

Λ -hypernuclear production in (K_{stop}^-, π) reactions

Vojtěch Krejčířík^(a,b), Aleš Cieplý^(b)

^(a) Faculty of Mathematics and Physics, Charles University, Prague, Czech Republic

^(b) Nuclear Physics Institute, Řež, Czech Republic

In the present contribution, we report on calculation of the Λ -hypernuclear production induced by the stopped kaon K^- . We performed the calculation within the framework of the distorted wave impulse approximation as specified in the paper by Gal and Klieb [1]. We used chirally motivated transition amplitudes for the microscopic description of the elementary kaon-nucleon process [2]. The sensitivity of the model to several effects was tested. We focused mostly on the effects caused by variation of wave functions of the kaon in the initial state and the pion in the final state. The calculations were performed for target nuclei from Lithium to Oxygen. Preliminary results were already presented at the Mazurian Lakes Conference [3].

[1] Gal A., Klieb L.: Phys. Rev. C **34**, 956 (1986).

[2] Cieplý A., Smejkal J.: Eur. Phys. J. A **43**, 191 (2010).

[3] Krejčířík V., Cieplý A.: arXiv:0912.1505 (2009).

E-mail:

v.krejcirik@ujf.cas.cz