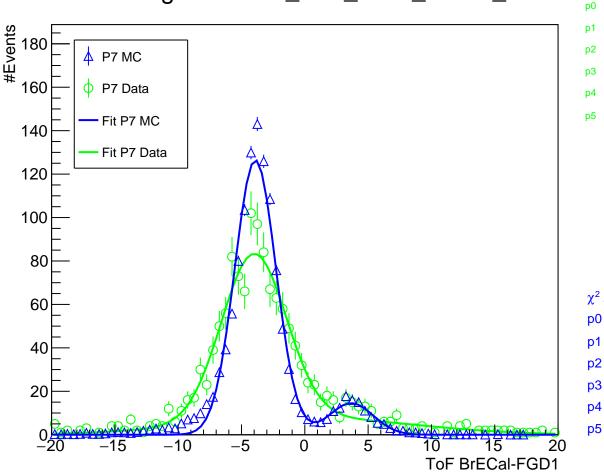
 χ^2 / ndf

 10.83 ± 0.37 -4.258 ± 0.068 **p1** p2 2.402 ± 0.071 p3 27.42 ± 0.66

 4.518 ± 0.037

p5 1.917 ± 0.038

Fgd1HABwd_ToF_ECal_FGD1_track



 $\begin{array}{cccc} \chi^2 \, / \, \text{ndf} & 868.7 \, / \, 65 \\ \text{p0} & 126.5 \pm 1.5 \\ \text{p1} & -3.907 \pm 0.015 \\ \text{p2} & 1.626 \pm 0.014 \\ \text{p3} & 14.53 \pm 0.51 \\ \text{p4} & 3.668 \pm 0.051 \\ \end{array}$

 1.742 ± 0.057

 χ^2 / ndf

76.94 / 67

 76.33 ± 3.44 -4.022 ± 0.108

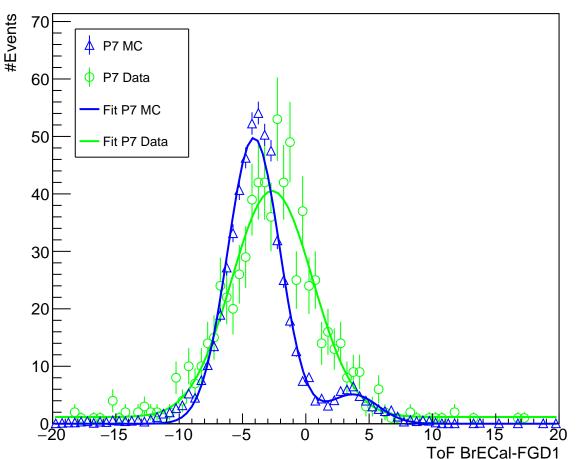
 2.559 ± 0.105

 7.858 ± 1.433

 8.371 ± 0.906

2.812e-10 ± 2.537e-01

Fgd1HABwd_ToF_ECal_FGD1_shower



 -2.653 ± 0.140 3.209 ± 0.129

36.36 / 52

 39.35 ± 2.05

 1.17 ± 0.25

319.3 / 64

 49.77 ± 0.83

 2.065 ± 0.027

 4.284 ± 11.935 7376 ± 4428228.5

p3 p4 p5

 χ^2 / ndf

p0

p1

p2

 χ^2 / ndf p0

 -4.102 ± 0.027

p2

p1

p3

 5.077 ± 0.283

p4

 3.751 ± 0.109

p5 1.965 ± 0.112

Fgd2Fwd_ToF_ECal_FGD2_track χ^2 / ndf p0 p1 #Events p2 ▲ P7 MC 140 p3 P7 Data p4 p5 120 Fit P7 MC Fit P7 Data 100 80 60 χ^2 / ndf p0 40 **p1** p2 20 p3 p4 **p5** -1010 15 ToF BrECal-FGD2

