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Recent BESIII results

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BESIII has collected data sets corresponding to integrated luminosities of 2.93 fb⁻¹, 3.19 fb⁻¹ and 0.567 fb⁻¹ at center-of-mass energies of 3.773, 4.178, and 4.6 GeV, respectively. We report the measurements of the decay constants $f_{D(s)^+}$, the semileptonic form factors $f_{P(0)}$, the CKM matrix elements $|V_{cs(d)}|$. These results are important to test the LQCD calculations of $f_{D(s)^+}$ and $f_{P(0)}$ and the CKM matrix unitarity. Precision tests of lepton flavor universality are also made via $D(s)^+ \rightarrow l + \nu$ and $D0(+) \rightarrow K\text{-bar}(\pi)l + \nu$, decays. The data set collected at 3.773 GeV contains quantum-correlated $D0D0\text{bar}$ pairs that allow access to the phase differences between amplitudes. We report the measurements of strong phase differences in $D0\text{-bar}$ decays, especially for $K_S/L\pi + \pi^-$, which are important to constrain the γ/ϕ_3 measurement at LHCb and Belle II. In addition, we report the measurements of the absolute branching fraction and amplitude analysis of D^+ , $D0$, Ds^+ and Λ_{c^+}

Collaboration name

BESIII

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