

Abstract Submitted
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Charged Black Hole in a Canonical Ensemble ANDREW LUNDGREN, Cornell University — We consider the thermodynamics of a charged black hole enclosed in a cavity. The charge in the cavity and the temperature at the walls are fixed, yielding a canonical ensemble. We derive the phase structure and stability of the black hole equilibrium states. We compare our results to those of other work which uses asymptotically anti-deSitter boundary conditions to define the thermodynamics. The thermodynamic properties have extensive similarities which suggest that the idea of AdS holography is more dependent on the existence of the boundary than on the exact details of asymptotically AdS metrics.

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