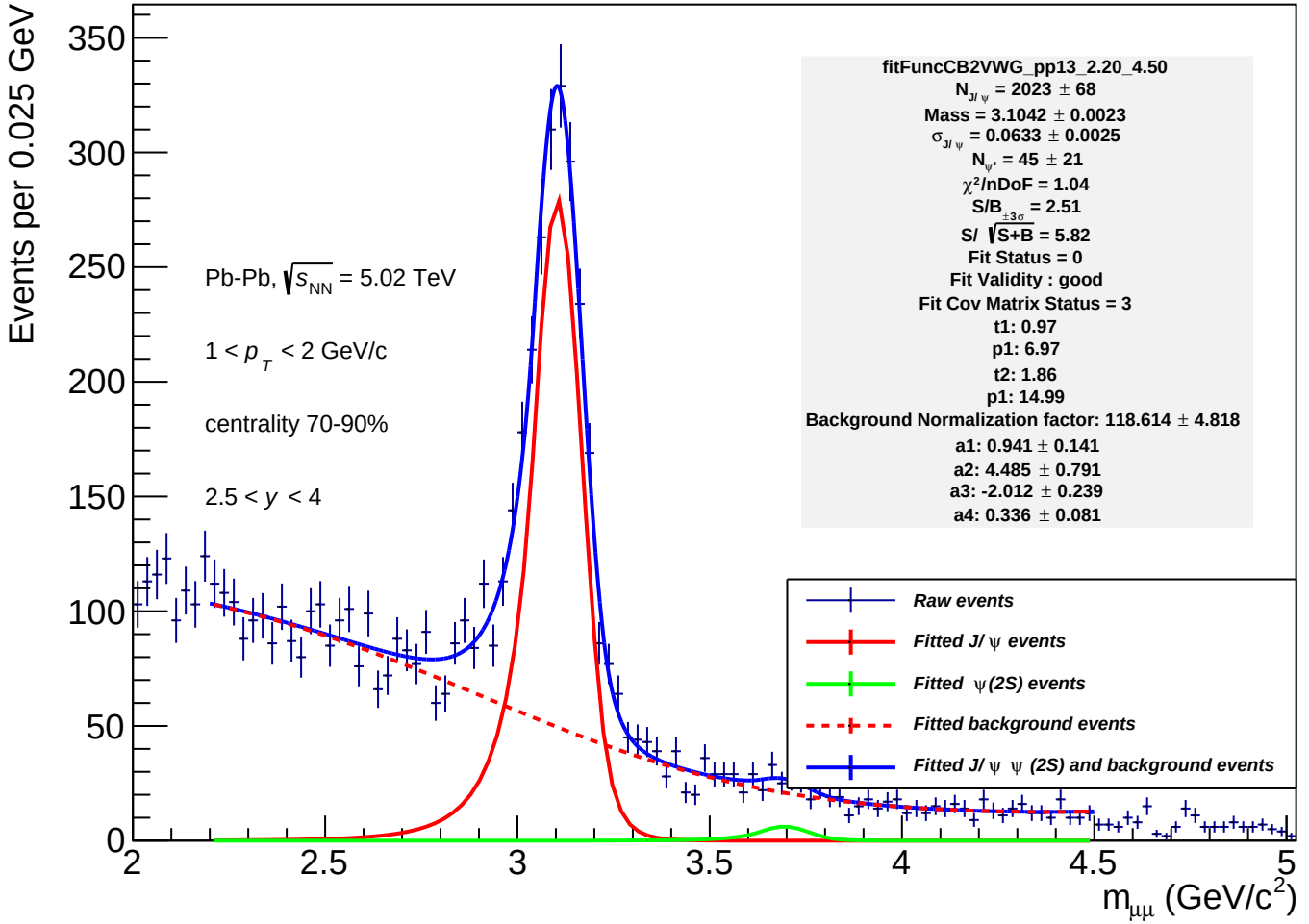
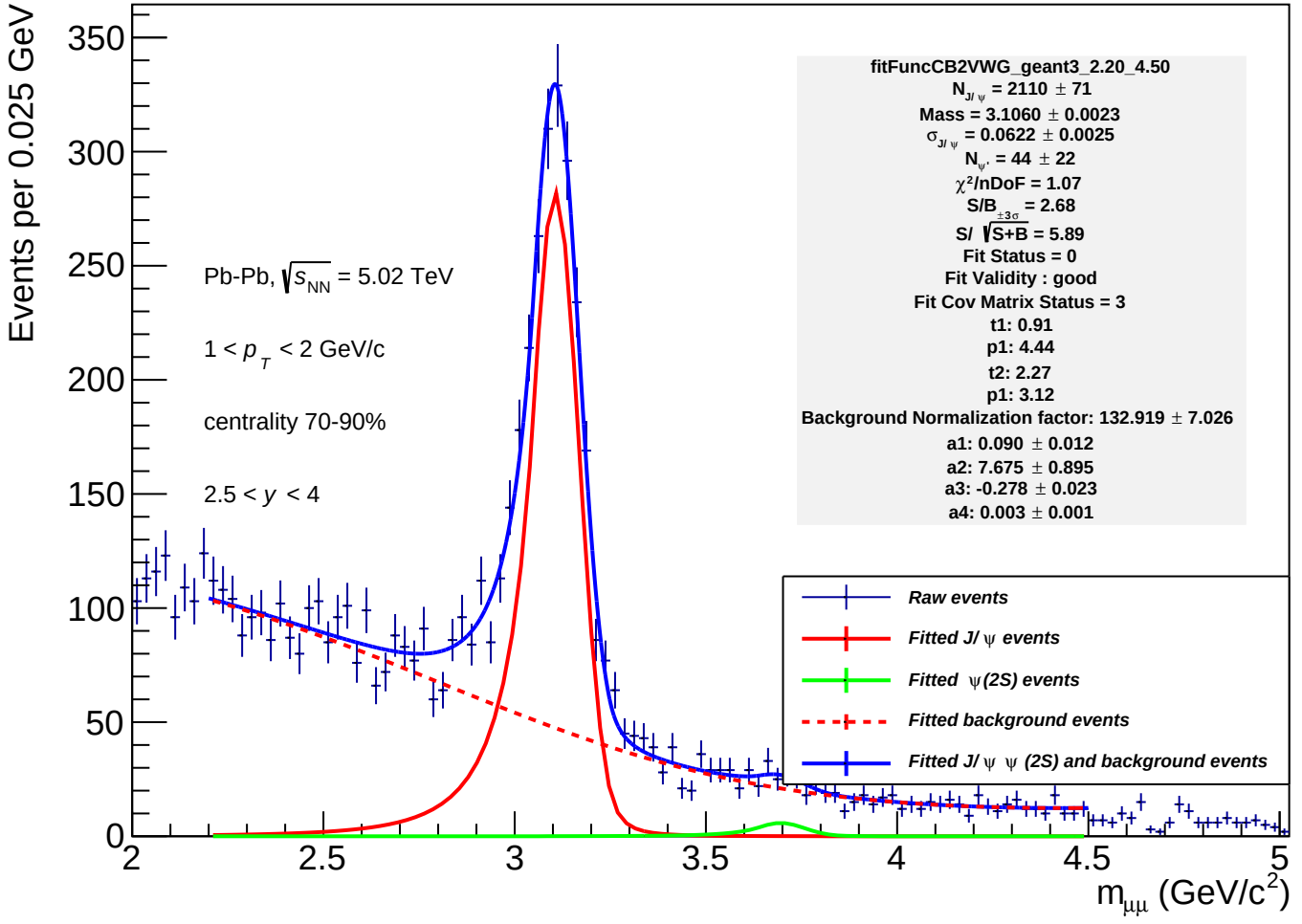
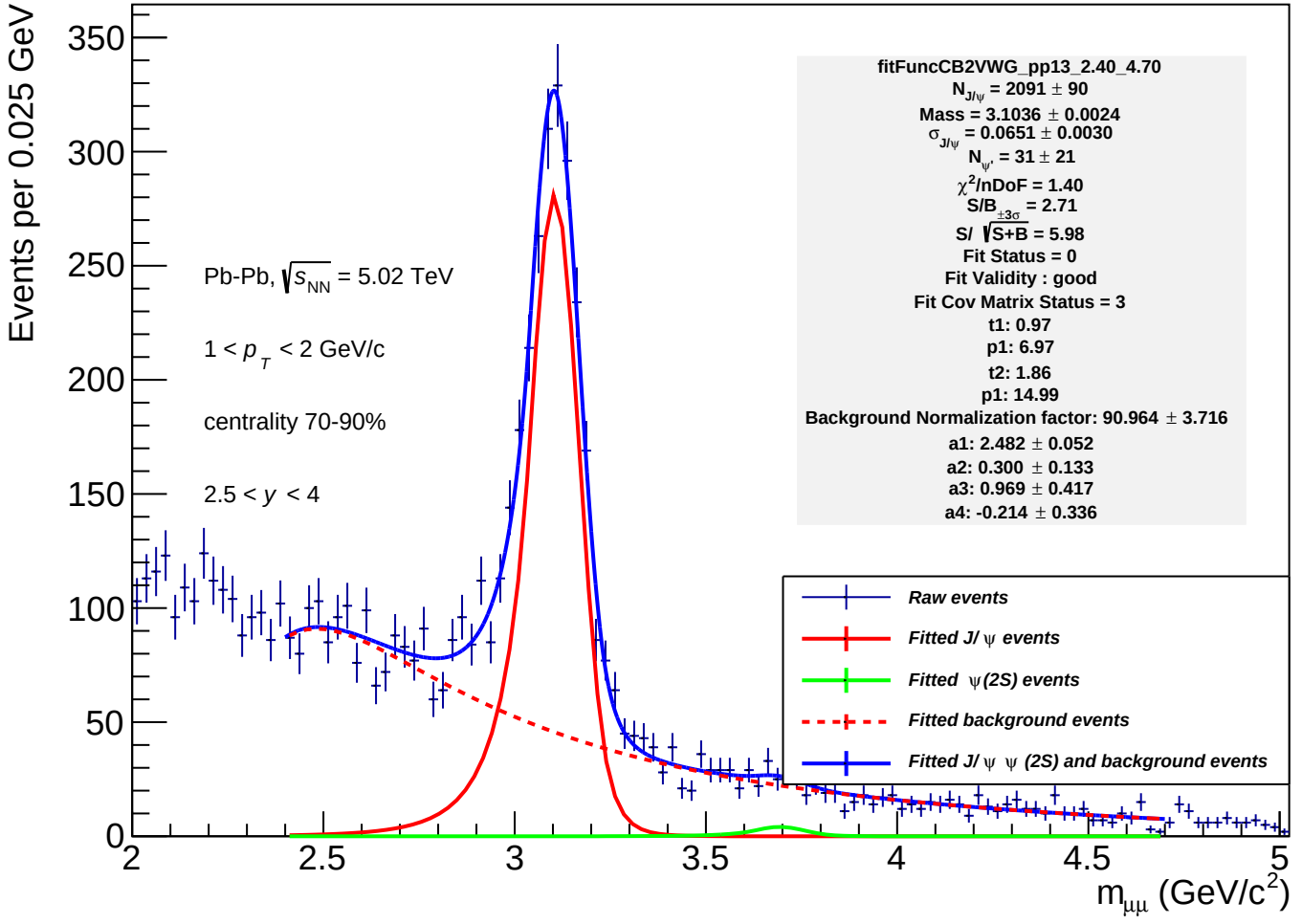
