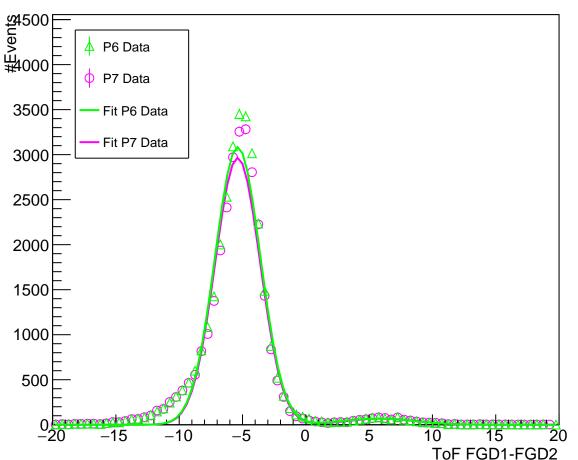
Fgd1Fwd_ToF_FGD1_FGD2



 -5.381 ± 0.012 p2 1.777 ± 0.011 p3 67.81 ± 2.93 5.978 ± 0.102

1950 / 73

 2966 ± 26.0

p4 **p5** 2.723 ± 0.098

 χ^2 / ndf

p0

 χ^2 / ndf p0 p1

 3084 ± 26.7 -5.378 ± 0.012

1959 / 73

p2 1.789 ± 0.011

 67.23 ± 3.07 p3

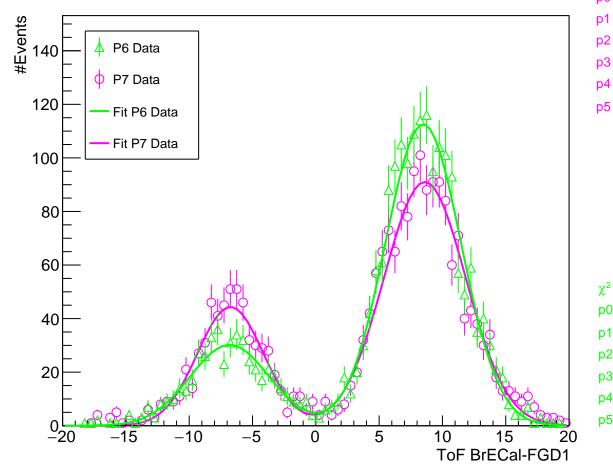
p4

p5 2.855 ± 0.110

 5.683 ± 0.118

Fgd1Fwd_ToF_ECal_FGD1_track χ^2 / ndf 164.1 / 71 p0 31.91 ± 2.13 #Events p1 -8.359 ± 0.136 p2 2.812 ± 0.133 P6 Data 700 609.7 ± 8.5 p3 P7 Data p4 8.755 ± 0.031 **p5** 2.724 ± 0.024 600 Fit P6 Data Fit P7 Data 500 400 300 χ^2 / ndf 134.1 / 72 p0 43.15 ± 2.35 200 -7.902 ± 0.119 **p1** p2 2.838 ± 0.106 100 564.1 ± 8.4 p3 p4 8.699 ± 0.031 **p5** 2.592 ± 0.024 -1010 15 ToF BrECal-FGD1

Fgd1Fwd_ToF_ECal_FGD1_shower



 χ^2 / ndf 60.48 / 68 p0 30.17 ± 1.82 -6.807 ± 0.156 **p1** p2 3.13 ± 0.13

 χ^2 / ndf

p0

p2

p4

p5

p3 p4

p5

96.7 / 68

 91 ± 3.1

 44.33 ± 2.53 -6.744 ± 0.114

 2.614 ± 0.111

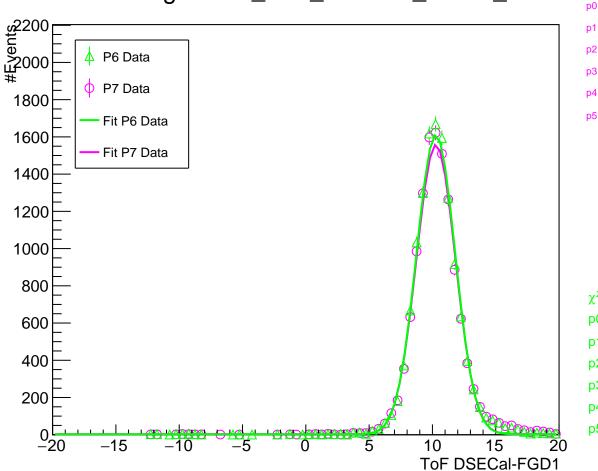
 8.613 ± 0.089

 3.232 ± 0.075

 112.5 ± 3.4 8.485 ± 0.075

 2.987 ± 0.057

Fgd1Fwd_ToF_DSECal_FGD1_track



 2.783 ± 0.290 $-1.442e-05 \pm 1.999e+01$ 238.8 ± 3.4 1556 ± 18.9 10.28 ± 0.01 1.537 ± 0.012

