Why: The Physics of NuSea

P + H_2,D_2 → Drell-Yan:

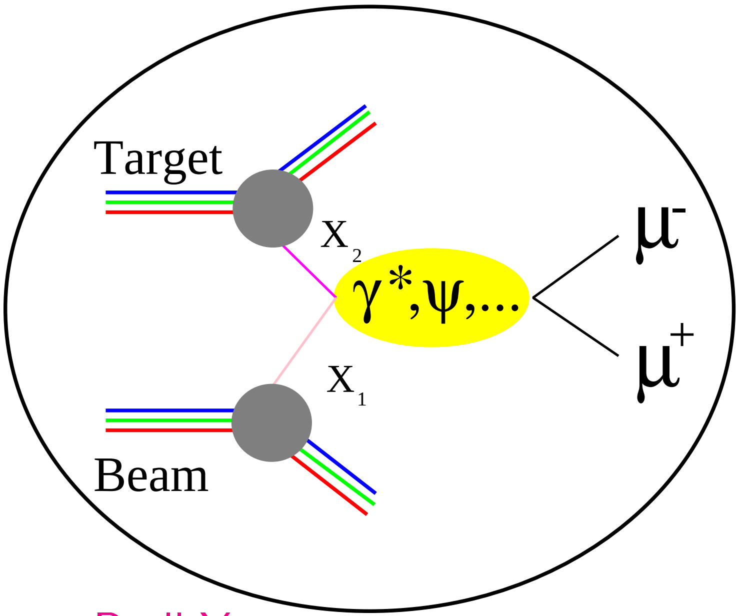
- Cross Section Ratio
  ⇒ $\bar{d}(x)/\bar{u}(x)$
- Absolute Cross Sections
  ⇒ $\bar{d}(x) + \bar{u}(x)$

P + H_2,D_2 → Υ,J/ψ:

- $\sigma^{PP}_{\Upsilon,J/\psi}$, $\sigma^{PD}_{\Upsilon,J/\psi}$, $\sigma^{PD}/2\sigma^{PP}$
  ⇒ $G(x)$

P + Nucleus → J/ψ:

- J/ψ Nuclear Dependence
  ⇒ Octet vs Singlet Absorption
  ⇒ J/ψ, ψ' Formation Times
  ⇒ Parton Energy Loss
  ⇒ Important
  for RHIC Physics (QGP)
- Low-mass ϕ, ρ & Continuum



P + Nucleus → Drell-Yan:

- Drell-Yan Nuclear Dependence
  ⇒ Parton Energy Loss
  ⇒ Shadowing
- Single Muons
  ⇒ Open Charm

P + A → J/ψ, ψ', Υ :

- J/ψ Angular Distribution
  ⇒10 Million J/ψ
  ⇒J/ψ Production:
  Octet or Singlet?
- Also Υ and ψ' Angular Distributions