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Higgs Production at Extremely Large Transverse Momentum

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A future 100 TeV collider provides the opportunity to study the production of Higgs at large transverse momentum p_T . The effective field theory for Higgs, obtained by integrating out the top quark, breaks down when p_T is larger than 200 GeV. We calculate the p_T distribution at much larger p_T using the framework of factorization, in which the cross section is expressed as convolutions of hard-scattering cross sections and fragmentation functions, with the leading logarithms of p_T^2/m_t^2 resummed to all orders. By separating the scales m_t and p_T , the higher order radiative correction can be greatly simplified.

Oral or Poster Presentation

Oral

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