

Events per 0.025 GeV

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

$10 < p_T < 11$ GeV/c

centrality 30-40%

$2.5 < y < 4$

fitFuncCB2VWG_pp13_2.20_4.50

$N_{J/\psi} = 285 \pm 29$

Mass = 3.0987 ± 0.0072

$\sigma_{J/\psi} = 0.0752 \pm 0.0087$

$N_{\psi'} = 36 \pm 4$

$\chi^2/nDoF = 2.08$

$S/B = 2.95$

$S/\sqrt{S+B} = 2.23$

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: 103.306 ± 151.719

a1: 2.225 ± 0.004

a2: 0.001 ± 0.005

a3: 0.925 ± 1.243

a4: -0.057 ± 0.171

- +— 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

$N_{J/\psi} = 292 \pm 26$

Mass = 3.0976 ± 0.0070

$\sigma_{J/\psi} = 0.0783 \pm 0.0081$

$N_{\psi'} = 19 \pm 2$

$\chi^2/nDoF = 1.95$

$S/B = 2.89$

$S/\sqrt{S+B} = 2.24$

Fit Status = 0

Fit Validity : good

Fit Cov Matrix Status = 3

t1: 1.11

p1: 4.30

t2: 1.82

p1: 2.98

Background Normalization factor: 408.212 ± 348.482

a1: 2.089 ± 0.284

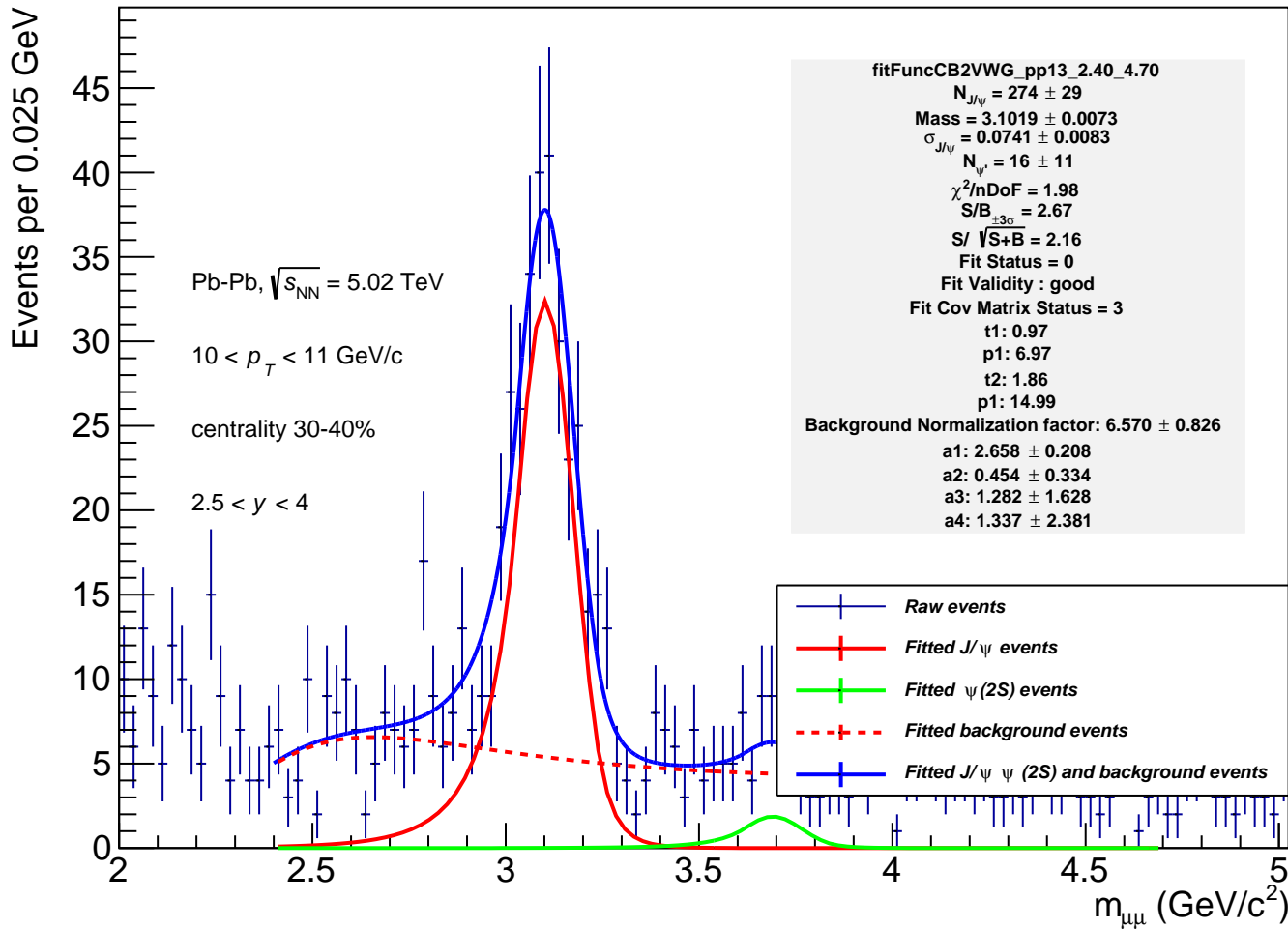
a2: 0.003 ± 0.007

a3: 0.707 ± 0.126

a4: -0.018 ± 0.035

