

Events per 0.025 GeV

Pb-Pb, $\sqrt{s_{NN}} = 5.02$ TeV

$11 < p_T < 12$ GeV/c

centrality 20-40%

$2.5 < y < 4$

fitFuncCB2VWG_pp13_2.20_4.50

$N_{J/\psi} = 426 \pm 34$

Mass = 3.1068 ± 0.0062

$\sigma_{J/\psi} = 0.0770 \pm 0.0069$

$N_{\psi'} = 6 \pm 14$

$\chi^2/nDoF = 1.39$

$S/B_{\pm 3\sigma} = 2.26$

$S/\sqrt{S+B} = 2.63$

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: 14.463 ± 3.656

a1: 2.209 ± 0.070

a2: 0.066 ± 0.170

a3: 2.721 ± 1.000

a4: -1.113 ± 0.941

- +— Raw events
- +— Fitted J/ψ events
- +— Fitted $\psi(2S)$ events
- - + - - Fitted background events
- +— Fitted J/ψ $\psi(2S)$ and background events

$m_{\mu\mu}$ (GeV/c²)

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fitFuncCB2VWG_geant3_2.20_4.50

$N_{J/\psi} = 447 \pm 36$

Mass = 3.1036 ± 0.0062

$\sigma_{J/\psi} = 0.0824 \pm 0.0071$

$N_{\psi'} = 8 \pm 15$

$\chi^2/nDoF = 1.38$

$S/B_{\pm 3\sigma} = 2.29$

$S/\sqrt{S+B} = 2.68$

Fit Status = 0

Fit Validity : good

Fit Cov Matrix Status = 3

t1: 1.15

p1: 3.84

t2: 1.98

p1: 2.28

Background Normalization factor: 14.456 ± 4.403

a1: 2.202 ± 0.142

a2: 0.091 ± 0.177

a3: 2.399 ± 1.143

a4: -0.796 ± 1.014

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$m_{\mu\mu}$ (GeV/c²)

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fitFuncCB2VWG_pp13_2.40_4.70

$N_{J/\psi} = 463 \pm 34$

Mass = 3.1065 ± 0.0062

$\sigma_{J/\psi} = 0.0821 \pm 0.0074$

$N_{\psi'} = 64 \pm 6$

$\chi^2/nDoF = 1.53$

$S/B_{\pm 3\sigma} = 2.79$

$S/\sqrt{S+B} = 2.83$

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: 80.953 ± 2.900

a1: -4.062 ± 1.293

a2: 9.818 ± 0.241

a3: 8.059 ± 0.850

a4: 2.479 ± 0.654

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$m_{\mu\mu}$ (GeV/c²)

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$11 < p_T < 12$ GeV/c

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$2.5 < y < 4$

fitFuncCB2VWG_geant3_2.40_4.70

$N_{J/\psi} = 459 \pm 36$

Mass = 3.1036 ± 0.0062

$\sigma_{J/\psi} = 0.0843 \pm 0.0072$

$N_{\psi'} = 11 \pm 14$

$\chi^2/nDoF = 1.36$

$S/B = 2.46$

$S/\sqrt{S+B} = 2.75$

Fit Status = 0

Fit Validity : good

Fit Cov Matrix Status = 3

t1: 1.13

p1: 4.18

t2: 1.97

p1: 2.30

Background Normalization factor: 316.072 ± 224.504

a1: 2.086 ± 0.835

a2: 0.006 ± 0.021

a3: 0.778 ± 0.392

a4: -0.027 ± 0.064

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$m_{\mu\mu}$ (GeV/c²)

