W(eekly) O(ffline) M(eeting)

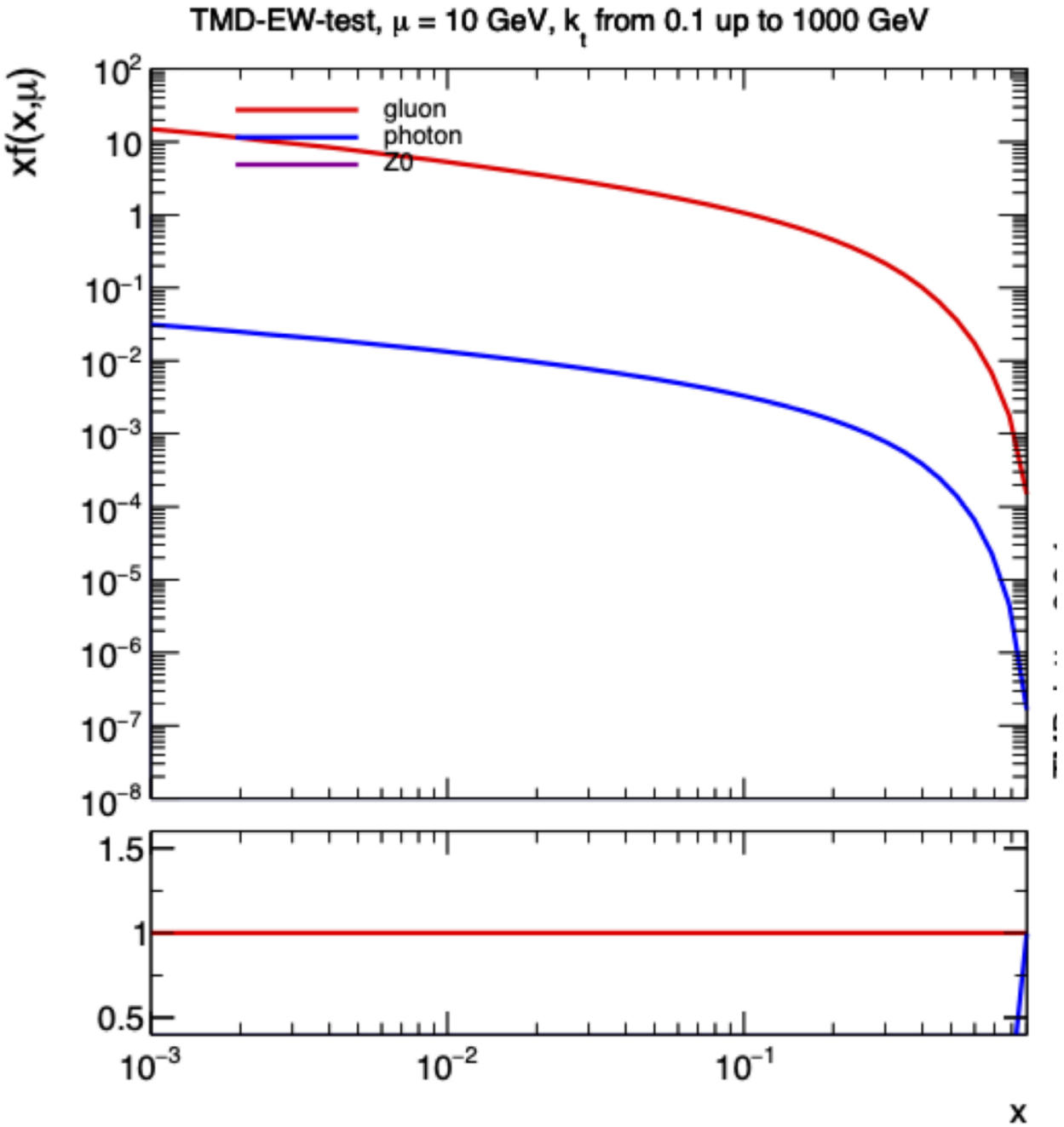
- Special remote DESY Summer School (7. Aug – 1. Sept)
  - https://indico.desy.de/event/39338/

