

The baryon resonance spectrum in Jülich-Bonn dynamical coupled-channel model

In order to connect predictions for the baryon spectrum in the non-perturbative energy regime from quark models or lattice calculations to experimental data, coupled-channel frameworks are especially suited. In those approaches a simultaneous partial-wave analysis of multiple reactions with different initial and final states is performed.

I will present recent results from the Jülich-Bonn dynamical coupled-channel approach, where the spectrum of nucleon and Delta resonances is extracted based on a combined study of the pion- and photon-induced reactions. The amplitudes of the Jülich-Bonn model also enter the study of electroproduction reactions as constraints at $Q^2=0$ and allow the determination of baryon transition form factors beyond the Roper and Delta(1232) resonances.

The Jülich-Bonn approach was also extended to hidden-charm reactions including the $J/\psi p$ channel to explore possible P_c states.

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