

Title:

Page: 1

AN EXPERIMENT AGAINST RELATIVITY

INTERACTIVE DEPENDENCY

BANDARU RAMU

Abstract:

This article reveals how some relative principles not obey its own principles. Practical examples given as experimental evidences which prove that:

Time dilation principle cannot calculate any time dilation.

Relative velocity cannot cause any time intervals.

Galilean relative principle depends upon relative velocity not time dilation. Time dilation cannot keep Galilean relative principle.

Two postulates of relativity are not sufficient. What relative principle, what vacuum, the postulates cannot describe.

An practical experimental evidence reveals that light runs in inertial frames not in vacuum.

The main problem in Michelson Morley's experiment is that they cannot recognise the difference between vacuum and inertial frame. the experiment were conducted many times but in only single inertial frame. If the experiment conducted between two inertial frames, the result follows relative velocity of the inertial frame not time dilation.

$E = mc^2$ cannot keep any equilibrium between energy and mass.

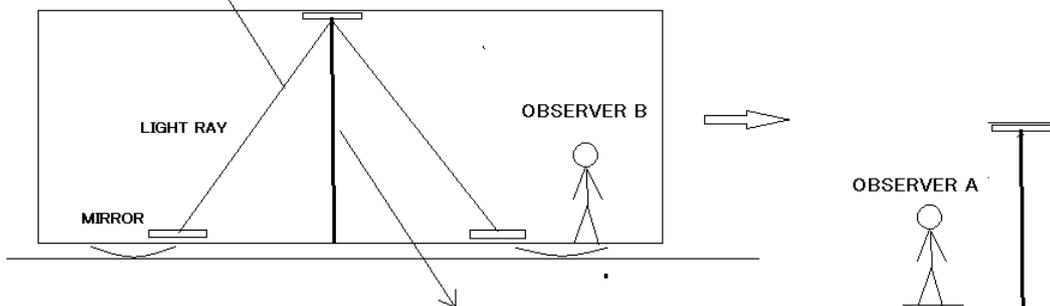
Physical interaction or physical laws not taken place only in a single inertial frame but occupies among many inertial frames. When the interaction (physical law) occupy among many inertial frames, which time of the inertial frames does the interaction or physical law follow?

What wrong in jet air craft - time dilation experiment? This follows relative theory? Was the Relative time observed by both observers: in jet air craft and another on the earth surface?

Actually can time dilation principle calculate time dilation?

According to the time dilation principle diagram,

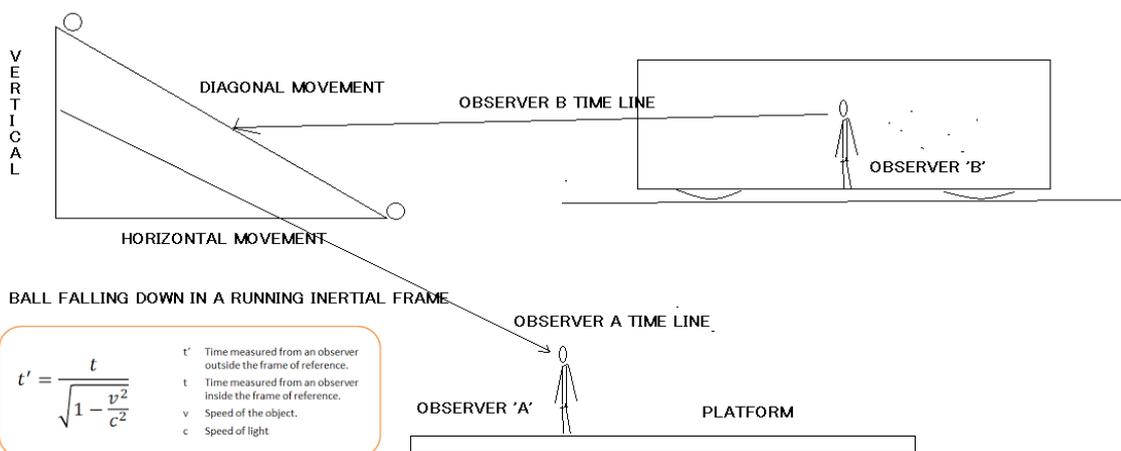
According to relative theory, Observer B should use this diagonal time value in time dilation principle but...vertical time value is used as their time value in time dilation principle by the both observers A and B to calculate time dilation in other observer's inertial frame.

