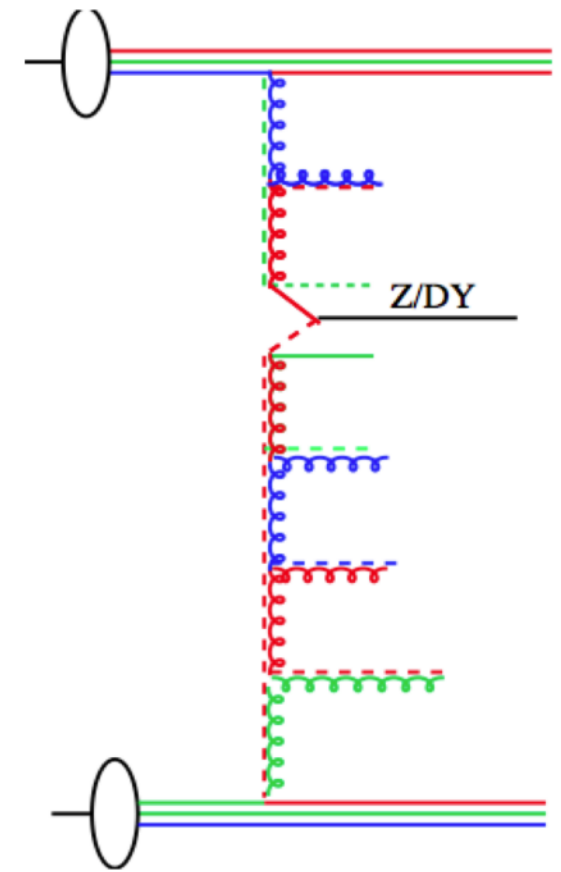


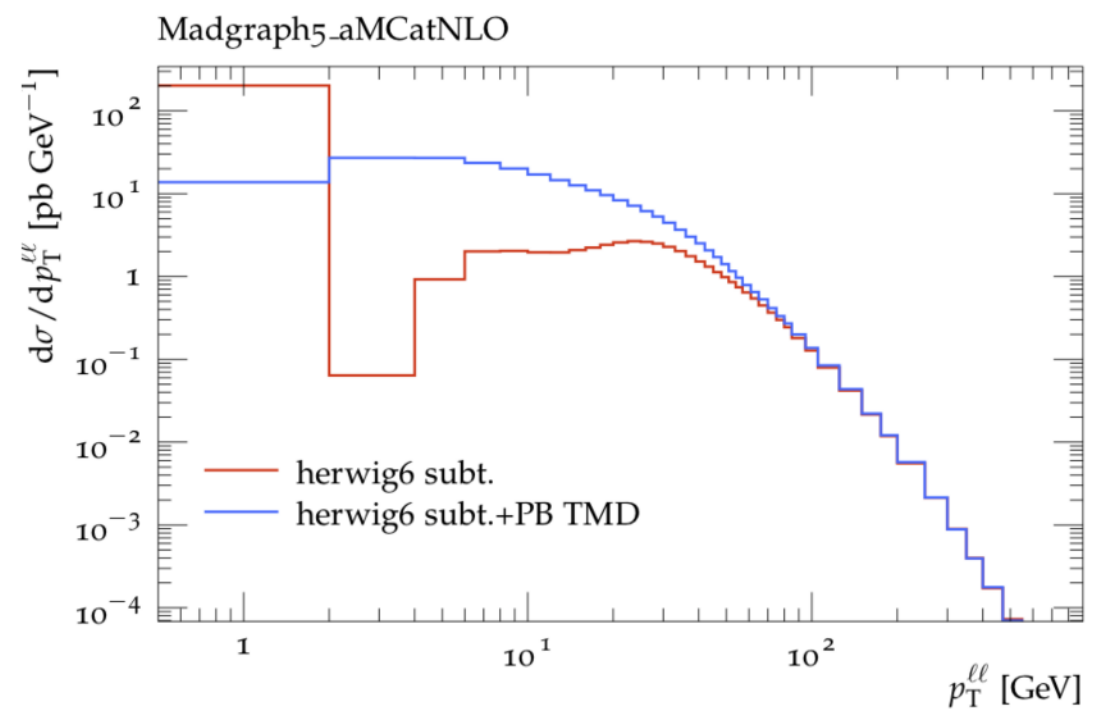
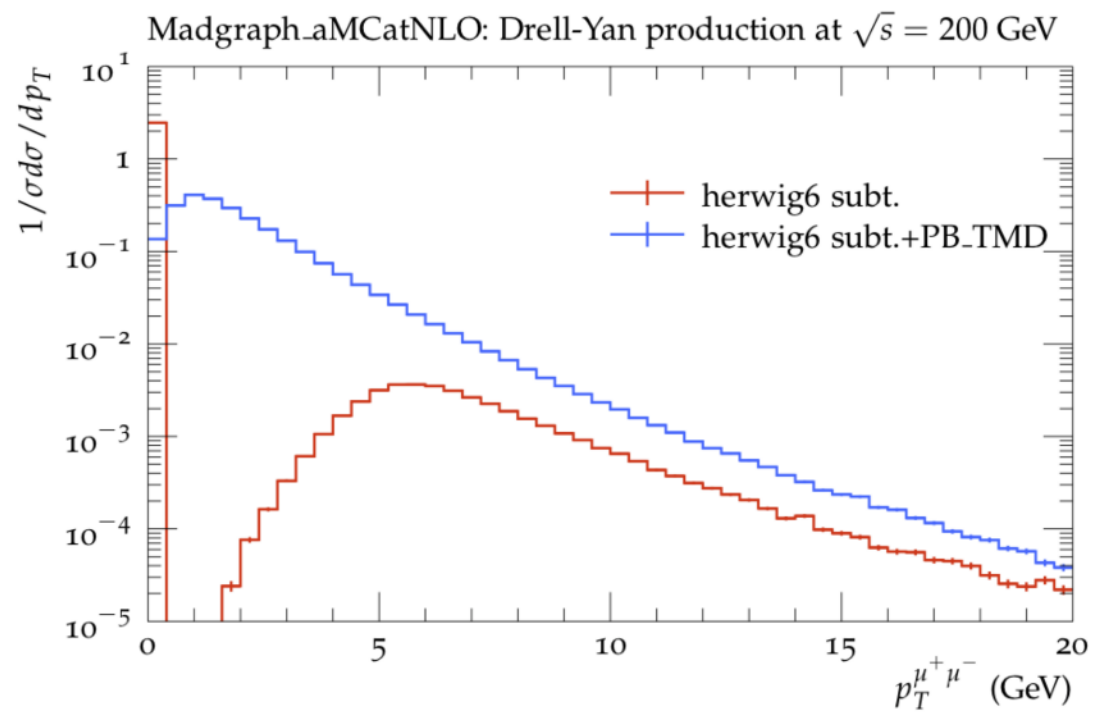
