

# Updated Nuclear PDFs:

New plots from Nestor

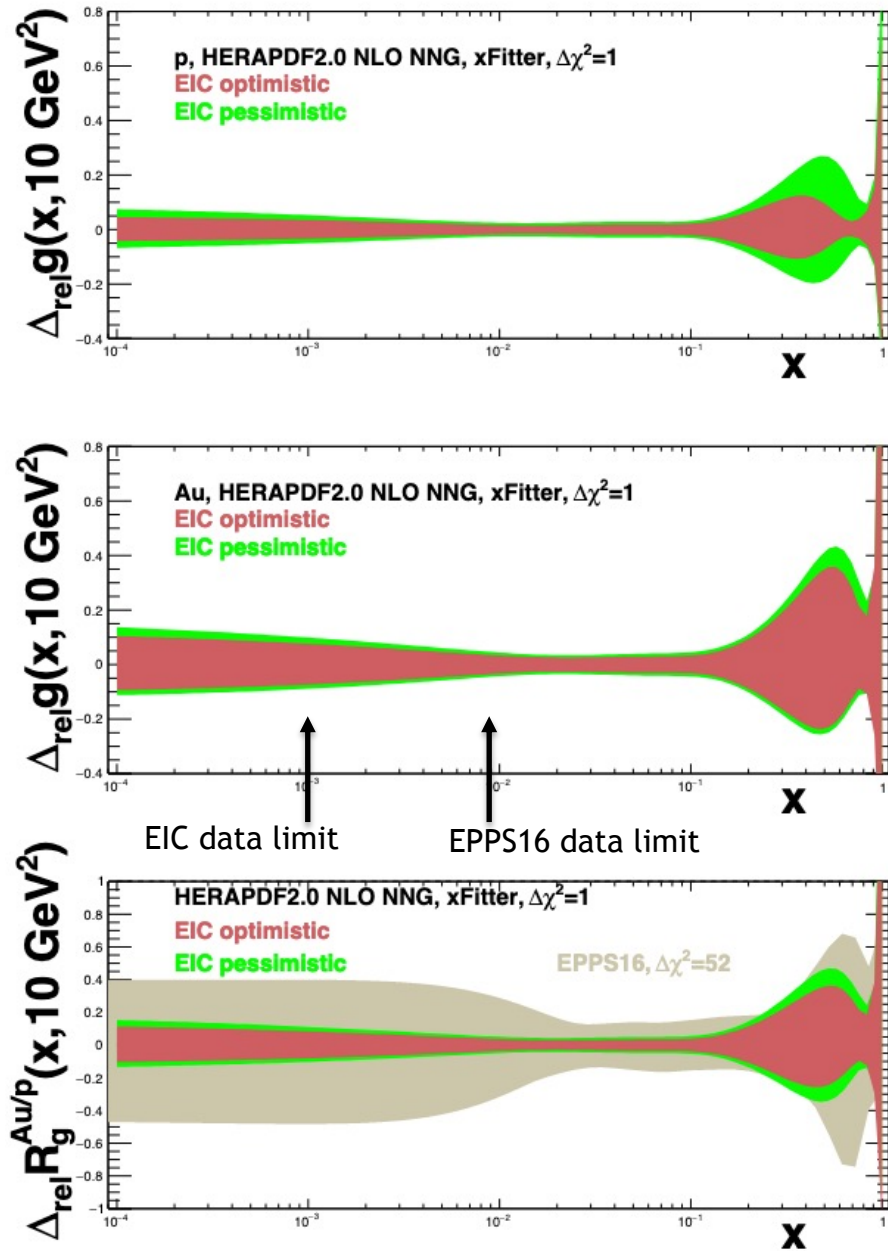
... based on Katarzyna's xFitter work

...fitting Barak's ep & eAu simulated data