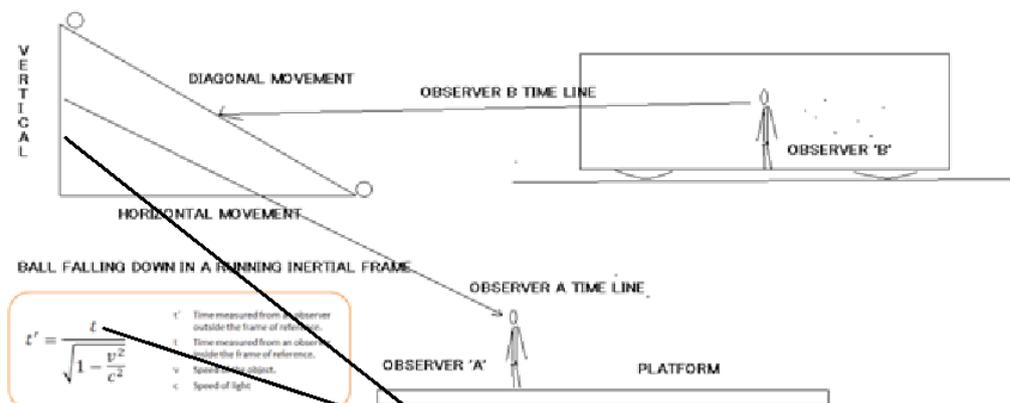


This vertical time line is used by the both observers A and B as their own time value in time dilation principle. If diagonal time line is used by the observer B, the other values – relative velocity and diagonal time line also enhanced more than actual relative velocity between them

Two observers uses same time values in the diagram in the place of vertical line to keep relative velocity same between them. The value of diagonal line cannot be used as their time in that time dilation principle by the two observers. If the diagonal line time value is used by any one between them, the values of the other two lines vertical and horizontal line are changed. This means time dilation will change the relative velocity. And time dilation cannot follow real relative velocity in other inertial frame. So time dilation value any body cannot use in the calculation of time dilation.

Picture:





Even though both observers have different time lines, the both observers A and B use the same vertical time value as their time in that time dilation principle. If the observer B use the diagonal value as his time in that principle, the other values in that diagram- vertical and horizontal values will be increased. not following actual relative velocity.

Two different inertial frame observers use same vertical time value in their relative time calculation principle because between them the relative velocity is same to them. But the same relative velocity not allow various relative time values. If dilated time values used in that principle, relative velocity will change and the new changed relative velocity cause more time dilation not following the actual relative velocity thus the relation between the time dilation and actual relative velocity. Thus this time dilation principle cannot calculate any time dilation.

In this diagram, The diagonal line in the diagram is the time line of the train - the inertial frame. This diagonal line is the result of the two velocities: vertical (steady observer time line) and horizontal (relative velocity).

According to this time dilation principle, the steady observer find the time dilation in the running inertial frame using his time value and relative velocity. these both values form the dilated time of the observer in the train.

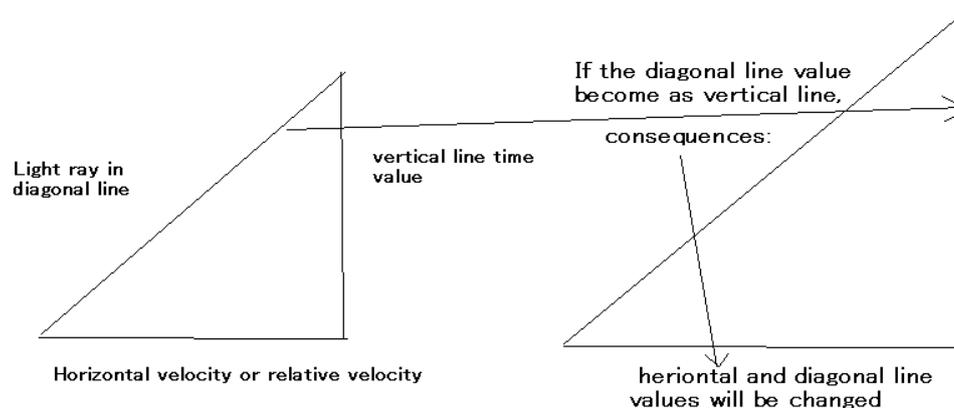
But in the same way, the observer 'B' in the train can use vertical time value or diagonal time value as his time line in the same time dilation principle to find the time of the observer 'A' on the platform?

