

# 30th International Symposium on Lepton Photon Interactions at High Energies



Contribution ID: 30

Type: **Parallel session talk**

## Recent result of baryon time-like form factors at BESIII

*Tuesday, January 11, 2022 3:00 PM (20 minutes)*

Electromagnetic form factors allow to investigate fundamental properties of the baryons. The BESIII collaboration has studied the time-like form factors of the proton and neutron with significantly improved precision. An intriguing periodic behavior of effective form factors lineshape is observed for both proton and neutron. Hyperons provide a unique avenue to study the strong interaction in baryon structure. Due to the unstable nature of hyperon, their form factors are usually studied in time-like via  $e^+e^-$  annihilations experiments. With the unique data sets obtained by the BESIII collaboration, the pair production cross sections for Lambda, Sigma, Xi, and Lambda<sub>c</sub> are studied from threshold, where some abnormal threshold effects are observed. Using the self-analyzing weak decays of the Lambda and Lambda<sub>c</sub>, the relative phase between the electric and magnetic form factors is measured. In this presentation the latest results on baryon form factors at BESIII are discussed.

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**Session Classification:** Precision SM Measurements

**Track Classification:** Standard Model