

SEMINÁŘ OTF ÚJF, ŘEŽ

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(ÚJF Řež)

Theoretical models for strangeness production

Abstrakt

The production of pseudoscalar mesons (π , η , K) on nucleons induced by electrons in the energy range of several GeV is a suitable process for investigating the properties and dynamics of baryons and their resonances. Because of the creation of the pair of strange quarks, the interesting process is the kaon production. Among the number of approaches describing the kaon production process, the most promising are the isobar and Regge-plus-resonance (RPR) models.

The subject of this presentation is to discuss some basic properties of isobar models for the photo- and electroproduction of kaons on protons, using well-known Saclay-Lyon and Kaon-MAID models and our newly constructed model. The comparison of the predictions of these models will be shown for photoproduction of K^+ on the proton. The discussion of properties of the hybrid RPR model, which describes satisfactorily the experimental data in the broad energy range from threshold up to 16 GeV, will be given as well. Moreover, theoretical predictions of our two variants of the RPR model differing in the magnitude and relative sign of the coupling constants of K and K^* trajectories will be shown. Results of the isobar models are also compared with the RPR model.

Seminář se koná v pátek 17. 5. 2013 v 10:30 hod.

v zasedací místnosti ÚJF Řež

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