Observer B use which time value- vertical time line or the diagonal time value as his time?

To calculate the time of the observer 'A' on the platform?,

When the observer 'B' in the train use the diagonal time value as his time dilated value in the position of the vertical line in the diagram concerning time dilation principle...

Picture



when the vertical line value changed, the values of other lines – relative velocity and diagonal line also changed. But according to relative theory, relative velocity should be kept same to two concerned inertial frames. In the diagram, If the relative velocity between two inertial frame should be same, the values of the times (in the vertical place) in that two inertial frames should be same.

The time dilation diagram or principle says that Same relative velocity between two inertial frame requires or keep same time values in two inertial frames.

If vertical value changed, the values of diagonal line and relative velocity(horizontal line) also will be changed. This leads to calculate different time dilation values with out following real relative velocity between them.

According to relative theory, same relative velocity should be between two inertial frames and at same relative velocity same time dilation values calculated by the two inertial frame observers. But it is possible only the two inertial frame observers use same time values in that vertical line place of the diagram of time dilation principle.

This means same relative velocity support only same time values in that two inertial frames. Same relative velocity can not support any time dilations.

Time dilation principle not consider space contraction

Another fault in this principle is that: Even though the time principle use the relative velocity as horizontal line value. The principle not consider any space contraction. When a ball thrown in side of a running inertial frame, the ball also run horizontally in that running inertial frame then the ball will consider space contract according to relative theory.

the diagonal line is the result of two velocities. Horizontal velocity is relative velocity between two inertial frame. Any object in that inertial frame moves also along with the inertial frame nothing but in horizontal velocity. In the process, horizontal line has space contraction in that inertial frame. But even though two velocities vertical and horizontal velocities form the time dilation line – diagonal line, when horizontal

velocity considered, but not consider any space contraction. Time dilation principle not consider space contraction even though that principle consider horizontal velocity.

Time dilation not obey Galilean relative principle

Galilean relative principle says that relative velocity between two inertial frames is same. The relative velocity is not more than the other inertial frame. Observe below picture:

The relative velocity is same between two observers



Galileo when dropped a ball in an inertial frame – in a moving ship, because of the time dilation, that ball fall down some slow way, but in that time dilation, that ship moves to more distance but in that same time. So this means: the relative velocity between the two observers enhanced more than actual relative velocity. If the relative velocity is same, the ball cannot fall down at the same place in that ship like the ship steady. So time dilation cannot coordinate with the relative velocity so time dilation cannot follow Galilean relative principle.

So all physical laws are valid same, only when the relative velocity of the inertial frame should be considered as same between the two observers.

Other consequences because of time dilation:

If the relative velocity enhanced, the momentum of that inertial frame also enhanced.

The relative theory of Einstein depends upon the relation between the relative velocity and time dilation. But actually time dilation changes the relative velocity.

Thus the relation collapsed.

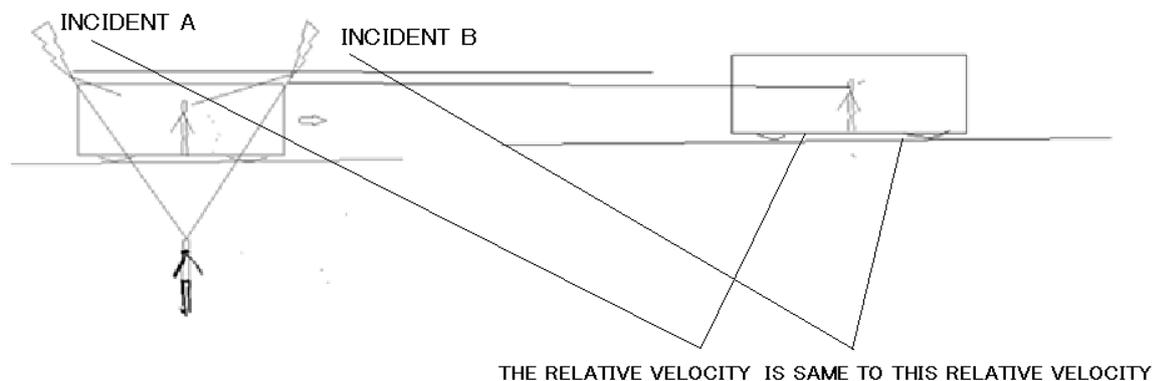
Einstein uses this relative principle as first postulate of his theory. Galilean relative principle depends up on relative velocity but time dilation cannot keep the relative velocity same between the two inertial frames concerned.

