GENIE Comparison

Datasets:

miniboone_nuccqe_2010

miniboone_nubarccqe_2013

t2k_nd280_numucc0pi_2015

MINERvAExDataCCQEQ2

MINERvAExDataCCQEQ2

Models:

trunk/G16_01b

trunk/GlobalFit

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Dataset:
miniboone_nuccqe_2010

Models:
trunk/G16_01b χ^2 = 441 / 137 DoF
trunk/GlobalFit χ^2 = 138 / 137 DoF

Plot:
$\partial^2\sigma(\nu_\mu$ **CC** $0\pi)/\partial$ **Cos**θ_μ/∂ **T**$_\mu$

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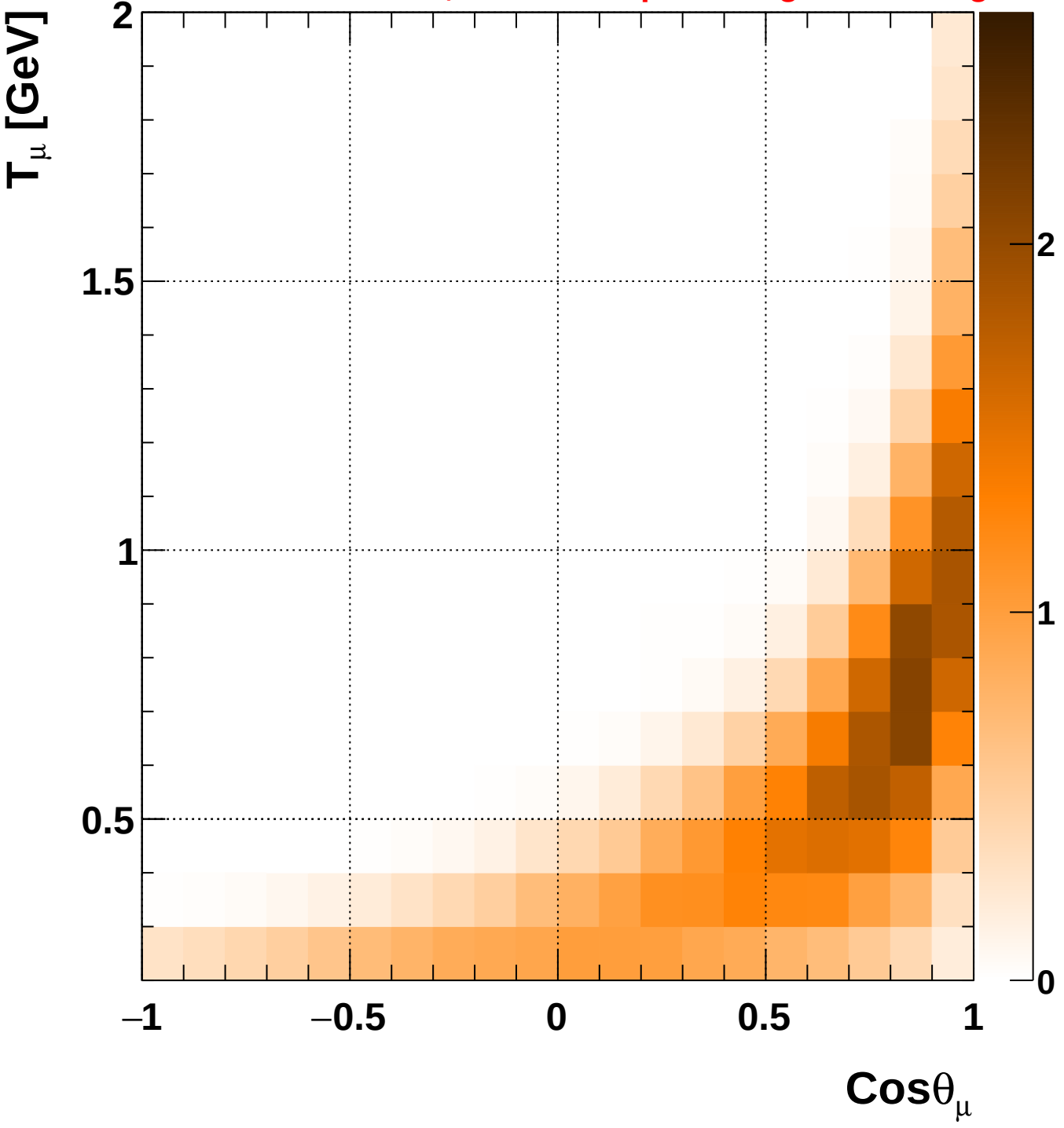
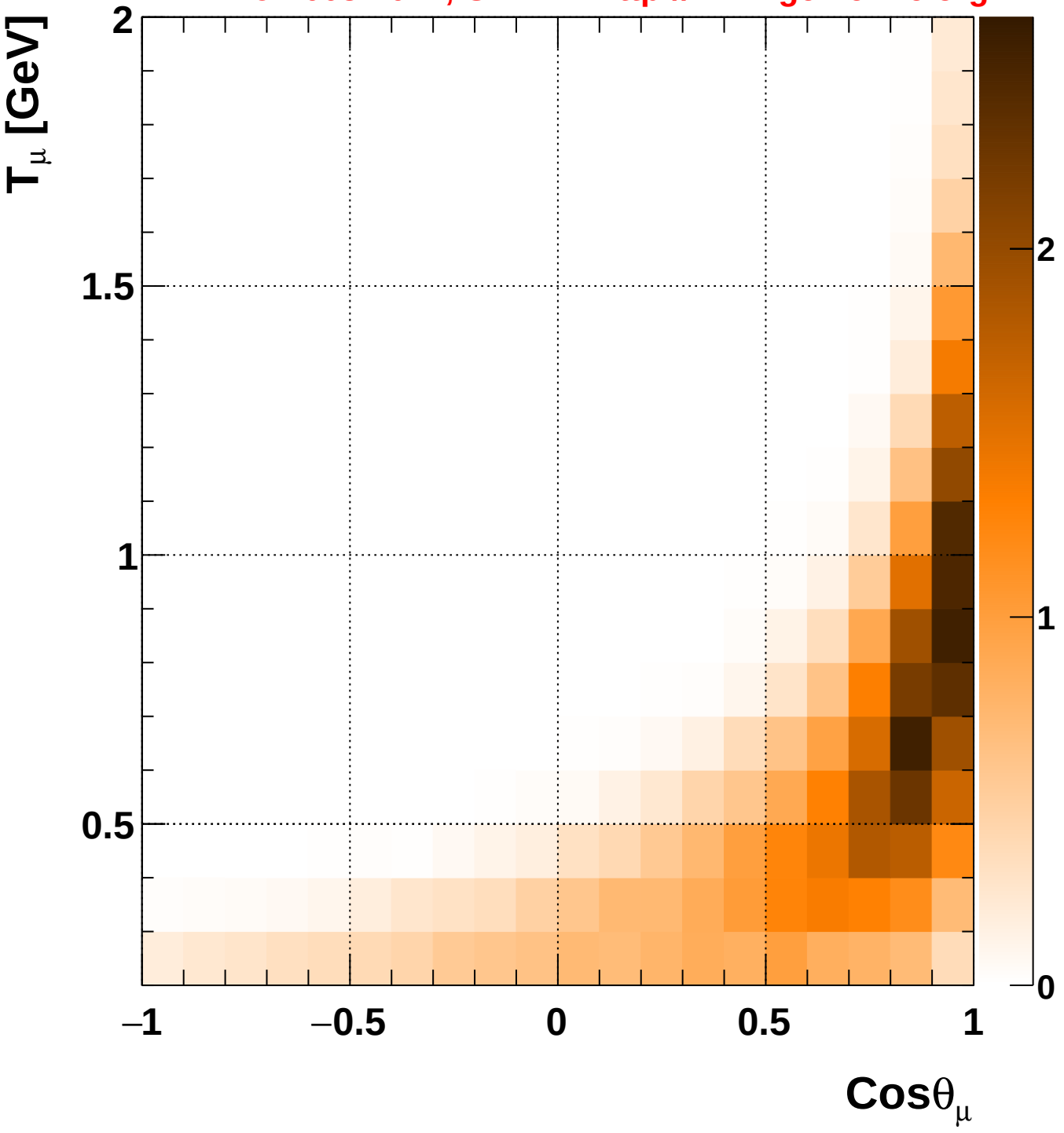


$\partial^2\sigma(\nu_\mu$ CC $0\pi)/\partial\ \mathrm{Cos}\theta_\mu/\partial\ T_\mu$ [10^{-38} cm^2/GeV/n]

Data: miniboone_nuccqe_2010



$\partial^2\sigma(\nu_\mu$ CC $0\pi)/\partial\ \mathrm{Cos}\theta_\mu/\partial\ T_\mu$ [10^{-38} cm^2/GeV/n]

Pred: trunk:G16_01b:miniboone_fhc

miniboone_nuccqe_2010

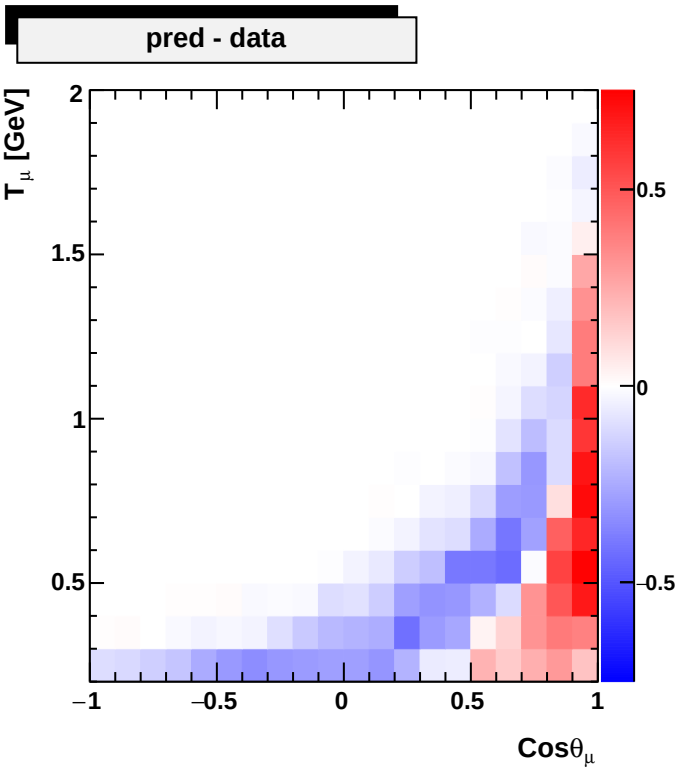
VS

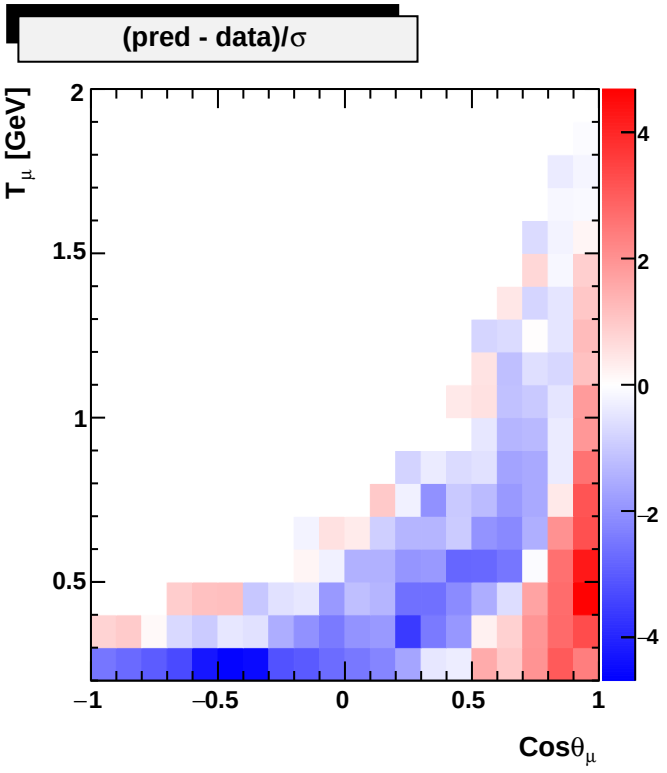
trunk:G16_01b:miniboone_fhc

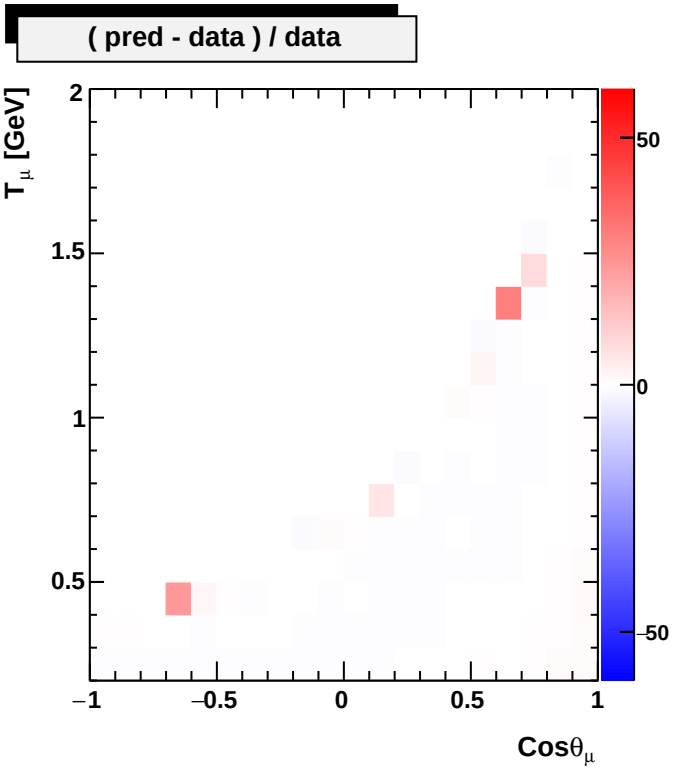
$\partial^2\sigma(\nu_\mu$ CC $0\pi)/\partial$ Cosθ_μ/∂ T_μ

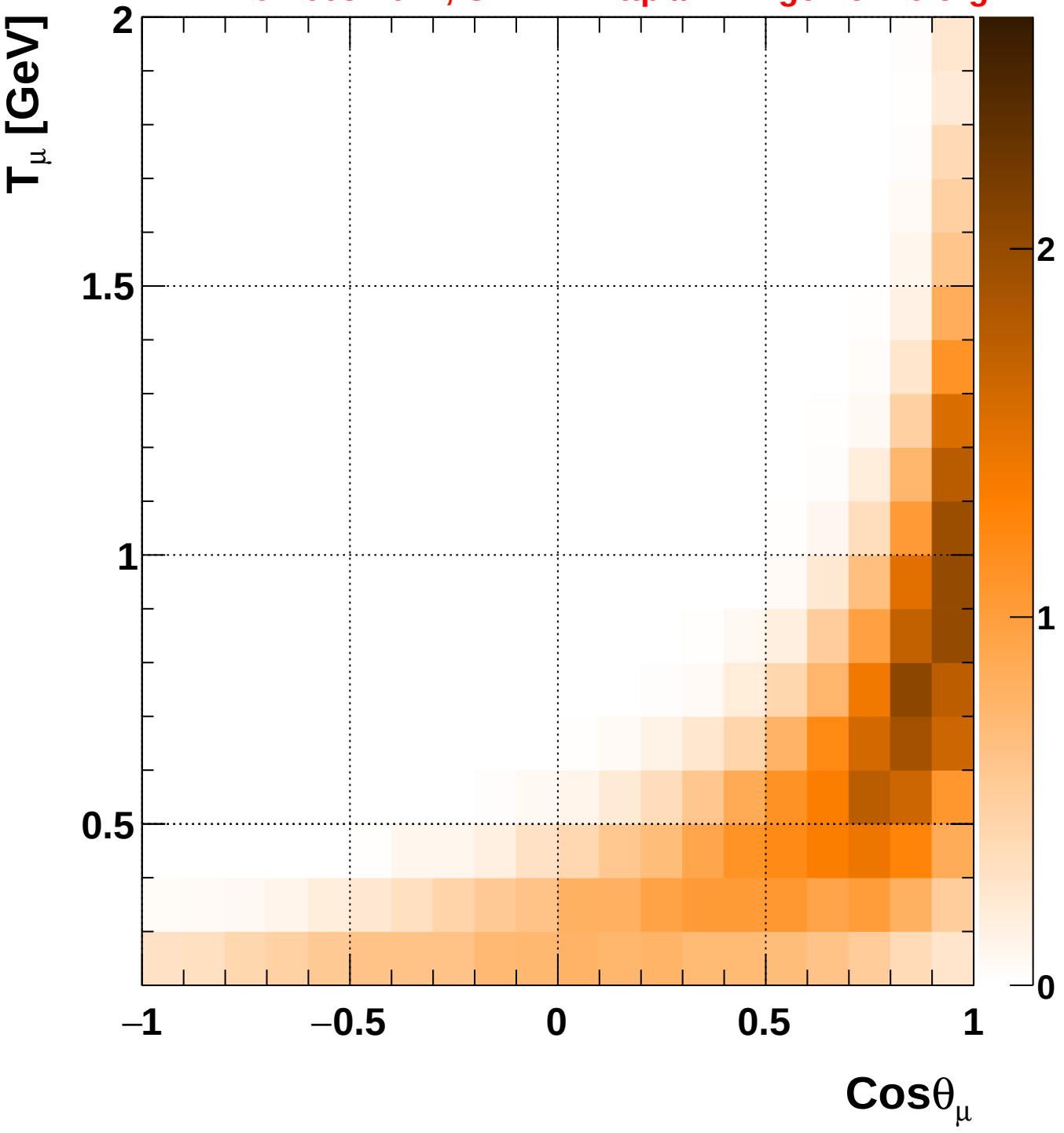
[10^{-38} cm^2/GeV/n]

χ^2 = 440.895/137 DoF









$\partial^2\sigma(\nu_\mu$ CC $0\pi)/\partial\ \mathrm{Cos}\theta_\mu/\partial\ T_\mu$ [10^{-38} cm^2/GeV/n]

Pred: trunk:GlobalFit:miniboone_fhc

miniboone_nuccqe_2010

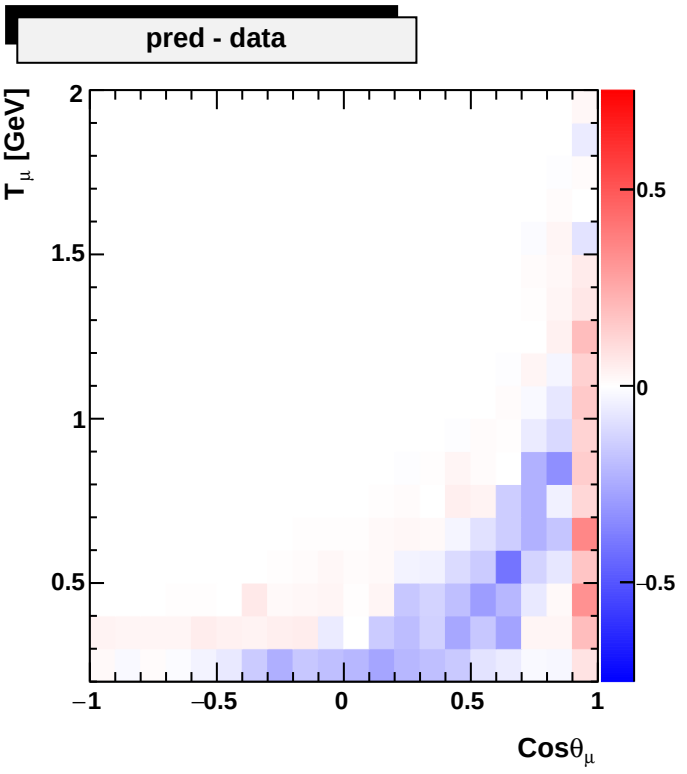
VS

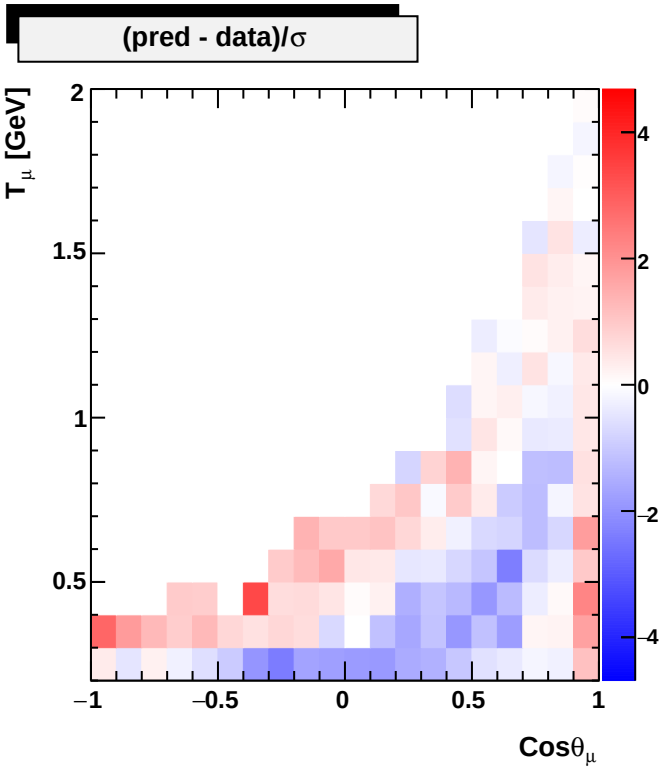
trunk:GlobalFit:miniboone_fhc

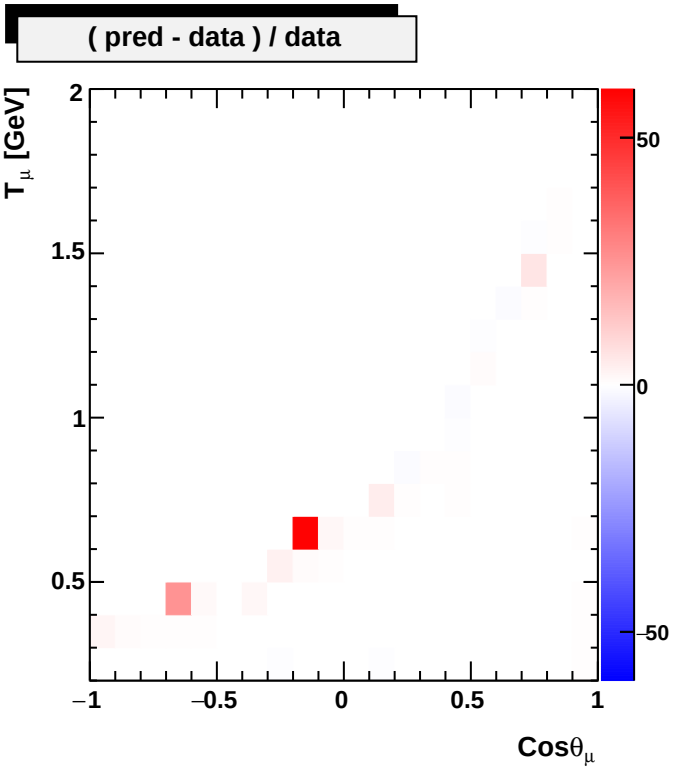
$\partial^2\sigma(\nu_\mu$ CC $0\pi)/\partial$ Cosθ_μ/∂ T_μ

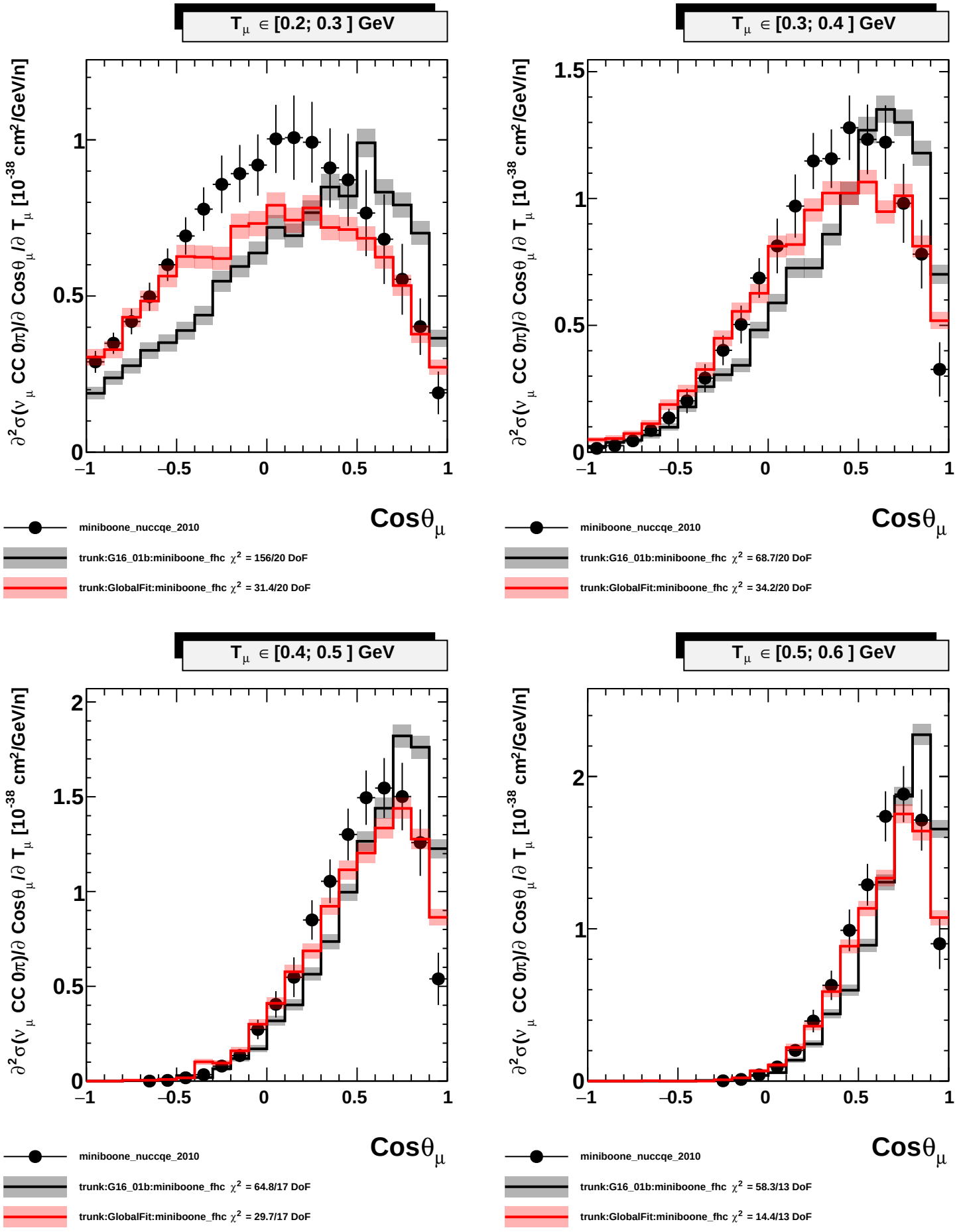
[10^{-38} cm^2/GeV/n]

