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The Motion of Cosmic Strings in the Schwarzschild Black Hole Spacetime

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Abstract: We study the classical dynamics of a bosonic string in the Schwarzschild spacetime using a perturbative scheme which is based on the assumption of a small value of a rescaled string tension parameter. The proposed approximation selfconsistently describes the string dynamics on the scale of large values for the worldsheet time in a fixed gauge.

Key Words: string, perturbation theory, Schwarzschild black hole



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