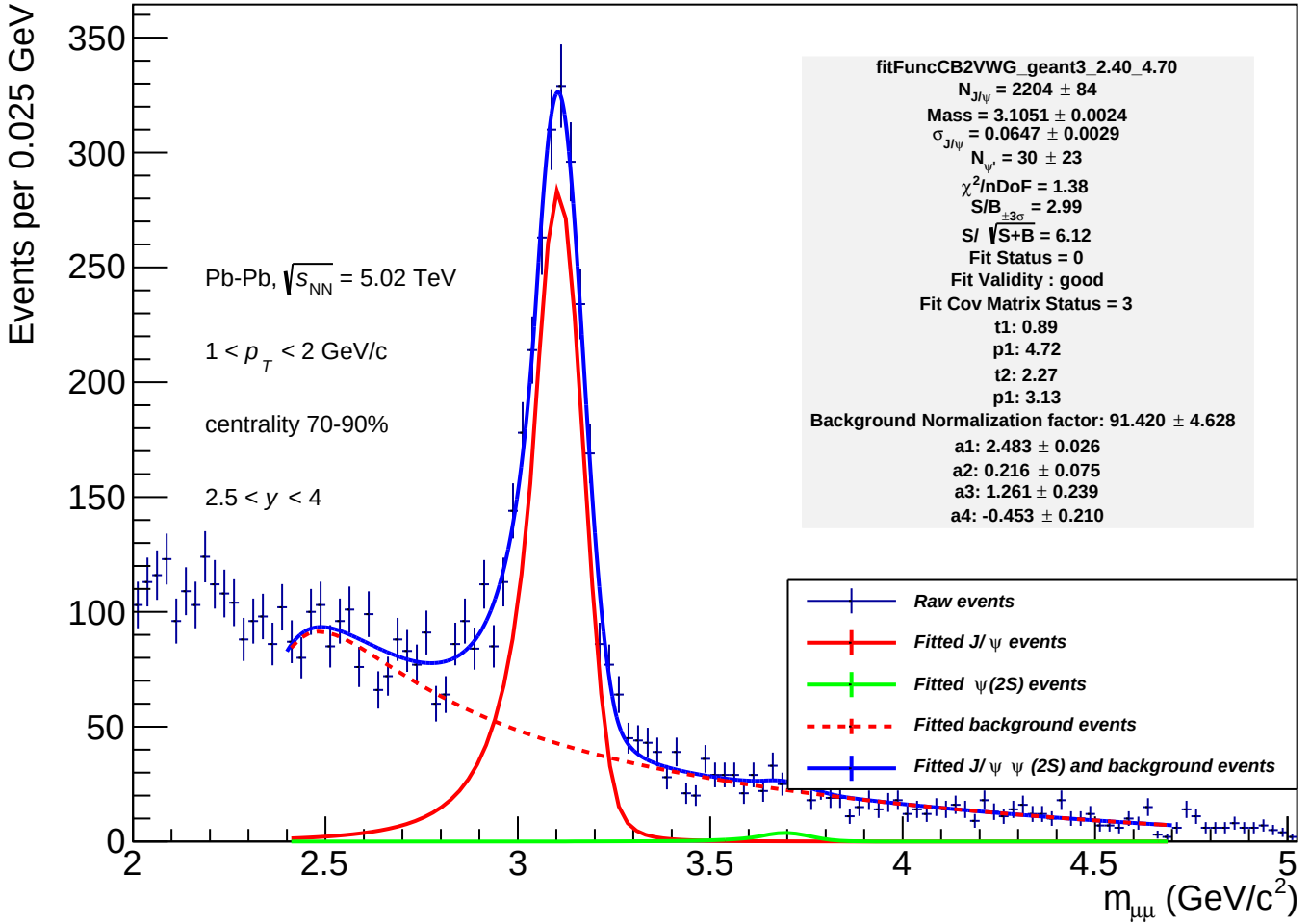
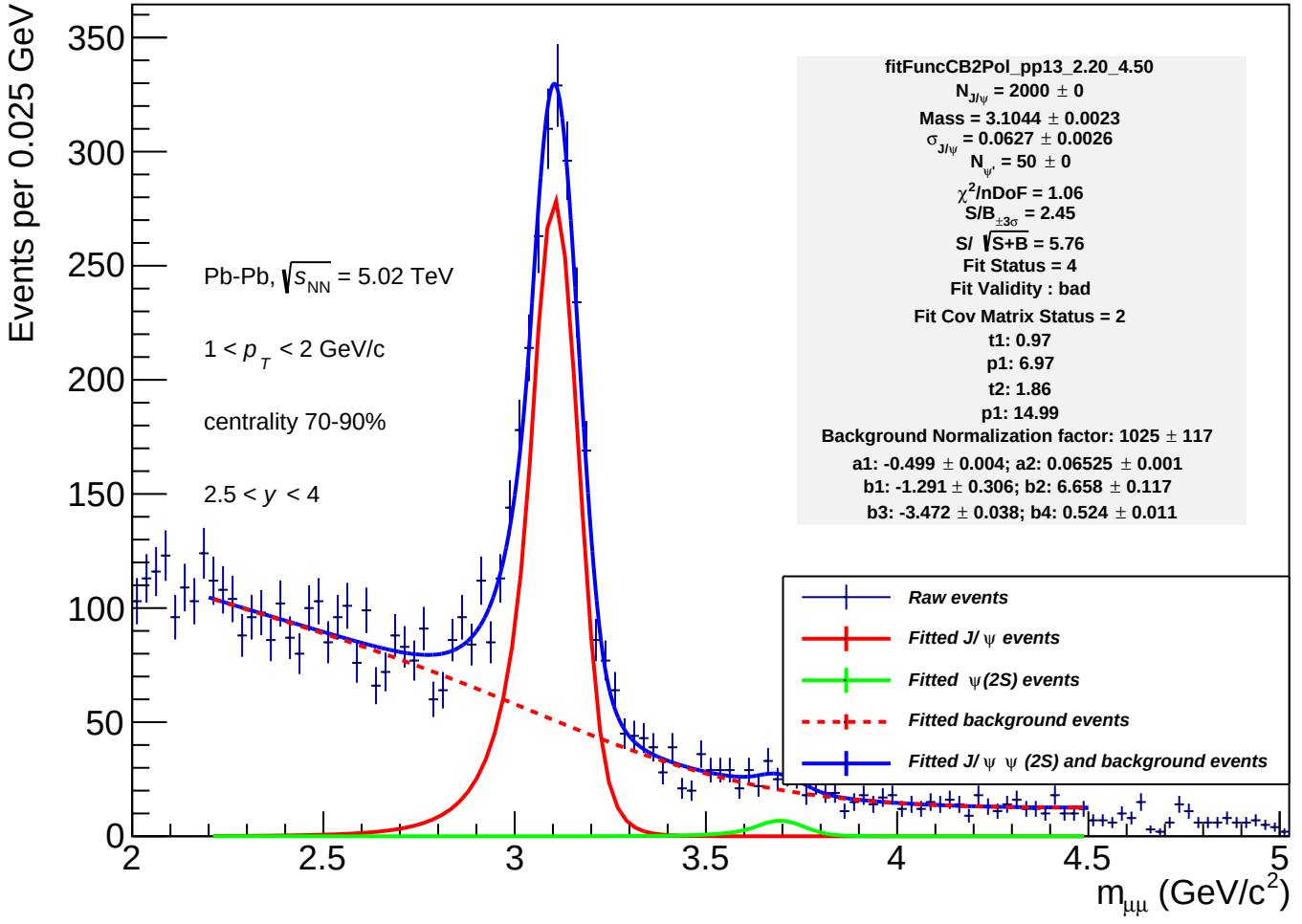
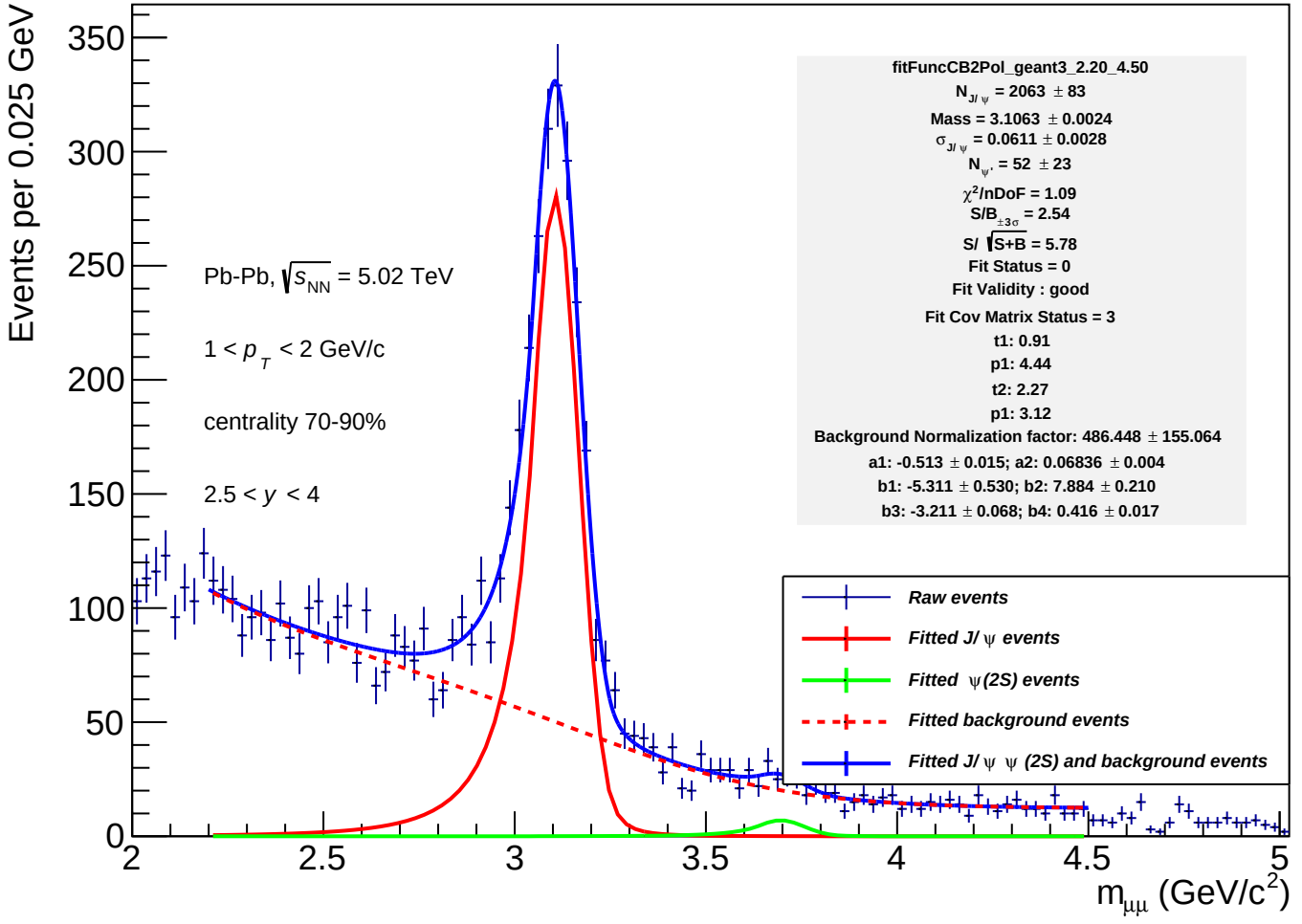