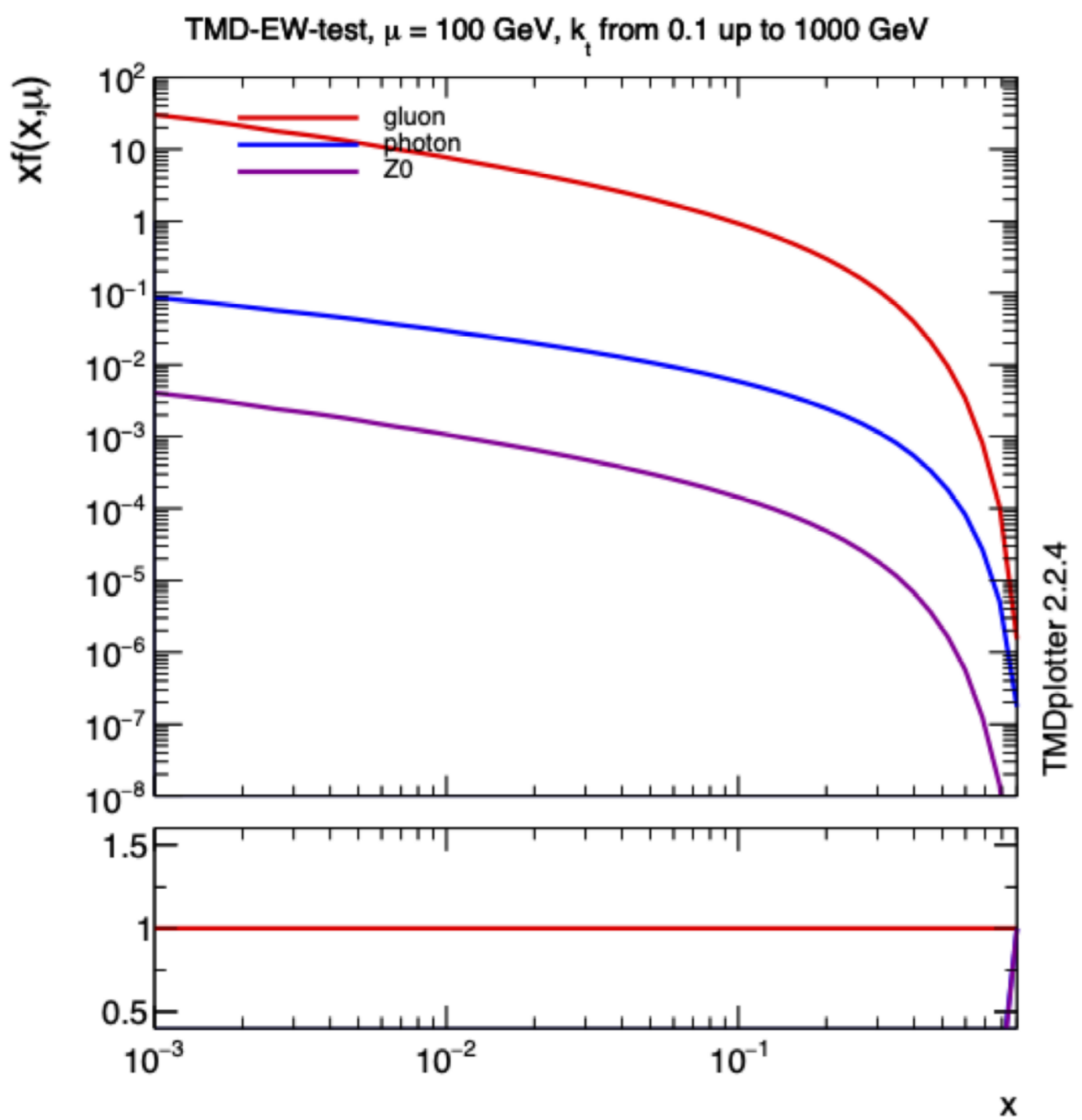
Electroweak PDFs

- References
  - Bauer, C. W., Ferland, N., and Webber, B. R. (2018). Combining initial-state resummation with fixed-order calculations of electroweak corrections, JHEP, 04(), 125, arXiv 1712.07147
  - Fornal, B., Manohar, A. V., and Waalewijn, W. J. (2018). Electroweak Gauge Boson Parton Distribution Functions, JHEP, 05(), 106 arXiv 1803.06347
  - Bauer, C. W., Ferland, N., and Webber, B. R. (2017). Standard Model Parton Distributions at Very High Energies, JHEP, 08(), 036 arXiv 1703.08562
  - Kunszt, Z. and Soper, D. E. (1988). On the Validity of the Effective W Approximation, Nucl. Phys. B, 296(), 253--289
  - Dawson, S. (1985). The Effective W Approximation, Nucl. Phys. B, 249(), 42--60
  - Kane, G. L., Repko, W. W., and Rolnick, W. B. (1984). The Effective W+-, Z0 Approximation for High-Energy Collisions, Phys. Lett. B, 148(), 367--372