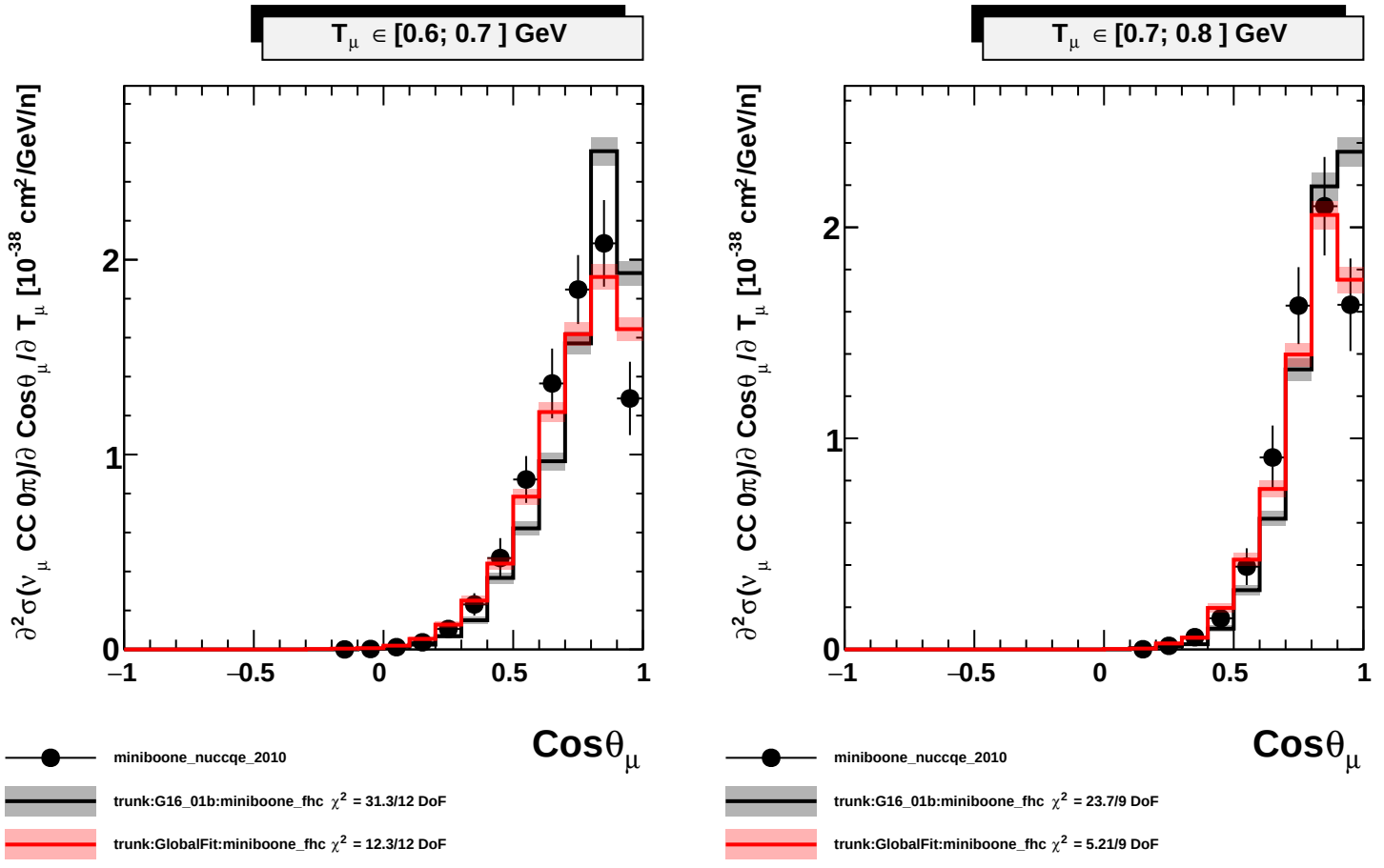
χ^2 = 137.89/137 DoF

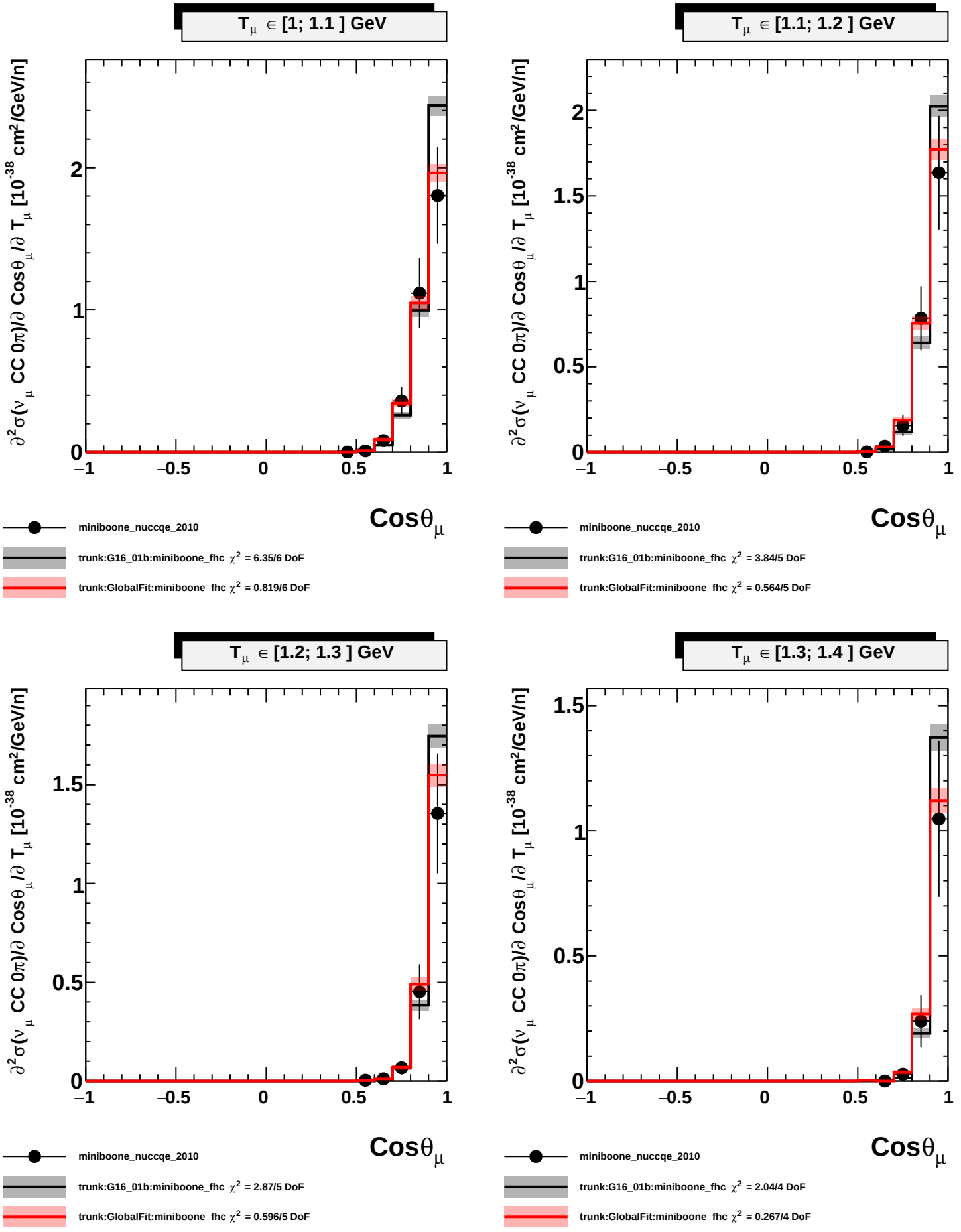


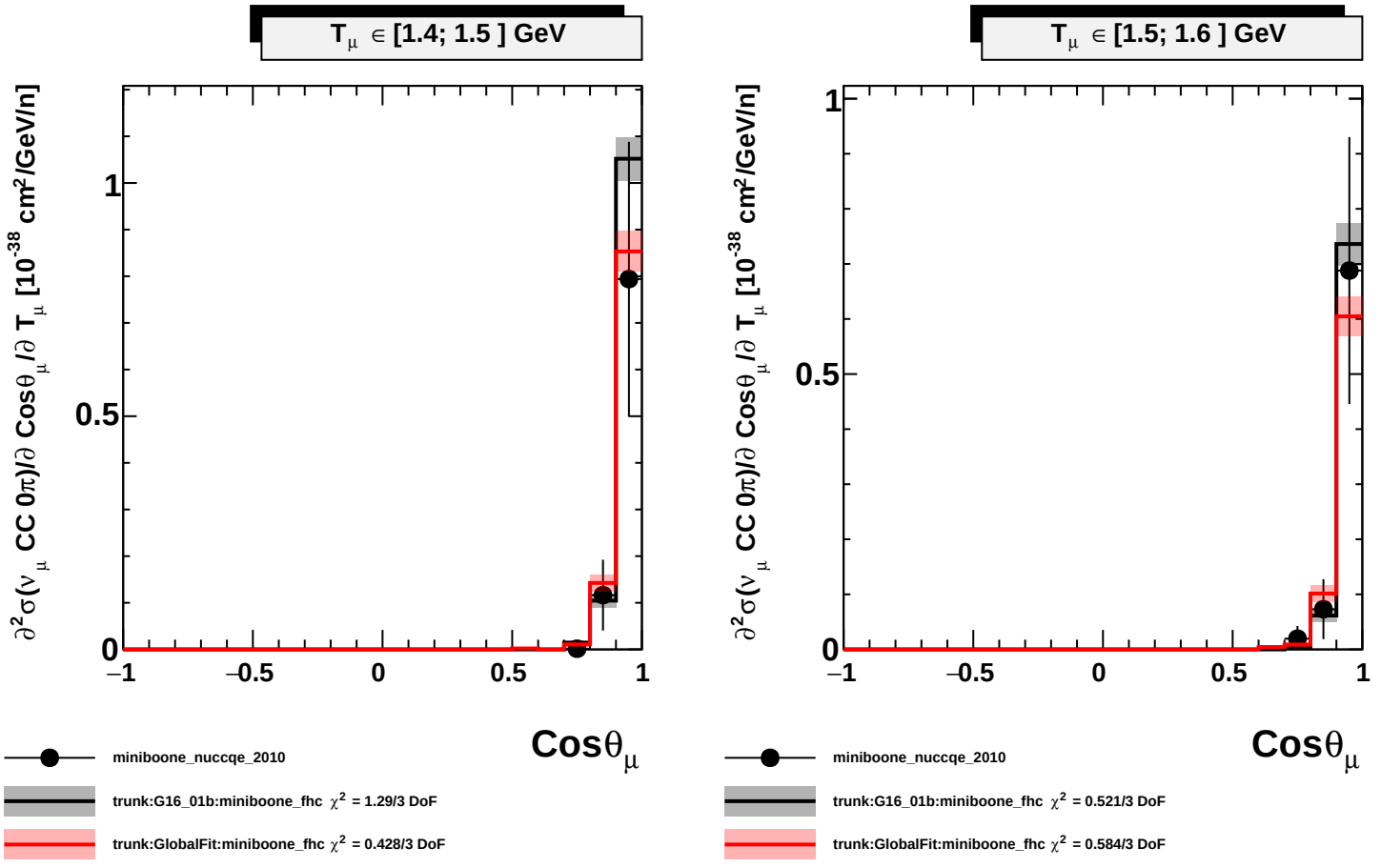


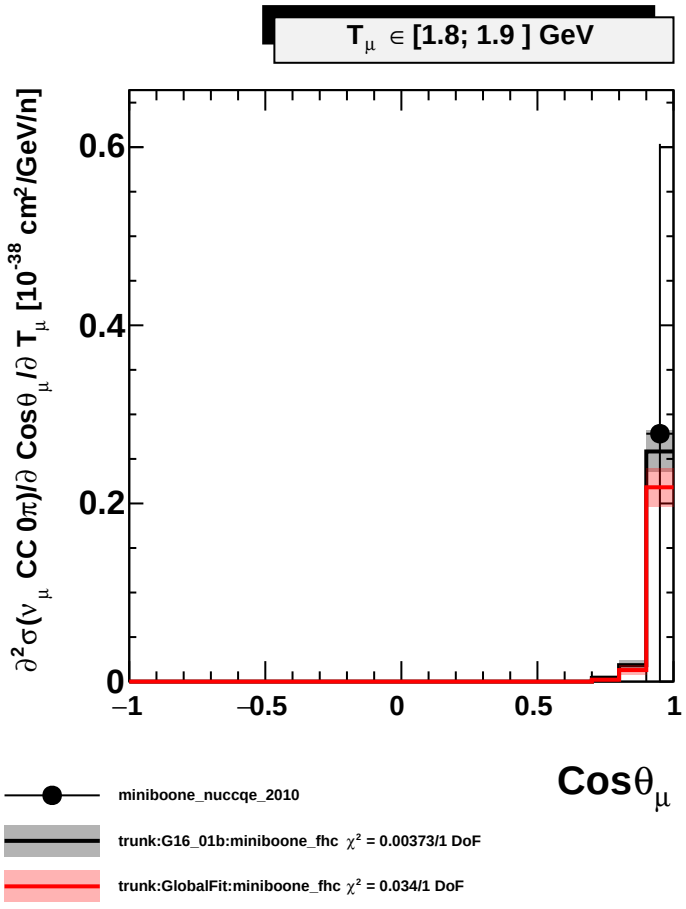


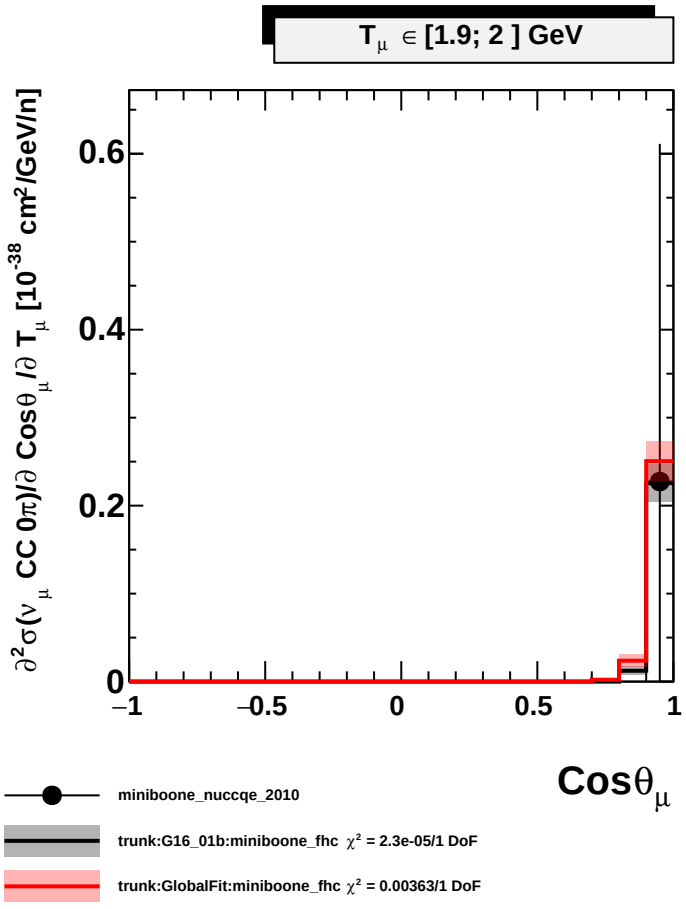

$T_\mu \in$ [0.2; 0.3] GeV
$T_\mu \in$ [0.3; 0.4] GeV
$T_\mu \in$ [0.4; 0.5] GeV
$T_\mu \in$ [0.5; 0.6] GeV
$\partial^2\sigma(\nu_\mu$ CC 0π)/∂ Cosθ_{μ} /∂ $T_{\mu,\pi}$ [10^{-38} cm^2/GeV/n]
Cosθ_μ
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ^2 = 156/20 DoF
trunk:GlobalFit:miniboone_fhc χ^2 = 31.4/20 DoF
trunk:G16_01b:miniboone_fhc χ^2 = 68.7/20 DoF
trunk:GlobalFit:miniboone_fhc χ^2 = 34.2/20 DoF
trunk:G16_01b:miniboone_fhc χ^2 = 64.8/17 DoF
trunk:GlobalFit:miniboone_fhc χ^2 = 29.7/17 DoF
trunk:G16_01b:miniboone_fhc χ^2 = 58.3/13 DoF
trunk:GlobalFit:miniboone_fhc χ^2 = 14.4/13 DoF

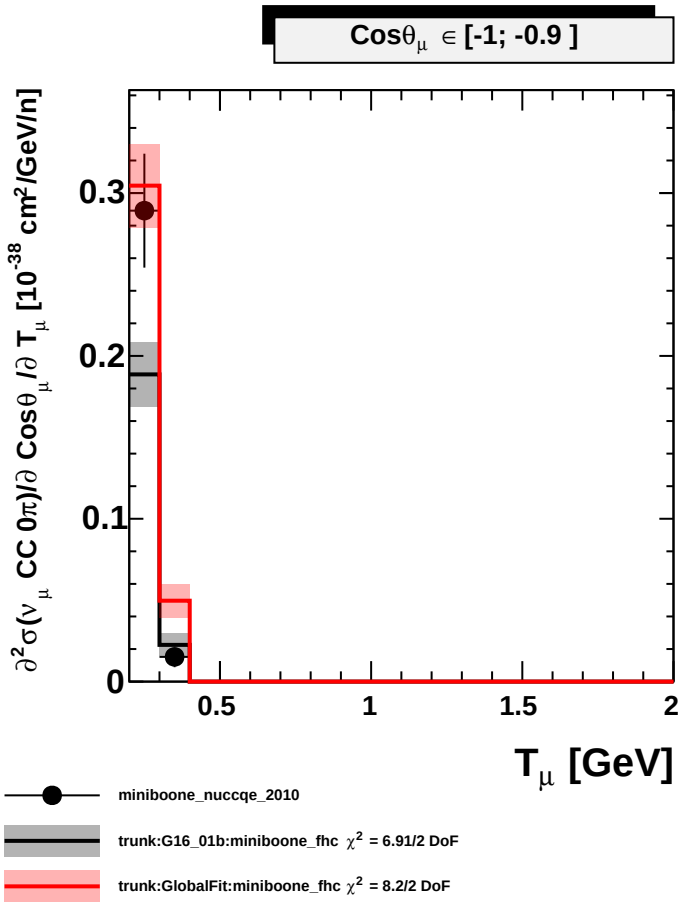

$T_\mu \in$ [0.6; 0.7] GeV
$\partial^2\sigma(\nu_\mu$ CC 0π)/∂ Cosθ_{μ} /∂ T_{μ} [10^{-38} cm^2/GeV/n]
Cosθ_μ
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ^2 = 31.3/12 DoF
trunk:GlobalFit:miniboone_fhc χ^2 = 12.3/12 DoF
$T_\mu \in$ [0.7; 0.8] GeV
$\partial^2\sigma(\nu_\mu$ CC 0π)/∂ Cosθ_{μ} /∂ T_{μ} [10^{-38} cm^2/GeV/n]
Cosθ_μ
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ^2 = 23.7/9 DoF
trunk:GlobalFit:miniboone_fhc χ^2 = 5.21/9 DoF
$T_\mu \in$ [0.8; 0.9] GeV
$\partial^2\sigma(\nu_\mu$ CC 0π)/∂ Cosθ_{μ} /∂ T_{μ} [10^{-38} cm^2/GeV/n]
Cosθ_μ
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ^2 = 13.9/8 DoF
trunk:GlobalFit:miniboone_fhc χ^2 = 6.39/8 DoF
$T_\mu \in$ [0.9; 1] GeV
$\partial^2\sigma(\nu_\mu$ CC 0π)/∂ Cosθ_{μ} /∂ T_{μ} [10^{-38} cm^2/GeV/n]
Cosθ_μ
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ^2 = 7.53/6 DoF
trunk:GlobalFit:miniboone_fhc χ^2 = 0.998/6 DoF

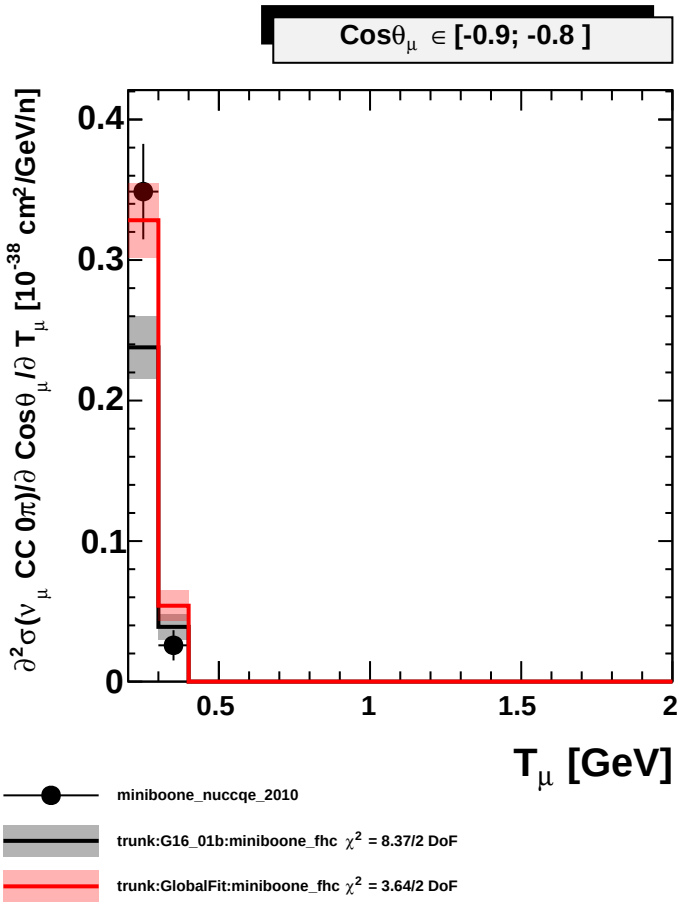

$T_\mu \in$ [1; 1.1] GeV
$T_\mu \in$ [1.1; 1.2] GeV
$T_\mu \in$ [1.2; 1.3] GeV
$T_\mu \in$ [1.3; 1.4] GeV
$\partial^2\sigma(\nu_\mu$ CC 0π)/∂ Cosθ_{μ} /∂ T_{μ} [10^{-38} cm^2/GeV/n]
Cosθ_μ
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ^2 = 6.35/6 DoF
trunk:GlobalFit:miniboone_fhc χ^2 = 0.819/6 DoF
trunk:G16_01b:miniboone_fhc χ^2 = 3.84/5 DoF
trunk:GlobalFit:miniboone_fhc χ^2 = 0.564/5 DoF
trunk:G16_01b:miniboone_fhc χ^2 = 2.87/5 DoF
trunk:GlobalFit:miniboone_fhc χ^2 = 0.596/5 DoF
trunk:G16_01b:miniboone_fhc χ^2 = 2.04/4 DoF
trunk:GlobalFit:miniboone_fhc χ^2 = 0.267/4 DoF

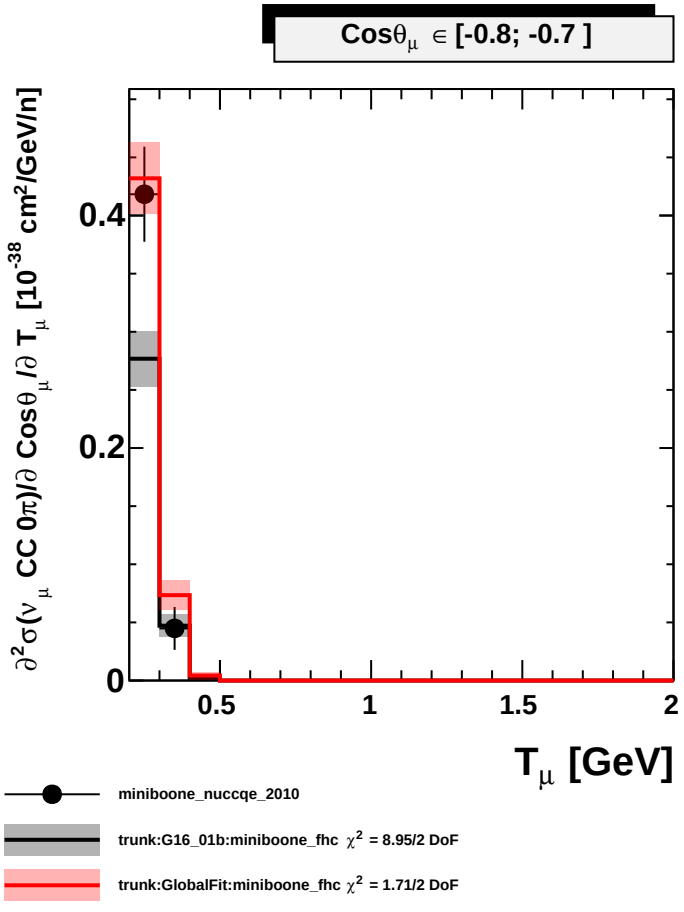

$T_\mu \in$ [1.4; 1.5] GeV
$\partial^2\sigma(\nu_\mu$ CC 0π)/∂ Cosθ_{μ} /∂ T_{μ} [10^{-38} cm^2/GeV/n]
Cosθ_μ
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ^2 = 1.29/3 DoF
trunk:GlobalFit:miniboone_fhc χ^2 = 0.428/3 DoF
$T_\mu \in$ [1.5; 1.6] GeV
$\partial^2\sigma(\nu_\mu$ CC 0π)/∂ Cosθ_{μ} /∂ T_{μ} [10^{-38} cm^2/GeV/n]
Cosθ_μ
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ^2 = 0.521/3 DoF
trunk:GlobalFit:miniboone_fhc χ^2 = 0.584/3 DoF
$T_\mu \in$ [1.6; 1.7] GeV
$\partial^2\sigma(\nu_\mu$ CC 0π)/∂ Cosθ_{μ} /∂ T_{μ} [10^{-38} cm^2/GeV/n]
Cosθ_μ
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ^2 = 0.0282/2 DoF
trunk:GlobalFit:miniboone_fhc χ^2 = 0.0388/2 DoF
$T_\mu \in$ [1.7; 1.8] GeV
$\partial^2\sigma(\nu_\mu$ CC 0π)/∂ Cosθ_{μ} /∂ T_{μ} [10^{-38} cm^2/GeV/n]
Cosθ_μ
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ^2 = 0.185/2 DoF
trunk:GlobalFit:miniboone_fhc χ^2 = 0.0321/2 DoF

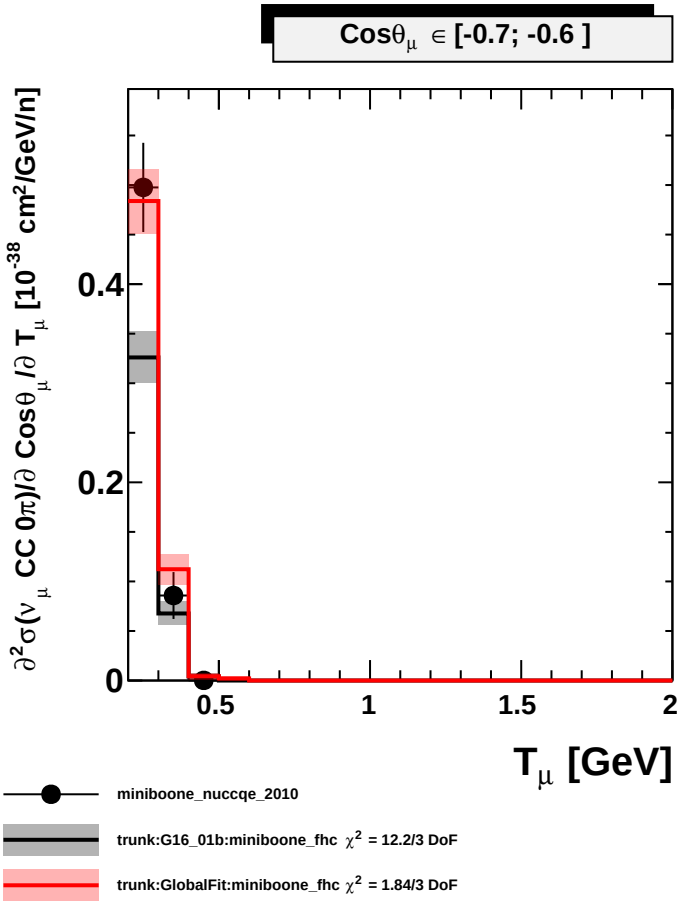

$T_\mu \in$ [1.8; 1.9] GeV
$\partial^2\sigma(\nu_\mu$ CC 0π)/∂ Cosθ_μ /∂ T_μ [10^{-38} cm^2/GeV/n]
0.6
0.4
0.2
0
−1
−0.5
0
0.5
1
Cosθ_μ
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ^2 = 0.00373/1 DoF
trunk:GlobalFit:miniboone_fhc χ^2 = 0.034/1 DoF

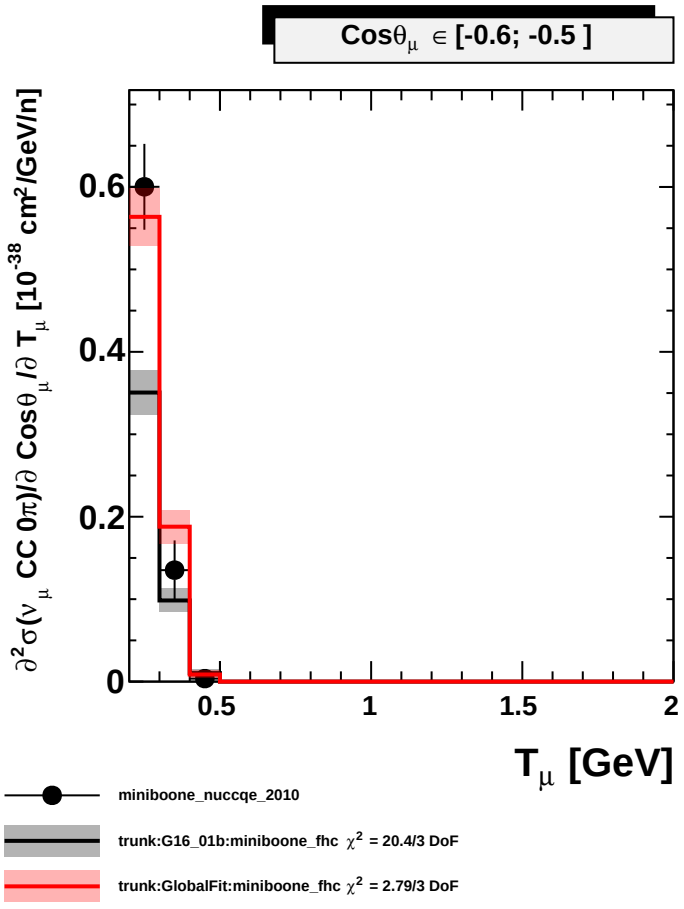

$T_\mu \in$ [1.9; 2] GeV
$\partial^2\sigma(\nu_\mu$ CC 0π)/∂ Cosθ_μ /∂ T_μ [10^{-38} cm^2/GeV/n]
0.6
0.4
0.2
0
−1
−0.5
0
0.5
1
Cosθ_μ
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ^2 = 2.3e-05/1 DoF
trunk:GlobalFit:miniboone_fhc χ^2 = 0.00363/1 DoF

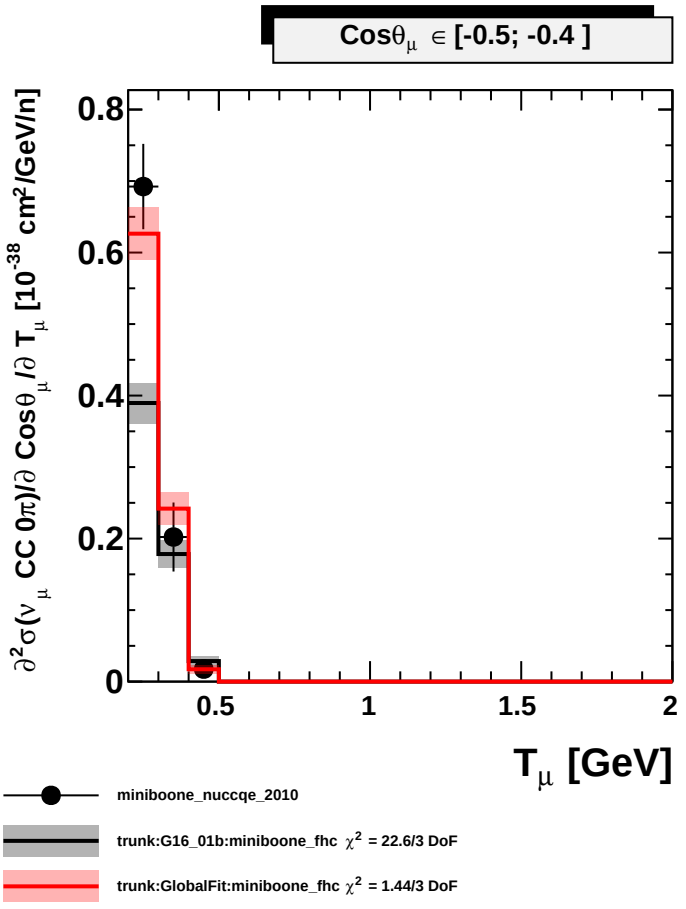

Cosθμ ∈ [-1; -0.9]
∂²σ(νμ CC 0π)/∂ Cosθμπ/∂ Tμπ [10⁻³⁸ cm²/GeV/n]
Tμ [GeV]
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ² = 6.91/2 DoF
trunk:GlobalFit:miniboone_fhc χ² = 8.2/2 DoF

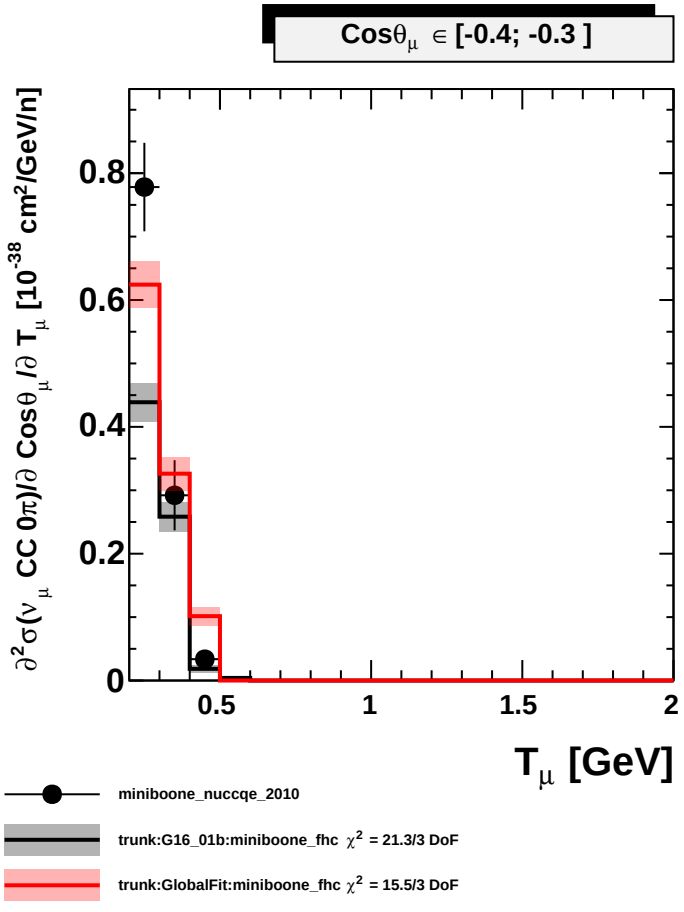

Cosθμ ∈ [-0.9; -0.8]
∂²σ(νμ CC 0π)/∂ Cosθμπ/∂ Tμπ [10⁻³⁸ cm²/GeV/n]
Tμ [GeV]
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ² = 8.37/2 DoF
trunk:GlobalFit:miniboone_fhc χ² = 3.64/2 DoF

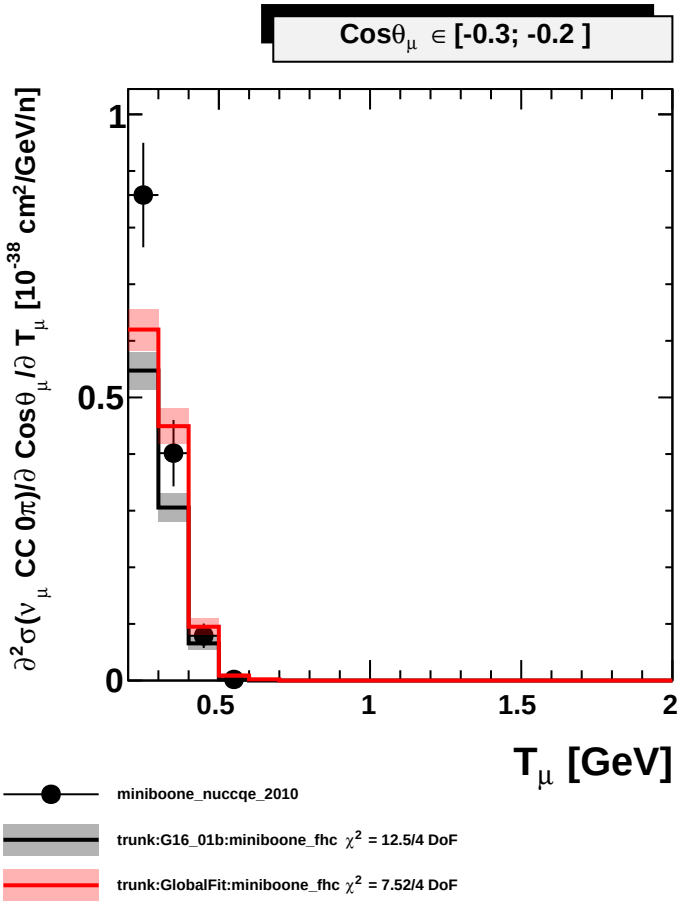

Cosθμ ∈ [-0.8; -0.7]
∂²σ(νμ CC 0π)/∂ Cosθμπ/∂ Tμπ [10⁻³⁸ cm²/GeV/n]
Tμ [GeV]
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ² = 8.95/2 DoF
trunk:GlobalFit:miniboone_fhc χ² = 1.71/2 DoF

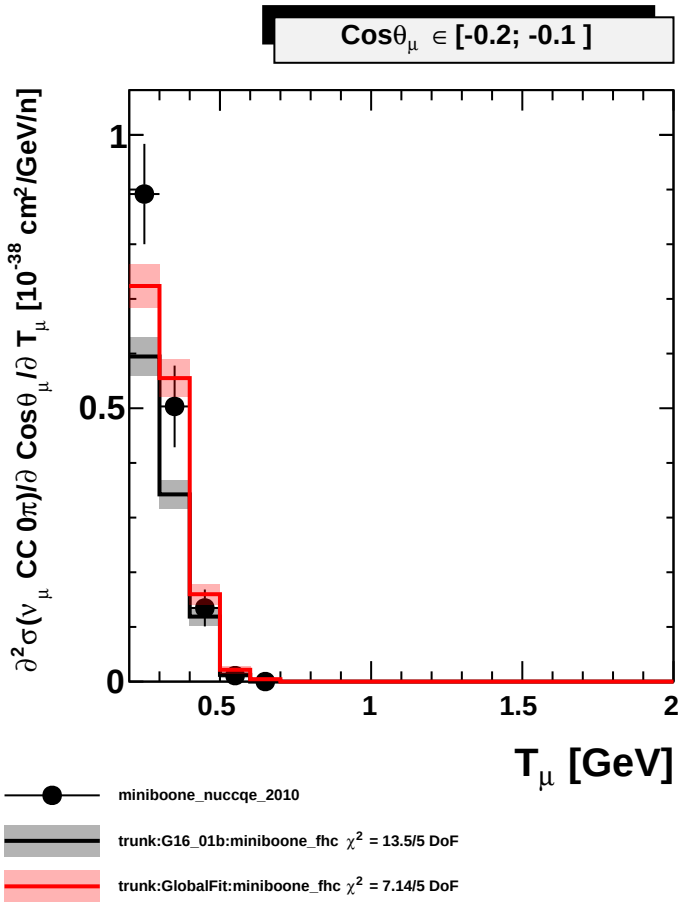

Cosθμ ∈ [-0.7; -0.6]
∂²σ(νμ CC 0π)/∂ Cosθμπ/∂ Tμπ [10⁻³⁸ cm²/GeV/n]
Tμ [GeV]
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ² = 12.2/3 DoF
trunk:GlobalFit:miniboone_fhc χ² = 1.84/3 DoF

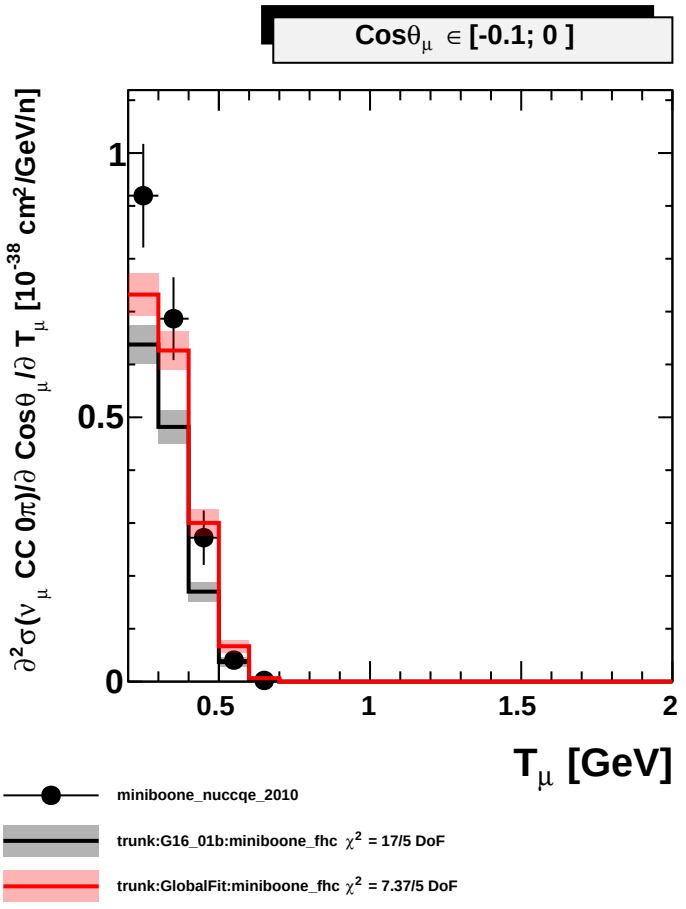

Cosθμ ∈ [-0.6; -0.5]
∂²σ(νμ CC 0π)/∂ Cosθμπ ∂ Tμπ [10⁻³⁸ cm²/GeV/n]
Tμ [GeV]
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ² = 20.4/3 DoF
trunk:GlobalFit:miniboone_fhc χ² = 2.79/3 DoF

