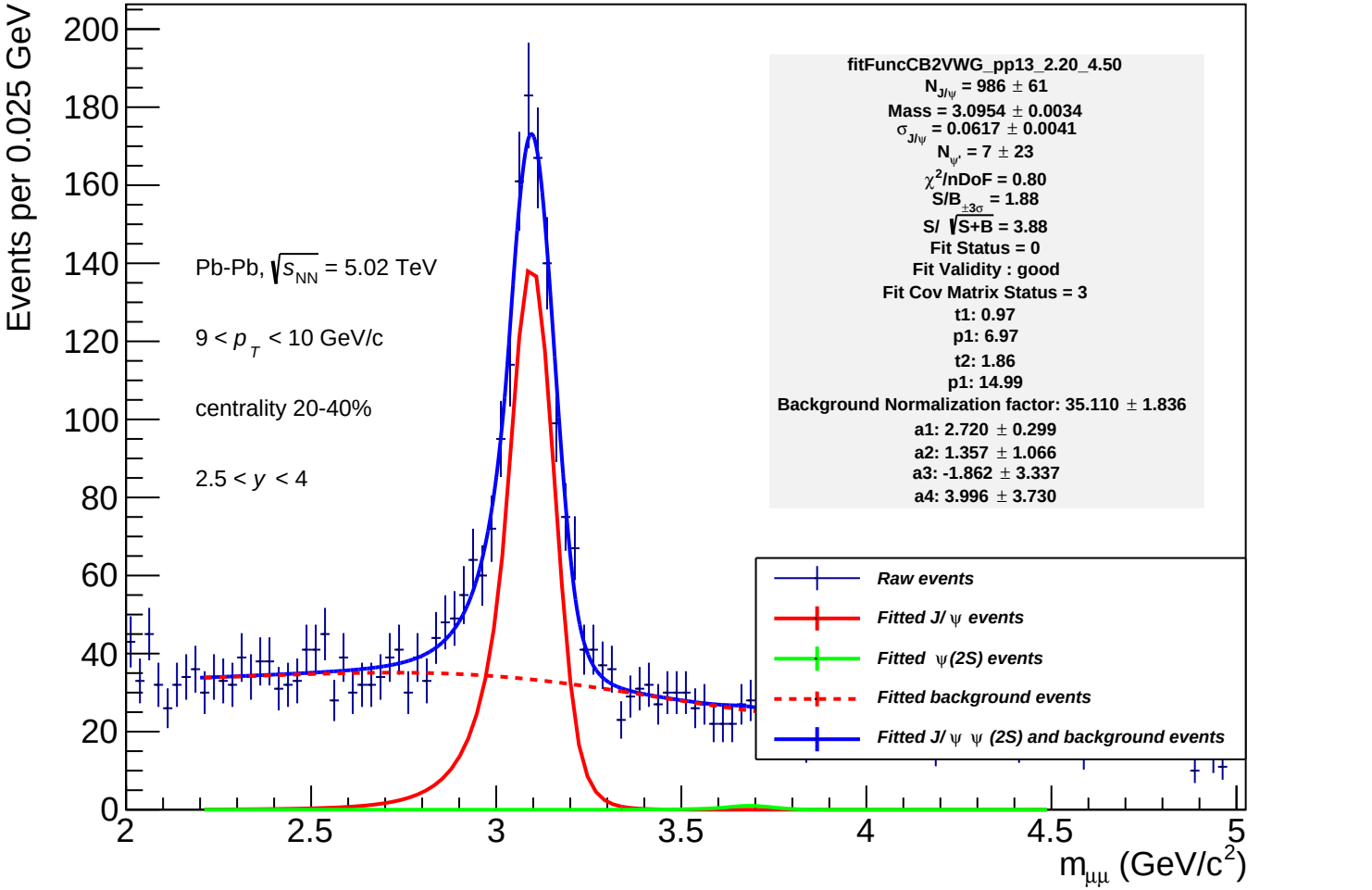
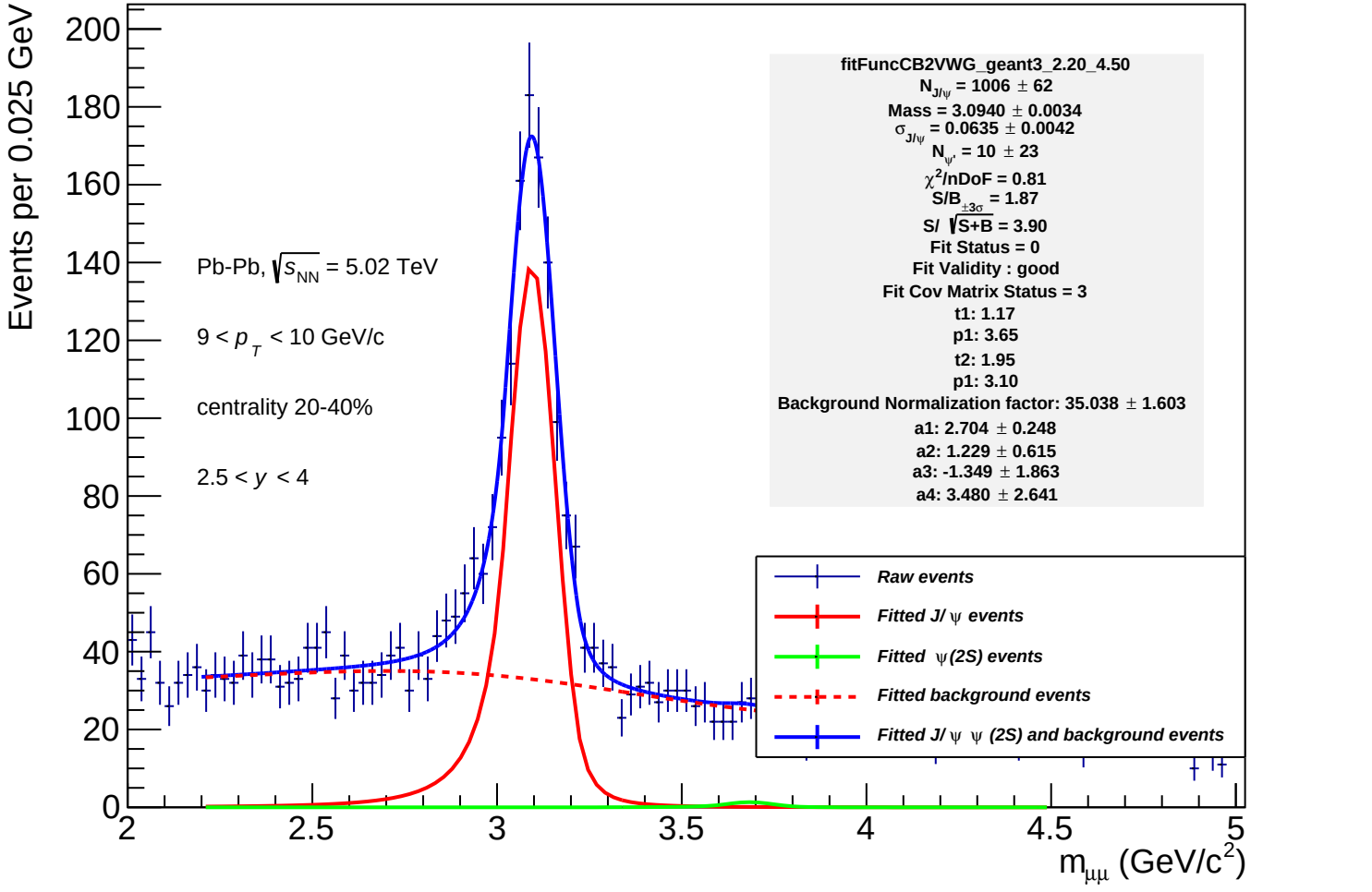
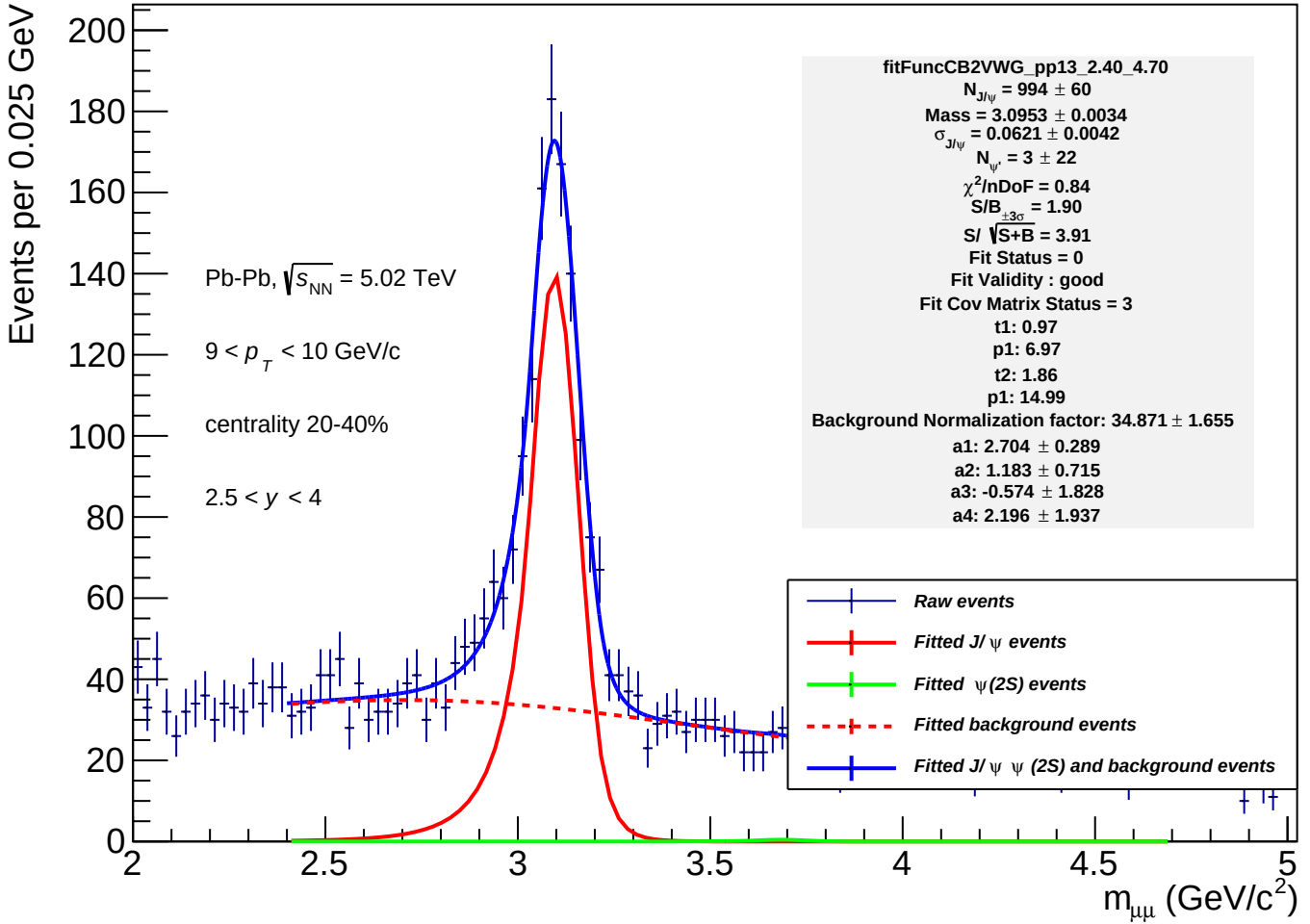
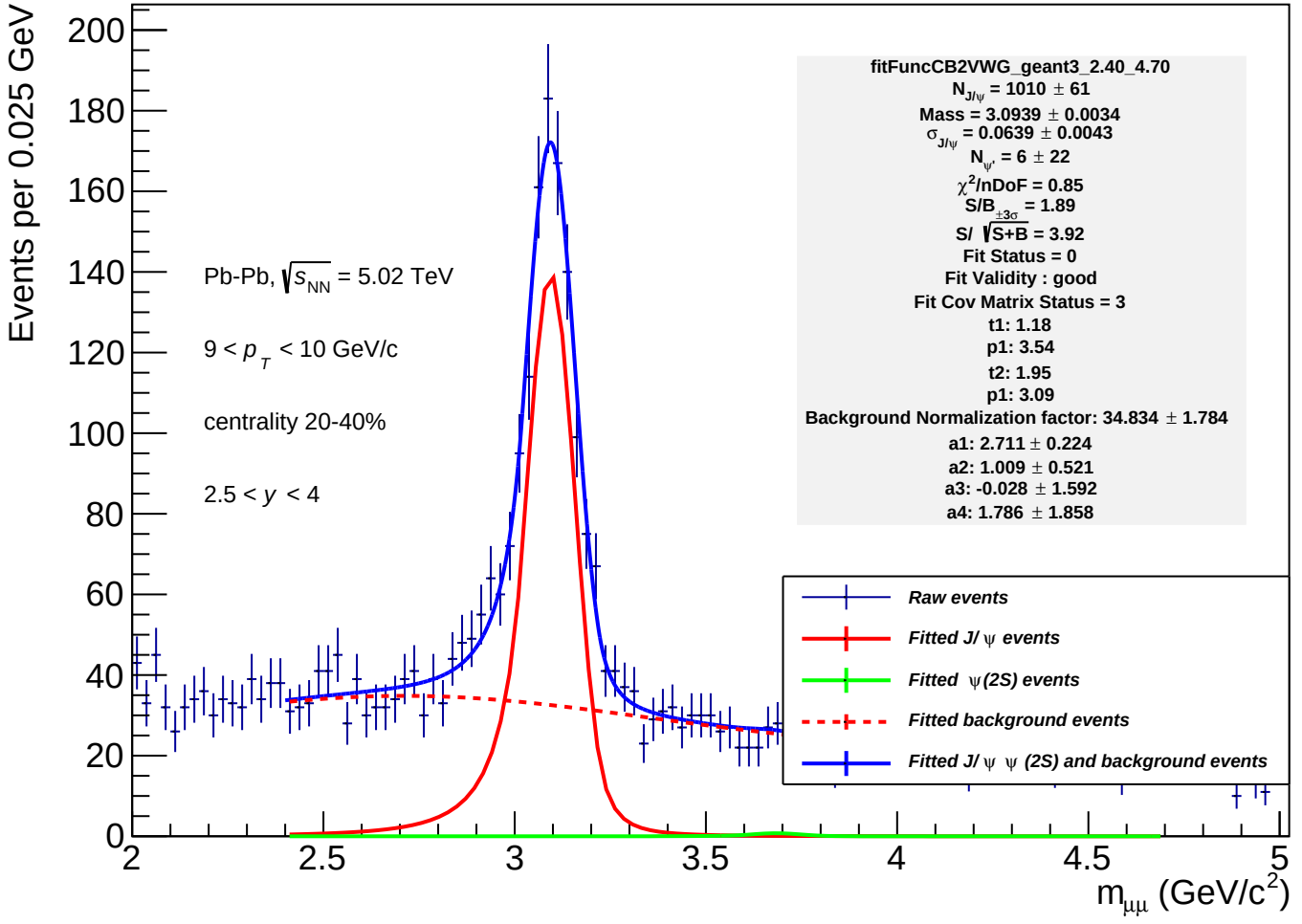
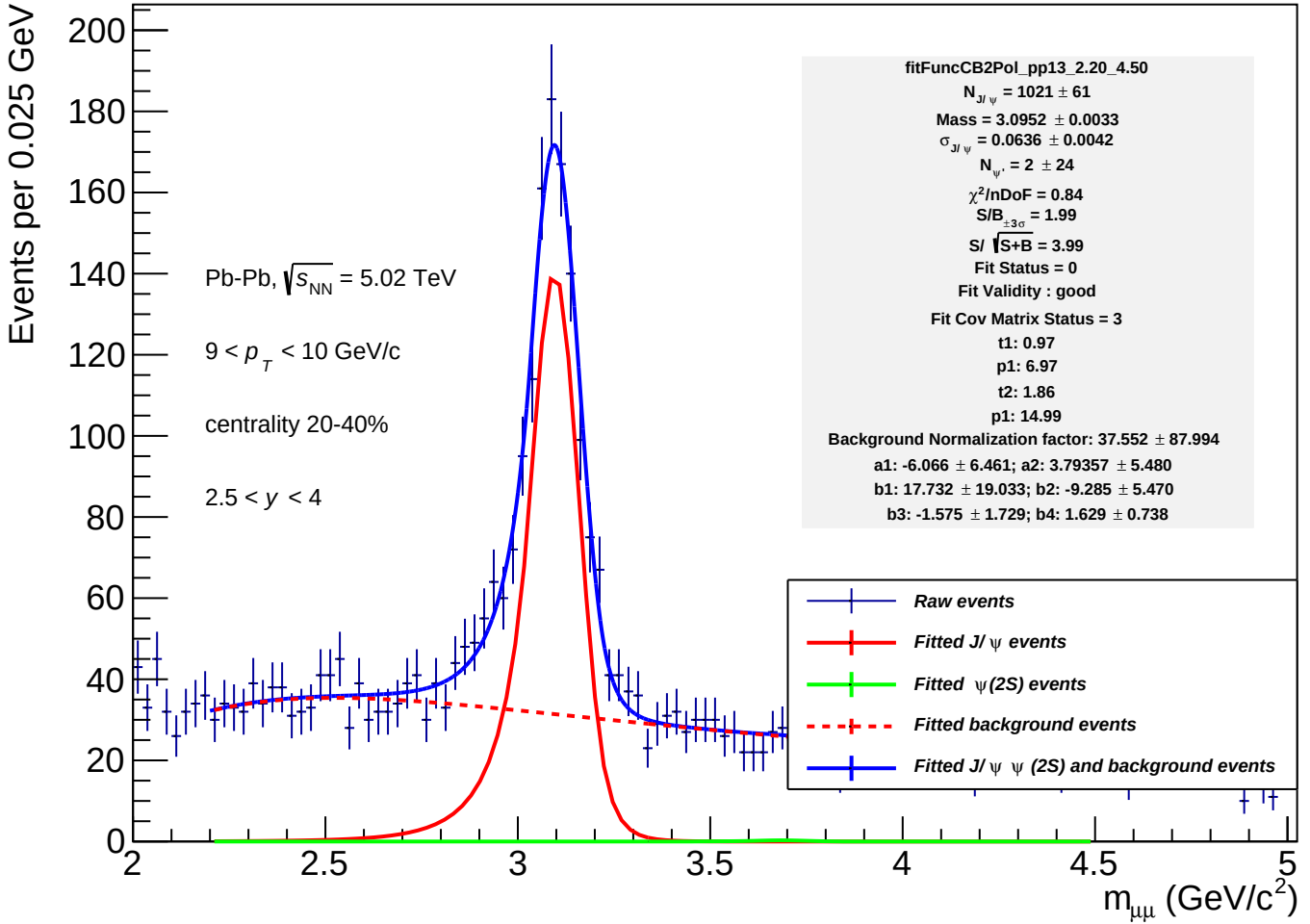

Events per 0.025 GeV
200
180
160
140
120
100
80
60
40
20
0
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
9 < p_T < 10 GeV/c
centrality 20-40%
2.5 < y < 4
fitFuncCB2VWG_pp13_2.20_4.50
$N_{J/\psi}$ = 986 ± 61
Mass = 3.0954 ± 0.0034
$\sigma_{J/\psi}$ = 0.0617 ± 0.0041
$N_{\psi'}$ = 7 ± 23
χ^2/nDoF = 0.80
$S/B_{\pm 3\sigma}$ = 1.88
$S/\sqrt{S+B}$ = 3.88
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: 35.110 ± 1.836
a1: 2.720 ± 0.299
a2: 1.357 ± 1.066
a3: -1.862 ± 3.337
a4: 3.996 ± 3.730
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
200
180
160
140
120
100
80
60
40
20
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
9 < p_T < 10 GeV/c
centrality 20-40%
2.5 < y < 4
fitFuncCB2VWG_geant3_2.20_4.50
$N_{J/\psi}$ = 1006 ± 62
Mass = 3.0940 ± 0.0034
$\sigma_{J/\psi}$ = 0.0635 ± 0.0042
$N_{\psi'}$ = 10 ± 23
χ^2/nDoF = 0.81
$S/B_{\pm 3\sigma}$ = 1.87
$S/\sqrt{S+B}$ = 3.90
Fit Status = 0
Fit Validity : good
Fit Cov Matrix Status = 3
t1: 1.17
p1: 3.65
t2: 1.95
p1: 3.10
Background Normalization factor: 35.038 ± 1.603
a1: 2.704 ± 0.248
a2: 1.229 ± 0.615
a3: -1.349 ± 1.863
a4: 3.480 ± 2.641
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
200
180
160
140
120
100
80
60
40
20
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