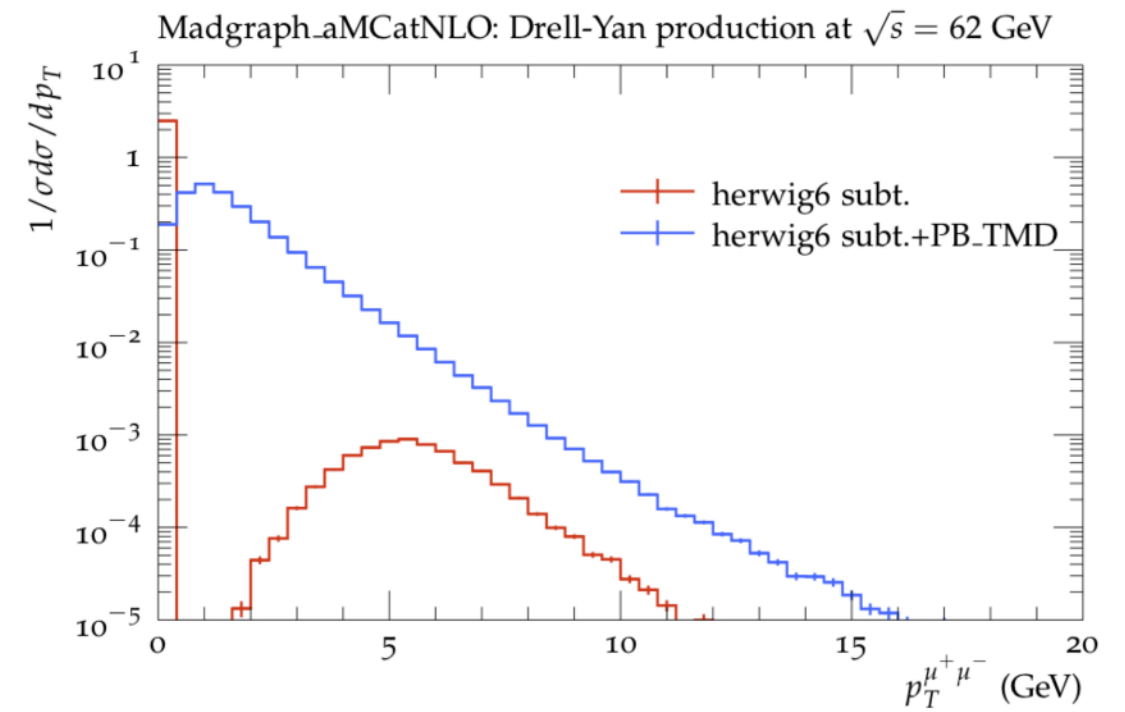
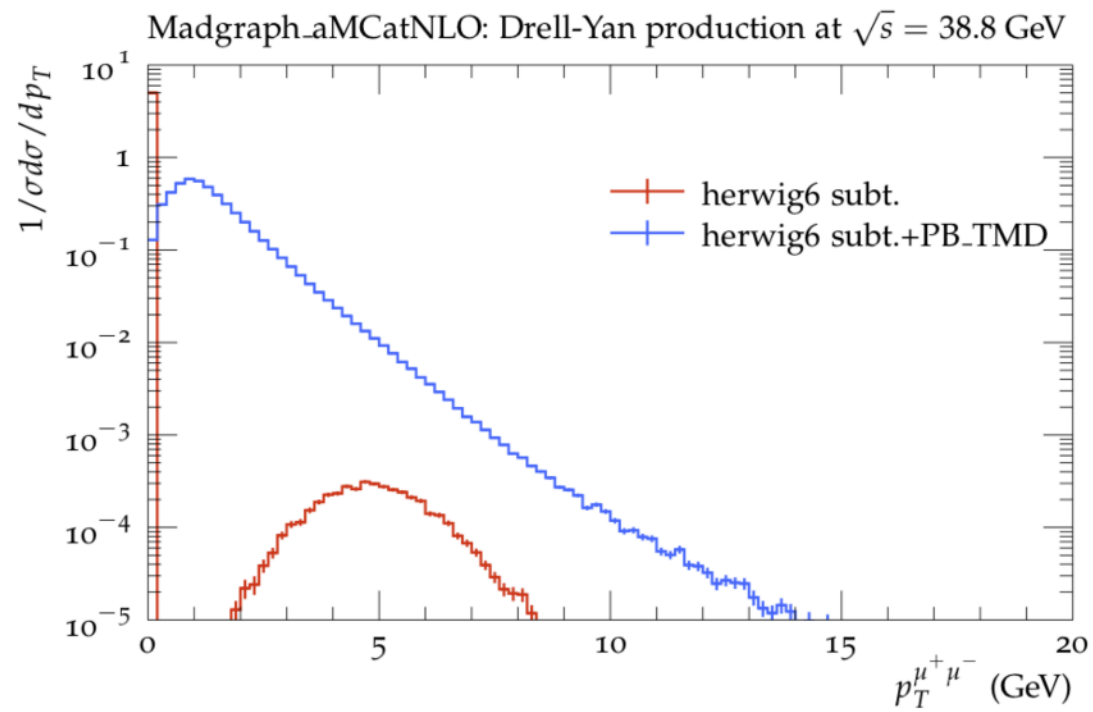
PB TMD meeting