Events per 0.025 GeV

Pb-Pb, $\sqrt{s_{NN}} = 5.02$ TeV

$11 < p_T < 12$ GeV/c

centrality 20-40%

$2.5 < y < 4$

fitFuncCB2Pol_pp13_2.20_4.50

$N_{J/\psi} = 460 \pm 35$

Mass = 3.1064 ± 0.0062

$\sigma_{J/\psi} = 0.0812 \pm 0.0072$

$N_{\psi'} = 63 \pm 6$

$\chi^2/\text{nDoF} = 1.62$

$S/B_{\pm 3\sigma} = 2.76$

$S/\sqrt{S+B} = 2.81$

Fit Status = 0

Fit Validity : good

Fit Cov Matrix Status = 3

t1: 0.97

p1: 6.97

t2: 1.86

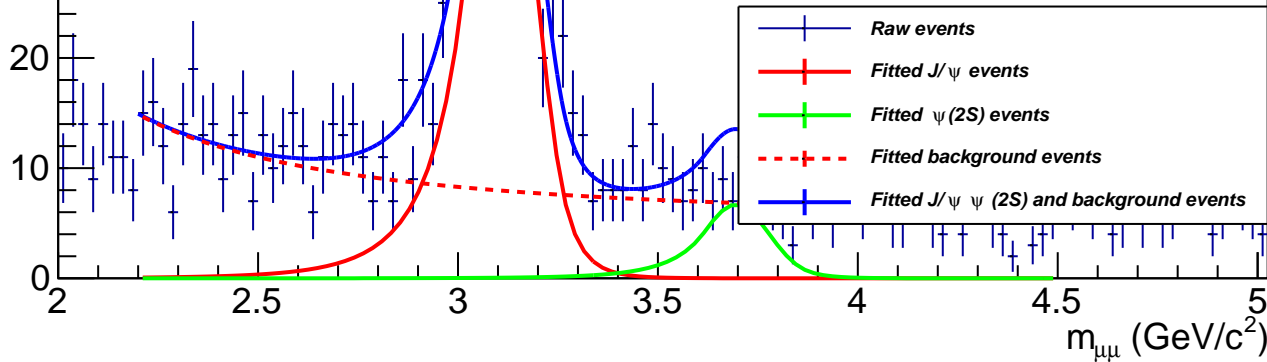
p1: 14.99

Background Normalization factor: 24.180 ± 450.194

a1: 11.572 ± 141.199 ; a2: 3.88093 ± 35.894

b1: -13.257 ± 103.841 ; b2: -91.682 ± 195.808

b3: 72.532 ± 55.625 ; b4: -5.872 ± 12.960



Events per 0.025 GeV

Pb-Pb, $\sqrt{s_{NN}} = 5.02$ TeV

$11 < p_T < 12$ GeV/c

centrality 20-40%

$2.5 < y < 4$

fitFuncCB2Pol_geant3_2.20_4.50

$N_{J/\psi} = 474 \pm 32$

Mass = 3.1029 ± 0.0061

$\sigma_{J/\psi} = 0.0860 \pm 0.0067$

$N_{\psi'} = 33 \pm 3$

$\chi^2/nDoF = 1.42$

$S/B_{\pm 3\sigma} = 2.65$

$S/\sqrt{S+B} = 2.82$

Fit Status = 0

Fit Validity : good

Fit Cov Matrix Status = 3

t1: 1.15

p1: 3.84

t2: 1.98

p1: 2.28

Background Normalization factor: 3.445 ± 0.822

a1: 19.863 ± 1.838 ; a2: -4.38546 ± 0.401

b1: -63.904 ± 2.457 ; b2: 58.141 ± 1.135

b3: -14.479 ± 0.217 ; b4: 1.062 ± 0.048

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$m_{\mu\mu}$ (GeV/c²)

