

## $\Sigma$ beam asymmetry for $\eta$ photoproduction on the proton at BGOOD

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The  $\Sigma$  beam asymmetry in meson photoproduction off the nucleon is a very sensitive observable in the investigation of the nucleon structure. The BGOOD experiment at ELSA, with its linearly polarized  $\gamma$  beam and large solid angle detector, is an ideal facility for the detection of charged and neutral particle final states. New results of  $\Sigma$  beam asymmetry will be presented for  $\eta$  photoproduction off the proton in the energy range 1250-1730 MeV; these results have been obtained analyzing at the same time all the available statistics from the main  $\eta$  decay channels with an original technique that allows to treat simultaneously periods with different efficiencies and polarization degrees.

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