ATHENA Inclusive meeting  
15 November 2021

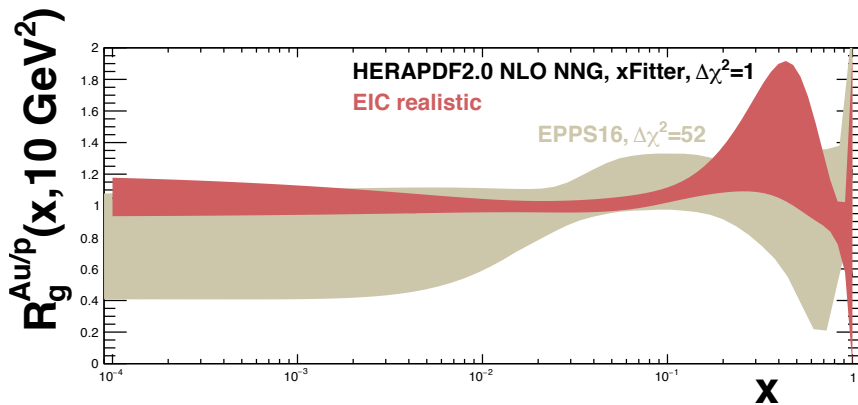
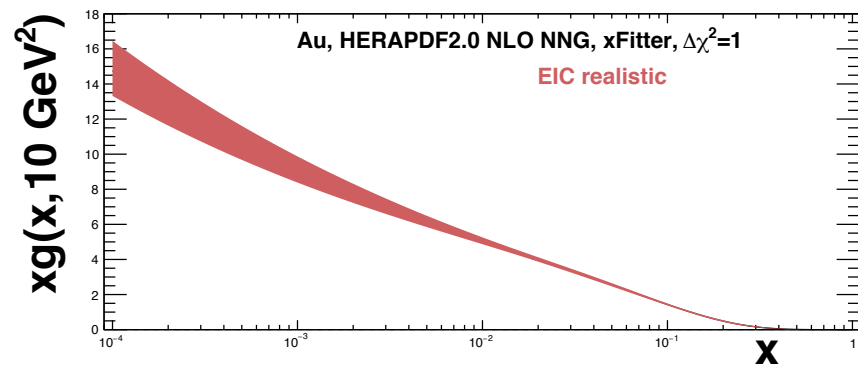
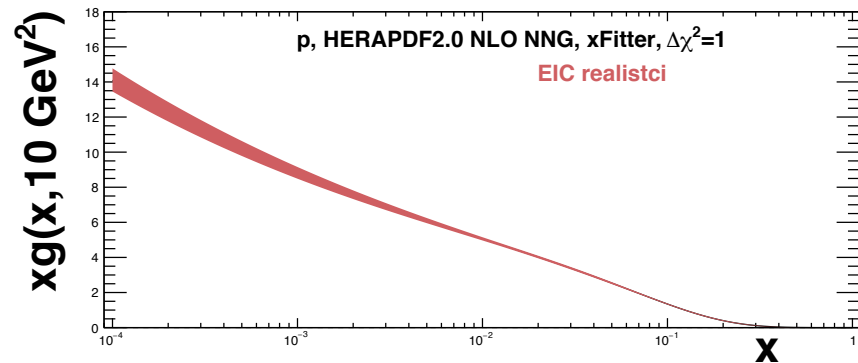
Paul Newman (Birmingham)

