

## High Energy Physics - Experiment

# Radiative $\pi^0$ photoproduction on protons in the $\Delta^+(1232)$ region

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(Submitted on 20 Jan 2010 (v1), last revised 25 Feb 2010 (this version, v2))

The reaction  $\gamma p \rightarrow p \pi^0 \gamma'$  has been measured with the Crystal Ball / TAPS detectors using the energy-tagged photon beam at the electron accelerator facility MAMI-B. Energy and angular differential cross sections for the emitted photon  $\gamma'$  and angular differential cross sections for the  $\pi^0$  have been determined with high statistics in the energy range of the  $\Delta^+(1232)$  resonance. Cross sections and the ratio of the cross section to the non-radiative process  $\gamma p \rightarrow p \pi^0$  are compared to theoretical reaction models, having the anomalous magnetic moment  $\kappa_{\Delta^+}$  as free parameter. As the shape of the experimental distributions is not reproduced in detail by the model calculations, currently no extraction of  $\kappa_{\Delta^+}$  is feasible.

Comments: 14 pages, 19 figures  
Subjects: **High Energy Physics - Experiment (hep-ex)**  
Journal reference: Eur. Phys. J. A 43, 269-282 (2010)  
DOI: [10.1140/epja/i2010-10925-y](https://doi.org/10.1140/epja/i2010-10925-y)  
Cite as: [arXiv:1001.3626v2](https://arxiv.org/abs/1001.3626v2) [hep-ex]

## Submission history

From: Sven Schumann [[view email](#)]  
[v1] Wed, 20 Jan 2010 15:50:18 GMT (1459kb)  
[v2] Thu, 25 Feb 2010 12:49:30 GMT (1407kb)

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