

Seminarium Zakładu Fizyki Teoretycznej

Departament Badań Podstawowych
Narodowego Centrum Badań Jądrowych

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pawilon NCBJ, sala 22, Hoża 69

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"ON A POSSIBILITY OF BARYONIC EXOTICA"

ABSTRACT: Prompted by a discovery of five Ω_c^{*} resonances announced by the LHCb Collaboration in March this year, we revisit models based on chiral symmetry that predict the baryonic states with exotic quantum numbers (pentaquarks) that have relatively low masses and small widths. We shall briefly review both theoretical and experimental status of a possibility of exotica in the light sector. Next we shall show how to extend chiral models to baryons with one heavy quark and show that one may expect exotic states also in this case. Finally, we shall try to interpret the LHCb Ω_c^{*} resonances in terms of regular and exotic excitations of the ground state Ω_c .

Serdecznie zapraszamy,

M. Kowal, W. Piechocki, L. Roszkowski, J. Skalski, L. Szymanowski