Where can intrinsic k_T be constrained ?

- need to go to low DY mass:
 - at low mass, little room for QCD evolution (parton shower)
 - p_T of DY is dominated by intrinsic k_T
- latest measurement: PHENIX (PhysRevD.99.072003) at $\sqrt{s} = 200$ GeV for $4.6 \leq m_{DY} \leq 8.2$ GeV
- other measurements (older)
 - R209 (1982) PhysRevLett.48.302 at $\sqrt{s} = 62$ GeV (data read from plot in paper)
 - E605 (1992) PhysRevD.43.2815 at $\sqrt{s} = 38$ GeV
 - NUSEA (2003) hep-ex/0301031 at $\sqrt{s} = 38$ GeV (unpublished)
 - E288 (1981) PhysRevD.23.604 at $\sqrt{s} = 23.8$ GeV

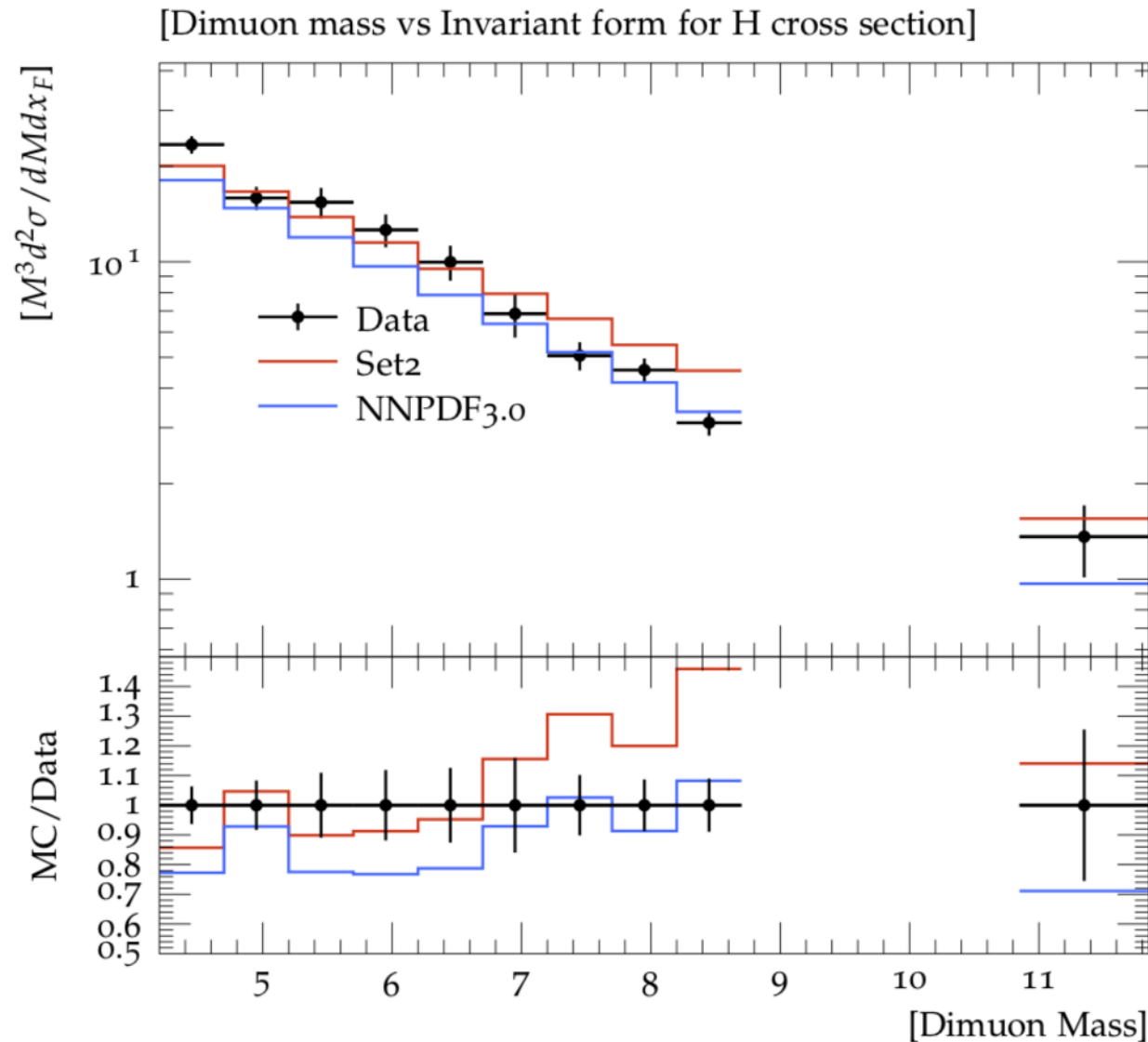


Madgraph_aMC@NLO



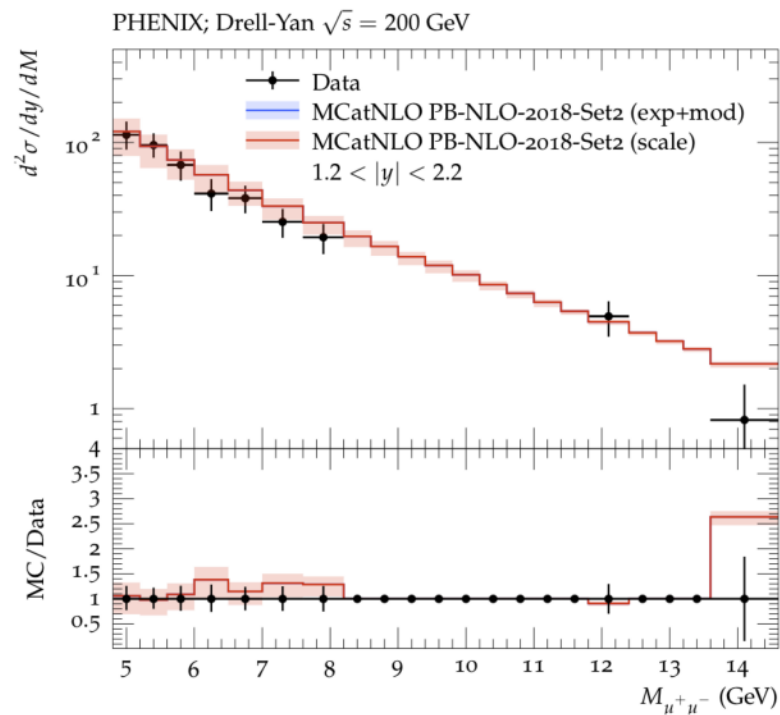
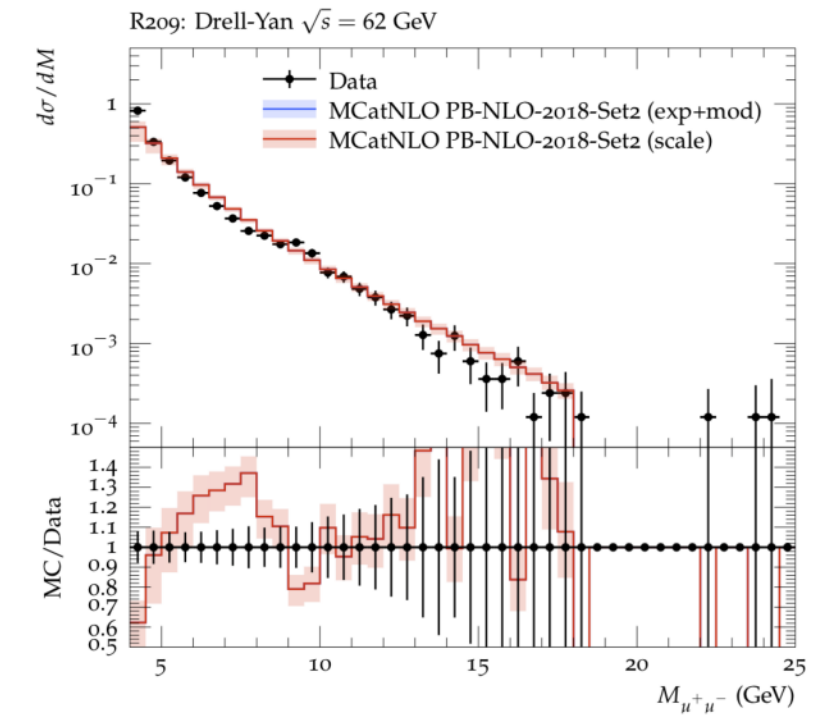
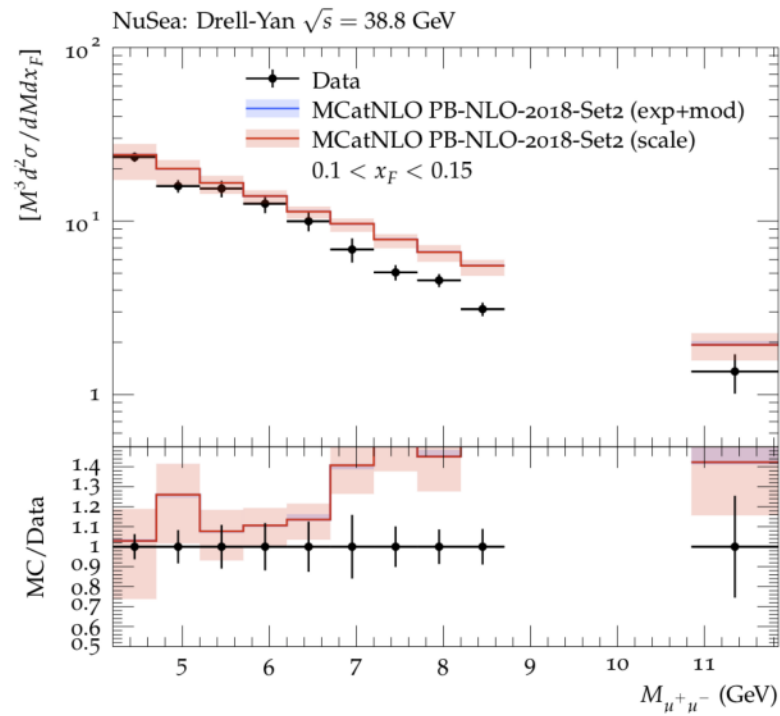
Mass distribution: sensitivity to collinear PDF