9 < p_T < 10 GeV/c
centrality 20-40%
2.5 < y < 4
fitFuncCB2VWG_pp13_2.40_4.70
$N_{J/\psi}$ = 994 ± 60
Mass = 3.0953 ± 0.0034
$\sigma_{J/\psi}$ = 0.0621 ± 0.0042
$N_{\psi'}$ = 3 ± 22
χ^2/nDoF = 0.84
$S/B_{\pm 3\sigma}$ = 1.90
$S/\sqrt{S+B}$ = 3.91
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: 34.871 ± 1.655
a1: 2.704 ± 0.289
a2: 1.183 ± 0.715
a3: -0.574 ± 1.828
a4: 2.196 ± 1.937
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
200
180
160
140
120
100
80
60
40
20
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
9 < p_T < 10 GeV/c
centrality 20-40%
2.5 < y < 4
fitFuncCB2VWG_geant3_2.40_4.70
$N_{J/\psi}$ = 1010 ± 61
Mass = 3.0939 ± 0.0034
$\sigma_{J/\psi}$ = 0.0639 ± 0.0043
$N_{\psi'}$ = 6 ± 22
χ^2/nDoF = 0.85
$S/B_{\pm 3\sigma}$ = 1.89
$S/\sqrt{S+B}$ = 3.92
Fit Status = 0
Fit Validity : good
Fit Cov Matrix Status = 3
t1: 1.18
p1: 3.54
t2: 1.95
p1: 3.09
Background Normalization factor: 34.834 ± 1.784
a1: 2.711 ± 0.224
a2: 1.009 ± 0.521
a3: -0.028 ± 1.592
a4: 1.786 ± 1.858
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
200
180
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140
120
100
80
60
40
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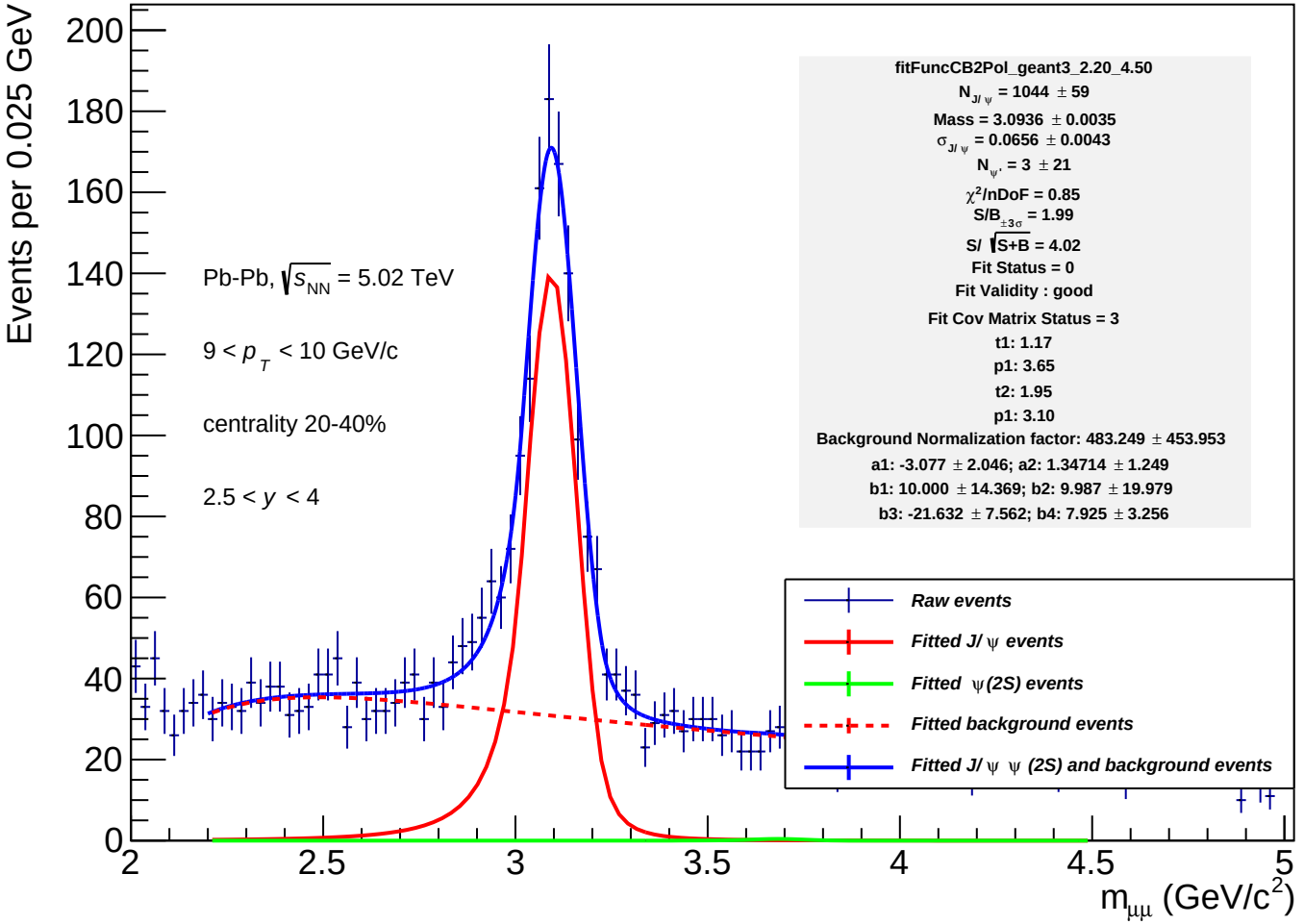
0
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
9 < p_T < 10 GeV/c
centrality 20-40%
2.5 < y < 4
fitFuncCB2Pol_pp13_2.20_4.50
$N_{J/\psi}$ = 1021 ± 61
Mass = 3.0952 ± 0.0033
$\sigma_{J/\psi}$ = 0.0636 ± 0.0042
$N_{\psi'}$ = 2 ± 24