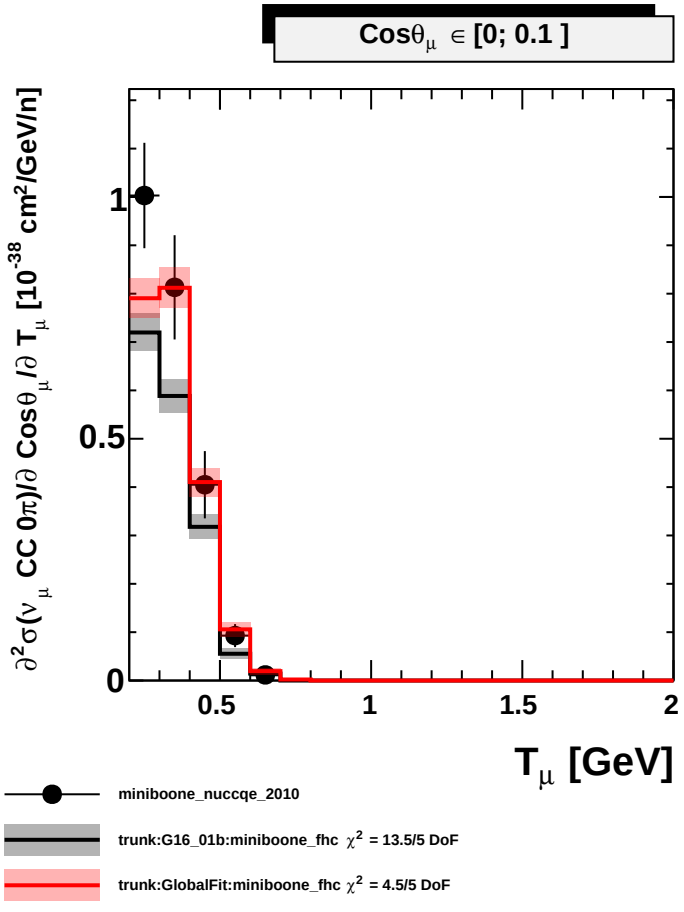

Cosθμ ∈ [-0.5; -0.4]
∂²σ(νμ CC 0π)/∂ Cosθμπ ∂ Tμπ [10⁻³⁸ cm²/GeV/n]
Tμ [GeV]
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ² = 22.6/3 DoF
trunk:GlobalFit:miniboone_fhc χ² = 1.44/3 DoF

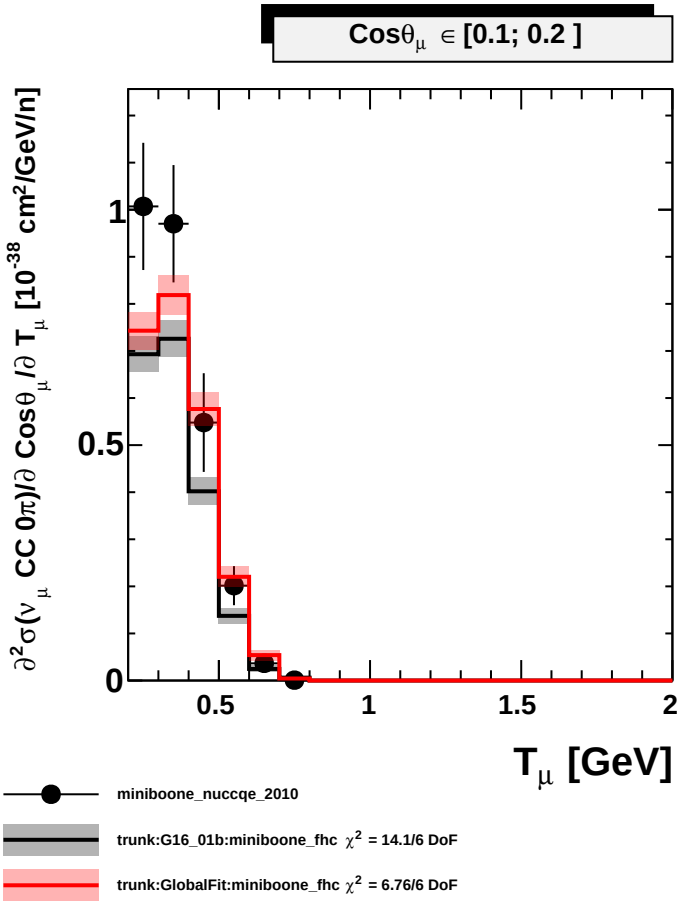

Cosθμ ∈ [-0.4; -0.3]
∂²σ(νμ CC 0π)/∂ Cosθμπ ∂ Tμπ [10⁻³⁸ cm²/GeV/n]
Tμ [GeV]
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ² = 21.3/3 DoF
trunk:GlobalFit:miniboone_fhc χ² = 15.5/3 DoF

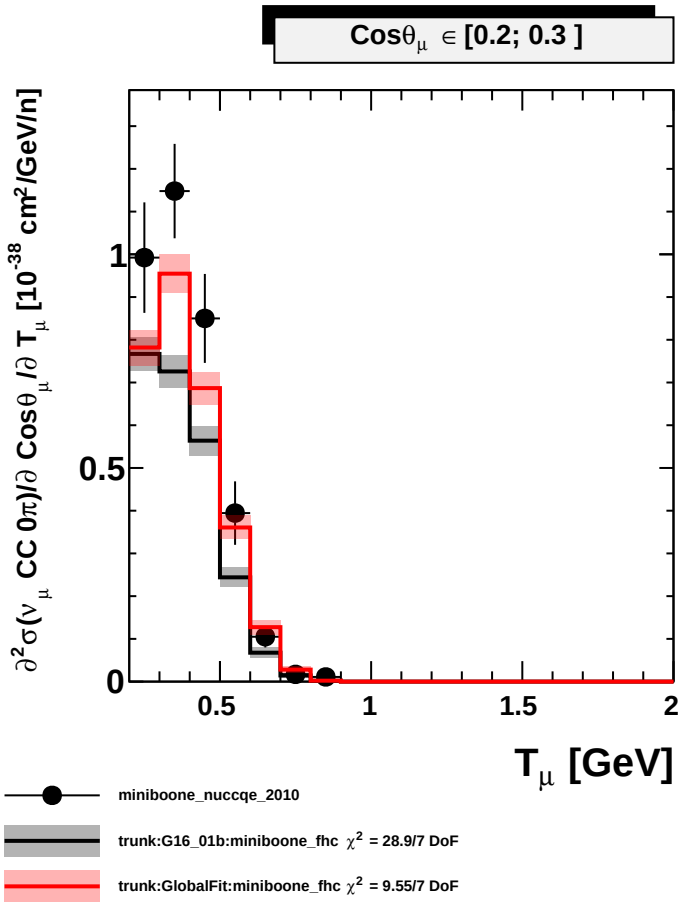

Cosθμ ∈ [-0.3; -0.2]
∂²σ(νμ CC 0π)/∂ Cosθμπ ∂ Tμπ [10⁻³⁸ cm²/GeV/n]
Tμ [GeV]
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ² = 12.5/4 DoF
trunk:GlobalFit:miniboone_fhc χ² = 7.52/4 DoF

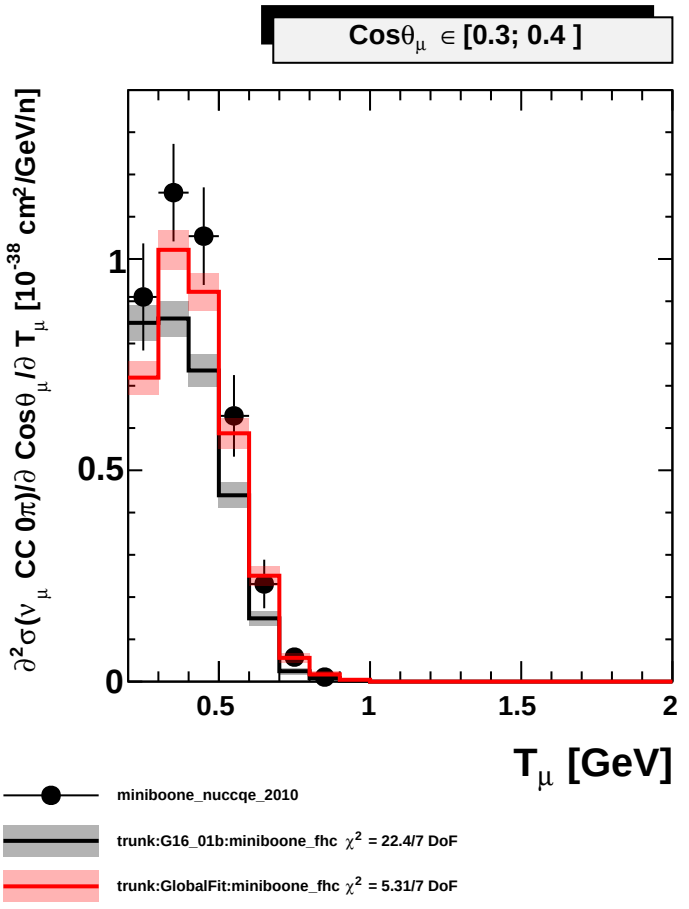

Cosθμ ∈ [-0.2; -0.1]
∂²σ(νμ CC 0π)/∂ Cosθμπ ∂ Tμπ [10⁻³⁸ cm²/GeV/n]
Tμ [GeV]
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ² = 13.5/5 DoF
trunk:GlobalFit:miniboone_fhc χ² = 7.14/5 DoF

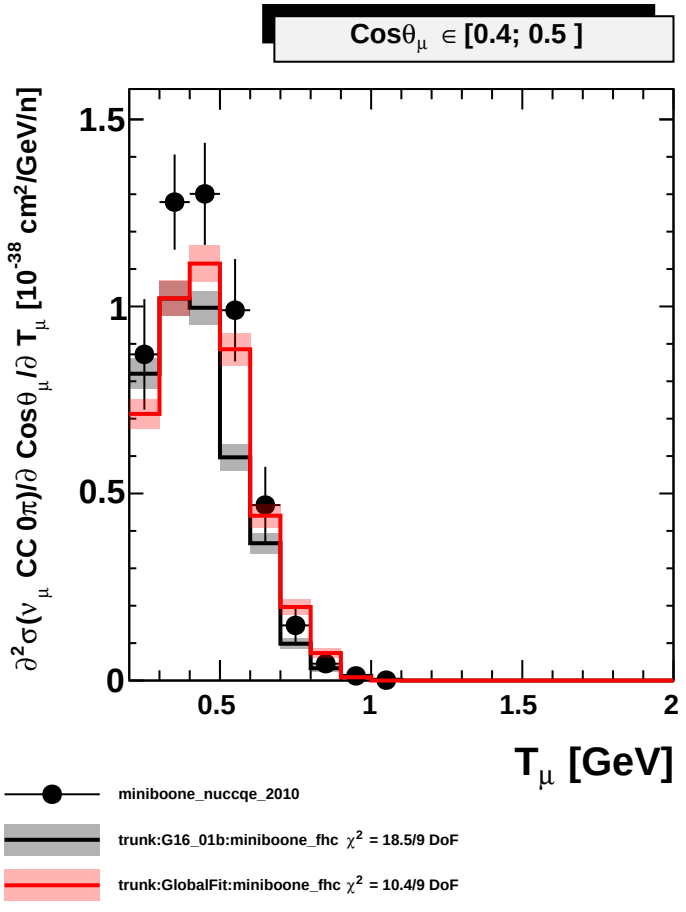

Cosθμ ∈ [-0.1; 0]
∂²σ(νμ CC 0π)/∂ Cosθμπ ∂ Tμπ [10⁻³⁸ cm²/GeV/n]
Tμ [GeV]
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ² = 17/5 DoF
trunk:GlobalFit:miniboone_fhc χ² = 7.37/5 DoF

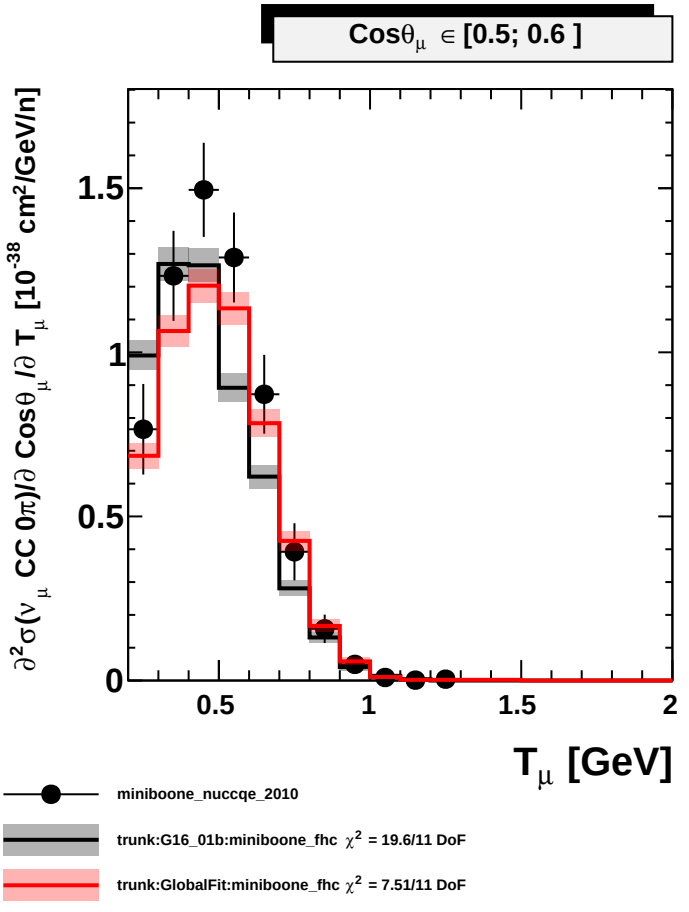

Cosθμ ∈ [0; 0.1]
∂²σ(νμ CC 0π)/∂ Cosθμπ ∂ Tμπ [10⁻³⁸ cm²/GeV/n]
Tμ [GeV]
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ² = 13.5/5 DoF
trunk:GlobalFit:miniboone_fhc χ² = 4.5/5 DoF

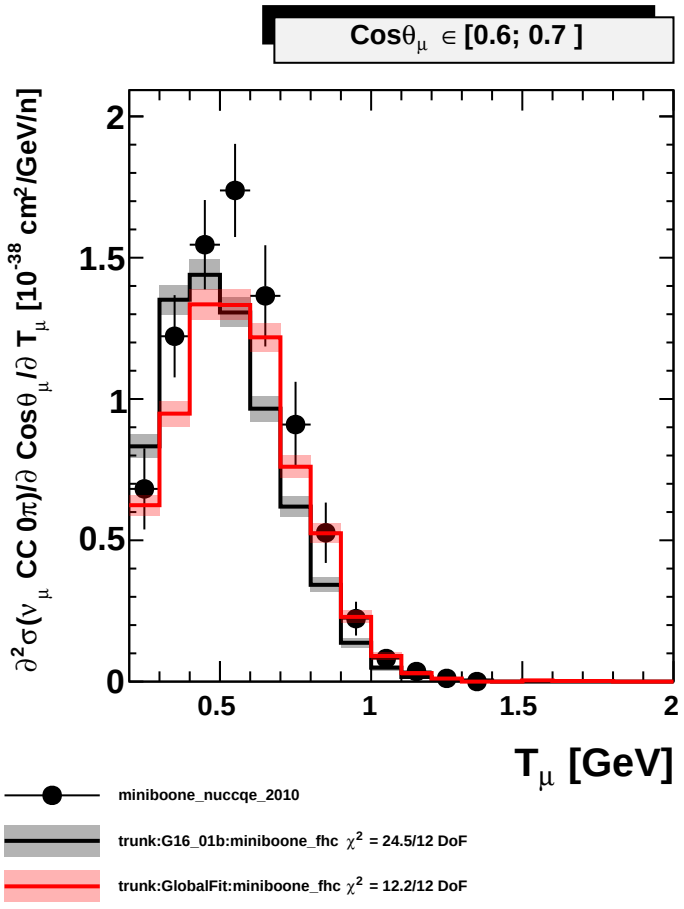

Cosθμ ∈ [0.1; 0.2]
∂²σ(νμ CC 0π)/∂ Cosθμπ ∂ Tμπ [10⁻³⁸ cm²/GeV/n]
Tμ [GeV]
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ² = 14.1/6 DoF
trunk:GlobalFit:miniboone_fhc χ² = 6.76/6 DoF

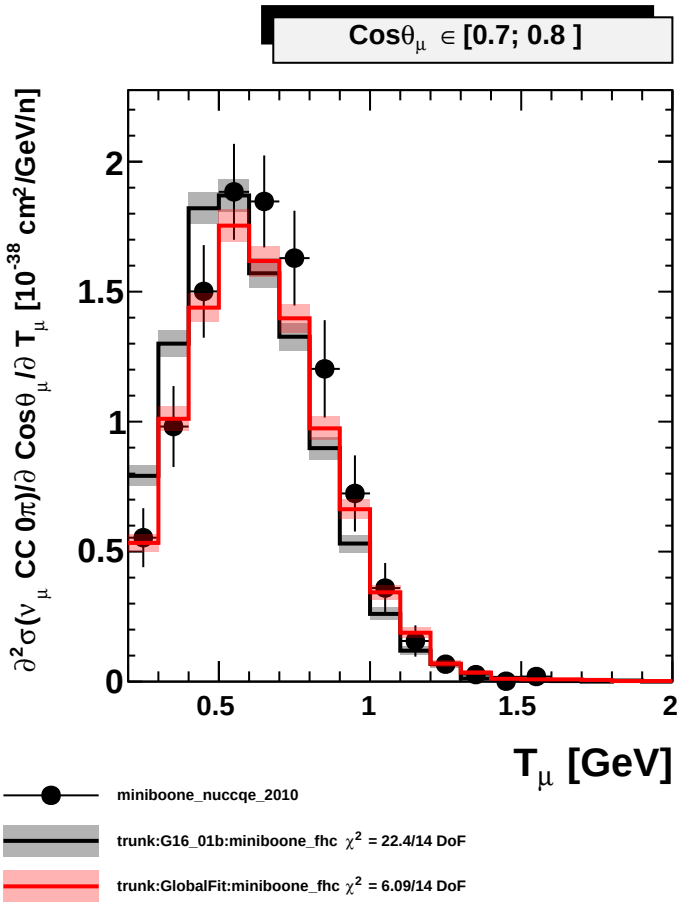

Cosθμ ∈ [0.2; 0.3]
∂²σ(νμ CC 0π)/∂ Cosθμπ /∂ Tμπ [10⁻³⁸ cm²/GeV/n]
Tμ [GeV]
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ² = 28.9/7 DoF
trunk:GlobalFit:miniboone_fhc χ² = 9.55/7 DoF

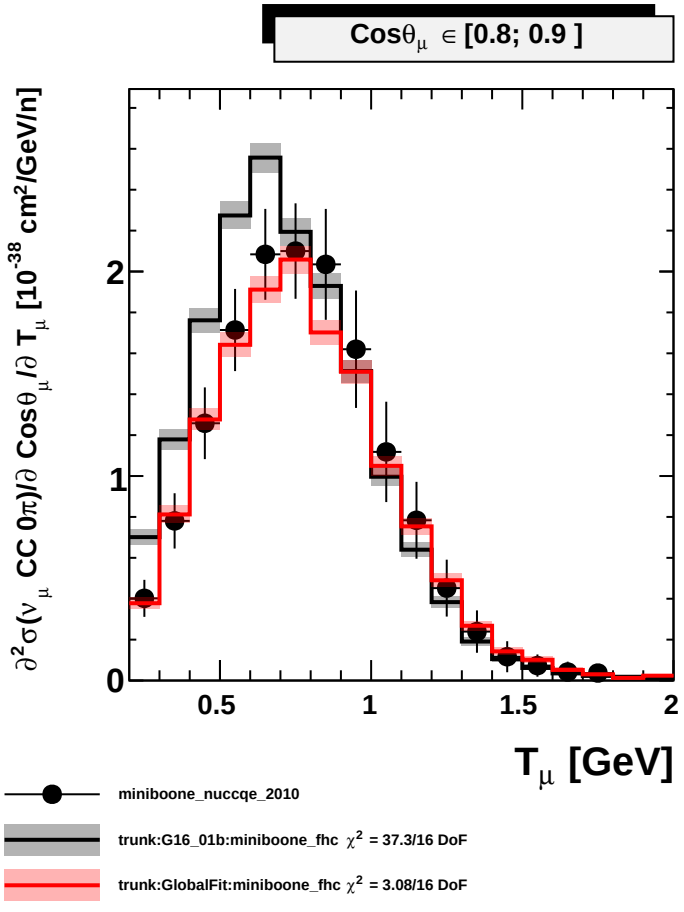

Cosθμ ∈ [0.3; 0.4]
∂²σ(νμ CC 0π)/∂ Cosθμπ /∂ Tμπ [10⁻³⁸ cm²/GeV/n]
Tμ [GeV]
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ² = 22.4/7 DoF
trunk:GlobalFit:miniboone_fhc χ² = 5.31/7 DoF

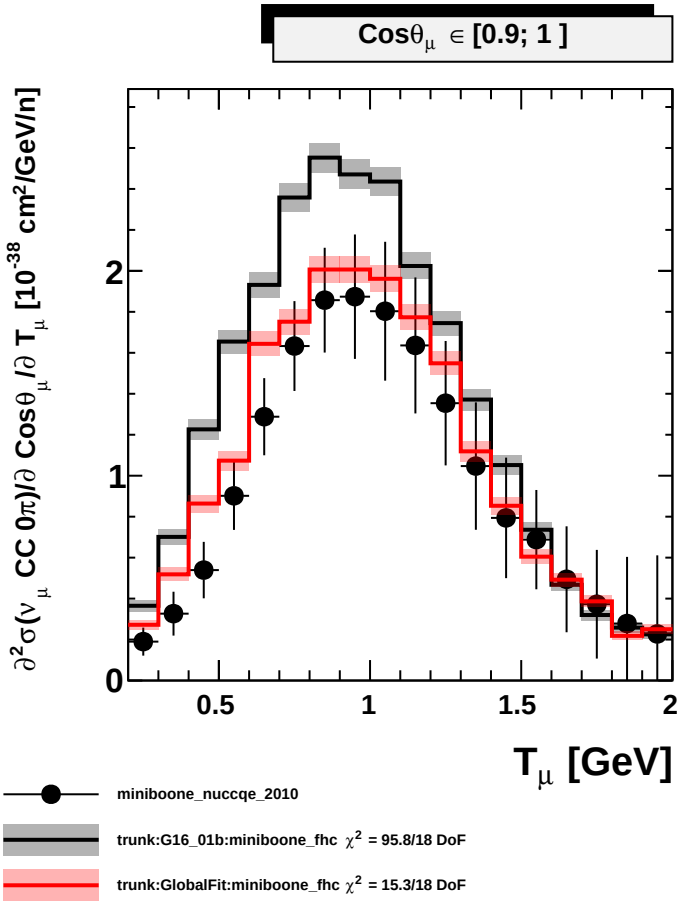

Cosθμ ∈ [0.4; 0.5]
∂²σ(νμ CC 0π)/∂ Cosθμπ /∂ Tμπ [10⁻³⁸ cm²/GeV/n]
Tμ [GeV]
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ² = 18.5/9 DoF
trunk:GlobalFit:miniboone_fhc χ² = 10.4/9 DoF


Cosθμ ∈ [0.5; 0.6]
∂²σ(νμ CC 0π)/∂ Cosθμπ /∂ Tμπ [10⁻³⁸ cm²/GeV/n]
Tμ [GeV]
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ² = 19.6/11 DoF
trunk:GlobalFit:miniboone_fhc χ² = 7.51/11 DoF


Cosθμ ∈ [0.6; 0.7]
∂²σ(νμ CC 0π)/∂ Cosθμ /∂ Tμ [10⁻³⁸ cm²/GeV/n]
Tμ [GeV]
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ² = 24.5/12 DoF
trunk:GlobalFit:miniboone_fhc χ² = 12.2/12 DoF


Cosθμ ∈ [0.7; 0.8]
∂²σ(νμ CC 0π)/∂ Cosθμ /∂ Tμ [10⁻³⁸ cm²/GeV/n]
Tμ [GeV]
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ² = 22.4/14 DoF
trunk:GlobalFit:miniboone_fhc χ² = 6.09/14 DoF


Cosθμ ∈ [0.8; 0.9]
∂²σ(νμ CC 0π)/∂ Cosθμ /∂ Tμ [10⁻³⁸ cm²/GeV/n]
Tμ [GeV]
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ² = 37.3/16 DoF
trunk:GlobalFit:miniboone_fhc χ² = 3.08/16 DoF

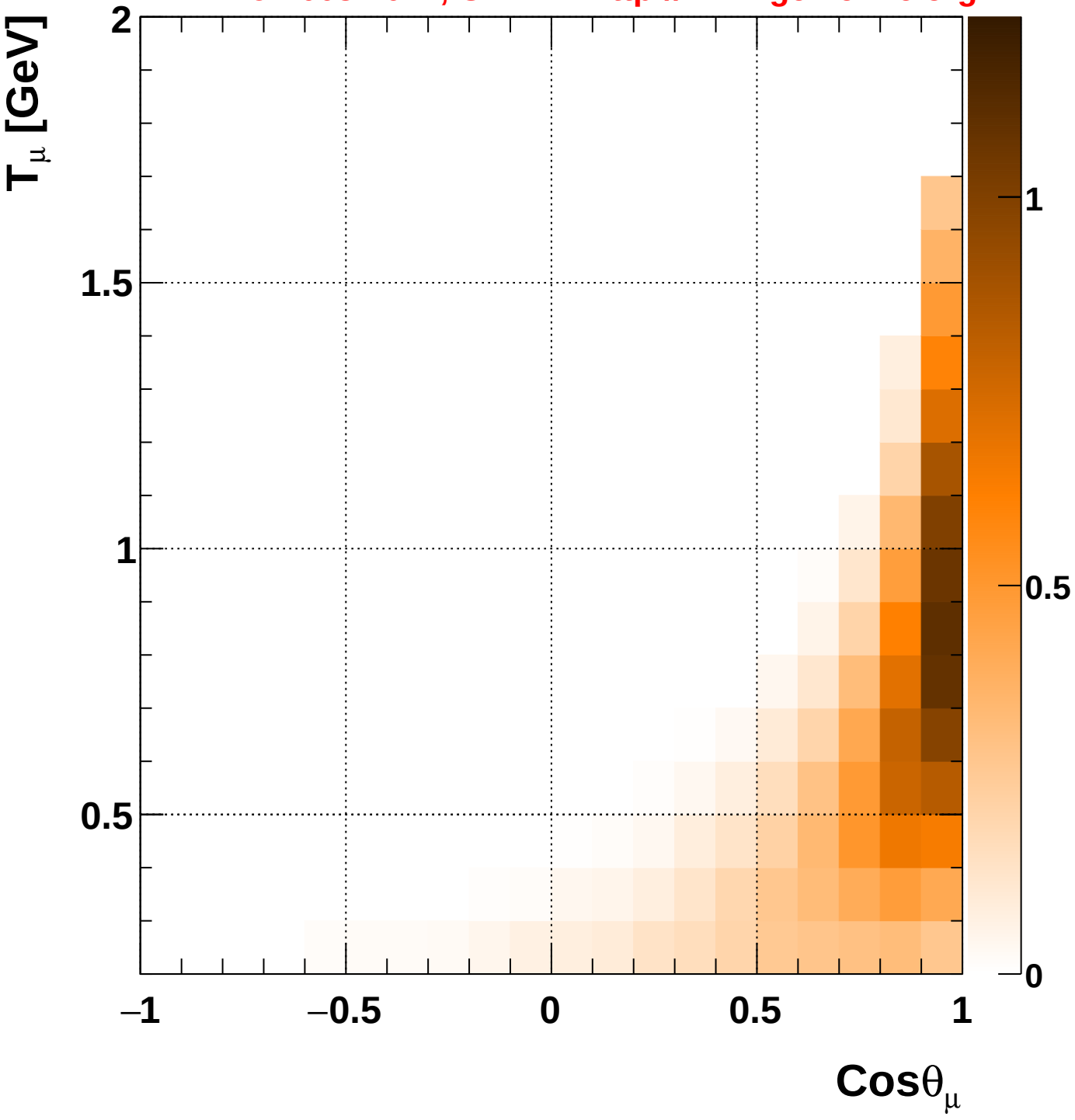

Cosθμ ∈ [0.9; 1]
∂²σ(νμ CC 0π)/∂ Cosθμ /∂ Tμ [10⁻³⁸ cm²/GeV/n]
Tμ [GeV]
miniboone_nuccqe_2010
trunk:G16_01b:miniboone_fhc χ² = 95.8/18 DoF
trunk:GlobalFit:miniboone_fhc χ² = 15.3/18 DoF

Dataset:
miniboone_nubarccqe_2013

Models:
trunk/G16_01b χ^2 = 50.4 / 78 DoF
trunk/GlobalFit χ^2 = 36.2 / 78 DoF

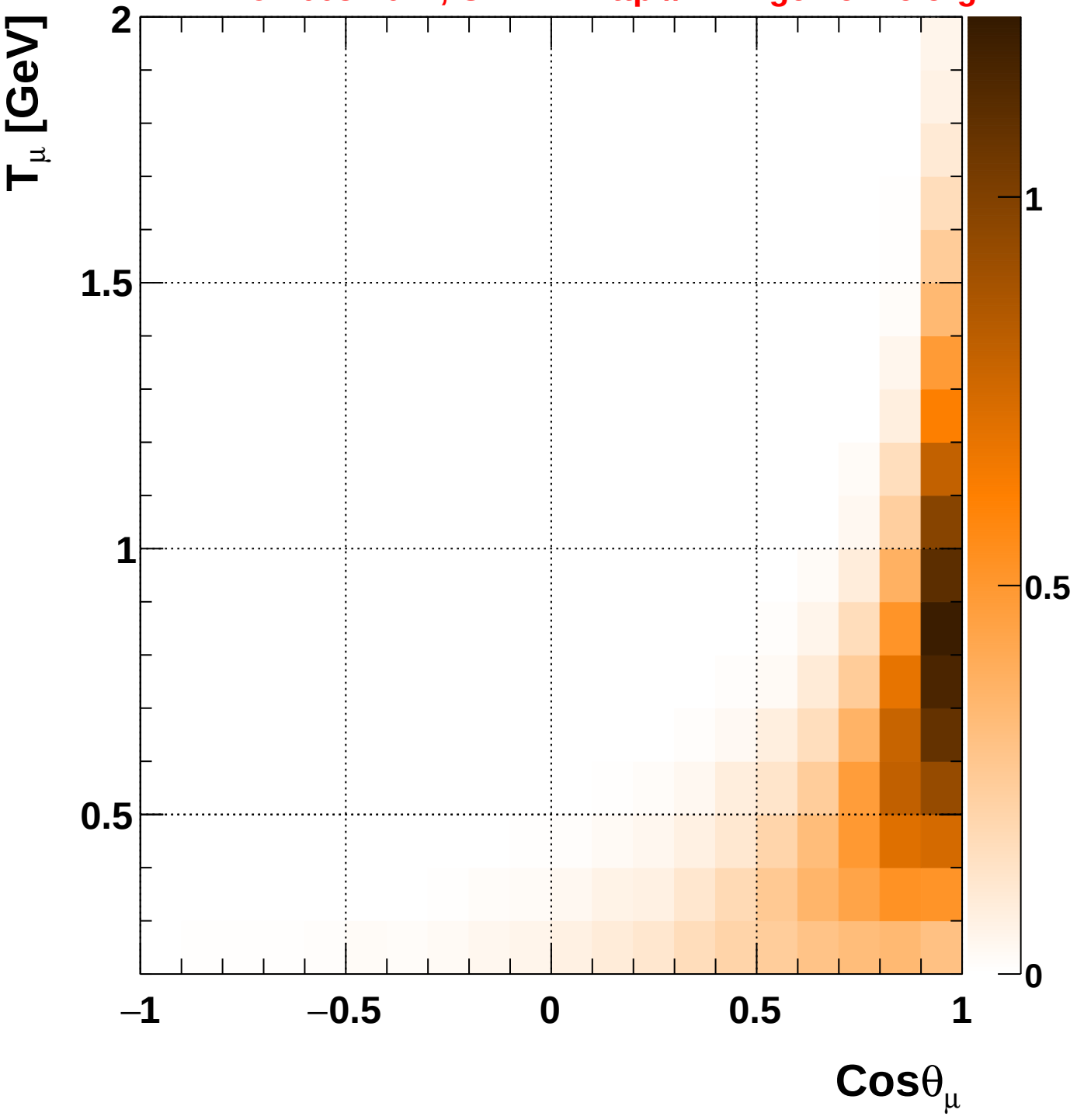
Plot:
$\partial^2\sigma(\overline{\nu}_\mu$ **CC** $0\pi)/\partial$ **Cos**θ_μ/∂ T_μ

2017/04/12 12:16:58



$\partial^2\sigma(\overline{\nu}_\mu$ CC $0\pi)/\partial\ \mathrm{Cos}\theta_\mu/\partial\ T_\mu$ [10^{-38} cm^2/GeV/n]

Data: miniboone_nubarccqe_2013



$\partial^2\sigma(\overline{\nu}_\mu$ CC $0\pi)/\partial$ Cosθ_μ/∂ T_μ [10^{-38} cm^2/GeV/n]