Work by M. Schmitz, H. Yang



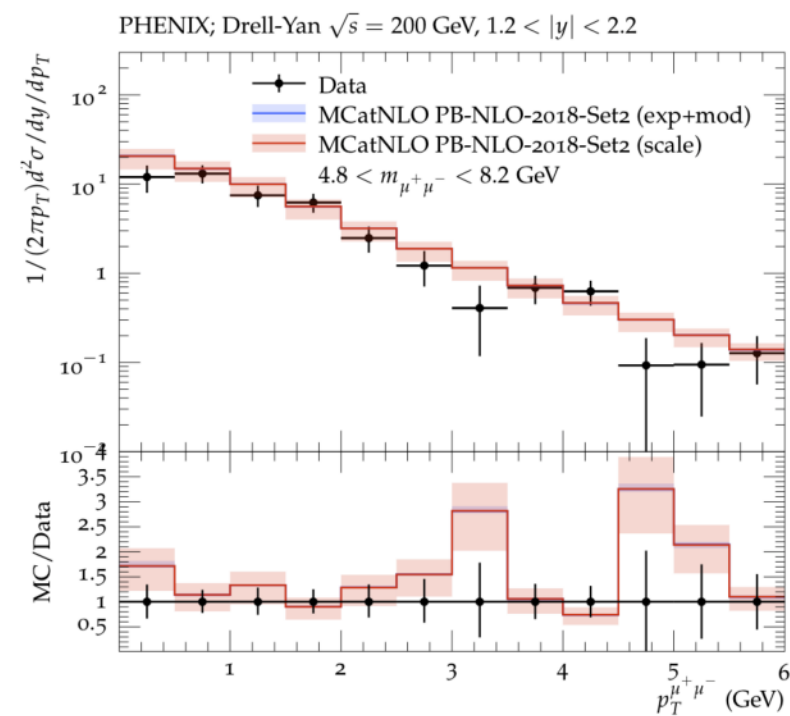
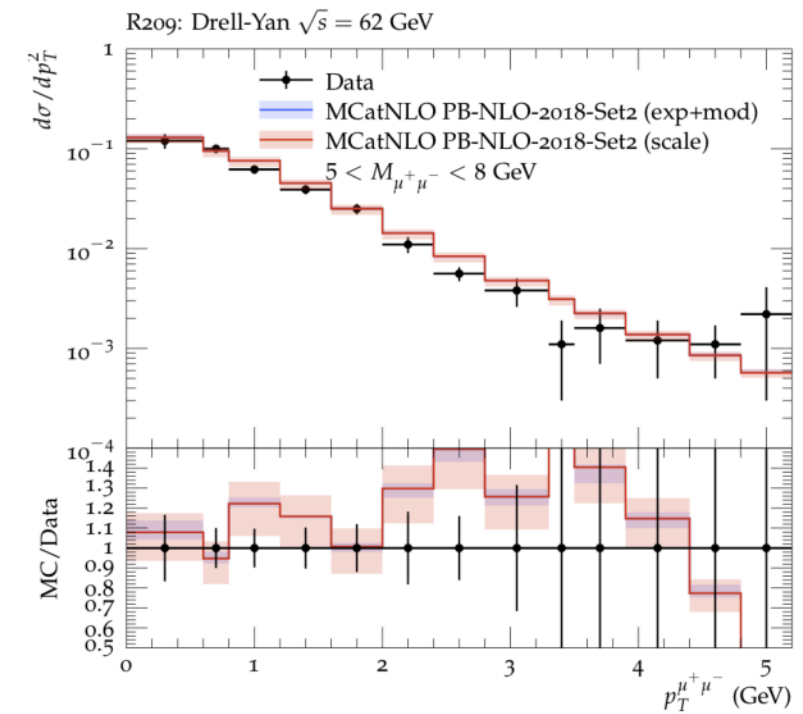
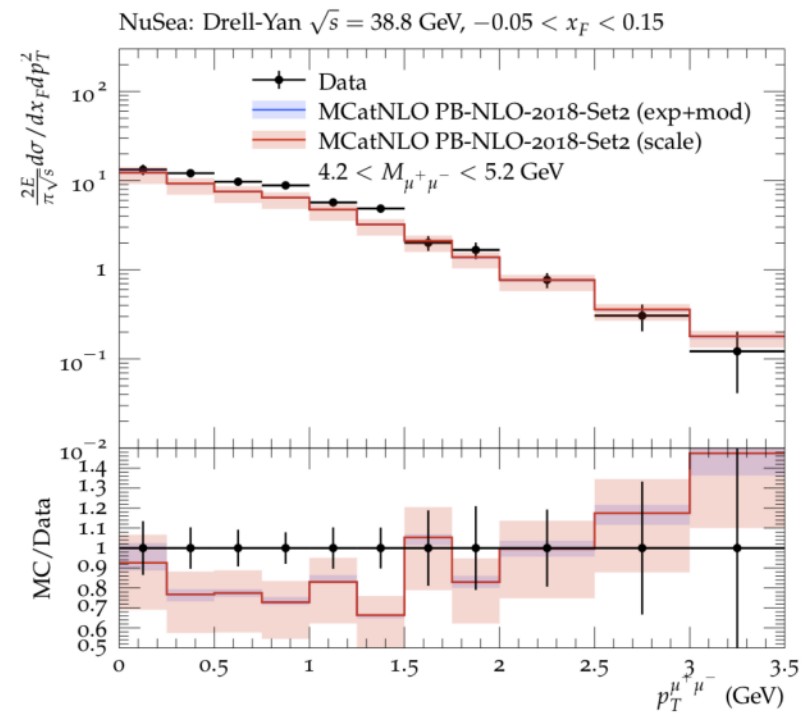
- Invariant mass distribution is sensitive to collinear PDF since:
 $m^2 = x_1 x_2 s$
- especially at low $\sqrt{s} = 40$ GeV
- NNPDF use NuSea data for collinear fits

