中國科學院高能物理研究所
Institute of High Energy Physics
Chinese Academy of Sciences

Double Jpsi

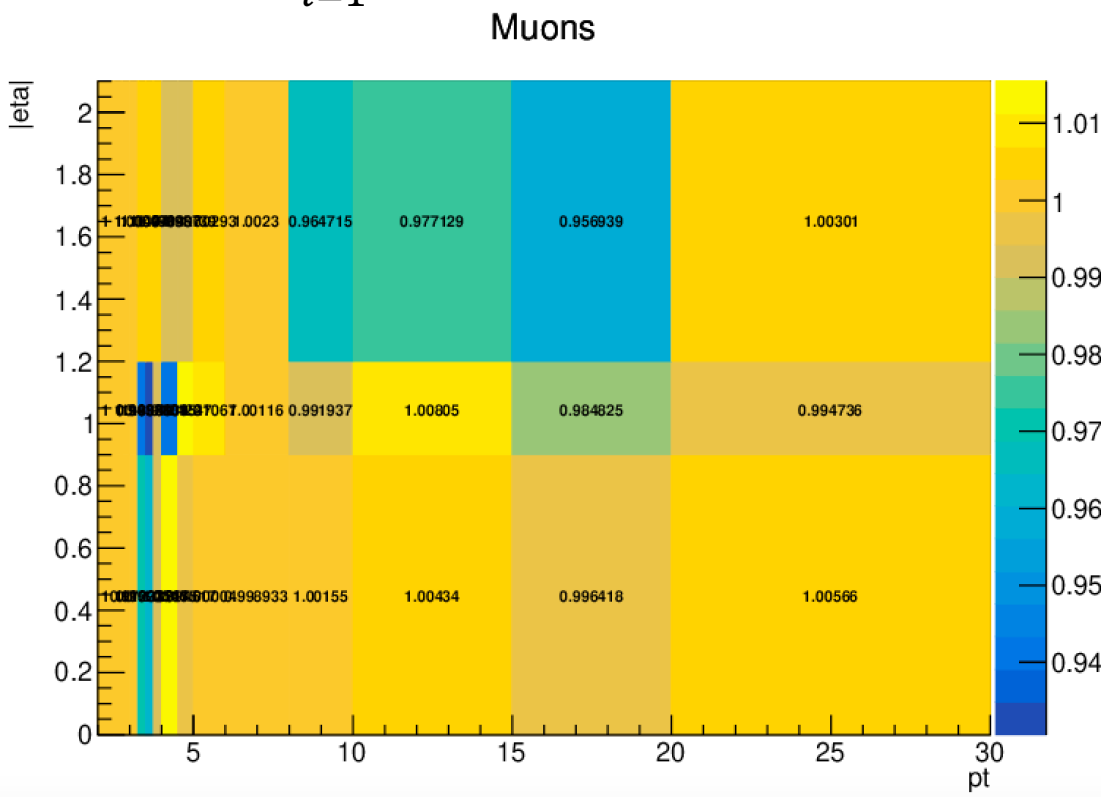
Efficiencies

$$\epsilon^{\mu}_{TRK} \cdot \epsilon^{\mu}_{ID|TRK} \cdot \epsilon^{\mu}_{Iso|ID} \cdot \epsilon^{\mu}_{Trigger|Iso}$$

- The track SFs are found to be above 0.99, and are considered equivalent to unity.
- Our analysis don’t apply ISO

RECO efficiency data/MC

$$\varepsilon_{RECO}^{4\mu}(p_T, |\eta|) = \prod_{i=1}^{4} \varepsilon_{RECO}^{\mu i}(p_T, |\eta|) \qquad SF_{RECO}^{4\mu}(p_T, |\eta|) = \prod_{i=1}^{4} SF_{RECO}^{\mu i}(p_T, |\eta|)$$



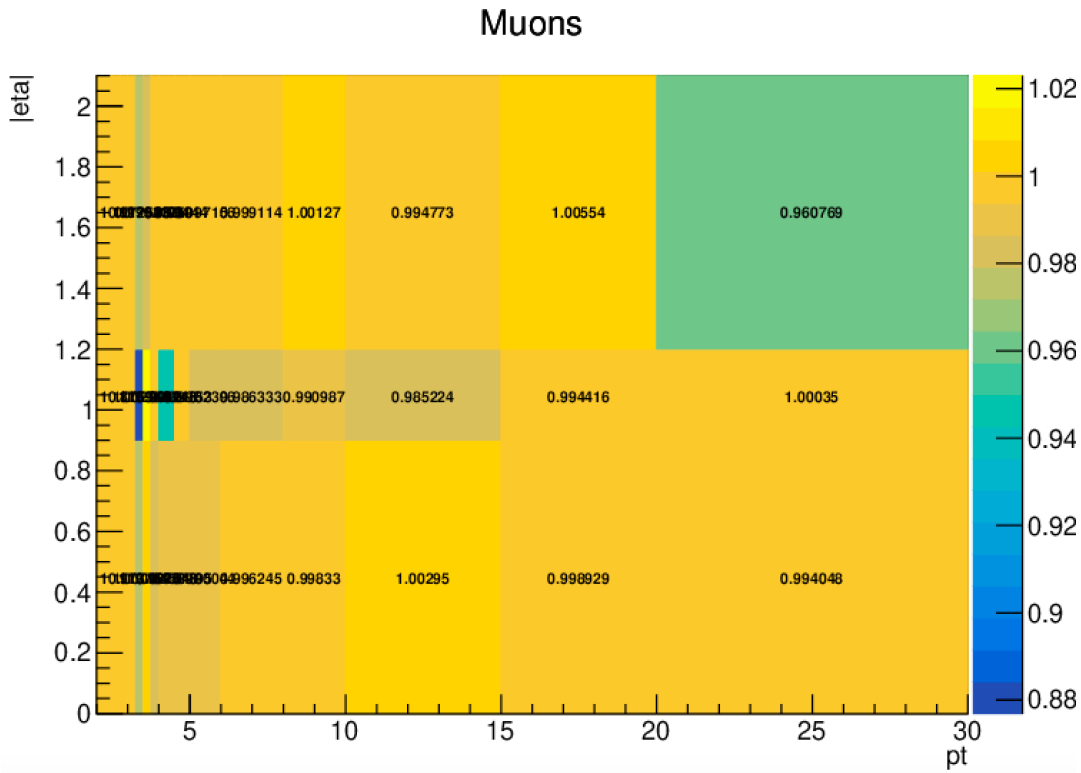
$$N^{TnP.Corr} = \sum_{i=1}^{N^{data}} SF_{RECO}^{4\mu}(i)$$

$$Error = \frac{|N^{TnP.Corr} - N^{data}|}{N^{data}}$$

	$N^{TnP.Corr}$	N^{data}	Relative Difference
Data	7164	7290	1.7%

ID efficiency data/MC

$$\varepsilon_{ID}^{4\mu}(p_T, |\eta|) = \prod_{i=1}^{4} \varepsilon_{ID}^{\mu i}(p_T, |\eta|) \qquad SF_{ID}^{4\mu}(p_T, |\eta|) = \prod_{i=1}^{4} SF_{ID}^{\mu i}(p_T, |\eta|)$$



$$N^{TnP.Corr} = \sum_{i=1}^{N^{data}} SF_{ID}^{4\mu}(i)$$

$$Error = \frac{|N^{TnP.Corr} - N^{data}|}{N^{data}}$$

	$N^{TnP.Corr}$	N^{data}	Relative Difference
Data	7131	7290	2.2%