

Events per 0.025 GeV

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

$7 < p_T < 8$ GeV/c

centrality 70-90%

$2.5 < y < 4$

fitFuncCB2VWG_pp13_2.20_4.50

$N_{J/\psi} = 150 \pm 15$

Mass = 3.0940 ± 0.0062

$\sigma_{J/\psi} = 0.0563 \pm 0.0059$

$N_{\psi'} = 15 \pm 2$

$\chi^2/\text{nDoF} = 0.86$

$S/B_{\pm 3\sigma} = 11.47$

$S/\sqrt{S+B} = 1.80$

Fit Status = 0

Fit Validity : good

Fit Cov Matrix Status = 3

t1: 0.97

p1: 6.97

t2: 1.86

p1: 14.99

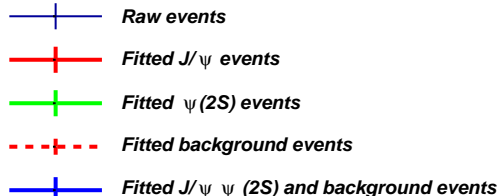
Background Normalization factor: 1.422 ± 0.263

a1: 2.458 ± 0.585

a2: 1.071 ± 1.025

a3: -2.512 ± 2.257

a4: 3.720 ± 2.935



$m_{\mu\mu}$ (GeV/c²)

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fitFuncCB2VWG_geant3_2.20_4.50

$N_{J/\psi} = 157 \pm 15$

Mass = 3.0916 ± 0.0061

$\sigma_{J/\psi} = 0.0597 \pm 0.0059$

$N_{\psi'} = 8 \pm 1$

$\chi^2/nDoF = 0.78$

$S/B_{\pm 3\sigma} = 13.22$

$S/\sqrt{S+B} = 1.83$

Fit Status = 0

Fit Validity : good

Fit Cov Matrix Status = 3

t1: 1.15

p1: 3.25

t2: 1.98

p1: 3.40

Background Normalization factor: 1.419 ± 0.442

a1: 2.109 ± 0.874

a2: 1.291 ± 1.490

a3: -1.789 ± 2.022

a4: 1.922 ± 2.173

—+— Raw events
—+— Fitted J/ψ events
—+— Fitted $\psi(2S)$ events
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$m_{\mu\mu}$ (GeV/c²)

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fitFuncCB2VWG_pp13_2.40_4.70

$N_{J/\psi} = 152 \pm 15$

Mass = 3.0934 ± 0.0063

$\sigma_{J/\psi} = 0.0581 \pm 0.0058$

$N_{\psi'} = 6 \pm 4$

$\chi^2/nDoF = 0.72$

$S/B_{\pm 3\sigma} = 12.38$

$S/\sqrt{S+B} = 1.81$

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: 1.589 ± 0.409

a1: 2.529 ± 0.227

a2: 0.302 ± 0.337

a3: 0.650 ± 1.205

a4: 0.795 ± 1.360

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fitFuncCB2VWG_geant3_2.40_4.70

$N_{J/\psi} = 153 \pm 14$

Mass = 3.0913 ± 0.0062

$\sigma_{J/\psi} = 0.0585 \pm 0.0056$

$N_{\psi'} = 4 \pm 4$

$\chi^2/\text{nDoF} = 0.73$

$S/B_{\pm 3\sigma} = 10.60$

$S/\sqrt{S+B} = 1.80$

Fit Status = 0

Fit Validity : good

Fit Cov Matrix Status = 3

t1: 1.12

p1: 3.45

t2: 1.98

p1: 3.40

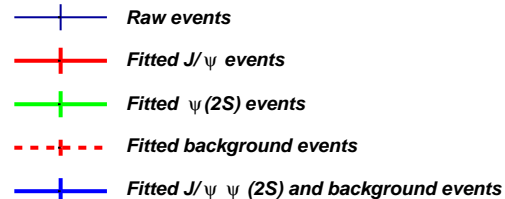
Background Normalization factor: 114.999 ± 111.525

a1: 2.984 ± 0.444

a2: 0.000 ± 0.000

a3: 0.969 ± 0.133

a4: -0.164 ± 0.082



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fitFuncCB2Pol_pp13_2.20_4.50