χ^2/nDoF = 0.84
$S/B_{\pm 3\sigma}$ = 1.99
$S/\sqrt{S+B}$ = 3.99
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: 37.552 ± 87.994
a1: -6.066 ± 6.461; a2: 3.79357 ± 5.480
b1: 17.732 ± 19.033; b2: -9.285 ± 5.470
b3: -1.575 ± 1.729; b4: 1.629 ± 0.738
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
200
180
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140
120
100
80
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2.5
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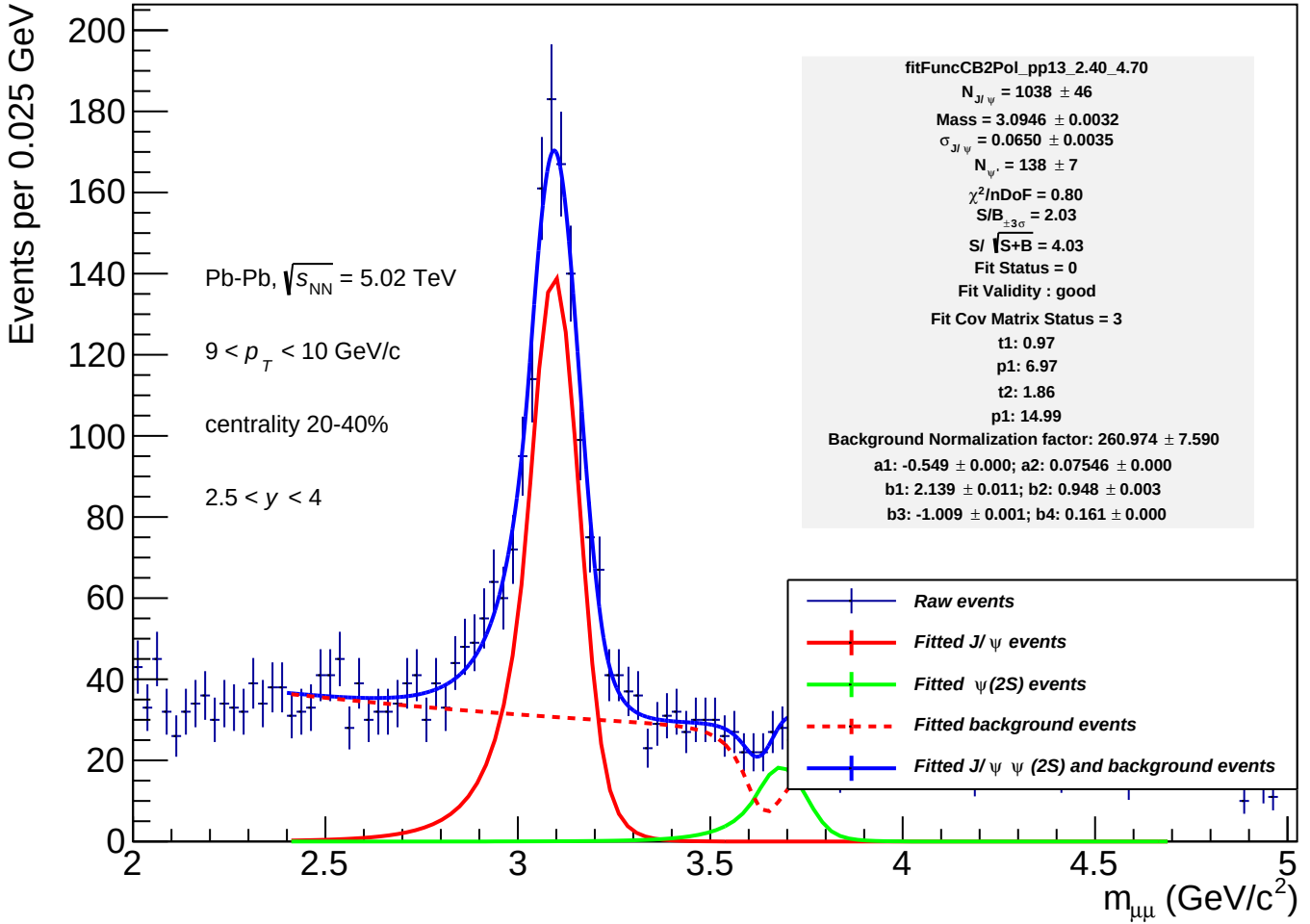
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
9 < p_T < 10 GeV/c
centrality 20-40%
2.5 < y < 4
fitFuncCB2Pol_geant3_2.20_4.50
$N_{J/\psi}$ = 1044 ± 59
Mass = 3.0936 ± 0.0035
$\sigma_{J/\psi}$ = 0.0656 ± 0.0043
$N_{\psi'}$ = 3 ± 21
χ^2/nDoF = 0.85
$S/B_{\pm 3\sigma}$ = 1.99
$S/\sqrt{S+B}$ = 4.02
Fit Status = 0
Fit Validity : good
Fit Cov Matrix Status = 3
t1: 1.17
p1: 3.65
t2: 1.95
p1: 3.10
Background Normalization factor: 483.249 ± 453.953
a1: -3.077 ± 2.046; a2: 1.34714 ± 1.249
b1: 10.000 ± 14.369; b2: 9.987 ± 19.979
b3: -21.632 ± 7.562; b4: 7.925 ± 3.256
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
200
180
160
140
120
100
80
60
40
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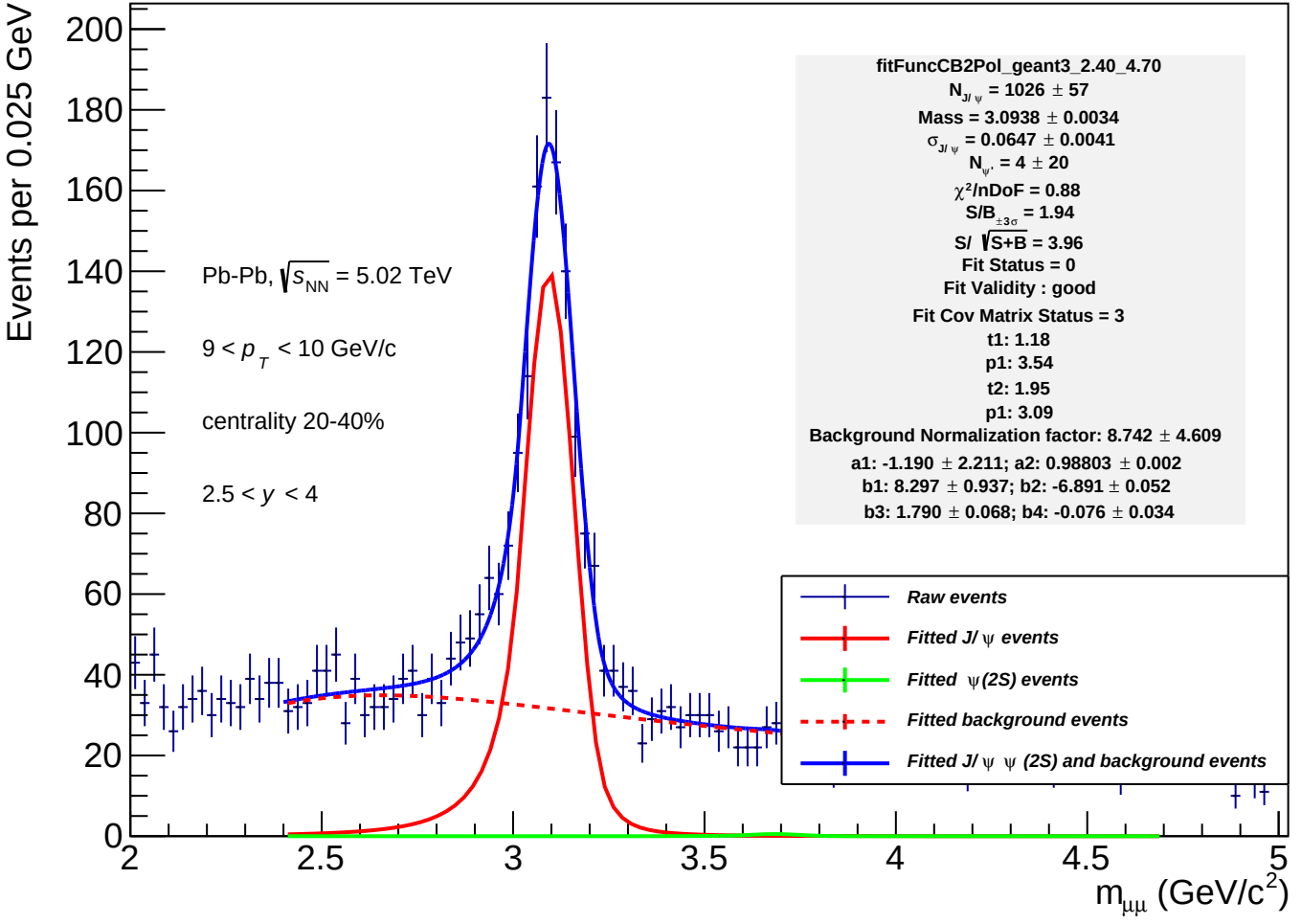
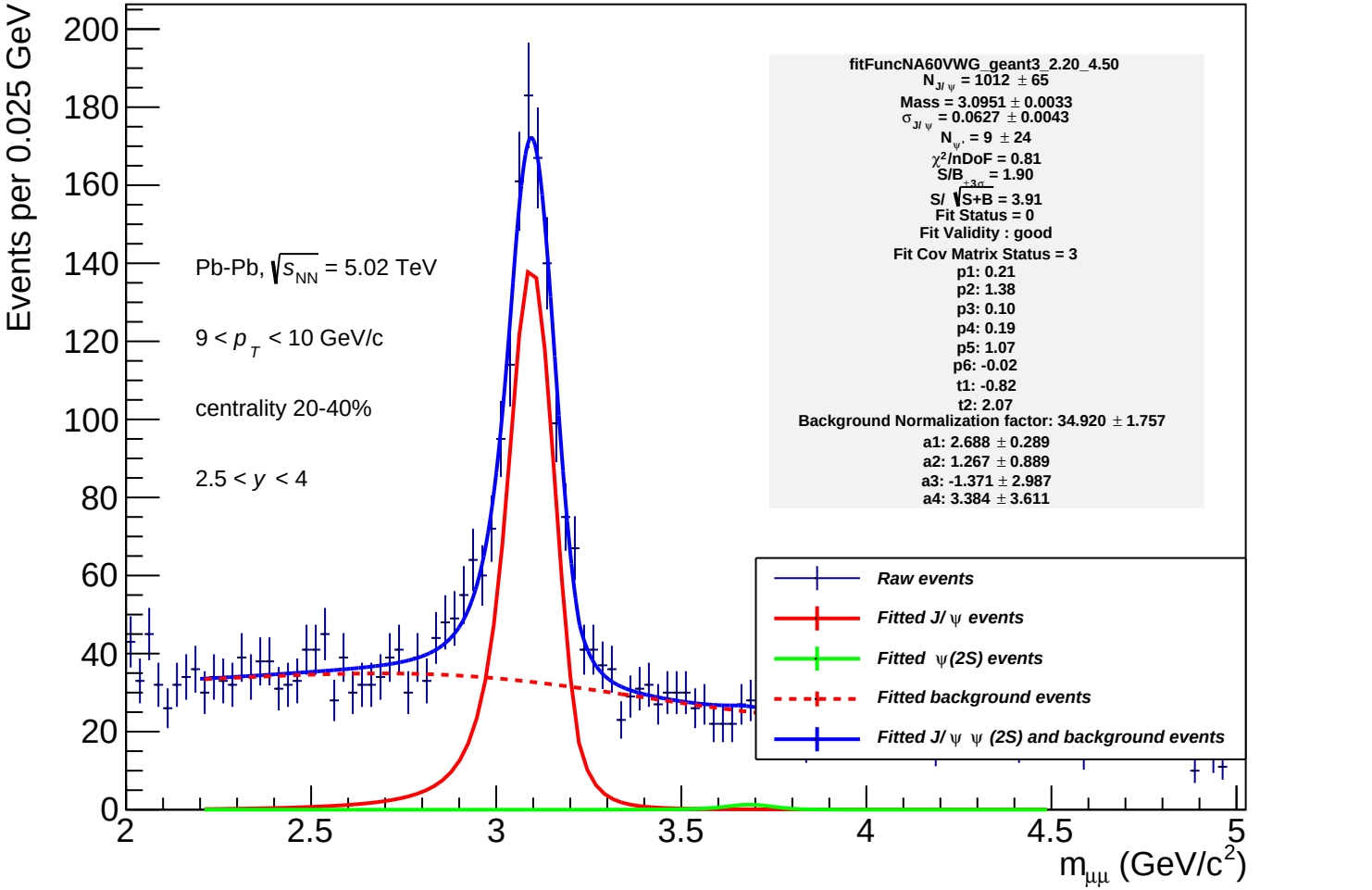
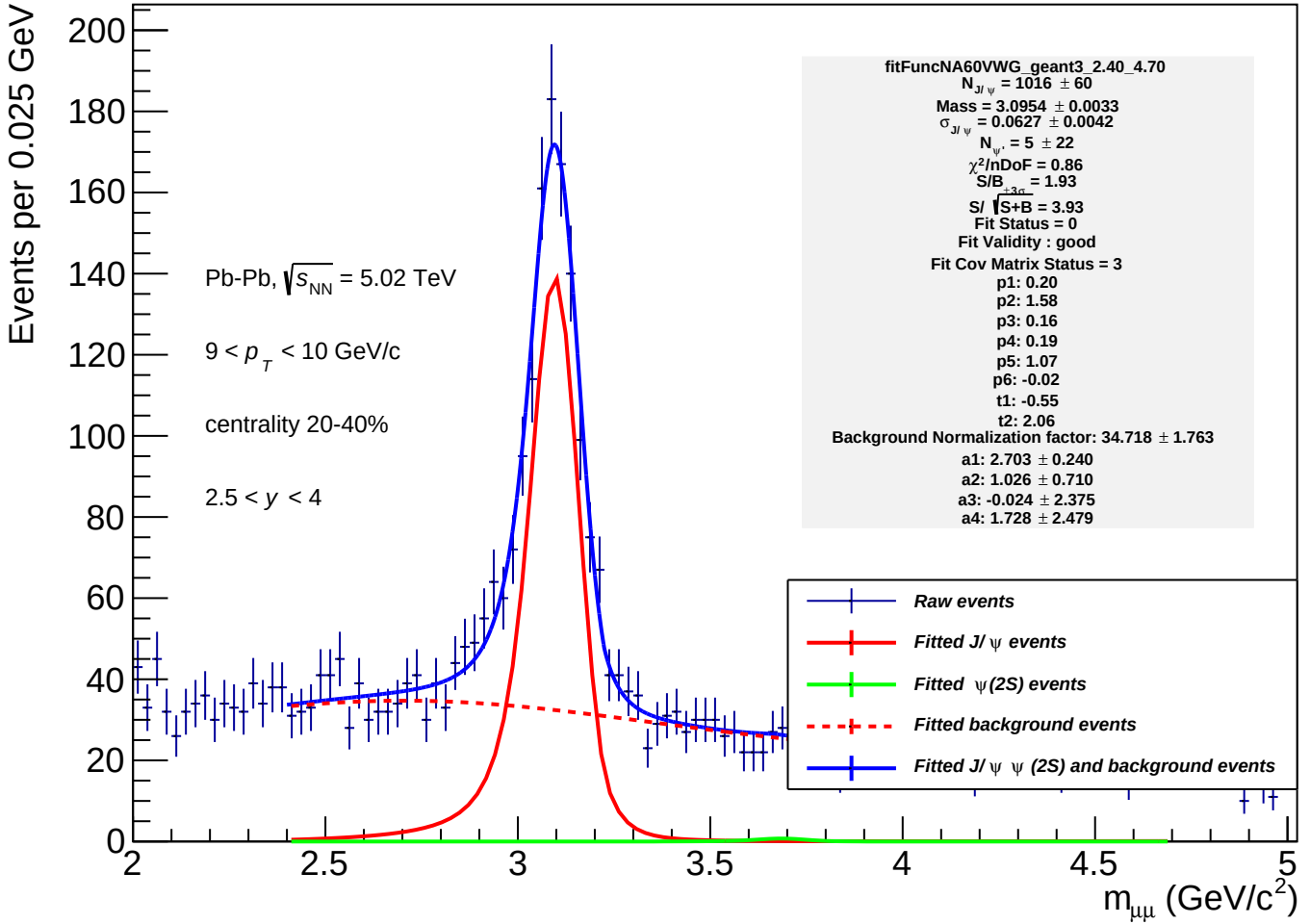
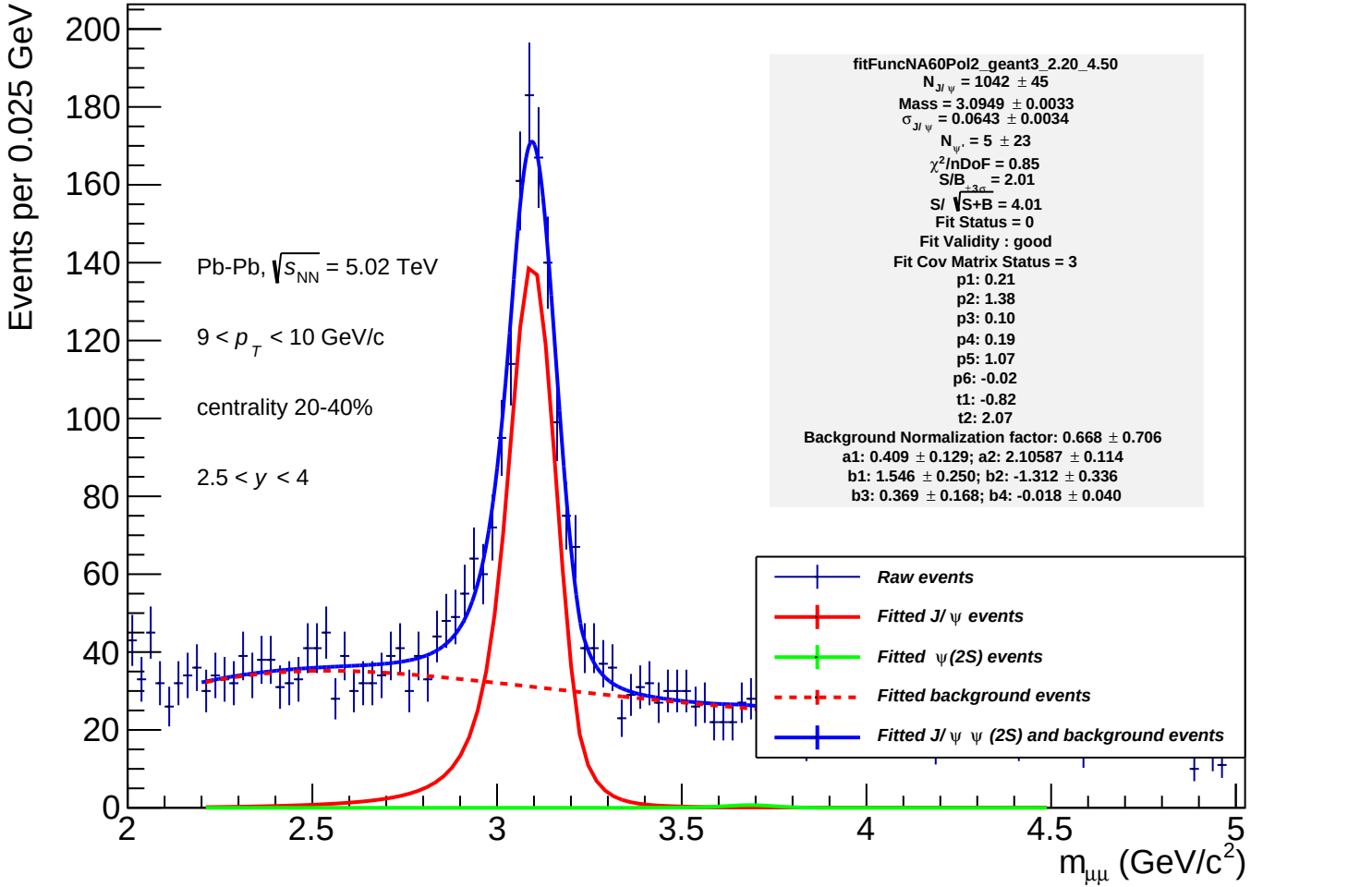
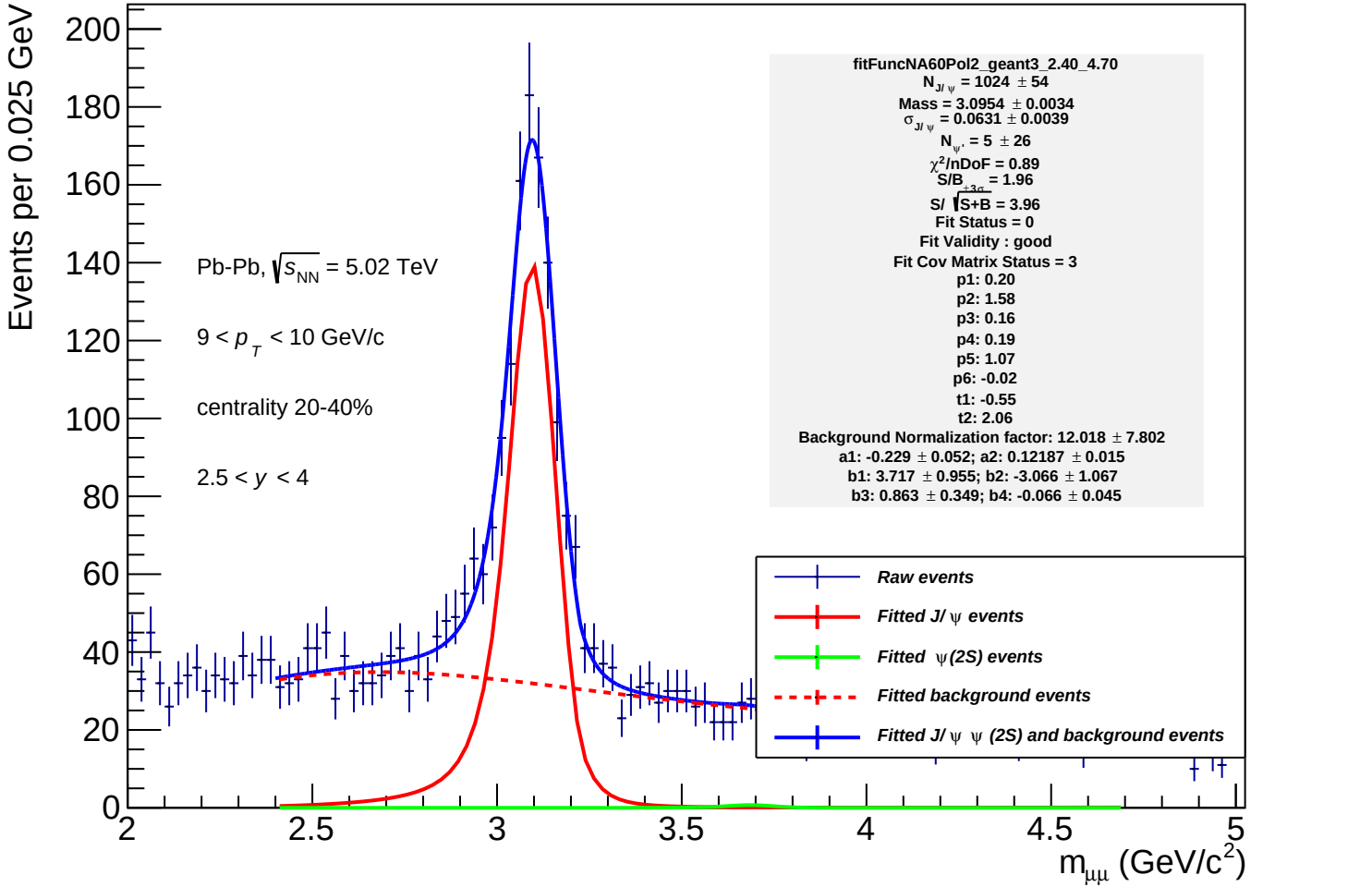
0