Pred: trunk:G16_01b:miniboone_rhc

miniboone_nubarccqe_2013

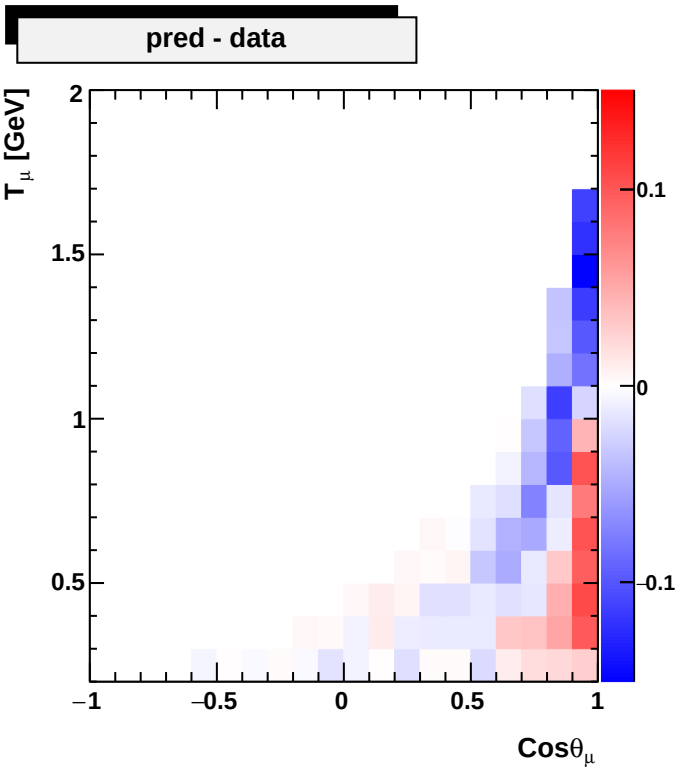
VS

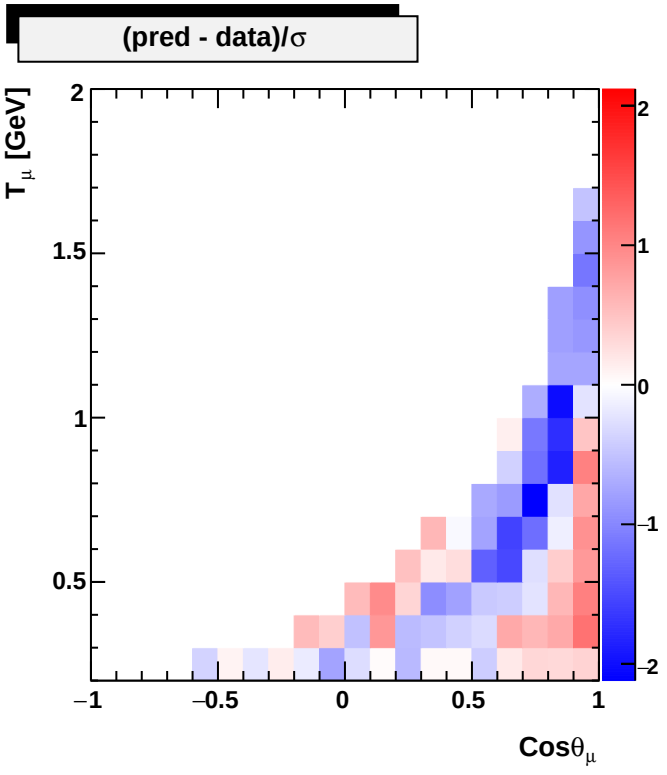
trunk:G16_01b:miniboone_rhc

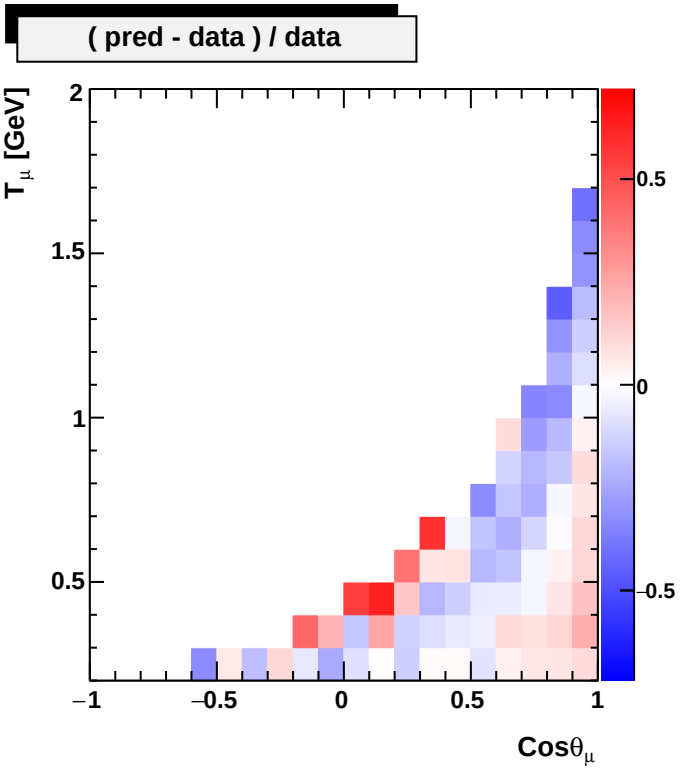
$\partial^2\sigma(\overline{\nu}_\mu$ **CC 0**π**)/**∂ **Cos**θ_μ**/**∂ T_μ

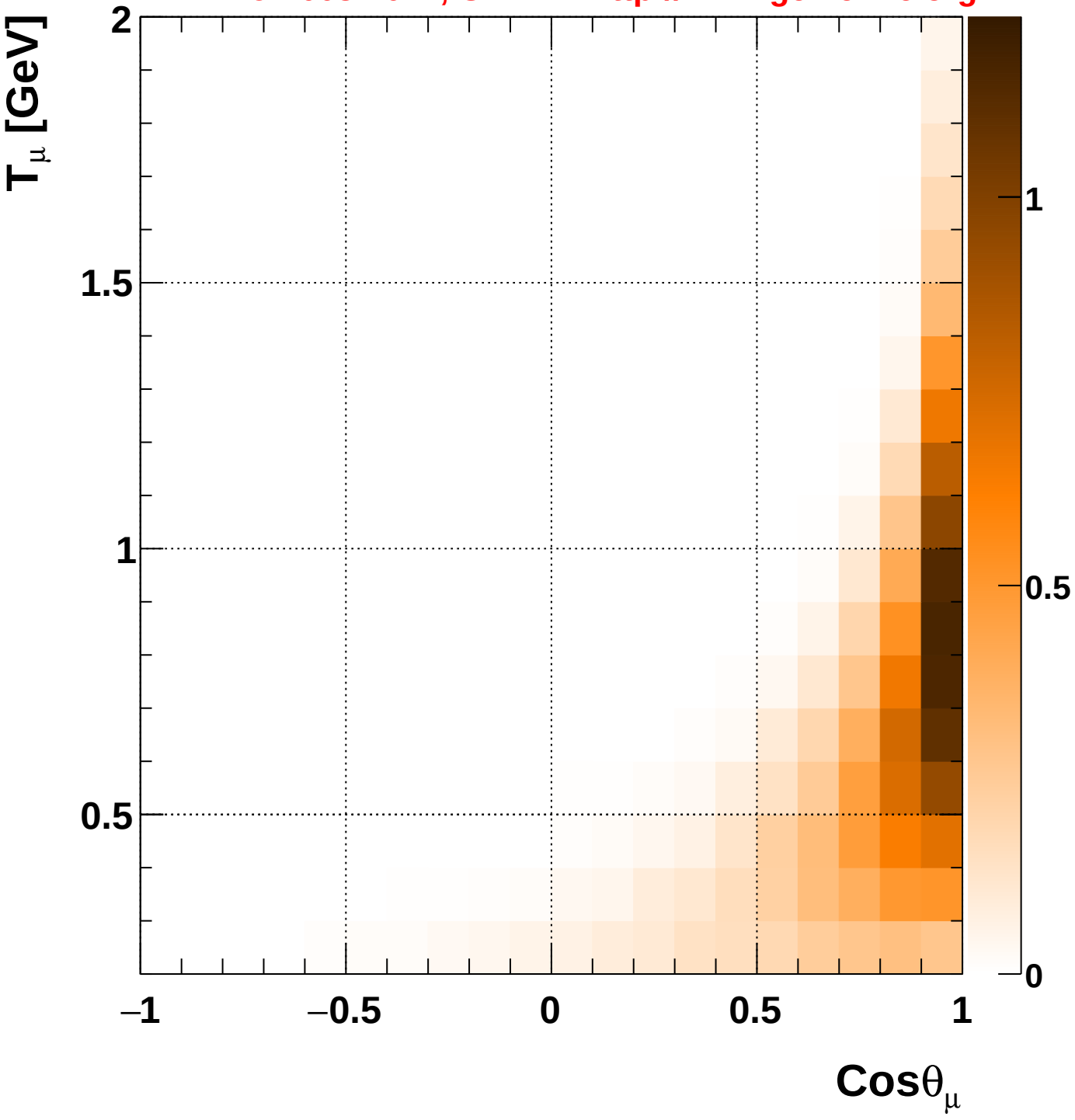
[10^{-38} **cm**^{2}**/GeV/n]**

χ^2 **= 50.4044/78 DoF**









$\partial^2\sigma(\overline{\nu}_\mu$ CC $0\pi)/\partial$ Cosθ_μ/∂ T_μ [10^{-38} cm^2/GeV/n]

Pred: trunk:GlobalFit:miniboone_rhc

miniboone_nubarccqe_2013

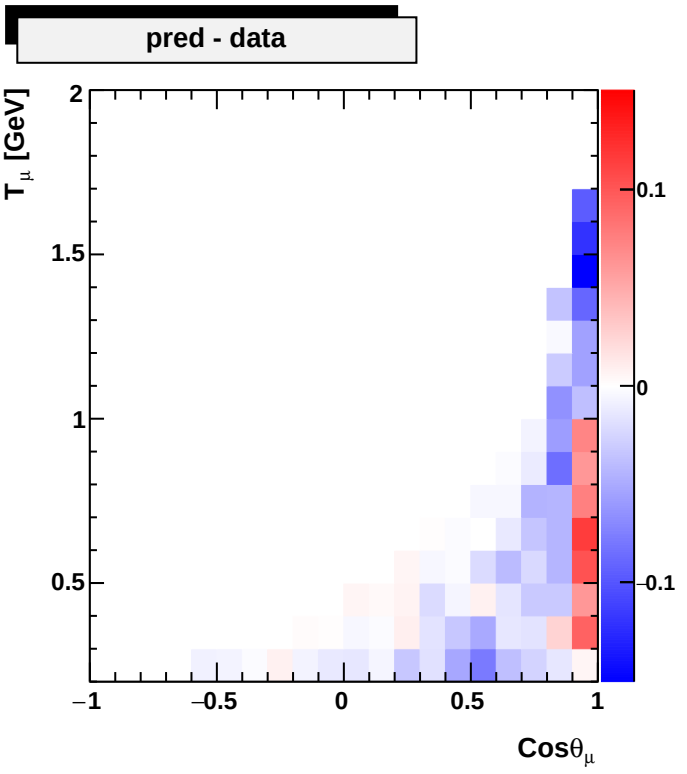
VS

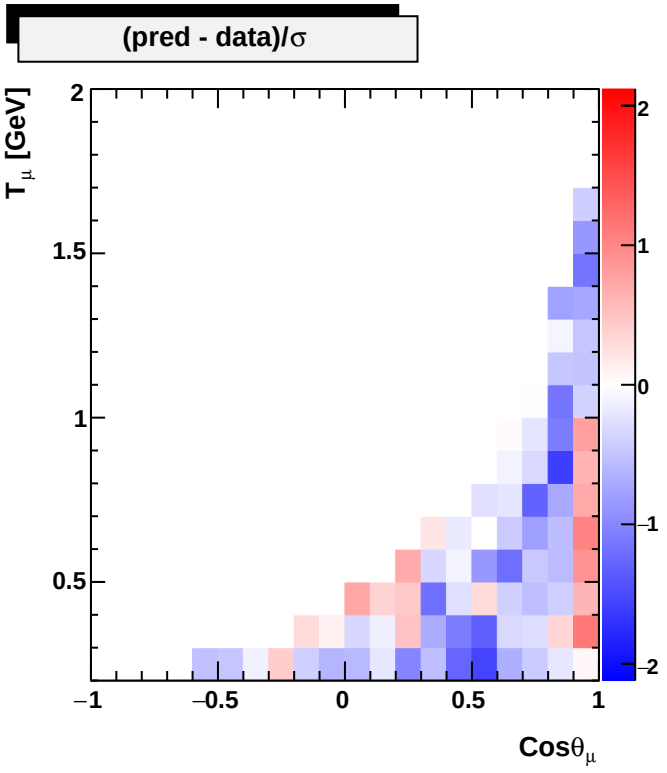
trunk:GlobalFit:miniboone_rhc

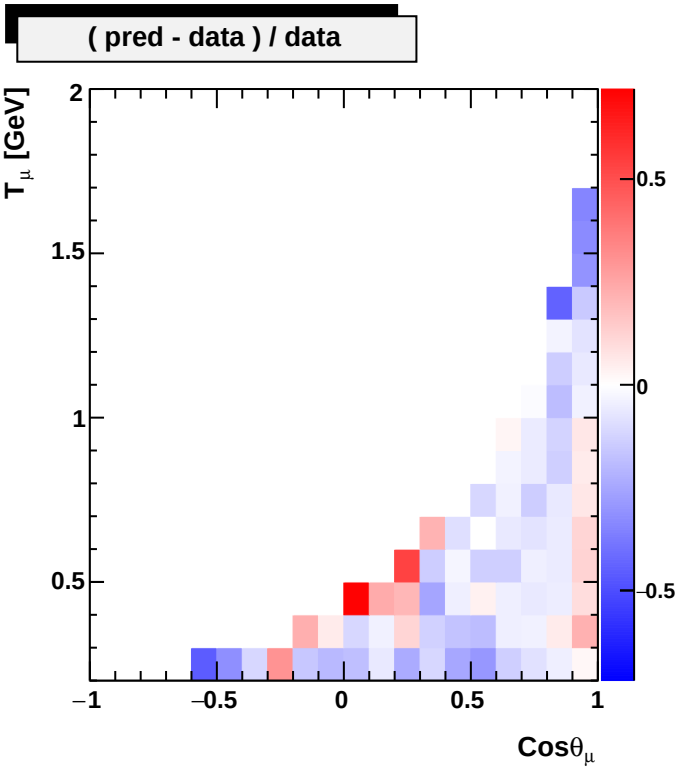
$\partial^2\sigma(\overline{\nu}_\mu$ **CC 0**π**)/**∂ **Cos**θ_μ**/**∂ **T**$_\mu$

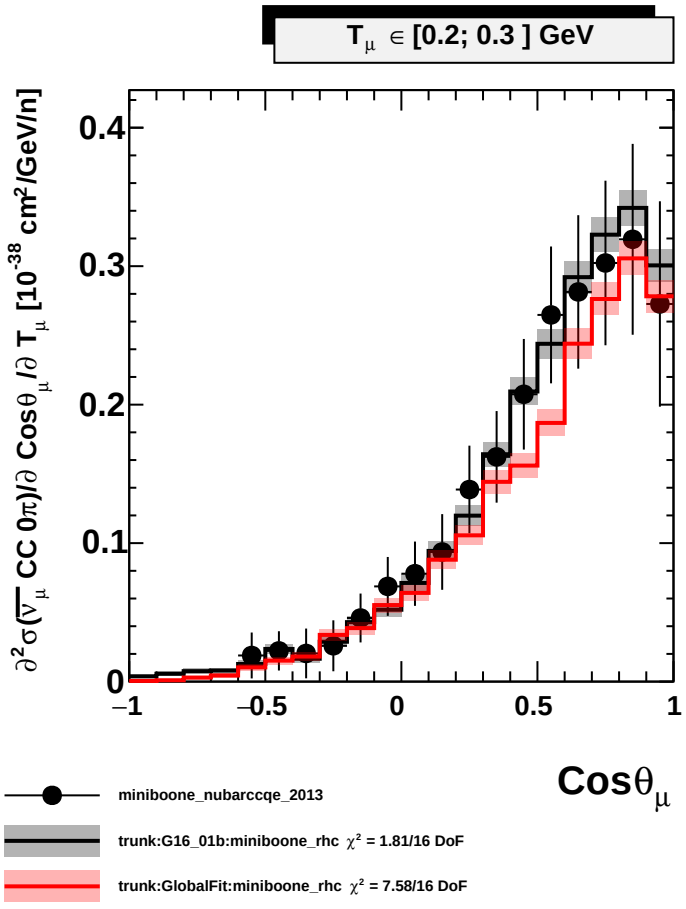
[10^{-38} **cm**^{2}**/GeV/n]**

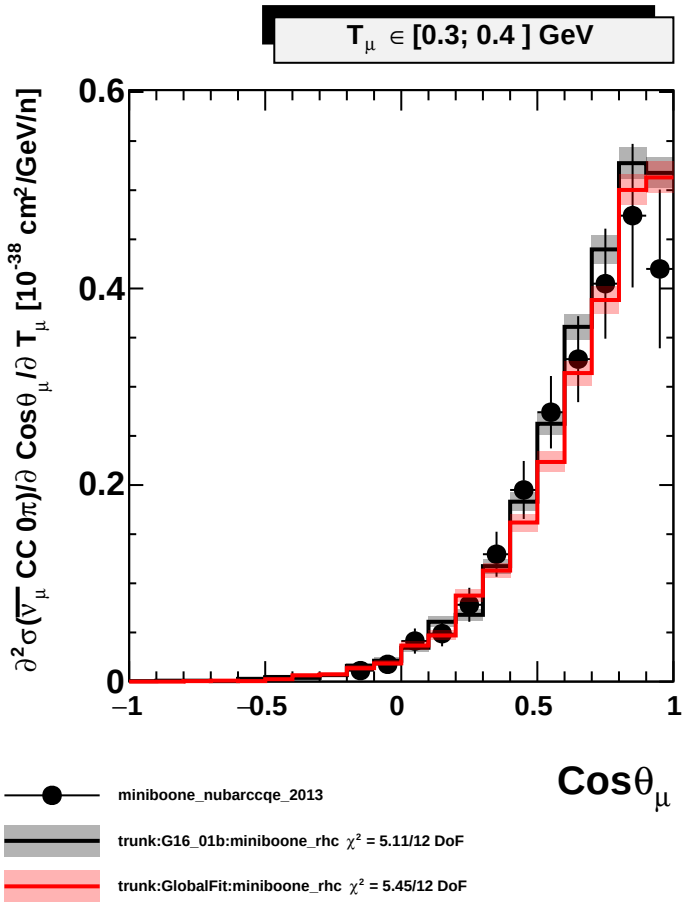
χ^2 **= 36.1633/78 DoF**

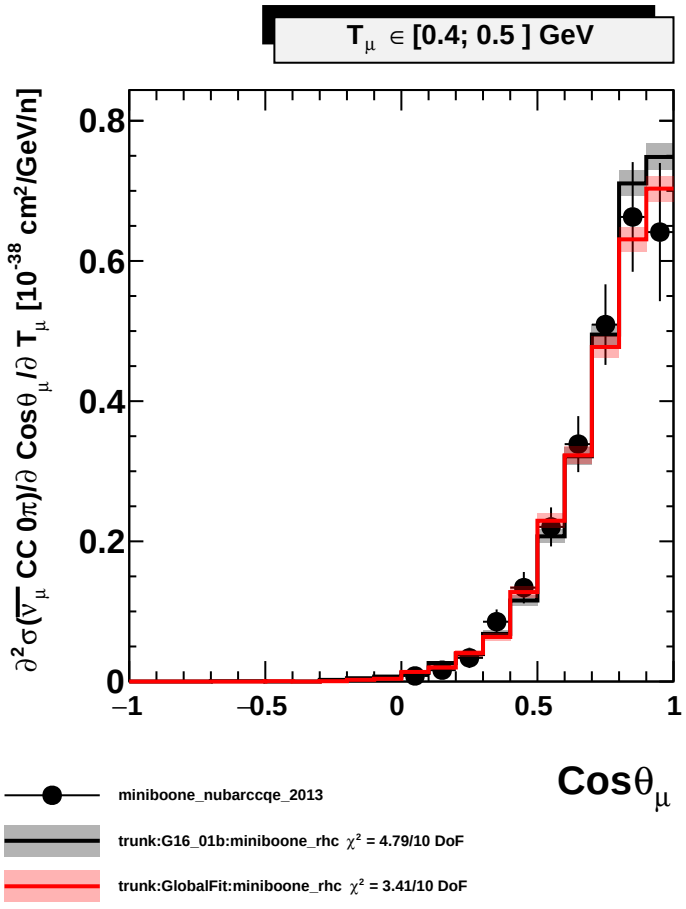


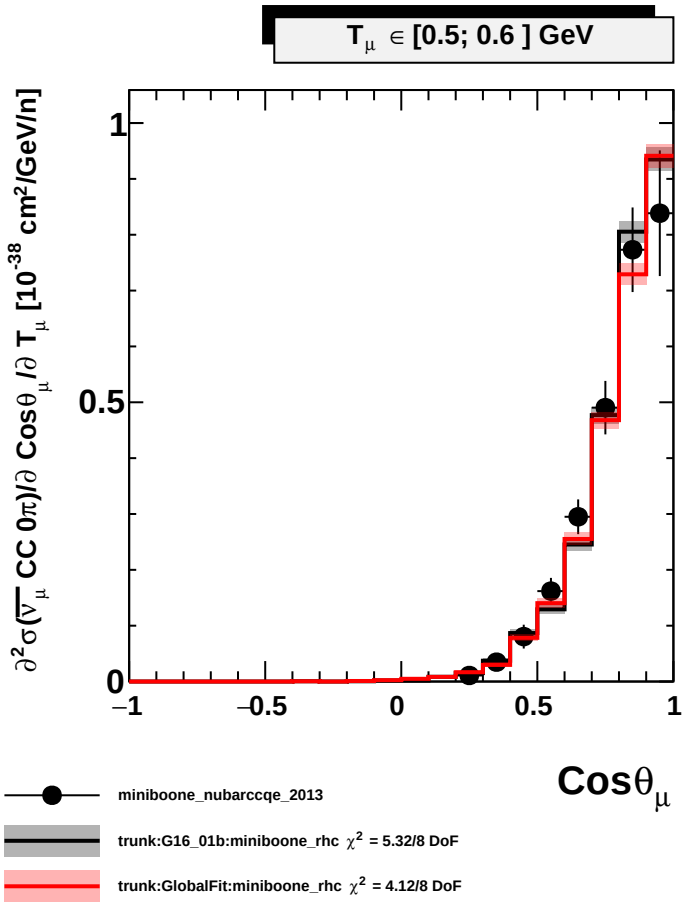


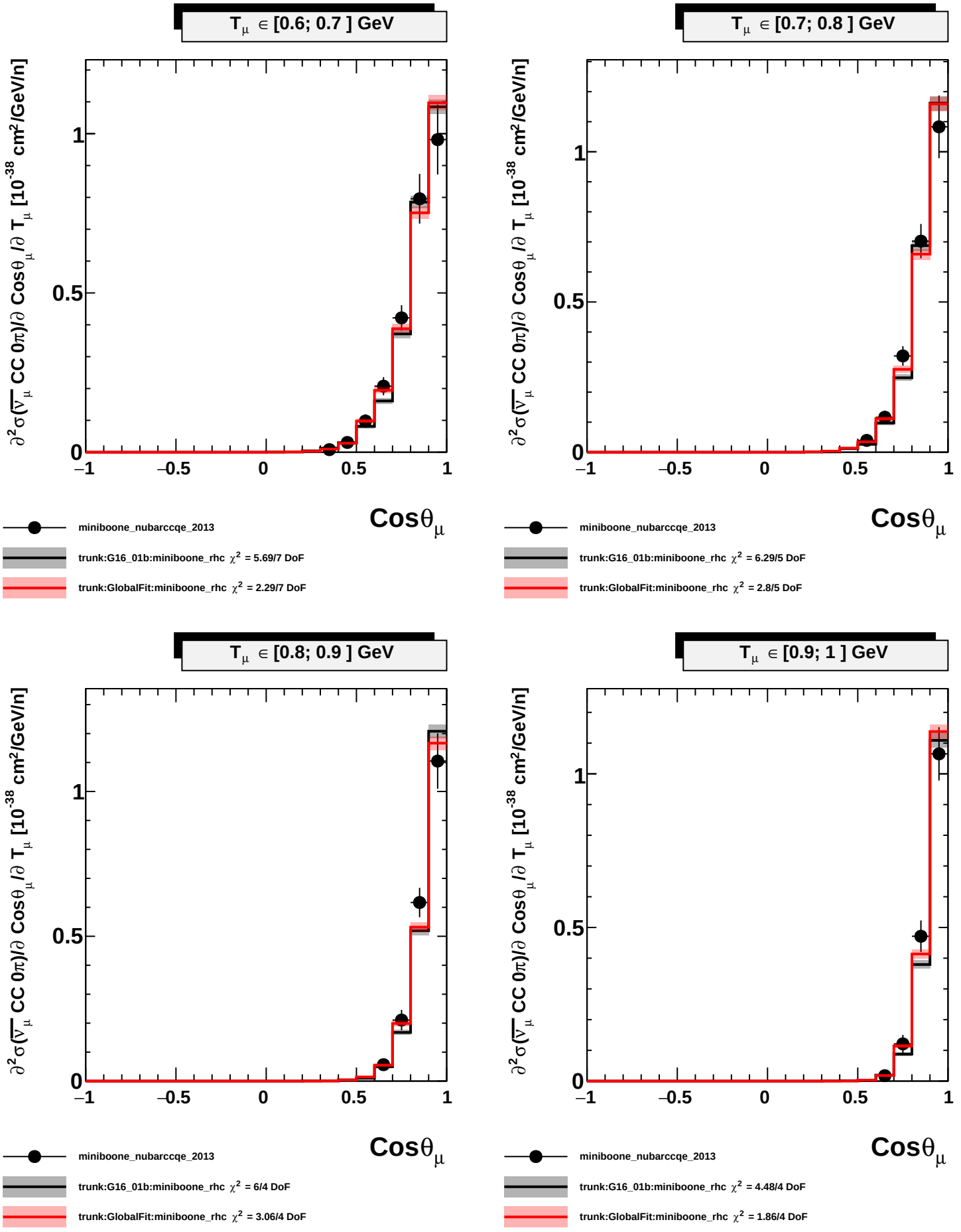


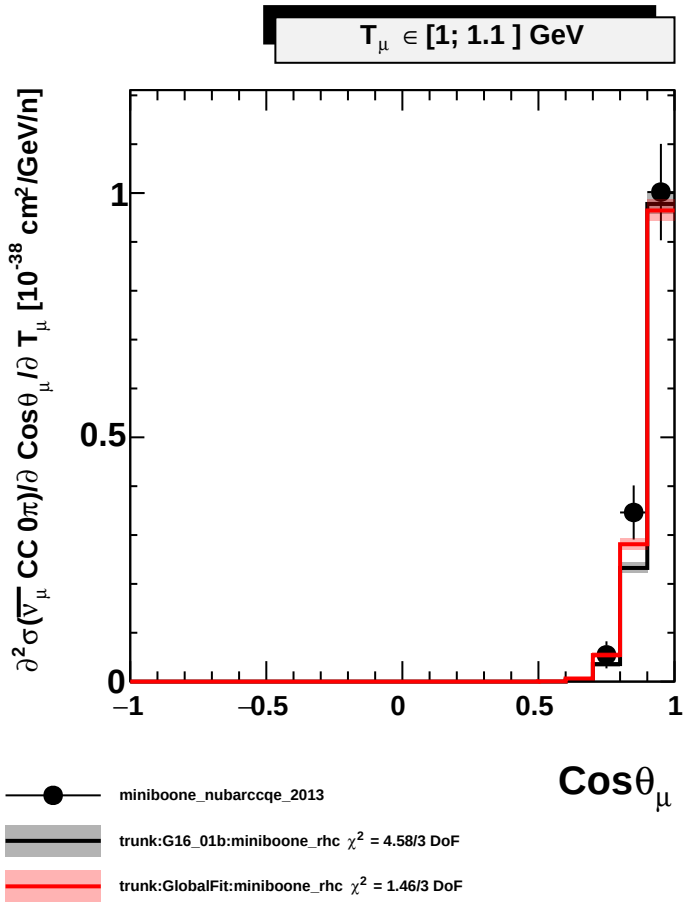

$T_\mu \in$ [0.2; 0.3] GeV
$\partial^2\sigma(\overline{\nu}_\mu$ CC 0π)/∂ Cosθ /∂ T_{μ^-} [10^{-38} cm^2/GeV/n]
Cosθ_μ
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ^2 = 1.81/16 DoF
trunk:GlobalFit:miniboone_rhc χ^2 = 7.58/16 DoF

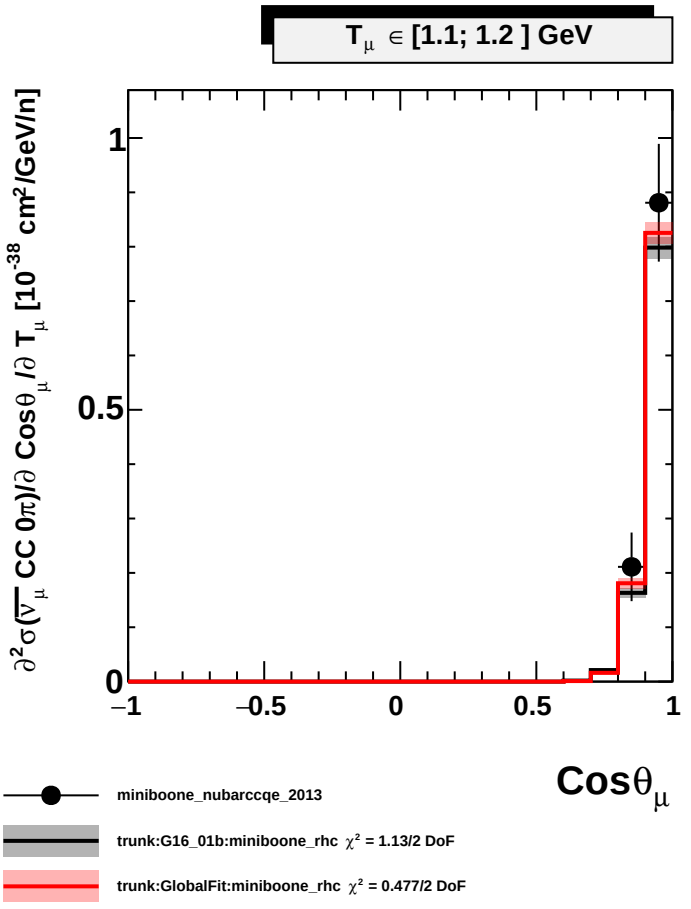

$T_\mu \in$ [0.3; 0.4] GeV
$\partial^2\sigma(\overline{\nu}_\mu$ CC 0π)/∂ Cosθ /∂ T_{μ^-} [10^{-38} cm^2/GeV/n]
Cosθ_μ
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ^2 = 5.11/12 DoF
trunk:GlobalFit:miniboone_rhc χ^2 = 5.45/12 DoF

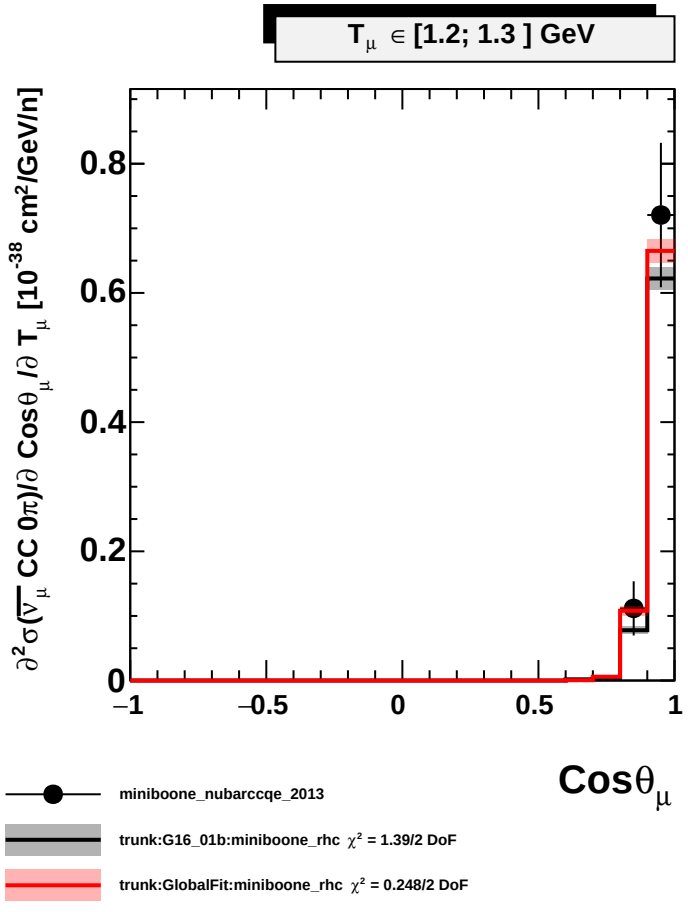

$T_\mu \in$ [0.4; 0.5] GeV
$\partial^2\sigma(\overline{\nu}_\mu$ CC 0π)/∂ Cosθ /∂ T_{μ^-} [10^{-38} cm^2/GeV/n]
Cosθ_μ
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ^2 = 4.79/10 DoF
trunk:GlobalFit:miniboone_rhc χ^2 = 3.41/10 DoF

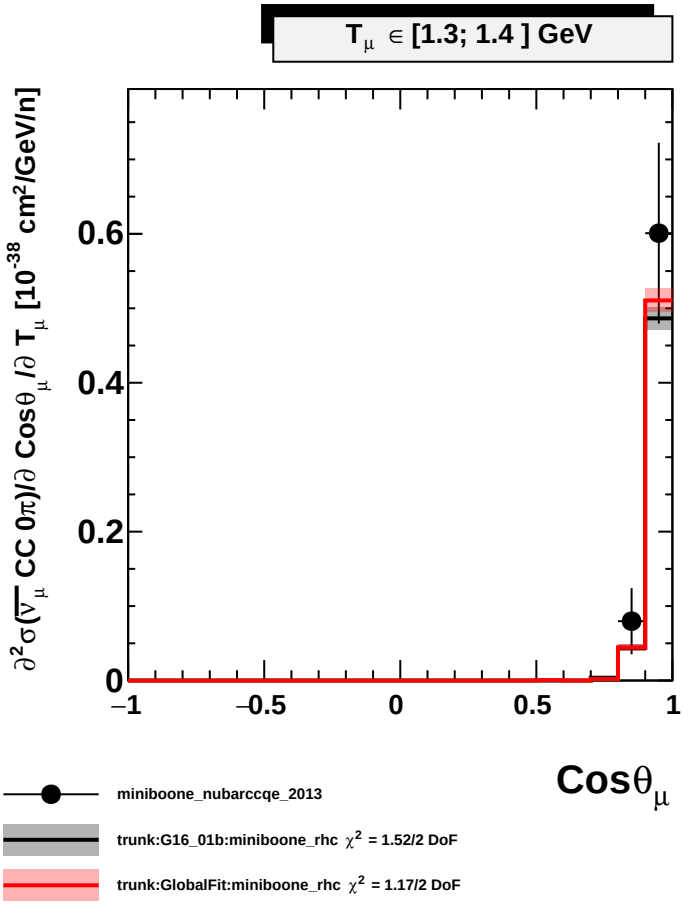

$T_\mu \in$ [0.5; 0.6] GeV
$\partial^2\sigma(\overline{\nu}_\mu$ CC 0π)/∂ Cosθ /∂ T_{μ^-} [10^{-38} cm^2/GeV/n]
Cosθ_μ
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ^2 = 5.32/8 DoF
trunk:GlobalFit:miniboone_rhc χ^2 = 4.12/8 DoF