Mass distribution



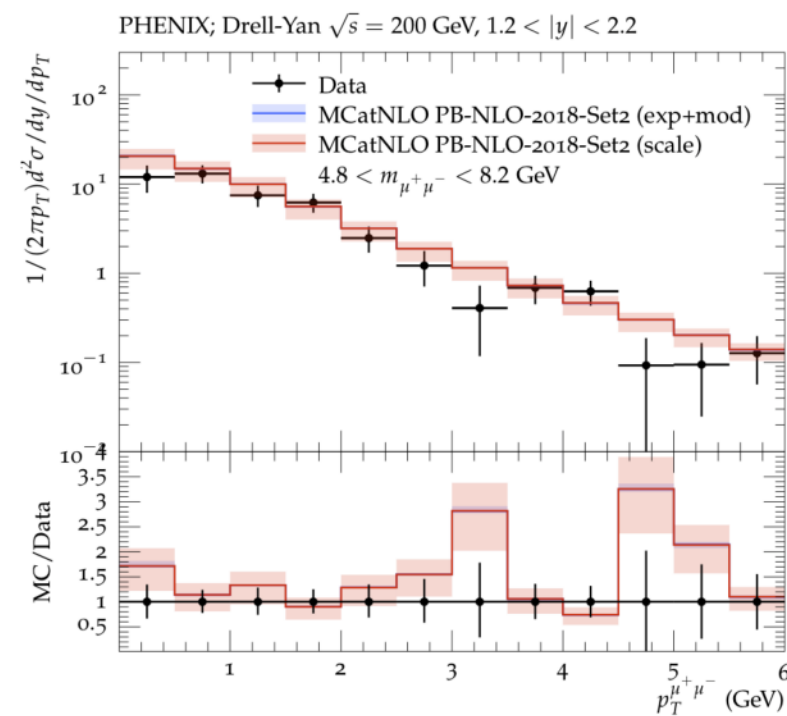
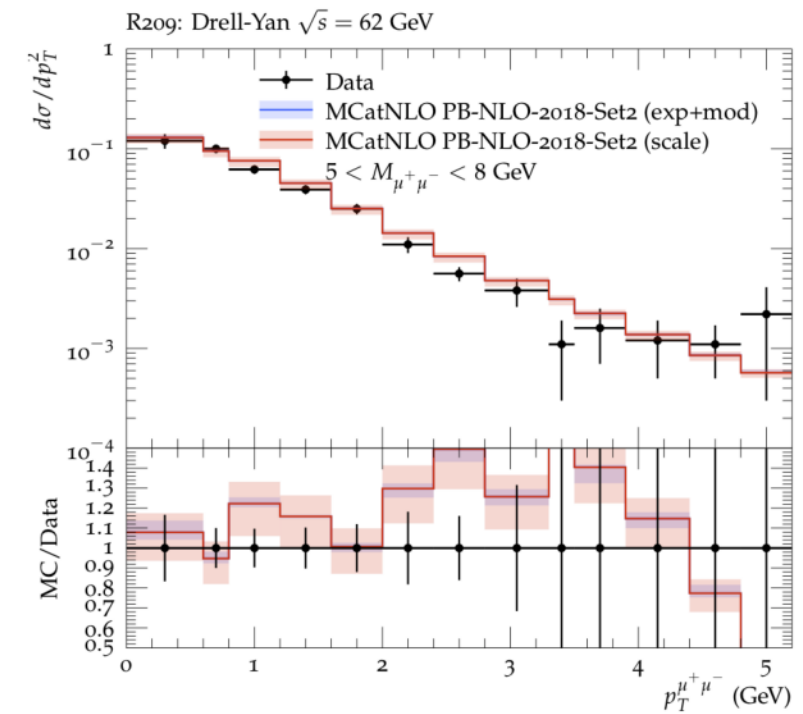
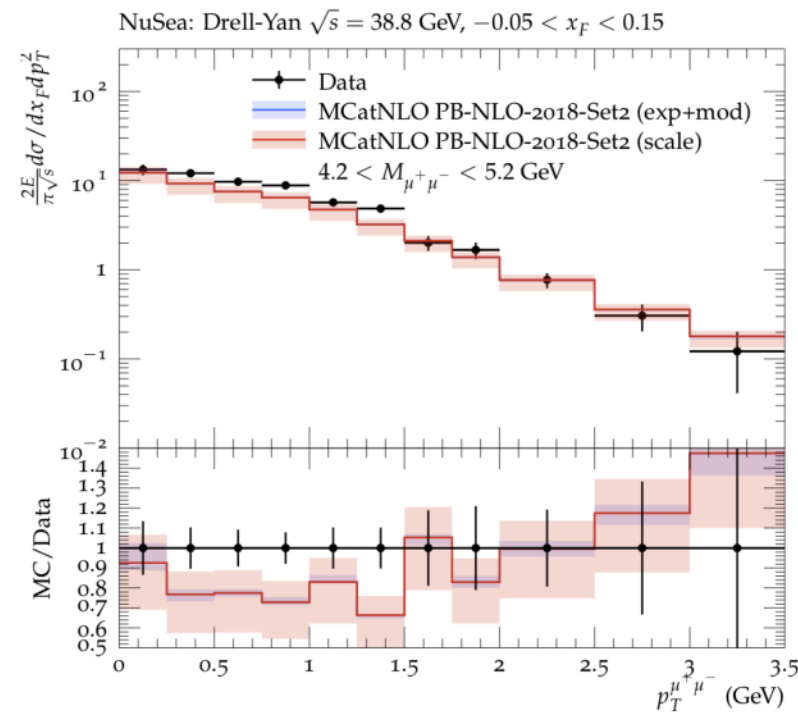
- Except lowest $\sqrt{s}$ data, well described with PB-pdf

