Começar (Iniciar) 10 de mar. de 2025 09:00
Fim 14 de mar. de 2025 19:00
America/Sao_Paulo

Centro Cultural - UFRGS
Jacarandá Auditorium
Rua Eng. Luiz Englert, 333 - Porto Alegre-RS
Ir para o mapa

Victor Goncalves

ID da Contribuição: **90** Tipos: **Poster**

Higher-order QCD corrections to the Higgs decay into hadrons

terça-feira, 11 de março de 2025 17:46 (2 minutos)

In this work we study the higher-order QCD corrections of the Higgs decay into bottom quarks and into a pair of gluons. Our method consists of employing Padé and D-log Padé approximants considering the perturbative coefficients dependence on the number of flavors. We estimate, in a model-independent way, the yet unknown coefficient of order α_s^7 of $\Gamma(H \to gg)$ in the scale-invariant scheme as -312 ± 36 and in the on-shell scheme as -302 ± 35. Moreover, our prediction of the first unknown coefficient of $\Gamma(H \to b\bar{b})$, of $\mathcal{O}(\alpha_s^5)$, is -27 ± 2. Both perturbative series, with the inclusion of these corrections, are almost insensitive to variations on the renormalization scale. The main source of uncertainty for the Higgs decay rate into hadrons remains to be the Standard Model parameters, the strong coupling, the quark masses and the Higgs mass.

Autores: BOITO, Diogo; LONDON, Cristiane Yumi; A. NOGUEIRA, Guilherme (UNICAMP)

Apresentador: LONDON, Cristiane Yumi

Classificação da Sessão: Poster session