$N_{J/\psi} = 153 \pm 0$

Mass = 3.0928 ± 0.0062

$\sigma_{J/\psi} = 0.0584 \pm 0.0054$

$N_{\psi'} = 8 \pm 0$

$\chi^2/nDoF = 0.77$

S/B $_{\pm 3\sigma} = 12.47$

S/ $\sqrt{S+B} = 1.82$

Fit Status = 4

Fit Validity : bad

Fit Cov Matrix Status = 1

t1: 0.97

p1: 6.97

t2: 1.86

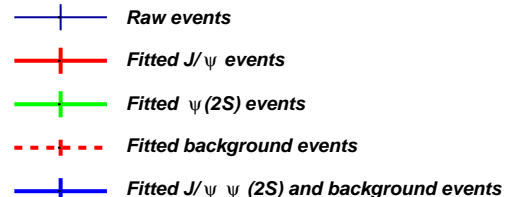
p1: 14.99

Background Normalization factor: 4.447 ± 0.637

a1: -0.867 ± 0.000 ; a2: 0.18794 ± 0.000

b1: -7.591 ± 0.000 ; b2: 10.775 ± 0.000

b3: -5.065 ± 0.000 ; b4: 0.789 ± 0.000



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$2.5 < y < 4$

fitFuncCB2Pol_geant3_2.20_4.50

$N_{J/\psi} = 156 \pm 14$

Mass = 3.0911 ± 0.0061

$\sigma_{J/\psi} = 0.0596 \pm 0.0055$

$N_{\psi'} = 5 \pm 4$

$\chi^2/nDoF = 0.78$

$S/B_{\pm 3\sigma} = 12.59$

$S/\sqrt{S+B} = 1.82$

Fit Status = 0

Fit Validity : good

Fit Cov Matrix Status = 3

t1: 1.15

p1: 3.25

t2: 1.98

p1: 3.40

Background Normalization factor: 6.622 ± 1.211

a1: -0.808 ± 0.000 ; a2: 0.16323 ± 0.000

b1: -5.170 ± 0.000 ; b2: 8.693 ± 0.000

b3: -4.481 ± 0.000 ; b4: 0.733 ± 0.000

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$m_{\mu\mu}$ (GeV/c²)

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centrality 70-90%

$2.5 < y < 4$

fitFuncCB2Pol_pp13_2.40_4.70

$N_{J/\psi} = 174 \pm 0$

Mass = 3.0872 ± 0.0290

$\sigma_{J/\psi} = 0.0664 \pm 0.0199$

$N_{\psi'} = 7 \pm 0$

$\chi^2/\text{nDoF} = 0.60$

$S/B_{\pm 3\sigma} = -60.13$

$S/\sqrt{S+B} = 2.03$

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: 16.783 ± 38.923

a1: -0.680 ± 6.481 ; a2: 0.11529 ± 6.496

b1: 21.029 ± 63.511 ; b2: -14.253 ± 64.301

b3: 2.226 ± 6.333 ; b4: 0.065 ± 6.496

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$m_{\mu\mu}$ (GeV/c²)

Events per 0.025 GeV

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

$7 < p_T < 8$ GeV/c

centrality 70-90%

$2.5 < y < 4$

fitFuncCB2Pol_geant3_2.40_4.70

$N_{J/\psi} = 156 \pm 13$

Mass = 3.0918 ± 0.0061

$\sigma_{J/\psi} = 0.0596 \pm 0.0057$

$N_{\psi'} = 6 \pm 4$

$\chi^2/nDoF = 0.73$

S/B $_{\pm 3\sigma} = 13.14$

S/ $\sqrt{S+B} = 1.83$

Fit Status = 0

Fit Validity : good

Fit Cov Matrix Status = 3

t1: 1.12

p1: 3.45

t2: 1.98

p1: 3.40

Background Normalization factor: 3.158 ± 1.738

a1: -0.550 ± 0.005 ; a2: 0.07949 ± 0.002

b1: -0.714 ± 0.001 ; b2: 1.327 ± 0.061

b3: -0.573 ± 0.001 ; b4: 0.079 ± 0.003

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$m_{\mu\mu}$ (GeV/c²)

Events per 0.025 GeV

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

$7 < p_T < 8$ GeV/c

centrality 70-90%

$2.5 < y < 4$

fitFuncNA60VWG_geant3_2.20_4.50

$N_{J/\psi} = 156 \pm 15$

Mass = 3.0935 ± 0.0063

$\sigma_{J/\psi} = 0.0575 \pm 0.0058$

$N_{\psi'} = 8 \pm 1$

$\chi^2/nDoF = 0.78$

$S/B_{\psi'} = 13.23$

$S/\sqrt{S+B} = 1.82$

Fit Status = 0

Fit Validity : good

Fit Cov Matrix Status = 3

p1: 0.23

p2: 1.19

p3: 0.05

p4: 0.18

p5: 1.52

p6: 0.17

t1: -0.96

t2: 1.76

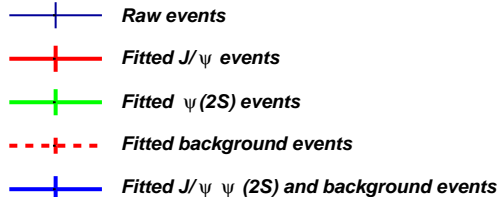
Background Normalization factor: 1.393 ± 0.387

a1: 2.210 ± 0.828

a2: 1.154 ± 1.367

a3: -1.686 ± 2.125

a4: 2.118 ± 2.313



$m_{\mu\mu}$ (GeV/c²)

