



Dipartimento di Fisica
Università di Cagliari
INFN, Sezione di Cagliari



HIGH ENERGY PHYSICS COLLOQUIA

17 Maggio 2018 · ore 14:30 · aula B

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HORIZON TEMPERATURE ON THE REAL LINE

Abstract

In this talk I will show how the characteristic thermal effects found for a quantum field in various space-time geometries admitting an event horizon, emerge already in a simple quantum system with translational symmetry living on the real line. The freedom in the choice of different notions of translation generators is the key to the linear Unruh effect I will describe. The derivation I will present is essentially group theoretic in nature: a thermal state emerges naturally when comparing representations of the affine group which differ in the range of their space spectrum due to the partition induced by affine transformations.

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