

Dimuon invariant mass distribution

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JSON file

Cert_271036-274240_13TeV_PromptReco_Collisions16_JSON_MuonPhys_v2.txt

Offline Selection(muon)

Singel muon $P_t > 2$

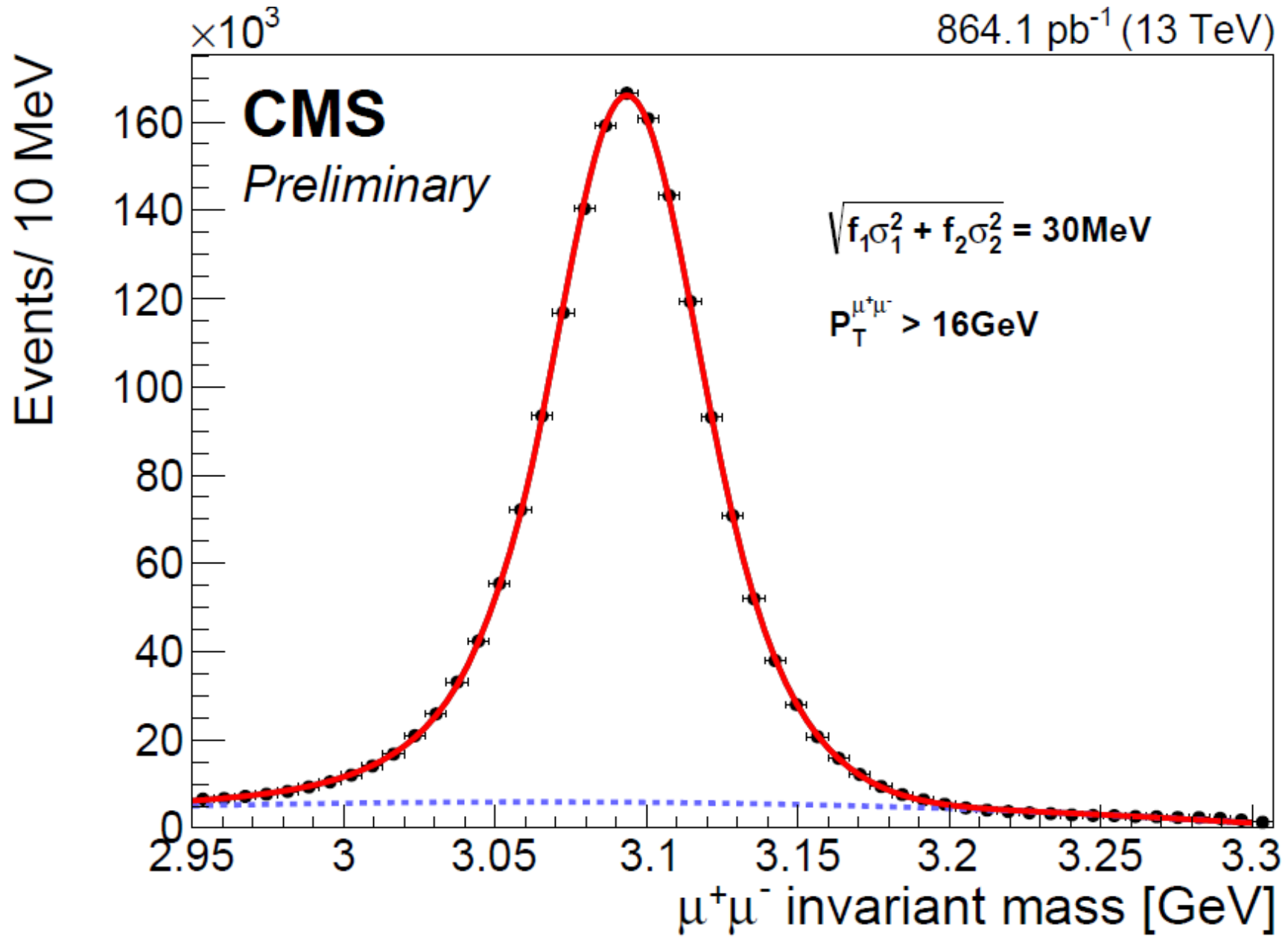
Muon ID : soft

TrackType: INNER

Dimuon invariant mass of J/ψ

- Dataset: Charmonium – Prompt_v2
- Selection: 2 muons passing Soft ID
- Trigger Conditions: opposite-sign muon pair with invariant mass in range 2.95—3.3 GeV, dimuon $p_T > 16 \text{ GeV}$
- Fit Method
 - Mass PDF: double Crystal Ball with common mean, n and alpha parameters
 - Background PDF: Chebychev polynomial series of order 2
- Quoted resolution: weighted quadrature sum of the two CB sigmas