Relative velocity cannot cause any time intervals

Time dilation, time interval and relative velocity are related aspects in relative theory. Especially Einstein tries to explain the time dilation with the time intervals.

But relative velocity cannot increase or decrease the interval between two incidents.

Because the relative velocity is same to the two incidents.



THE RELATIVE VELOCITY BETWEEN INCIDENT A AND THIS TRAIN IS SAME TO THE RELATIVE VELOCITY BETWEEN INCIDENT B AND THE TRAIN. SAME RELATIVE VELOCITY CAN CREATE SAME INTERVAL AT ANY VELOCITY. THUS CHANGED RELATIVE VELOCITY CANNOT CHANGE THE INTERVALS IN THE INCIDENTS.

According to relative theory, relative velocity cause time intervals or time dilation. But relative velocity cannot cause any time intervals.

The famous Einstein thought experiment – train and lightning experiment on simultaneity or time intervals tries to establish the relation between relative velocity and time intervals or time dilation.

But is that intervals time intervals? To confirm the results, we add another train and compare the intervals between the two trains.

Another train at very distance from the platform and the two incidents i.e., two lightning.

The distant train while moving at various velocities:

At the same velocity comparable to the first train. What time intervals observed in the distant train?

Even though the two trains run at same speeds, the time intervals not same in that two trains.

The distant train at the double speed of the first train: any change in that time intervals in the distant train observed?

Even though the speed is double,

In the view of the distant train, the interval in the two incidents is same.

At 30% of c , at 40%, at 60% of c , at any speed,

There is no change in that intervals of that two incidents at any relative velocity. because the relative velocity between the distant running train and the two incidents (two lightning 'A' and 'B') is same.

That relative velocity is same:

between lightning A and the distant train

between lightning B and the distant train.

Same relative velocity between them cannot change the interval.

Then the two lightning cannot show any time interval changes.

This means that The interval also we observe in that trains first (Einstein train at platform)and second train at distant is only relative distant interval not time interval. Because that interval not be changed by following the relative velocities.

Same relative velocity between the train and two dots or two (or more) incidents cannot cause any time intervals **because among them the relative velocity is same**. The remain difference is distant difference. **Thus relative velocity cannot cause any time intervals according to relative theory circumstances. Thus relative theory collapses up on its own principle.**

Galilean relative principle depends upon relative velocity not on time or time intervals. In other words physicals laws consider relative velocity of the inertial frame not consider any time and space. This means physical laws not consider any time intervals. Thus in the view of physical laws, there is no time. Time cannot cause any incidents. Only The evolution of the incidents we call time intervals or time. But there is no time as a real quantity.

Relative principle reveals that the difference between two inertial frames is relative velocity. If there is relative velocity, there are two inertial frames.

This relative principle says that there is no any relative velocity or it is zero between the observer and his own inertial frame because the relative velocity is same to them. In Michelson –Morley experiment also, they cannot observe any relative velocity of their own inertial frame i.e., this earth. actually they considered this earth as an inertial frame to find ether. This experiment result obeys relative principle: the relative velocity of this earth we cannot recognise because it is our own inertial frame. So the relative velocity between the earth and us is zero (same).

Galilean relative principle depending upon the relative velocity, reveals **why** we and the light velocity cannot observe or consider the velocity of the earth in that Michelson and Morley experiment. Because of considering relative velocity. When With the relative velocity of inertial frame, the relative principle reveals the light velocity how we observe as the specific or constant in this inertial frame i.e., on this earth, Galilean relative principle says that the light runs through out the inertial frame considering the relative velocities because the relative principle depends upon the relative velocities of the inertial frames. In the view of relative principle, all physical laws taken place in inertial frames not in vacuum. So physical laws are same in all inertial frame not in vacuum. So all physical laws are same because of considering the velocity of the inertial frame.

Why scientists surprised at the result of Michelson and Morley experiment, because of no ether, the light travels in vacuum. So the velocity is independent of the inertial frames. so they think to

establish a relation between the light velocity and the relative principle which is related to inertial frames.

Actually relative principle depends on relative velocity, Einstein uses relative time and space instead of relative velocity to make light speed constant and independent of inertial frame but when came to other objects except light speed Einstein uses **relative velocity** and **relative time and space**. He uses two alternatives or two values. But relative time and relative space is not alternative or equal to the relative velocity of the inertial frames. So time dilation cannot obey relative principle.

