

# Kolya and New results on inclusive $V_{cb}$ using $q^2$ , $E_\ell$ and $M_X$ spectral moments

*Wednesday 25 September 2024 13:30 (30 minutes)*

We present a new global fit for inclusive  $V_{cb}$  decays based on the Kolya open-source library, utilizing the full available set of spectral moments of semileptonic  $B \rightarrow X_c \ell \nu$  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  $1/m_b^4$  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.

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**Session Classification:** Heavy to heavy inclusive