On the Electrodynamics of Moving Bodies

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Motivation

Since I was very young, I have always been fascinated with light. I thought about what would happen to my reflection in a mirror as I moved close to the speed of light. Would I see my reflection? What does Maxwell’s theory of electromagnetic waves predict?

Literature Review

This investigation will be based on the works of James Clerk Maxwell [2] and Isaac Newton [1]. In [2] Maxwell introduces the equations of electricity and magnetism in one complete theory. Newton had already presented in his Principia the laws of classical motion and gravitation [1].

Problem to be Addressed

In this project I will reconcile Maxwell’s equations for electricity and magnetism with the laws of mechanics by introducing major changes to mechanics close to the speed of light.

References