Even though they cannot recognise the difference between the vacuum and the inertial frame, Even though whenever they cannot find that separate vacuum or space from an inertial frame, they think that light travels in vacuum and try to establish the coordination between light speed constant and relative principle. This is unnecessary attempt.

All physical laws are same in all inertial frames not in vacuum. Actually all physical interactions take place in initial frames or rotating inertial frames but not in vacuum. **Actually whenever we cannot find that vacuum or space as independent quantity of inertial frame. Then the velocity of light also cannot be independent of inertial frames. so 'C' is specific in inertial frame not in vacuum.**

Michelson and Morley had to ask themselves a question: did the light travel in vacuum or in this inertial frame? They could not ask the question. Einstein in his second postulate use the term vacuum. What the difference between an inertial frame and vacuum Einstein does not reveal in his second postulate.

Can we move in vacuum independently from any inertial frame in this universe?

It is not important that light velocity is constant or not. The important thing is that light travel in vacuum or in or through out the inertial frames. Because Galilean relative principle belongs to inertial frames not to vacuum.

An experiment reveals that light travel in vacuum or in inertial frames and what difference between the terms vacuum and inertial frames.

What the main fault in Michelson Morley experiment is that it cannot recognise the difference between vacuum and inertial frame.

If there is no eather, that means that the light travel in vacuum?

Michelson and morley conducted their experiment considering this earth as an inertial frame. But they cannot ask themselves the question: does the light travel in vacuum or in inertial frames?

is Vacuum absolute? Where is vacuum? Is it in inertial frame or out side of the inertial frame?

There is no chance to vacuum to remain as absolute in this relative motion. So 'C' is in any where, it is relative constant.

Michelson –Morley conducted the experiment many times but conducted in only one inertial frame. Thus we have no chance to find that how the light speed recognise the difference between two different inertial frames. Relative principle says that the difference between two inertial frames is

relative velocity but there is no difference in relative velocity (concerning inertial frame) in the same or own inertial frame. Because the velocity of that inertial frame is same to all and in all directions in that inertial frame, thus The velocity of the earth - the inertial frame not found in the light velocity in any direction in Michelson and Morley experiment. According to relative principle, this indicates that light travels in that inertial frame i.e., the earth not in vacuum.

But Michelson and Morley and Einstein how did they say that light travel in vacuum?

One observer observes the light travelling on a diagonal way in other inertial frame. Actually if the light travels in a straight line in one running inertial frame, How does light run in a diagonal line way? The diagonal line is the result of two velocities in two angles at same time. This means only the objects consider the relative velocity of the inertial frame, moves on the diagonal line (observed by others).

If light speed is independent, how does the light travel in that diagonal line?

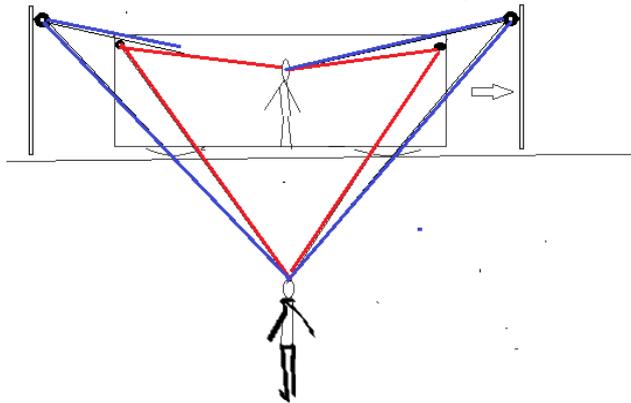
The question is not that what the speed of light on the diagonal line, the question is that how the light can run in that diagonal line. Only when the light consider the velocity of inertial frame i.e., horizontal velocity, the light can move on the diagonal line in the other inertial frames. that horizontal velocity is the velocity of the inertial frame. So the observer who is in the inertial frame, cannot observe the horizontal velocity in the light velocity. The observer in that inertial frame, observe the path of light as vertical line but other observers who are in out side, can observe the light particle's its vertical velocity and the inertial frame horizontal velocity-in both velocities, the light particle has to travel so it travel that two velocities combined way like in the diagonal path. Diagonal line includes the relative velocity of the inertial frame. If the light travel in that diagonal path in an inertial frame, the light consider the horizontal velocity (relative velocity) of the inertial frame. This diagonal travelling reveals that light travel in inertial frame not in vacuum. If light travel in vacuum, all observers should observe same path of the light travelling. Relative theory says that only the velocity of light is constant but it ignore the path. Light diagonal travelling reveals that light travelling is not independent of the inertial frame it consider the velocity of the inertial frame like other objects consider the the velocity of the inertial frame.

