

Energy Reflection and Transmission at 2D Holographic Interfaces

lundi 24 juin 2024 14:00 (1 heure)

Scattering from conformal interfaces in two dimensions is universal in that the flux of reflected and transmitted energy does not depend on the details of the initial state. In this talk, I will present two gravitational calculations of the energy reflection and transmission coefficients for interfaces with holographic duals. I will first consider a thin-brane holographic toy model which is often used in the context of entanglement islands and black hole evaporation. I will demonstrate that the result for the reflection coefficient there depends monotonically on the tension of the brane. I will then extend the calculation to smooth domain-walls in 3-dimensional gravity. As an application, I will compute the transmission coefficient of a Janus interface in terms of its deformation parameter. I will demonstrate that both results obey bounds derived from the ANEC in conformal field theory.

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Classification de Session: Formal theory