

Abstract for an Invited Paper  
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**Prize for a Faculty Member for Research in an Undergraduate Institution: Undergraduate Participation in the Study of Ultraperipheral Collisions at RHIC<sup>1</sup>**

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In ultraperipheral nuclear collisions, with impact parameters larger than twice the nuclear radius, the nuclei do not physically overlap, but instead interact via intense long-range electromagnetic fields. Heavy-ion colliders are therefore powerful tools to study photonuclear and two-photon interactions. These interactions typically produce final states with only a few particles and leave the colliding nuclei intact. Undergraduate students at Creighton University have been heavily involved in this physics program within the STAR (Solenoidal Tracker at RHIC) Collaboration for the last decade. We present recent STAR results on vector meson production in AuAu collisions at various energies, including the observation of coherent photoproduction of the J/Psi meson, as well as a 4-pion final state which may be associated with excited rho states that are not yet well understood. An emphasis will be placed on the contributions of undergraduate students.

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