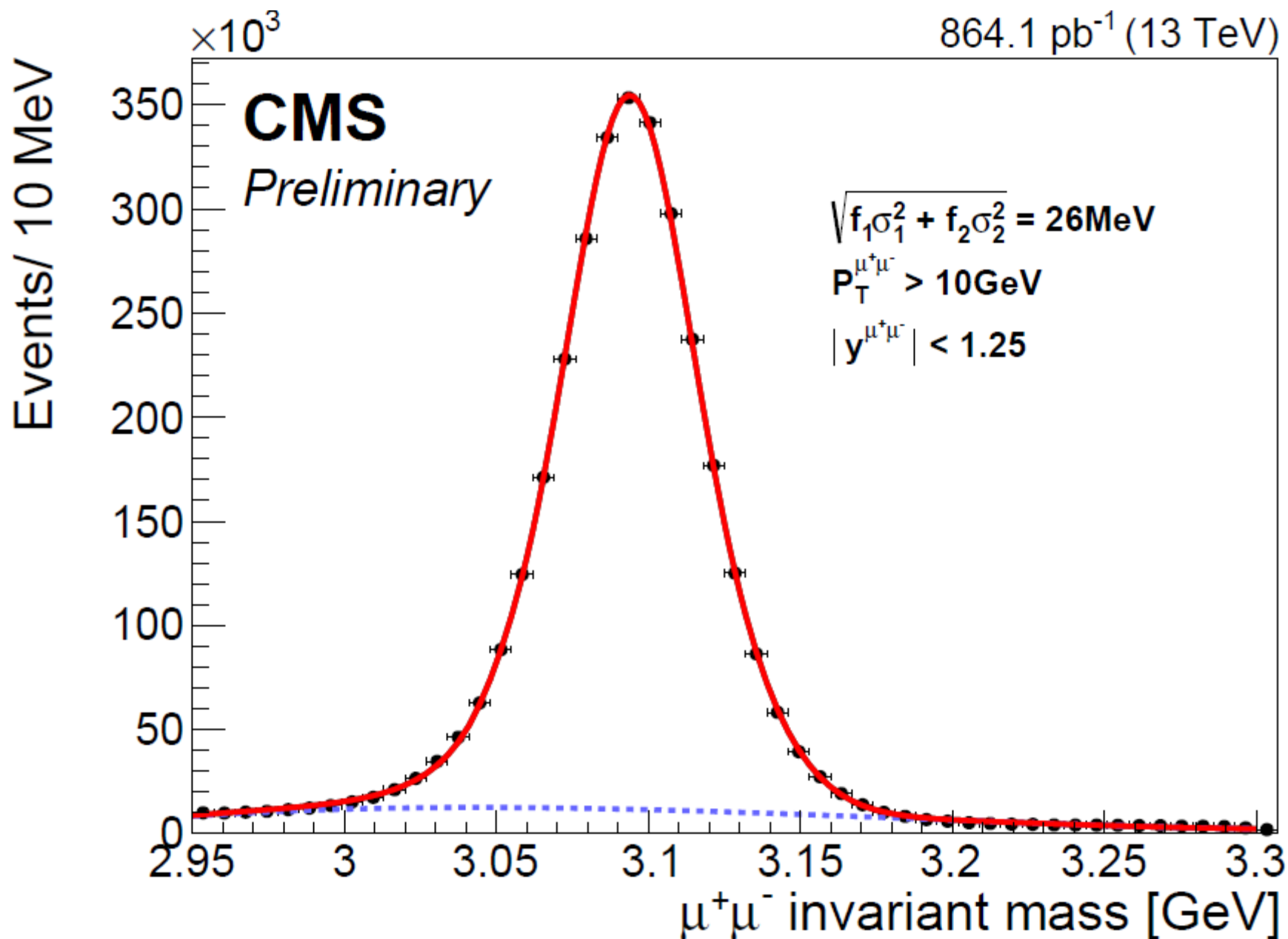
Dimuon invariant mass of J/ψ



Dimuon invariant mass of J/ψ

- Dataset: Charmonium – Prompt_v2
- Selection: 2 muons passing Soft ID
- Trigger Conditions: opposite-sign muon pair with invariant mass in range 2.95–3.3 GeV, dimuon $p_T > 10 \text{ GeV}$, $|y^{\mu\mu}| < 1.25$
- Fit Method
 - Mass PDF: double Crystal Ball with common mean, n and alpha parameters
 - Background PDF: Chebychev polynomial series of order 2
- Quoted resolution: weighted quadrature sum of the two CB sigmas