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
9 < p_T < 10 GeV/c
centrality 20-40%
2.5 < y < 4
fitFuncCB2Pol_pp13_2.40_4.70
$N_{J/\psi}$ = 1038 ± 46
Mass = 3.0946 ± 0.0032
$\sigma_{J/\psi}$ = 0.0650 ± 0.0035
$N_{\psi'}$ = 138 ± 7
χ^2/nDoF = 0.80
$S/B_{\pm 3\sigma}$ = 2.03
$S/\sqrt{S+B}$ = 4.03
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: 260.974 ± 7.590
a1: -0.549 ± 0.000; a2: 0.07546 ± 0.000
b1: 2.139 ± 0.011; b2: 0.948 ± 0.003
b3: -1.009 ± 0.001; b4: 0.161 ± 0.000
Raw events
Fitted J/ψ events
Fitted ψ(2S) events
Fitted background events
Fitted J/ψ ψ(2S) and background events

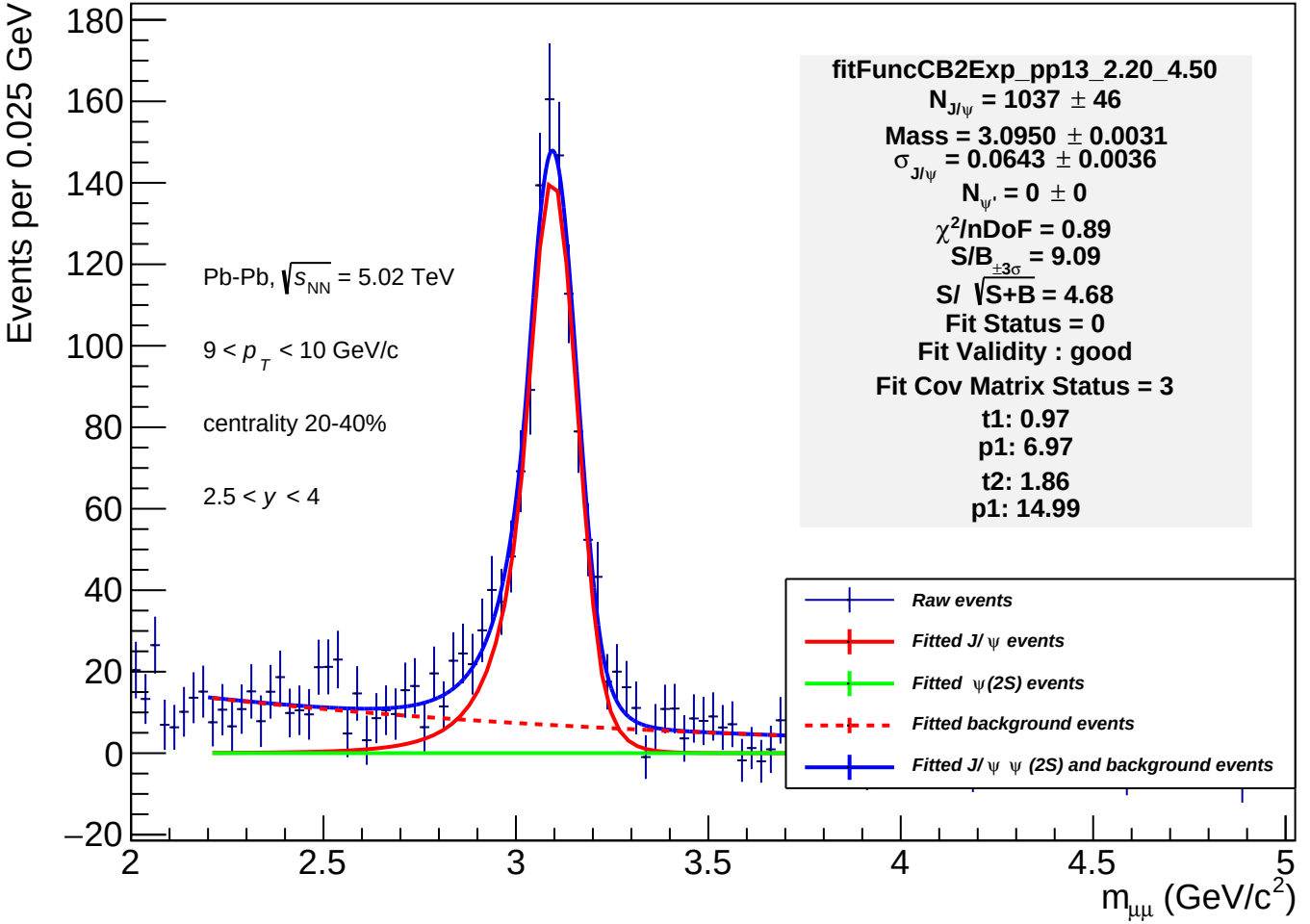

Events per 0.025 GeV
200
180
160
140
120
100
80
60
40
20
0
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
9 < p_T < 10 GeV/c
centrality 20-40%
2.5 < y < 4
fitFuncCB2Pol_geant3_2.40_4.70
$N_{J/\psi}$ = 1026 ± 57
Mass = 3.0938 ± 0.0034
$\sigma_{J/\psi}$ = 0.0647 ± 0.0041
$N_{\psi'}$ = 4 ± 20
χ^2/nDoF = 0.88
$S/B_{\pm 3\sigma}$ = 1.94
$S/\sqrt{S+B}$ = 3.96
Fit Status = 0
Fit Validity : good
Fit Cov Matrix Status = 3
t1: 1.18
p1: 3.54
t2: 1.95
p1: 3.09
Background Normalization factor: 8.742 ± 4.609
a1: -1.190 ± 2.211; a2: 0.98803 ± 0.002
b1: 8.297 ± 0.937; b2: -6.891 ± 0.052
b3: 1.790 ± 0.068; b4: -0.076 ± 0.034
Raw events
Fitted J/ψ events
Fitted ψ(2S) events
Fitted background events
Fitted J/ψ ψ(2S) and background events

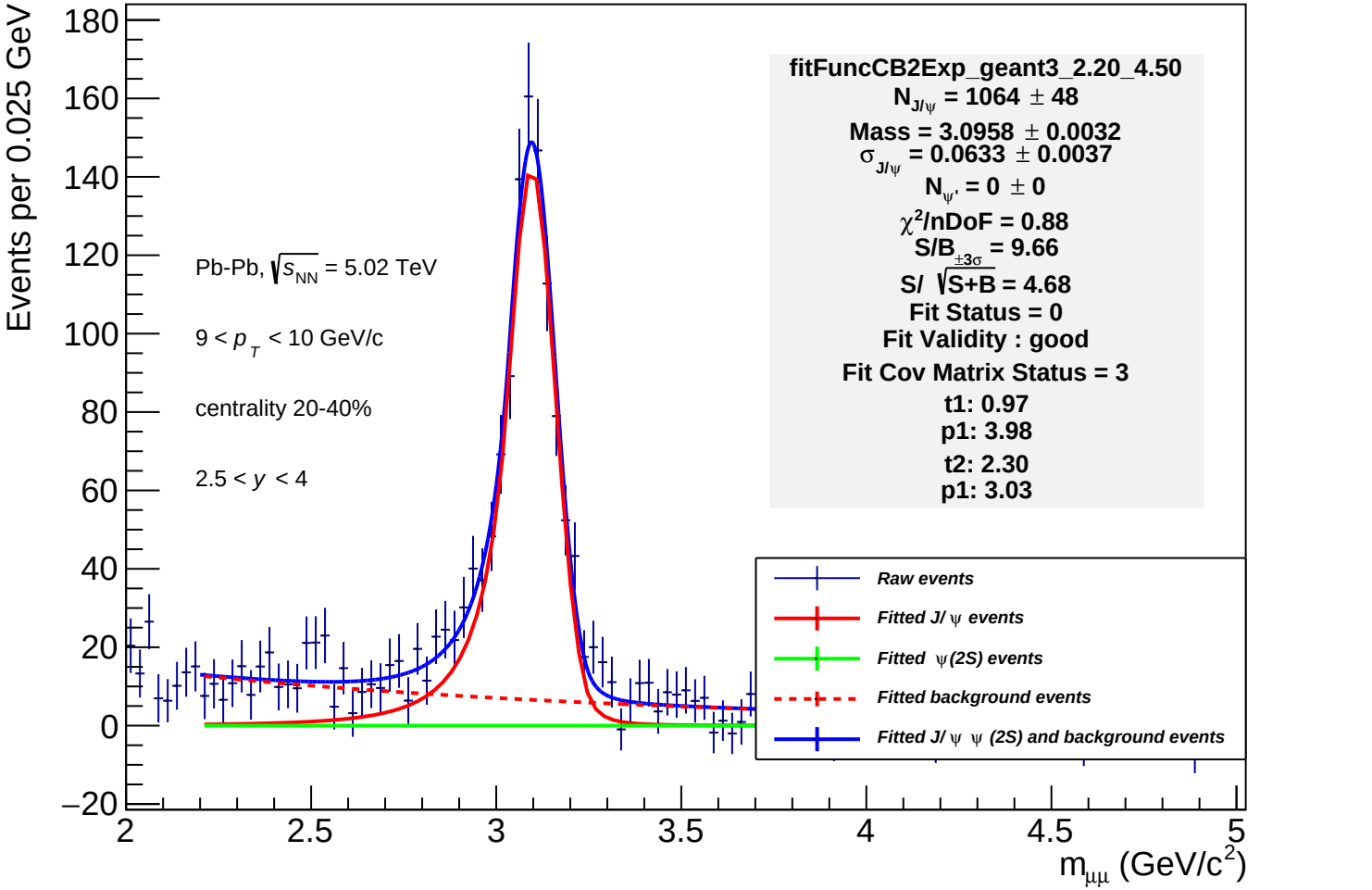

Events per 0.025 GeV
200
180
160
140
120
100
80
60
40
20
0
