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Lattice-QCD determinations of α_s and the heavy quark masses ($15' + 5'$)

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The most important sources of uncertainty in calculations of the partial widths of the Higgs boson within the Standard Model will come from the parametric dependences on α_s , m_b , and m_c . Knowledge of these parameters is systematically improvable through numerical lattice gauge theory calculations. I discuss the current status of and prospects for these calculations and estimate the precision that lattice QCD will achieve in the next decade and the corresponding precision that will be attained for the Standard Model predictions for Higgs boson partial widths.

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