Electroweak PDFs

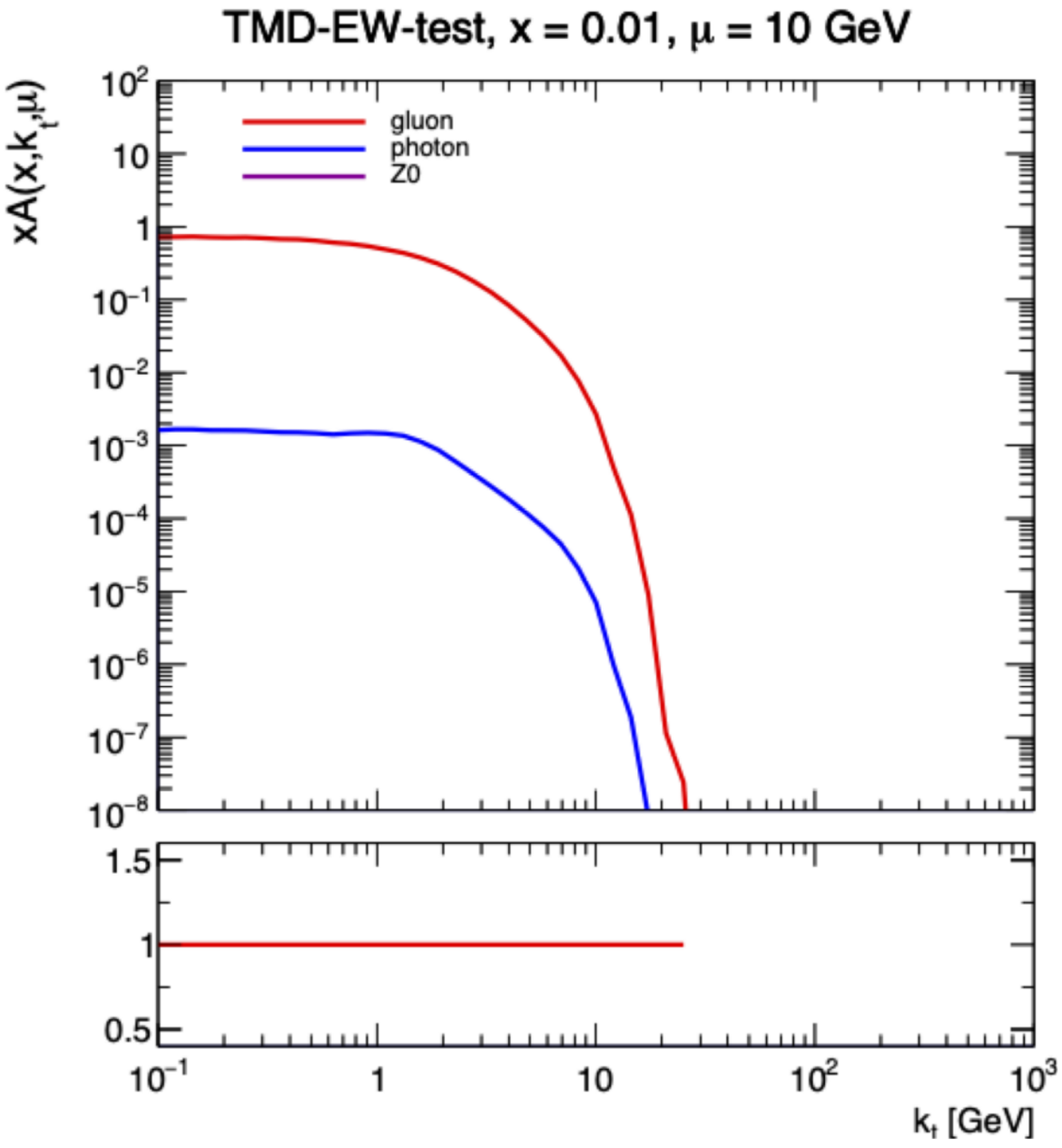
- Integrated PDFs from PB set2