Events per 0.025 GeV
350
300
250
200
150
100
50
0
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
1 < p_T < 2 GeV/c
centrality 70-90%
2.5 < y < 4
fitFuncCB2VWG_pp13_2.20_4.50
$N_{J/\psi}$ = 2023 ± 68
Mass = 3.1042 ± 0.0023
$\sigma_{J/\psi}$ = 0.0633 ± 0.0025
$N_{\psi'}$ = 45 ± 21
χ^2/nDoF = 1.04
$S/B_{\pm 3\sigma}$ = 2.51
$S/\sqrt{S+B}$ = 5.82
Fit Status = 0
Fit Validity : good
Fit Cov Matrix Status = 3
t1: 0.97
p1: 6.97
t2: 1.86
p1: 14.99
Background Normalization factor: 118.614 ± 4.818
a1: 0.941 ± 0.141
a2: 4.485 ± 0.791
a3: -2.012 ± 0.239
a4: 0.336 ± 0.081
Raw events
Fitted J/ψ events
Fitted ψ(2S) events
Fitted background events
Fitted J/ψ ψ(2S) and background events

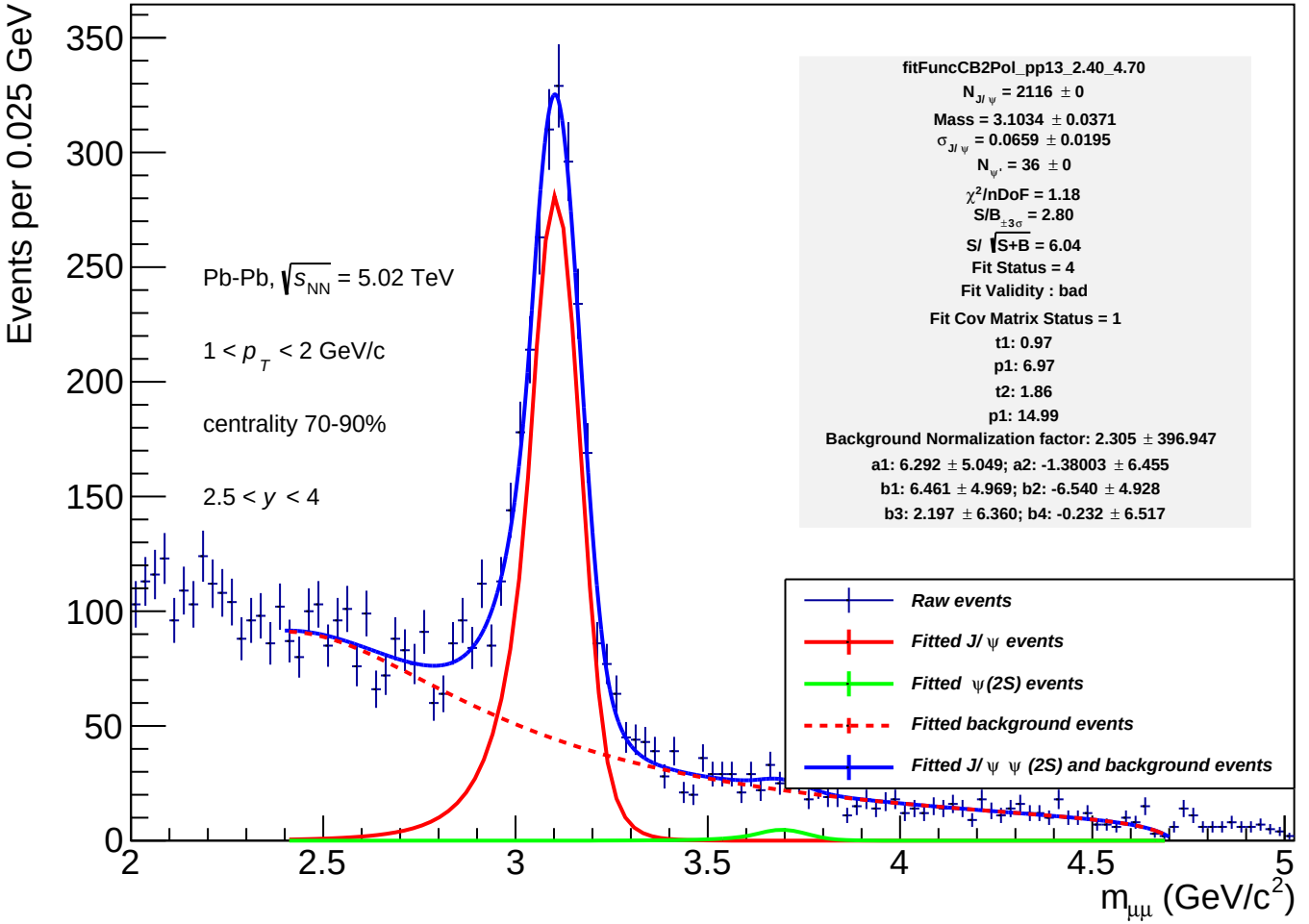

Events per 0.025 GeV
350
300
250
200
150
100
50
0
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
1 < p_T < 2 GeV/c
centrality 70-90%
2.5 < y < 4
fitFuncCB2VWG_geant3_2.20_4.50
$N_{J/\psi}$ = 2110 ± 71
Mass = 3.1060 ± 0.0023
$\sigma_{J/\psi}$ = 0.0622 ± 0.0025
$N_{\psi'}$ = 44 ± 22
χ^2/nDoF = 1.07
$S/B_{\pm 3\sigma}$ = 2.68
$S/\sqrt{S+B}$ = 5.89
Fit Status = 0
Fit Validity : good
Fit Cov Matrix Status = 3
t1: 0.91
p1: 4.44
t2: 2.27
p1: 3.12
Background Normalization factor: 132.919 ± 7.026
a1: 0.090 ± 0.012
a2: 7.675 ± 0.895
a3: -0.278 ± 0.023
a4: 0.003 ± 0.001
Raw events
Fitted J/ψ events
Fitted ψ(2S) events
Fitted background events
Fitted J/ψ ψ(2S) and background events

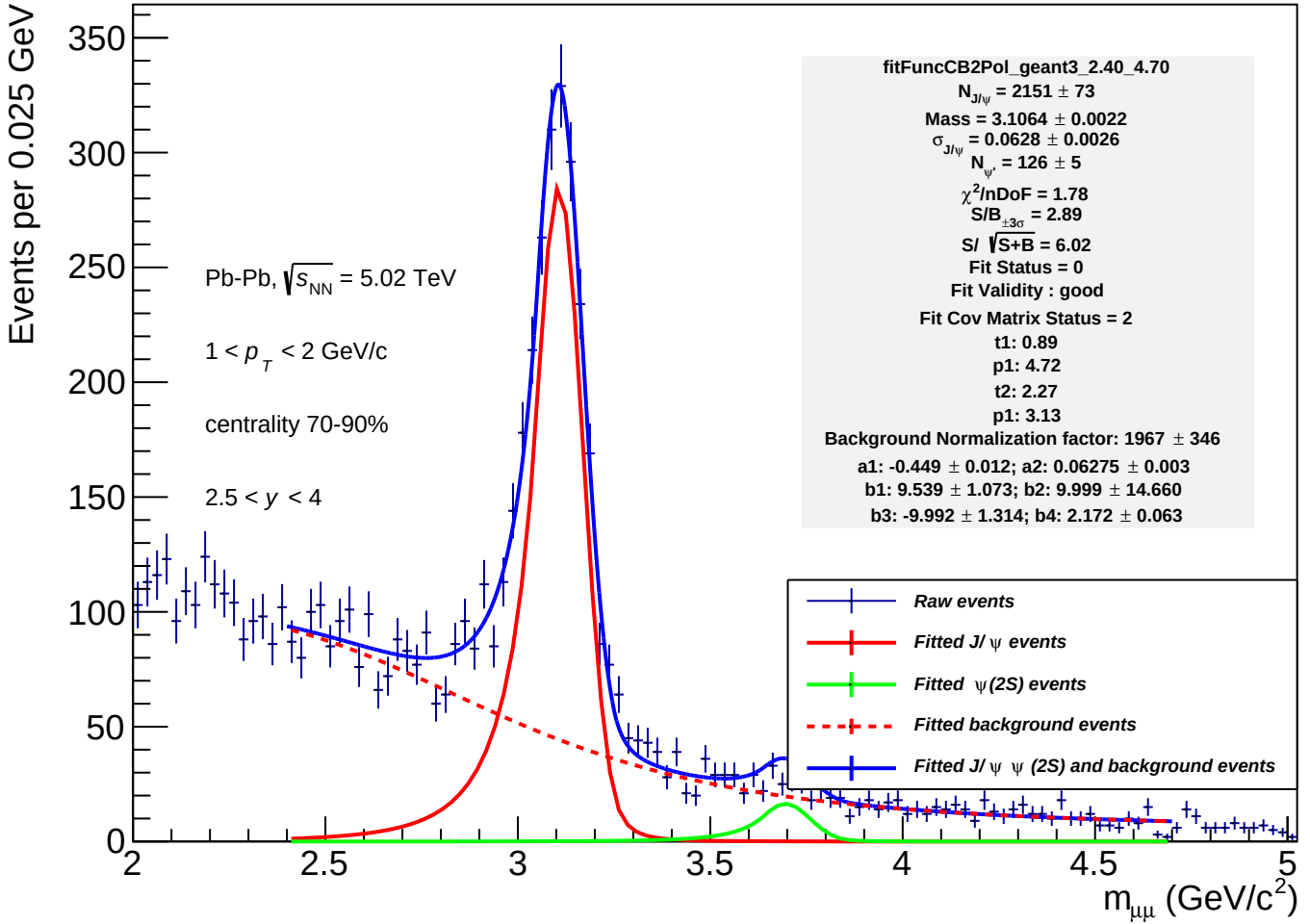

Events per 0.025 GeV
350
300
250
200
150
100
50
0
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
1 < p_T < 2 GeV/c
centrality 70-90%
2.5 < y < 4
fitFuncCB2VWG_pp13_2.40_4.70
$N_{J/\psi}$ = 2091 ± 90
Mass = 3.1036 ± 0.0024
$\sigma_{J/\psi}$ = 0.0651 ± 0.0030
$N_{\psi'}$ = 31 ± 21
χ^2/nDoF = 1.40
S/$B_{\pm 3\sigma}$ = 2.71
S/ $\sqrt{S+B}$ = 5.98
Fit Status = 0
Fit Validity : good
Fit Cov Matrix Status = 3
t1: 0.97
p1: 6.97
t2: 1.86
p1: 14.99
Background Normalization factor: 90.964 ± 3.716
a1: 2.482 ± 0.052
a2: 0.300 ± 0.133
a3: 0.969 ± 0.417
a4: -0.214 ± 0.336
Raw events
Fitted J/ψ events
Fitted ψ(2S) events
Fitted background events
Fitted J/ψ ψ (2S) and background events