If light speed is to be independent of the inertial frame, that light should not travel in that horizontal velocity path of that inertial frame.

Does Light travel in vacuum or throughout in inertial frames?

Einstein second postulate of relativity use the term VACUUM but how it is different from an inertial frame, he cannot say.

Michelson –Morley conducted the experiment many times but conducted in only one inertial frame. That is this earth. Then to find that light travel in vacuum or travel in the inertial frame -this earth Michelson Morley experiment now we extend up to two inertial frames to find that light moves in an inertial frame i.e., this earth or vacuum:



Picture: simultaneous incidents in two inertial frames:

1. In side of the train car
2. Out side of the train car

In Einstein thought experiment on simultaneity, the simultaneous two incident taken place out side of the train car but the experiment some how extended. Simultaneous incidents added in the inertial frame train car.

Out side and in side of the train car, arranged in the way, our light bulbs will be on at the same time in the view of the observer on the platform or in the view of observer in the train operated by a remote.

In the both perspectives the result is:

1. Out side of the train car, two bulbs are switched on simultaneously to the observer on the platform not simultaneously to the observer who is in the train car.
2. but the bulbs arranged in side of the train car, switched on simultaneously to both observers

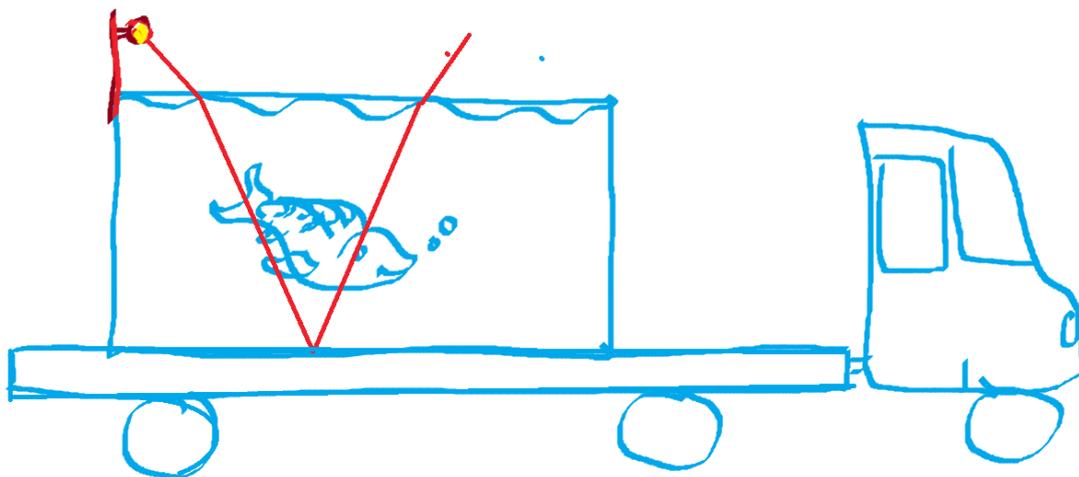
This informatins shows differences between two inertial frames. The difference between Out side light speed and in side light speed is relative velocity of the inertial frame. This reveals light rays cannot travel in vacuum. The light speed consider the velocity of the inertial frame this means light speed is specific or constant to observers only in their own inertial frame. Relative principle also says the same. Relative velocity of the inertial frame not observed in their own inertial frame because the relative velocity of the inertial frame is same to the objects in that inertial frame but relative velocity observed in other inertial frame. In the experiment we observe the same. observer 'B' not observes any relative velocity in light speed but out side of his inertial frame he observe that the relative velocity considered by light velocity.

This same result also we can observe in the Michelson Morley experiment. In that experiment, earth is an inertial frame, so the velocity of the earth is common to the observers and the velocity of the light. So the observers in the inertial frame i.e., on the earth observe only specific velocity of light in any direction on the earth seems to be not considering the velocity of the earth.

because of considering the speed of earth an inertial frame. The result of the Michelson –morley experiment is because of relative principle.

Another experiment:

The speed of light in water is specific at a reflective index. at a Reflective index speed of light in water is a physical law. So that physical law is same in all inertial frame. Can Time dilation keep that physical law same?