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fitFuncCB2VWG_geant3_2.40_4.70

$N_{J/\psi} = 283 \pm 33$

Mass = 3.1003 ± 0.0072

$\sigma_{J/\psi} = 0.0757 \pm 0.0091$

$N_{\psi} = 18 \pm 12$

$\chi^2/nDoF = 1.98$

$S/B_{\pm 3\sigma} = 2.77$

$S/\sqrt{S+B} = 2.19$

Fit Status = 0

Fit Validity : good

Fit Cov Matrix Status = 3

t1: 1.08

p1: 4.75

t2: 1.81

p1: 3.00

Background Normalization factor: 6.559 ± 0.855

a1: 2.653 ± 0.180

a2: 0.414 ± 0.284

a3: 1.063 ± 1.338

a4: 1.770 ± 2.172

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fitFuncCB2Pol_pp13_2.20_4.50

$N_{J/\psi} = 285 \pm 24$

Mass = 3.0995 ± 0.0072

$\sigma_{J/\psi} = 0.0769 \pm 0.0077$

$N_{\psi'} = 18 \pm 2$

$\chi^2/\text{nDoF} = 2.00$

$S/B_{\pm 3\sigma} = 2.84$

$S/\sqrt{S+B} = 2.22$

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: 29.419 ± 10.391

a1: -3.785 ± 0.301 ; a2: 1.58697 ± 0.051

b1: -3.398 ± 15.062 ; b2: -4.567 ± 2.937

b3: -0.708 ± 2.393 ; b4: 1.694 ± 0.089

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fitFuncCB2Pol_geant3_2.20_4.50