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
9 < p_T < 10 GeV/c
centrality 20-40%
2.5 < y < 4
fitFuncNA60VWG_geant3_2.20_4.50
$N_{J/\psi}$ = 1012 ± 65
Mass = 3.0951 ± 0.0033
$\sigma_{J/\psi}$ = 0.0627 ± 0.0043
$N_{\psi'}$ = 9 ± 24
χ^2/nDoF = 0.81
$S/B_{\pm 3\sigma}$ = 1.90
$S/\sqrt{S+B}$ = 3.91
Fit Status = 0
Fit Validity : good
Fit Cov Matrix Status = 3
p1: 0.21
p2: 1.38
p3: 0.10
p4: 0.19
p5: 1.07
p6: -0.02
t1: -0.82
t2: 2.07
Background Normalization factor: 34.920 ± 1.757
a1: 2.688 ± 0.289
a2: 1.267 ± 0.889
a3: -1.371 ± 2.987
a4: 3.384 ± 3.611
Raw events
Fitted J/ψ events
Fitted ψ(2S) events
Fitted background events
Fitted J/ψ ψ(2S) and background events

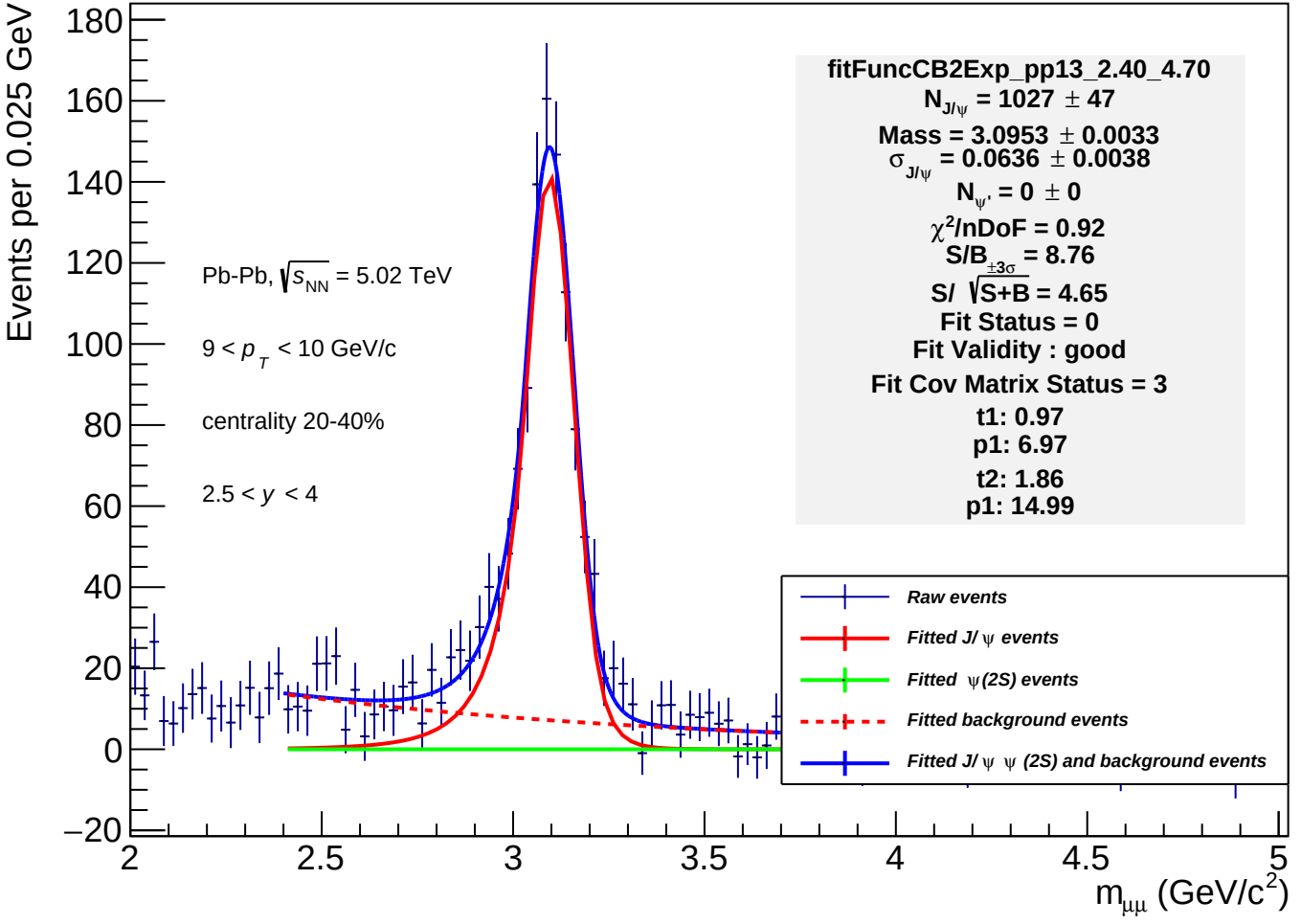

Events per 0.025 GeV
200
180
160
140
120
100
80
60
40
20
0
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
9 < p_T < 10 GeV/c
centrality 20-40%
2.5 < y < 4
fitFuncNA60VWG_geant3_2.40_4.70
$N_{J/\psi}$ = 1016 ± 60
Mass = 3.0954 ± 0.0033
$\sigma_{J/\psi}$ = 0.0627 ± 0.0042
$N_{\psi'}$ = 5 ± 22
χ^2/nDoF = 0.86
$S/B_{\pm 3\sigma}$ = 1.93
$S/\sqrt{S+B}$ = 3.93
Fit Status = 0
Fit Validity : good
Fit Cov Matrix Status = 3
p1: 0.20
p2: 1.58
p3: 0.16
p4: 0.19
p5: 1.07
p6: -0.02
t1: -0.55
t2: 2.06
Background Normalization factor: 34.718 ± 1.763
a1: 2.703 ± 0.240
a2: 1.026 ± 0.710
a3: -0.024 ± 2.375
a4: 1.728 ± 2.479
Raw events
Fitted J/ψ events
Fitted ψ(2S) events
Fitted background events
Fitted J/ψ ψ(2S) and background events