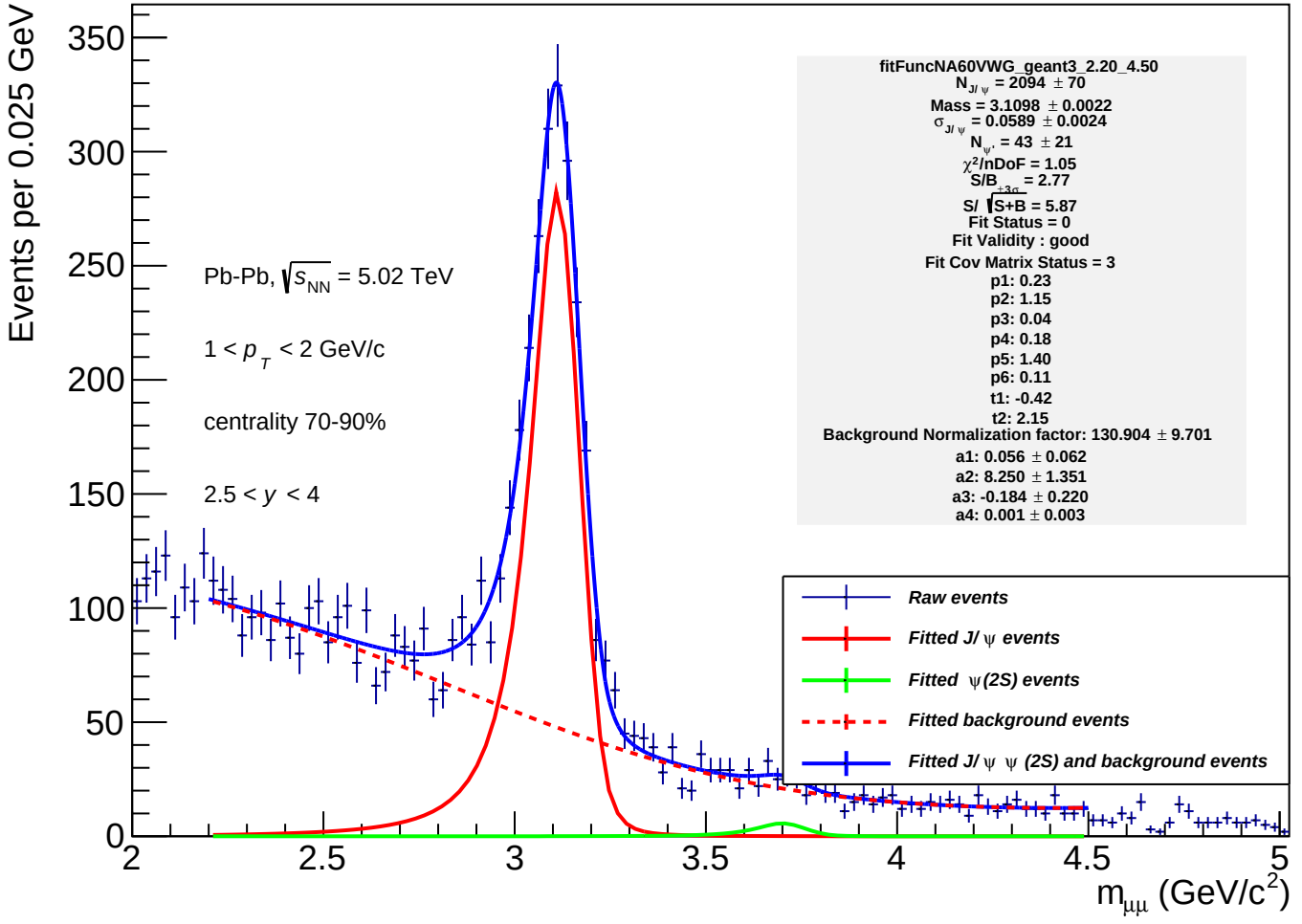

Events per 0.025 GeV
350
300
250
200
150
100
50
0
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
1 < p_T < 2 GeV/c
centrality 70-90%
2.5 < y < 4
fitFuncCB2VWG_geant3_2.40_4.70
$N_{J/\psi}$ = 2204 ± 84
Mass = 3.1051 ± 0.0024
$\sigma_{J/\psi}$ = 0.0647 ± 0.0029
$N_{\psi'}$ = 30 ± 23
χ^2/nDoF = 1.38
$S/B_{\pm 3\sigma}$ = 2.99
$S/\sqrt{S+B}$ = 6.12
Fit Status = 0
Fit Validity : good
Fit Cov Matrix Status = 3
t1: 0.89
p1: 4.72
t2: 2.27
p1: 3.13
Background Normalization factor: 91.420 ± 4.628
a1: 2.483 ± 0.026
a2: 0.216 ± 0.075
a3: 1.261 ± 0.239
a4: -0.453 ± 0.210
Raw events
Fitted J/ψ events
Fitted ψ(2S) events
Fitted background events
Fitted J/ψ ψ(2S) and background events

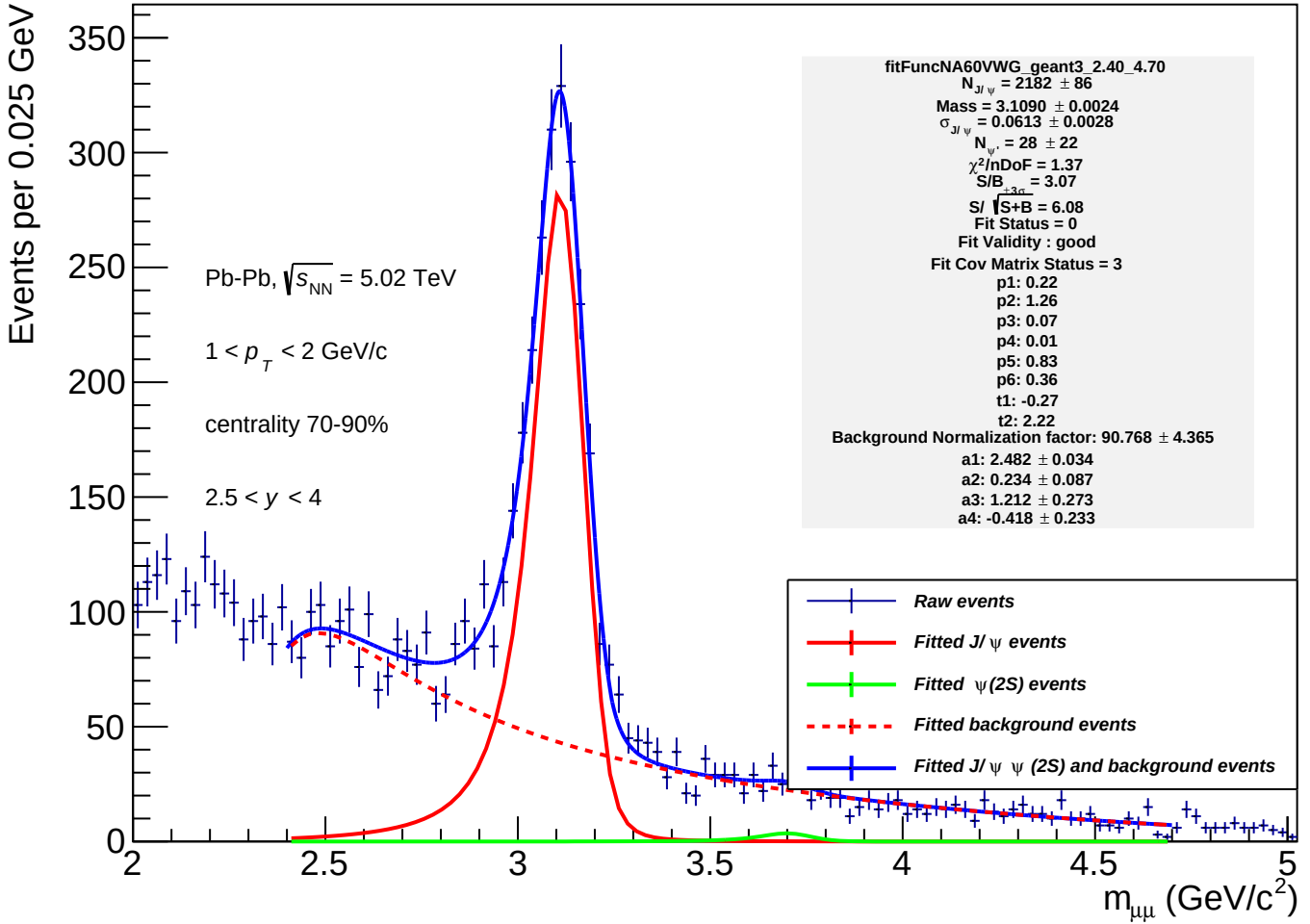

Events per 0.025 GeV
350
300
250
200
150
100
50
0
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
1 < p_T < 2 GeV/c
centrality 70-90%
2.5 < y < 4
fitFuncCB2Pol_pp13_2.20_4.50
$N_{J/\psi}$ = 2000 ± 0
Mass = 3.1044 ± 0.0023
$\sigma_{J/\psi}$ = 0.0627 ± 0.0026
$N_{\psi'}$ = 50 ± 0
χ^2/nDoF = 1.06
S/$B_{\pm 3\sigma}$ = 2.45
S/ $\sqrt{S+B}$ = 5.76
Fit Status = 4
Fit Validity : bad
Fit Cov Matrix Status = 2
t1: 0.97
p1: 6.97
t2: 1.86
p1: 14.99
Background Normalization factor: 1025 ± 117
a1: -0.499 ± 0.004; a2: 0.06525 ± 0.001
b1: -1.291 ± 0.306; b2: 6.658 ± 0.117
b3: -3.472 ± 0.038; b4: 0.524 ± 0.011
Raw events
Fitted J/ψ events
Fitted ψ(2S) events
Fitted background events
Fitted J/ψ ψ (2S) and background events