Events per 0.025 GeV

Pb-Pb, $\sqrt{s_{NN}} = 5.02$ TeV

$11 < p_T < 12$ GeV/c

centrality 20-40%

$2.5 < y < 4$

fitFuncCB2Pol_pp13_2.40_4.70

$N_{J/\psi} = 469 \pm 36$

Mass = 3.1061 ± 0.0061

$\sigma_{J/\psi} = 0.0831 \pm 0.0073$

$N_{\psi'} = 64 \pm 6$

$\chi^2/nDoF = 1.57$

$S/B_{\pm 3\sigma} = 2.88$

$S/\sqrt{S+B} = 2.86$

Fit Status = 0

Fit Validity : good

Fit Cov Matrix Status = 3

t1: 0.97

p1: 6.97

t2: 1.86

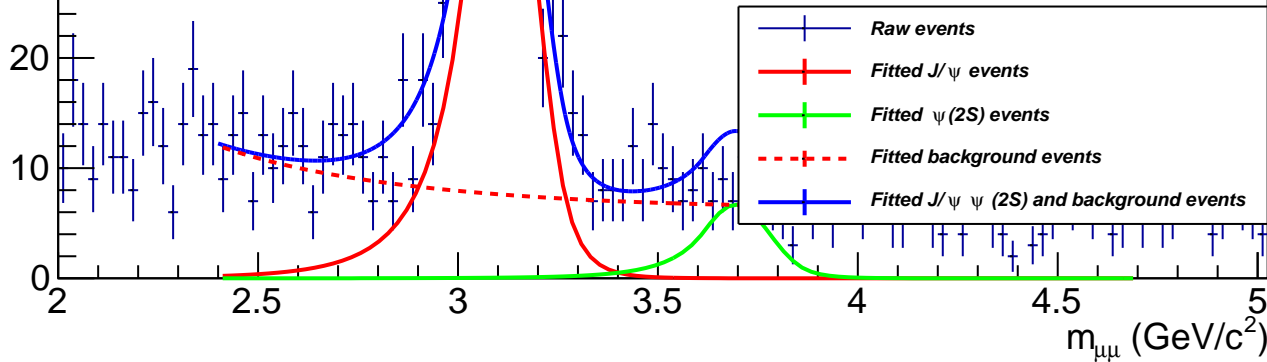
p1: 14.99

Background Normalization factor: 47.163 ± 20.478

a1: 2.695 ± 10.907 ; a2: 0.34464 ± 2.665

b1: 2.193 ± 34.947 ; b2: -55.201 ± 39.821

b3: 40.455 ± 34.294 ; b4: -4.751 ± 6.359



Events per 0.025 GeV

Pb-Pb, $\sqrt{s_{NN}} = 5.02$ TeV

$11 < p_T < 12$ GeV/c

centrality 20-40%

$2.5 < y < 4$

fitFuncCB2Pol_geant3_2.40_4.70

$N_{J/\psi} = 474 \pm 37$

Mass = 3.1036 ± 0.0060

$\sigma_{J/\psi} = 0.0863 \pm 0.0072$

$N_{\psi'} = 33 \pm 3$

$\chi^2/nDoF = 1.41$

$S/B_{\pm 3\sigma} = 2.68$

$S/\sqrt{S+B} = 2.83$

Fit Status = 0

Fit Validity : good

Fit Cov Matrix Status = 3

t1: 1.13

p1: 4.18

t2: 1.97

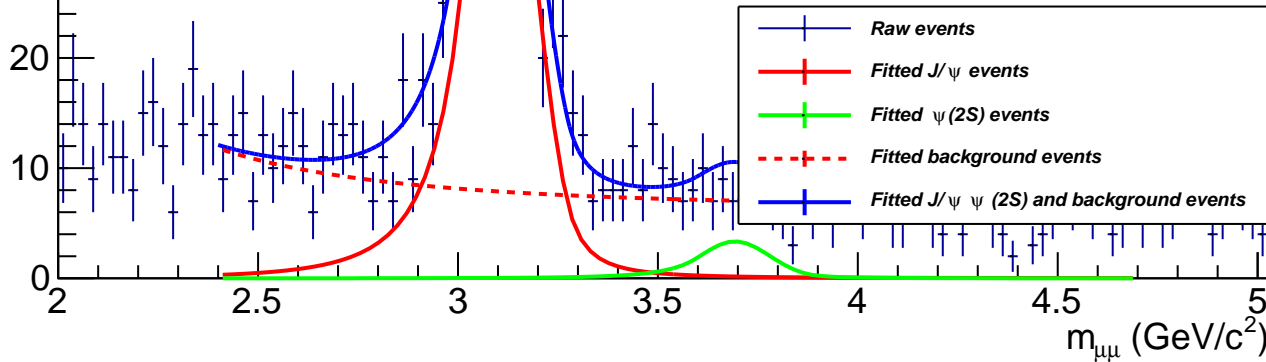
p1: 2.30

Background Normalization factor: 228.668 ± 245.880

a1: -0.488 ± 0.805 ; a2: 0.23308 ± 0.280

b1: -35.732 ± 67.580 ; b2: 13.275 ± 17.518

b3: 4.489 ± 7.195 ; b4: 0.051 ± 0.190



Events per 0.025 GeV

Pb-Pb, $\sqrt{s_{NN}} = 5.02$ TeV

$11 < p_T < 12$ GeV/c

centrality 20-40%

$2.5 < y < 4$

fitFuncNA60VWG_geant3_2.20_4.50

$N_{J/\psi} = 437 \pm 34$

Mass = 3.1038 ± 0.0060

$\sigma_{J/\psi} = 0.0677 \pm 0.0059$

$N_{\psi'} = 6 \pm 14$

$\chi^2/nDoF = 1.35$

$S/B = 2.59$

$S/(S+B) = 2.67$

Fit Status = 0

Fit Validity : good

Fit Cov Matrix Status = 3

p1: 0.23

p2: 0.98

p3: -0.01

p4: 0.13

p5: 2.26

p6: 0.17

t1: -1.01

t2: -1.00

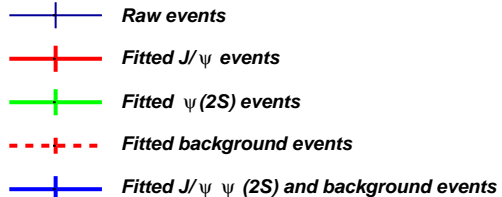
Background Normalization factor: 14.389 ± 3.744

a1: 2.204 ± 0.103

a2: 0.082 ± 0.191

a3: 2.594 ± 0.898

a4: -1.000 ± 0.830



$m_{\mu\mu}$ (GeV/c²)

