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Overview of leptonic and semi-leptonic decays of charmed hadrons

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In this report, I mainly overview the recent selected leptonic and semileptonic decays of charmed hadrons including D^0 , D^+ , D_s and L_c ($L=\text{Lambda}$), based on data samples collected by BESIII detector corresponding to luminosities of 2.93 fb^{-1} , 7.33 fb^{-1} and 4.5 fb^{-1} above the threshold of $D\bar{D}$, $D_s D_s^*$ and $L_c L_c$, respectively. By measuring the branching fractions, form factors and CKM matrix elements $|V_{cs(d)}|$ via the decays of $D(s) \rightarrow l \nu$ ($l=\text{leptonic}$) ν ($l = e, \mu$), $D(s) \rightarrow P$ ($P=\text{pseudoscalar}$) $l \nu$ ($l = e, \mu$), $D(s) \rightarrow V$ ($V=\text{vector}$) $l \nu$ ($l = e, \mu$), $D(s) \rightarrow S$ ($S=\text{scalar}$) $l \nu$ ($l = e, \mu$), $D(s) \rightarrow A$ ($A=\text{axial-vector}$) $l \nu$ ($l = e, \mu$) and $L_c \rightarrow B$ ($B=\text{baryon}$) (P) $l \nu$ ($l = e, \mu$), we are offered an opportunity to search for new physics by testing LFU and CKM matrix unity, and to test QCD models's predictions such as LQCD.

Consent

I consent to recording/broadcasting my presentation.

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