

# **Drell\_Yan Process Cross Section Estimation for RHIC Energies**

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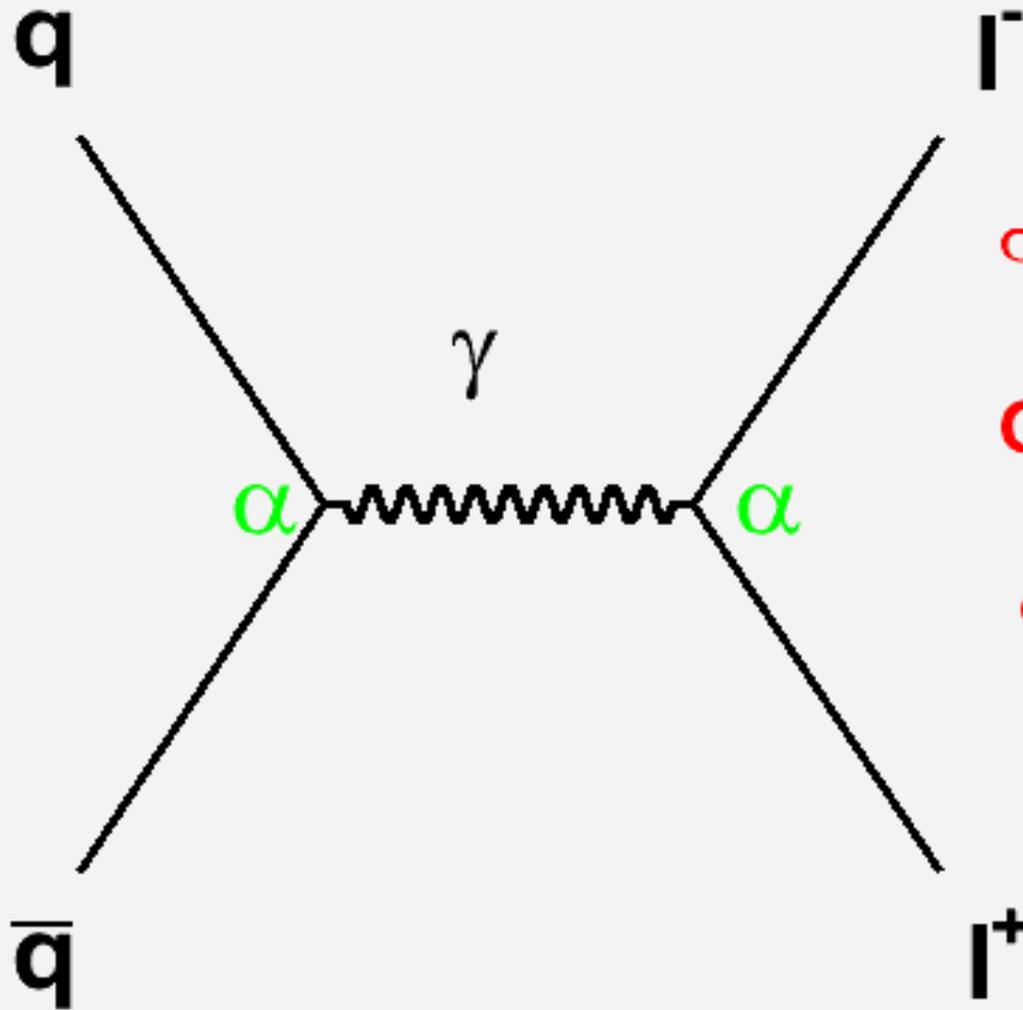
# Introduction

- **Based on Drell-Yan process study for the Monopole production at the Fermilab Tevatron energies at 1.96 TeV, I have recalculated DY process for the RHIC energies for 200 GeV, using well known DY process cross section formula for pp reaction and recalculated it for AuAu interactions, using expected number of binary collision know from theory (D. Kharzeev).**

# References

- **Abulencia A. et al., Phys. Rev. Lett. p.201801, 2006. → Direct Search for Dirac Monopoles in  $pp\bar{p}$  Collisions at  $\sqrt{s}=1.96$  TeV**
- **Kharzeev D. et al., nucl-th/0012025. → Hadron production in nuclear collisions at RHIC and high density QCD**

