

# Polarization observables $T$ and $F$ in single $\pi^0$ and $\eta$ -photoproduction off quasi-free nucleons

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## Collaboration

A2

## Abstract content

Meson photoproduction has developed into a powerful tool to study the nucleons excitation spectrum and test effective quark models which operate in the non-perturbative regime of QCD. An insight into the  $J^P$  configurations and isospin decompositions of the contributing resonances is gained by measuring a minimal set of polarization observables on both the proton and the neutron. Single  $\pi^0$  and  $\eta$ -photoproduction off a transversally polarized D-butanol target has been measured with circularly polarized bremsstrahlung photons generated by the MAMI-C electron microtron. With the nearly  $4\pi$  acceptance of the combined Crystal Ball/TAPS setup the double polarization observable  $F$  and the target asymmetry  $T$  can be extracted for the first time for polarized, quasi-free neutrons over a wide energy and angular range.

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