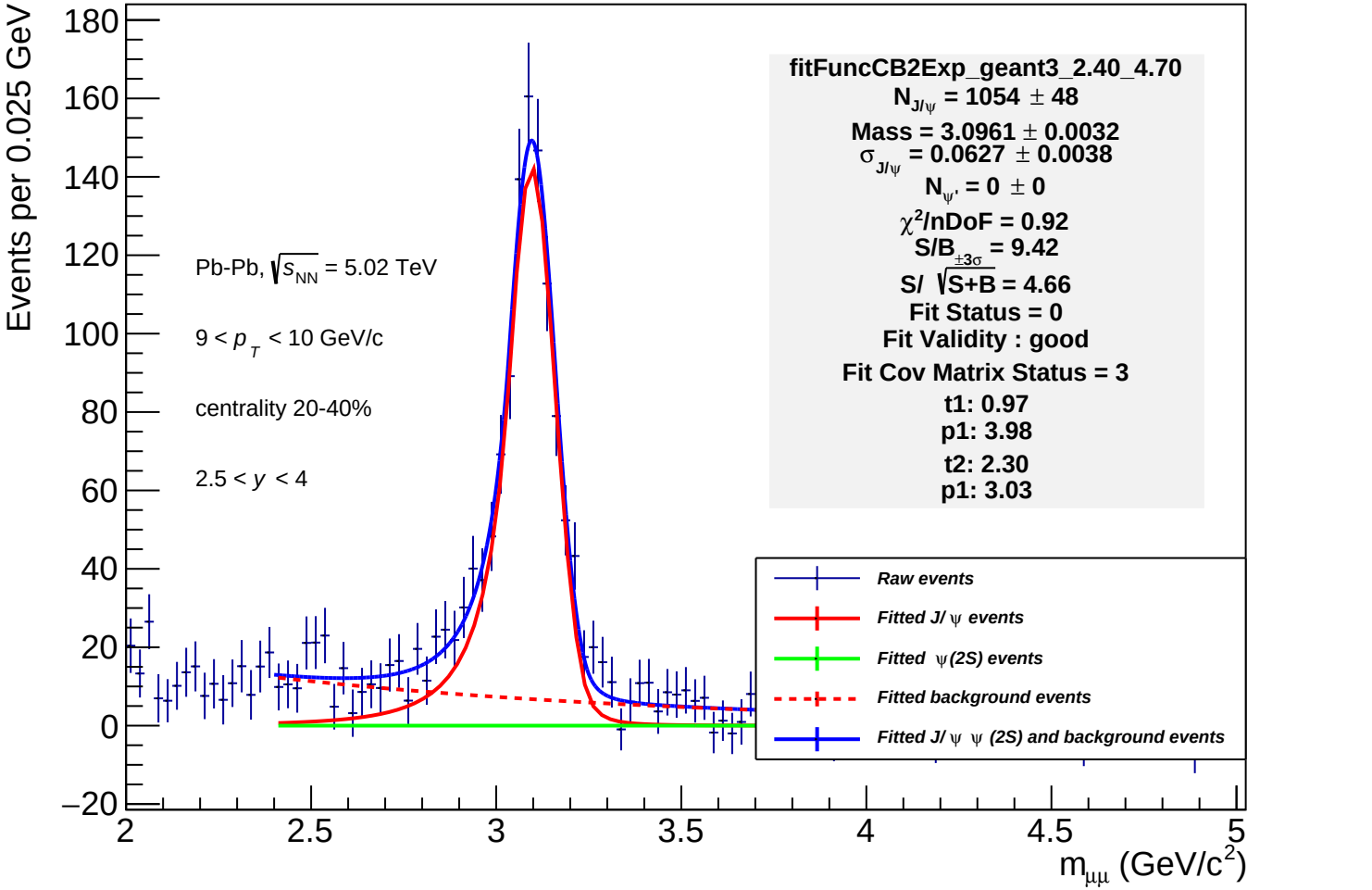

Events per 0.025 GeV
200
180
160
140
120
100
80
60
40
20
0
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
9 < p_T < 10 GeV/c
centrality 20-40%
2.5 < y < 4
fitFuncNA60Pol2_geant3_2.20_4.50
$N_{J/\psi}$ = 1042 ± 45
Mass = 3.0949 ± 0.0033
$\sigma_{J/\psi}$ = 0.0643 ± 0.0034
$N_{\psi'}$ = 5 ± 23
χ^2/nDoF = 0.85
S/$B_{\pm 3\sigma}$ = 2.01
S/$\sqrt{S+B}$ = 4.01
Fit Status = 0
Fit Validity : good
Fit Cov Matrix Status = 3
p1: 0.21
p2: 1.38
p3: 0.10
p4: 0.19
p5: 1.07
p6: -0.02
t1: -0.82
t2: 2.07
Background Normalization factor: 0.668 ± 0.706
a1: 0.409 ± 0.129; a2: 2.10587 ± 0.114
b1: 1.546 ± 0.250; b2: -1.312 ± 0.336
b3: 0.369 ± 0.168; b4: -0.018 ± 0.040
Raw events
Fitted J/ψ events
Fitted ψ(2S) events
Fitted background events
Fitted J/ψ ψ (2S) and background events

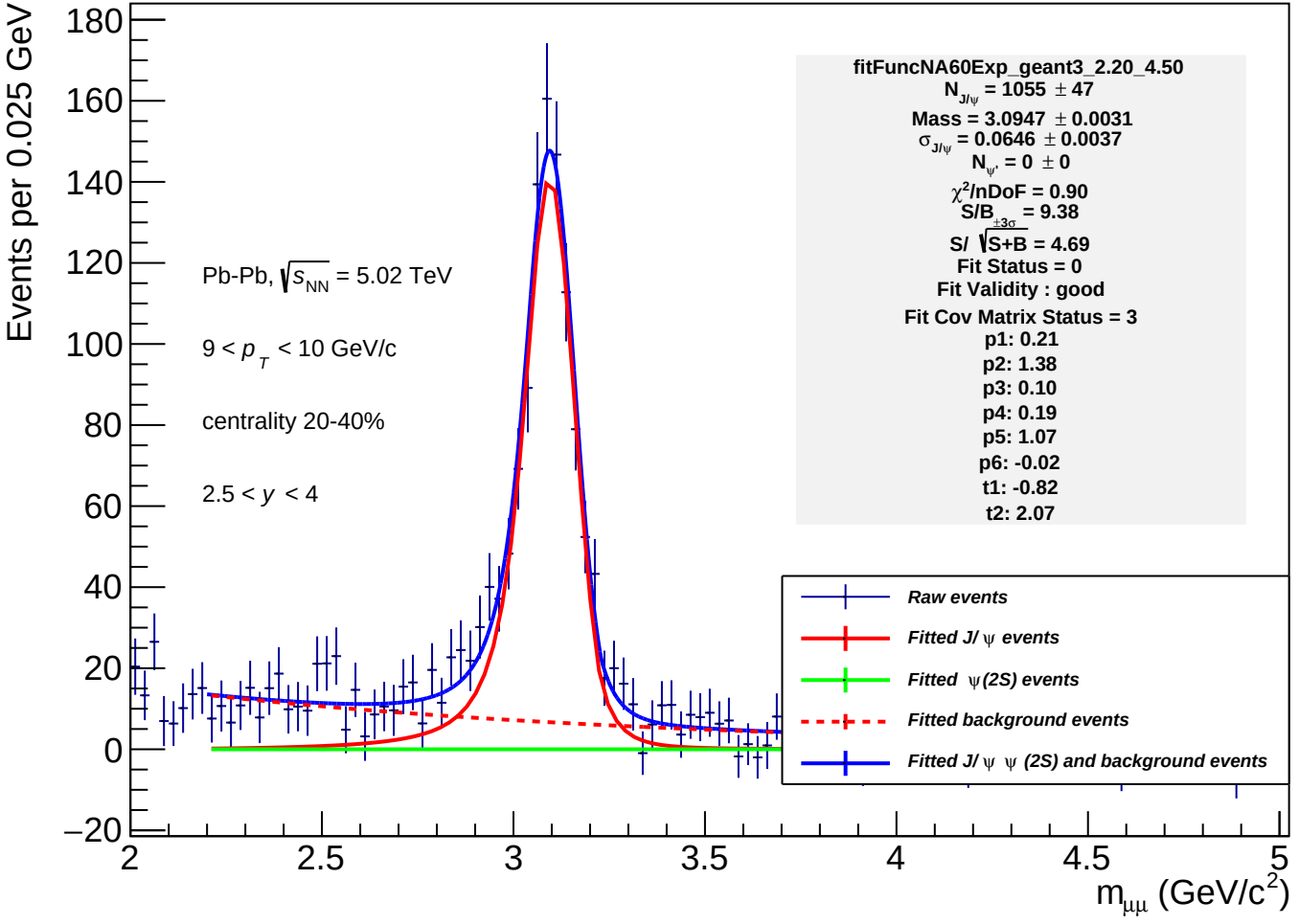

Events per 0.025 GeV
200
180
160
140
120
100
80
60
40
20
0
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
9 < p_T < 10 GeV/c
centrality 20-40%
2.5 < y < 4
fitFuncNA60Pol2_geant3_2.40_4.70
$N_{J/\psi}$ = 1024 ± 54
Mass = 3.0954 ± 0.0034
$\sigma_{J/\psi}$ = 0.0631 ± 0.0039
$N_{\psi'}$ = 5 ± 26
χ^2/nDoF = 0.89
$S/B_{\pm 3\sigma}$ = 1.96
$S/\sqrt{S+B}$ = 3.96
Fit Status = 0
Fit Validity : good
Fit Cov Matrix Status = 3
p1: 0.20
p2: 1.58
p3: 0.16
p4: 0.19
p5: 1.07
p6: -0.02
t1: -0.55
t2: 2.06
Background Normalization factor: 12.018 ± 7.802
a1: -0.229 ± 0.052; a2: 0.12187 ± 0.015
b1: 3.717 ± 0.955; b2: -3.066 ± 1.067