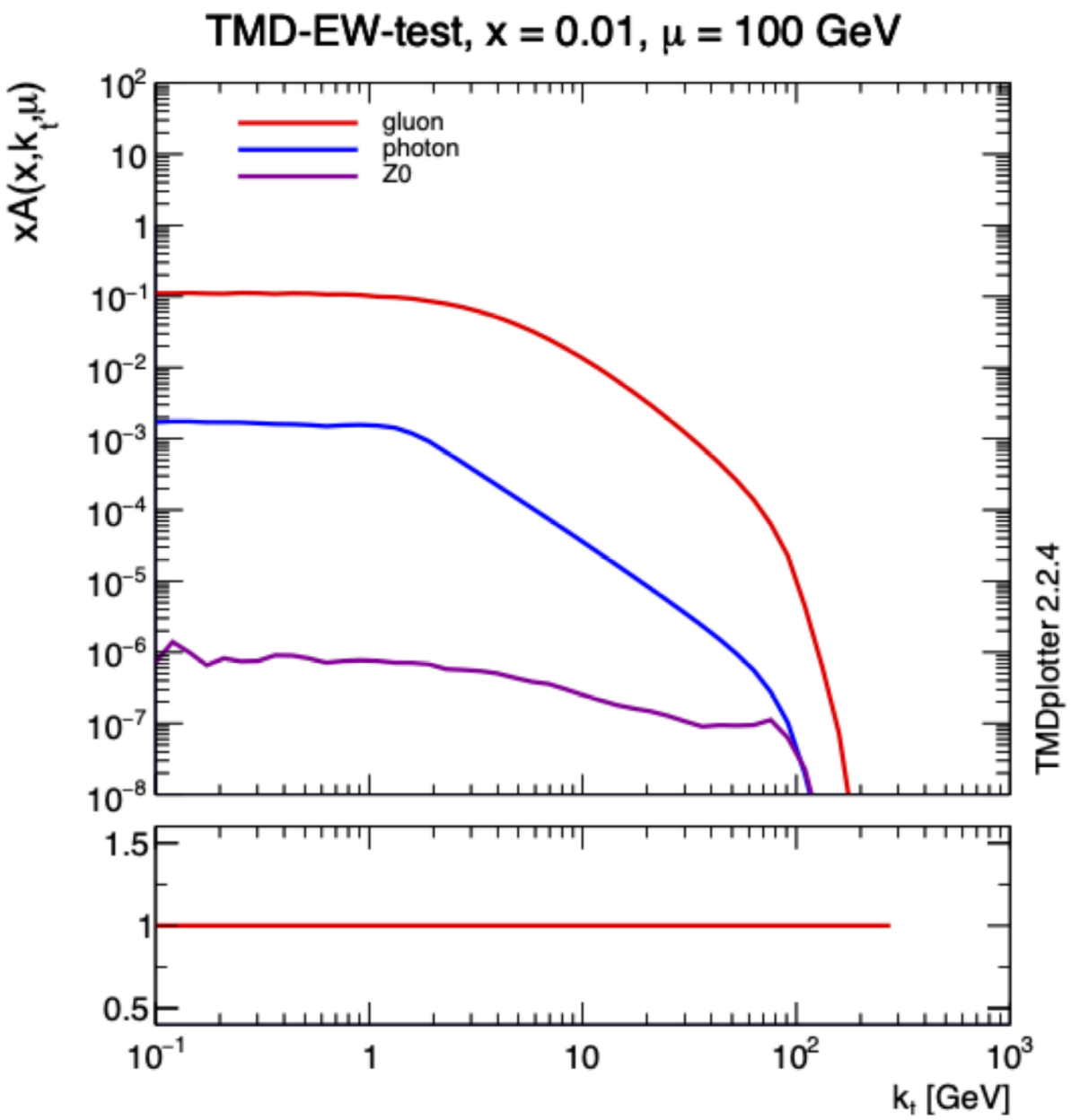




Electroweak TMDs

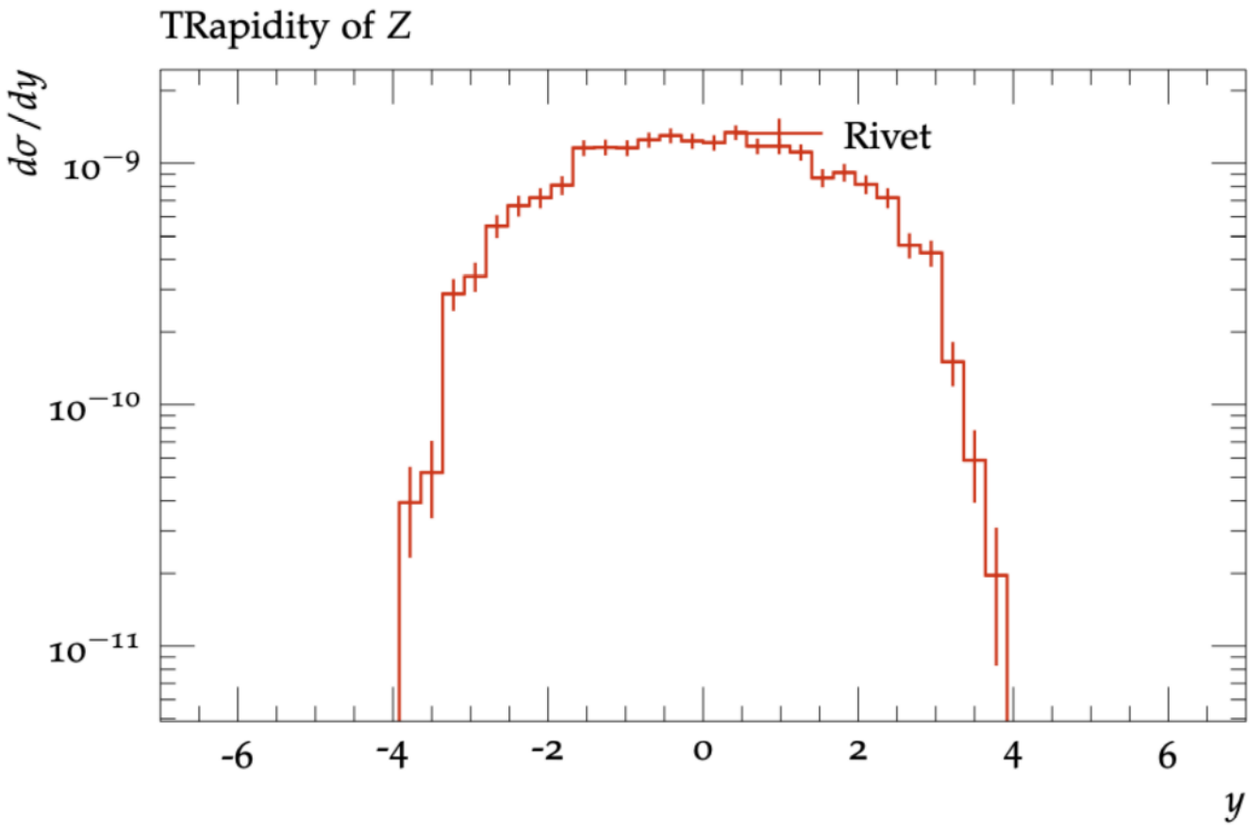