# Previous version (Yellow Report data)

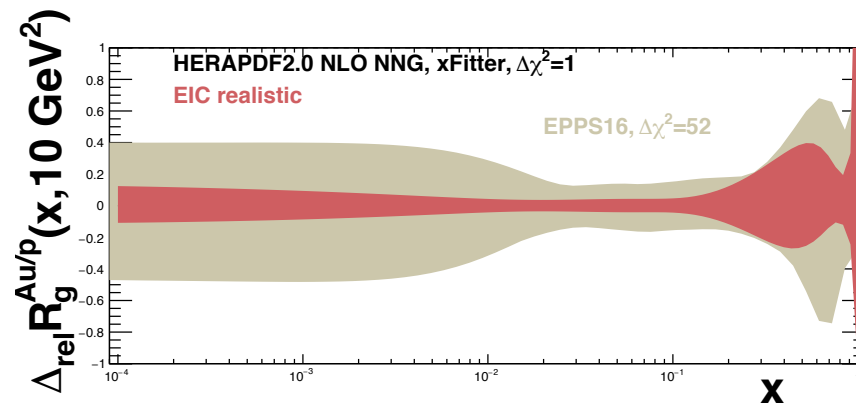
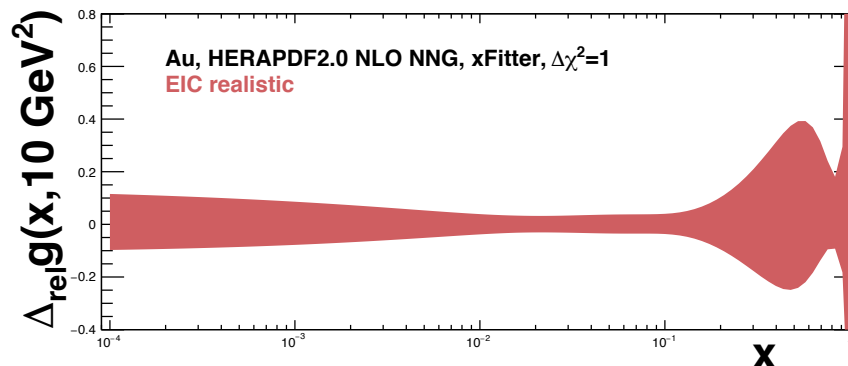
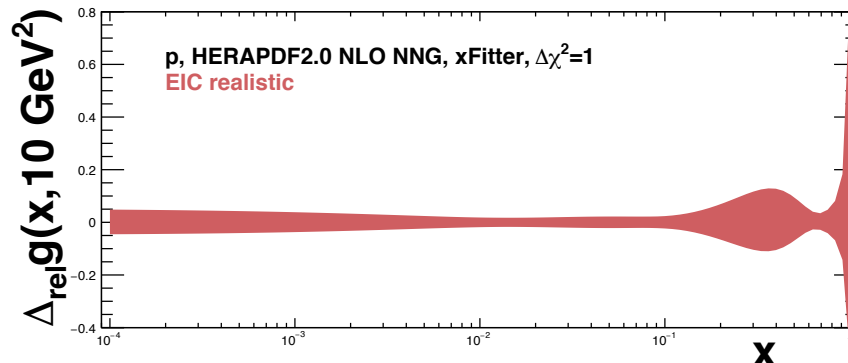


# New plots of Gluon Density

## Fitted gluon density

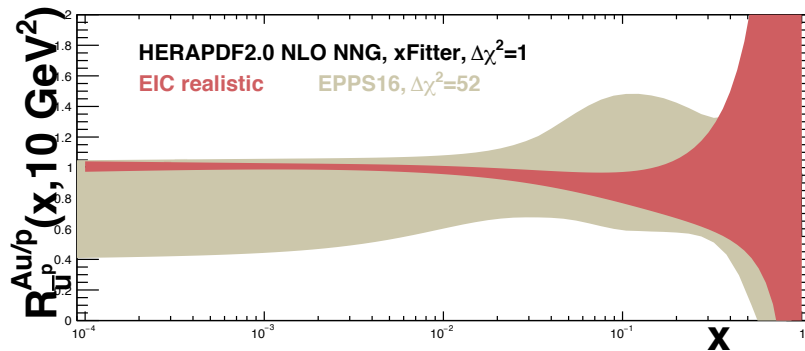
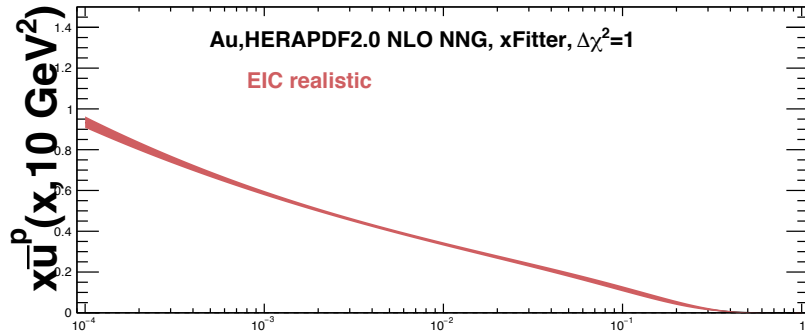
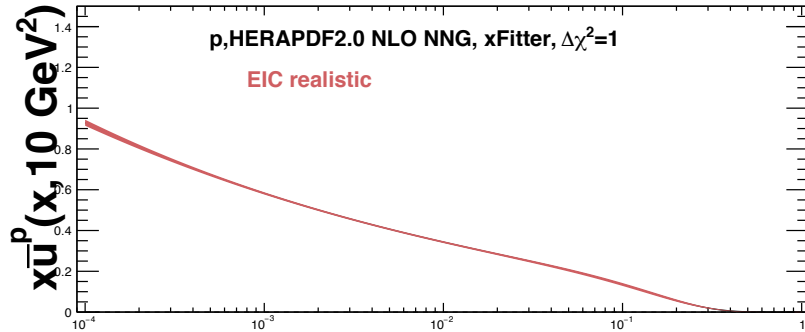