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$2.5 < y < 4$

fitFuncNA60VWG_geant3_2.40_4.70

$N_{J/\psi} = 483 \pm 30$

Mass = 3.1004 ± 0.0062

$\sigma_{J/\psi} = 0.0764 \pm 0.0063$

$N_{\psi(2S)} = 8 \pm 13$

$\chi^2/nDoF = 1.63$

$S/B = 3.04$

$S/(S+B) = 2.88$

Fit Status = 0

Fit Validity : good

Fit Cov Matrix Status = 3

p1: 0.23

p2: 1.00

p3: 0.00

p4: 0.13

p5: 2.26

p6: 0.17

t1: -0.99

t2: -1.00

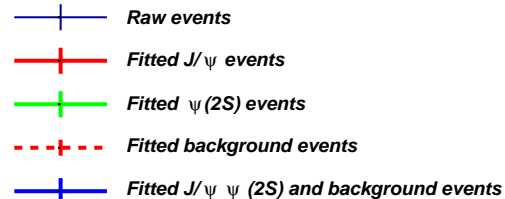
Background Normalization factor: 7.874 ± 0.407

a1: -0.052 ± 34.764

a2: 9.828 ± 0.118

a3: -17.914 ± 0.148

a4: 10.000 ± 0.123



$m_{\mu\mu}$ (GeV/c²)

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Pb-Pb, $\sqrt{s_{NN}} = 5.02$ TeV

$11 < p_T < 12$ GeV/c

centrality 20-40%

$2.5 < y < 4$

fitFuncNA60Pol2_geant3_2.20_4.50

$N_{J/\psi} = 455 \pm 34$

Mass = 3.1032 ± 0.0060

$\sigma_{J/\psi} = 0.0704 \pm 0.0060$

$N_{\psi'} = 6 \pm 15$

$\chi^2/nDoF = 1.36$

S/B = 2.81

S/ $\sqrt{S+B}$ = 2.76

Fit Status = 0

Fit Validity : good

Fit Cov Matrix Status = 3

p1: 0.23

p2: 0.98

p3: -0.01

p4: 0.13

p5: 2.26

p6: 0.17

t1: -1.01

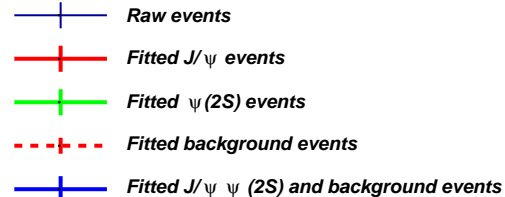
t2: -1.00

Background Normalization factor: 25.885 ± 19.501

a1: 0.472 ± 0.078 ; a2: -0.14714 ± 0.008

b1: -22.455 ± 1.717 ; b2: 21.991 ± 1.275

b3: -5.972 ± 0.213 ; b4: 0.497 ± 0.102



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fitFuncNA60Pol2_geant3_2.40_4.70