# DY Process Feynman Diagram

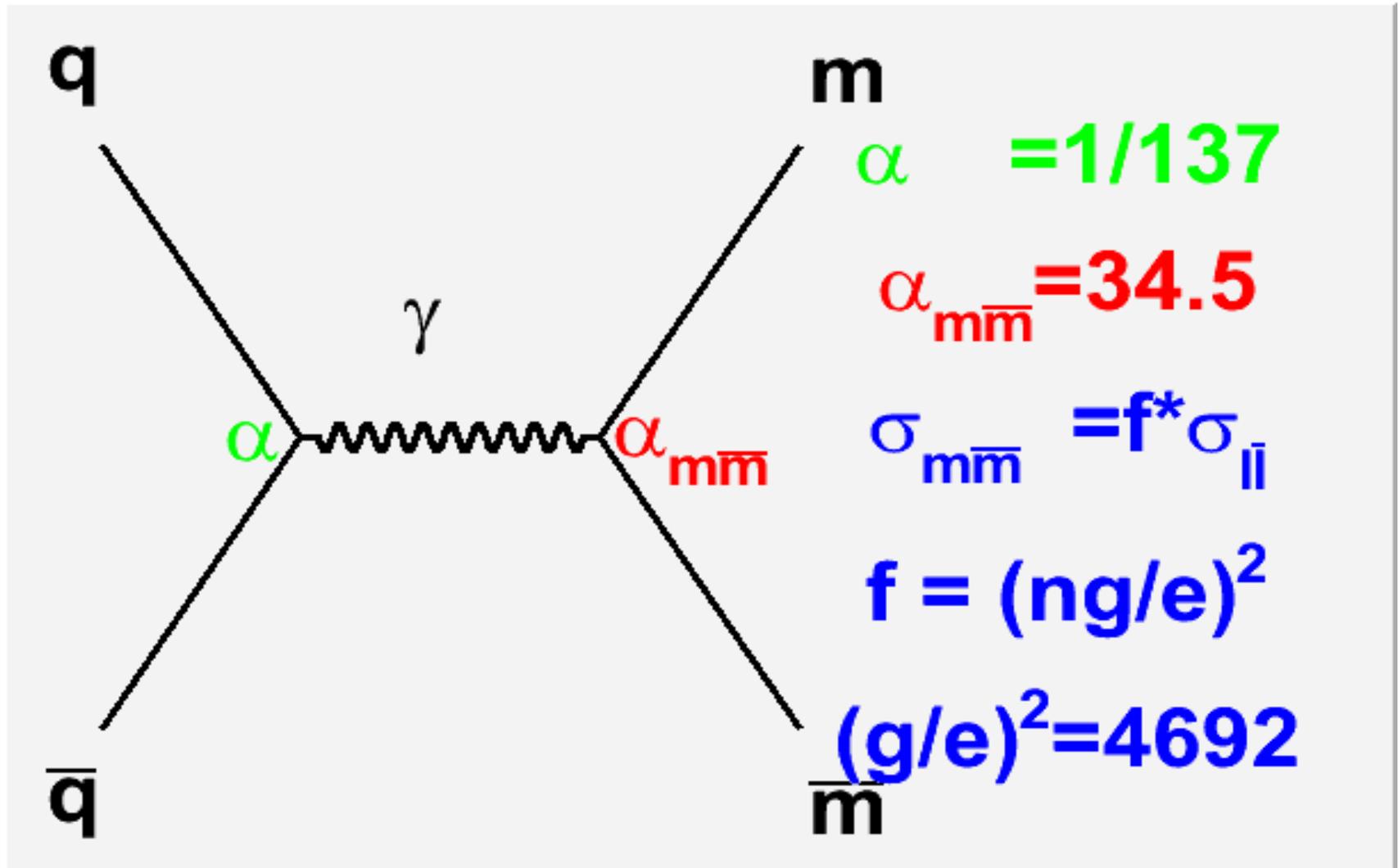


$$\sigma(q\bar{q} \rightarrow l^+l^-) =$$

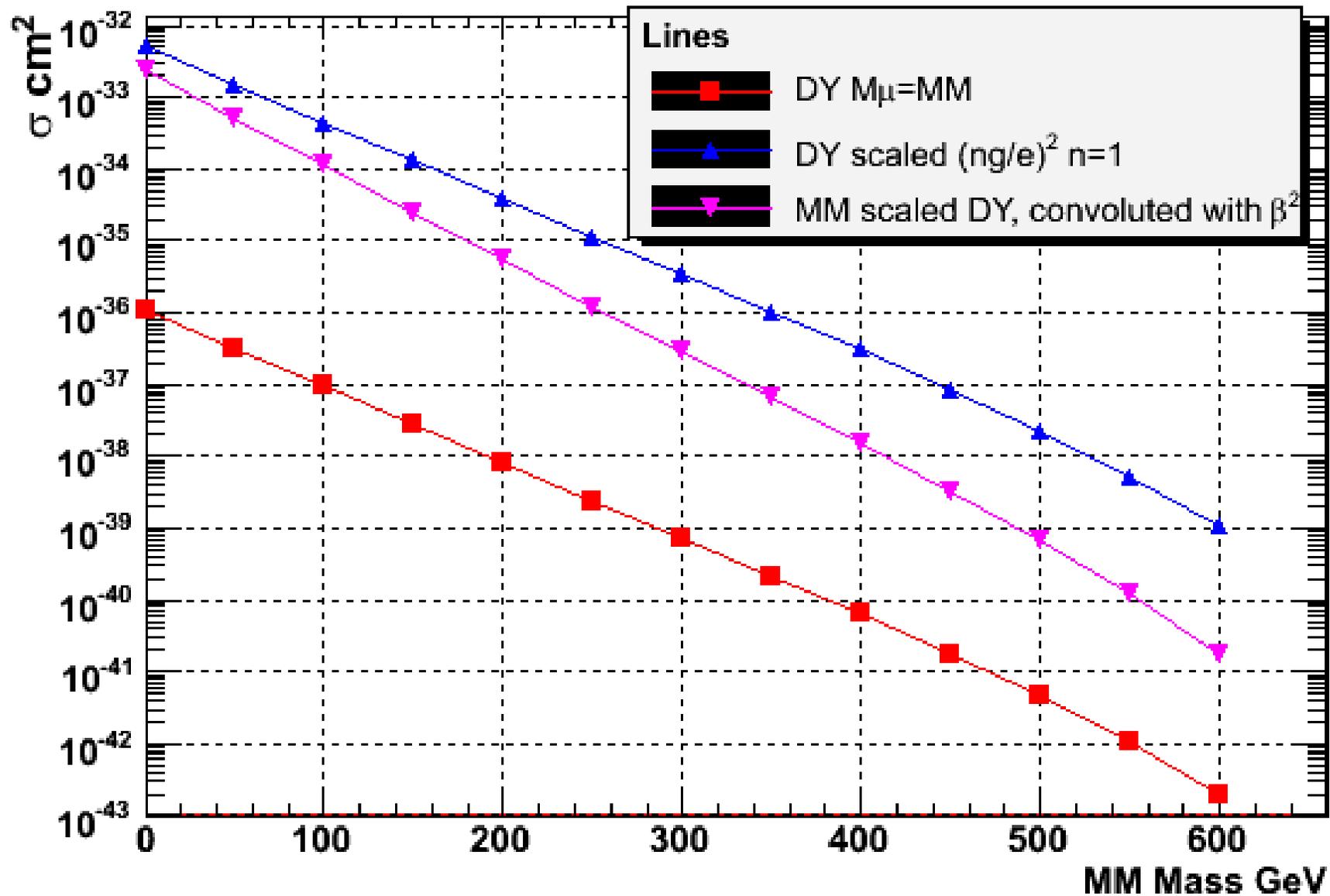
$$\frac{Q^2}{3} \times \frac{4\pi\alpha^2}{3E^2}$$

$$\alpha = 1/137$$

# DY Process for Monopole Production



# Inclusive cross section for DY in pp at $\sqrt{s}=1.96$ TeV



# Inclusive cross section for DY at $\sqrt{s}=200$ GeV