A big container used as an inertial frame in this experiment. In that container we filled up water at half level of the container.

The water moves along with the container.

Now if we conduct a light refraction experiment in that container,

The light ray consider the time dilation and space contraction or the relative velocity of the inertial frame in the refraction in the water experiment in the that running container?

Does light run in vacuum or in inertial frame (throughout the inertial frames)? to find the answer, we use water as medium or inertial frame.

According to Galileo relative principle, all physical laws are same in all inertial frames. this is the first postulate of relativity also. Why same? Because: 1. considering Relative velocity of that inertial frame or 2. considering relative space- time of that inertial frame.

Actually Galilean relative principle depends relative velocity. But Einstein chooses second cause i.e., relative space and time.

But the question is that: that space time can keep relative principle here?

The speed light in water is a physical law. The speed should be same on ground and in the running container. But relative space time of that inertial frame cannot keep the physical law same in that inertial frame.

In water, light moves somehow slower than outside of the water. The same speed should be shown in all inertial frames.

When the light moves at slow rate in water, the diagonal line is more at the slow rate of light showing more time dilation than the time dilation because of C. somehow less speed of light in water indicates more time dilation than the time dilation at the speed in vacuum. So that time

dilation at C cannot keep the light speed as independent of that inertial frame. Thus that physical law cannot consider time dilation only it consider the relative velocity of that inertial frame. Thus light travel in inertial frames considering the velocity of that inertial frame not in vacuum with the help of relative time

this means the relative space times cannot keep the speed of light in water same in all inertial frames.

So physical laws because of considering relative velocity of inertial frame, are same in all inertial frame.

This reveals that light travels throughout inertial frames and not travel in vacuum.

How does light travel in an inertial frames?

not only light but also many things take place not only in one inertial frame but in many inertial frames

Physical laws taken place among many inertial frames. then...

which time followed by them?

What is PHYSICAL LAW?

Does physical law or physical interaction follow one inertial frame? In other words, does one physical law or physical interaction take place in only one inertial frame concerned **to follow a specific time of that inertial frame?**

What is PHYSICAL LAW?

Same incidents: Throwing a ball upside. but

Two inertial frames: 1. on the ground

2. In the train

but one same common aspect behind the incidents taken place in two inertial frames - What is that common aspect? :

Let us observe the picture given below:

In the picture, imaginary lines of interaction rate equals to the rate of movement of relative velocity.

This shows that interaction or physical laws consider relative velocity, that interaction cannot consider any relative time.

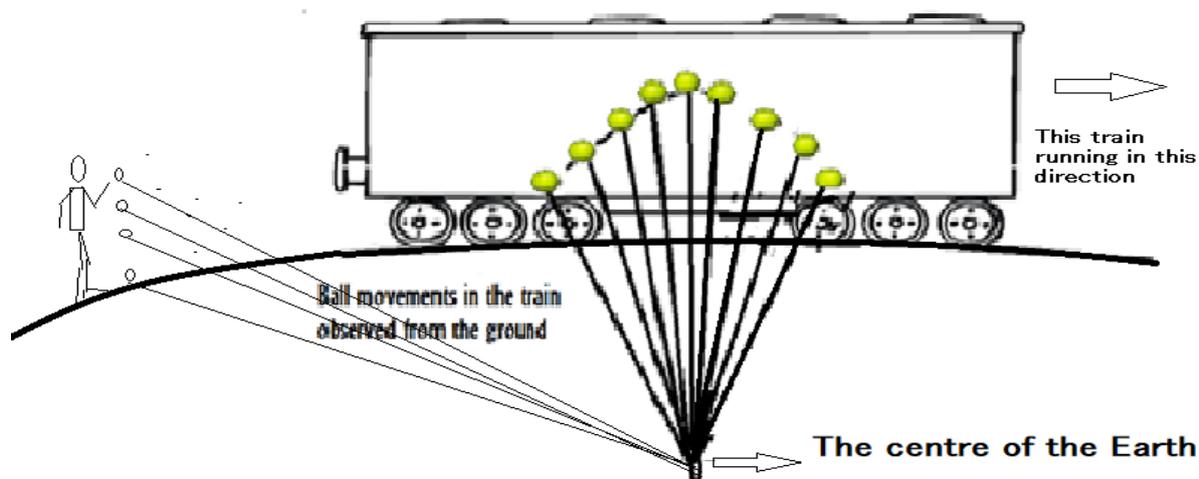


Figure 1 PHYSICAL INTERACTION BETWEEN TWO INERTIAL FRAMES (the train and the Earth)

In above picture, The imaginary lines of interaction between the moving ball and the centre of the Earth show the same rate of interaction between both inertial frames the train and the Earth.