$N_{J/\psi} = 453 \pm 38$

Mass = 3.1030 ± 0.0062

$\sigma_{J/\psi} = 0.0705 \pm 0.0066$

$N_{\psi'} = 9 \pm 15$

$\chi^2/nDoF = 1.37$

S/B = 2.79

S/ $\sqrt{S+B}$ = 2.75

Fit Status = 0

Fit Validity : good

Fit Cov Matrix Status = 3

p1: 0.23

p2: 1.00

p3: 0.00

p4: 0.13

p5: 2.26

p6: 0.17

t1: -0.99

t2: -1.00

Background Normalization factor: 43.460 ± 420.117

a1: -0.830 ± 1.667 ; a2: 0.37776 ± 1.803

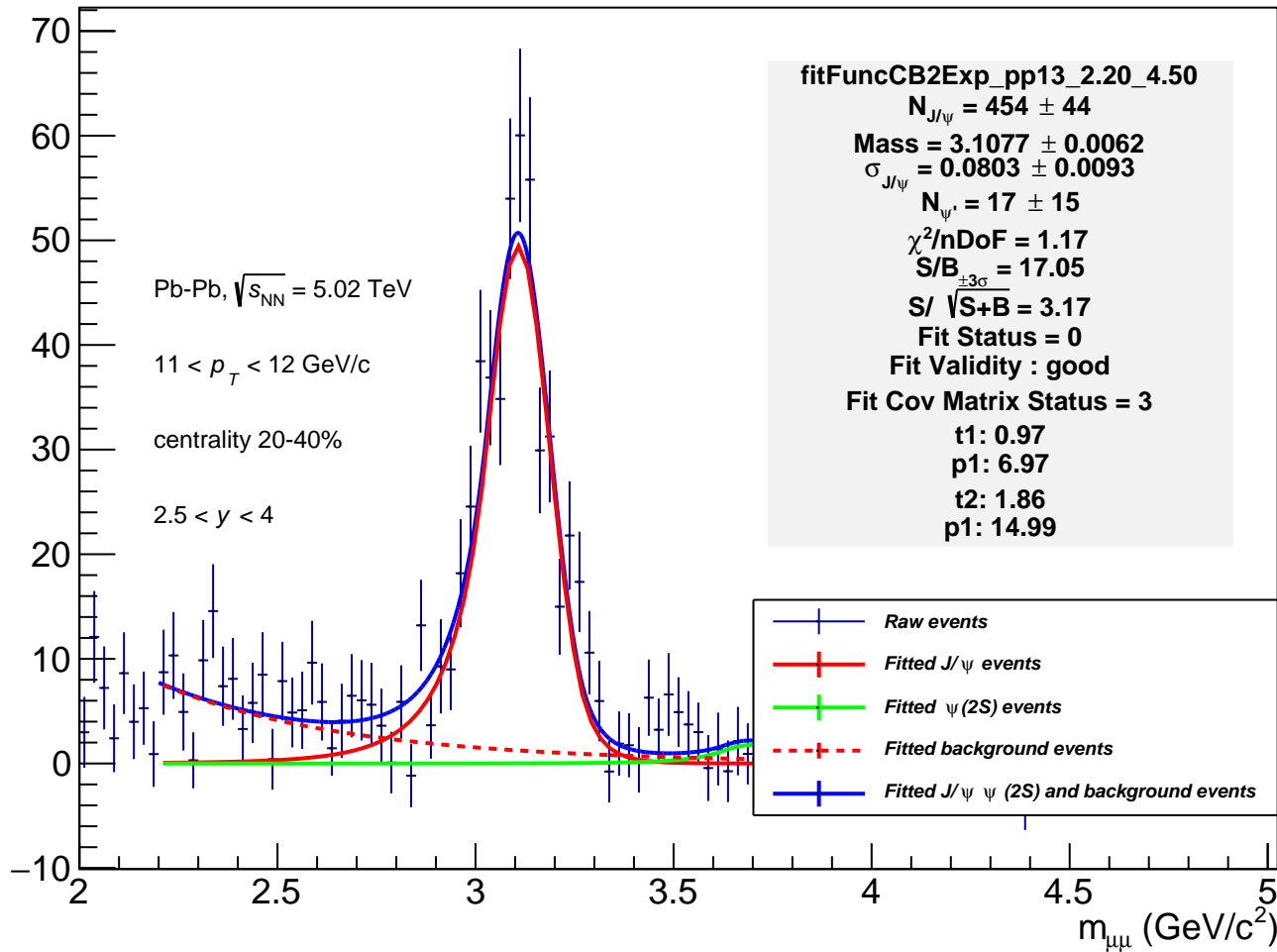
b1: -38.188 ± 15.684 ; b2: 35.746 ± 8.873

