Abstract Submitted
for the APR16 Meeting of
The American Physical Society

Inclusive Higgs Production at Large Transverse Momentum[1]
HONG ZHANG, ERIC BRAATEN, Ohio State Univ - Columbus — The transverse momentum (p_T) distribution of Higgs is important to check our understanding of the Standard Model, and study new physics. 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_H^2 resummed to all orders. By separating the scales m_H and p_T, the higher order radiative correction can be greatly simplified.

[1]Work supported in part by the Department of Energy under grant DE-SC0011726.

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Date submitted: 08 Jan 2016 Electronic form version 1.4