$N_{J/\psi} = 288 \pm 25$

Mass = 3.0981 ± 0.0071

$\sigma_{J/\psi} = 0.0779 \pm 0.0079$

$N_{\psi} = 12 \pm 10$

$\chi^2/\text{nDoF} = 1.95$

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

$S/\sqrt{S+B} = 2.22$

Fit Status = 0

Fit Validity : good

Fit Cov Matrix Status = 3

t1: 1.11

p1: 4.30

t2: 1.82

p1: 2.98

Background Normalization factor: 133.638 ± 157.581

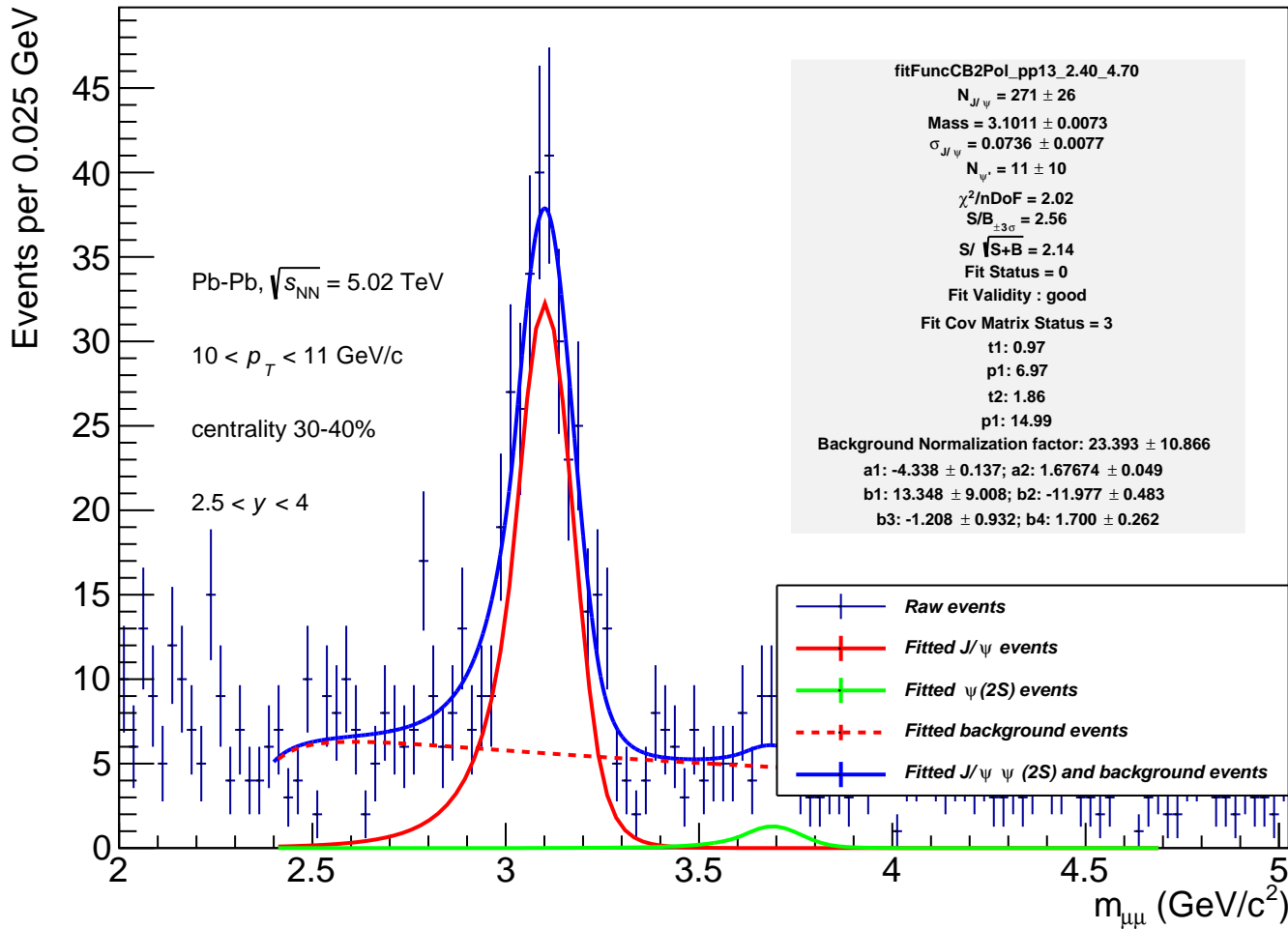
a1: -2.520 ± 0.985 ; a2: 0.97865 ± 0.479

b1: -14.962 ± 58.755 ; b2: -2.164 ± 26.821

b3: -6.648 ± 5.452 ; b4: 5.146 ± 5.453

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fitFuncCB2Pol_geant3_2.40_4.70