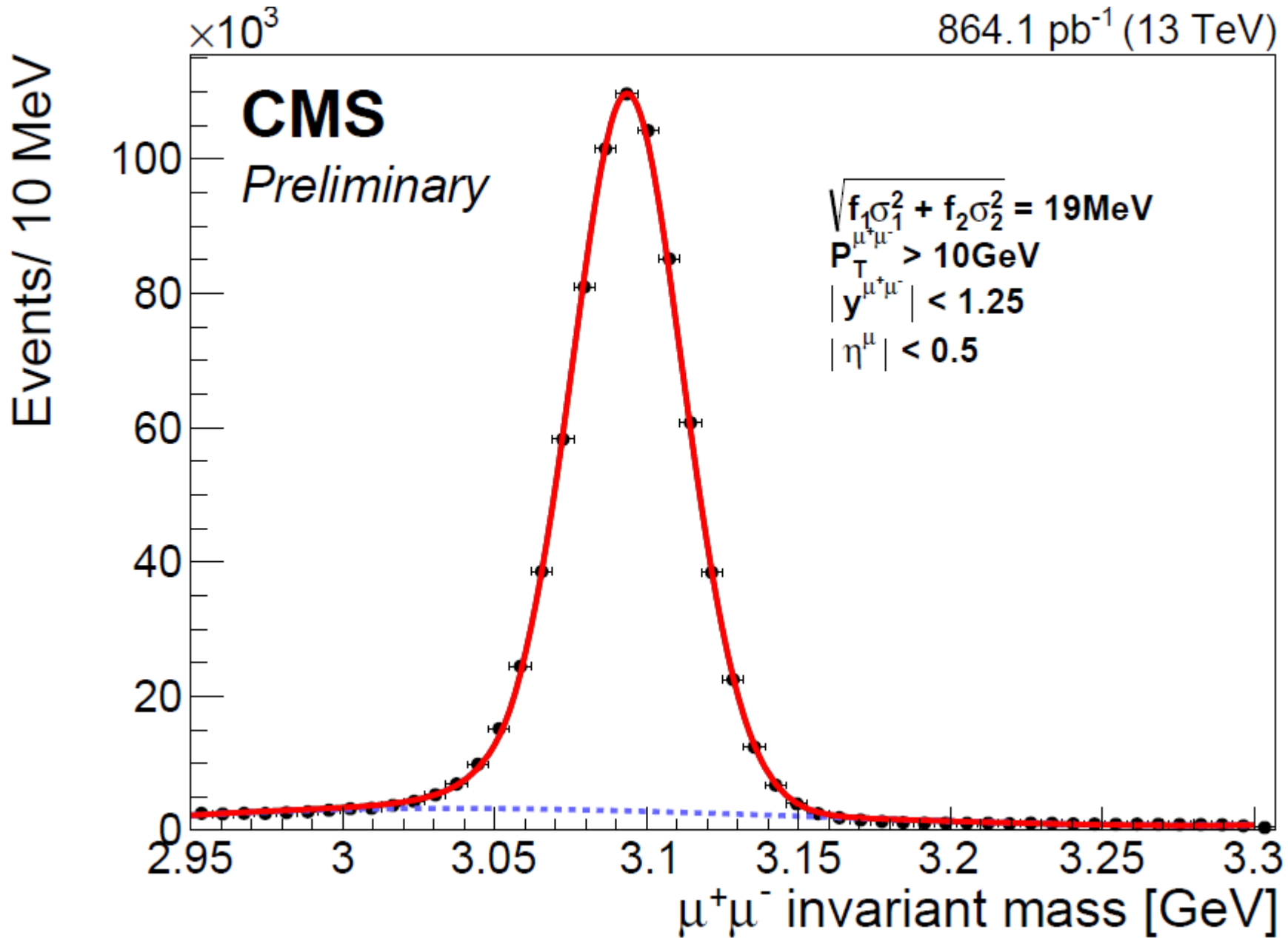
Dimuon invariant mass of J/ψ



Dimuon invariant mass of J/ψ

- Dataset: Charmonium – Prompt_v2
- Selection: 2 muons passing Soft ID, $|\eta^\mu| < 0.5$
- Trigger Conditions: opposite-sign muon pair with invariant mass in range 2.95–3.3 GeV, dimuon $p_T > 10 \text{ GeV}$, $|y^{\mu\mu}| < 1.25$
- Fit Method
 - Mass PDF: double Crystal Ball with common mean, n and alpha parameters
 - Background PDF: Chebychev polynomial series of order 2
- Quoted resolution: weighted quadrature sum of the two CB sigmas