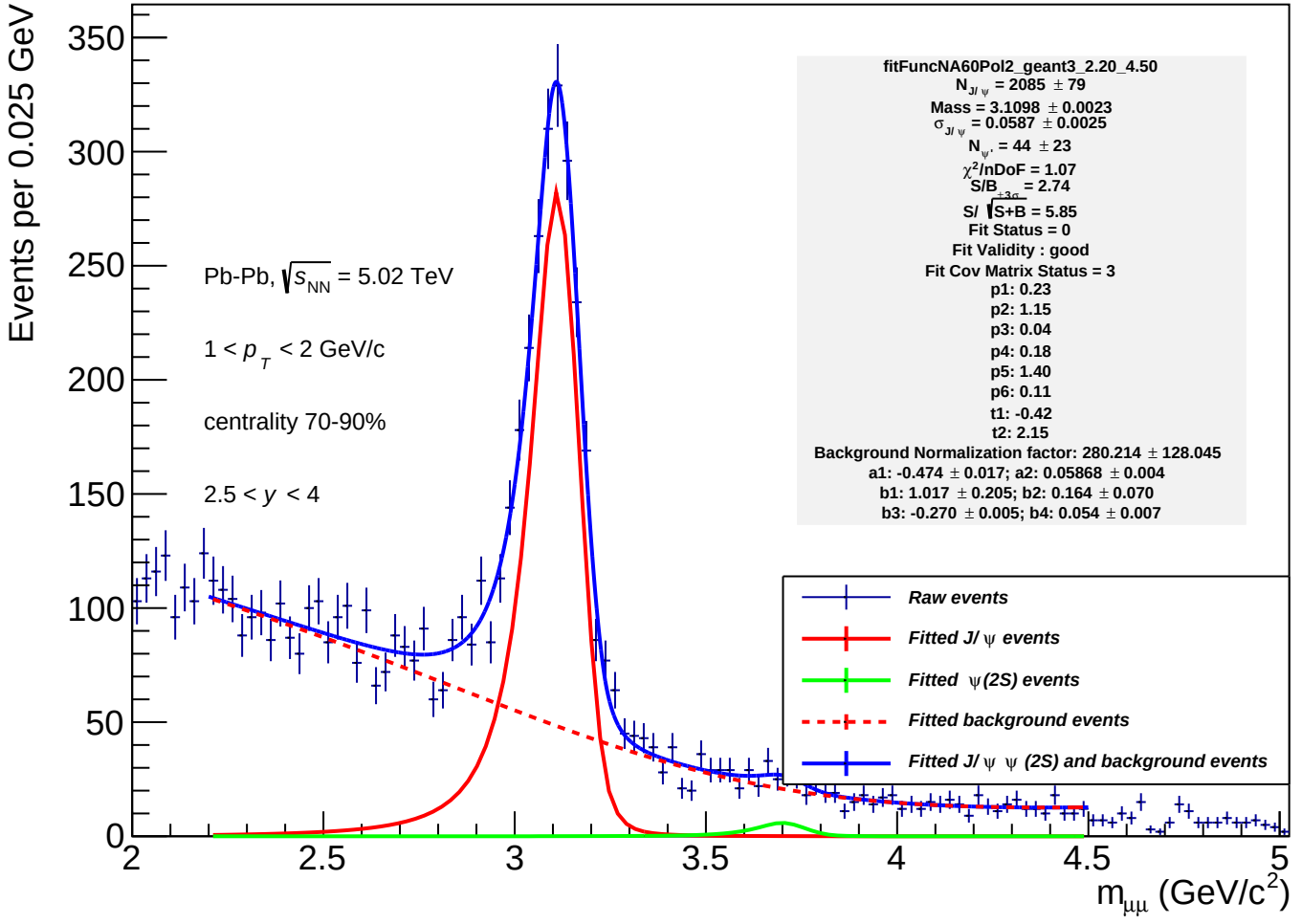

Events per 0.025 GeV
350
300
250
200
150
100
50
0
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
1 < p_T < 2 GeV/c
centrality 70-90%
2.5 < y < 4
fitFuncCB2Pol_geant3_2.20_4.50
$N_{J/\psi}$ = 2063 ± 83
Mass = 3.1063 ± 0.0024
$\sigma_{J/\psi}$ = 0.0611 ± 0.0028
$N_{\psi'}$ = 52 ± 23
χ^2/nDoF = 1.09
S/$B_{\pm 3\sigma}$ = 2.54
S/$\sqrt{S+B}$ = 5.78
Fit Status = 0
Fit Validity : good
Fit Cov Matrix Status = 3
t1: 0.91
p1: 4.44
t2: 2.27
p1: 3.12
Background Normalization factor: 486.448 ± 155.064
a1: -0.513 ± 0.015; a2: 0.06836 ± 0.004
b1: -5.311 ± 0.530; b2: 7.884 ± 0.210
b3: -3.211 ± 0.068; b4: 0.416 ± 0.017
Raw events
Fitted J/ψ events
Fitted ψ(2S) events
Fitted background events
Fitted J/ψ ψ(2S) and background events

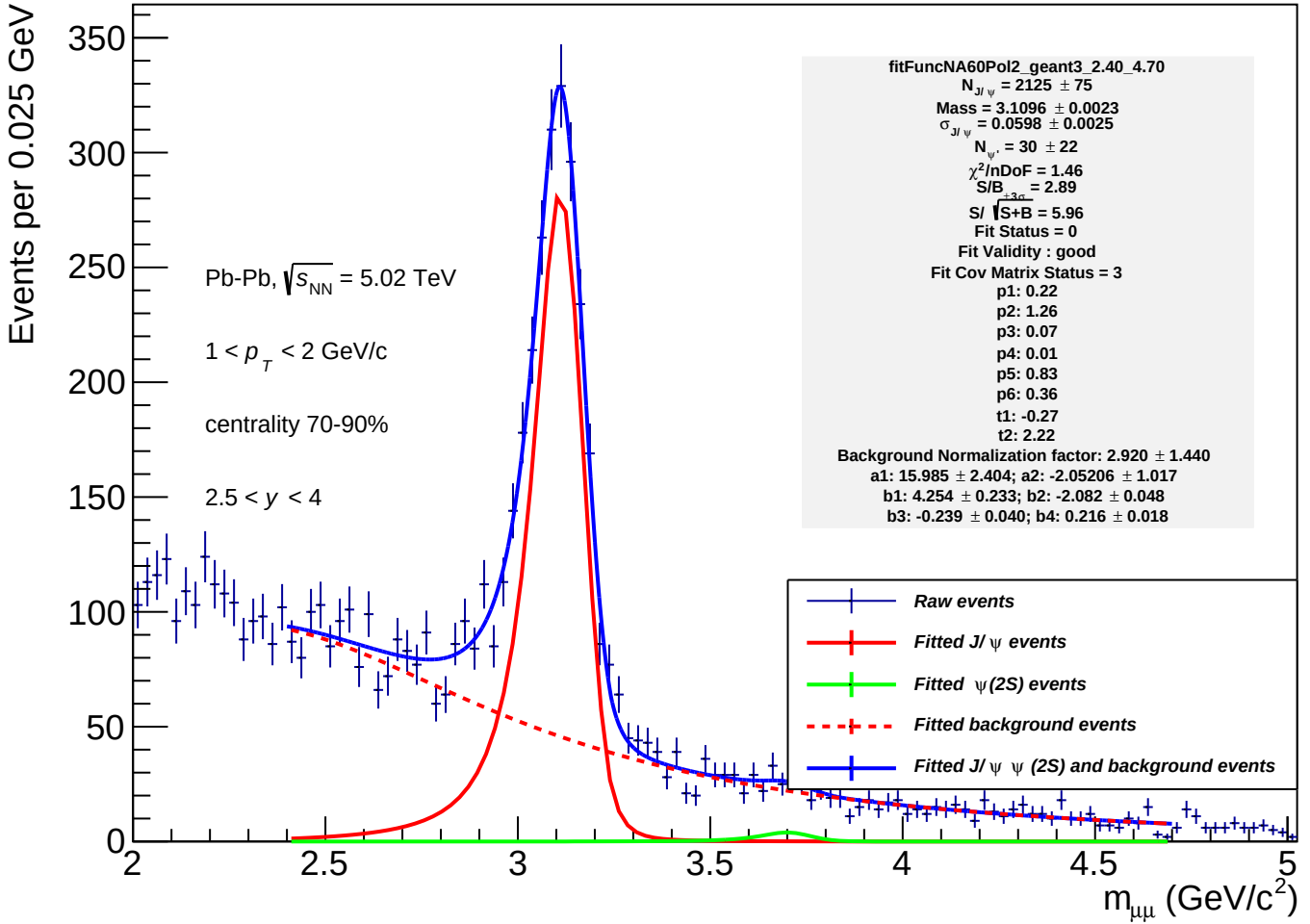

Events per 0.025 GeV
350
300
250
200
150
100
50
0
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
1 < p_T < 2 GeV/c
centrality 70-90%
2.5 < y < 4
fitFuncCB2Pol_pp13_2.40_4.70
$N_{J/\psi}$ = 2116 ± 0
Mass = 3.1034 ± 0.0371
$\sigma_{J/\psi}$ = 0.0659 ± 0.0195
$N_{\psi'}$ = 36 ± 0
χ^2/nDoF = 1.18
$S/B_{\pm 3\sigma}$ = 2.80
$S/\sqrt{S+B}$ = 6.04
Fit Status = 4
Fit Validity : bad
Fit Cov Matrix Status = 1
t1: 0.97
p1: 6.97
t2: 1.86
p1: 14.99
Background Normalization factor: 2.305 ± 396.947
a1: 6.292 ± 5.049; a2: -1.38003 ± 6.455
b1: 6.461 ± 4.969; b2: -6.540 ± 4.928
b3: 2.197 ± 6.360; b4: -0.232 ± 6.517
Raw events
Fitted J/ψ events
Fitted ψ(2S) events
Fitted background events
Fitted J/ψ ψ(2S) and background events

