

Study of the production mechanism of the η meson by means of analysing power measurements

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Three sets of analysing power data [1,2,3] for the $\vec{p}p \rightarrow pp\eta$ reaction at the excess energies of $Q=10, 37$ and 40 MeV, as measured by the COSY-11 collaboration will be presented and confronted with the theoretical calculations [4,5]. Present results of the theoretical studies indicate that the two-step resonant process (mesonic excitation of the $S_{11}(1535)$ resonance and its further deexcitation with an emission of proton and η meson) constitutes the main contribution to the production of η in proton-proton interaction. Measurements of the analysing power are very important since polarisation observables pin down the contributions from the individual mesons (both pseudoscalar or vector) which take part in the excitation of the S_{11} resonance.

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