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Thermodynamic Studies of Phase Transitions in Inflationary Cosmology KENDALL MALLORY, Aims Community College — I will describe some thermodynamic studies of cosmological phase transitions to inflationary spacetime modes. We employ averaging methods assuming some kind of thermodynamic equilibrium is represented by these states. Some results are presented from direct partition sum solutions over normal modes in a scalar inflaton field, and also from metropolis Monte-Carlo simulations utilizing a scaling random walk method designed to avoid stiffness in the averaging near transitions.

> Kendall Mallory Aims Community College

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