90.91 / 65

 5.432 ± 0.860

 -7.892 ± 0.501

 3.556 ± 0.653

 6.551 ± 0.082

 3.135 ± 0.078

797.8 / 73

 7.358 ± 0.268

 -8.295 ± 0.076

 2.763 ± 0.073

 7.012 ± 0.019

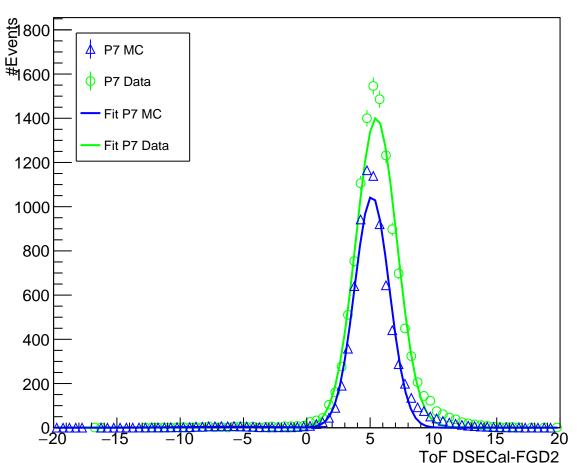
 2.228 ± 0.014

 113 ± 1.1

 100.4 ± 3.4

Fgd2Fwd_ToF_ECal_FGD2_shower χ^2 / ndf 69.46 / 61 p0 6.306 ± 0.879 p1 -6.759 ± 0.446 #Events 35 p2 3.39 ± 0.49 ▲ P7 MC p3 23.02 ± 1.62 P7 Data p4 6.398 ± 0.199 30 **p5** 3.424 ± 0.196 Fit P7 MC Fit P7 Data 25 20 15 χ^2 / ndf 316.9 / 73 p0 7.603 ± 0.261 10 -8.289 ± 0.086 **p1** p2 3.232 ± 0.084 5 p3 23.09 ± 0.52 p4 6.278 ± 0.045 **p5** 2.461 ± 0.040 -10 -5 10 15 ToF BrECal-FGD2

Fgd2Fwd_ToF_DSECal_FGD2_track



p0

 $-1.514e-08 \pm 1.659e-01$

432.1 / 59

 3.468 ± 0.455

 13.67 ± 2.39

1399 ± 17.5

 5.491 ± 0.016 1.615 ± 0.014

6102 / 71

 4.715 ± 0.256

 3.357 ± 0.178

p2

p3

 χ^2 / ndf

p5

 χ^2 / ndf p0

 -6.014 ± 0.151

p1

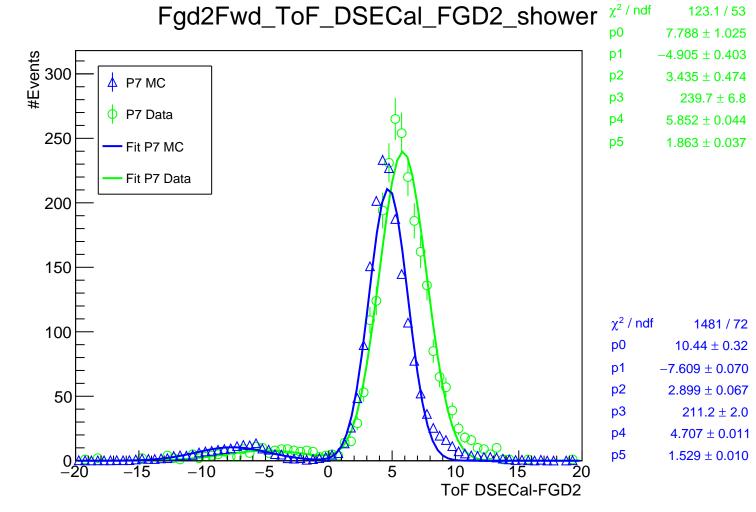
p2

p3 p4

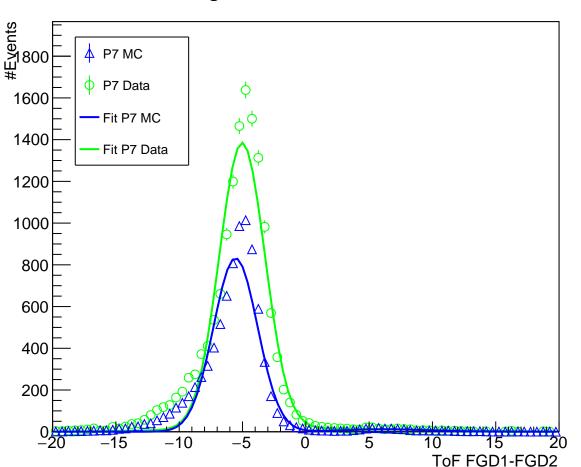
p5

 1047 ± 4.7 5.145 ± 0.005

 1.37 ± 0.00



Fgd2Bwd_ToF_FGD1_FGD2



p0 1371 ± 17.9 -5.032 ± 0.019 p2 1.802 ± 0.019 p3 16.17 ± 1.23 $5.824e-11 \pm 2.107e-02$ p4 p5 9.162 ± 0.453