## Relative uncertainties

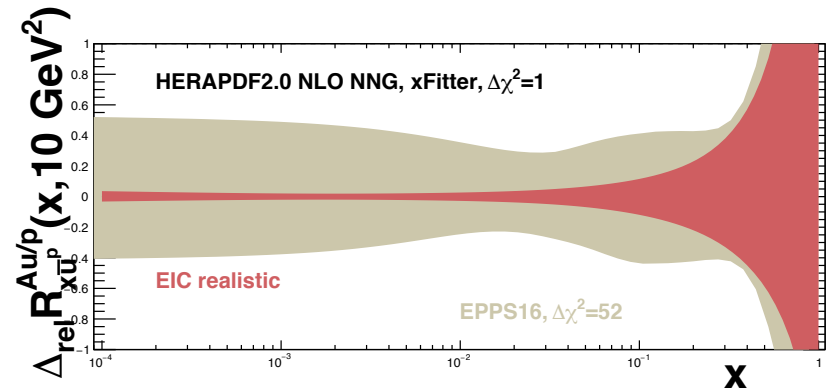
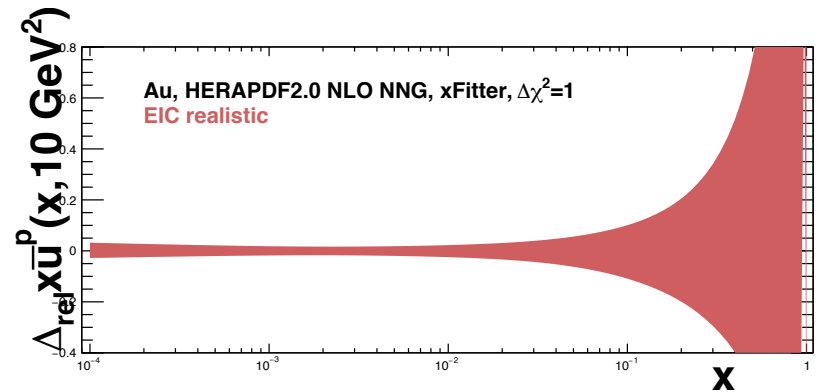
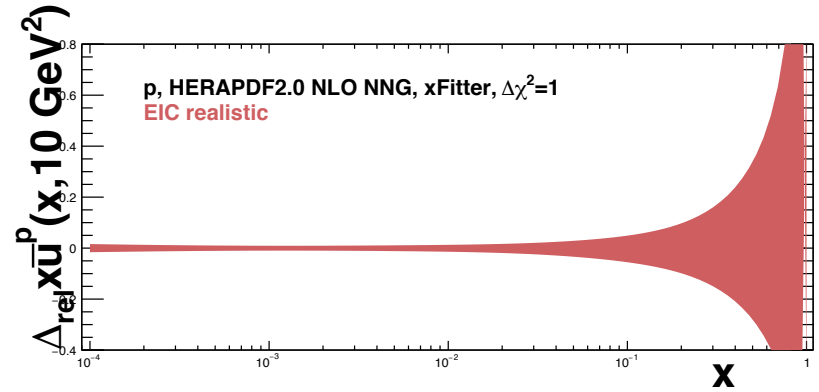


