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Time Dependent Entropy of Constant Force Motion

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Abstract: Time dependent entropy of constant force motion is investigated. Obtained is the joint entropy, also known as the Leipnik entropy. The main purpose of this work is to calculate the Leipnik entropy via a time dependent wave function which is obtained by the Feynman path integral method. For this case it is found the Leipnik entropy increases with time, and is the same behavior as in the free particle case.

Key Words: Path integral, joint entropy, constant force motion