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(G*) (POS-10) Ising-like model on black hole space

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It is known that Schwarzschild geometry exhibits thermodynamic properties and these have a statistical mechanics explanation. An interesting question to ask is if we can study the statistical mechanics of spins on this background. In this presentation we will answer this question in the positive and construct an Ising-like model on black hole space. Then we will numerically study the thermodynamic properties of spins (such as alignment and entropy) for different masses of the black hole and discuss the resultant second order phase transition.

Keyword-1

Ising-like model

Keyword-2

Black hole space

Keyword-3

Phase transition

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