Transverse momentum distributions



- Reasonably well described !

Transverse momentum distributions

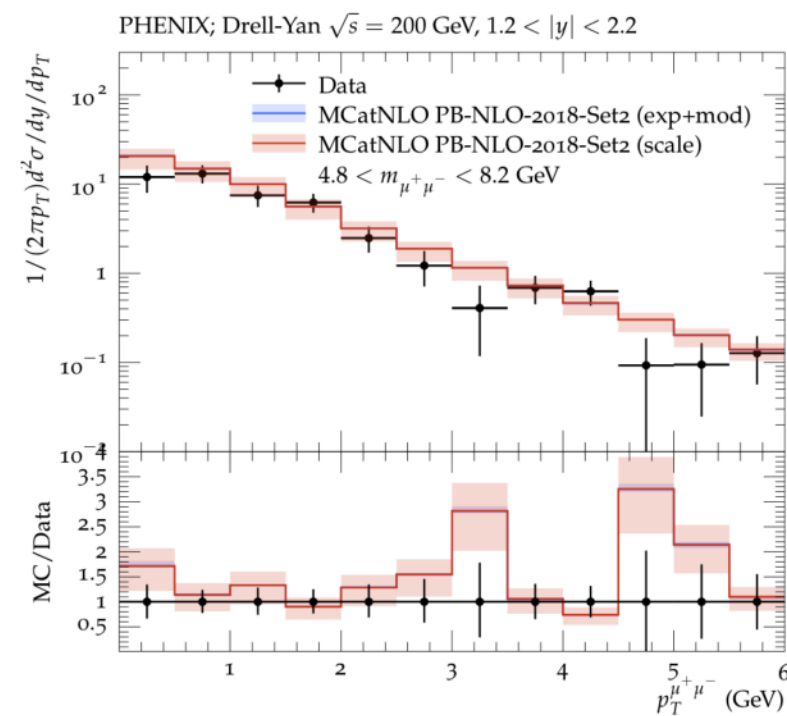
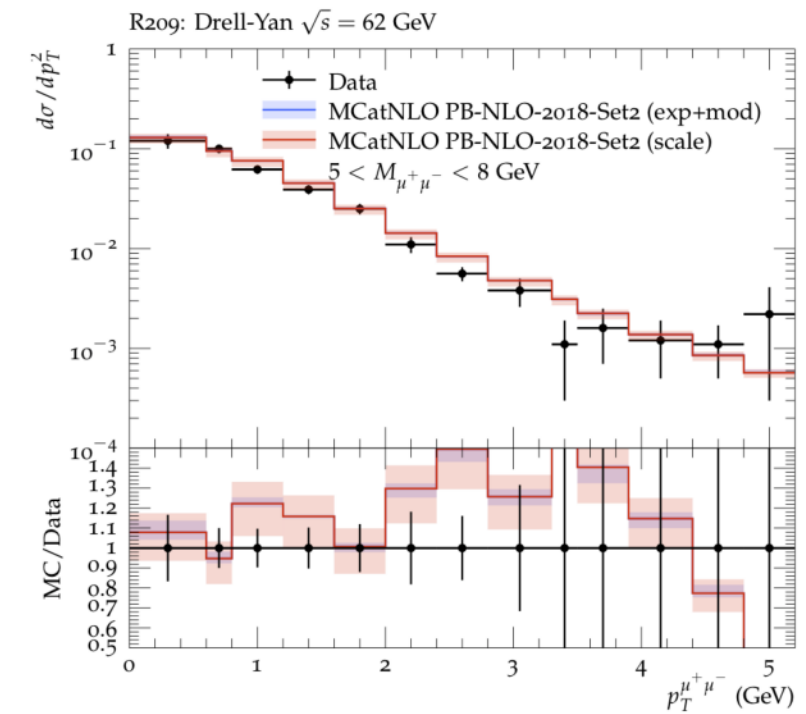
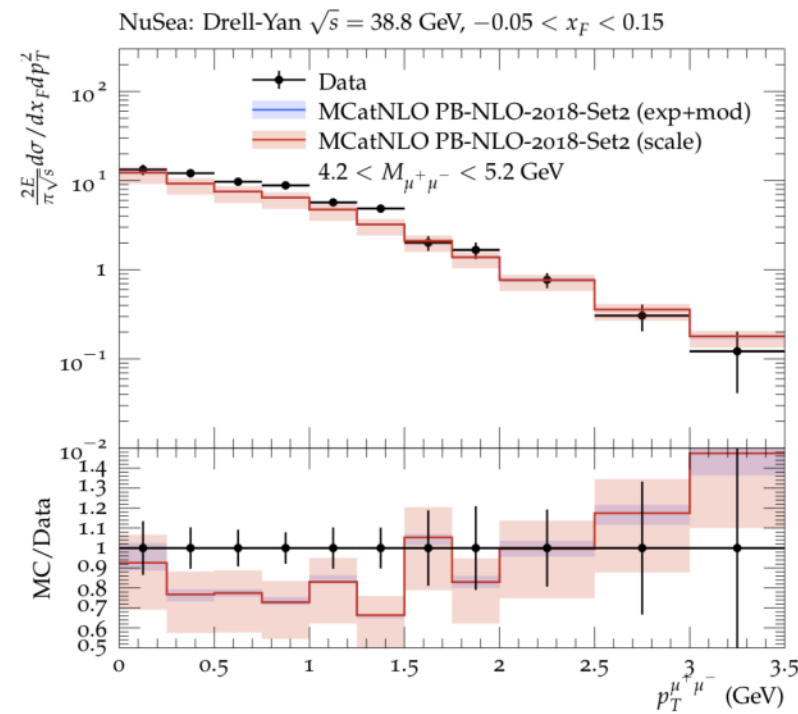


