

Strangeness photoproduction at the BGO-OD experiment

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The BGO-OD experiment at the ELSA accelerator facility uses an energy tagged bremsstrahlung photon beam to investigate the internal structure of the nucleon. The setup consists of a highly segmented BGO calorimeter surrounding the target, with a particle tracking magnetic spectrometer at forward angles.

BGO-OD is ideal for investigating the photoproduction of hadrons of non-zero strangeness. The high momentum resolution at forward angles covers a kinematic region where t-channel exchange mechanisms play a dominant role. Access to this low momentum transfer region also allows the investigation of degrees of freedom not derived from constituent quark models, for example, the role of vector meson-baryon interactions and dynamically generated states in photoproduction reactions.

Data taking for the first part of an extensive physics programme is complete. Preliminary results for differential cross sections and recoil polarisation measurements, in particular at extremely forward angles, for the photoproduction of $K^+ \Lambda$ and higher lying hyperons will be presented.

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