Type: ポスター発表

Calculation Scheme of Photon-Mediated Higgs Production at μ⁺μ⁻ Colliders

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The next generation of colliders offers exciting new opportunities to explore the Standard Model and beyond, pushing energy and precision frontiers to new heights, thus making electroweak processes such as WW-fusion become increasingly important. However, such processes may be mediated by photons whose collinear emissions cause divergences, making computations using event generators difficult. We therefore propose splitting the phase-space into the sum of a non-collinear region calculable using event generators, and a collinear region approximated by parton distribution functions for the photon. This scheme enables calculating high-energy processes reliably and accurately, and may also be applied to other particles and colliders. Specifically, we apply this scheme to Higgs-production at mu;⁺mu;⁺ colliders, which is dominated by the photon-mediated process at high energies. We thus find that the cross section is almost as big as for mu;⁺-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup>-</sup

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