364.2 / 46

 χ^2 / ndf

 -19.92 ± 14.32 p1 p2 776.1 ± 9.7 1607 ± 19.3 p3 10.27 ± 0.01

 χ^2 / ndf

p0

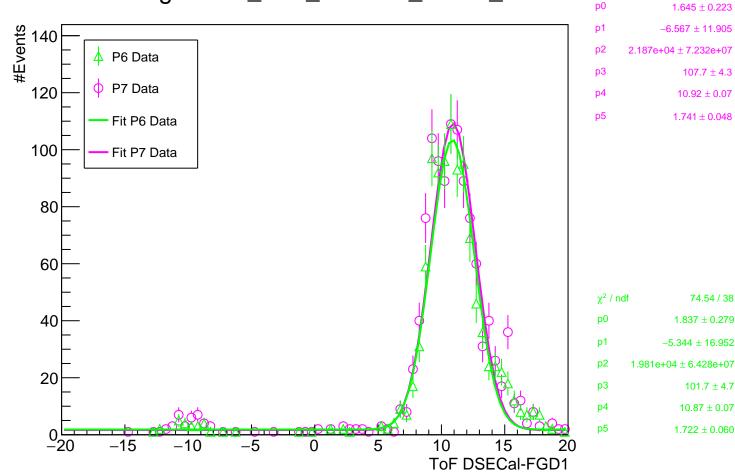
p4 **p5**

 1.525 ± 0.012

306.1 / 48 2.45 ± 0.26

Fgd1Fwd_ToF_DSECal_FGD1_shower

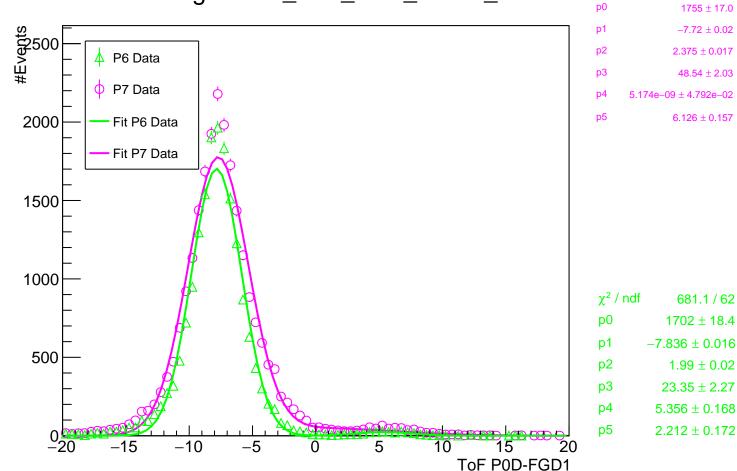
118.7 / 48

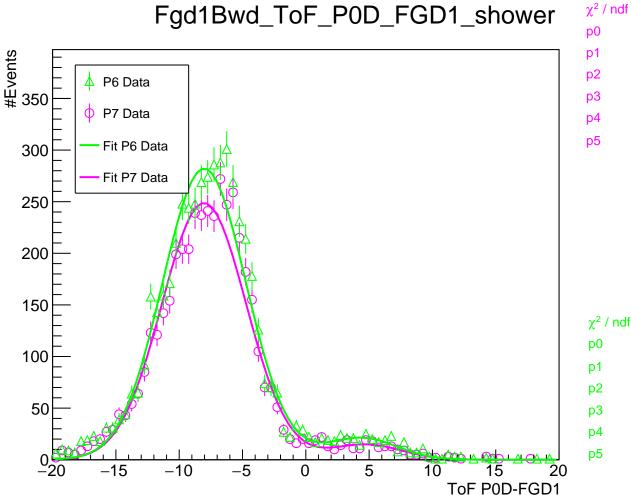


Fgd1Bwd_ToF_P0D_FGD1_track

 χ^2 / ndf

785.3 / 69





 -8.038 ± 0.056 3.328 ± 0.049

143.8 / 62

 248.8 ± 5.1

 14.8 ± 1.4

p4 4.741 ± 0.285 **p5** 2.818 ± 0.254

 χ^2 / ndf

 282.2 ± 5.5 -8.023 ± 0.051

p2

 3.302 ± 0.046

p3

 21.19 ± 1.50

200.6 / 65

p4

 4.398 ± 0.238 2.781 ± 0.181

Fgd1Bwd_ToF_ECal_FGD1_track χ^2 / ndf p0 #Events p1 90 p2 P6 Data р3 80 P7 Data p4 **p5** 70 Fit P6 Data Fit P7 Data 60 50 40 30 p0 20 p1 p2 p3 10 p4

-10

-5

 -8.059 ± 0.102 2.697 ± 0.084 14.6 ± 1.4 5.394 ± 0.188 2.266 ± 0.147 χ^2 / ndf 65.55 / 56 56.2 ± 2.8 -7.794 ± 0.100 2.62 ± 0.09 9.991 ± 1.228 5.263 ± 0.254 **p5** 2.545 ± 0.245

15

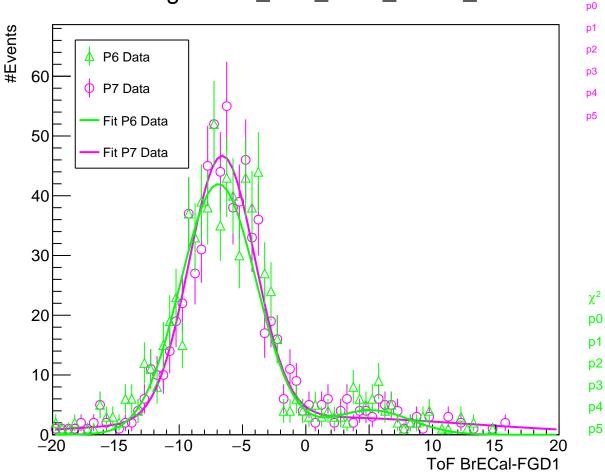
ToF BrECal-FGD1

20

67.93 / 61

 59.3 ± 2.7

