

Events per 0.025 GeV

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

$15 < p_T < 20$  GeV/c

centrality 30-40%

$2.5 < y < 4$

fitFuncCB2VWG\_pp13\_2.20\_4.50

$N_{J/\psi} = 106 \pm 15$

Mass =  $3.0969 \pm 0.0119$

$\sigma_{J/\psi} = 0.0823 \pm 0.0134$

$N_{\psi'} = 10 \pm 7$

$\chi^2/nDoF = 0.81$

$S/B = 4.59$

$S/\sqrt{S+B} = 1.43$

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:  $74.719 \pm 43.199$

a1:  $2.003 \pm 0.282$

a2:  $0.021 \pm 0.038$

a3:  $0.634 \pm 0.220$

a4:  $0.031 \pm 0.089$

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

$m_{\mu\mu}$  (GeV/c<sup>2</sup>)

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fitFuncCB2VWG\_geant3\_2.20\_4.50

$N_{J/\psi} = 108 \pm 29$

Mass =  $3.0922 \pm 0.0114$

$\sigma_{J/\psi} = 0.0874 \pm 0.0132$

$N_{\psi'} = 9 \pm 6$

$\chi^2/nDoF = 0.81$

$S/B_{\pm 3\sigma} = 4.36$

$S/\sqrt{S+B} = 1.43$

Fit Status = 0

Fit Validity : good

Fit Cov Matrix Status = 3

t1: 1.40

p1: 3.08

t2: 2.08

p1: 1.52

Background Normalization factor:  $61.973 \pm 8.846$

a1:  $1.995 \pm 0.298$

a2:  $0.023 \pm 0.040$

a3:  $0.644 \pm 0.232$

a4:  $0.029 \pm 0.091$

—+— Raw events  
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$m_{\mu\mu}$  (GeV/c<sup>2</sup>)

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fitFuncCB2VWG\_pp13\_2.40\_4.70

$N_{J/\psi} = 100 \pm 14$

Mass =  $3.0987 \pm 0.0116$

$\sigma_{J/\psi} = 0.0775 \pm 0.0118$

$N_{\psi'} = 9 \pm 6$

$\chi^2/nDoF = 0.72$

$S/B_{\pm 3\sigma} = 3.78$

$S/\sqrt{S+B} = 1.36$

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:  $3.758 \pm 4.220$

a1:  $5.328 \pm 1.487$

a2:  $0.269 \pm 0.614$

a3:  $-0.963 \pm 3.049$

a4:  $5.000 \pm 6.856$

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

$m_{\mu\mu}$  (GeV/c<sup>2</sup>)

Events per 0.025 GeV

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$2.5 < y < 4$

fitFuncCB2VWG\_geant3\_2.40\_4.70

$N_{J/\psi} = 109 \pm 16$

Mass =  $3.0914 \pm 0.0116$

$\sigma_{J/\psi} = 0.0886 \pm 0.0134$

$N_{\psi'} = 9 \pm 6$

$\chi^2/nDoF = 0.69$

$S/B_{\pm 3\sigma} = 4.54$

$S/\sqrt{S+B} = 1.45$

Fit Status = 0

Fit Validity : good

Fit Cov Matrix Status = 3

t1: 1.39

p1: 3.13

t2: 2.10

p1: 1.47

Background Normalization factor:  $2.647 \pm 1.213$

a1:  $2.442 \pm 0.028$

a2:  $0.037 \pm 0.040$

a3:  $1.587 \pm 0.638$

a4:  $0.250 \pm 0.777$

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

$m_{\mu\mu}$  (GeV/c<sup>2</sup>)

