Dimuon invariant mass of J/ψ

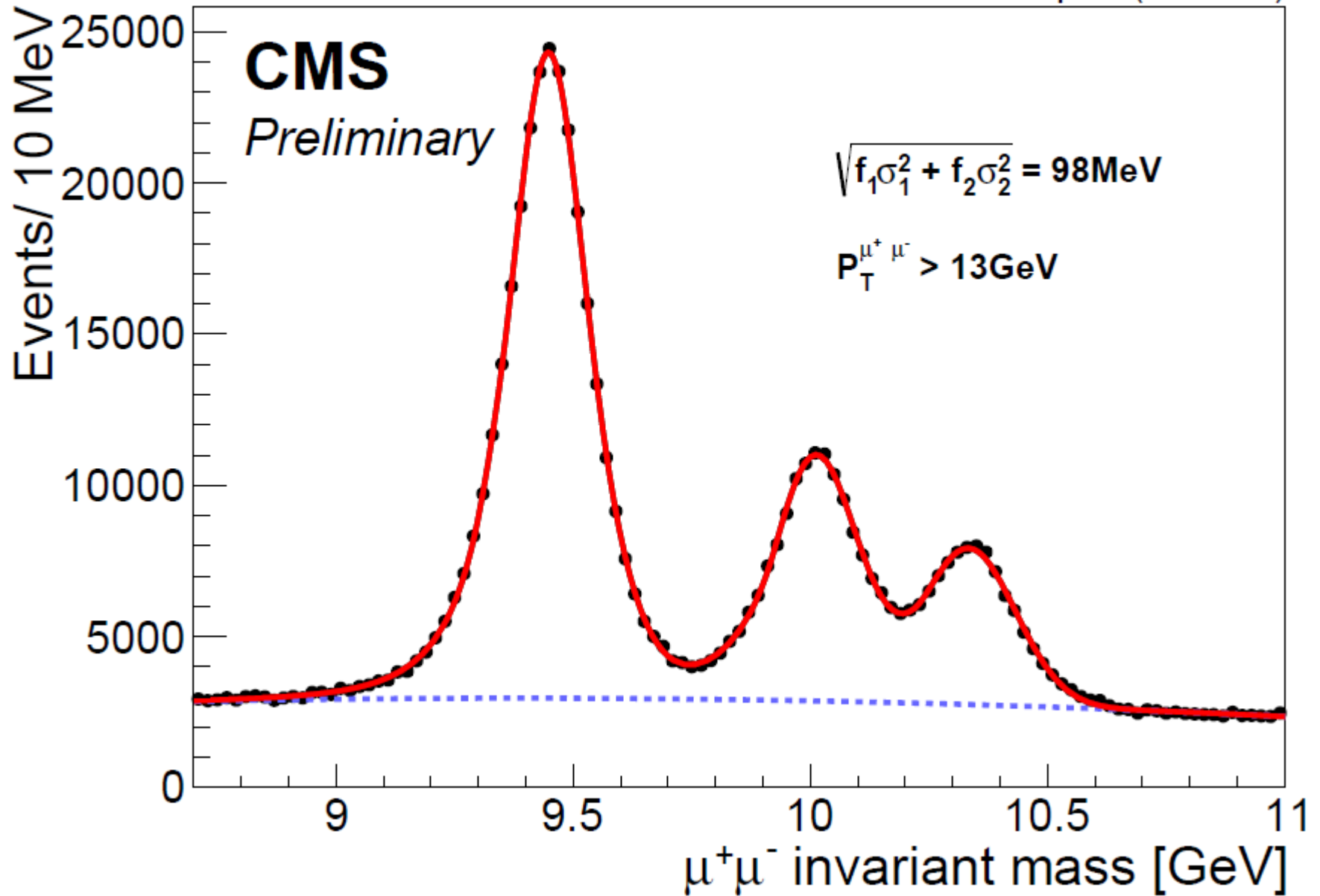


Dimuon invariant mass of $Y(nS)$

- Dataset: MuOnia – Prompt_v2
- Selection: 2 muons passing Soft ID
- Trigger Conditions: opposite-sign muon pair with invariant mass in range 8.5–11. GeV, dimuon $p_T > 13 \text{ GeV}$
- Fit Method
 - Y(1S) Mass PDF: double Crystal Ball with common mean, n and alpha parameters
 - Y(2S) Mass PDF: Crystal Ball
 - Y(3S) Mass PDF: Crystal Ball
 - Background PDF: Chebychev polynomial series of order 1
- Quoted resolution: weighted quadrature sum of the two CB sigmas

Dimuon invariant mass of $Y(nS)$

864.1 pb⁻¹ (13 TeV)