- Integrated TMDs from PB set2

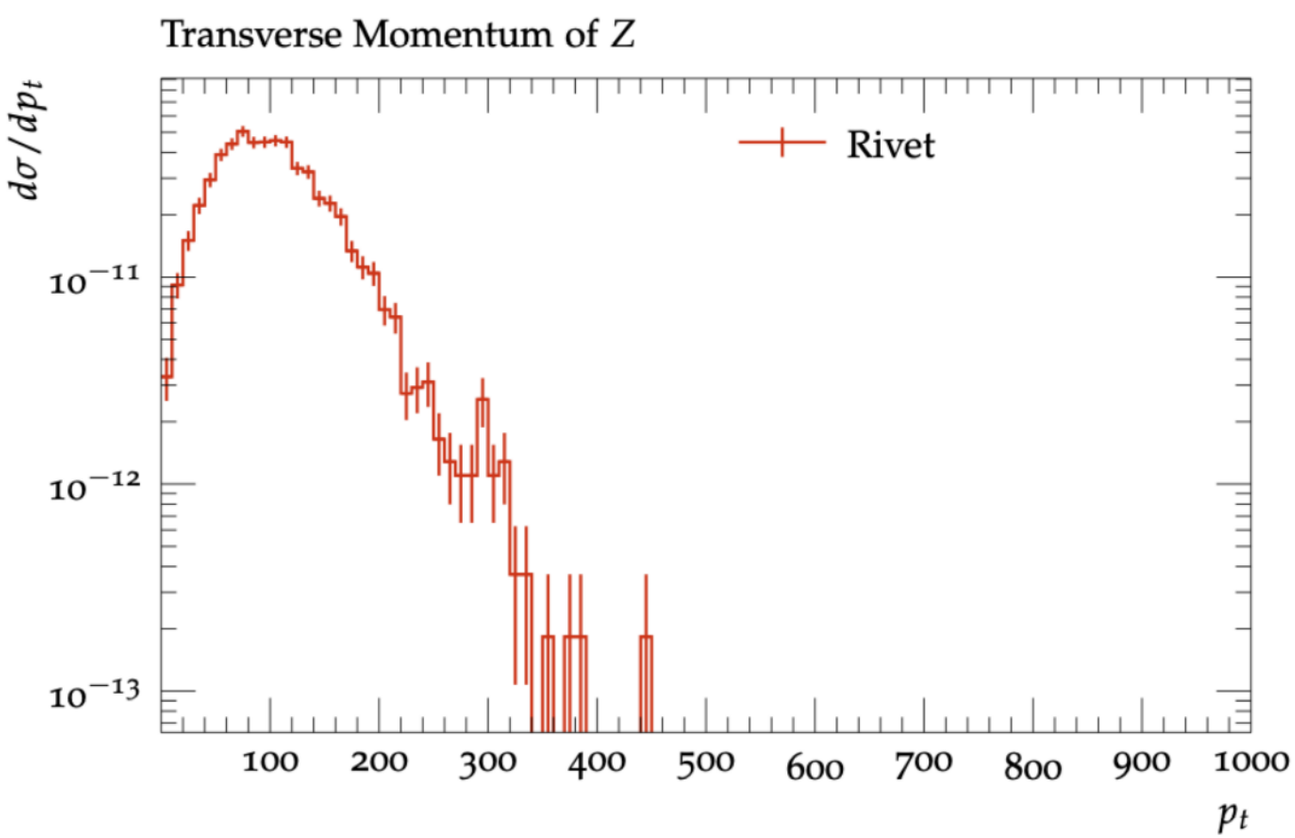




Toy simulation of WW→ Z

