Contributed Talk

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Title: Quantum aspects of stimulated Hawking radiation on an analog white-black Hole pair

Abstract: The stimulated Hawking effect is commonly regarded as as classical process, of little value to enhance and measure the quantum aspects of the Hawking process in analog systems (i.e. entanglement). In this talk we will argue otherwise, and describe a protocol to amplify and observe these quantum features, based on stimulating the process with a single-mode squeezed input. Although our ideas are general, we formulated them in the context of optical systems containing the analog of a pair white-black hole. This results open the door to new possibilities of experimental verification of the Hawking effect.