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Study of baryon form factors at BESIII

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Electromagnetic form factors of baryons provide fundamental information about their structure and dynamics. They constitute a rigorous test of non-perturbative QCD as well as of phenomenological models. However, results in the time-like region have large uncertainties. The production cross section and form factors of hyperons are hardly explored. Based on 500 pb^{-1} of data collected with the BESIII detector between 2.0 GeV and 3.08 GeV, and data collected at the peak of the $\psi(3770)$ resonance and higher energies, we report measurements of the proton form factor in the time-like region applying the energy scan method and the initial state radiation technique. In this talk, the line-shape of the Born cross sections of hyperon pairs for Λ and Λ_c baryons are included, where a non-zero cross section near threshold is discerned. The relative phase angle between electromagnetic form factors G_E and G_M of Λ is also reported.

Primary author: Ms ZHOU, Xiaorong (University of Science and Technology of China)

Presenter: Ms ZHOU, Xiaorong (University of Science and Technology of China)

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