



EINLADUNG

im Rahmen des Seminars für Mathematische Physik
(Joint TU/UV Theory Seminar)

zum Vortrag
von

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„*The Three Laws of Future Light Cone Thermodynamics*“

Abstract:

We show that there exist *local* gravitational laws — valid near any point in any space-time — which take the form of the laws of thermodynamics. To derive these laws, we will define a surface called the stretched future light cone. Then the gravitational entropy is precisely one quarter of the area of this surface. Interestingly, we find that, like the ordinary first law of thermodynamics but unlike its black hole counterpart, our local gravitational first law also contains a work term. The existence of local gravitational laws provides evidence that gravitational entropy is a property of all space-times, and not just space-times containing event horizons.

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