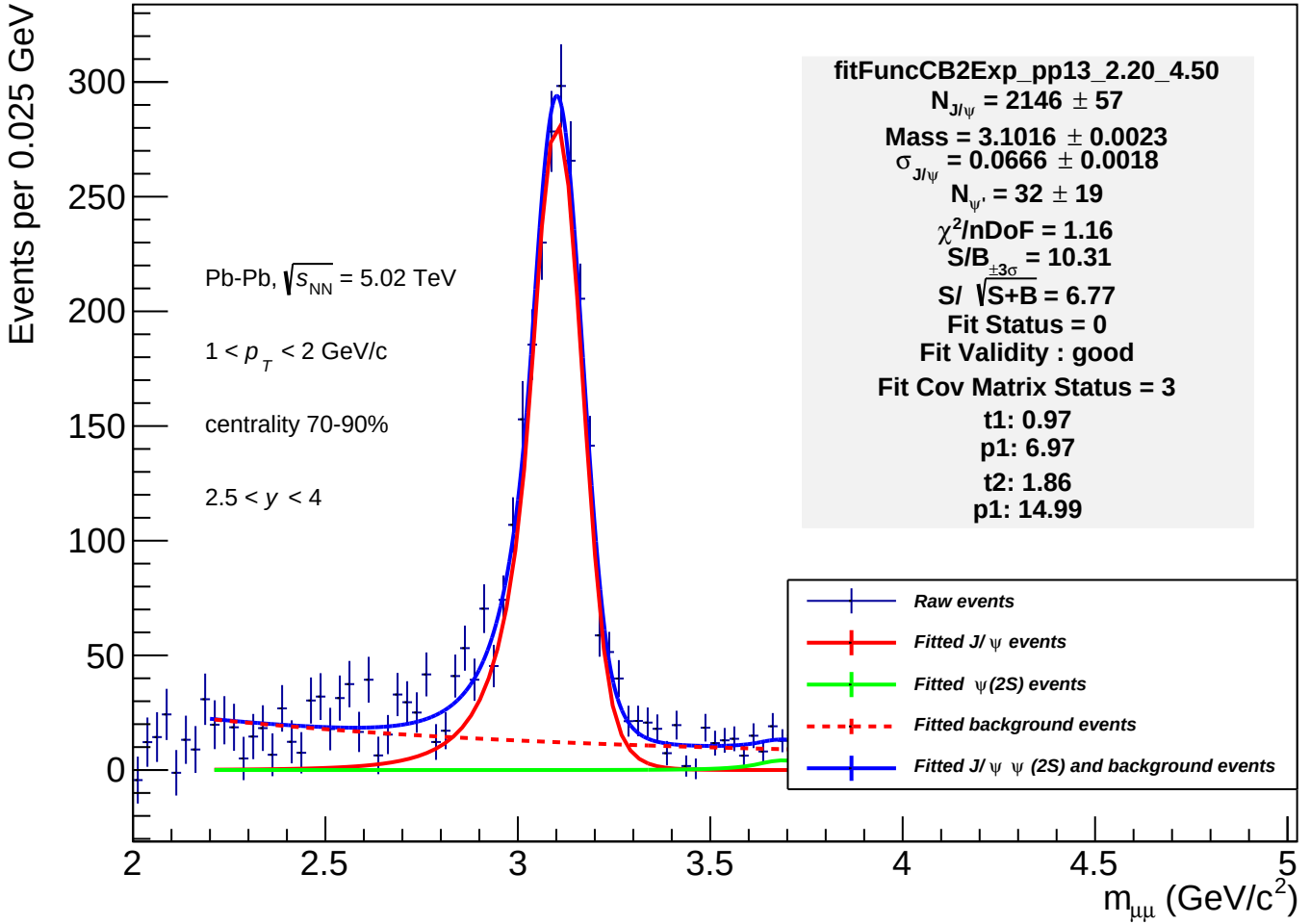

Events per 0.025 GeV
350
300
250
200
150
100
50
0
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
1 < p_T < 2 GeV/c
centrality 70-90%
2.5 < y < 4
fitFuncCB2Pol_geant3_2.40_4.70
$N_{J/\psi}$ = 2151 ± 73
Mass = 3.1064 ± 0.0022
$\sigma_{J/\psi}$ = 0.0628 ± 0.0026
$N_{\psi'}$ = 126 ± 5
χ^2/nDoF = 1.78
$S/B_{\pm 3\sigma}$ = 2.89
$S/\sqrt{S+B}$ = 6.02
Fit Status = 0
Fit Validity : good
Fit Cov Matrix Status = 2
t1: 0.89
p1: 4.72
t2: 2.27
p1: 3.13
Background Normalization factor: 1967 ± 346
a1: -0.449 ± 0.012; a2: 0.06275 ± 0.003
b1: 9.539 ± 1.073; b2: 9.999 ± 14.660
b3: -9.992 ± 1.314; b4: 2.172 ± 0.063
Raw events
Fitted J/ψ events
Fitted ψ(2S) events
Fitted background events
Fitted J/ψ ψ (2S) and background events

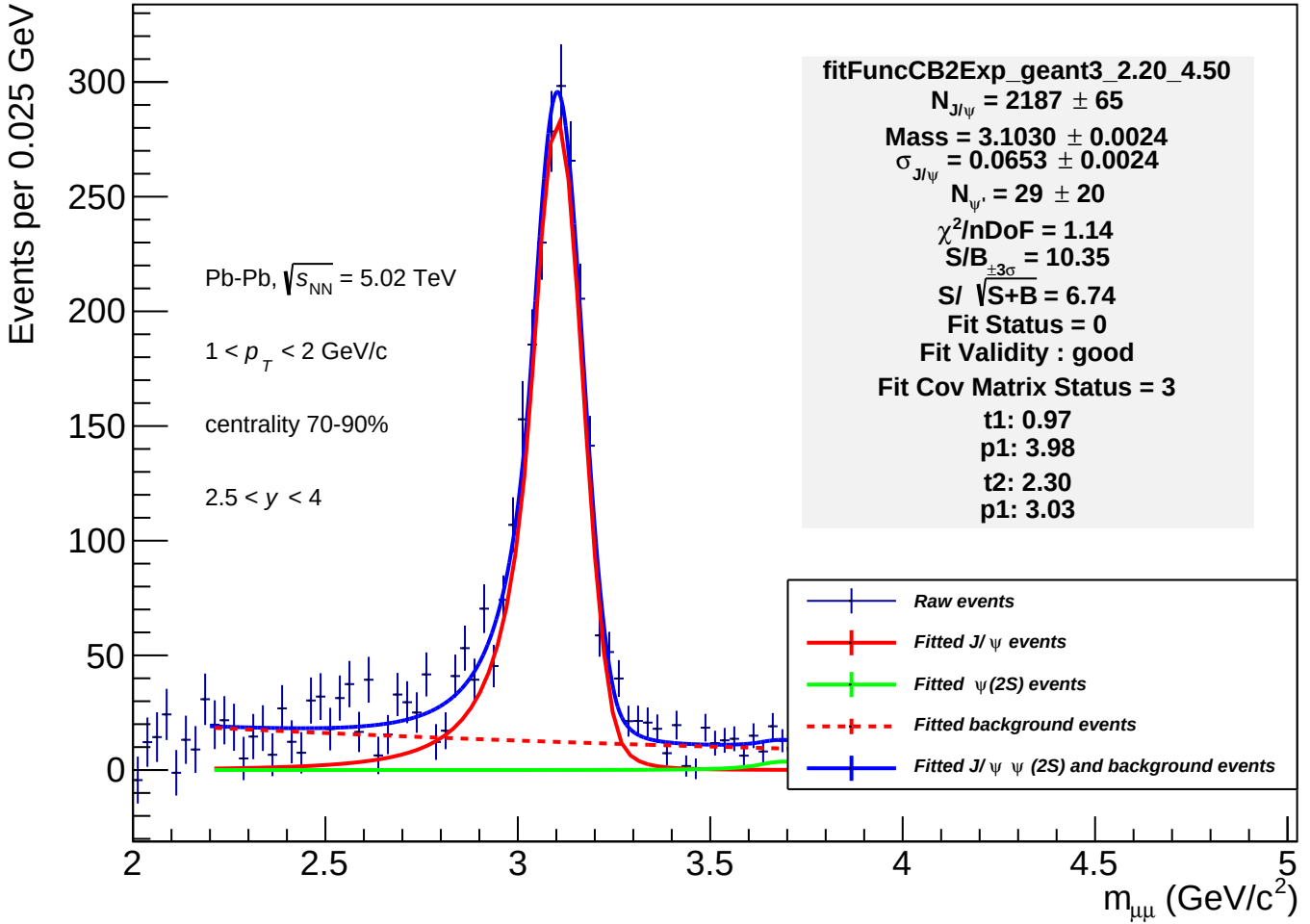

Events per 0.025 GeV
350
300
250
200
150
100
50
0
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
1 < p_T < 2 GeV/c
centrality 70-90%
2.5 < y < 4
fitFuncNA60VWG_geant3_2.20_4.50
$N_{J/\psi}$ = 2094 ± 70
Mass = 3.1098 ± 0.0022
$\sigma_{J/\psi}$ = 0.0589 ± 0.0024
$N_{\psi'}$ = 43 ± 21
χ^2/nDoF = 1.05
$S/B_{\pm 3\sigma}$ = 2.77
$S/\sqrt{S+B}$ = 5.87
Fit Status = 0
Fit Validity : good
Fit Cov Matrix Status = 3
p1: 0.23
p2: 1.15
p3: 0.04
p4: 0.18
p5: 1.40
p6: 0.11
t1: -0.42
t2: 2.15
Background Normalization factor: 130.904 ± 9.701
a1: 0.056 ± 0.062
a2: 8.250 ± 1.351
a3: -0.184 ± 0.220
a4: 0.001 ± 0.003
Raw events
Fitted J/ψ events
Fitted ψ(2S) events
Fitted background events
Fitted J/ψ ψ(2S) and background events