Fgd1Bwd_ToF_ECal_FGD1_shower



 χ^2 / ndf 92.12 / 59 p0 41.96 \pm 2.24 p1 -6.894 ± 0.139

 3.002 ± 0.128

 4.098 ± 1.538

 3.122 ± 1.645

 5.16 ± 0.74

 χ^2 / ndf

45.42 / 58

 44.09 ± 2.45 -6.617 ± 0.129

 2.592 ± 0.110

 2.991 ± 0.494

 12.77 ± 2.39

2.166e-09 ± 1.677e+00

Fgd1HAFwd_ToF_ECal_FGD1_track χ^2 / ndf 149.8 / 58 p0 47.56 ± 3.00 #Events 200 -3.465 ± 0.123 p2 2.034 ± 0.118 P6 Data p3 410.2 ± 8.5 P7 Data p4 5.171 ± 0.035 **p5** 2.155 ± 0.034 Fit P6 Data 400 Fit P7 Data 300 200 χ^2 / ndf 163.3 / 60 p0 53.81 ± 3.08 -3.342 ± 0.136 **p1** 100 p2 2.326 ± 0.135 382.4 ± 8.6 p3 p4 5.194 ± 0.037 _____ **p5** 2.111 ± 0.039 -5 -10 ToF BrECal-FGD1

χ^2 / ndf Fgd1HAFwd_ToF_ECal_FGD1_shower 81.25 / 54 p0 42.34 ± 2.63 -2.637 ± 0.164 #Events p2 2.523 ± 0.160 P6 Data 100 53.82 ± 3.01 p3 P7 Data p4 5.532 ± 0.135 **p5** 2.403 ± 0.132 Fit P6 Data 80 Fit P7 Data 60 40 χ^2 / ndf 68.59 / 51 33.63 ± 2.54 p0 -2.53 ± 0.19 p1 20 p2 2.359 ± 0.204 66.44 ± 3.40 p3 p4 5.094 ± 0.113 <u> MA OLIMAN DAN</u> **p5** 2.231 ± 0.106 0 -20 -5 15 ToF BrECal-FGD1

