

Abstract Submitted  
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**Interference in vector meson production in Au + Au Collisions at  $\sqrt{s} = 200$  GeV from STAR** BROOKE HAAG, UC Davis, STAR COLLABORATION — Photoproduction in Ultra Peripheral Collisions (UPCs) at the RHIC generates  $\rho$  mesons. This occurs when a photon from one nucleus fluctuates into a quark-antiquark pair and scatters off the second nucleus producing a vector meson. The  $t = p_T^2$  spectrum of the produced  $\rho$  mesons, where  $t$  is the 4 momentum transfer squared, is sensitive to interference between the two possible production channels: the first nucleus emits a photon which scatters from the second nucleus, or vice versa. This interference is observed in the STAR data as a suppression in the  $\frac{dN}{dt}$  spectrum at small  $t$ . In this talk, a measurement of the degree of interference will be presented as well as a discussion of systematic and statistical errors.

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