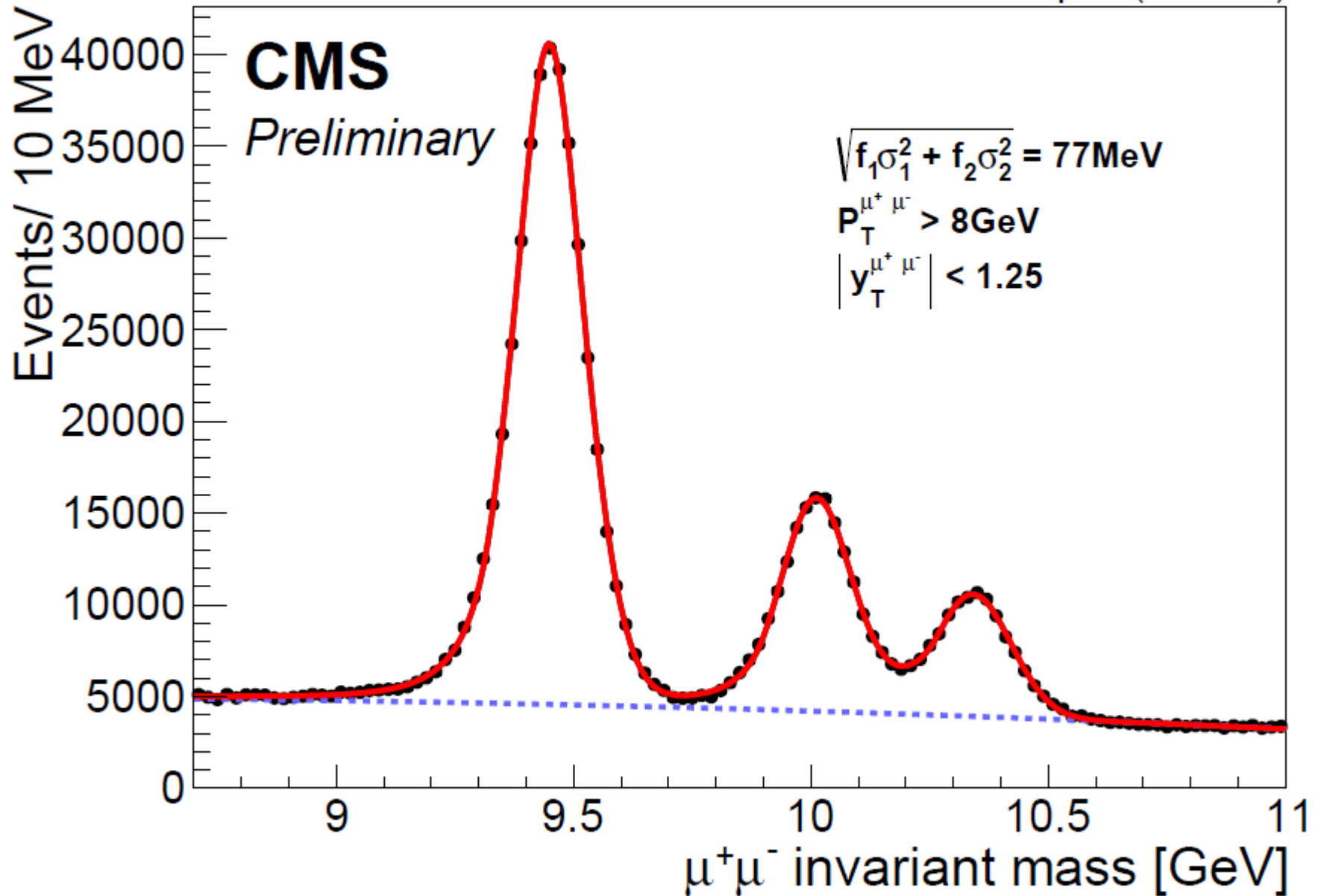


Dimuon invariant mass of $Y(nS)$

- Dataset: MuOnia – Prompt_v2
- Selection: 2 muons passing Soft ID
- Trigger Conditions: opposite-sign muon pair with invariant mass in range 8.5–11. GeV, dimuon $p_T > 8 \text{ GeV}$, $|y^{\mu\mu}| < 1.25$
- Fit Method
 - Y(1S) Mass PDF: double Crystal Ball with common mean, n and alpha parameters
 - Y(2S) Mass PDF: Crystal Ball
 - Y(3S) Mass PDF: Crystal Ball
 - Background PDF: Chebychev polynomial series of order 1
- Quoted resolution: weighted quadrature sum of the two CB sigmas

Dimuon invariant mass of $Y(nS)$

864.1 pb⁻¹ (13 TeV)