Fgd1HABwd_ToF_ECal_FGD1_track χ^2 / ndf p0 **p1** #Events 400 p2 P6 Data p3 350 P7 Data p4 **p5** Fit P6 Data 300 Fit P7 Data 250 200 150 χ^2 / ndf p0 100 p1 p2 50 p3 p4 **p5** 0 -20 -10-5 15 -15

199.8 / 70

 233.3 ± 6.2

 -4.407 ± 0.054

 2.181 ± 0.049

 49.74 ± 3.31

 3.708 ± 0.161

 2.543 ± 0.208

200.4 / 68 251.4 ± 6.7

 -4.193 ± 0.054

 2.205 ± 0.053

 51.67 ± 3.51

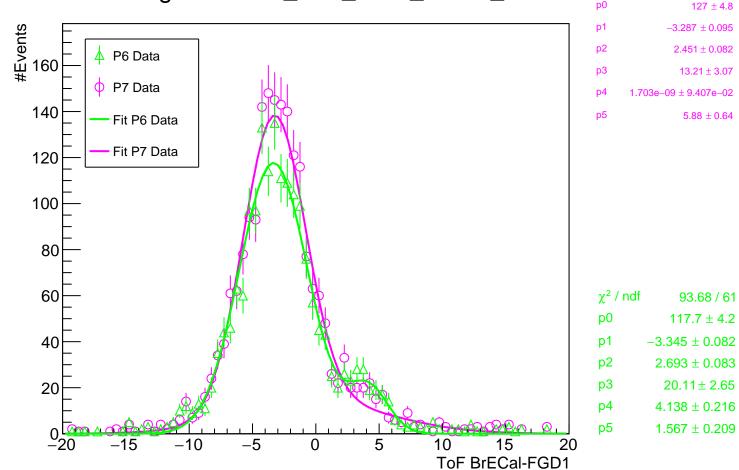
 3.49 ± 0.17

 2.44 ± 0.21

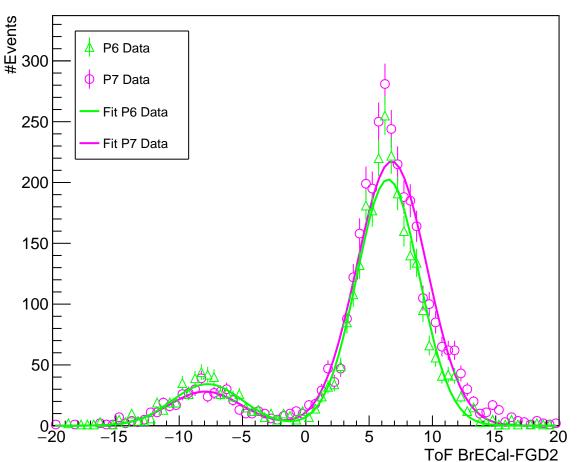
ToF BrECal-FGD1

Fgd1HABwd_ToF_ECal_FGD1_shower

91.14 / 61



Fgd2Fwd_ToF_ECal_FGD2_track



 217.3 ± 5.6 6.787 ± 0.053 2.759 ± 0.051 χ^2 / ndf 129.3 / 68 p0 34.25 ± 2.23

 -7.766 ± 0.135

 2.786 ± 0.138

 2.472 ± 0.046

 202.6 ± 5.5

 6.5 ± 0.1

183.6 / 69

 28.1 ± 1.9

 -7.955 ± 0.157 2.865 ± 0.148

 χ^2 / ndf

p0

р3

p4

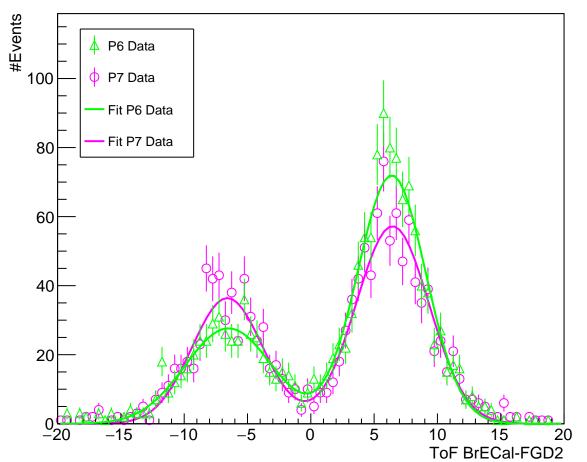
p5

p1 p2

p3 p4

p5

Fgd2Fwd_ToF_ECal_FGD2_shower



p2 2.8 ± 0.1 p3 57.21 ± 2.70 p4 6.455 ± 0.108 p5 2.882 ± 0.100

