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## First measurement of near-threshold $J/\psi$ photoproduction and search for the LHCb $P_c^+$ states

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Photoproduction of charmonium near threshold gives an excellent probe for studying the gluonic structure of the nucleon. Of more recent interest is the possibility of producing the  $P_c^+$  pentaquark candidates reported by LHCb in the s-channel reaction:  $\gamma p \rightarrow P_c^+ \rightarrow p J/\psi$ . We report on the measurement of the total cross section

$\sigma(\gamma p \rightarrow p J/\psi)$  in 10 bins of photon beam energy down to the threshold of  $E_\gamma = 8.2$  GeV using a tagged photon beam with the GlueX experiment at Jefferson Lab. We find the cross section as a function of beam energy to fall less steeply near threshold than expectations from lowest-order calculations. We also find no evidence for the photoproduction of the  $P_c$  states and set upper limits on their production and  $\mathcal{B}(P_c^+ \rightarrow J/\psi p)$ . We will also discuss the future prospects for extending these measurements at GlueX.

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