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Preliminary results of pion induced reaction with carbon and polyethylene targets obtained by HADES-GSI in 2014

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In the summer of 2014, HADES conducted measurements with secondary pion-beam using different targets. The program is devoted to measure dielectron radiation from baryonic resonances. In particular we investigated a sub-threshold coupling of rho to baryonic resonances in the second resonance region (N(1520), N(1535)). Most of the beam time was dedicated to measurement of e^+e^- production from PolyEthylene target at pion beam momentum of 0.69 GeV/c. The contribution from pion-proton can be separated from contribution of pion-carbon interaction by means of kinematic constraints. Therefore it was possible to measure at the same time exclusive $\pi^-p \rightarrow e^+e^- n$ and inclusive e^+e^- production. In addition we run part of the time with pure carbon target to allow precise background subtraction. The normalization of spectra has been done using elastic scattering of pion on proton. In this contribution I will also discuss the cocktail simulations of pion-Dalitz-decay, delta-Dalitz-decay and resonance N1520 using PLUTO and compare the results to experimental data.

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