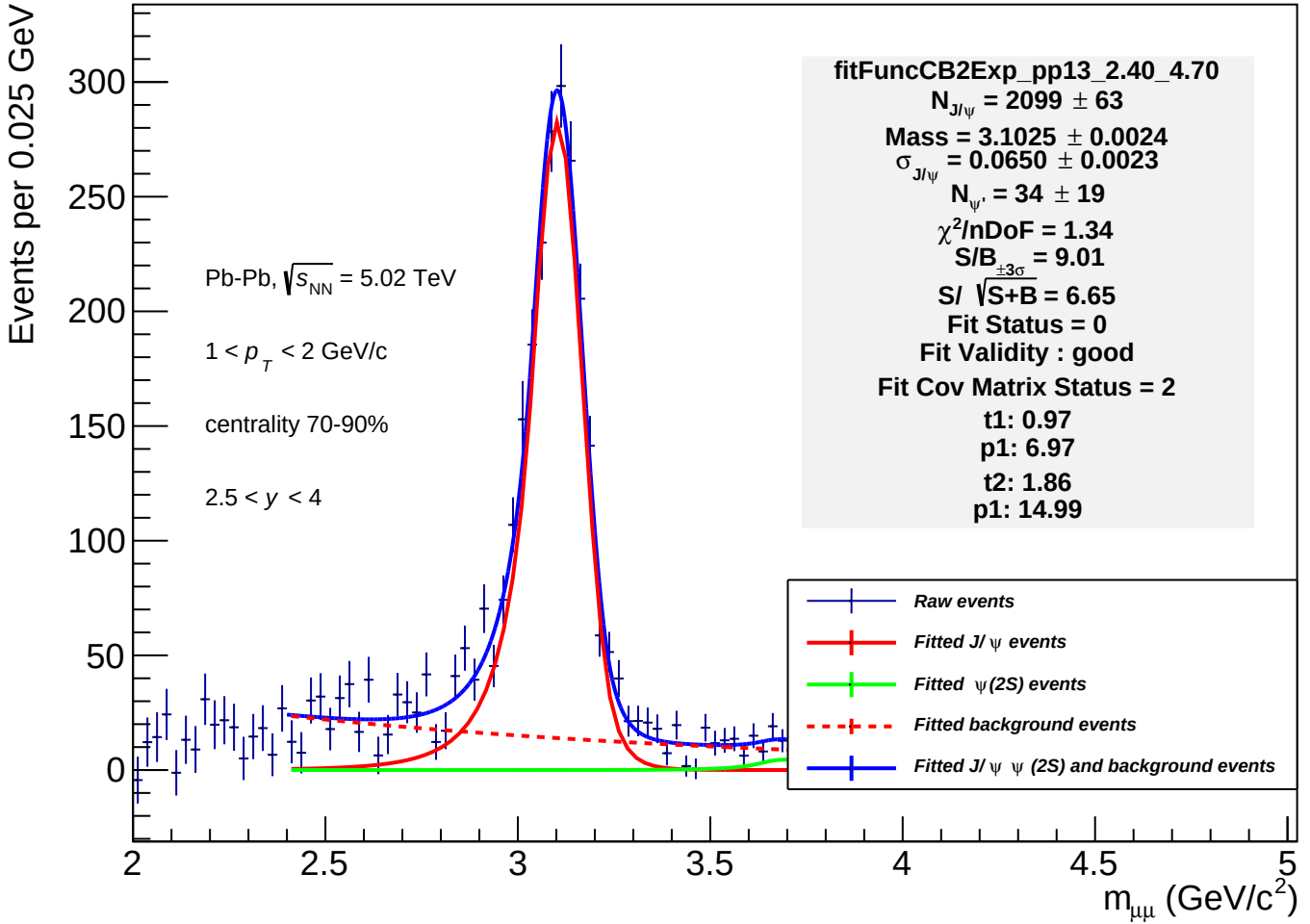

Events per 0.025 GeV
350
300
250
200
150
100
50
0
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
1 < p_T < 2 GeV/c
centrality 70-90%
2.5 < y < 4
fitFuncNA60VWG_geant3_2.40_4.70
$N_{J/\psi}$ = 2182 ± 86
Mass = 3.1090 ± 0.0024
$\sigma_{J/\psi}$ = 0.0613 ± 0.0028
$N_{\psi'}$ = 28 ± 22
χ^2/nDoF = 1.37
$S/B_{\pm 3\sigma}$ = 3.07
$S/\sqrt{S+B}$ = 6.08
Fit Status = 0
Fit Validity : good
Fit Cov Matrix Status = 3
p1: 0.22
p2: 1.26
p3: 0.07
p4: 0.01
p5: 0.83
p6: 0.36
t1: -0.27
t2: 2.22
Background Normalization factor: 90.768 ± 4.365
a1: 2.482 ± 0.034
a2: 0.234 ± 0.087
a3: 1.212 ± 0.273
a4: -0.418 ± 0.233
Raw events
Fitted J/ψ events
Fitted ψ(2S) events
Fitted background events
Fitted J/ψ ψ(2S) and background events

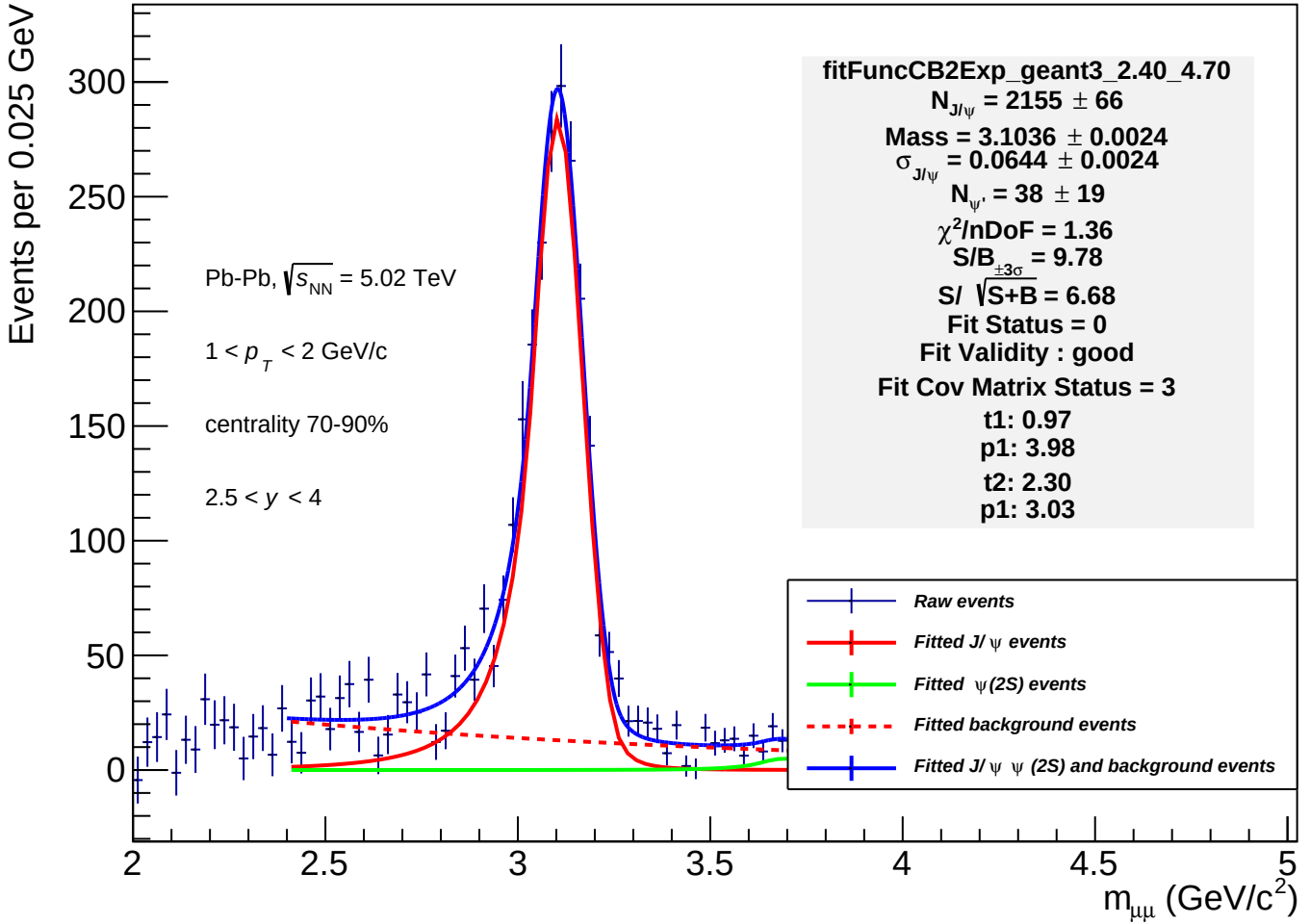

Events per 0.025 GeV
350
300
250
200
150
100
50
0
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
1 < p_T < 2 GeV/c
centrality 70-90%
2.5 < y < 4
fitFuncNA60Pol2_geant3_2.20_4.50
$N_{J/\psi}$ = 2085 ± 79
Mass = 3.1098 ± 0.0023
$\sigma_{J/\psi}$ = 0.0587 ± 0.0025
$N_{\psi'}$ = 44 ± 23
χ^2/nDoF = 1.07
$S/B_{\pm 3\sigma}$ = 2.74
$S/\sqrt{S+B}$ = 5.85
Fit Status = 0
Fit Validity : good
Fit Cov Matrix Status = 3
p1: 0.23
p2: 1.15
p3: 0.04
p4: 0.18
p5: 1.40
p6: 0.11
t1: -0.42
t2: 2.15
Background Normalization factor: 280.214 ± 128.045
a1: -0.474 ± 0.017; a2: 0.05868 ± 0.004
b1: 1.017 ± 0.205; b2: 0.164 ± 0.070
b3: -0.270 ± 0.005; b4: 0.054 ± 0.007
Raw events
Fitted J/ψ events
Fitted ψ(2S) events
Fitted background events
Fitted J/ψ ψ(2S) and background events

