

Events per 0.025 GeV

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

$12 < p_T < 20$  GeV/c

centrality 10-20%

$3.5 < y < 4$

fitFuncCB2VWG\_pp13\_2.20\_4.50

$N_{J/\psi} = 59 \pm 16$

Mass =  $3.0782 \pm 0.0174$

$\sigma_{J/\psi} = 0.0734 \pm 0.0259$

$N_{\psi'} = 5 \pm 9$

$\chi^2/nDoF = 1.36$

$S/B_{\pm 3\sigma} = 0.95$

$S/\sqrt{S+B} = 0.82$

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:  $69.999 \pm 59.251$

a1:  $0.027 \pm 0.019$

a2:  $-0.463 \pm 0.413$

a3:  $0.019 \pm 0.011$

a4:  $-0.000 \pm 0.000$

—+— 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

$N_{J/\psi} = 64 \pm 32$

Mass =  $3.0700 \pm 0.0244$

$\sigma_{J/\psi} = 0.0724 \pm 0.0218$

$N_{\psi} = 13 \pm 13$

$\chi^2/nDoF = 1.23$

$S/B_{\pm 3\sigma} = 1.05$

$S/\sqrt{S+B} = 0.86$

Fit Status = 0

Fit Validity : good

Fit Cov Matrix Status = 3

t1: 0.99

p1: 3.34

t2: 2.25

p1: 2.90

Background Normalization factor:  $4.298 \pm 0.767$

a1:  $3.305 \pm 0.108$

a2:  $0.223 \pm 0.171$

a3:  $-0.085 \pm 0.349$

a4:  $9.910 \pm 19.246$

—+— 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\_pp13\_2.40\_4.70

$N_{J/\psi} = 62 \pm 15$

Mass =  $3.0791 \pm 0.0178$

$\sigma_{J/\psi} = 0.0772 \pm 0.0215$

$N_{\psi'} = 5 \pm 9$

$\chi^2/nDoF = 1.41$

$S/B_{\pm 3\sigma} = 1.00$

$S/\sqrt{S+B} = 0.85$

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:  $3.153 \pm 0.372$

a1:  $3.267 \pm 0.419$

a2:  $2.514 \pm 1.079$

a3:  $1.011 \pm 4.633$

a4:  $-10.000 \pm 10.665$

—+— 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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$3.5 < y < 4$

fitFuncCB2VWG\_geant3\_2.40\_4.70

$N_{J/\psi} = 68 \pm 17$

Mass =  $3.0801 \pm 0.0199$

$\sigma_{J/\psi} = 0.0825 \pm 0.0447$

$N_{\psi'} = 9 \pm 10$

$\chi^2/nDoF = 1.43$

$S/B_{\pm 3\sigma} = 1.06$

$S/\sqrt{S+B} = 0.89$

Fit Status = 0

Fit Validity : good

Fit Cov Matrix Status = 3

t1: 0.98

p1: 3.47

t2: 2.24

p1: 2.91

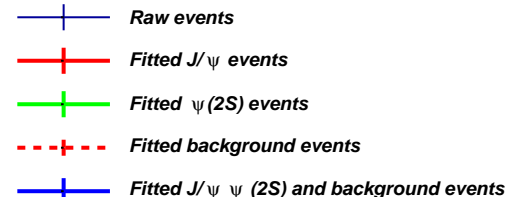
Background Normalization factor:  $2.949 \pm 0.310$

a1:  $1.832 \pm 1.001$

a2:  $10.000 \pm 18.524$

a3:  $9.905 \pm 14.349$

a4:  $-9.651 \pm 19.277$



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

