$N_{J/\psi} = 276 \pm 26$

Mass = 3.0993 ± 0.0071

$\sigma_{J/\psi} = 0.0744 \pm 0.0080$

$N_{\psi} = 11 \pm 10$

$\chi^2/nDoF = 2.02$

$S/B_{\pm 3\sigma} = 2.58$

$S/\sqrt{S+B} = 2.15$

Fit Status = 0

Fit Validity : good

Fit Cov Matrix Status = 3

t1: 1.08

p1: 4.75

t2: 1.81

p1: 3.00

Background Normalization factor: 2.078 ± 0.910

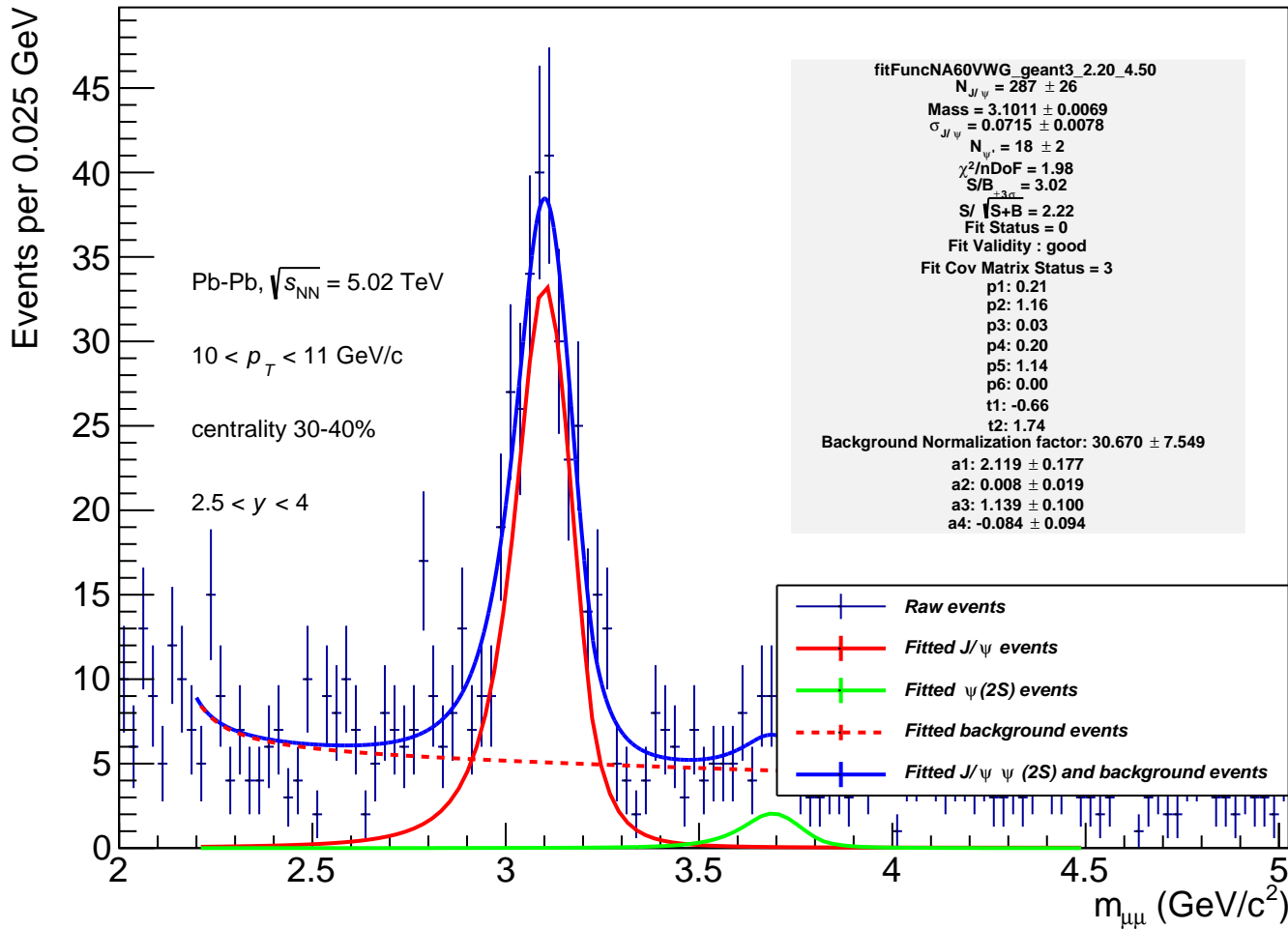
a1: -4.988 ± 0.172 ; a2: 1.95041 ± 0.058