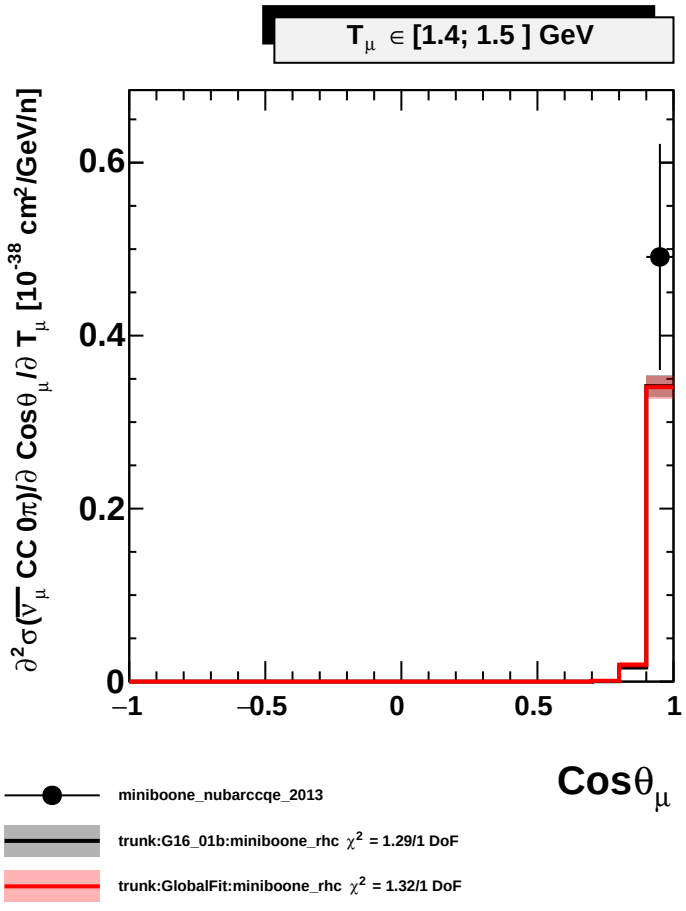

$T_\mu \in$ [0.6; 0.7] GeV
$\partial^2\sigma(\overline{\nu}_\mu$ CC 0π)/∂ Cosθ /∂ $T_{\mu^-\pi^+}$ [10^{-38} cm^2/GeV/n]
Cosθ_μ
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ^2 = 5.69/7 DoF
trunk:GlobalFit:miniboone_rhc χ^2 = 2.29/7 DoF
$T_\mu \in$ [0.7; 0.8] GeV
$\partial^2\sigma(\overline{\nu}_\mu$ CC 0π)/∂ Cosθ /∂ $T_{\mu^-\pi^+}$ [10^{-38} cm^2/GeV/n]
Cosθ_μ
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ^2 = 6.29/5 DoF
trunk:GlobalFit:miniboone_rhc χ^2 = 2.8/5 DoF
$T_\mu \in$ [0.8; 0.9] GeV
$\partial^2\sigma(\overline{\nu}_\mu$ CC 0π)/∂ Cosθ /∂ $T_{\mu^-\pi^+}$ [10^{-38} cm^2/GeV/n]
Cosθ_μ
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ^2 = 6/4 DoF
trunk:GlobalFit:miniboone_rhc χ^2 = 3.06/4 DoF
$T_\mu \in$ [0.9; 1] GeV
$\partial^2\sigma(\overline{\nu}_\mu$ CC 0π)/∂ Cosθ /∂ $T_{\mu^-\pi^+}$ [10^{-38} cm^2/GeV/n]
Cosθ_μ
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ^2 = 4.48/4 DoF
trunk:GlobalFit:miniboone_rhc χ^2 = 1.86/4 DoF

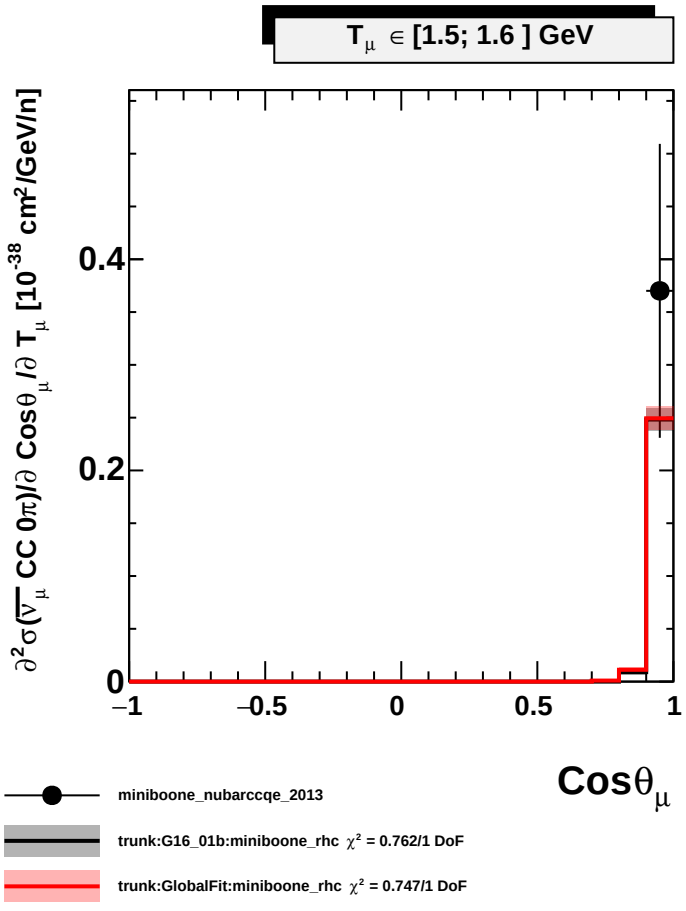

$T_\mu \in$ [1; 1.1] GeV
$\partial^2\sigma(\overline{\nu}_\mu$ CC 0π)/∂ Cosθ_μ /∂ T_μ [10^{-38} cm^2/GeV/n]
Cosθ_μ
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ^2 = 4.58/3 DoF
trunk:GlobalFit:miniboone_rhc χ^2 = 1.46/3 DoF

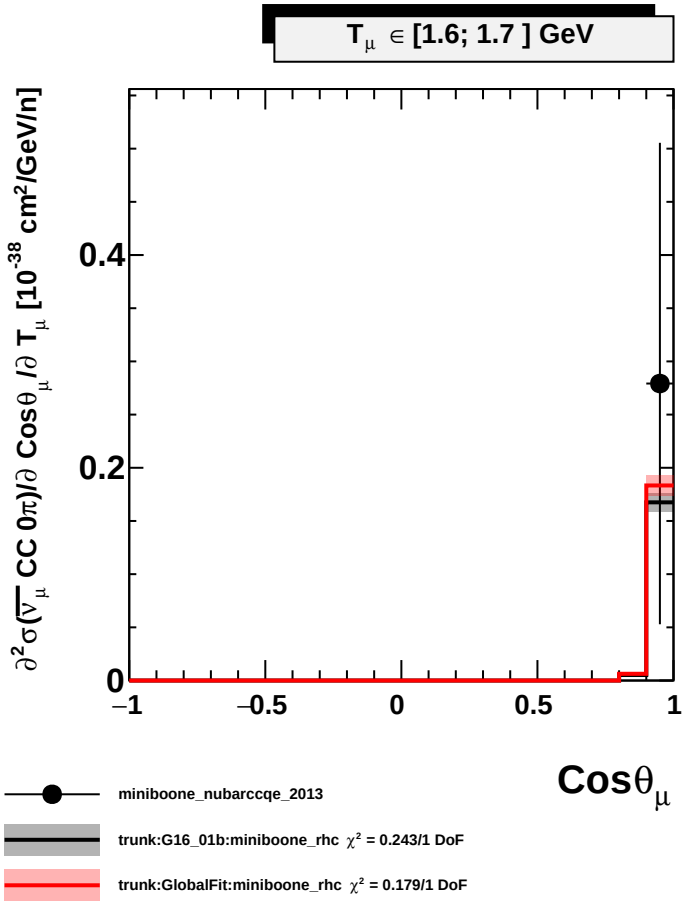

$T_\mu \in$ [1.1; 1.2] GeV
$\partial^2\sigma(\overline{\nu}_\mu$ CC 0π)/∂ Cosθ_μ /∂ T_μ [10^{-38} cm^2/GeV/n]
Cosθ_μ
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ^2 = 1.13/2 DoF
trunk:GlobalFit:miniboone_rhc χ^2 = 0.477/2 DoF

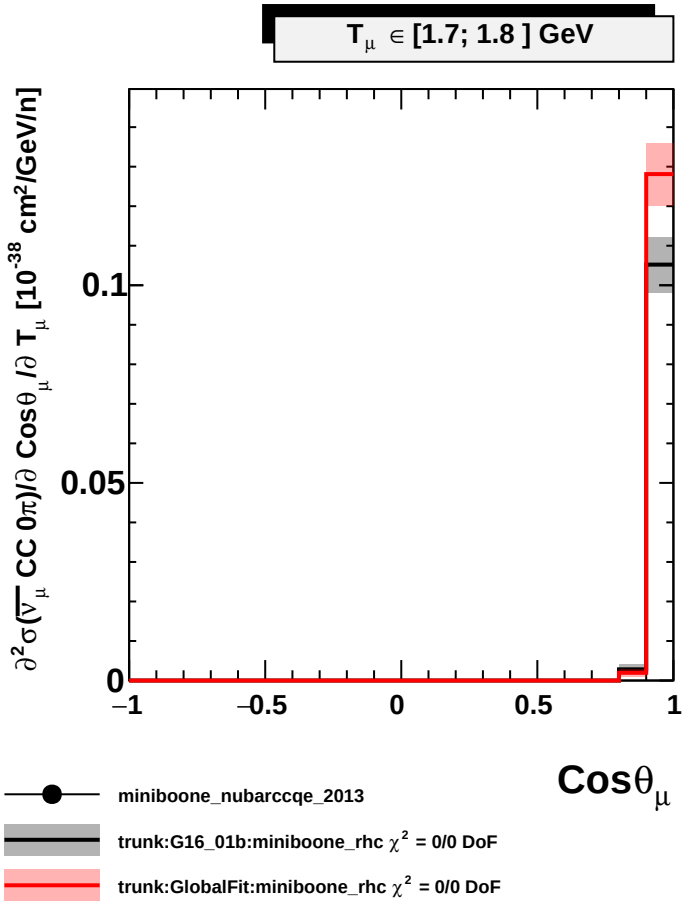

$T_\mu \in$ [1.2; 1.3] GeV
$\partial^2\sigma(\overline{\nu}_\mu$ CC 0π)/∂ Cosθ_μ /∂ T_μ [10^{-38} cm^2/GeV/n]
Cosθ_μ
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ^2 = 1.39/2 DoF
trunk:GlobalFit:miniboone_rhc χ^2 = 0.248/2 DoF

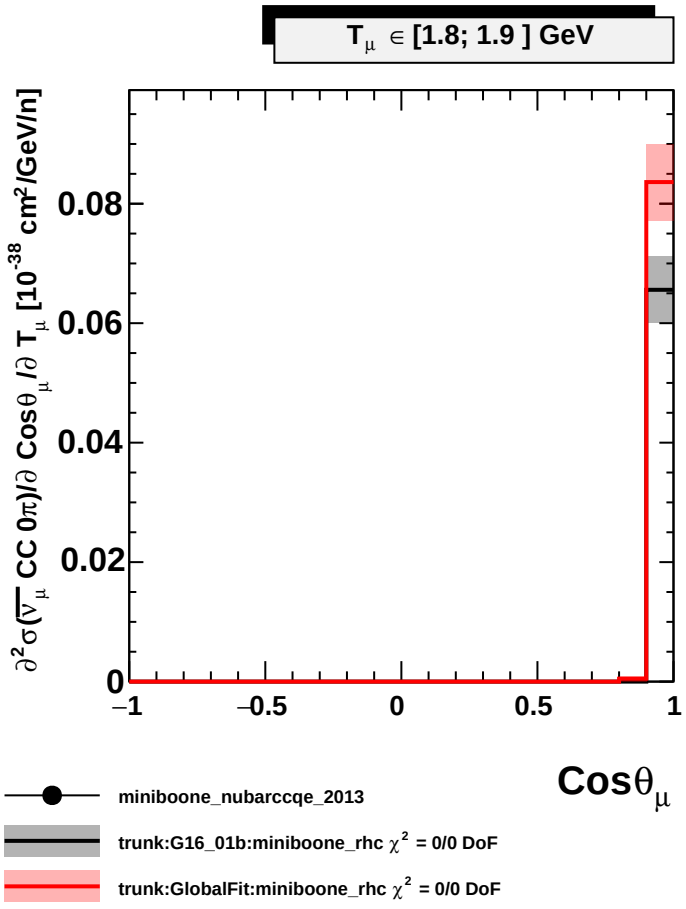

$T_\mu \in$ [1.3; 1.4] GeV
$\partial^2\sigma(\overline{\nu}_\mu$ CC 0π)/∂ Cosθ_μ /∂ T_μ [10^{-38} cm^2/GeV/n]
Cosθ_μ
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ^2 = 1.52/2 DoF
trunk:GlobalFit:miniboone_rhc χ^2 = 1.17/2 DoF

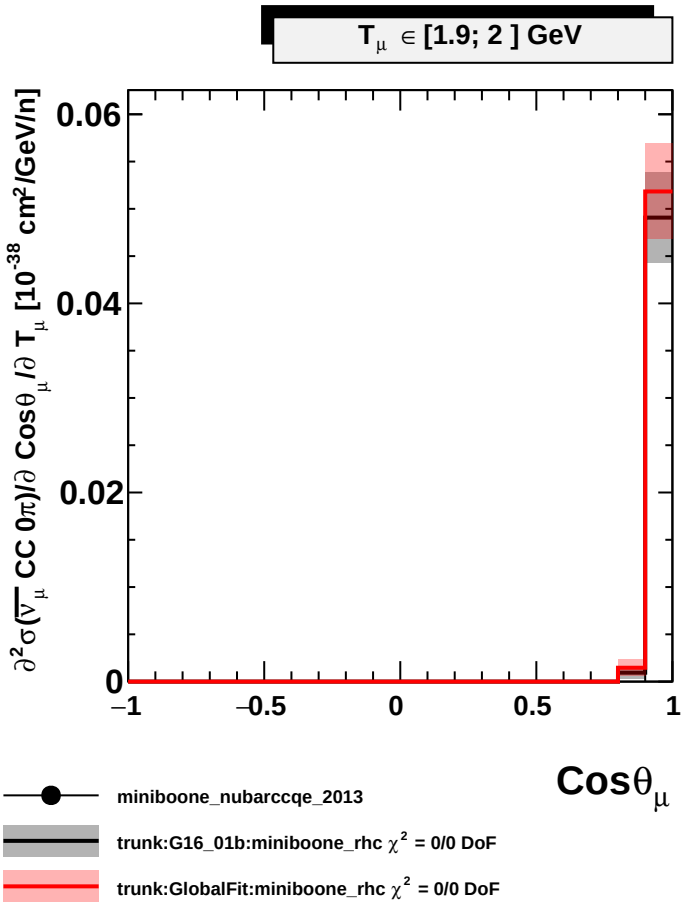

$T_\mu \in$ [1.4; 1.5] GeV
$\partial^2\sigma(\overline{\nu}_\mu$ CC 0π)/∂ Cosθ /∂ $T_{\mu^-\pi^+}$ [10^{-38} cm^2/GeV/n]
0.6
0.4
0.2
0
−1
−0.5
0
0.5
1
Cosθ_μ
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ^2 = 1.29/1 DoF
trunk:GlobalFit:miniboone_rhc χ^2 = 1.32/1 DoF

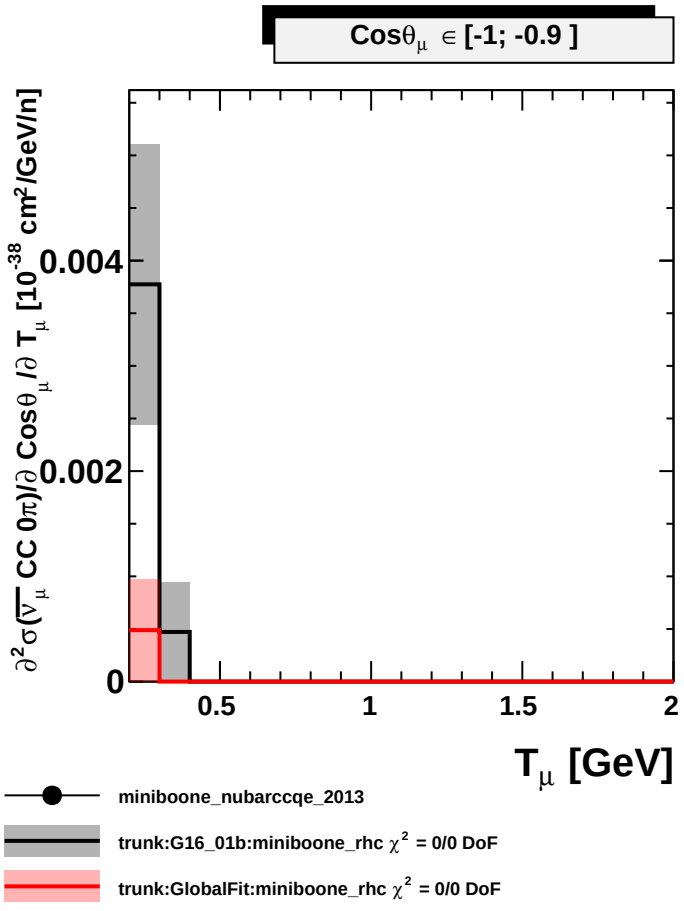

$T_\mu \in$ [1.5; 1.6] GeV
$\partial^2\sigma(\overline{\nu}_\mu$ CC 0π)/∂ Cosθ /∂ $T_{\mu^-\pi^+}$ [10^{-38} cm^2/GeV/n]
0.4
0.2
0
−1
−0.5
0
0.5
1
Cosθ_μ
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ^2 = 0.762/1 DoF
trunk:GlobalFit:miniboone_rhc χ^2 = 0.747/1 DoF

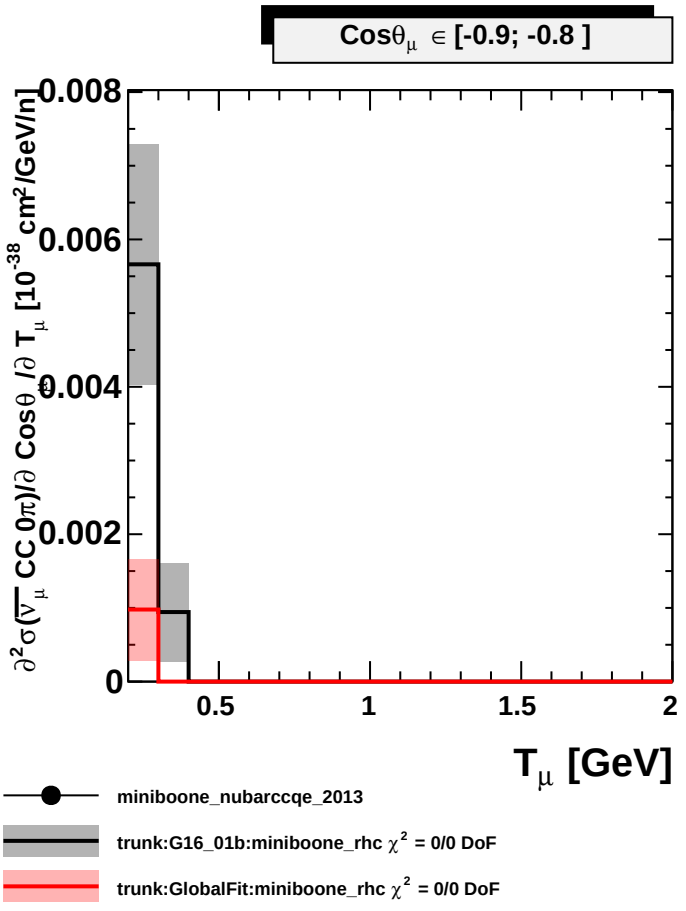

$T_\mu \in$ [1.6; 1.7] GeV
$\partial^2\sigma(\overline{\nu}_\mu$ CC 0π)/∂ Cosθ /∂ $T_{\mu^-\pi^+}$ [10^{-38} cm^2/GeV/n]
0.4
0.2
0
−1
−0.5
0
0.5
1
Cosθ_μ
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ^2 = 0.243/1 DoF
trunk:GlobalFit:miniboone_rhc χ^2 = 0.179/1 DoF

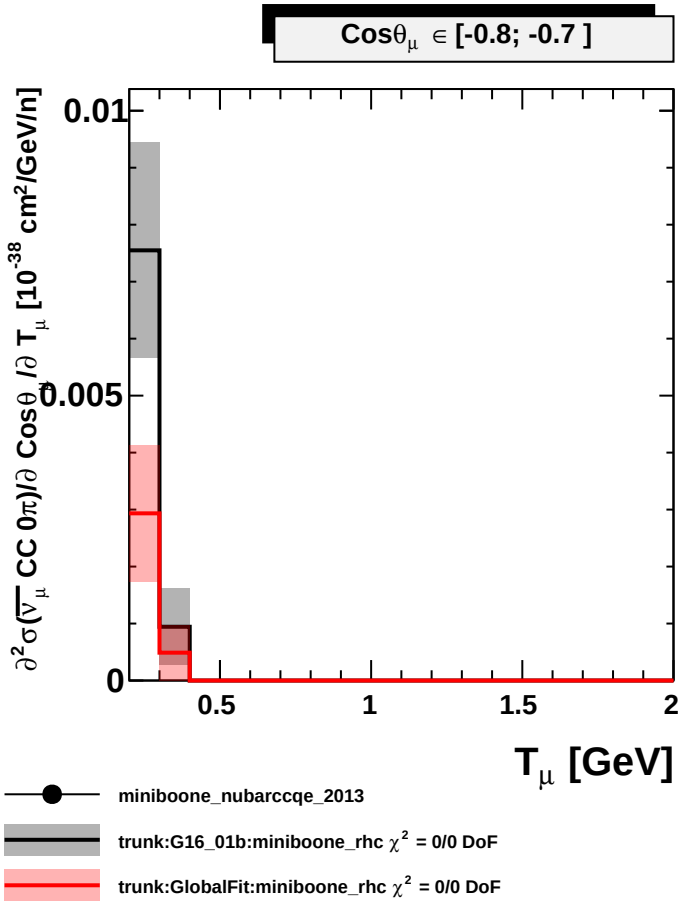

$T_\mu \in$ [1.7; 1.8] GeV
$\partial^2\sigma(\overline{\nu}_\mu$ CC 0π)/∂ Cosθ /∂ $T_{\mu^-\pi^+}$ [10^{-38} cm^2/GeV/n]
0.1
0.05
0
−1
−0.5
0
0.5
1
Cosθ_μ
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ^2 = 0/0 DoF
trunk:GlobalFit:miniboone_rhc χ^2 = 0/0 DoF

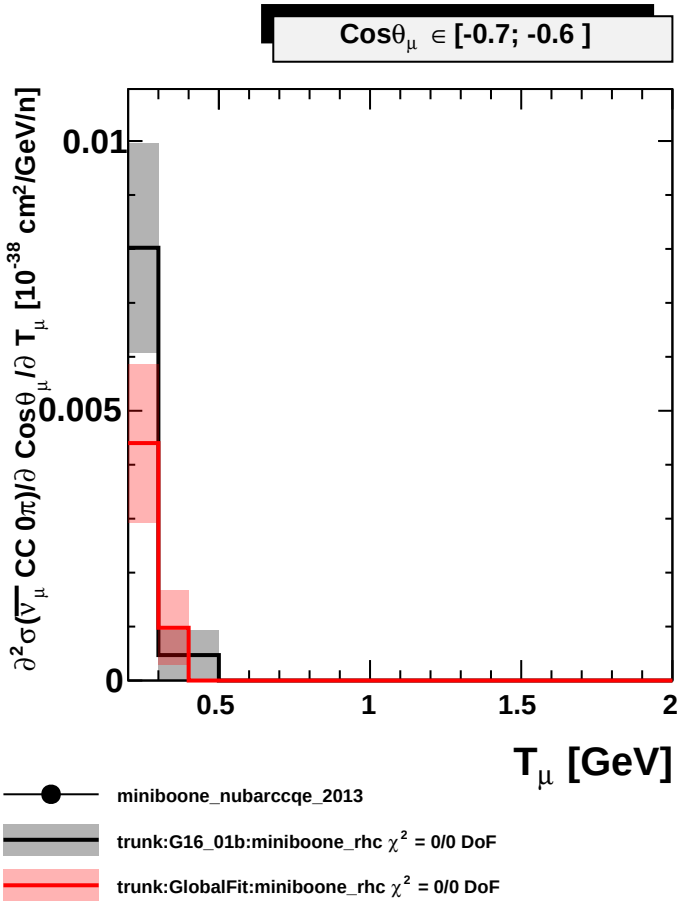

$T_\mu \in$ [1.8; 1.9] GeV
$\partial^2\sigma(\overline{\nu}_\mu$ CC 0π)/∂ Cosθ_μ /∂ T_μ [10^{-38} cm^2/GeV/n]
0.08
0.06
0.04
0.02
0
−1
−0.5
0
0.5
1
Cosθ_μ
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ^2 = 0/0 DoF
trunk:GlobalFit:miniboone_rhc χ^2 = 0/0 DoF

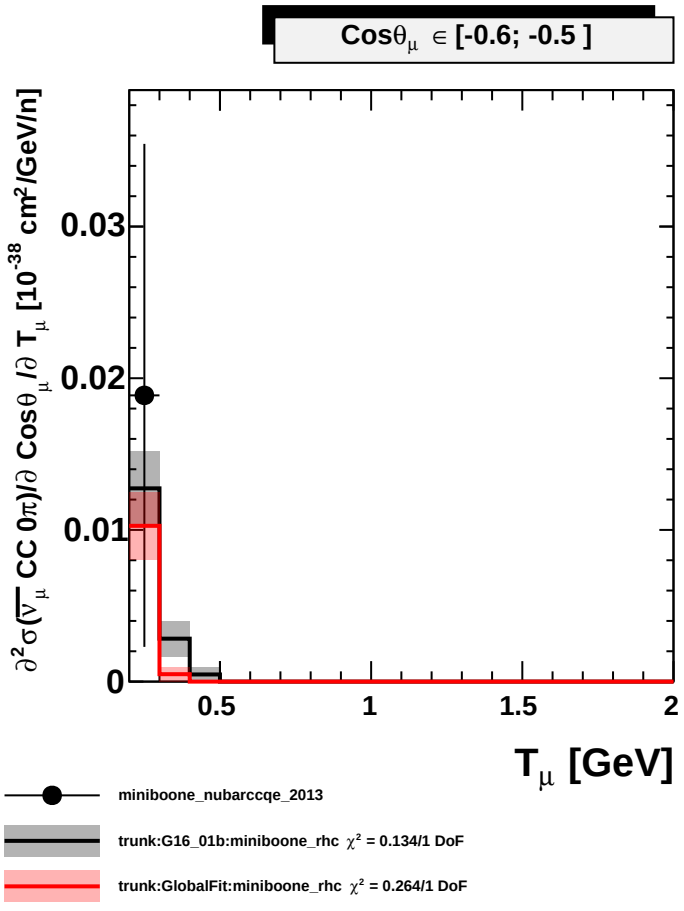

$T_\mu \in$ [1.9; 2] GeV
$\partial^2\sigma(\overline{\nu}_\mu$ CC 0π)/∂ Cosθ_μ /∂ T_μ [10^{-38} cm^2/GeV/n]
0.06
0.04
0.02
0
−1
−0.5
0
0.5
1
Cosθ_μ
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ^2 = 0/0 DoF
trunk:GlobalFit:miniboone_rhc χ^2 = 0/0 DoF

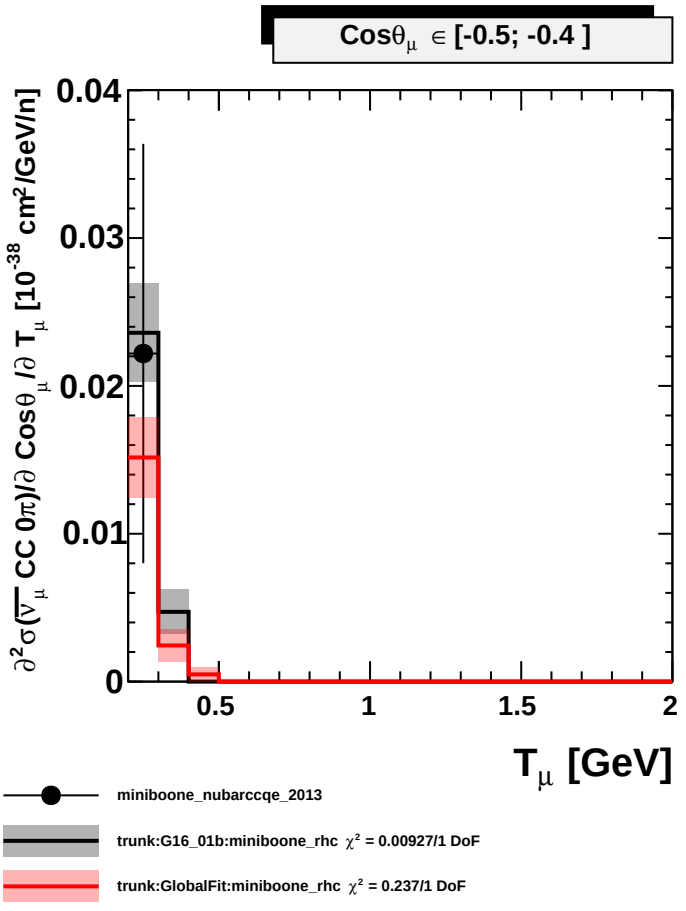

Cosθμ ∈ [-1; -0.9]
∂²σ(ν̄μ CC 0π)/∂ Cosθμ /∂ Tμ [10⁻³⁸ cm²/GeV/n]
0.004
0.002
0
0.5
1
1.5
2
Tμ [GeV]
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ² = 0/0 DoF
trunk:GlobalFit:miniboone_rhc χ² = 0/0 DoF

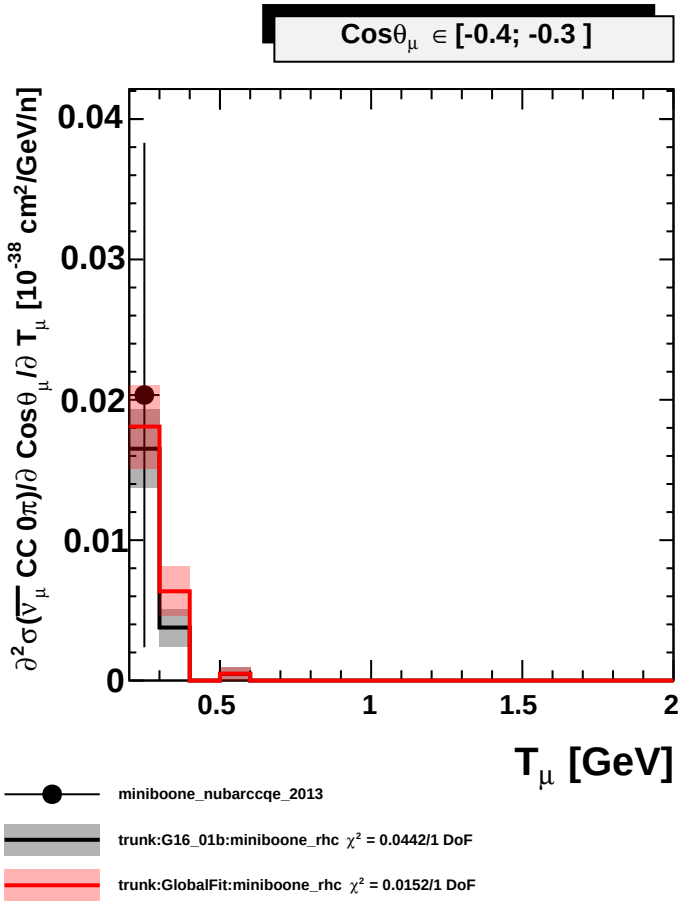

Cosθμ ∈ [-0.9; -0.8]
∂²σ(ν̄μ CC 0π)/∂ Cosθμ /∂ Tμ [10⁻³⁸ cm²/GeV/n]
0.008
0.006
0.004
0.002
0
0.5
1
1.5
2
Tμ [GeV]
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ² = 0/0 DoF
trunk:GlobalFit:miniboone_rhc χ² = 0/0 DoF

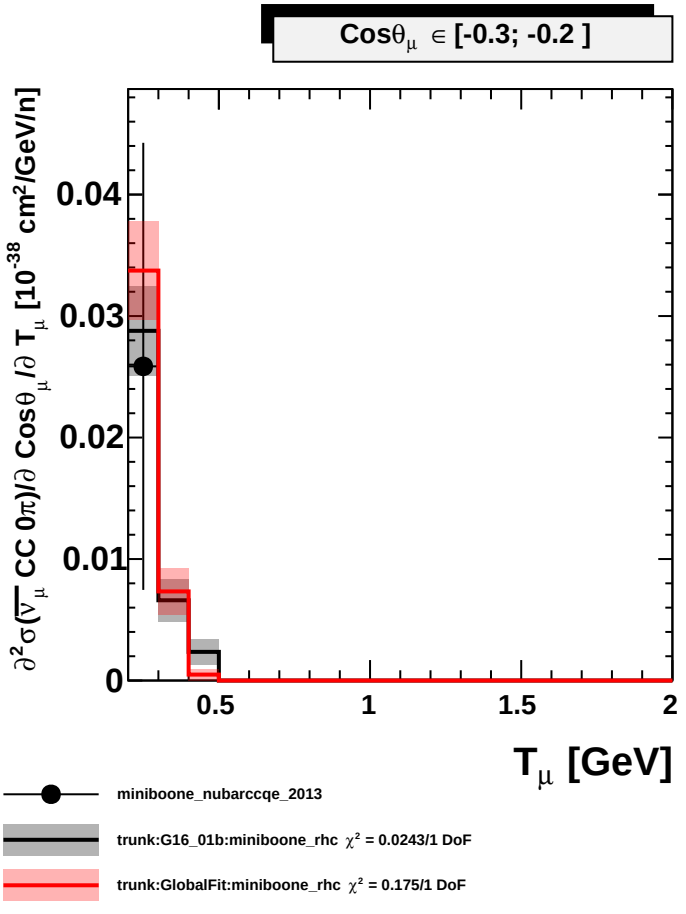

Cosθμ ∈ [-0.8; -0.7]
∂²σ(ν̄μ CC 0π)/∂ Cosθμ /∂ Tμ [10⁻³⁸ cm²/GeV/n]
0.01
0.005
0
0.5
1
1.5
2
Tμ [GeV]
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ² = 0/0 DoF
trunk:GlobalFit:miniboone_rhc χ² = 0/0 DoF