- How good is description ?

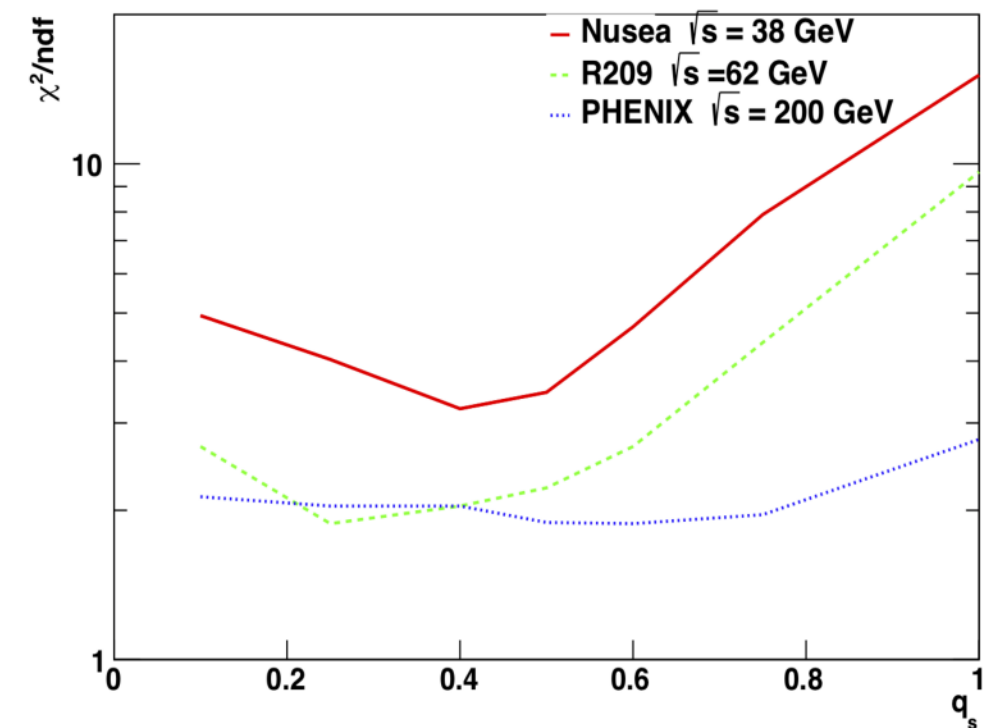
$$\chi^2/ndf$$

Qs	NuSea	R209	PHENIX
0.5	1.08	1.27	1.04

Transverse momentum distributions



- How good is description ?



Agenda

PB TMD discussion

Thursday, 9 January 2020 from **15:30** to **17:30** (Europe/Berlin)
at **CMS meeting room**

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Description Vidyo connection:

<https://vidyoportal.cern.ch/flex.html?roomdirect.html&key=Nh6qpY4rP69Q>

If you want to join by phone, please use one of the phone numbers listed in the link below:

<http://information-technology.web.cern.ch/services/fe/howto/users-join-vidyo-meeting-phone>

and enter the meeting extension 1010403749 in order to join.

Thursday, 9 January 2020

- | | | |
|---------------|--------------------------------------|---|
| 15:30 - 15:50 | Intro 20' | ▾ |
| 15:50 - 16:10 | update on TMD splitting function 20' | ▾ |
| | Speaker: Lissa Keersmaekers | |