b3: -10.999 ± 3.354 ; b4: 1.454 ± 0.950

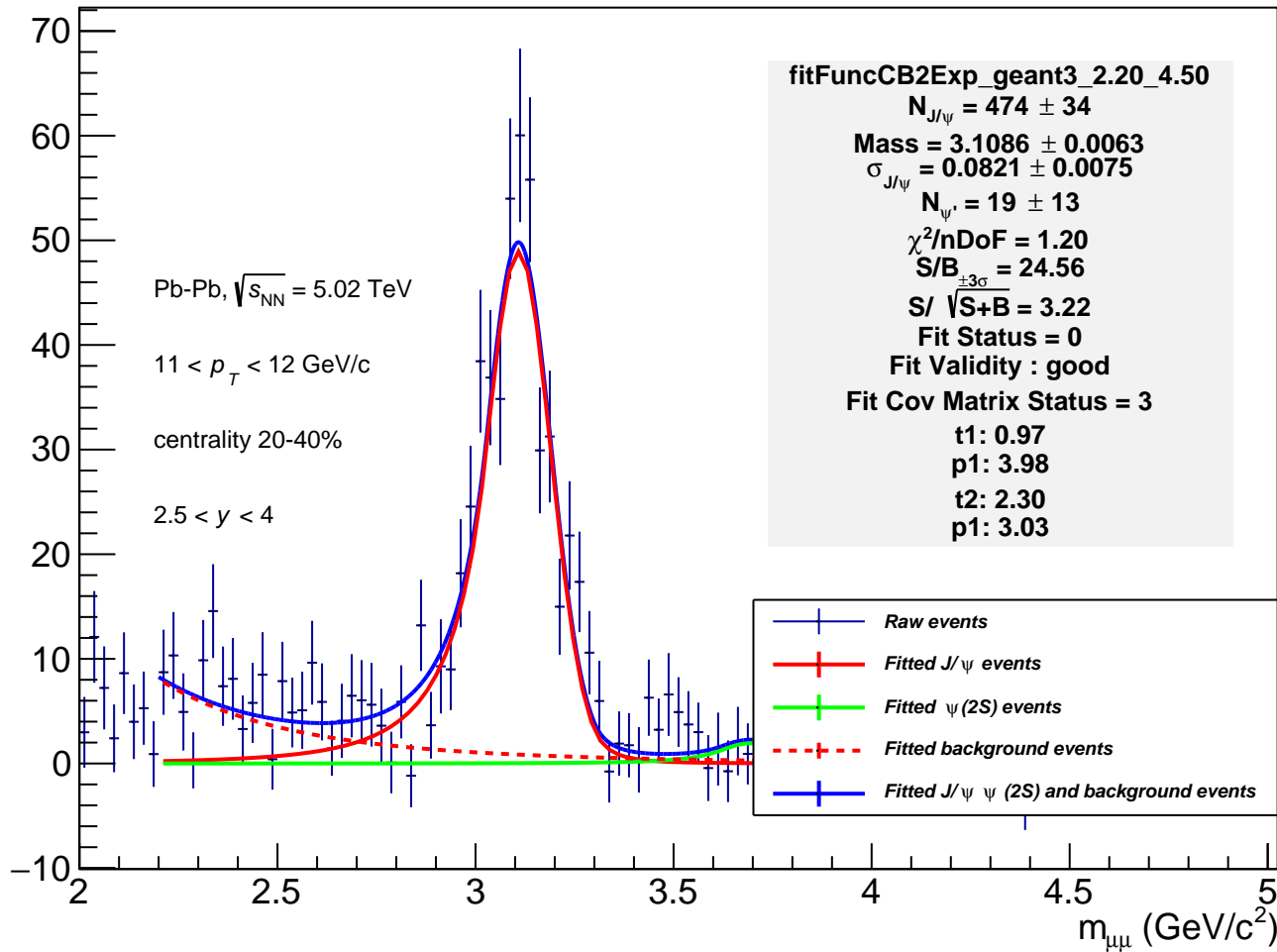
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$m_{\mu\mu}$ (GeV/c²)