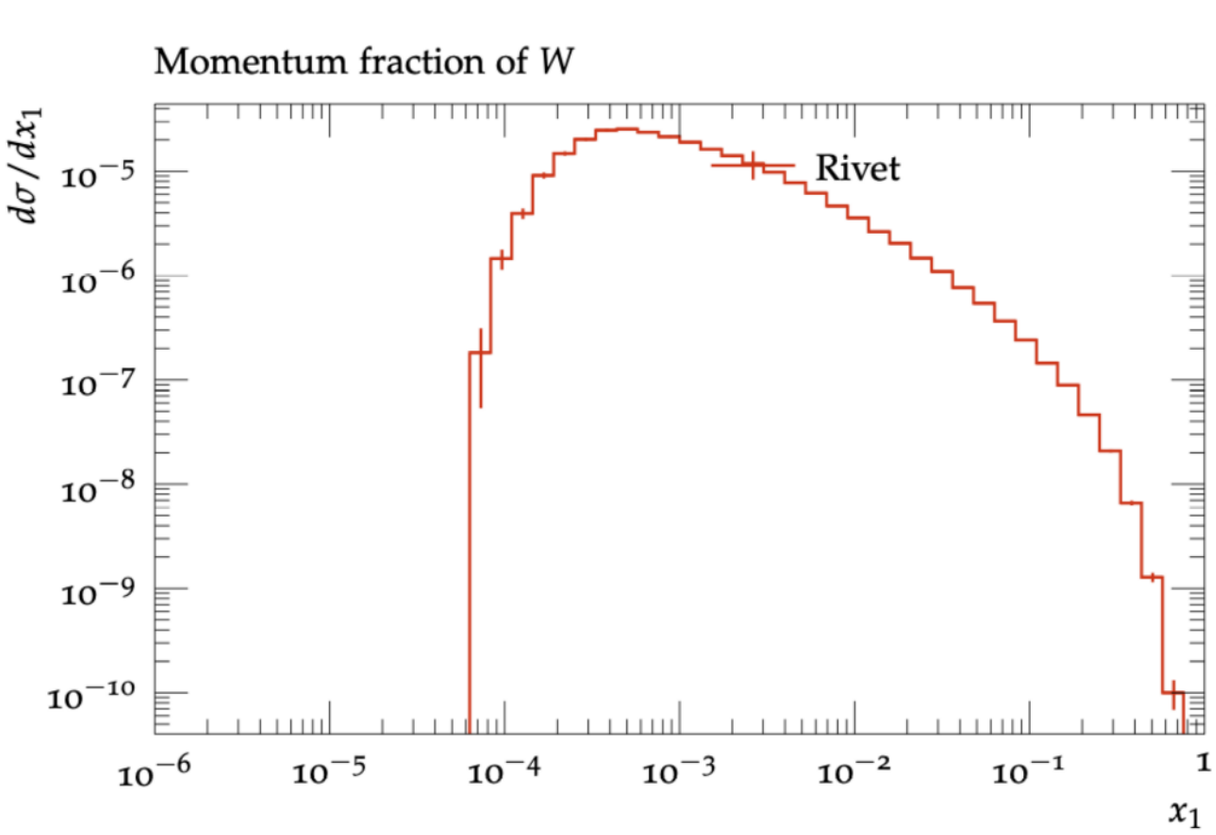
- Toy simulation of $W^+W^- \rightarrow Z_0$

