Radiative Corrections to the Process $\mu^+\mu \to H\gamma^*$

A. B. Arbuzov, E. A. Kuraev, F. F. Tikhonin[1)], and B. G. Shaikhatdenov[2)]**

Joint Institute for Nuclear Research, Dubna, Moscow oblast, 141980 Russia

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Abstract—QED radiative corrections to the cross section for muon–antimuon annihilation into a Higgs boson and a photon are calculated within the one-loop approximation. We present an expression for the cross section in the form of that for a Drell–Yan process, taking into account higher order leading logarithms. The nonsinglet structure functions of fermions are shown to obey the evolution equations for twist-3 operators. Numerical estimates show the importance of the correction in the region close to the threshold of Higgs production.