

# XXVIII International Workshop on Deep Inelastic Scattering and Related Subjects



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## Automatic one loop EW-Sudakov corrections in SHERPA

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Precision physics calculation are now slowly becoming a standard in Monte Carlo event generation. In particular now, many MC generators allow the possibility to automatically include higher order EW-corrections on top of the usual QCD ones. Nevertheless these corrections can become quite computationally intensive, in particular for many-particles final states (or processes where one includes even higher order QCD corrections). EW-Sudakov logs represent the dominant contributions to the full NLO-EW corrections, and are based on ratio of tree-level amplitudes, and as such are much cheaper to compute than full EW-corrections. In this talk I will present a fully automated implementation of EW-Sudakov logs in the SHERPA MC generator. As well as showing comparisons with full EW-corrections, I will show a practical application in high-mass Drell-Yan computed at NNLO (QCD) + Sudakov EW matched to a parton shower.

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