92.62 / 69

 36.4 ± 2.1

65.54 / 65

 27.64 ± 1.73 -6.504 ± 0.188

 3.439 ± 0.181

 71.95 ± 3.26

 6.392 ± 0.094

 2.694 ± 0.097

 -6.591 ± 0.137

 χ^2 / ndf

 χ^2 / ndf

p0

p1 p2

p3 p4

p5

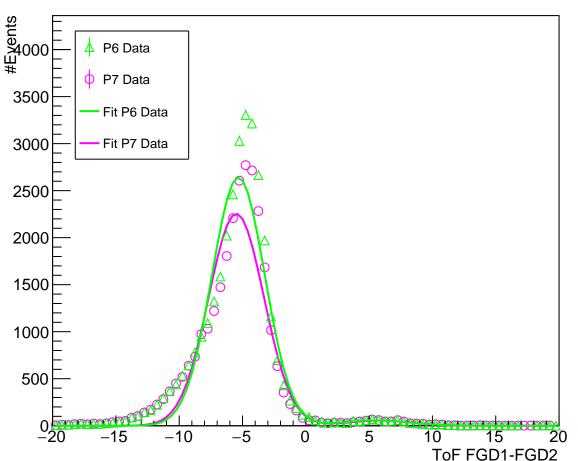
p0

p1

Fgd2Fwd_ToF_DSECal_FGD2_track χ^2 / ndf 1023 / 61 p0 29.36 ± 2.41 #Eyents -5.888 ± 0.122 p2 -2.003 ± 0.115 P6 Data p3 2191 ± 21.6 P7 Data p4 5.706 ± 0.013 **p5** 1.723 ± 0.012 Fit P6 Data 2500 Fit P7 Data 2000 1500 χ^2 / ndf 584.4 / 59 1000 p0 33.37 ± 2.53 -5.446 ± 0.126 p1 p2 2.123 ± 0.119 500 2402 ± 23.7 p3 p4 5.608 ± 0.012 **p5** 1.63 ± 0.01 ToF DSECal-FGD2

χ^2 / ndf Fgd2Fwd_ToF_DSECal_FGD2_shower 289.2 / 63 p0 41.03 ± 2.73 #Events 000 -4.928 ± 0.112 2.181 ± 0.112 P6 Data p3 429.1 ± 9.3 P7 Data p4 6.033 ± 0.035 500 **p5** 1.933 ± 0.029 Fit P6 Data Fit P7 Data 400 300 χ^2 / ndf 201.9 / 60 200 27.35 ± 2.24 p0 -5.172 ± 0.135 p1 p2 2.205 ± 0.145 100 395.6 ± 8.7 p3 p4 5.973 ± 0.036 **p5** 1.91 ± 0.03 050 -5 -10ToF DSECal-FGD2

