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## Strange hadron production in d+Au collisions at $\sqrt{s_{NN}} = 200$ GeV using the STAR detector

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Strangeness production has been suggested as a sensitive probe to the dynamics of the deconfined matter created in heavy-ion collisions. Ratios of particle yields involving strange particles are often utilized to study properties of the nuclear matter at freeze-out, such as the strangeness chemical potential and the chemical freeze-out temperature. The  $d+Au$  collisions bridge the multiplicity gap between  $p+p$  and  $Au+Au$  collisions and can provide insight to the role of event multiplicity in strange hadron production. The study of strange hadrons in  $d+Au$  collisions can also help to understand their cold nuclear matter effects, a necessary ingredient for interpreting similar measurements in heavy-ion collisions.

In this poster, we will present new measurements on the production of strange hadrons ( $K_S^0$ ,  $\Lambda$ ) for different rapidity intervals in  $d+Au$  collisions at  $\sqrt{s_{NN}} = 200$  GeV, recorded by the STAR experiment in 2016. We will report transverse momentum ( $p_T$ ) spectra,  $p_T$  integrated yield  $dN/dy$ , average transverse momentum, yield ratios, nuclear modification factors, and rapidity asymmetry ( $Y_{Asym}$ ) for these strange hadrons. The physics implications of these measurements on the collision dynamics will be discussed.

### Category

Experiment

### Collaboration (if applicable)

STAR COLLABORATION

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