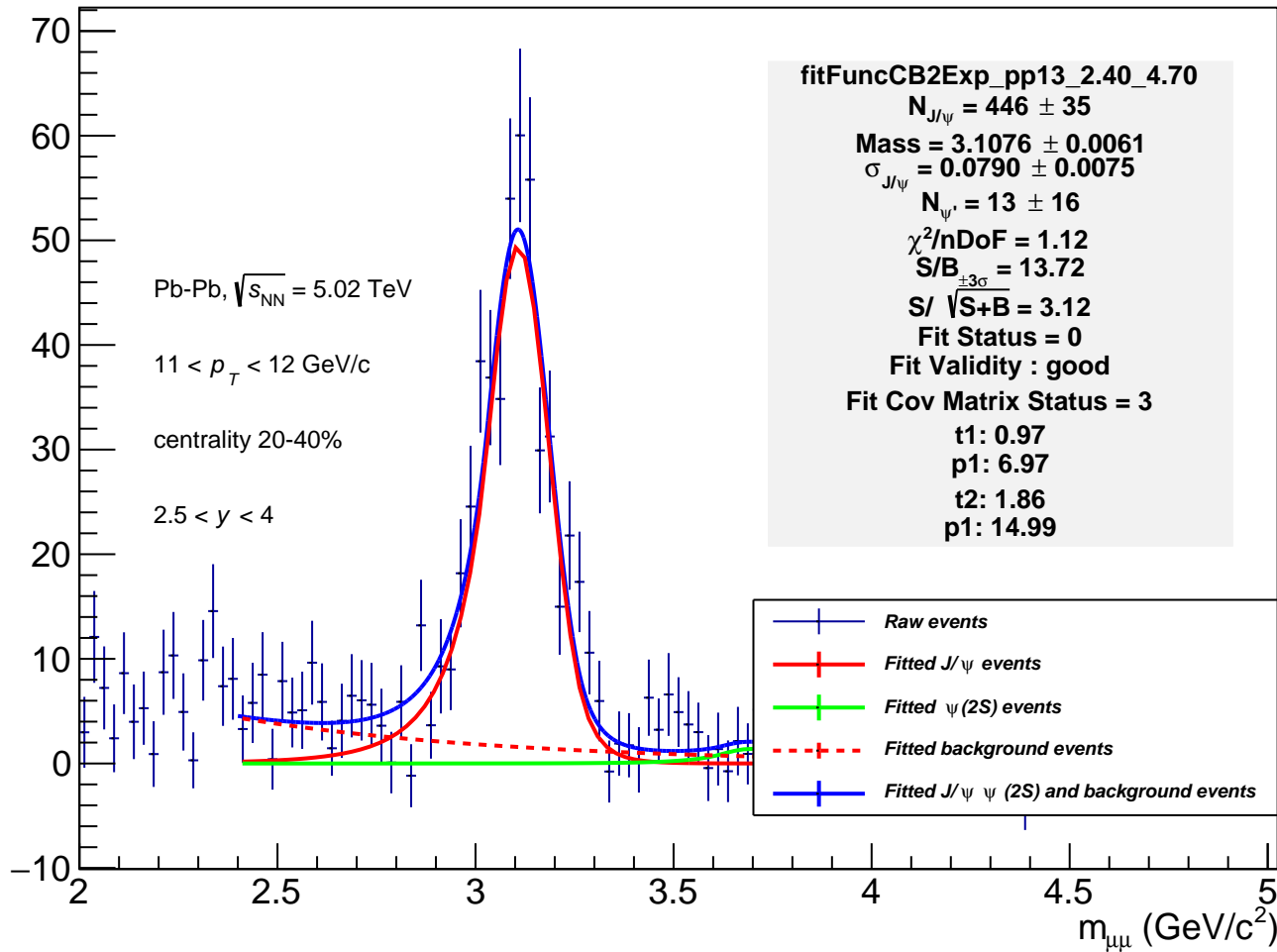
Events per 0.025 GeV



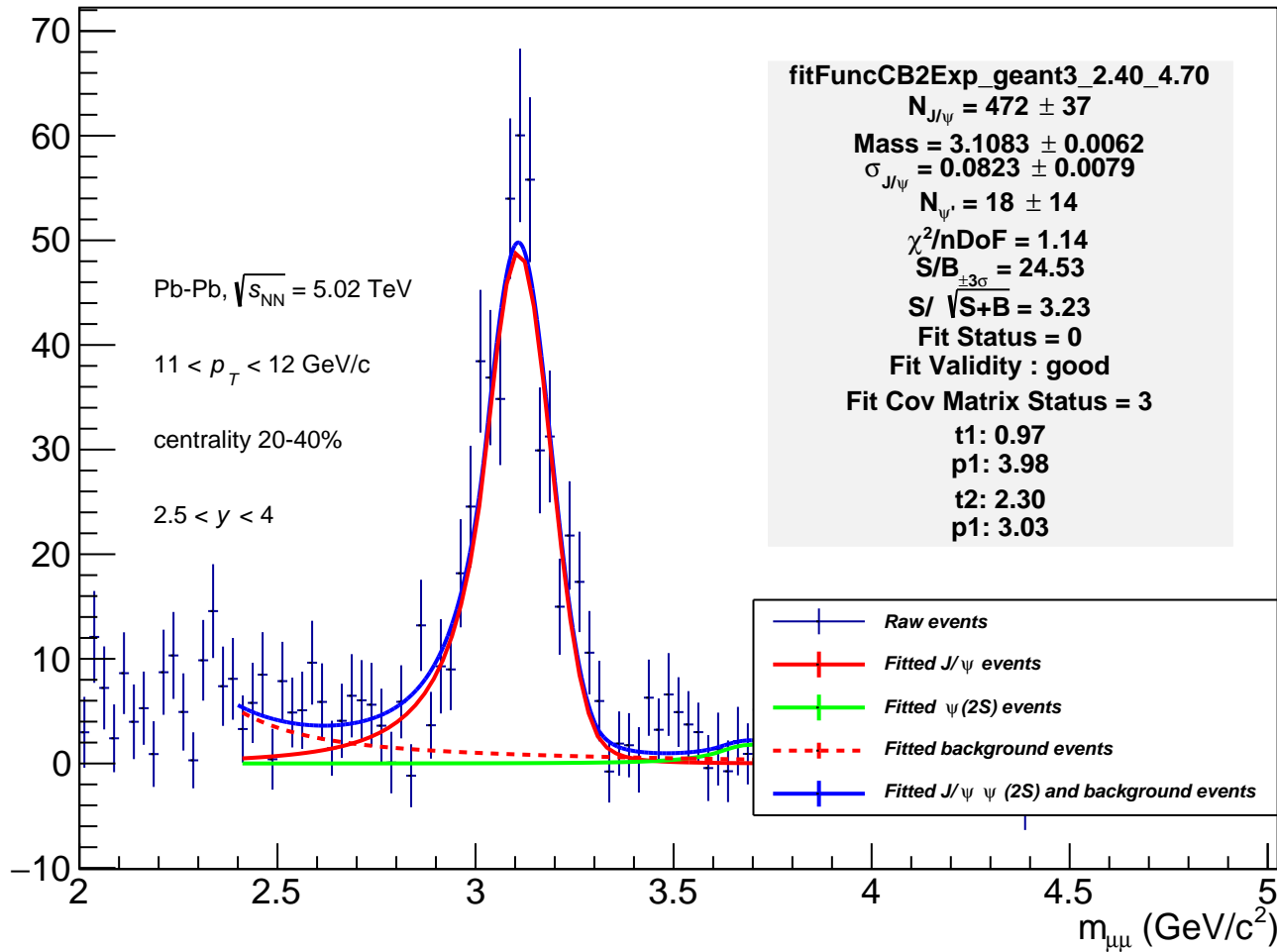
Events per 0.025 GeV



