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System size dependence of the hadronization temperature for light and strange baryons in relativistic particle collisions at ALICE GABRIELLE OLINGER, FERNANDO FLOR, REN BELLWIED, University of Houston — Statistical Hadronization Models (SHMs) have been shown to adequately reproduce hadronic particle abundances produced in high energy collisions of heavy ions at ALICE. Identified particle yields are used in determining freeze-out parameters of the QCD phase diagram via thermal fits in the SHM framework. When comparing fit results to varying sets of particles, differences in the chemical freeze-out temperature (T_{ch}) arise between light and strange hadrons. In this talk, I will show the system size and flavor dependence of T_{ch} via fits to experimental yields for several centrality classes in PbPb, pPb, and pp collisions measured by ALICE. I will compare the quality of fits across various treatments of strangeness conservation under different freeze-out conditions. Additionally, I will examine how the normalized hadron to pion yield ratios of light and strange baryons, as well as the ϕ meson, evolve within a flavor dependent model. Through a unique two-temperature approach, I will show that flavor dependence of the freeze-out parameters leads to a natural explanation of strangeness enhancement from small to large systems.

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