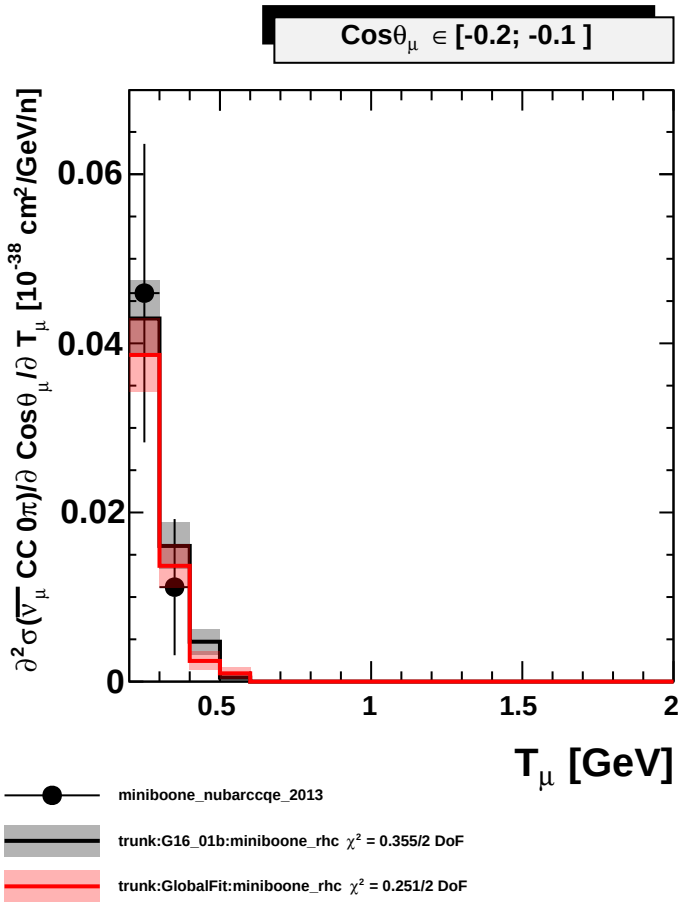

Cosθμ ∈ [-0.7; -0.6]
∂²σ(ν̄μ CC 0π)/∂ Cosθμ /∂ Tμ [10⁻³⁸ cm²/GeV/n]
0.01
0.005
0
0.5
1
1.5
2
Tμ [GeV]
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ² = 0/0 DoF
trunk:GlobalFit:miniboone_rhc χ² = 0/0 DoF

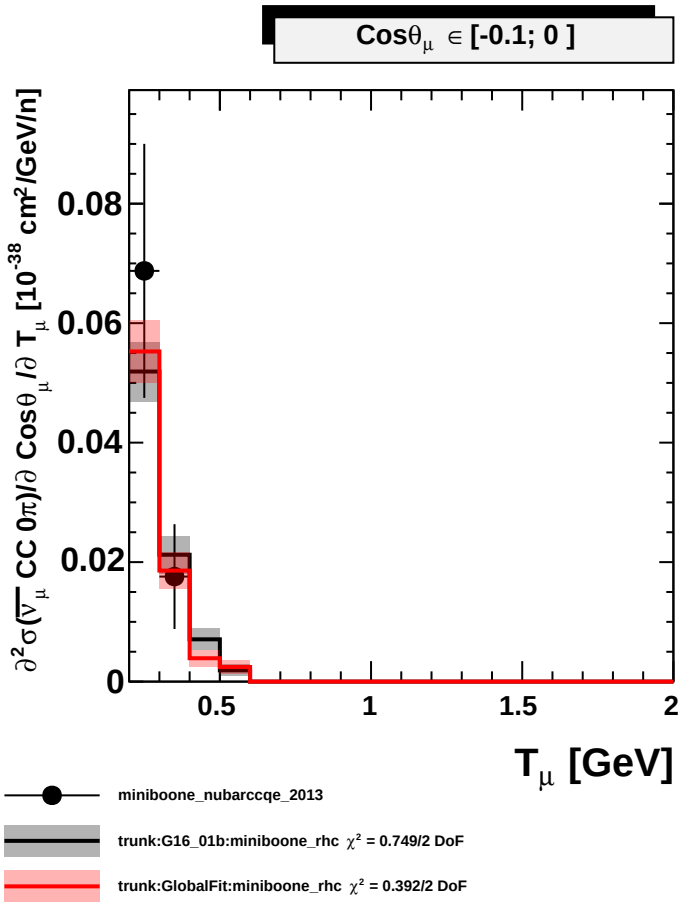

Cosθμ ∈ [-0.6; -0.5]
∂²σ(ν_μ CC 0π)/∂ Cosθ_μ /∂ T_μ [10⁻³⁸ cm²/GeV/n]
0
0.01
0.02
0.03
0.5
1
1.5
2
T_μ [GeV]
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ² = 0.134/1 DoF
trunk:GlobalFit:miniboone_rhc χ² = 0.264/1 DoF

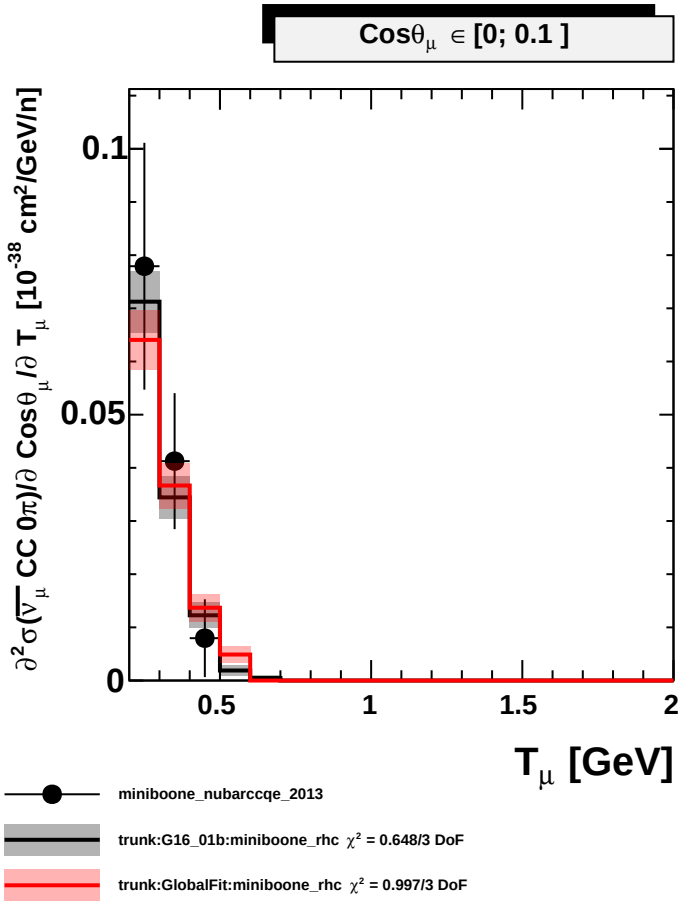

Cosθμ ∈ [-0.5; -0.4]
∂²σ(ν_μ CC 0π)/∂ Cosθ_μ /∂ T_μ [10⁻³⁸ cm²/GeV/n]
0
0.01
0.02
0.03
0.04
0.5
1
1.5
2
T_μ [GeV]
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ² = 0.00927/1 DoF
trunk:GlobalFit:miniboone_rhc χ² = 0.237/1 DoF

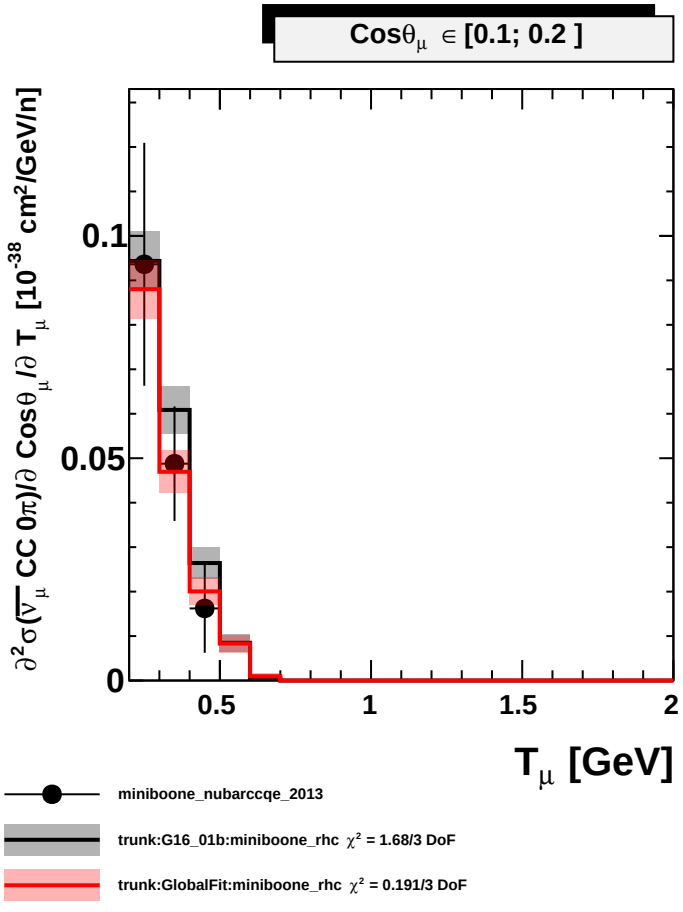

Cosθμ ∈ [-0.4; -0.3]
∂²σ(ν_μ CC 0π)/∂ Cosθ_μ /∂ T_μ [10⁻³⁸ cm²/GeV/n]
0
0.01
0.02
0.03
0.04
0.5
1
1.5
2
T_μ [GeV]
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ² = 0.0442/1 DoF
trunk:GlobalFit:miniboone_rhc χ² = 0.0152/1 DoF

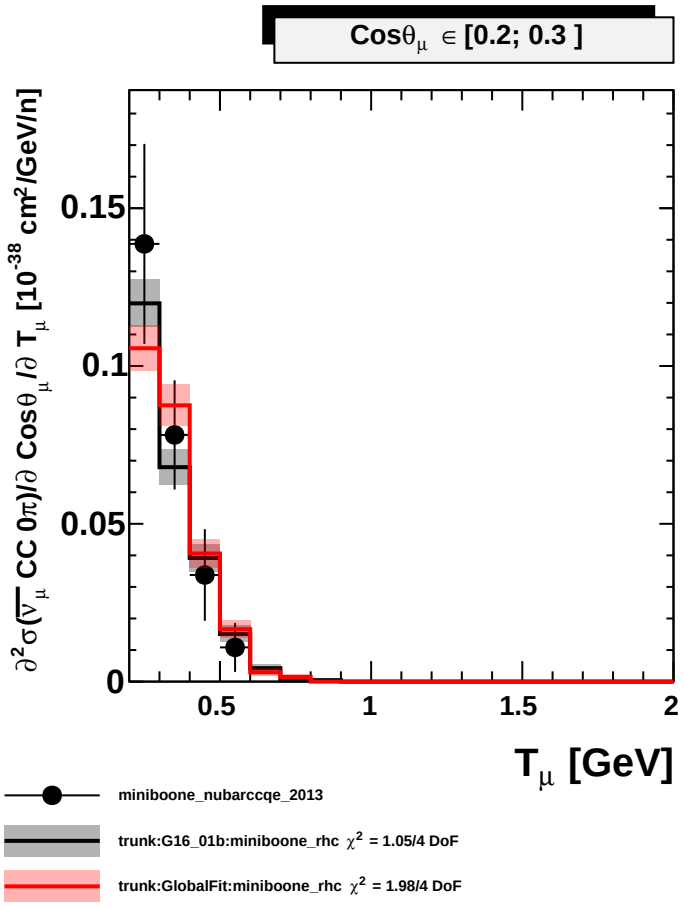

Cosθμ ∈ [-0.3; -0.2]
∂²σ(ν_μ CC 0π)/∂ Cosθ_μ /∂ T_μ [10⁻³⁸ cm²/GeV/n]
0
0.01
0.02
0.03
0.04
0.5
1
1.5
2
T_μ [GeV]
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ² = 0.0243/1 DoF
trunk:GlobalFit:miniboone_rhc χ² = 0.175/1 DoF

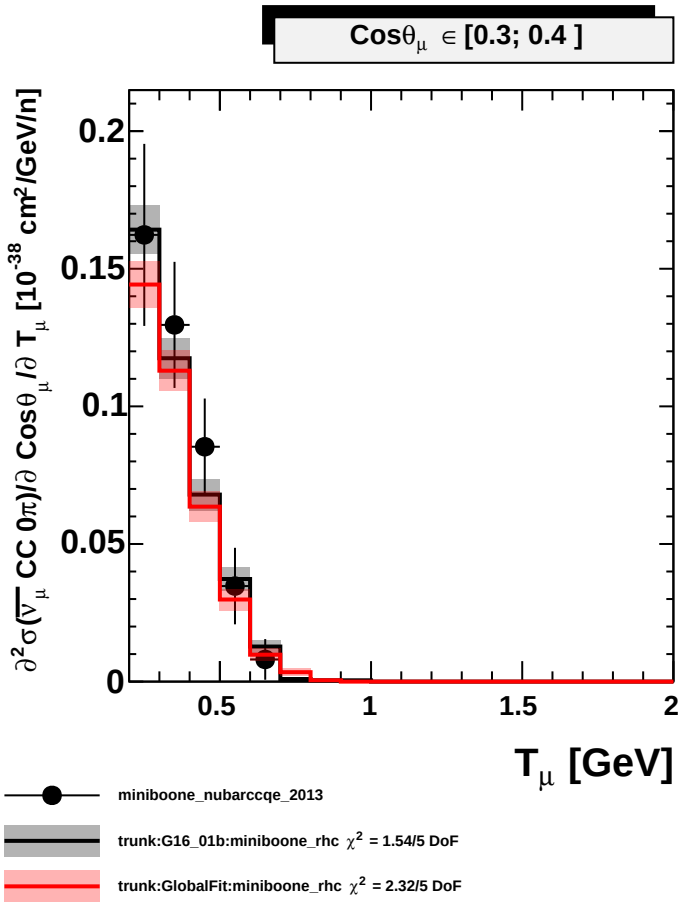

Cosθμ ∈ [-0.2; -0.1]
∂²σ(ν_μ CC 0π)/∂ Cosθ_μ /∂ T_μ [10⁻³⁸ cm²/GeV/n]
0.06
0.04
0.02
0
0.5
1
1.5
2
T_μ [GeV]
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ² = 0.355/2 DoF
trunk:GlobalFit:miniboone_rhc χ² = 0.251/2 DoF

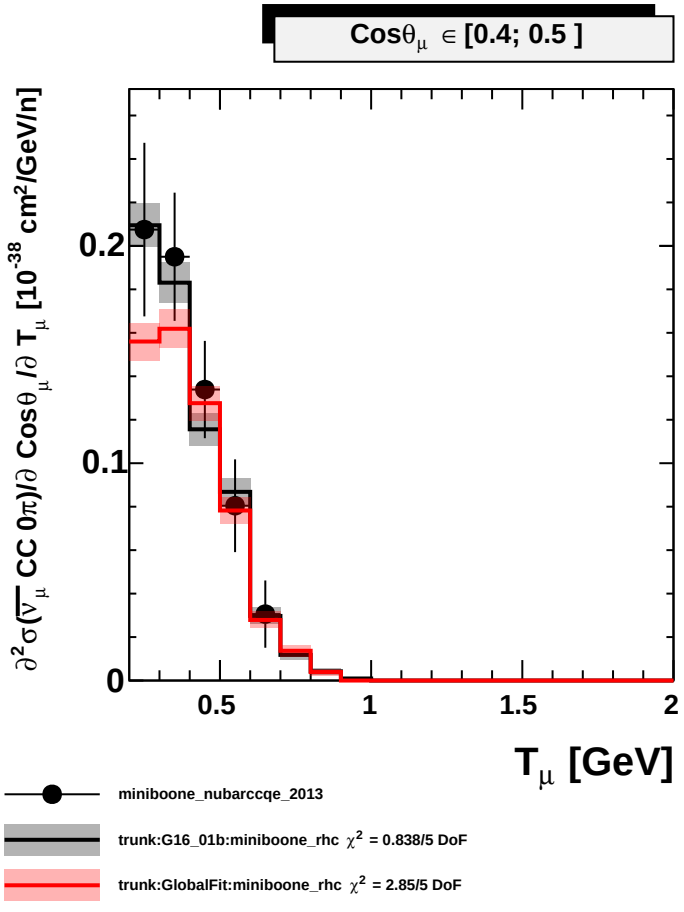

Cosθμ ∈ [-0.1; 0]
∂²σ(ν_μ CC 0π)/∂ Cosθ_μ /∂ T_μ [10⁻³⁸ cm²/GeV/n]
0.08
0.06
0.04
0.02
0
0.5
1
1.5
2
T_μ [GeV]
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ² = 0.749/2 DoF
trunk:GlobalFit:miniboone_rhc χ² = 0.392/2 DoF

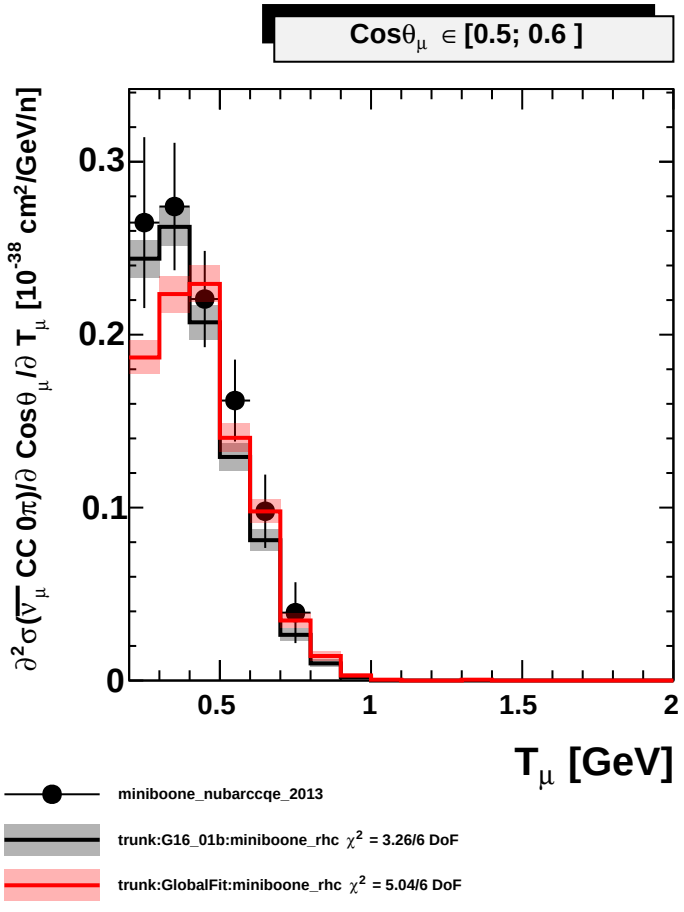

Cosθμ ∈ [0; 0.1]
∂²σ(ν_μ CC 0π)/∂ Cosθ_μ /∂ T_μ [10⁻³⁸ cm²/GeV/n]
0.1
0.05
0
0.5
1
1.5
2
T_μ [GeV]
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ² = 0.648/3 DoF
trunk:GlobalFit:miniboone_rhc χ² = 0.997/3 DoF

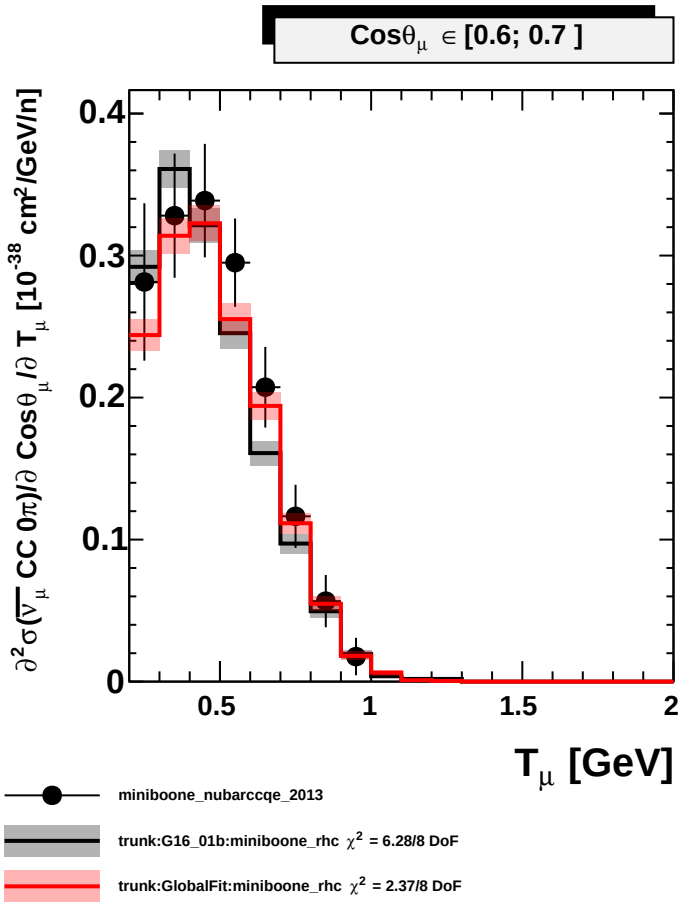

Cosθμ ∈ [0.1; 0.2]
∂²σ(ν_μ CC 0π)/∂ Cosθ_μ /∂ T_μ [10⁻³⁸ cm²/GeV/n]
0.1
0.05
0
0.5
1
1.5
2
T_μ [GeV]
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ² = 1.68/3 DoF
trunk:GlobalFit:miniboone_rhc χ² = 0.191/3 DoF

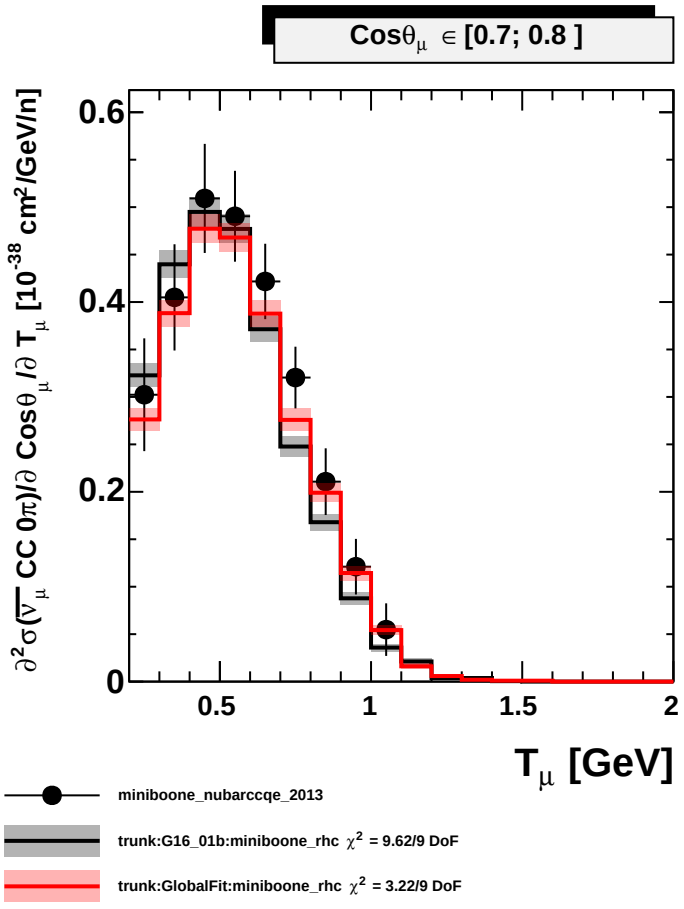

Cosθμ ∈ [0.2; 0.3]
∂²σ(ν̄μ CC 0π)/∂ Cosθμπ ∂ Tμπ [10⁻³⁸ cm²/GeV/n]
Tμ [GeV]
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ² = 1.05/4 DoF
trunk:GlobalFit:miniboone_rhc χ² = 1.98/4 DoF

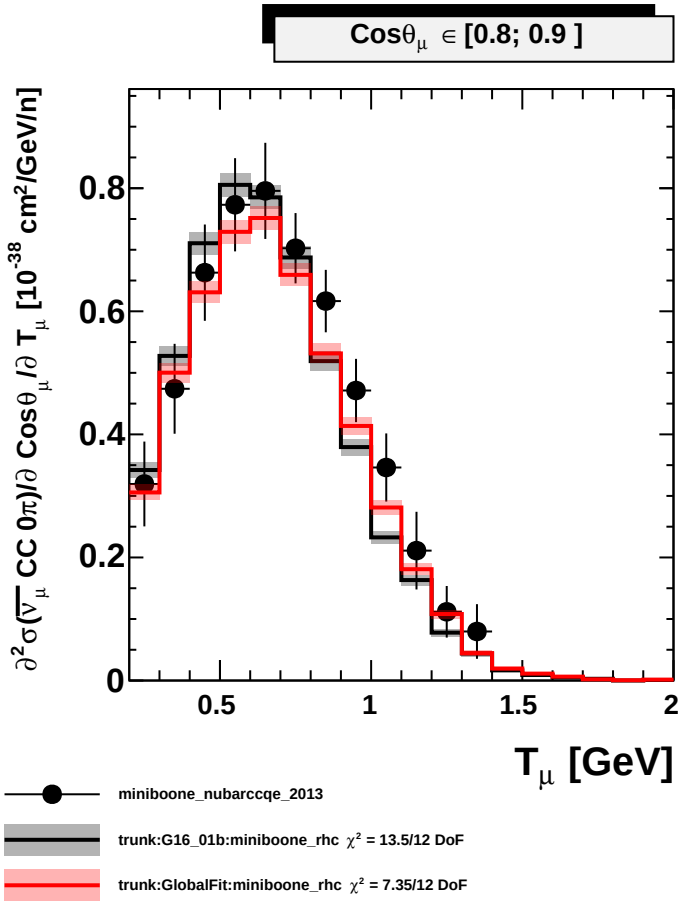

Cosθμ ∈ [0.3; 0.4]
∂²σ(ν̄μ CC 0π)/∂ Cosθμπ ∂ Tμπ [10⁻³⁸ cm²/GeV/n]
Tμ [GeV]
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ² = 1.54/5 DoF
trunk:GlobalFit:miniboone_rhc χ² = 2.32/5 DoF

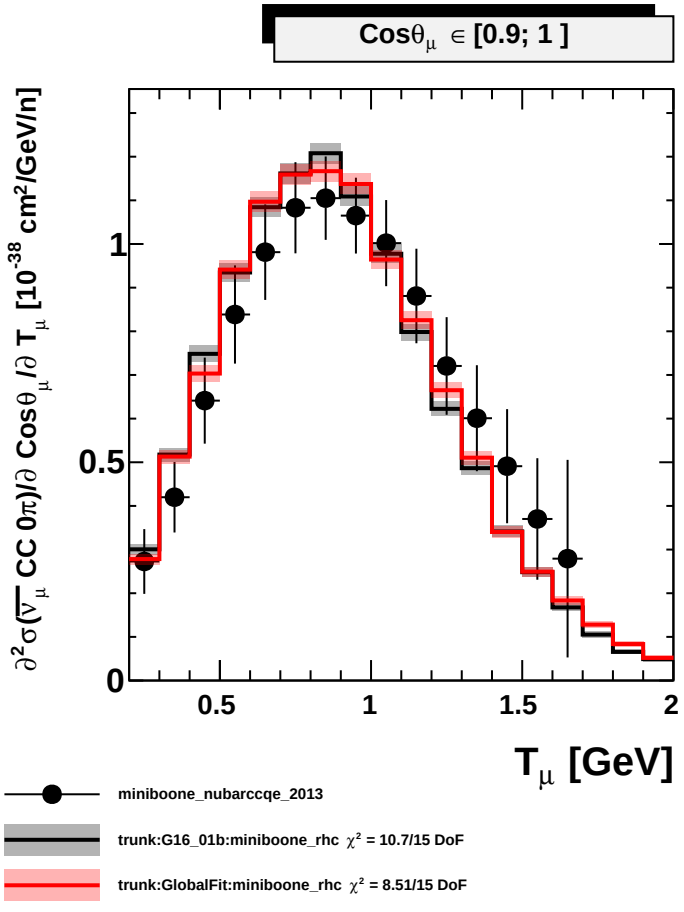

Cosθμ ∈ [0.4; 0.5]
∂²σ(ν̄μ CC 0π)/∂ Cosθμπ ∂ Tμπ [10⁻³⁸ cm²/GeV/n]
Tμ [GeV]
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ² = 0.838/5 DoF
trunk:GlobalFit:miniboone_rhc χ² = 2.85/5 DoF


Cosθμ ∈ [0.5; 0.6]
∂²σ(ν̄μ CC 0π)/∂ Cosθμπ ∂ Tμπ [10⁻³⁸ cm²/GeV/n]
Tμ [GeV]
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ² = 3.26/6 DoF
trunk:GlobalFit:miniboone_rhc χ² = 5.04/6 DoF


Cosθμ ∈ [0.6; 0.7]
∂²σ(ν_μ CC 0π)/∂ Cosθ /∂ T_μ [10⁻³⁸ cm²/GeV/n]
T_μ [GeV]
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ² = 6.28/8 DoF
trunk:GlobalFit:miniboone_rhc χ² = 2.37/8 DoF


Cosθμ ∈ [0.7; 0.8]
∂²σ(ν_μ CC 0π)/∂ Cosθ /∂ T_μ [10⁻³⁸ cm²/GeV/n]
T_μ [GeV]
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ² = 9.62/9 DoF
trunk:GlobalFit:miniboone_rhc χ² = 3.22/9 DoF


Cosθμ ∈ [0.8; 0.9]
∂²σ(ν_μ CC 0π)/∂ Cosθ /∂ T_μ [10⁻³⁸ cm²/GeV/n]
T_μ [GeV]
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ² = 13.5/12 DoF
trunk:GlobalFit:miniboone_rhc χ² = 7.35/12 DoF

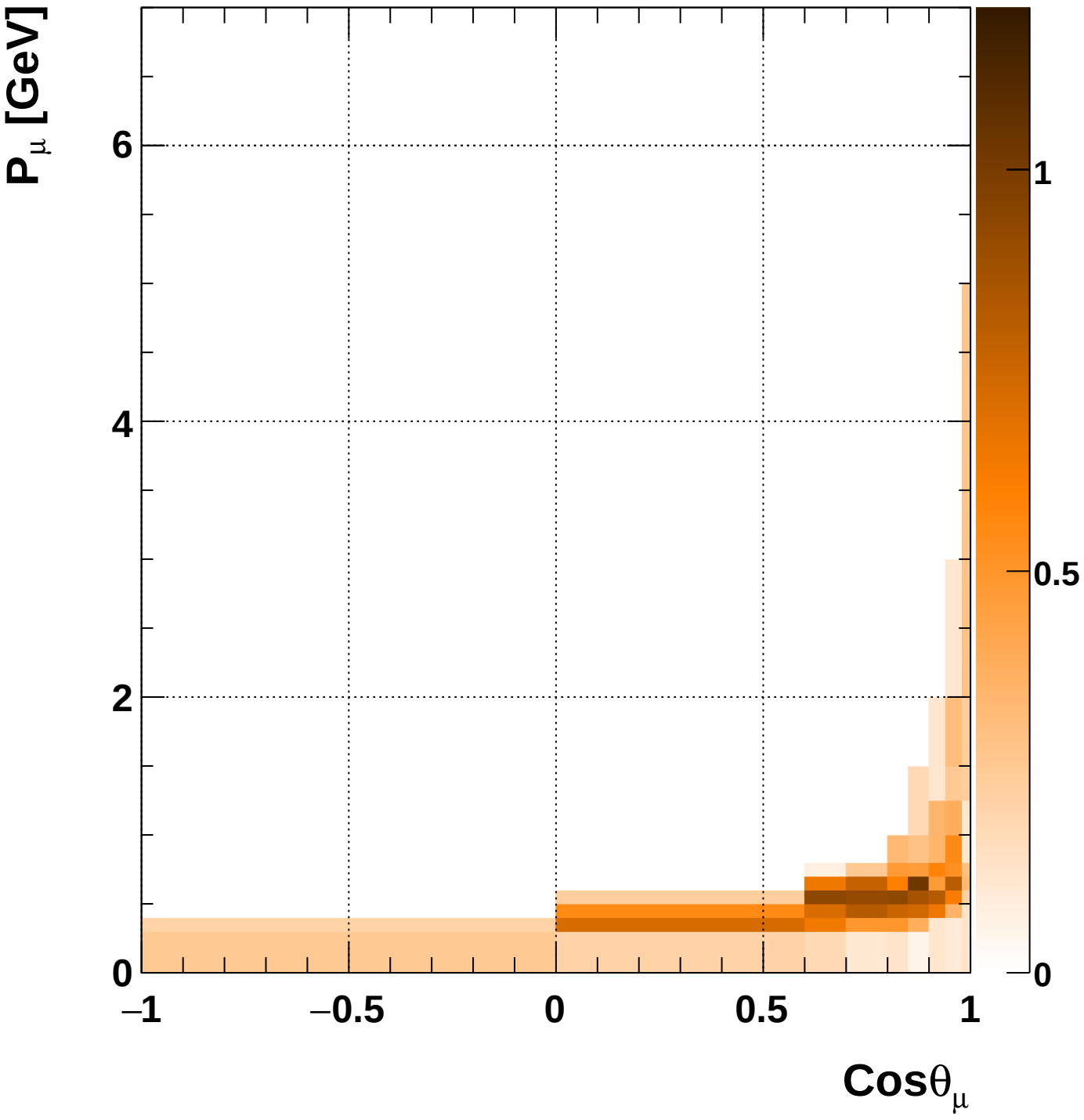

Cosθμ ∈ [0.9; 1]
∂²σ(ν_μ CC 0π)/∂ Cosθ /∂ T_μ [10⁻³⁸ cm²/GeV/n]
T_μ [GeV]
miniboone_nubarccqe_2013
trunk:G16_01b:miniboone_rhc χ² = 10.7/15 DoF
trunk:GlobalFit:miniboone_rhc χ² = 8.51/15 DoF

