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Strange hadron spectroscopy at GlueX and beyond

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Hadron spectroscopy has been successfully employed as a tool to study Quantum Chromodynamics for many years. While much progress has been made in the past in the study of states with the light up and down quarks and the heavy charm and bottom quarks, there has been little progress regarding states with strange quarks. A recent review on "Λ and Σ Resonances" in the PDG states that the "field is starved for data" [1]. Several experimental campaigns are ongoing or in the planning stages to address this shortcoming and provide high quality data on hyperons and mesons with strange quarks.
The GlueX experiment, located at Jefferson Lab, studies the spectrum of hadrons using photoproduction on a LH_2 target in a wide variety of final states. With its detector system capable of measuring neutral and charged final state particles over almost the full solid angle, and very good particle identification capabilities, GlueX can measure many different hadrons containing strangeness. A linearly polarized photon beam allows the measurement of polarization observables, which contain information about the production mechanisms involved in generating strange particles in photoproduction. In addition, GlueX can perform precise cross-section measurements, which help to study the spectrum of strange hadrons.
In this talk, the GlueX experiment is introduced, and recent progress of its strangeness program will be presented. In addition, prospects for strangeness measurements at other facilities, such as the KLong Facility at Jefferson Lab or AMBER at CERN, will be discussed.

[1] R.L. Workman et al. (Particle Data Group), Prog. Theor. Exp. Phys. 2022, 083C01 (2022) and 2023 update, Chapter 82.