b3: 0.863 ± 0.349; b4: -0.066 ± 0.045
Raw events
Fitted J/ψ events
Fitted ψ(2S) events
Fitted background events
Fitted J/ψ ψ(2S) and background events

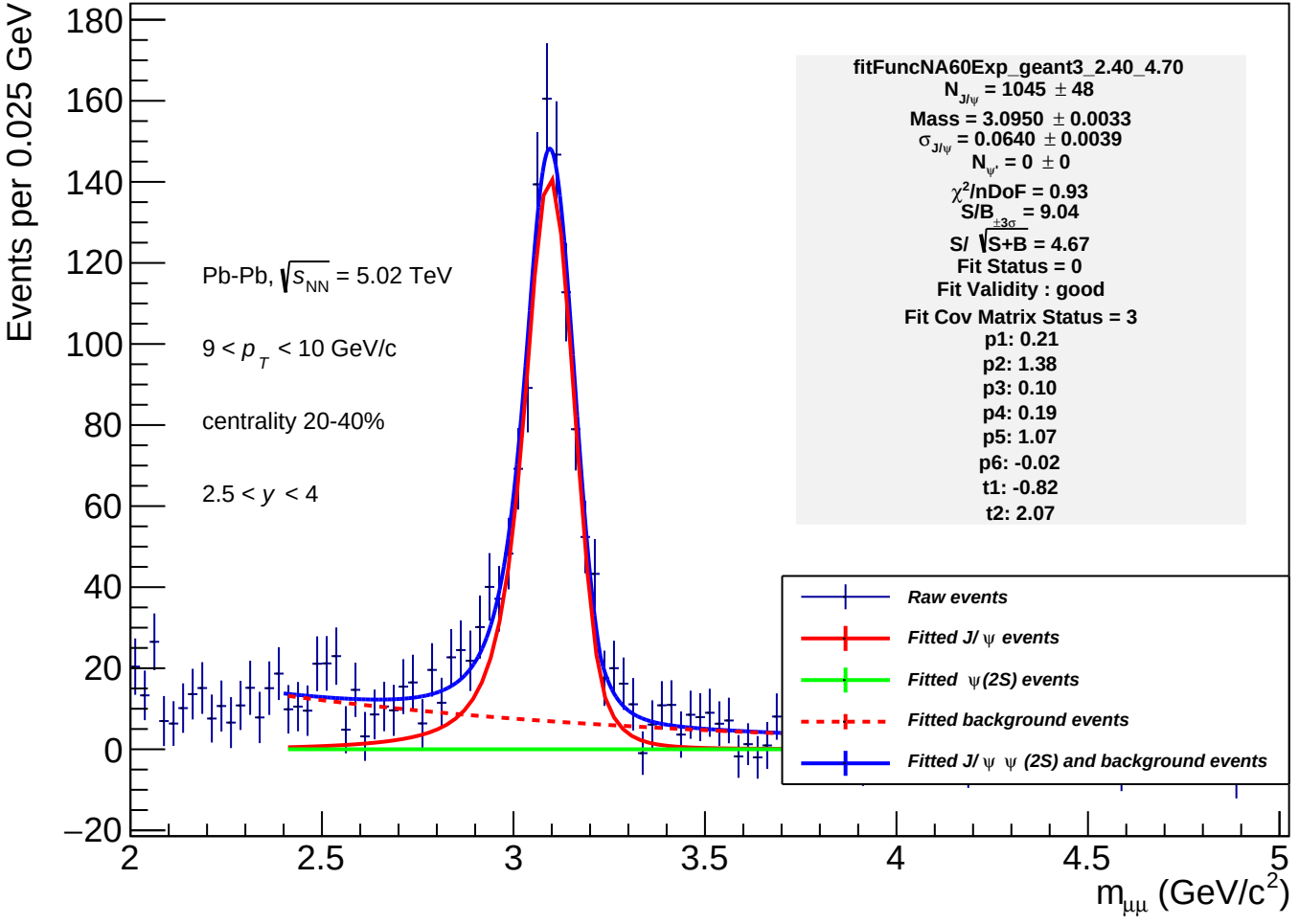

Events per 0.025 GeV
180
160
140
120
100
80
60
40
20
0
−20
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
9 < p_T < 10 GeV/c
centrality 20-40%
2.5 < y < 4
fitFuncCB2Exp_pp13_2.20_4.50
$N_{J/\psi}$ = 1037 ± 46
Mass = 3.0950 ± 0.0031
$\sigma_{J/\psi}$ = 0.0643 ± 0.0036
$N_{\psi'}$ = 0 ± 0
χ^2/nDoF = 0.89
$S/B_{\pm 3\sigma}$ = 9.09
$S/\sqrt{S+B}$ = 4.68
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
180
160
140
120
100
80
60
40
20
0
−20
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
9 < p_T < 10 GeV/c
centrality 20-40%
2.5 < y < 4
fitFuncCB2Exp_geant3_2.20_4.50
$N_{J/\psi}$ = 1064 ± 48
Mass = 3.0958 ± 0.0032
$\sigma_{J/\psi}$ = 0.0633 ± 0.0037
$N_{\psi'}$ = 0 ± 0
χ^2/nDoF = 0.88
$S/B_{\pm 3\sigma}$ = 9.66
$S/\sqrt{S+B}$ = 4.68
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
180
160
140
120
100
80
60
40
20
0
−20
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
9 < p_T < 10 GeV/c
centrality 20-40%
2.5 < y < 4
fitFuncCB2Exp_pp13_2.40_4.70
$N_{J/\psi}$ = 1027 ± 47
Mass = 3.0953 ± 0.0033
$\sigma_{J/\psi}$ = 0.0636 ± 0.0038
$N_{\psi'}$ = 0 ± 0
χ^2/nDoF = 0.92
$S/B_{\pm 3\sigma}$ = 8.76
$S/\sqrt{S+B}$ = 4.65
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
180
160
140
120
100
80
60
40
20
0
−20
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