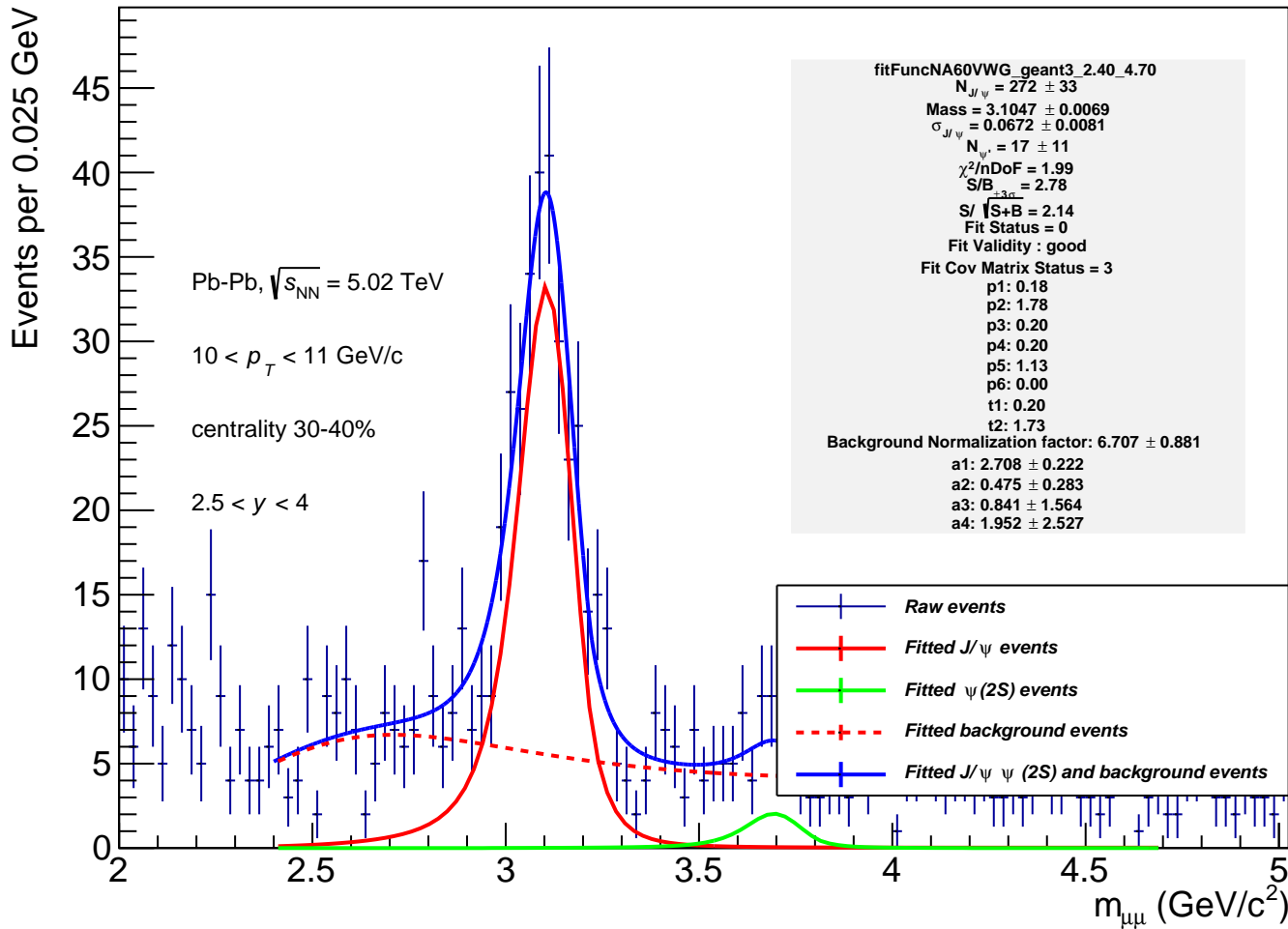
b1: 1.332 ± 0.901 ; b2: -1.248 ± 0.046

b3: -0.115 ± 0.092 ; b4: 0.176 ± 0.026

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$2.5 < y < 4$

fitFuncNA60Pol2_geant3_2.20_4.50

$N_{J/\psi} = 285 \pm 23$

Mass = 3.1016 ± 0.0069

$\sigma_{J/\psi} = 0.0714 \pm 0.0072$

$N_{\psi'} = 12 \pm 10$

$\chi^2/nDoF = 1.98$

S/B = 2.94

S/ $\sqrt{S+B} = 2.21$

Fit Status = 0

Fit Validity : good

Fit Cov Matrix Status = 3

p1: 0.21

p2: 1.16

p3: 0.03

p4: 0.20

p5: 1.14

p6: 0.00

t1: -0.66

t2: 1.74

Background Normalization factor: 64.098 ± 18.866

a1: -2.675 ± 0.338 ; a2: 1.04577 ± 0.158

b1: -0.608 ± 4.625 ; b2: -7.340 ± 2.299

b3: -1.791 ± 1.052 ; b4: 2.508 ± 0.486

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fitFuncNA60Pol2_geant3_2.40_4.70

