# Measurements of Hypertriton Production in Au+Au Collisions at 3 to 7.7 GeV

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Hypernuclei are bound states of nuclei with one or more hyperons. Precise measurements of hypernuclei properties and their production yields in heavy-ion collisions are crucial for the understanding of their production mechanisms. The strangeness population factor, $S_{\rm A} = ({}^{A}_{\Lambda}{\rm H}/{}^{A}{\rm He})/(\Lambda/p)$ (A=3,4), is directly related to the ratio of light nuclei and hypernuclei coalescence parameters $B_A$. It eliminates canonical correction factors for strangeness and is independent of the chemical potential of the produced medium. The STAR Beam Energy Scan II program offers us a great opportunity to investigate collision energy and system size dependence of hypernuclei production.

In this poster, we present new measurements on transverse momentum ($p_T$), rapidity ($y$), and centrality dependence of ${}^{3}_{\Lambda}{\rm H}$ production yields in Au+Au collisions from $\sqrt{s_{\rm NN}} = 3$ to 7.7 GeV. Strangeness population factors $S_3$ and $S_4$ as functions of collision energy, centrality, $p_T$, and $y$ will be reported. These results are compared with phenomenological model calculations, and physics implications on the hypernuclei production mechanism will also be discussed.