# New plots of Sea Quark Density

## Fitted singlet quark density



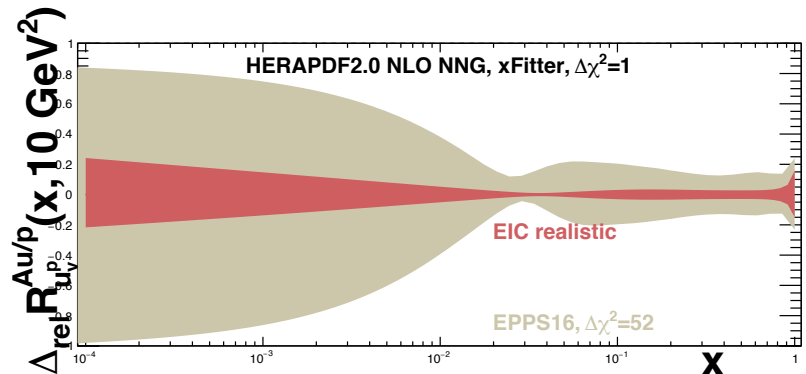
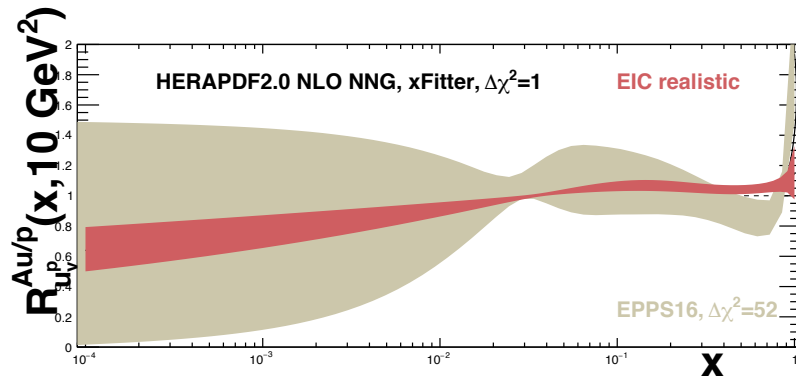
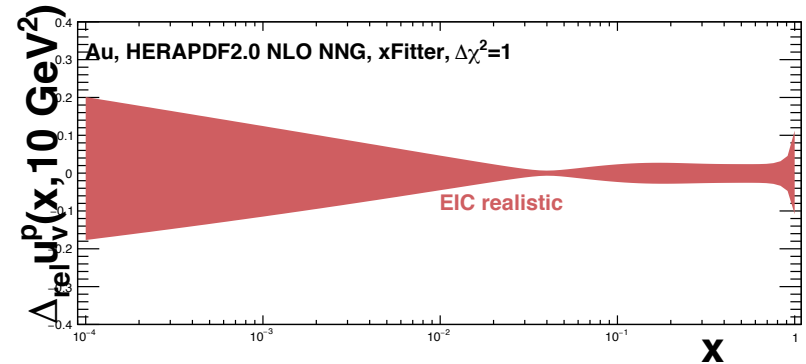
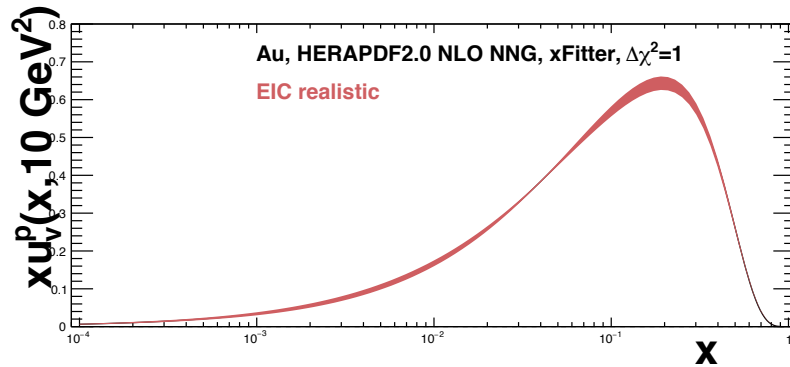
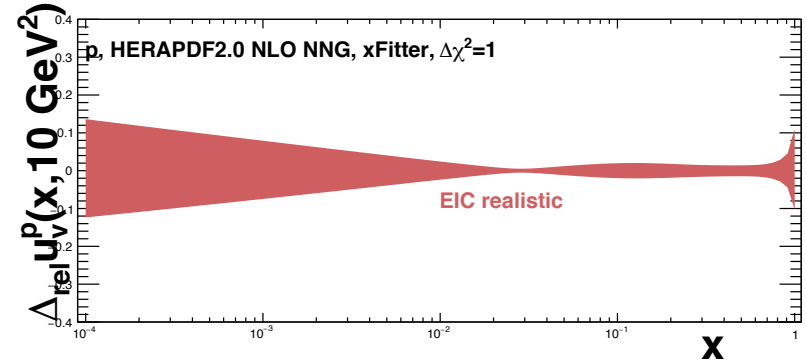
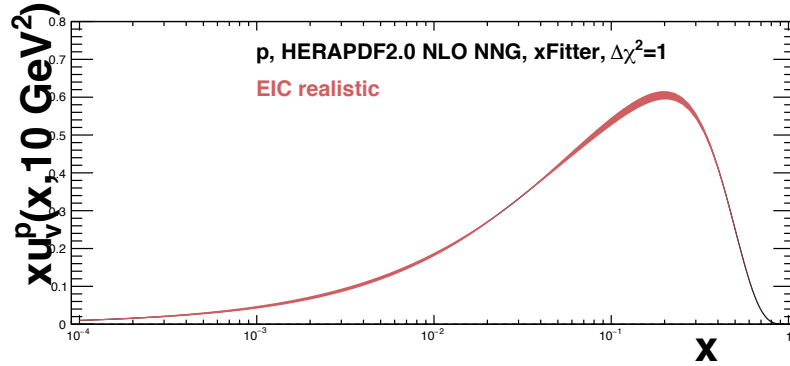
## Relative uncertainties