$N_{J/\psi} = 126 \pm 27$

Mass = 3.0802 ± 0.0085

$\sigma_{J/\psi} = 0.0407 \pm 0.0362$

$N_{\psi'} = 21 \pm 4$

$\chi^2/nDoF = 1.88$

S/B = 0.74

S/ $\sqrt{S+B}$ = 1.10

Fit Status = 0

Fit Validity : good

Fit Cov Matrix Status = 3

p1: 0.18

p2: 1.78

p3: 0.20

p4: 0.20

p5: 1.13

p6: 0.00

t1: 0.20

t2: 1.73

Background Normalization factor: 306.333 ± 19.490

a1: -0.616 ± 0.002 ; a2: 0.09501 ± 0.001

b1: 47.846 ± 0.089 ; b2: -26.687 ± 0.024

b3: 2.594 ± 0.009 ; b4: 0.337 ± 0.003

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fitFuncCB2Exp_pp13_2.20_4.50

$N_{J/\psi} = 284 \pm 24$

Mass = 3.0874 ± 0.0067

$\sigma_{J/\psi} = 0.0695 \pm 0.0074$

$N_{\psi'} = 30 \pm 3$

$\chi^2/nDoF = 2.09$

$S/B_{\pm 3\sigma} = 80.69$

$S/\sqrt{S+B} = 2.56$

Fit Status = 0

Fit Validity : good

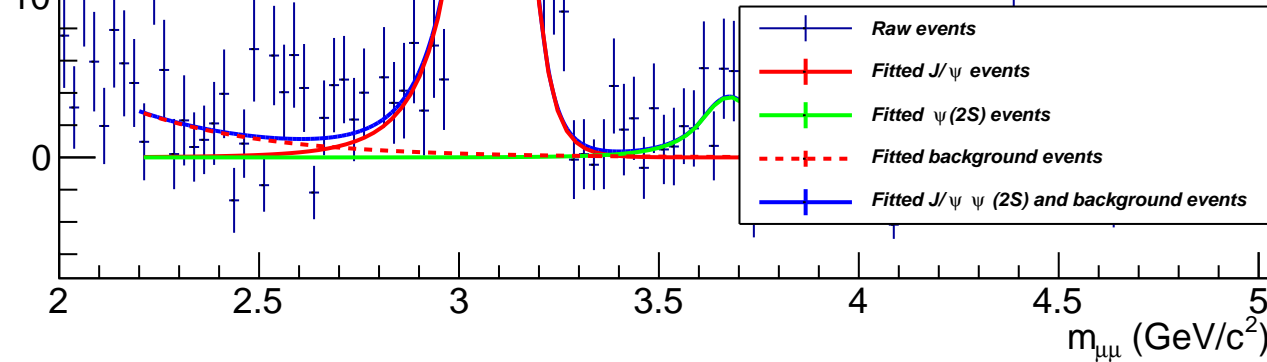
Fit Cov Matrix Status = 3

t1: 0.97

p1: 6.97

t2: 1.86

p1: 14.99



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fitFuncCB2Exp_geant3_2.20_4.50

