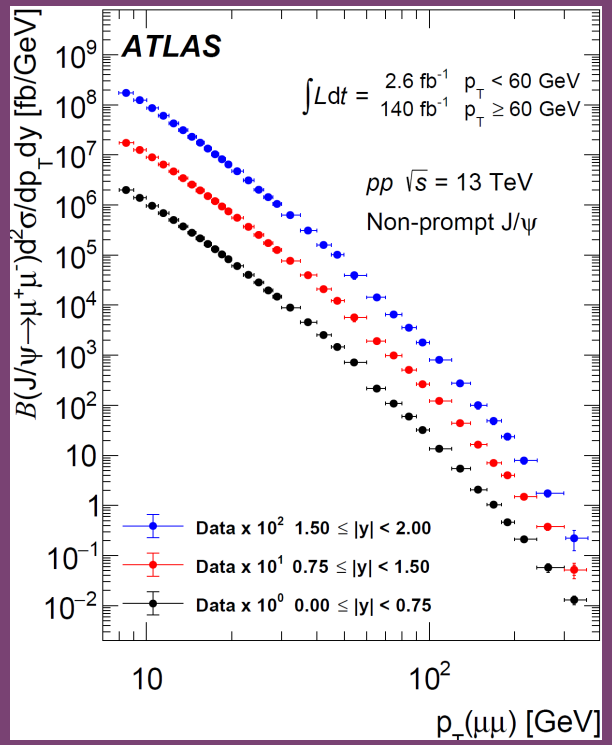
Effective cross section

- It is proposed to use prompt + non-prompt components to calculate the effective cross section
  - Prompt: $\sigma_{eff} = \frac{\sigma^2_{SPS\to J/\psi}}{2\sigma_{DPS\to J/\psi J/\psi}} = \frac{(0.37\ \mu b)^2}{2\times 36.5\ pb} = \mathbf{1.87\ mb}$
  - Non-prompt: $\sigma_{SPS\to J/\psi} = 0.24\ \mu b$
  - Prompt + non-prompt
    - $\sigma_{J/\psi J/\psi} = 250\ pb$
    - $\sigma_{eff} = \frac{\sigma^2_{SPS\to J/\psi}}{2\sigma_{DPS\to J/\psi J/\psi}} = \frac{(0.62\ \mu b)^2}{2\times 250\times 0.63\ pb} = \mathbf{1.10\ mb}$



Effective cross section

- For single J/ψ, non-prompt fraction is relatively small