Dataset:
t2k_nd280_numucc0pi_2015

Models:
trunk/G16_01b χ^2 = 135 / 67 DoF
trunk/GlobalFit χ^2 = 252 / 67 DoF

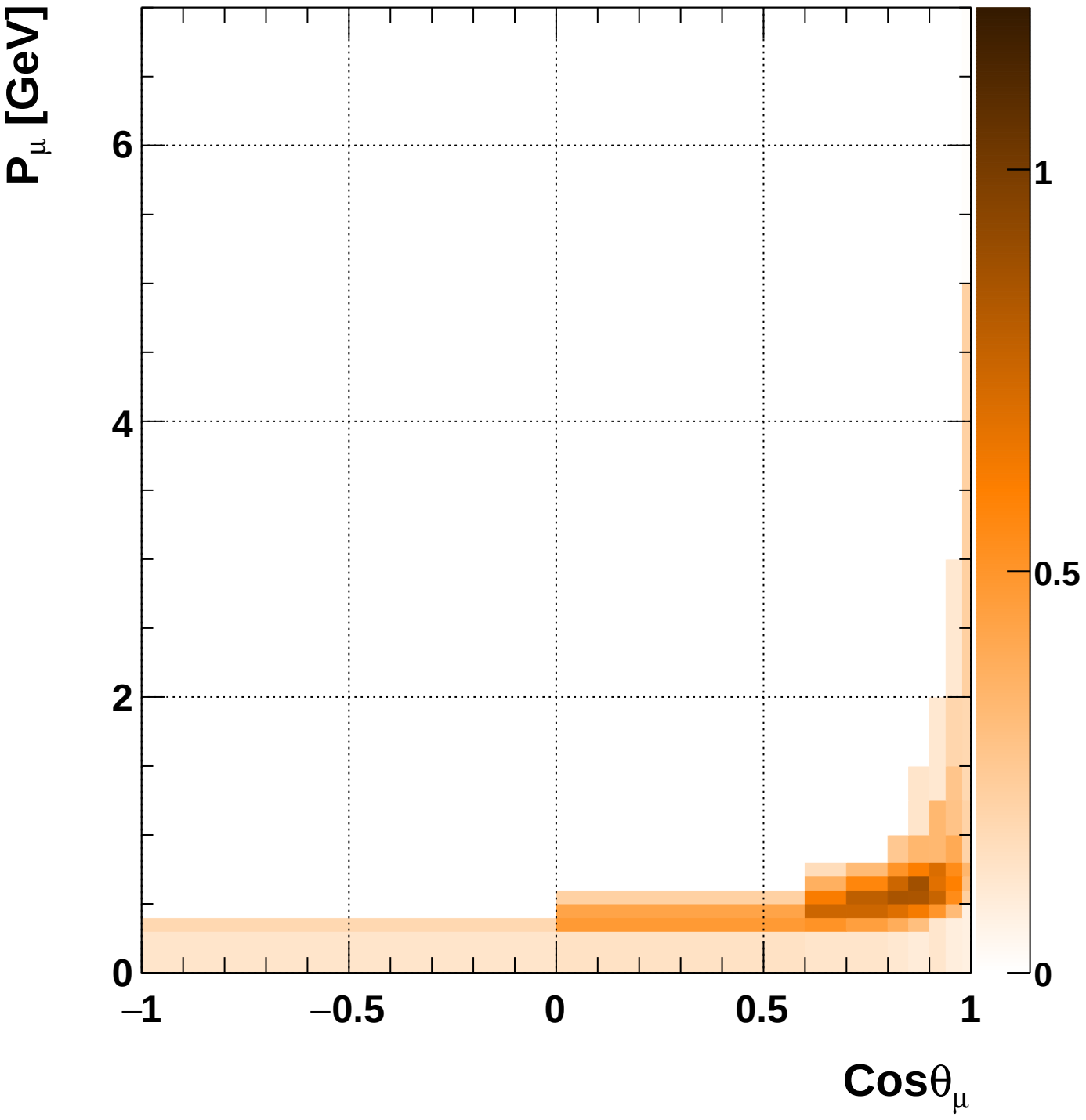
Plot:
$\partial^2\sigma/\partial$ **Cos**θ_μ/∂ **P**$_\mu$

2017/04/12 12:16:58



$\partial^2\sigma/\partial\,\mathrm{Cos}\theta_\mu/\partial\,P_\mu$ [10^{-38} cm^2/GeV/n]

Data: t2k_nd280_numucc0pi_2015



$\partial^2\sigma/\partial\ \text{Cos}\theta_\mu/\partial\ P_\mu$ [10^{-38} cm^2/GeV/n]

Pred: trunk:G16_01b:t2k_nd280_numu_fhc

t2k_nd280_numucc0pi_2015

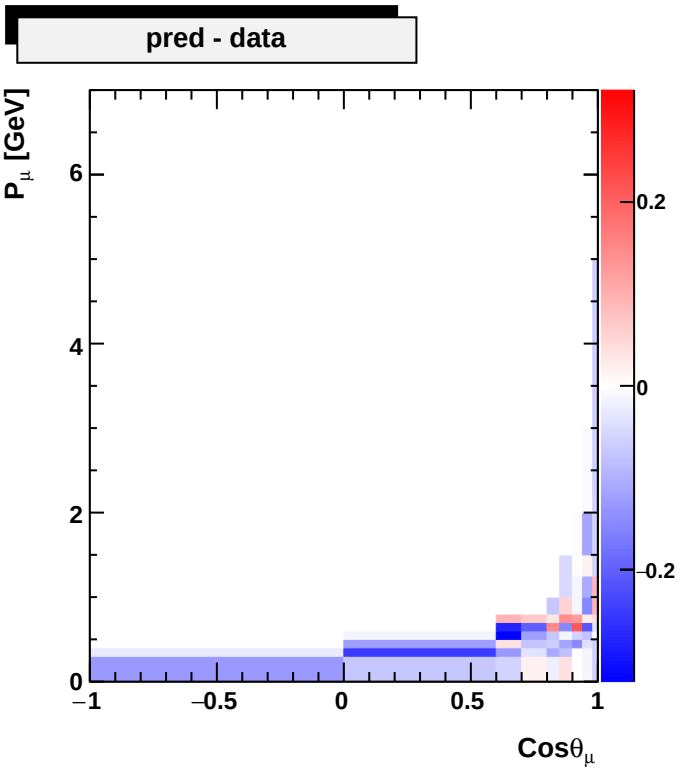
VS

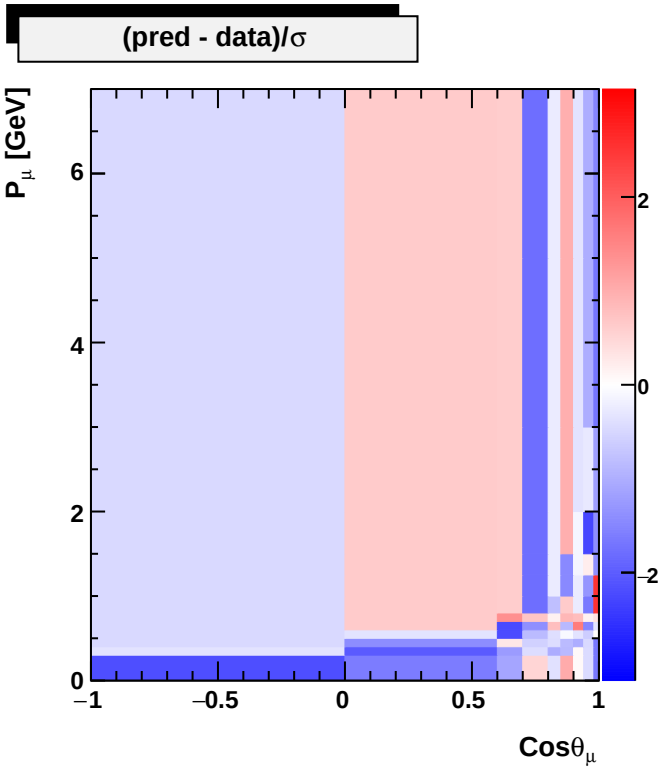
trunk:G16_01b:t2k_nd280_numu_fhc

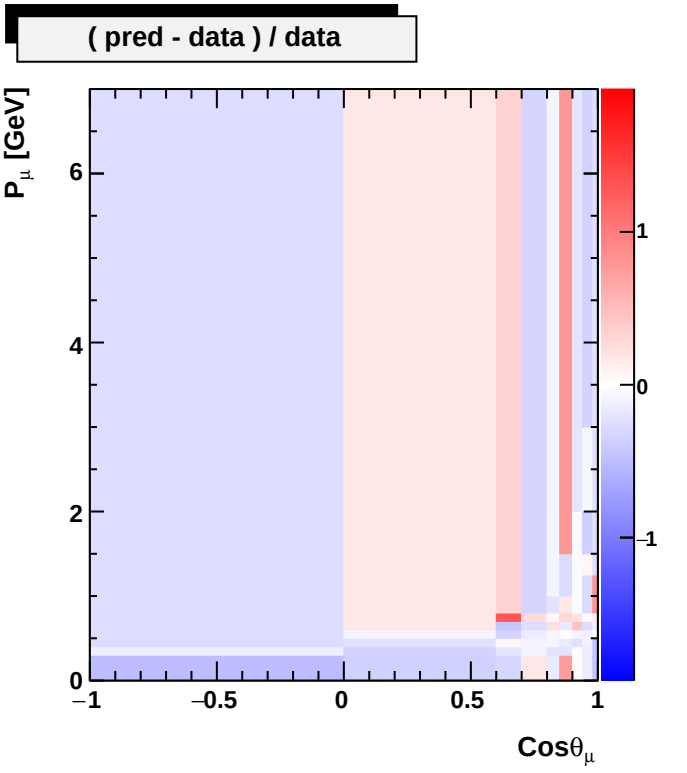
$\partial^2\sigma/\partial \text{Cos}\theta_\mu/\partial P_\mu$

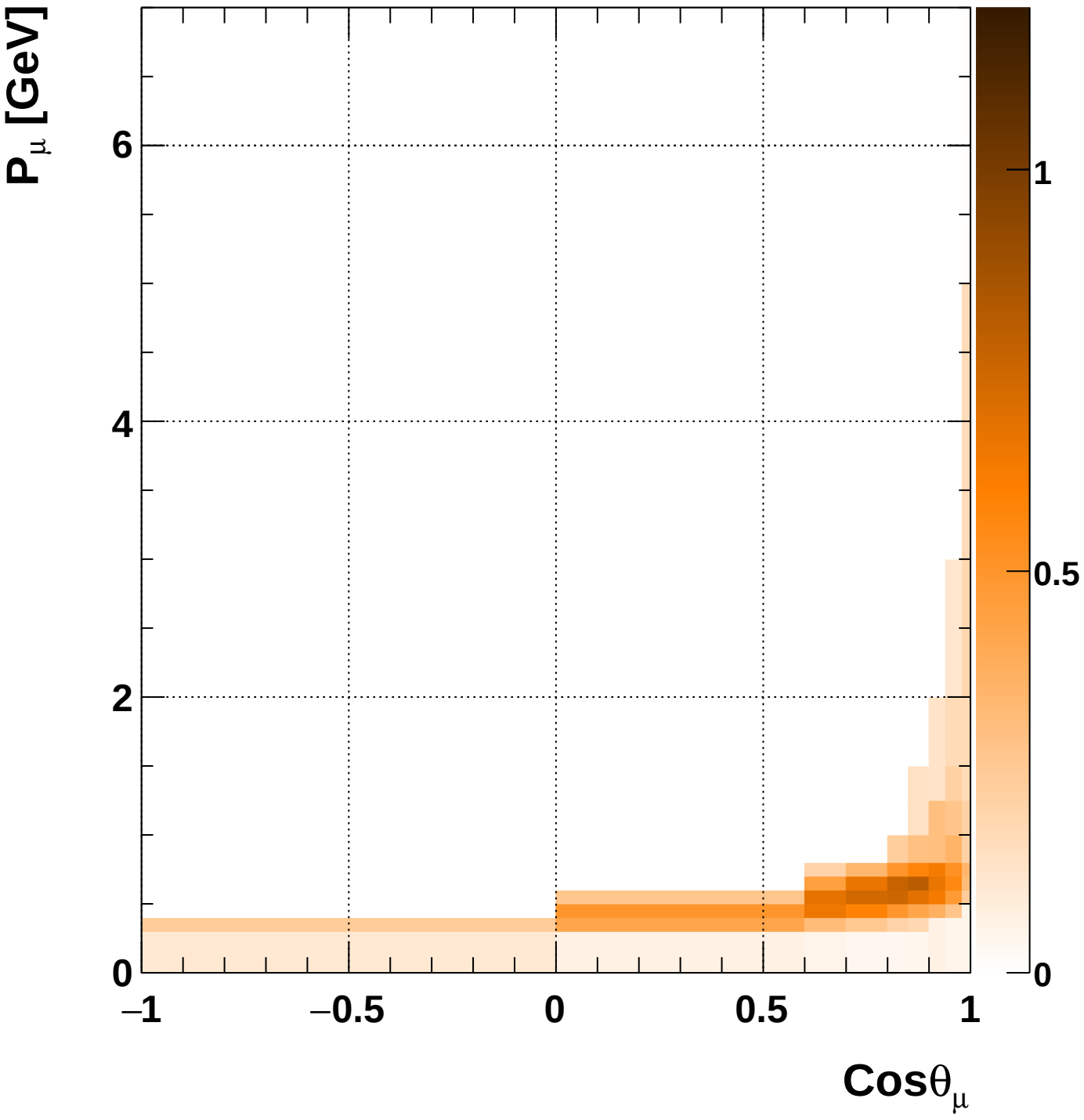
[10^{-38} cm^2/GeV/n]

χ^2 = 134.636/67 DoF









$\partial^2\sigma/\partial\ \text{Cos}\theta_\mu/\partial\ P_\mu$ [10^{-38} cm^2/GeV/n]

Pred: trunk:GlobalFit:t2k_nd280_numu_fhc

t2k_nd280_numucc0pi_2015

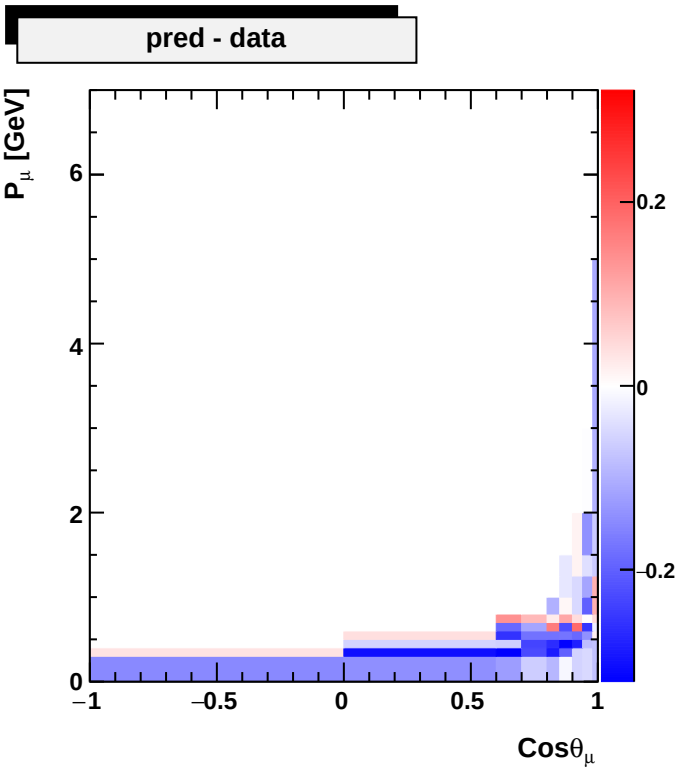
VS

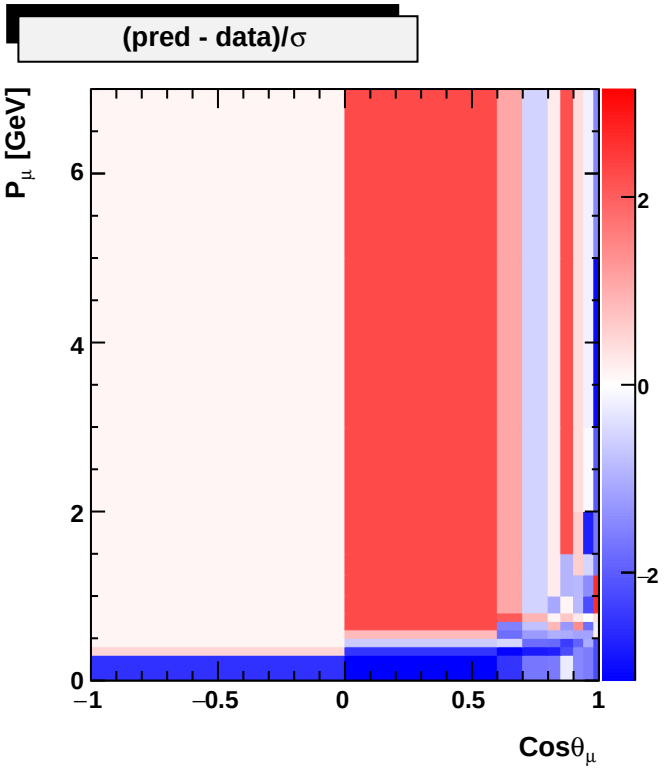
trunk:GlobalFit:t2k_nd280_numu_fhc

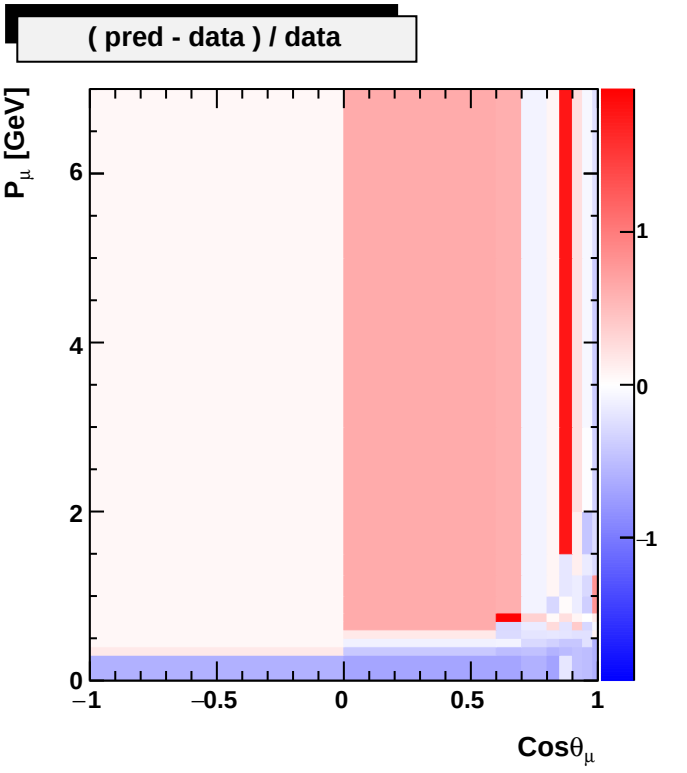
$\partial^2\sigma/\partial$ Cosθ_μ/∂ P$_\mu$

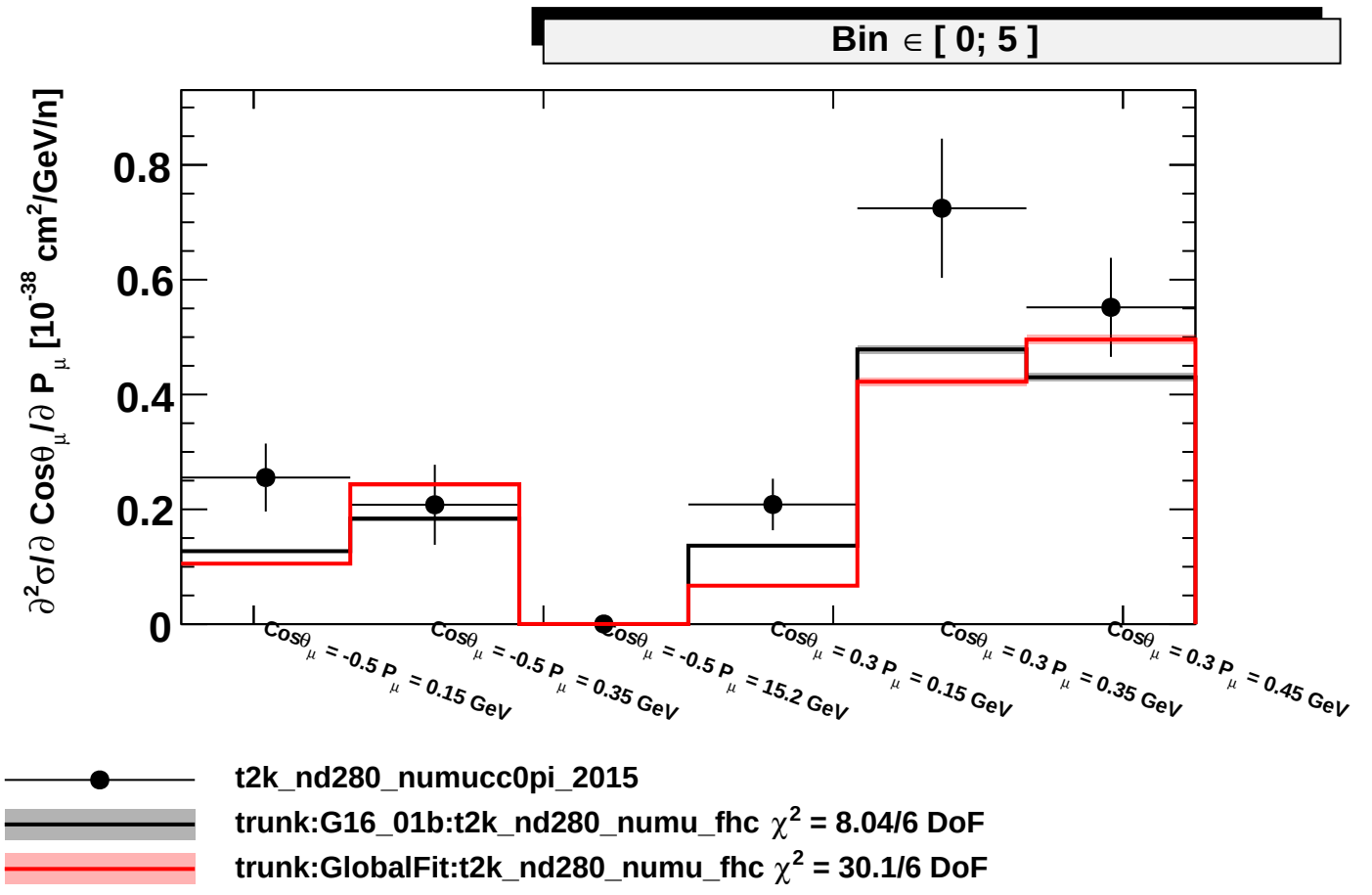
[10^{-38} cm^2/GeV/n]

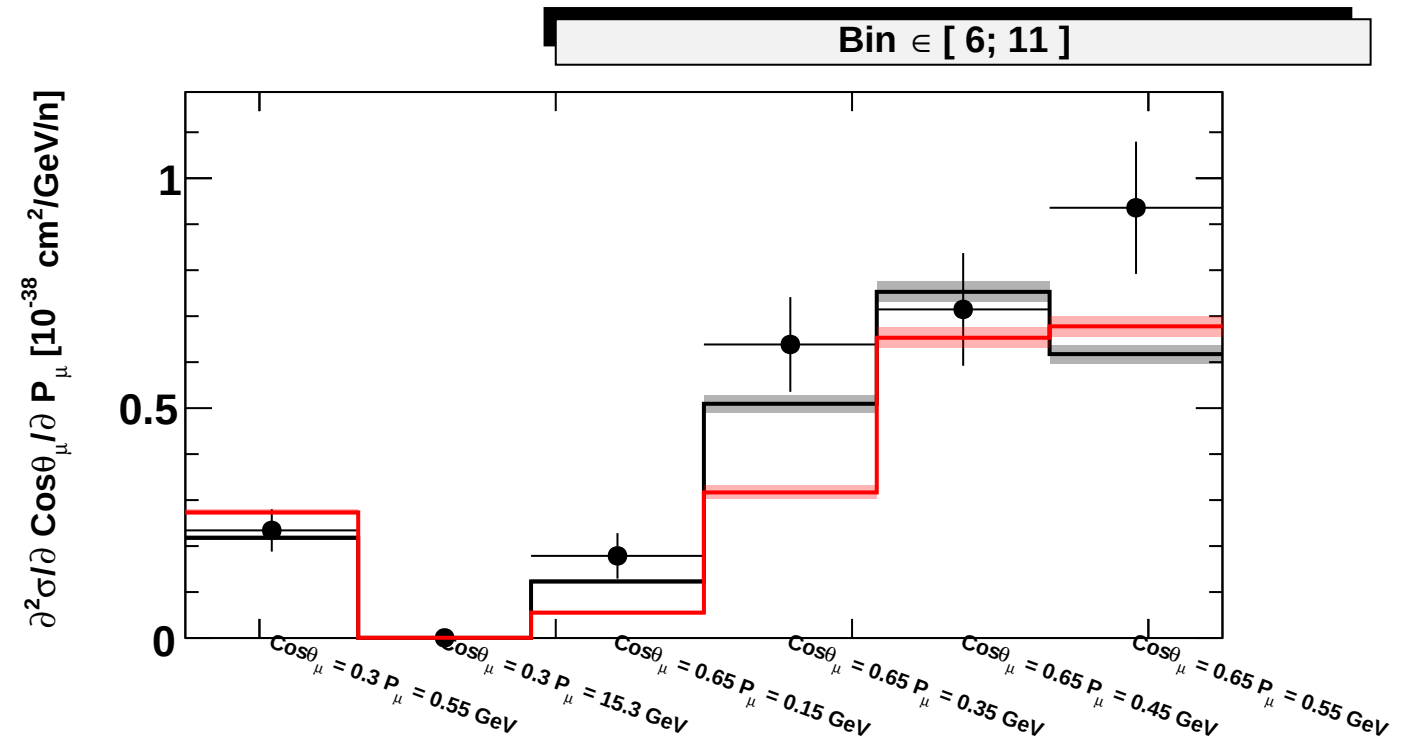
χ^2 = 252.009/67 DoF

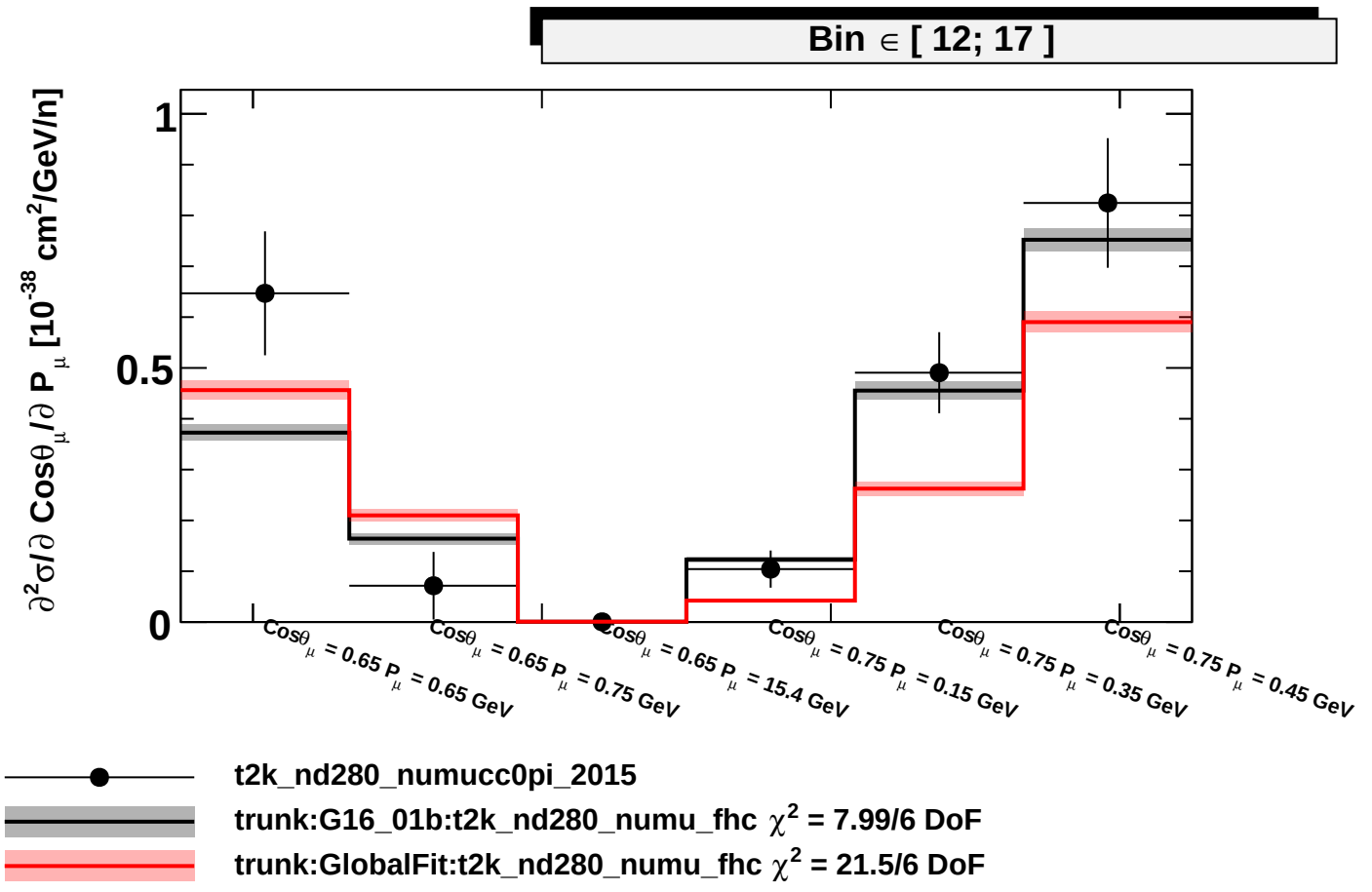


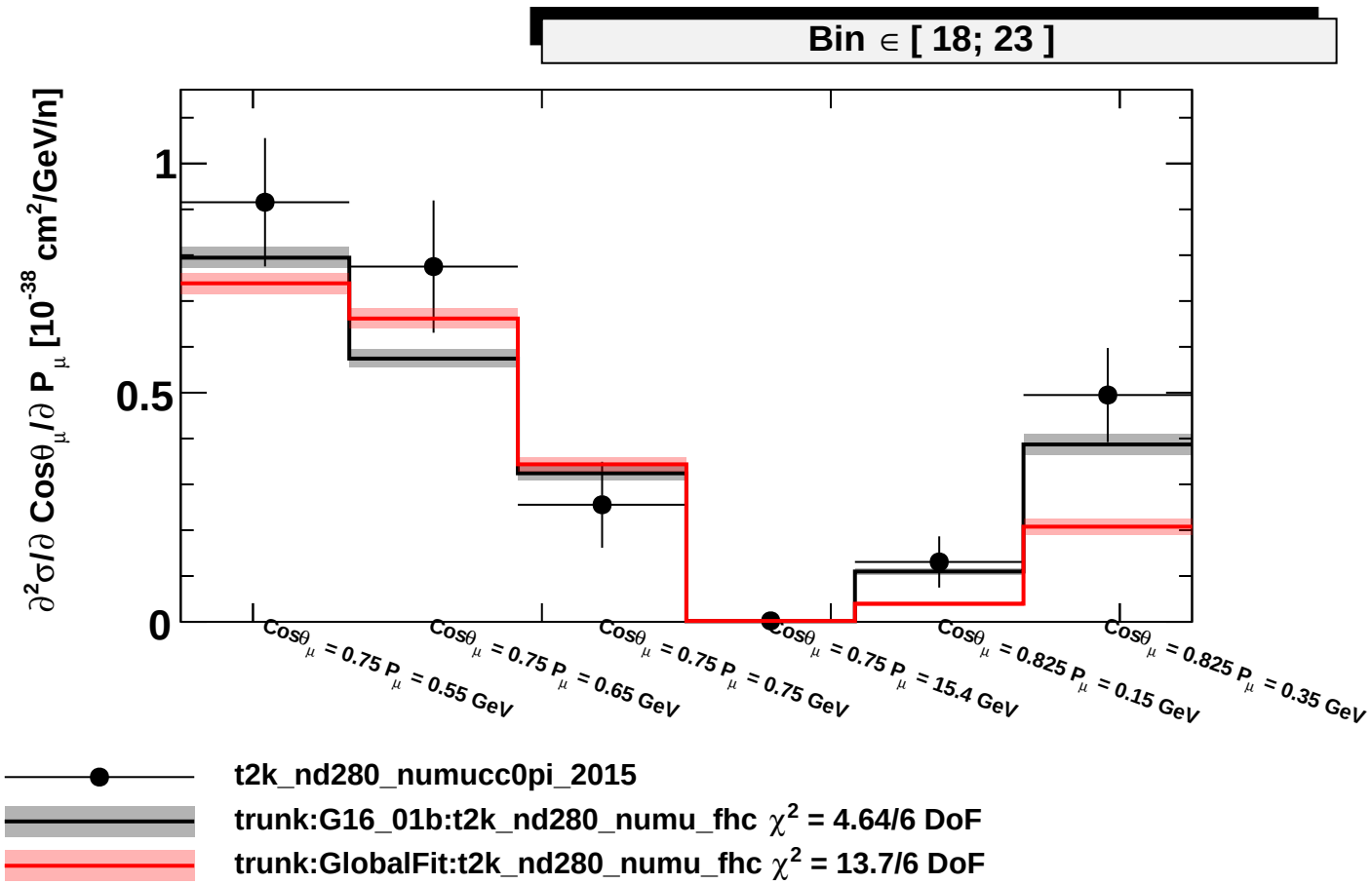


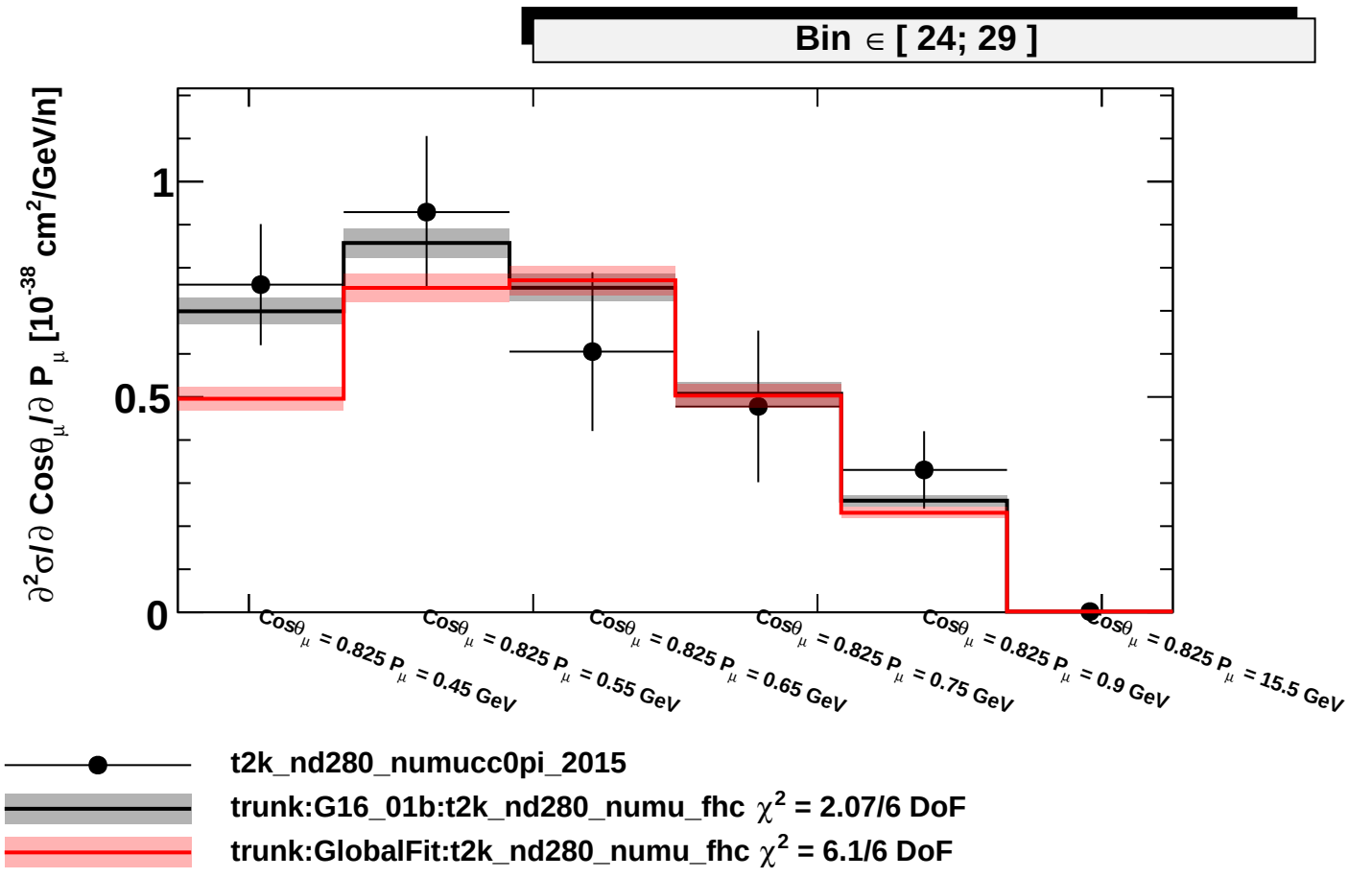



Bin ∈ [0; 5]
$\partial^2\sigma/\partial\,\mathrm{Cos}\theta_\mu/\partial\,P_\mu$ [10^{-38} cm^2/GeV/n]
0
0.2
0.4
0.6
0.8
$\mathrm{Cos}\theta_\mu$ = -0.5 P_μ = 0.15 GeV
$\mathrm{Cos}\theta_\mu$ = -0.5 P_μ = 0.35 GeV
$\mathrm{Cos}\theta_\mu$ = -0.5 P_μ = 15.2 GeV
$\mathrm{Cos}\theta_\mu$ = 0.3 P_μ = 0.15 GeV
$\mathrm{Cos}\theta_\mu$ = 0.3 P_μ = 0.35 GeV
$\mathrm{Cos}\theta_\mu$ = 0.3 P_μ = 0.45 GeV
t2k_nd280_numucc0pi_2015
trunk:G16_01b:t2k_nd280_numu_fhc χ^2 = 8.04/6 DoF
trunk:GlobalFit:t2k_nd280_numu_fhc χ^2 = 30.1/6 DoF


