

Compton scattering off the proton in the resonance region

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Compton scattering off the proton in the third resonance region is analyzed, owing to the full combined analysis of pion- and photo-induced reactions in a coupled-channel effective Lagrangian model with K-matrix approximation. Two isospin $I=3/2$ resonances $D_{33}(1700)$ and $F_{35}(1930)$ are found to be essential in the range of 1.6 - 1.8 GeV. The recent beam asymmetry data of Compton scattering from the GRAAL facility are used to determine the helicity couplings of these resonances, and strong constraints are coming also from πN and $K\Sigma$ photoproduction data. The possible spin and parity of new narrow resonances is discussed.

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