

Kolya and New results on inclusive $|V_{cb}|$ using E_ℓ , M_X , and q^2 spectral moments

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We present a new global fit for inclusive $|V_{cb}|$ based on the Kolya open-source library, utilizing the full available set of spectral moments of semileptonic $B \rightarrow X_c \ell \bar{\nu}_\ell$ decays with state-of-the-art precision. Our approach includes a novel prescription to estimate the uncertainty arising from missing higher-order contributions of order $1/m^4$ in the heavy quark expansion (HQE). We review various approaches on how to incorporate theoretical uncertainties and correlations, studying their impact on the value of inclusive $|V_{cb}|$ and HQE parameters. Additionally, we conduct a detailed investigation into the compatibility of $|V_{cb}|$ using different sets of experimental inputs.

Alternate track

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