

Overview of hadron photoproduction studies at LEPS/LEPS2

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The photo-induced reactions are complementary to hadron-induced reactions in the study of excited baryons. In particular, GeV photon beam can provide information on highly excited hadrons.

In the LEPS experiment at SPring-8, hadron photoproduction reactions have been studied using linearly polarized photons from laser Compton scattering up to 2.9 GeV. The LEPS experiment measured production cross sections and spin observables of hyperons at forward angle, as well as searched for exotic hadrons such as penta-quark Θ^+ .

The LEPS experiment has completed data collection, and upgraded experiments are ongoing at a newly constructed beamline (LEPS2 beamline).

The LEPS2 beamline has a high-quality electron beam and a new laser system that enables experiments using high-intensity photon beams.

At the LEPS2 beamline, BGOegg experiments using a BGO electromagnetic calorimeter and LEPS2 solenoid experiments using a large solenoid magnet are currently being performed.

The purpose of these experiments is to further validate the results obtained at LEPS and to open up new physics channels.

In this talk, the recent results obtained from these experiments are reviewed, and future plans are reported.

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Classificazione della track: Hyperon production with electromagnetic probes