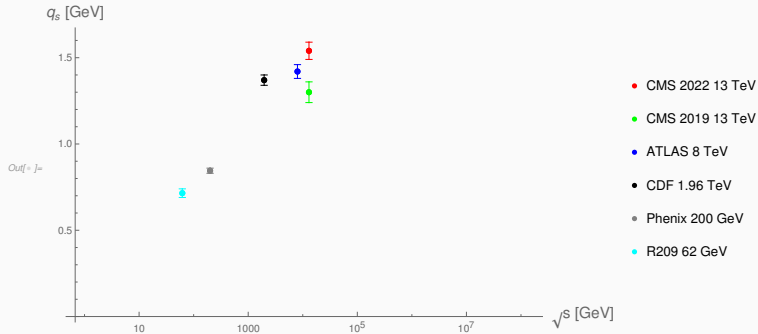
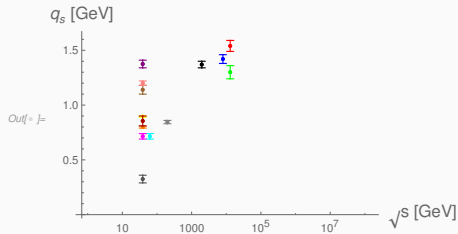


# Update on $q_s$ fits with dynamical $z_M$



- The results obtained with (i)TMD with dynamical  $z_M$  with  $q_0 = 1$  GeV (both in  $z_M$  def and as a cut in  $\alpha_s$ )
- iTMD fitted to HERA data
- For CMS, ATLAS, CDF I look at Z mass window
- R209 and Phenix are in much lower mass window ( $5 < M < 8$  GeV and  $4.8 < M < 8.2$  GeV respectively)
- uncertainties still have to be assigned correctly

# Problem with NUSEA and E605



- CMS 2022 13 TeV
- CMS 2019 13 TeV
- ATLAS 8 TeV
- CDF 1.96 TeV
- Phenix 200 GeV
- R209 62 GeV
- NUSEA,  $4.2 \text{ GeV} < M_{\mu^+ \mu^-} < 5.2 \text{ GeV}$
- NUSEA,  $5.2 \text{ GeV} < M_{\mu^+ \mu^-} < 6.2 \text{ GeV}$
- NUSEA,  $6.2 \text{ GeV} < M_{\mu^+ \mu^-} < 7.2 \text{ GeV}$
- NUSEA,  $7.2 \text{ GeV} < M_{\mu^+ \mu^-} < 8.7 \text{ GeV}$
- NUSEA,  $10.2 \text{ GeV} < M_{\mu^+ \mu^-} < 12.85 \text{ GeV}$
- E605,  $7 \text{ GeV} < M_{\mu^+ \mu^-} < 8 \text{ GeV}$
- E605,  $8 \text{ GeV} < M_{\mu^+ \mu^-} < 9 \text{ GeV}$
- E605,  $11.5 \text{ GeV} < M_{\mu^+ \mu^-} < 13.5 \text{ GeV}$

- I get different result from each mass window