

Four-Fermions SMEFT Operators in the Drell-Yan Process

Monday 14 July 2025 16:30 (20 minutes)

I explore the impact of dimension-6 operators within the Standard Model Effective Field Theory (SMEFT) framework on the Drell–Yan process. SMEFT provides a systematic and model-independent approach to searching for signs of physics beyond the Standard Model, based on the inclusion of higher dimensions operators. I focus on four-fermion interactions, examining their helicity amplitudes, their interference with Standard Model contributions, and the quadratic SMEFT terms. I show how the inclusion of these operators can modify well-measured collider observables, with particular emphasis on the single differential cross section.

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