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Determination of V_{ub} and V_{cb}

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Semileptonic decays of B mesons involving low-mass charged leptons e or μ are expected to be free of non-Standard Model contributions and therefore play a critical role in determinations of $|V_{cb}|$ and $|V_{ub}|$ ($|V_{qb}|$). Decays of the form $b \to c\ell\bar{\nu}_\ell$ and $b \to u\ell\bar{\nu}_\ell$ allow us to determine these matrix elements and test the CKM sector of the Standard Model. The theory underlying the determination of $|V_{qb}|$ is mature and experimental measurements are precise. However, the difference between exclusive and inclusive determinations persist even as the theoretical and experimental errors get smaller with more statistics, better theoretical calculations, and more precise measurements. Of all the CKM matrix parameters, $|V_{ub}|$ is the least precise and in most need of additional studies in order to constrain the apex of the unitarity triangle even further. We present the procedures and latest results for exclusive and inclusive determinations of $|V_{qb}|$.

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