Bin ∈ [6; 11]
$\partial^2\sigma/\partial\,\mathrm{Cos}\theta_\mu/\partial\,P_\mu$ [10^{-38} cm^2/GeV/n]
0
0.5
1
$\mathrm{Cos}\theta_\mu$ = 0.3 P_μ = 0.55 GeV
$\mathrm{Cos}\theta_\mu$ = 0.3 P_μ = 15.3 GeV
$\mathrm{Cos}\theta_\mu$ = 0.65 P_μ = 0.15 GeV
$\mathrm{Cos}\theta_\mu$ = 0.65 P_μ = 0.35 GeV
$\mathrm{Cos}\theta_\mu$ = 0.65 P_μ = 0.45 GeV
$\mathrm{Cos}\theta_\mu$ = 0.65 P_μ = 0.55 GeV
t2k_nd280_numucc0pi_2015
trunk:G16_01b:t2k_nd280_numu_fhc χ^2 = 9.21/6 DoF
trunk:GlobalFit:t2k_nd280_numu_fhc χ^2 = 40.8/6 DoF


Bin ∈ [12; 17]
$\partial^2\sigma/\partial\ \mathrm{Cos}\theta_\mu/\partial\ P_\mu$ [10^{-38} cm^2/GeV/n]
1
0.5
0
$\mathrm{Cos}\theta_\mu$ = 0.65 P_μ = 0.65 GeV
$\mathrm{Cos}\theta_\mu$ = 0.65 P_μ = 0.75 GeV
$\mathrm{Cos}\theta_\mu$ = 0.65 P_μ = 15.4 GeV
$\mathrm{Cos}\theta_\mu$ = 0.75 P_μ = 0.15 GeV
$\mathrm{Cos}\theta_\mu$ = 0.75 P_μ = 0.35 GeV
$\mathrm{Cos}\theta_\mu$ = 0.75 P_μ = 0.45 GeV
t2k_nd280_numucc0pi_2015
trunk:G16_01b:t2k_nd280_numu_fhc χ^2 = 7.99/6 DoF
trunk:GlobalFit:t2k_nd280_numu_fhc χ^2 = 21.5/6 DoF

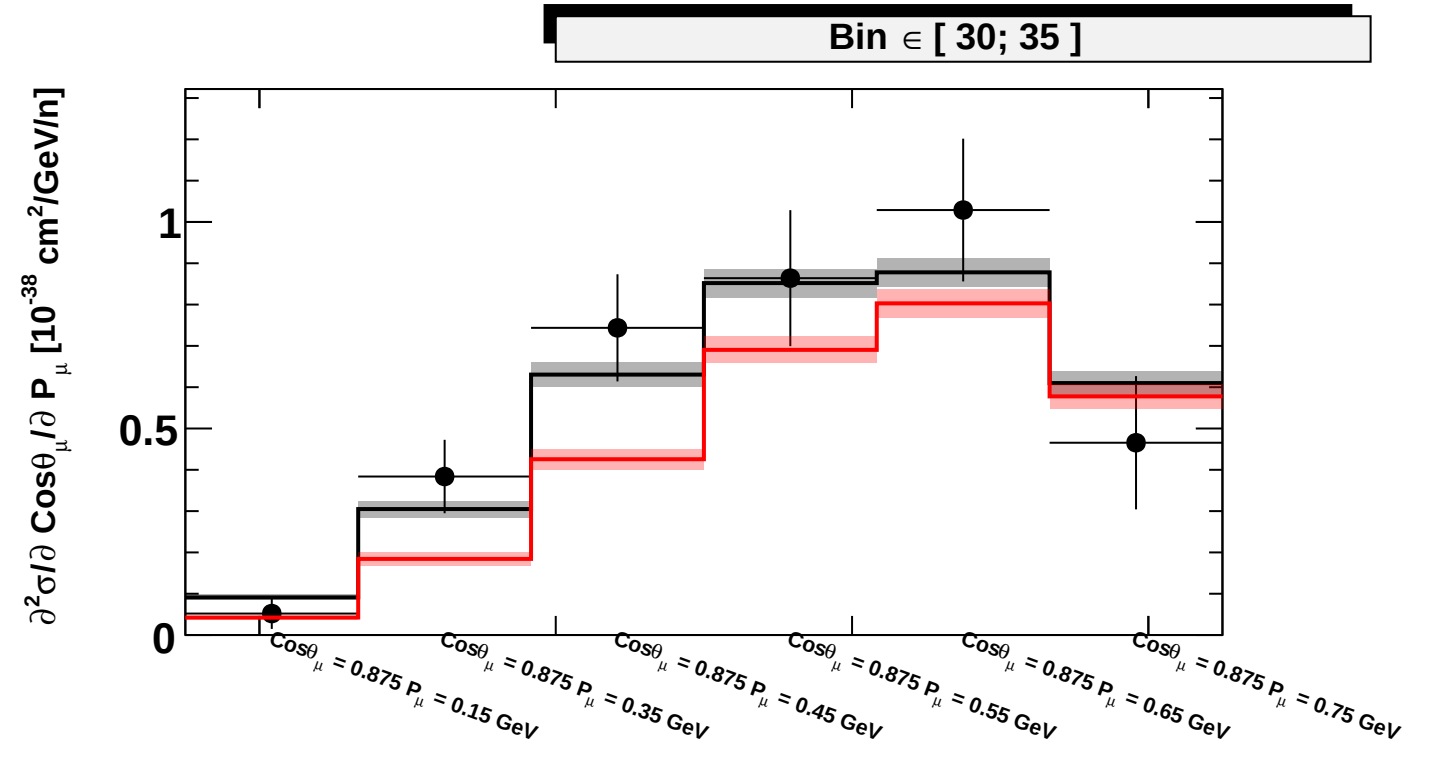

Bin ∈ [18; 23]
$\partial^2\sigma/\partial\ \mathrm{Cos}\theta_\mu/\partial\ P_\mu$ [10^{-38} cm^2/GeV/n]
1
0.5
0
$\mathrm{Cos}\theta_\mu$ = 0.75 P_μ = 0.55 GeV
$\mathrm{Cos}\theta_\mu$ = 0.75 P_μ = 0.65 GeV
$\mathrm{Cos}\theta_\mu$ = 0.75 P_μ = 0.75 GeV
$\mathrm{Cos}\theta_\mu$ = 0.75 P_μ = 15.4 GeV
$\mathrm{Cos}\theta_\mu$ = 0.825 P_μ = 0.15 GeV
$\mathrm{Cos}\theta_\mu$ = 0.825 P_μ = 0.35 GeV
t2k_nd280_numucc0pi_2015
trunk:G16_01b:t2k_nd280_numu_fhc χ^2 = 4.64/6 DoF
trunk:GlobalFit:t2k_nd280_numu_fhc χ^2 = 13.7/6 DoF



t2k_nd280_numucc0pi_2015

trunk:G16_01b:t2k_nd280_numu_fhc χ^2 = 2.07/6 DoF

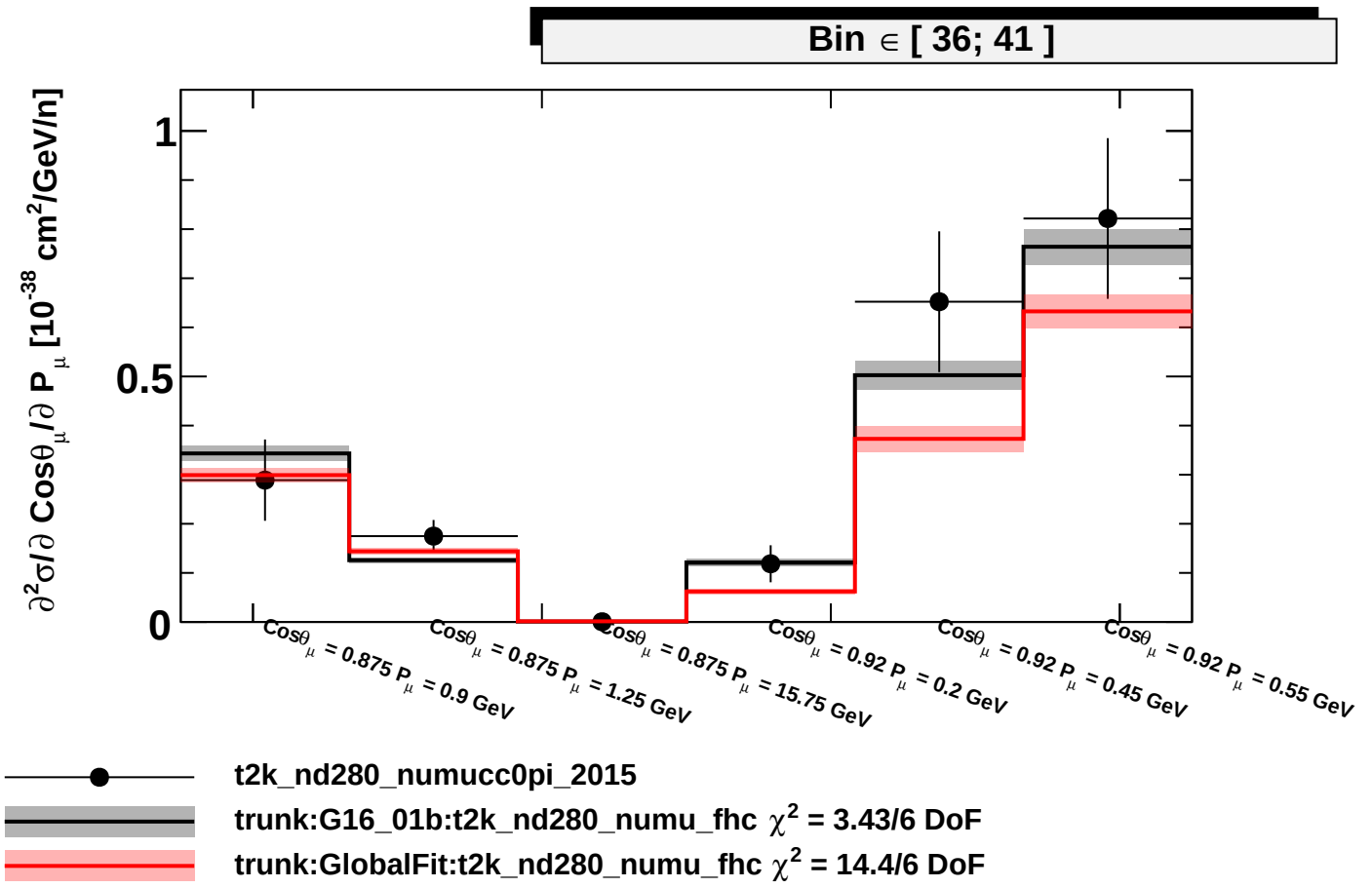
trunk:GlobalFit:t2k_nd280_numu_fhc χ^2 = 6.1/6 DoF



t2k_nd280_numucc0pi_2015

trunk:G16_01b:t2k_nd280_numu_fhc χ^2 = 3.33/6 DoF

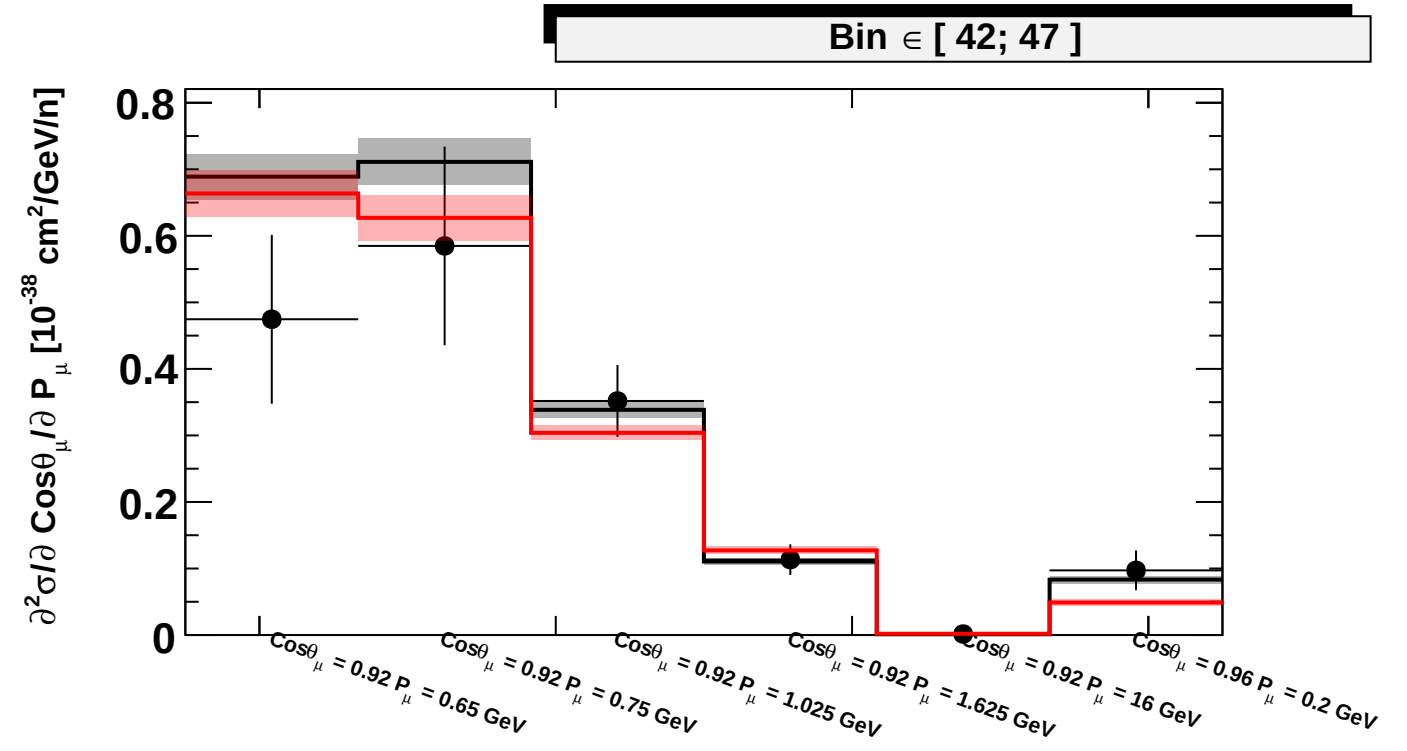
trunk:GlobalFit:t2k_nd280_numu_fhc χ^2 = 12/6 DoF



t2k_nd280_numucc0pi_2015

trunk:G16_01b:t2k_nd280_numu_fhc χ^2 = 3.43/6 DoF

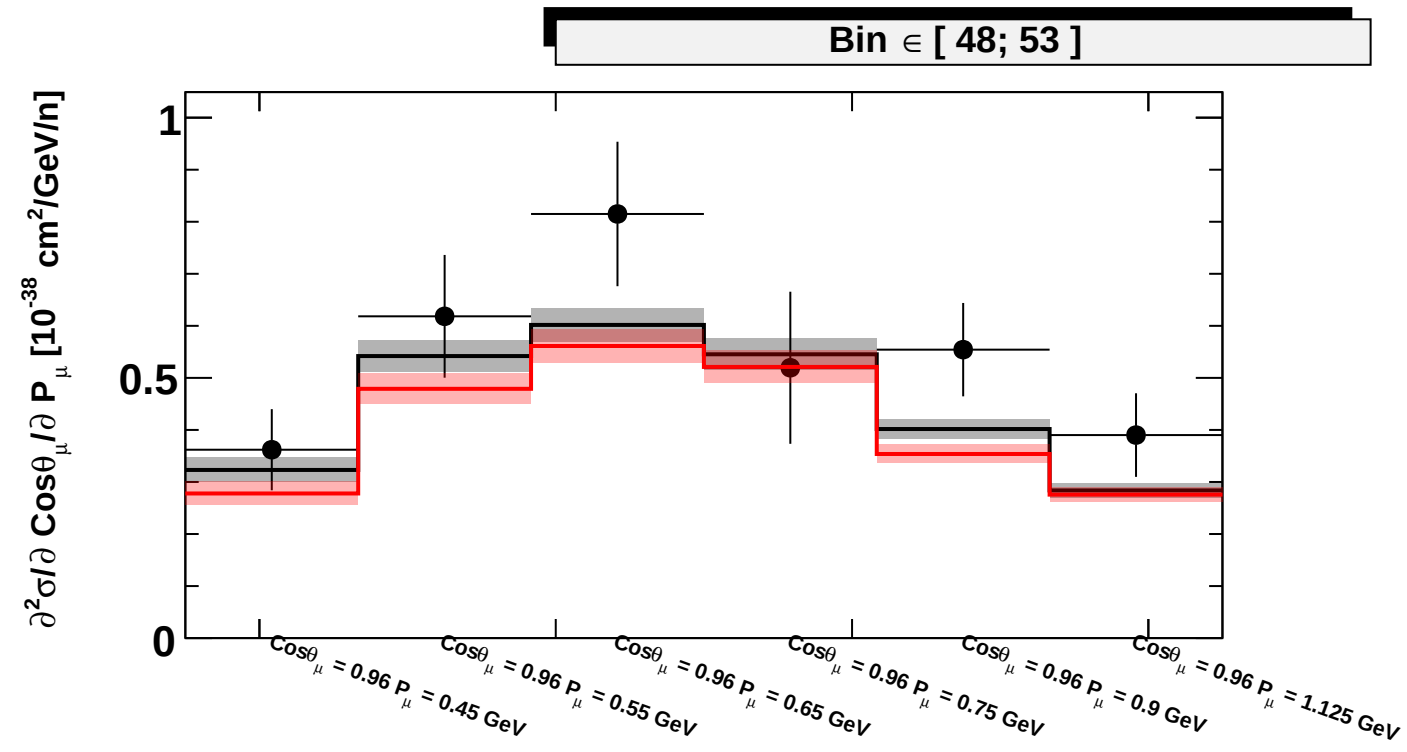
trunk:GlobalFit:t2k_nd280_numu_fhc χ^2 = 14.4/6 DoF



t2k_nd280_numucc0pi_2015

trunk:G16_01b:t2k_nd280_numu_fhc χ^2 = 5.76/6 DoF

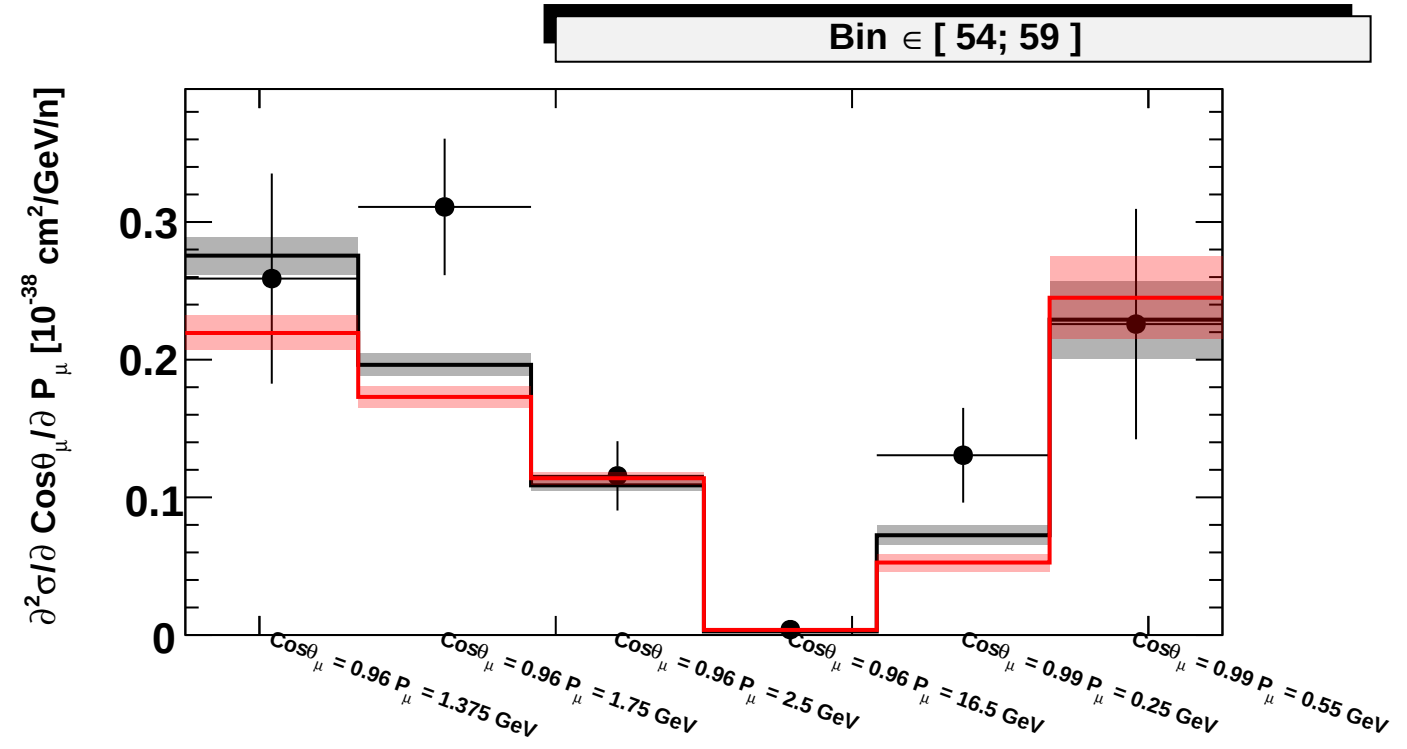
trunk:GlobalFit:t2k_nd280_numu_fhc χ^2 = 8.15/6 DoF



t2k_nd280_numucc0pi_2015

trunk:G16_01b:t2k_nd280_numu_fhc χ^2 = 5.47/6 DoF

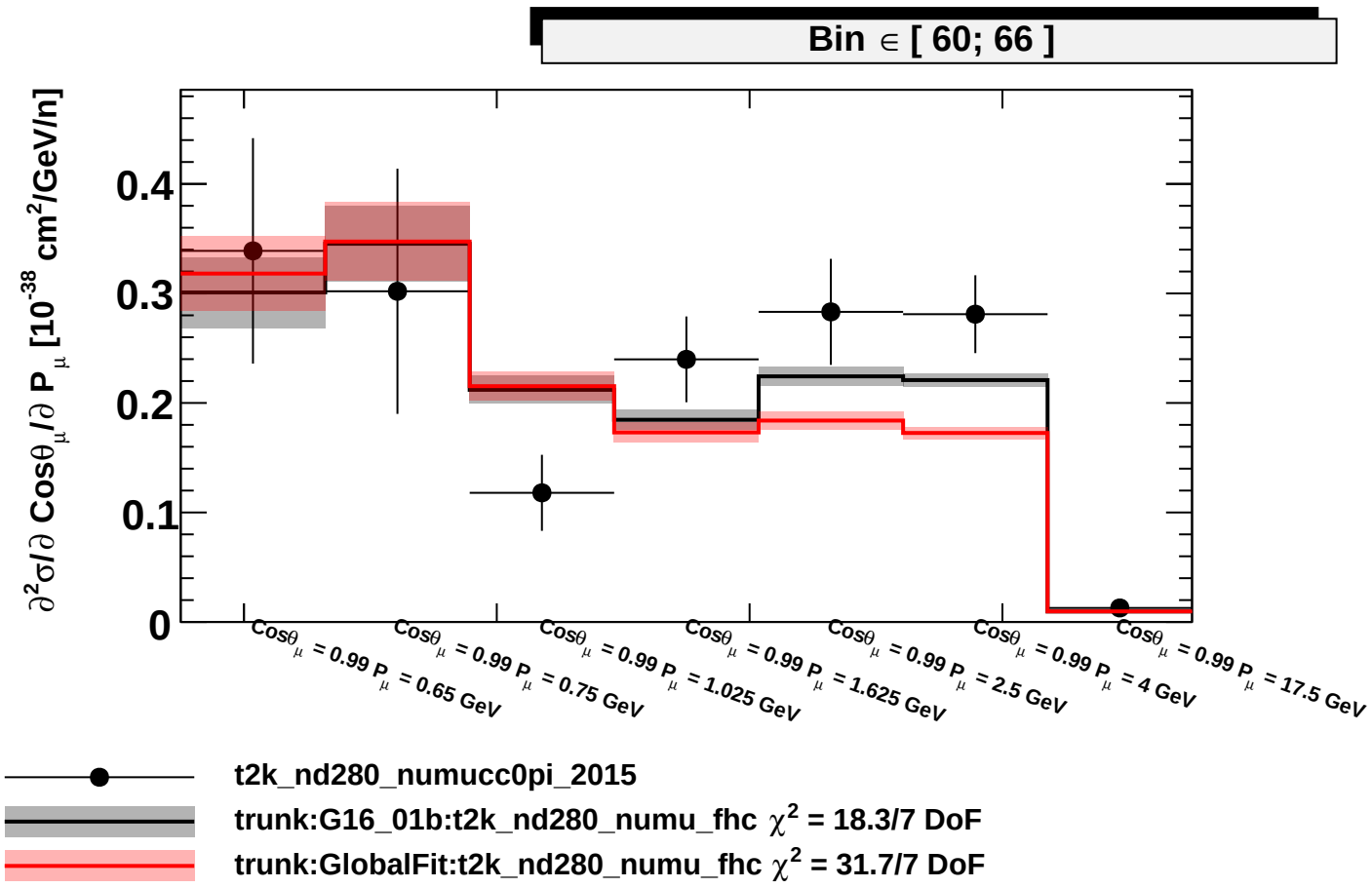
trunk:GlobalFit:t2k_nd280_numu_fhc χ^2 = 8.1/6 DoF



t2k_nd280_numucc0pi_2015

trunk:G16_01b:t2k_nd280_numu_fhc χ^2 = 6.66/6 DoF

trunk:GlobalFit:t2k_nd280_numu_fhc χ^2 = 12.3/6 DoF



t2k_nd280_numucc0pi_2015

trunk:G16_01b:t2k_nd280_numu_fhc χ^2 = 18.3/7 DoF

trunk:GlobalFit:t2k_nd280_numu_fhc χ^2 = 31.7/7 DoF

Dataset:

MINERvAExDataCCQEQ2

Models:

trunk/G16_01b χ^2 = 17.5 / 8 DoF

trunk/GlobalFit χ^2 = 7.79 / 8 DoF

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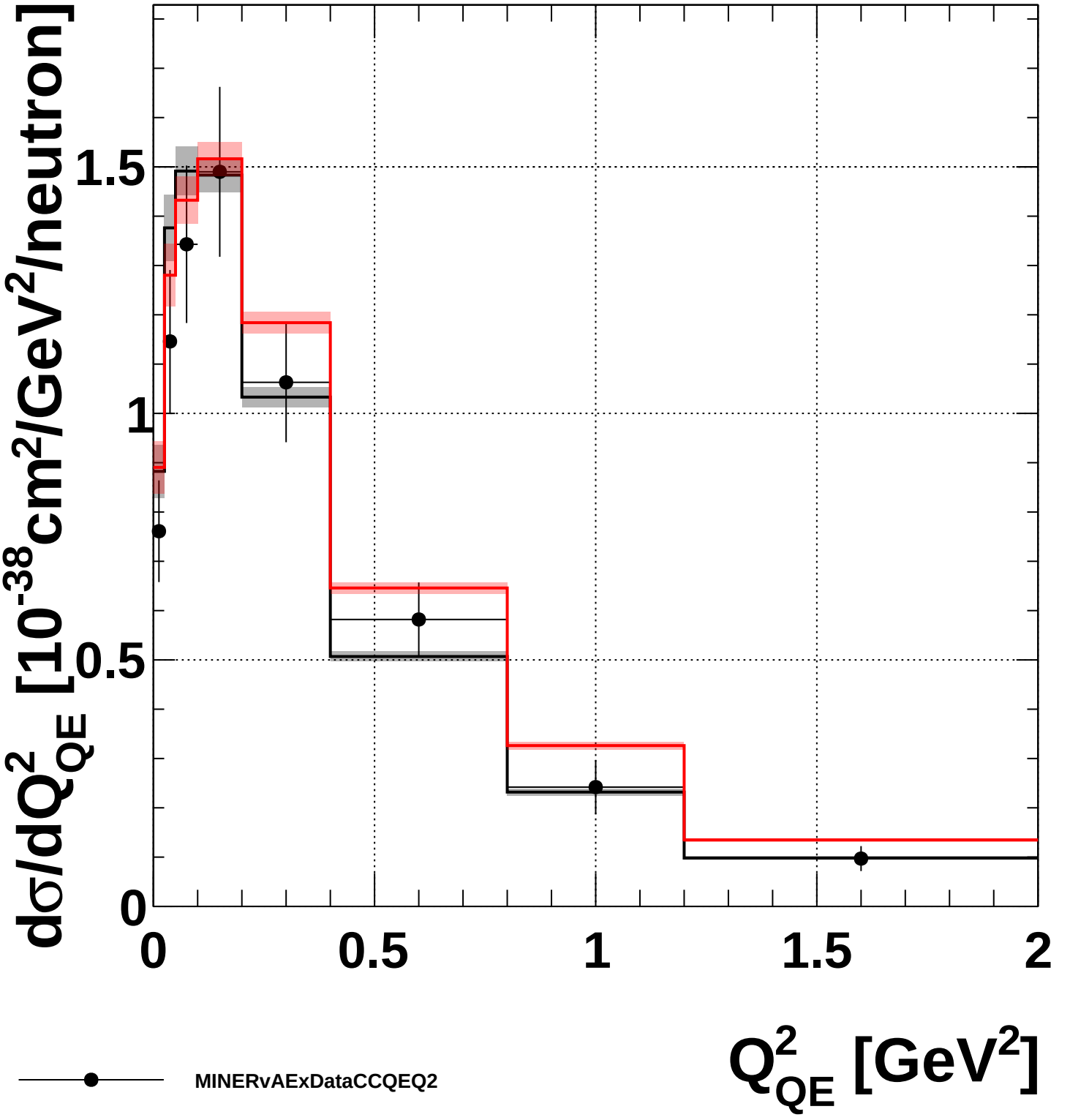

Dataset:

MINERvAExDataCCQEQ2

Models:

trunk/G16_01b χ^2 = 6.23 / 8 DoF

trunk/GlobalFit χ^2 = 5.7 / 8 DoF

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