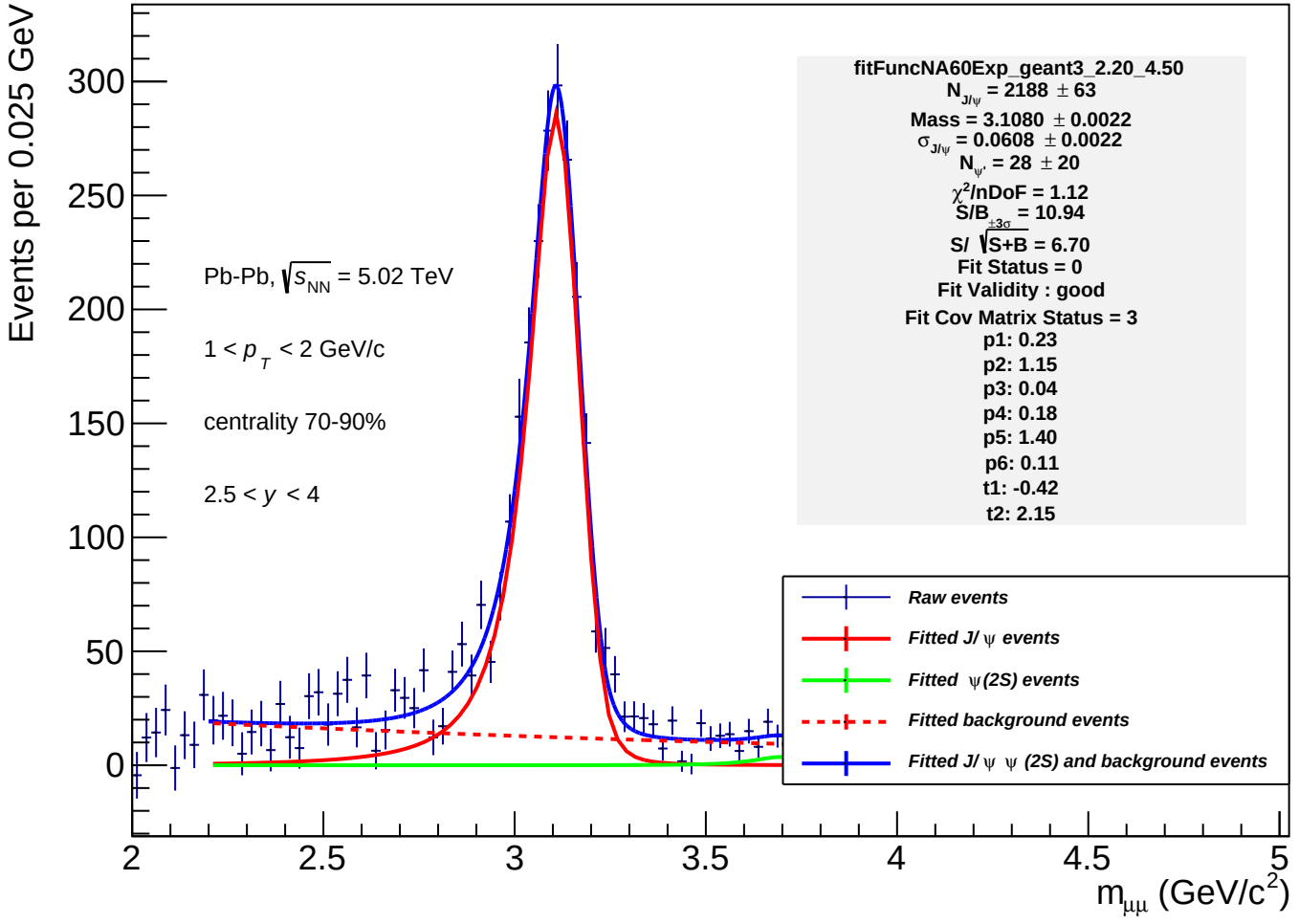

Events per 0.025 GeV
350
300
250
200
150
100
50
0
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
1 < p_T < 2 GeV/c
centrality 70-90%
2.5 < y < 4
fitFuncNA60Pol2_geant3_2.40_4.70
$N_{J/\psi}$ = 2125 ± 75
Mass = 3.1096 ± 0.0023
$\sigma_{J/\psi}$ = 0.0598 ± 0.0025
$N_{\psi'}$ = 30 ± 22
χ^2/nDoF = 1.46
$S/B_{\pm 3\sigma}$ = 2.89
$S/\sqrt{S+B}$ = 5.96
Fit Status = 0
Fit Validity : good
Fit Cov Matrix Status = 3
p1: 0.22
p2: 1.26
p3: 0.07
p4: 0.01
p5: 0.83
p6: 0.36
t1: -0.27
t2: 2.22
Background Normalization factor: 2.920 ± 1.440
a1: 15.985 ± 2.404; a2: -2.05206 ± 1.017
b1: 4.254 ± 0.233; b2: -2.082 ± 0.048
b3: -0.239 ± 0.040; b4: 0.216 ± 0.018
Raw events
Fitted J/ψ events
Fitted ψ(2S) events
Fitted background events
Fitted J/ψ ψ(2S) and background events

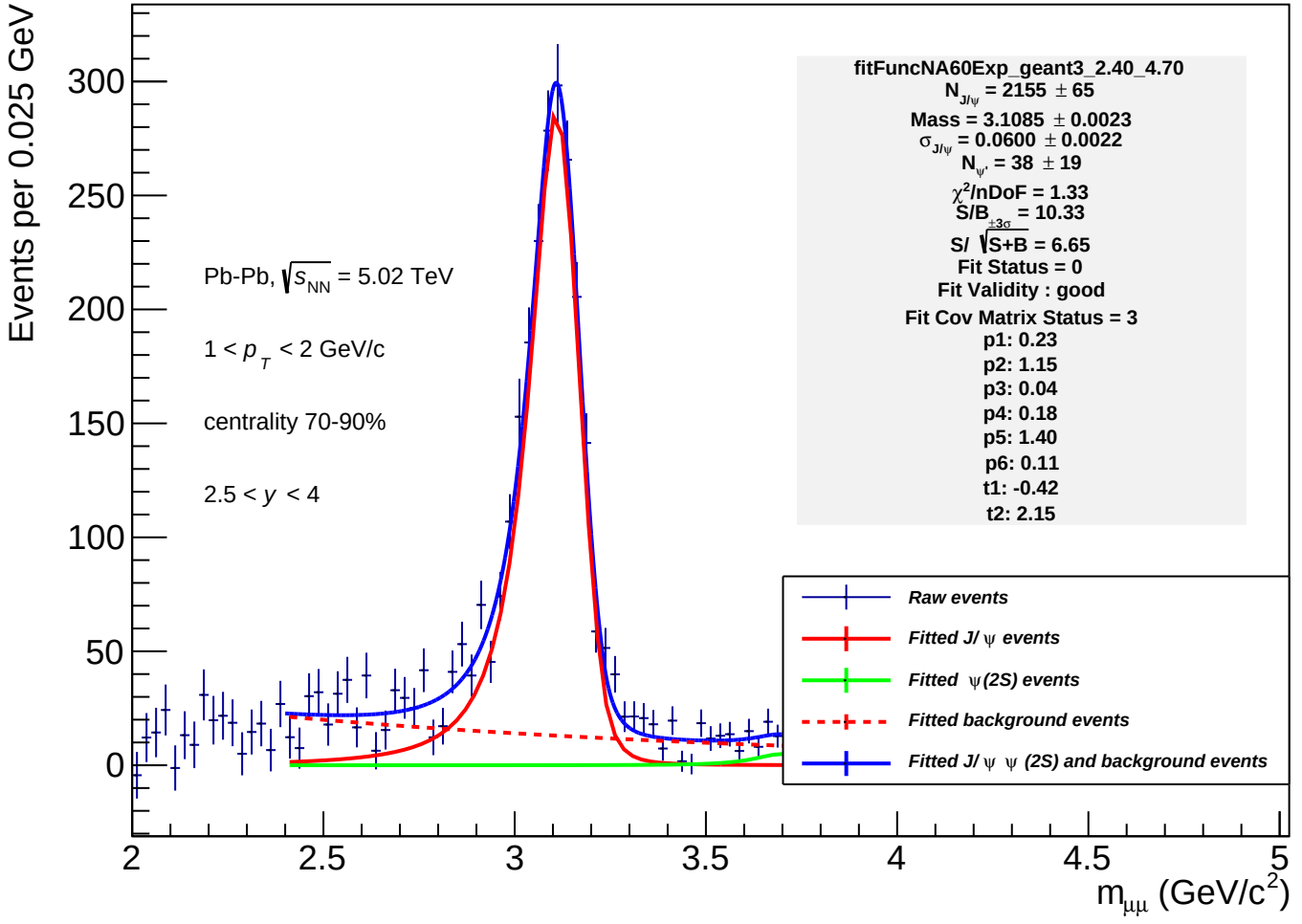

Events per 0.025 GeV
300
250
200
150
100
50
0
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
1 < p_T < 2 GeV/c
centrality 70-90%
2.5 < y < 4
fitFuncCB2Exp_pp13_2.20_4.50
$N_{J/\psi}$ = 2146 ± 57
Mass = 3.1016 ± 0.0023
$\sigma_{J/\psi}$ = 0.0666 ± 0.0018
$N_{\psi'}$ = 32 ± 19
χ^2/nDoF = 1.16
$S/B_{\pm 3\sigma}$ = 10.31
$S/\sqrt{S+B}$ = 6.77
Fit Status = 0
Fit Validity : good
Fit Cov Matrix Status = 3
t1: 0.97
p1: 6.97
t2: 1.86
p1: 14.99
Raw events
Fitted J/ψ events
Fitted ψ(2S) events
Fitted background events
Fitted J/ψ ψ(2S) and background events


Events per 0.025 GeV
300
250
200
150
100
50
0
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
1 < p_T < 2 GeV/c
centrality 70-90%
2.5 < y < 4
fitFuncCB2Exp_geant3_2.20_4.50
$N_{J/\psi}$ = 2187 ± 65
Mass = 3.1030 ± 0.0024
$\sigma_{J/\psi}$ = 0.0653 ± 0.0024
$N_{\psi'}$ = 29 ± 20
χ^2/nDoF = 1.14
$S/B_{\pm 3\sigma}$ = 10.35
$S/\sqrt{S+B}$ = 6.74
Fit Status = 0
Fit Validity : good
Fit Cov Matrix Status = 3
t1: 0.97
p1: 3.98
t2: 2.30
p1: 3.03
Raw events
Fitted J/ψ events
Fitted ψ(2S) events
Fitted background events
Fitted J/ψ ψ(2S) and background events


Events per 0.025 GeV
300
250
200
150
100
50
0
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
1 < p_T < 2 GeV/c
centrality 70-90%
2.5 < y < 4
fitFuncCB2Exp_pp13_2.40_4.70
$N_{J/\psi}$ = 2099 ± 63
Mass = 3.1025 ± 0.0024
$\sigma_{J/\psi}$ = 0.0650 ± 0.0023
$N_{\psi'}$ = 34 ± 19
χ^2/nDoF = 1.34
$S/B_{\pm 3\sigma}$ = 9.01
$S/\sqrt{S+B}$ = 6.65
Fit Status = 0
Fit Validity : good
Fit Cov Matrix Status = 2
t1: 0.97
p1: 6.97
t2: 1.86
p1: 14.99
Raw events
Fitted J/ψ events
Fitted ψ(2S) events
Fitted background events
Fitted J/ψ ψ(2S) and background events


Events per 0.025 GeV
300
250
200
150
100
50
0
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
1 < p_T < 2 GeV/c
centrality 70-90%
2.5 < y < 4
fitFuncCB2Exp_geant3_2.40_4.70
$N_{J/\psi}$ = 2155 ± 66
Mass = 3.1036 ± 0.0024
$\sigma_{J/\psi}$ = 0.0644 ± 0.0024
$N_{\psi'}$ = 38 ± 19
χ^2/nDoF = 1.36
$S/B_{\pm 3\sigma}$ = 9.78
$S/\sqrt{S+B}$ = 6.68
Fit Status = 0
Fit Validity : good
Fit Cov Matrix Status = 3
t1: 0.97
p1: 3.98
t2: 2.30
p1: 3.03
Raw events
Fitted J/ψ events
Fitted ψ(2S) events
Fitted background events
Fitted J/ψ ψ(2S) and background events


Events per 0.025 GeV
300
250
200
150
100
50
0
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
1 < p_T < 2 GeV/c
centrality 70-90%
2.5 < y < 4
fitFuncNA60Exp_geant3_2.20_4.50
$N_{J/\psi}$ = 2188 ± 63
Mass = 3.1080 ± 0.0022
$\sigma_{J/\psi}$ = 0.0608 ± 0.0022
$N_{\psi'}$ = 28 ± 20
χ^2/nDoF = 1.12
$S/B_{\pm 3\sigma}$ = 10.94
$S/\sqrt{S+B}$ = 6.70
Fit Status = 0
Fit Validity : good
Fit Cov Matrix Status = 3
p1: 0.23
p2: 1.15
p3: 0.04
p4: 0.18
p5: 1.40
p6: 0.11
t1: -0.42
t2: 2.15
Raw events
Fitted J/ψ events
Fitted ψ(2S) events
Fitted background events
Fitted J/ψ ψ(2S) and background events


Events per 0.025 GeV
300
250
200
150
100
50
0
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
1 < p_T < 2 GeV/c
centrality 70-90%
2.5 < y < 4
fitFuncNA60Exp_geant3_2.40_4.70
$N_{J/\psi}$ = 2155 ± 65
Mass = 3.1085 ± 0.0023
$\sigma_{J/\psi}$ = 0.0600 ± 0.0022
$N_{\psi'}$ = 38 ± 19
χ^2/nDoF = 1.33
$S/B_{\pm 3\sigma}$ = 10.33
$S/\sqrt{S+B}$ = 6.65
Fit Status = 0
Fit Validity : good
Fit Cov Matrix Status = 3
p1: 0.23
p2: 1.15
p3: 0.04
p4: 0.18
p5: 1.40
p6: 0.11
t1: -0.42
t2: 2.15
Raw events
Fitted J/ψ events
Fitted ψ(2S) events
Fitted background events
Fitted J/ψ ψ(2S) and background events