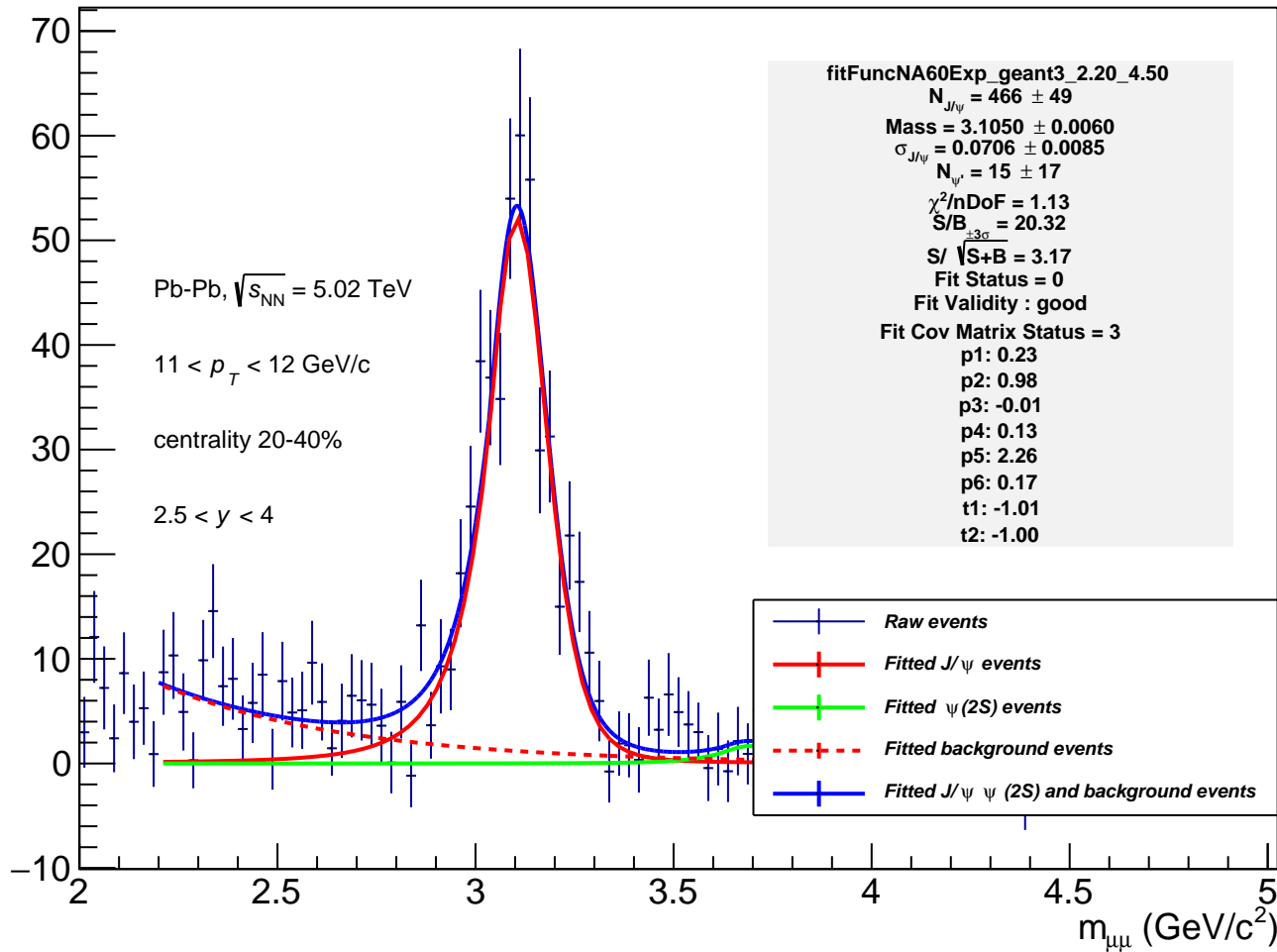
Events per 0.025 GeV



Events per 0.025 GeV



Events per 0.025 GeV



Events per 0.025 GeV