Fgd2Bwd_ToF_FGD1_FGD2



 -5.488 ± 0.019 2.183 ± 0.016 54.68 ± 2.77 5.809 ± 0.116 2.578 ± 0.108

2768 / 73

 2254 ± 21.8

 χ^2 / ndf

p0

p1

p2

p3

p4

p5

 χ^2 / ndf

p0

 -5.325 ± 0.016 p1 p2 2.087 ± 0.015 57.27 ± 2.74 p3

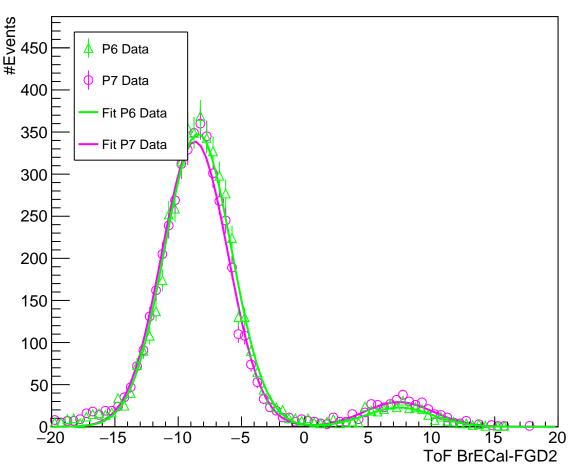
3099 / 72

 2640 ± 24.8

p4 5.496 ± 0.124 **p5**

 2.644 ± 0.105

Fgd2Bwd_ToF_ECal_FGD2_track



 2.62 ± 0.03 29.27 ± 2.08 7.416 ± 0.137

132.3 / 65

 338.8 ± 6.6

 -8.686 ± 0.039

 χ^2 / ndf

p0

p1

p2

p3

p4

p0

p1

p5 2.731 ± 0.149

 χ^2 / ndf 149.7 / 65 348.1 ± 6.8 -8.432 ± 0.039

p2 2.642 ± 0.034 22.69 ± 2.00 p3

p4 **p5**

 2.663 ± 0.182

 7.46 ± 0.16

Fgd2Bwd_ToF_ECal_FGD2_shower \$\frac{\pmathbb{F}{220}}{\pmathbb{P}} \frac{\pmathbb{P}{200}}{\pmathbb{P}} \frac{\pmathbb{P}{180}}{\pmathbb{P}} \frac{\pmathbb{P}

140

120

100

80

60

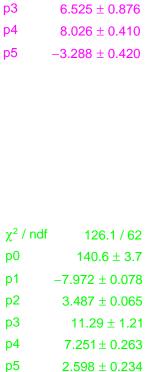
40

20

-15

-10

-5



135.9 / 66

 169.3 ± 4.2

 -7.675 ± 0.067

 3.428 ± 0.059

 χ^2 / ndf

p0

p1

p2

10 15 20 ToF BrECal-FGD2

Fgd2HAFwd_ToF_ECal_FGD2_track χ^2 / ndf 93.86 / 56 p0 35.61 ± 2.20 **p1** -3.017 ± 0.296 #Events p2 2.796 ± 0.220 P6 Data 400 p3 323.5 ± 7.9 P7 Data p4 4.646 ± 0.045 350 **p5** 1.993 ± 0.046 Fit P6 Data Fit P7 Data 300 250 200 150 χ^2 / ndf 73.35 / 52 43.61 ± 2.39 p0 100 -2.84 ± 0.26 p1 p2 2.957 ± 0.202 304.2 ± 7.6 50 p3 4.639 ± 0.046 p4 **p5** 1.926 ± 0.041 0 −20 -10 -5 ToF BrECal-FGD2

χ^2 / ndf Fgd2HAFwd_ToF_ECal_FGD2_shower 55.6 / 52 p0 26.55 ± 1.94 #Events -3.494 ± 0.196 p2 2.575 ± 0.178 70 P6 Data 35.97 ± 2.51 p3 P7 Data p4 5.175 ± 0.143 60 **p5** 2.248 ± 0.141 Fit P6 Data Fit P7 Data 50 40 30 χ^2 / ndf 61.47 / 45 15.42 ± 1.45 p0 20 -3.465 ± 0.273 **p1** p2 2.628 ± 0.243 10 45.13 ± 2.90 p3 p4 4.745 ± 0.115 **p5** 2.031 ± 0.111 0 -20 -5 15 ToF BrECal-FGD2

Fgd2HABwd_ToF_ECal_FGD2_track χ^2 / ndf p0 **p1** #Events 400 p2 P6 Data p3 P7 Data p4 350 **p5** Fit P6 Data 300 Fit P7 Data 250 200 150 p0 100 p1 p2 50 p3 p4 **p5** -10-5 15 ToF BrECal-FGD2

 46.72 ± 2.79 4.149 ± 0.137 2.187 ± 0.121 χ^2 / ndf 165.4 / 66 297.9 ± 7.2

 -4.247 ± 0.042

 2.143 ± 0.041

 45.57 ± 2.99

 3.937 ± 0.135

 2.091 ± 0.134

155.1 / 67

 264.5 ± 6.7

 -4.399 ± 0.046

 2.208 ± 0.044

χ^2 / ndf Fgd2HABwd_ToF_ECal_FGD2_shower 98.57 / 56 p0 106.7 ± 4.1 **p1** -3.756 ± 0.073 #Events p2 2.466 ± 0.071 P6 Data 140 p3 7.458 ± 1.354 P7 Data p4 4.623 ± 0.306 **p5** 1.57 ± 0.25 120 Fit P6 Data Fit P7 Data 100 80 60 χ^2 / ndf 84.22 / 49 p0 79.88 ± 3.57 40 -3.651 ± 0.083 p1 p2 2.325 ± 0.079 20 8.679 ± 1.367 p3 p4 4.798 ± 0.277 0 -15 **p5** 1.731 ± 0.241 -10-5 15 ToF BrECal-FGD2