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D leptonic decay and semi-leptonic decays from BESIII

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Based on 2.92/fb of data accumulated at $\psi(3770)$, BESIII measured the branching ratio of $(D^+ \rightarrow \mu^+ \nu)$ is about $(3.71 \pm 0.19 \pm 0.06) \times 10^{-4}$, and determine the weak decay constant $f_D = (203.2 \pm 5.3 \pm 1.8) \text{ MeV}$. these are the most precise results.

Based on the $\psi(3770) \rightarrow D\bar{D}$ data accumulated at the BESIII experiment, we present studies of $D^0 \rightarrow K^- e^+ \nu$ and $D^0 \rightarrow \pi^0 e^+ \nu$ decays which include preliminary results of $B(D^0 \rightarrow K^- e^+ \nu)$, $B(D^0 \rightarrow \pi^0 e^+ \nu)$, as well as the partial decay rates of these decays in q^2 bins. The measured partial decay rates, in return, allow us to determine different parameterizations of the form factors.

Summary

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