

Peer Review

Review of: "A Common Origin for the Sagnac Effect and Einstein's Train-Embankment Thought Experiment"

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This paper responds to the statement, "there is no consensus on the origin of the relativistic Sagnac effect" (from the first reference), presents with clarity other relativistic effects, and explains clearly how they closely resemble the Sagnac effect. The author identifies that these different relativistic effects all are formalized based upon the Lorentz factor. However, this reviewer finds the broad range of relativistic effects that exhibit the Lorentz factor well known. Although this reviewer had not considered Achilles and the turtle before.

It is the origin of the Lorentz factor that is not widely understood. To this reviewer, this is the question that deserves answering. In this deeper sense, the paper has not answered the question it set out to answer.

With apologies for a personal plug, the paper "Relative Measurement Theory" (RMT) by this reviewer develops (Section 2.2) an understanding of the origin of the Lorentz factor. RMT was published in Measurement in 2018 and is available at: <https://www.sciencedirect.com/science/article/pii/S0263224117306887>

Declarations

Potential competing interests: No potential competing interests to declare.