Events per 0.025 GeV

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centrality 70-90%

$2.5 < y < 4$

fitFuncNA60VWG_geant3_2.40_4.70

$N_{J/\psi} = 153 \pm 14$

Mass = 3.0937 ± 0.0062

$\sigma_{J/\psi} = 0.0561 \pm 0.0054$

$N_{\psi'} = 4 \pm 4$

$\chi^2/\text{ndof} = 0.72$

S/B = 10.96

S/ $\sqrt{S+B}$ = 1.79

Fit Status = 0

Fit Validity : good

Fit Cov Matrix Status = 3

p1: 0.21

p2: 1.47

p3: 0.13

p4: 0.18

p5: 1.55

p6: 0.17

t1: -0.61

t2: 1.71

Background Normalization factor: 229.999 ± 186.548

a1: 2.975 ± 0.073

a2: 0.000 ± 0.000

a3: 0.903 ± 0.025

a4: -0.136 ± 0.047

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$m_{\mu\mu}$ (GeV/c²)

Events per 0.025 GeV

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

$7 < p_T < 8$ GeV/c

centrality 70-90%

$2.5 < y < 4$

fitFuncNA60Pol2_geant3_2.20_4.50

$N_{J/\psi} = 162 \pm 0$

Mass = 3.0915 ± 0.0042

$\sigma_{J/\psi} = 0.0620 \pm 0.0028$

$N_{\psi'} = 5 \pm 0$

$\chi^2/\text{nDoF} = 2.78$

S/B = 15.48

S/ $\sqrt{S+B} = 1.87$

Fit Status = 4

Fit Validity : bad

Fit Cov Matrix Status = 2

p1: 0.23

p2: 1.19

p3: 0.05

p4: 0.18

p5: 1.52

p6: 0.17

t1: -0.96

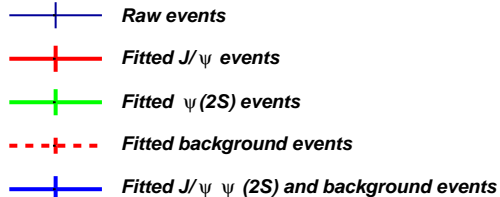
t2: 1.76

Background Normalization factor: 6.263 ± 0.699

a1: -0.588 ± 0.000 ; a2: 0.08091 ± 0.000

b1: 0.556 ± 0.000 ; b2: 2.793 ± 0.000

b3: -1.809 ± 0.000 ; b4: 0.259 ± 0.000



$m_{\mu\mu}$ (GeV/c²)

Events per 0.025 GeV

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$7 < p_T < 8$ GeV/c

centrality 70-90%

$2.5 < y < 4$

fitFuncNA60Pol2_geant3_2.40_4.70

$N_{J/\psi} = 140 \pm 0$

Mass = 3.0950 ± 0.0016

$\sigma_{J/\psi} = 0.0578 \pm 0.0010$

$N_{\psi'} = 16 \pm 0$

$\chi^2/nDoF = 0.84$

S/B = 13.89

S/ $\sqrt{S+B} = 1.73$

Fit Status = 4

Fit Validity : bad

Fit Cov Matrix Status = 2

p1: 0.21

p2: 1.47

p3: 0.13

p4: 0.18

p5: 1.55

p6: 0.17

t1: -0.61

t2: 1.71

Background Normalization factor: 15.917 ± 0.648

a1: -0.620 ± 0.001 ; a2: 0.09309 ± 0.000

b1: -12.812 ± 0.000 ; b2: 19.192 ± 0.000

b3: -8.173 ± 0.000 ; b4: 1.048 ± 0.000

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$m_{\mu\mu}$ (GeV/c²)

Events per 0.025 GeV

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

$7 < p_T < 8$ GeV/c

centrality 70-90%

$2.5 < y < 4$

fitFuncCB2Exp_pp13_2.20_4.50

$N_{J/\psi} = 78 \pm 9$

Mass = 3.1353 ± 0.0011

$\sigma_{J/\psi} = 0.0400 \pm 0.0000$

$N_{\psi'} = 11 \pm 0$

$\chi^2/nDoF = 8.40$

$S/B_{\pm 3\sigma} = -32.31$

$S/\sqrt{S+B} = 1.37$

Fit Status = 0

Fit Validity : good

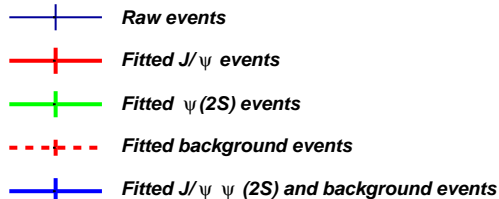
Fit Cov Matrix Status = 3

t1: 0.97

p1: 6.97

t2: 1.86

p1: 14.99



2

2.5

3

3.5

4

4.5

5

$m_{\mu\mu}$ (GeV/c²)

