

عنوان مقاله:

Non-perturbative correction to the black holes distribution function

محل انتشار:

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خلاصه مقاله:

This letter investigates non-perturbative corrections to the entropy of black holes and their impact on the associated statistical mechanics and thermodynamics. An exponential correction term to the entropy is proposed, modifying the standard Bekenstein-Hawking formula. The corrected partition function is derived, enabling calculations of thermodynamic quantities like the Helmholtz free energy. For the Schwarzschild black hole case, the free energy reduces to the standard result when the correction term vanishes, providing a consistency check. The implications of these non-perturbative entropy corrections for the statistical mechanics and thermodynamic descriptions of black holes are discussed.

کلمات کلیدی:

Quantum correction, Thermodynamics, black hole

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