

Hadron form factors at BESIII

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Electromagnetic form factors of baryon provide fundamental information about its structure and dynamics. They constitute a rigorous test of nonperturbative QCD as well as of phenomenological models. Using data samples collected with BESIII detector at BEPCII collider, We measure Born cross section of $e^+e^- \rightarrow p\bar{p}$ at center-of-mass energy between 2.0GeV and 3.08GeV. The ratio $|G_E/G_M|$ and $|G_M|$ are extracted by fitting polar angle distribution of proton for data samples with large statistics. For BESIII data between 3.773 and 4.6GeV, We also use initial state radiation (ISR) method to study $e^+e^- \rightarrow p\bar{p}$ by tagged ISR photon or un-tagged ISR photon. The cross section of $e^+e^- \rightarrow p\bar{p}$ and ratio $|G_E/G_M|$ are obtained. For $e^+e^- \rightarrow \Lambda_c^+ \Lambda_c^-$ process, very weak energy dependence of cross section near threshold indicates that traditional theoretical prediction, which does not take into account strong interaction, needs to be modified. With the large statistics of multiple decay modes, The ratio $|G_E/G_M|$ and $|G_M|$ are extracted.

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