

International Workshop on Partial Wave Analyses and Advanced Tools for Hadron Spectroscopy



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η and η' photoproduction with η MAID including Regge phenomenology

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We present a new version of the η MAID model for η and η' photoproduction on proton and neutron.

The model includes 23 nucleon resonances parameterized with Breit-Wigner shapes.

The background is described by vector and axial-vector meson exchanges in the t channel using the Regge cut phenomenology.

Parameters of the resonances were obtained from a fit to the new experimental data of the A2 Collaboration and available data from CBELSA/TAPS, CLAS, and GRAAL Collaborations.

for η and η' photoproduction on protons and neutrons.

Dominant role of $1/2^-$ resonances is discussed.

The total cross section for η photoproduction demonstrates a cusp at the energy $W \sim 1.9$ GeV.

The cusp is explained as a threshold effect due to the opening $\eta'p$ decay channel of the $N(1895)1/2^-$ resonance.

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