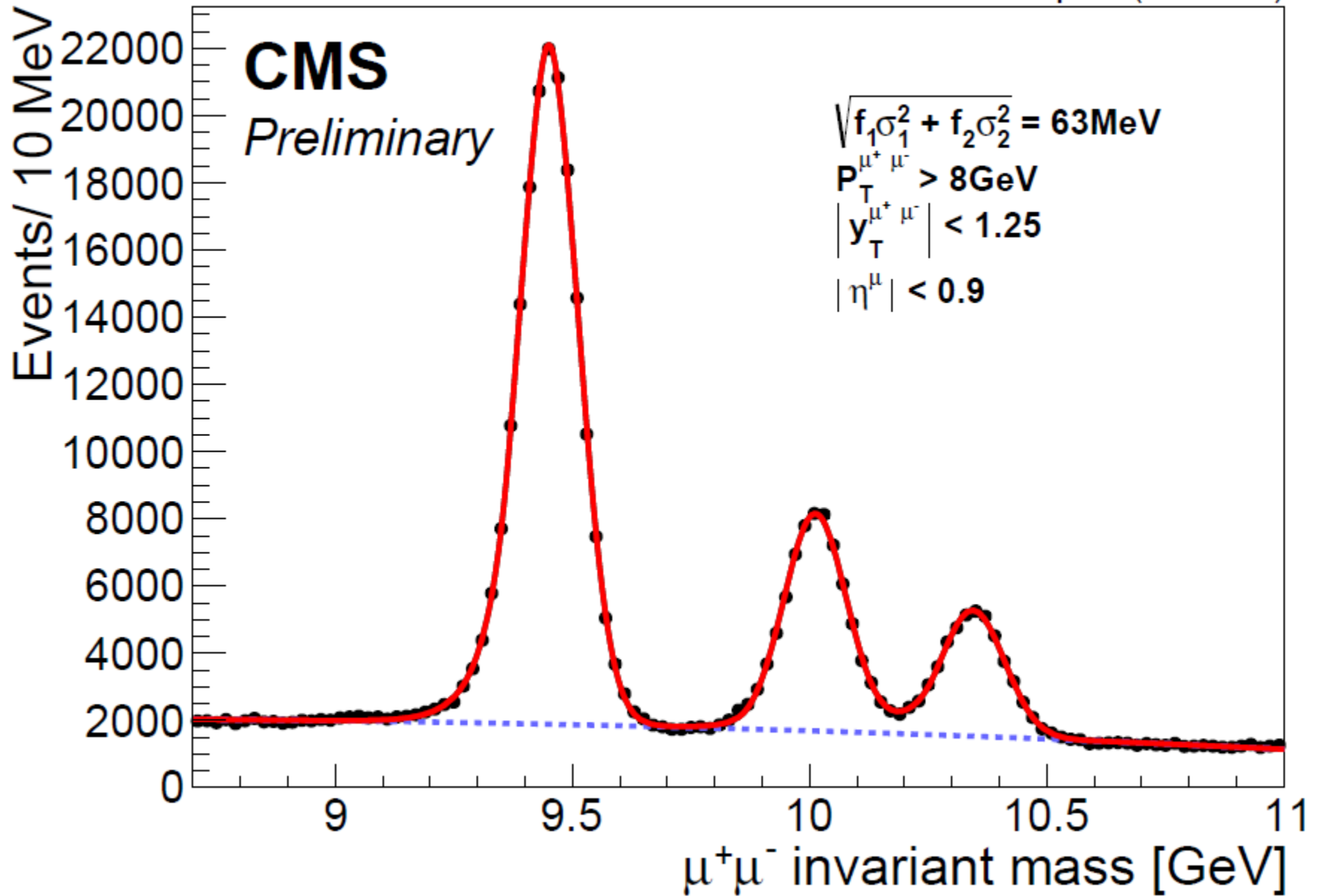


Dimuon invariant mass of $Y(nS)$

- Dataset: MuOnia – Prompt_v2
- Selection: 2 muons passing Soft ID, $|\eta^\mu| < 0.9$
- Trigger Conditions: opposite-sign muon pair with invariant mass in range 8.5–11. GeV, dimuon $p_T > 8 \text{ GeV}$, $|y^{\mu\mu}| < 1.25$
- Fit Method
 - Y(1S) Mass PDF: double Crystal Ball with common mean, n and alpha parameters
 - Y(2S) Mass PDF: Crystal Ball
 - Y(3S) Mass PDF: Crystal Ball
 - Background PDF: Chebychev polynomial series of order 1
- Quoted resolution: weighted quadrature sum of the two CB sigmas

Dimuon invariant mass of $Y(nS)$

864.1 pb⁻¹ (13 TeV)



Thank you for your attention!