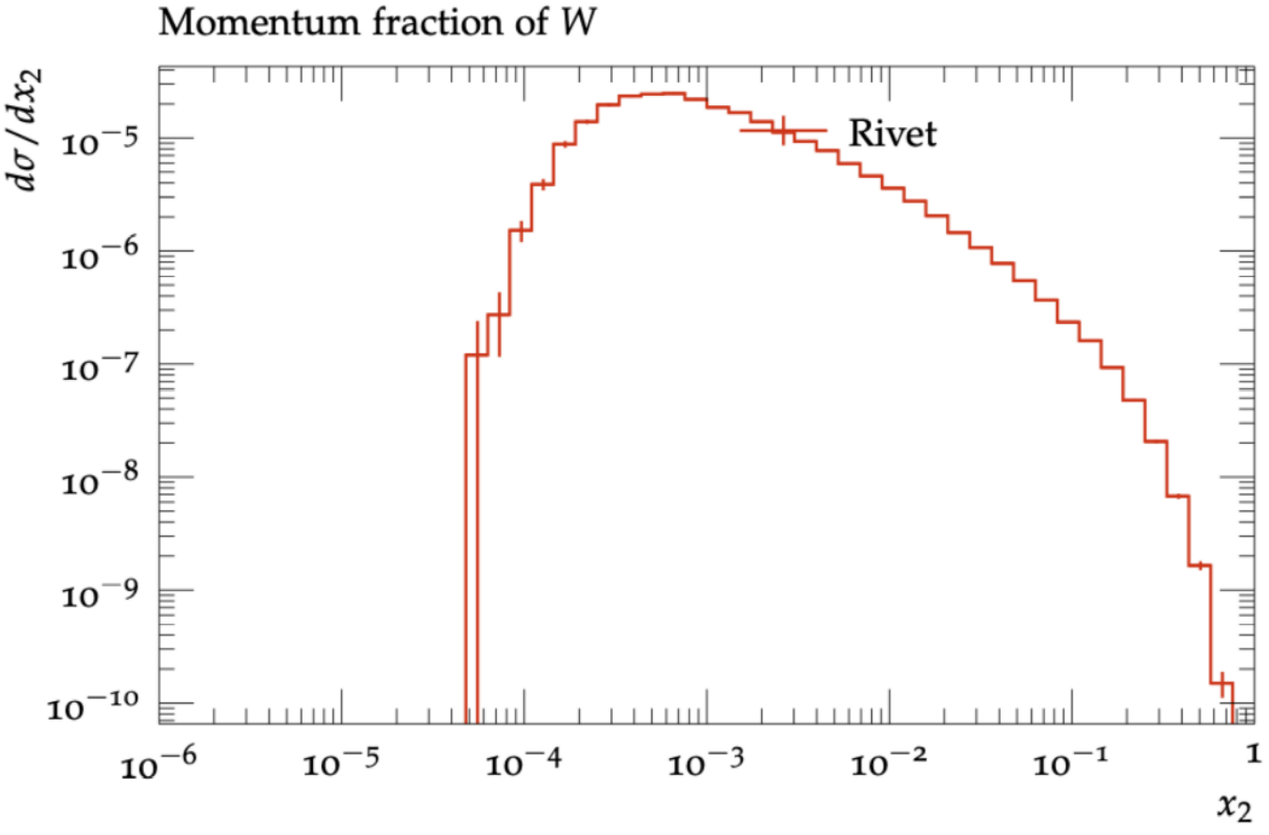




Toy simulation of WW→ Z

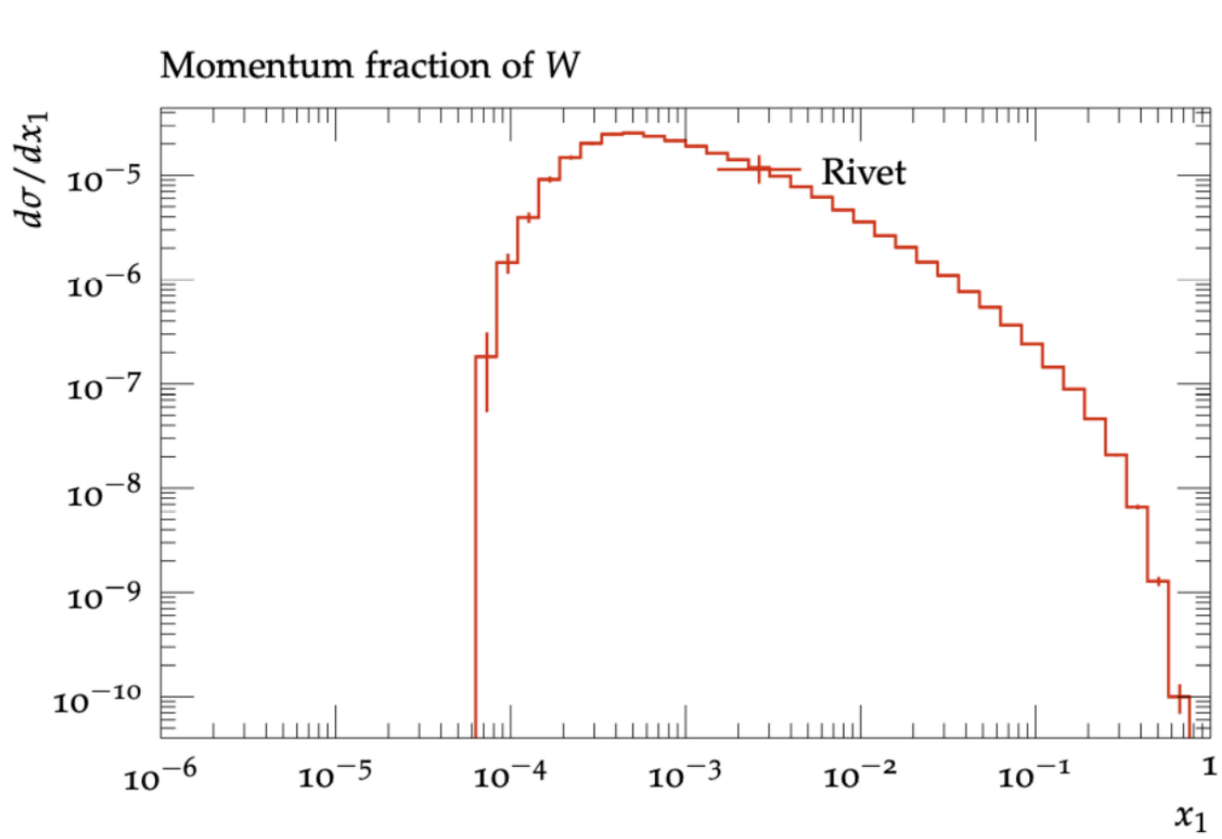
- Toy simulation of $W^+W^- \rightarrow Z_0$
  - average x: $x = \frac{m_Z}{\sqrt{s}} = \frac{90}{13000} \sim 0.007$

