2015 European Nuclear Physics Conference
European Physical Society
university of groningen
kvi - center for advanced radiation technology
Groningen
31 August - 4 September 2015
www.EuNCP2015.org

Contribution ID: **151** Type: **Oral**

Measurement of polarization observables in neutral double pion photoproduction off the proton with the CBELSA/TAPS-experiment

Monday, 31 August 2015 14:45 (15 minutes)

One important step in understanding the baryon spectrum is a precise knowledge of the excited states and their decays. In order to extract the contributing resonances from experimental data a partial wave analysis needs to be performed. To resolve ambiguities, the measurement of polarization observables is indispensable. In the regime of high mass baryon resonances multi-meson final states are of particular importance. Here sequential decays of resonances are observed. The Crystal Barrel/TAPS experiment is ideally suited to measure the photoproduction of neutral mesons decaying into photons due to its good energy resolution, high detection efficiency for photons, and the nearly complete solid angle coverage. In combination with a longitudinally or transversely polarized target and an energy tagged, linearly or circularly polarized photon beam the experiment allows the measurement of a large set of polarization observables. This talk will focus on preliminary results of neutral double pion production obtained with a transversely polarized target. This work is supported by the DFG (SFB/TR16).

Primary author: SEIFEN, Tobias

Co-author: CBELSA/TAPS COLLABORATION

Presenter: SEIFEN, Tobias

Session Classification: Hadron Structure, Spectroscopy, and Dynamics I