

Matrix Method for Special Relativity

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Overview:

- Lorentz transformation matrix
 - Explaining relativistic phenomena:
 - Time dilation
 - Length contraction
 - Velocity addition
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1 Lorentz Transform

1.1 Matrix as Linear Transformation

To begin with, first you need to be aware of that matrix can be used to describe transformation of coordinates:

1.2 Lorentz Transformation Matrix

1.2.1 2 Einstein's Posulates

1.2.2 Spacetime Coordinate

1.2.3 The Derivation

2 Relativistic Phenomena

2.1 Time Dilation

2.2 Length Contraction

2.3 Velocity Addition

— The End —