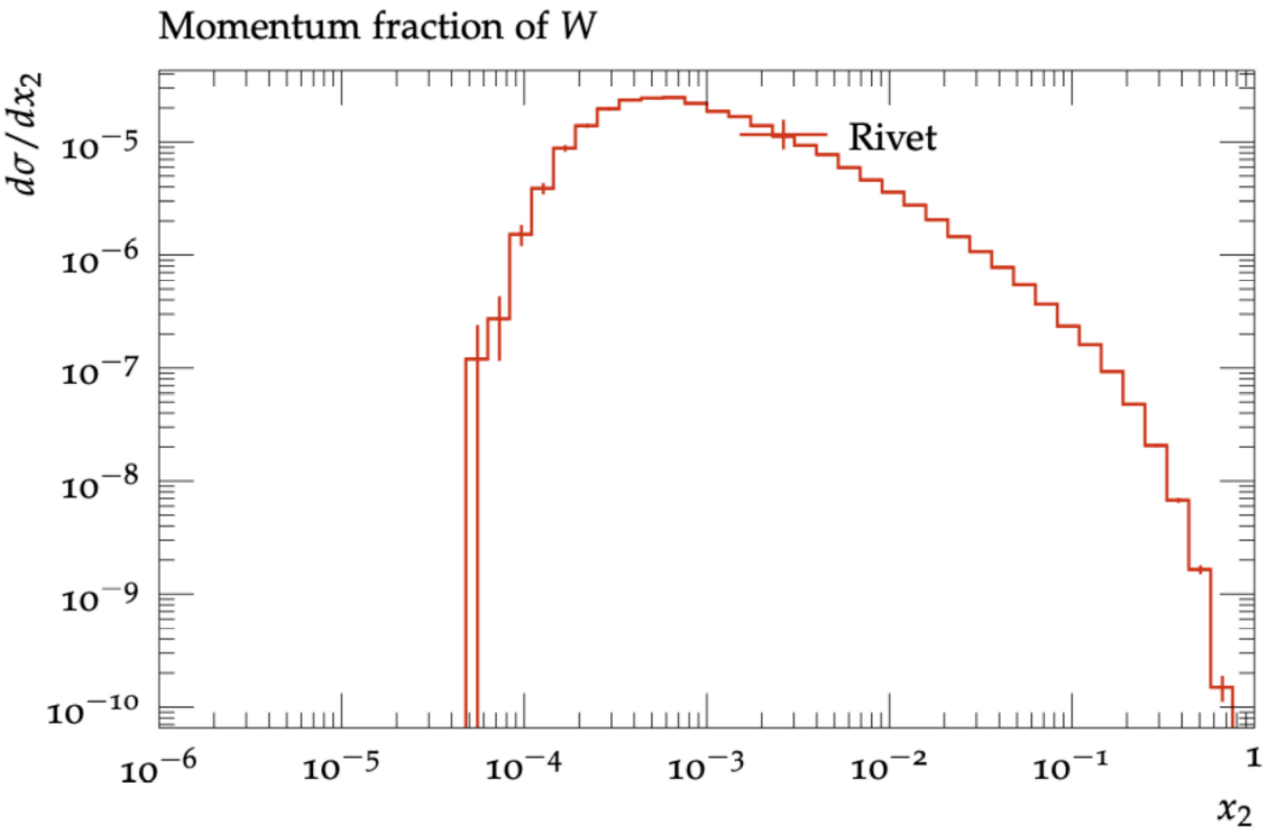




Toy simulation of WW→ Z

- Toy simulation of $W^+W^- \rightarrow Z_0$
  - average x: $x = \frac{m_Z}{\sqrt{s}} = \frac{90}{13000} \sim 0.007$
    - E=x*$\sqrt{s}/2$ = 45 GeV, is this possible





Appendix