9 < p_T < 10 GeV/c
centrality 20-40%
2.5 < y < 4
fitFuncCB2Exp_geant3_2.40_4.70
$N_{J/\psi}$ = 1054 ± 48
Mass = 3.0961 ± 0.0032
$\sigma_{J/\psi}$ = 0.0627 ± 0.0038
$N_{\psi'}$ = 0 ± 0
χ^2/nDoF = 0.92
$S/B_{\pm 3\sigma}$ = 9.42
$S/\sqrt{S+B}$ = 4.66
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
180
160
140
120
100
80
60
40
20
0
−20
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
9 < p_T < 10 GeV/c
centrality 20-40%
2.5 < y < 4
fitFuncNA60Exp_geant3_2.20_4.50
$N_{J/\psi}$ = 1055 ± 47
Mass = 3.0947 ± 0.0031
$\sigma_{J/\psi}$ = 0.0646 ± 0.0037
$N_{\psi'}$ = 0 ± 0
χ^2/nDoF = 0.90
$S/B_{\pm 3\sigma}$ = 9.38
$S/\sqrt{S+B}$ = 4.69
Fit Status = 0
Fit Validity : good
Fit Cov Matrix Status = 3
p1: 0.21
p2: 1.38
p3: 0.10
p4: 0.19
p5: 1.07
p6: -0.02
t1: -0.82
t2: 2.07
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
180
160
140
120
100
80
60
40
20
0
−20
2
2.5
3
3.5
4
4.5
5
$m_{\mu\mu}$ (GeV/c^2)
Pb-Pb, $\sqrt{s_{NN}}$ = 5.02 TeV
9 < p_T < 10 GeV/c
centrality 20-40%
2.5 < y < 4
fitFuncNA60Exp_geant3_2.40_4.70
$N_{J/\psi}$ = 1045 ± 48
Mass = 3.0950 ± 0.0033
$\sigma_{J/\psi}$ = 0.0640 ± 0.0039
$N_{\psi'}$ = 0 ± 0
χ^2/nDoF = 0.93
$S/B_{\pm 3\sigma}$ = 9.04
$S/\sqrt{S+B}$ = 4.67
Fit Status = 0
Fit Validity : good
Fit Cov Matrix Status = 3
p1: 0.21
p2: 1.38
p3: 0.10
p4: 0.19
p5: 1.07
p6: -0.02
t1: -0.82
t2: 2.07
Raw events
Fitted J/ψ events
Fitted ψ(2S) events
Fitted background events
Fitted J/ψ ψ(2S) and background events