

Abstract Submitted  
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**Searching for  $\Phi(1860)^{--}$  pentaquark state in photo-induced reactions using the CLAS detector** JÖRN LANGHEINRICH, University of South Carolina, HOVANES EGIYAN, University of New Hampshire, CLAS COLLABORATION — By launching the eg3 experiment the CLAS collaboration joined the worldwide efforts to search the  $\Phi(1860)^{--}$  state, which is predicted to be one of the  $S=-2$  states in the pentaquark anti-decuplet. Evidence for this state has been found by the NA49 experiment but couldn't be confirmed by any other group so far. The eg3 experiment exploits the fact that the state - if present - decays by two subsequent weak interactions which allows us to cut on the extremely narrow invariant masses of the intermediate states as well as on the well separated decay vertices. The reconstruction of  $S=-2$  states from its decay products is a new analysis technique for CLAS, thus pushing the hardware and software to their limits. Data taking and calibration are now completed and the intermediate states  $\Lambda$  and  $\Xi^-$  have been identified. The focus of the ongoing analysis is the search for the  $\Phi(1860)^{--}$  as well as for excited  $\Xi$  states.

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