The Fail of Relativity

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Abstract

Reasert the old twin paradox in a new light leading to conclusion that theory of relativity is inconsistent with physical reality. Also possible alternatives to undestand electrodynamic fenomenons are analysed.

1 The clock paradox

The clock paradox also known as twin paradox is a direct consequence of relativity principle symmetry in the context of constant light speed principle, with other words in context of special relativity. One consequence of special relativity is time dilation witch say that in a moving inertial reference frame with respect to a stationary reference frame, the time intervals become larger and consequently the clocks run slower than clocks from stationary reference frame. Such an affirmation that moving clocks runs slover than stationary clocks, in context of relativity principle is inconsistent because if we consider relativity principle as a basic principle of physics, then we cannot say that A is moving and B is sit, but correctly is to say that exist a relativ movement between A and B or between A and B we have a relative velocity v, as result while relativity principle is active we cannot have a sense of which is in motion and have its local time dilated, instead both A and B can be considered in motion relative to each other, so both have they local time dilated relativ to each other what is of course impossible.

1.1 Classic clock paradox

Is the best known case of clock paradox, often denominated as twin paradox, the original two clocks variant is pretty useless because imply accelerations and fall outside the scope of special relativity, which leave room for various interpretations from both sides supporters and opponents of relativity. Lets to suppose we have two clocks A and B, initialy both clocks are in the same reference frame having the same state of motion. The clocks counters are

cleared to 0 and clock B is accelerated at speed v with respect to clock A which remain in the same state of motion. After a while the clock B stop and turn back with same speed v with respect to clock A, until it reach the clock A and the clocks counters are compared. Analyzing the problem from the clock A reference frame, which is a valid inertial reference frame on entire duration of experiment, will result that clock B has lag behind clock A due to kinetic time dilation caused by moving of B with respect to A. However the same analysis can be made from the clock B reference frame which see that clock A is moving with respect with B and consequently the clock A will lag behind clock B due to time dilation. However the problem is that clock B reference frame experience accelerations and consequently is not a valid reference frame from special relativity point of view, as result this case cannot be considered a clear paradox of special relativity. Supporters of relativity still try to resolve this paradox in a way that uses a light pulses counting technique, which is noting more than doppler analysis, but time dilation is a purely kinetic transformational effect and have noting to do with doppler effect, so this solution is wrong. Others try to take dynamic effects of acceleration into consideration and move the problem into scope of general relativity, this way is wrong from start because kinetic time dilation, as it name imply, have nothing to do with acceleration and gravity. This classic clock paradox is an asymmetric case which not reveal the inherent problem of special relativity.

1.2 Symmetric clock paradox

The simplest symmetric version of clock paradox experiment have only two clocks and a system to compare the clocks counters without the necessity to bring the clocks together. Lets suppose we have two very long rods, every rod have a clock at one end and a marker at other end. The marker is nothing more than a head (e.g. a small magnet) which can be sensing by an appropriate sensor embedded in clock, when the clock pass near it. Now these two rods are already in motion with respect to each other with speed v on an approaching trajectory with the clocks in front of movement direction. We arbitrary name them rod system A and rod system B, however the analysis is perfectly symmetrical.

Figure 1: symmetric 2 clocks experiment

When the clocks reach each other their counters are cleared to 0, from

now on we analyze the problem from clock A reference frame, but is the same from clock B reference frame. When clock B reach the marker a it send a light pulse (electromagnetic pulse) in direction of clock A followed by transmision of counter value as was at the moment of marker detection. When clock A receive the light pulse, it will memorize the value of own counter at that moment, the clocks counters never stop, and then receive and memorize the transmitted value of clock B counter. Because the lenght of the rod is known as L and the clock A and marker a reside in the same reference frame, using the principle of constant light speed we can calculate the flight time of light pulse as $\tau = \frac{L}{c}$ and substract it from memorized counter value of clock A to find which was the clock A counter value when clock B counter value was extracted and transmitted. When these two counters values are compared, the clock A should see, according to relativity, that clock B lag behind clock A. If the analysis is repeated identical from clock B reference frame, will result that clock A lag behind clock B, which is impossible and reveal the paradox. The entire theory of relativity suffer from symmetric inconsistencies, what mean that the relativity principle and constant light speed principle cannot stand together as valid principles of physics, one or both of them are erroneous. Of course the paradox disapear if we say that one clock only *see* the other clock how lag behind due to time necessary to information carrier (e.g. ligh or sound) to cover the distance between them, but this is in fact a measurement problem not a physical law. Seem that Einstein raised at rank of fundamental space-time properties a simple measurement characteristic using electromagnetic field as information carrier.

1.3 General relativity can save situation?

No, obviously not, why? First because is based on space-time kinetic properties defined by special relativity, which is broken, second because the principle of equivalence between inertial and havy mass is no more than a simple method, a tool, not a physical law. Saying that an accelerated reference frame will generate a gravitational field extended on entire space is obviosly only a mathematical method, cannot result from a principle of nature because such a field will have infinite energy which is imposible, as result the so called principle of equivalence of general relativity is in fact a method of equivalence. Also seem that some astronomic observations indicate a very high propagation velocity for gravitational field, considerably higher than the propagation velocity for electromagnetic field, which contradict the theory of relativity, first as a space-time theory and second as a theory of gravity, eliminating the light speed value c as a limit speed for all interactions. Consequently the general relativity is broken too as fundamental theory, again Einstein raised at rank of principle of nature a simple methematical method.

2 The missing link of electrodynamic

If the relativity is eliminated then some modern scientific theories are also eliminated and the theoretical physics need to reanalyse many concepts from begining of twenty century. Also the relativity theory was intended to be the missing link of electrodynamic, which reconcile the field view of electromagnetic fenomenons with kinetic concept of mechanics, especialy with relativity of movement.

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