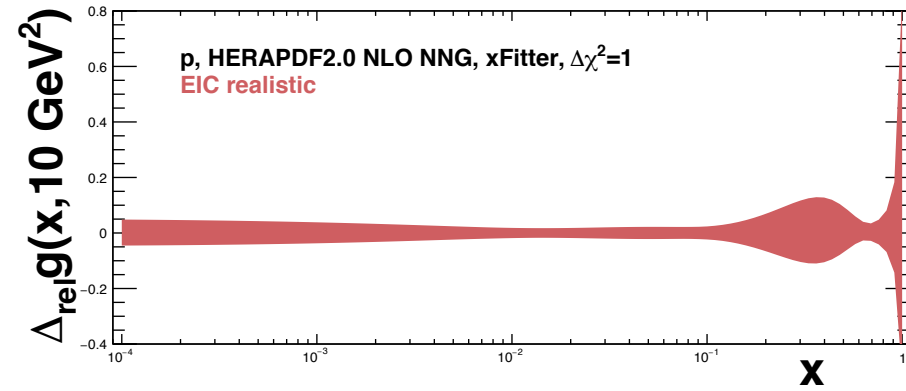
# New plots of (up) Valence Density

Fitted  $u_v$  density

Relative uncertainties

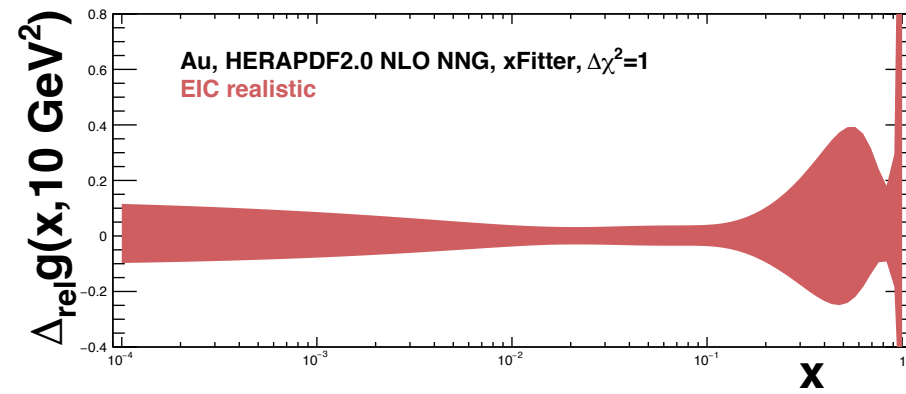


# Plans



- All of this fits well in Twiki material

- Gluon uncertainties is current placeholder in proposal



- Could alternatively show gluon, sea and u-valence ratios?

- Cosmetic changes?...

→ EIC realistic → ATHENA

→ Crop at lowest x of data?

→ Suppress  $\Delta\chi^2$  (discussed in Text)?

→ ...