1292 / 67

 χ^2 / ndf

 χ^2 / ndf 1.306e+04 / 74 p0 831.9 ± 4.0

p1 -5.549 ± 0.007 1.737 ± 0.006

p2 p3

 11.28 ± 0.33

p4 6.313 ± 0.077 **p5**

 3.468 ± 0.093

Fgd2Bwd_ToF_ECal_FGD2_track χ^2 / ndf p0 #Events p2 ▲ P7 MC 180 p3 P7 Data p4 160 p5 Fit P7 MC 140 Fit P7 Data 120 100 80 60 40 20 -15 -10 -5 ToF BrECal-FGD2

79.61 / 63

 115.4 ± 3.5

 -8.704 ± 0.076

 3.045 ± 0.060

 3.592 ± 0.573

 7.735 ± 0.730

 4.415 ± 0.859

548.8 / 72

 146.4 ± 1.2

 -8.603 ± 0.015

 2.273 ± 0.012 6.239 ± 0.252

 7.746 ± 0.084

 2.642 ± 0.073

p1

 χ^2 / ndf

p0

p1

p2

p3

p4

p5

Fgd2Bwd_ToF_ECal_FGD2_shower χ^2 / ndf p0 #Events 80 p1 p2 ▲ P7 MC p3 70 P7 Data Fit P7 MC 60 Fit P7 Data 50 40 30 χ^2 / ndf p0 20 p1 p2 10 p3 p4 **p5** -15 -10-5 5 ToF BrECal-FGD2

p4 9.279 \pm 1.374 p5 3.618 \pm 0.854

117.2 / 55

 58.66 ± 2.42

 -7.483 ± 0.132

 3.594 ± 0.102

 2.015 ± 0.477

474.9 / 71

 54.58 ± 0.68

 3.12 ± 0.03

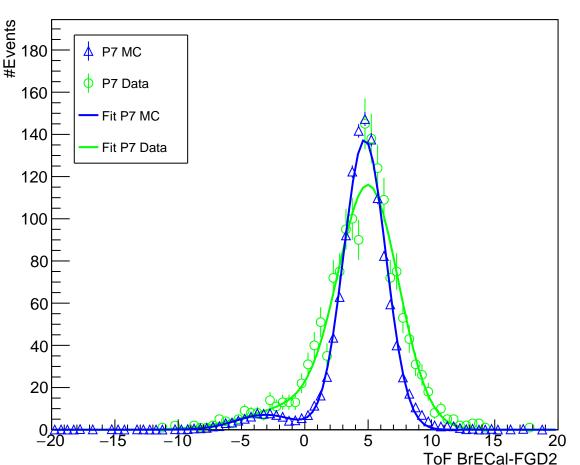
 7.13 ± 0.14

 2.785 ± 0.131

 2.393 ± 0.152

 -8.896 ± 0.032

Fgd2HAFwd_ToF_ECal_FGD2_track



 11.59 ± 1.89 $-8.371e-11 \pm 8.854e-01$ 4.127 ± 0.431

56.87 / 44

110.6 ± 4.1

 5.06 ± 0.09

 2.368 ± 0.073

286.1 / 63

 7.072 ± 0.288

 137.5 ± 1.5

p2 p3

p5

 χ^2 / ndf

p0

 χ^2 / ndf

p0

p1

 -3.099 ± 0.106 2.338 ± 0.094

p2

p3

p4

p5

 4.731 ± 0.014 1.665 ± 0.013

χ^2 / ndf Fgd2HAFwd_ToF_ECal_FGD2_shower 47.16 / 39 p0 3.05 ± 1.25 #Events **p1** -4.742 ± 0.634 25 p2 2.151 ± 1.283 ▲ P7 MC p3 13.78 ± 1.30 P7 Data p4 4.714 ± 0.317 20 p5 3.19 ± 0.33 Fit P7 MC Fit P7 Data 15 10 χ^2 / ndf 140.6 / 56 p0 5.539 ± 0.263 -4.542 ± 0.087 **p1** 5 p2 2.216 ± 0.085 p3 17.3 ± 0.5 p4 4.529 ± 0.043 **p5** 1.904 ± 0.042 -10-5 15 ToF BrECal-FGD2

