

Abstract Submitted  
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**Study of Omega-proton correlations in heavy-ion collisions<sup>1</sup>** YIFEI

HAN, Univ of California - Los Angeles, STAR COLLABORATION — Recently the STAR experiment at RHIC measured Lambda-Lambda correlations from Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV [1] to search for the H particle (uuddss). The correlation strength indicated that the Lambda-Lambda interaction is weak and is unlikely to be attractive enough to form a bound state. A recent lattice QCD calculation [2] predicted a possible di-baryon bound state with Omega-nucleon. Thus, we will extend the correlation measurements to Omega-proton, which could potentially be a sensitive approach to search for such a state. We will present the Omega-proton correlations based on data collected by STAR in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV, and discuss the physics implications. [1] L. Adamczyk et al [STAR Collaboration], Phys. Rev. Lett.114(2015)022301 [2] F. Etminan et al [HAL QCD Collaboration], arXiv:1403.7284

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