## Sixteenth Marcel Grossmann Meeting



Contribution ID: 488

Type: Talk in the parallel session

## Black hole induced false vacuum decay from first principles

Monday, 5 July 2021 18:10 (20 minutes)

We provide a method to calculate the rate of false vacuum decay induced by a black hole. The method uses complex tunnelling solutions and consistently takes into account the structure of different quantum vacua in the black hole metric via boundary conditions. We illustrate the technique on a two-dimensional toy model of a scalar field with inverted Liouville potential in an external background of a dilaton black hole.

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Session Classification: Quantum Fields

Track Classification: Early Universe: Quantum Fields