

A disproof to the special relativity of Einstein and to the Lorentz' transformation.

- Let's name with \mathcal{E} the base of the bilinear form: "f" of the Minkowski Space, with $\mathcal{E} \Leftrightarrow \{\vec{e}_0, \vec{e}_1, \vec{e}_2, \vec{e}_3\}$ and let's consider $\vec{u} = u_0 \cdot \vec{e}_0 + u_1 \cdot \vec{e}_1 + u_2 \cdot \vec{e}_2 + u_3 \cdot \vec{e}_3$ with $u_0 > 0$.

- Let's consider \mathcal{E}' : an orthonormal base for the Euclidean Space, with: $\mathcal{E}' \Leftrightarrow \{\vec{e}'_0, \vec{e}'_1, \vec{e}'_2, \vec{e}'_3\}$ and $\langle \cdot, \cdot \rangle$ the scalar product.

* We have: $\forall \vec{u}, \exists \vec{u}' = u_0 \cdot \vec{e}'_0 + u_1 \cdot \vec{e}'_1 + u_2 \cdot \vec{e}'_2 + u_3 \cdot \vec{e}'_3$ (I)

* And we have: $\forall \vec{u}'$, An infinity of \vec{v}' exist with:

$$\vec{v}' = v_0 \cdot \vec{e}'_0 + v_1 \cdot \vec{e}'_1 + v_2 \cdot \vec{e}'_2 + v_3 \cdot \vec{e}'_3 \text{ and } \vec{v}' \text{ orthogonal to } \vec{u}' \text{ and } v_0 > 0.$$

That means, there are an infinity of \vec{v}' with: $\langle \vec{u}', \vec{v}' \rangle = 0$,

$$\text{which means also: } u_0 \cdot v_0 = -u_1 \cdot v_1 - u_2 \cdot v_2 - u_3 \cdot v_3 \quad \text{(II)}$$

* And we have: $\forall \vec{v}', \exists \vec{v} = v_0 \cdot \vec{e}_0 + v_1 \cdot \vec{e}_1 + v_2 \cdot \vec{e}_2 + v_3 \cdot \vec{e}_3$ (III)

* We also have in the Vectorial Space E so in the Minkowski Space:

$$\forall \vec{a}, \vec{b} \in E: f(\vec{a}, \vec{b}) = a_0 \cdot b_0 - a_1 \cdot b_1 - a_2 \cdot b_2 - a_3 \cdot b_3 \quad \text{(IV)}$$

$(E, \langle \cdot, \cdot \rangle)$ is the Euclidean and $\vec{a} = a_0 \cdot \vec{e}_0 + a_1 \cdot \vec{e}_1 + a_2 \cdot \vec{e}_2 + a_3 \cdot \vec{e}_3$

$$\text{and } \vec{b} = b_0 \cdot \vec{e}_0 + b_1 \cdot \vec{e}_1 + b_2 \cdot \vec{e}_2 + b_3 \cdot \vec{e}_3$$

→ From (I), (II) and (III), we conclude that:

$\forall \vec{u}$ from the Minkowski Space, An infinity of \vec{v}' exist in the Minkowski Space with: $u_0 \cdot v_0 = -u_1 \cdot v_1 - u_2 \cdot v_2 - u_3 \cdot v_3$

and with (IV), we conclude that:

$\forall \vec{u}$ from the Minkowski Space, An infinity of \vec{v} exist in the Minkowski Space with: $f(\vec{u}, \vec{v}) = 2u_0 \cdot v_0$
with $u_0 > 0$ and $v_0 > 0$

- Now Let's consider $\vec{u} = \vec{OA}$ and $\vec{v} = \vec{BC}$ with A, B, C are three events with $A(a_0, a_1, a_2, a_3)$, $B(b_0, b_1, b_2, b_3)$ and $C(c_0, c_1, c_2, c_3)$, so we have: $f(\vec{u}, \vec{v}) = f(\vec{OA}, \vec{BC})$

Consequently: $f(\vec{OA}, \vec{BC}) = f(\vec{OA}, \vec{BO} + \vec{OC})$
 $= f(\vec{OA}, \vec{OC}) - f(\vec{OA}, \vec{OB})$

(Let's consider $O(0,0,0,0)$, then $u_0 = a_0$ and $v_0 = c_0 - b_0$)

we conclude that: $f(\vec{OA}, \vec{BC}) = f(\vec{OA}, \vec{OC}) - f(\vec{OA}, \vec{OB}) = 2a_0 \cdot (c_0 - b_0)$

* So, for each event A, an infinity of couples of events (B,C) exist in the universe with $f(\vec{OA}, \vec{OC}) - f(\vec{OA}, \vec{OB})$ doesn't depend on the spatial coordinates when we consider:
 $2a_0 \cdot (c_0 - b_0) = 2 \cdot d_1 \cdot d_2 = K$, with: d_1 : the distance made by the studied particle in the vacuum during: $\frac{c_0 - b_0}{c} = \text{constant}_1$
 and d_2 : the distance made by the studied particle in the vacuum during: $\frac{a_0}{c} = \text{constant}_2$ (c : the velocity of the particle in the vacuum)
 and thus K is a constant.

And this is an impossible fact, since this is a characteristic of all the universe around A, and this characteristic doesn't consider the different phenomena of the universe which have spatial coordinates and must influence the velocity of the studied particle.

We finally conclude that we can't use the Minkowski space to study the effects of the phenomena on the particles.

Consequently: The Special relativity of Einstein and The Lorentz transformation shouldn't be used in physics, since we can't delete an infinity of events from the universe.

If an event happens at the position A, we consider a couple (B,C) far enough from it so not influenced by the phenomenon, and respecting my mathematical proved relationship between the events A, B and C in the minkowsky space (see the papers). Obviously the event A changes by the phenomenon but the couple of events (B,C) doesn't change in a manner to allow the relationship to stay respected since the couple is isolated from any phenomenon. Consequently, the event A can't change, hence, No curvatures happen, and thus the Space is always The Euclidean Space!!