

Abstract Submitted
for the APR10 Meeting of
The American Physical Society

Gravity from Thermodynamics: Going beyond Einstein equation of state¹ SUDIPTA SARKAR, Center for Fundamental Physics, University of Maryland, MAULIK PARIKH, IUCAA, Pune, TED JACOBSON, Center for Fundamental Physics, University of Maryland — We will discuss the possibility of deriving the classical equation of motion of any diffeomorphism-invariant theory of gravity from the thermodynamic relation $T\delta S = \delta Q$, applied to a local Rindler horizon with S as the Wald entropy. The approach generalizes an earlier result for General Relativity and thereby suggests a thermodynamic origin of any metric theory of gravity.

¹The work is supported by NSF grant PHY-0903572.

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Date submitted: 22 Oct 2009

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