

Abstract Submitted  
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**Probing the asymmetry dependence of the nuclear caloric curve in fusion-evaporation reactions**<sup>1</sup> ALAN MCINTOSH, LAUREN MCINTOSH, KRIS HAGEL, SHERRY YENNELLO, Texas AM University — The nuclear caloric curve is an emergent property of the nuclear equation of state. Some models predict the caloric curve depends on the neutron excess, but the magnitude and even sign of this dependence varies between models. We aim to characterize the asymmetry dependence of the nuclear caloric curve experimentally. Since the caloric curve emerges from the microscopic interaction, knowledge of the asymmetry dependence of the caloric curve may constrain the asymmetry energy in the nuclear equation of state. We have conducted an experiment to study this effect in an independent way, using fusion-evaporation reactions of  $^{78,86}\text{Kr} + ^{12}\text{C}$  @ 15, 25, 35 MeV/u. Light charged particles were measured to extract the temperature and heavy residues were measured to select fusion reactions. The experimental setup, calibration, and analysis of nuclear temperatures in the fusion reactions will be discussed.

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