

## **DY QCD predictions at $\alpha_s^3$ with CuTe-MCFM & LHC EWWG activity overview (30' talk + 30' discussion)**

*Tuesday, 18 April 2023 13:30 (1 hour)*

High-precision DY predictions are a crucial ingredient in current W-boson mass analyses. I present predictions at the level of  $\alpha_s^3$  at fixed-order and including transverse-momentum resummation and put them in the context of remaining effects that need to be included at that level of precision. I will propose steps towards bringing the baseline modeling of the W-mass analyses from alphas to  $\alpha_s^3$ .

In a second part I give a brief overview of the activities of the LHC EWWG, where various groups benchmark DY transverse-momentum resummation and push developments towards more precise DY modeling.

**Presenter:** NEUMANN, Tobias