Abstract Submitted
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De Sitter Entropy from a Lower Dimensional Black Hole[1] NELSON ZAMORANO, Departamento de Física, FCFM, Universidad de Chile, CESAR ARIAS, RODRIGO AROS, Departamento de Ciencias Físicas, FCE, Universidad Andrés Bello — An alternative way to obtain the entropy of de Sitter spacetime for dimensions higher or equal than five is presented. We show that de Sitter entropy can be obtained as that of a lower dimensional black hole. This result follows from the existence of a one to one correspondence between de Sitter and a spacetime which contains a black hole localized on a p-brane. Specifically, the entropy of five dimensional de Sitter can be obtained as the entropy of a BTZ black hole localized on a 2-brane. Therefore, the microstates giving rise to such entropy, are those carried by a two dimensional conformal field theory. For dimensions higher than five, de Sitter entropy is matched to the entropy of a Schwarzschild-de Sitter black hole localized on a $(d-3)$-brane.

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