

# Measurement of the photoproduction cross section for $\gamma p \rightarrow \phi \pi^+ \pi^- p$ and search for the $Y(2175)$ at GlueX

Klaus Götzen<sup>(a)</sup> / Frank Nerling<sup>(a,b)</sup> on behalf of the GlueX Collaboration<sup>(c)</sup>,

<sup>(a)</sup> GSI Darmstadt

<sup>(b)</sup> Helmholtz Research Academy Hesse for FAIR, Campus Frankfurt,  
GSI Darmstadt & GU Frankfurt

<sup>(c)</sup> JLab, Newport News, Virginia, US

The  $Y(2175)$ , meanwhile renamed to  $\phi(2170)$ , is one of the rare exotic candidates connected to strangeonium as compared to the heavier charmonium-like and bottomonium-like exotic states. Originally observed in initial-state radiation by the BaBar experiment in 2006, it is discussed to be a strange partner state of the famous charmonium-like exotic vector state  $Y(4260)$  that was one of the first of the so-called XYZ states reported in the charmonium mass region. The  $Y(2175)$  has meanwhile been seen in different experiments and decay channels, however, it had not yet been addressed in a photo-production experiment. In this talk, we report on our measurement of the production cross section of the reaction  $\gamma + p \rightarrow \phi \pi^+ \pi^- + p$  based on data recorded by the GlueX experiment and the performed search for  $Y(2175) \rightarrow \phi \pi^+ \pi^-$ .

Email:

f.nerling@gsi.de