$N_{J/\psi} = 307 \pm 21$

Mass = 3.1018 ± 0.0068

$\sigma_{J/\psi} = 0.0785 \pm 0.0064$

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

$\chi^2/nDoF = 1.67$

$S/B_{\pm 3\sigma} = 91.15$

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

Fit Status = 0

Fit Validity : good

Fit Cov Matrix Status = 3

t1: 0.97

p1: 3.98

t2: 2.30

p1: 3.03

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

2

2.5

3

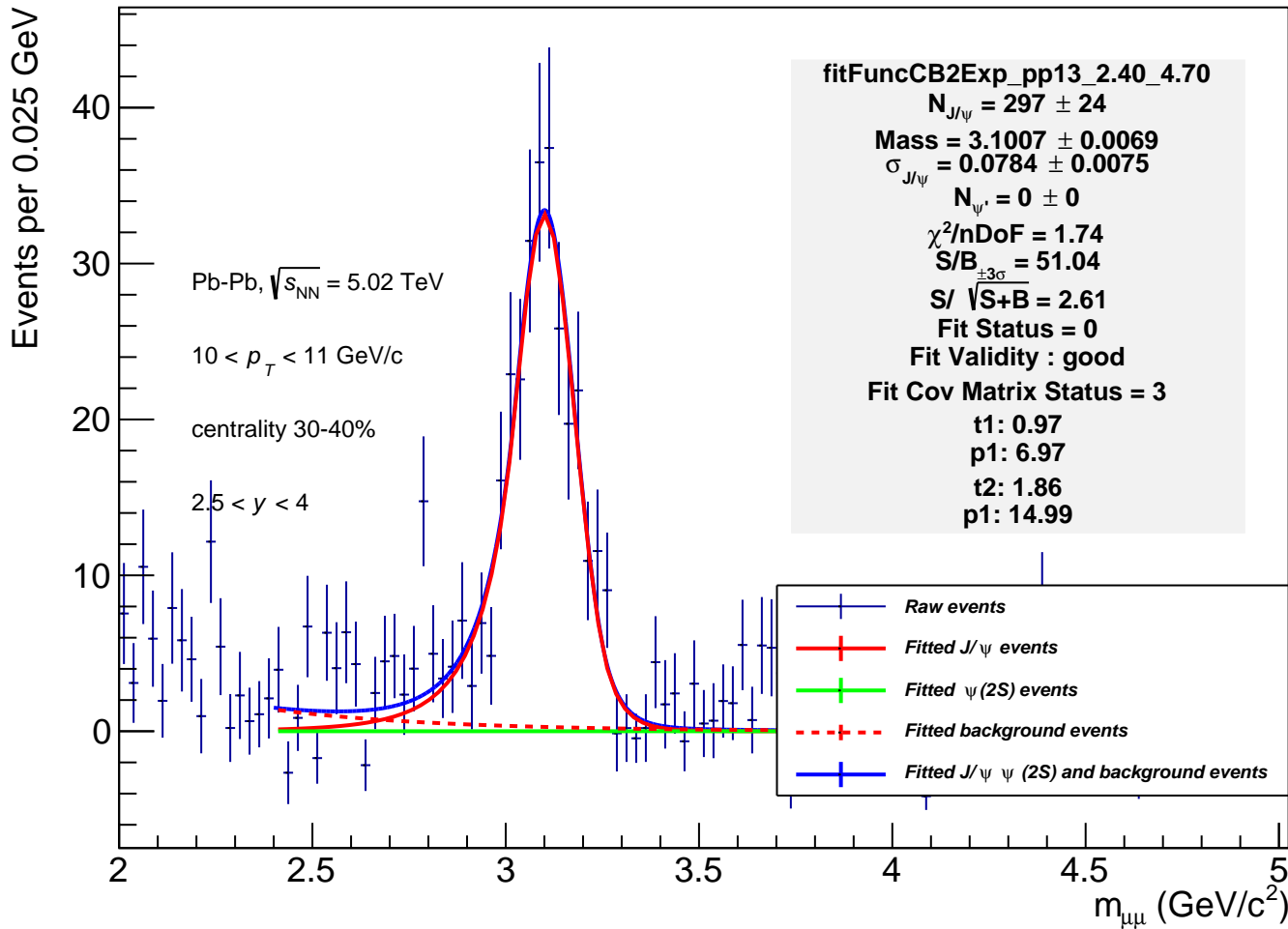
3.5

4

4.5

5

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fitFuncCB2Exp_geant3_2.40_4.70

$N_{J/\psi} = 306 \pm 23$

Mass = 3.1017 ± 0.0069

$\sigma_{J/\psi} = 0.0786 \pm 0.0068$

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

$\chi^2/nDoF = 1.72$

$S/B_{\pm 3\sigma} = 80.82$

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

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*
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2

2.5

3

3.5

4

4.5

5

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fitFuncNA60Exp_geant3_2.20_4.50

$N_{J/\psi} = 299 \pm 23$

Mass = 3.1021 ± 0.0068

$\sigma_{J/\psi} = 0.0731 \pm 0.0070$

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

$\chi^2/nDoF = 1.70$

S/B = 61.46

S/ $\sqrt{S+B}$ = 2.60

Fit Status = 0

Fit Validity : good

Fit Cov Matrix Status = 3

p1: 0.21

p2: 1.16

p3: 0.03






p4: 0.20

p5: 1.14

p6: 0.00

t1: -0.66

t2: 1.74

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fitFuncNA60Exp_geant3_2.40_4.70

$N_{J/\psi} = 298 \pm 25$

Mass = 3.1020 ± 0.0067

$\sigma_{J/\psi} = 0.0730 \pm 0.0074$

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

$\chi^2/\text{nDoF} = 1.76$

S/B = 56.01

S/ $\sqrt{S+B} = 2.59$

Fit Status = 0

Fit Validity : good

Fit Cov Matrix Status = 3

p1: 0.21

p2: 1.16

p3: 0.03






p4: 0.20

p5: 1.14

p6: 0.00

t1: -0.66

t2: 1.74

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