This is a train. A ball is thrown upside in the train. It moves upside and towards downside.

Of course on the ground the incident occurs in the same way.

In these two inertial frames, the balls fall down towards THE CENTRE OF THE EARTH.

The centre of the Earth is common aspect behind the same incidents taken place in two various inertial frames.

Is Falling ball – the incident related to only one inertial frame – the train?

The ball falling down in the train is not concerned to only that train. It is falling towards the centre of the Earth (maybe that is Newton's gravity or Einstein's gravity: the ball falls down towards the centre). Falling ball the incident occupies two inertial frames not only one inertial frame the train. 'Falling ball' the interaction between the ball and the centre of the Earth.

FALLING is the result of interaction between ball and the centre of the Earth.

Here we observe two things:

i. Physical law is nothing but **the result of interaction**. That interaction is dependent not independent. The ball **itself without any interaction** cannot fall towards downside. Other physical laws: Faraday's law, Bernoulli principle etc., are formed **as the result of interactions** among existed and related objects. So

Physical laws are interactive and dependent in other words, WE CAN CALL THE FEATURE OF PHYSICAL LAW '**INTERACTIVE DEPENDENCY**'

ii. That physical interaction (law) can OCCUPY AMONG MANY INERTIAL FRAMES not only one inertial frame.

Two questions:

- i. When the interaction (physical law) occupy among many inertial frames, which time of the inertial frames does the interaction or physical law follow?
- ii. When the interaction occupies among many inertial frames, which factor – relative Time or relative velocity can keep the relative principle – “All physical laws are same in any inertial frame to the observer regardless of his own inertial frame velocity.”

“Falling ball” is not related to only one inertial frame –the train. The interaction extends Up to the centre of the Earth.

The interaction between two inertial frames follows relative velocity not relative time:

In above picture, The imaginary lines of interaction between the moving ball and the centre of the Earth show the same rate of interaction between both inertial frames the train and the Earth. The interaction can not show any various rates in two inertial frames. Because the interaction follows the same relative velocity between them.

So In the picture, imaginary lines of interaction rate equals to the rate of movement of relative velocity. Physical interaction is not related to only one inertial frame. That interaction taken place among many inertial frames using related components prevailed among that inertial frames related. So, that interaction consider relative velocity among the inertial frames, that interaction cannot consider any relative time of one inertial frame because we cannot say actually that interaction related or limited to one particular inertial frame and it taken place in one particular inertial frame to follow the relative time of that inertial frame.

In other words,

This same interacting rate between two inertial frame (shown in the picture: as interacting lines) cannot follow only one inertial frame time In same way, it cannot follow all various times of Concerned inertial frames. So the interaction (physical laws) cannot follow two various times of Concerned two inertial frames.

In the picture, imaginary lines of interaction rate equals to the rate of movement of relative velocity.

This shows that interaction or physical laws consider relative velocity, that interaction cannot consider any relative time.

$$\text{Relative speed} = \text{relative distance} / \text{relative time}$$

Only because of considering the relative velocity, the Relative principle exists. By moving relatively, the same relative moving observer can observe in his own inertial frame that “ALL PHYSICAL LAWS ARE SAME IN ANY INERTIAL FRAME REGARDLESS OF OBSERVER’S **RELATIVE VELOCITY.**”

E=mc² can’t preserve the equilibrium between mass and energy:

The value of momentum is same in any where?

The value of specific quantity of mass is same in anywhere in this universe. But the quantity of kinetic energy to move the same mass quantity is various in this universe.

Example:

The 60 kg`’s quantity of mass on the earth show its weight only 10 kg`’s on the moon.

When compared to the earth, the same kinetic energy can move the massive body six times faster on the moon than on the earth.

Thus the value of momentum is various in different places of this universe.

But this $E=mc^2$ – this equation cannot recognize this various values of momentum of same quantity of mass. This $E=mc^2$ considers only relative velocity.

When same quantity of mass at the speed of 90% of 'c', the mass of that object will increase up to nearly 50% according to relative theory. If this experiment is conducted on this earth and the moon separately. The increased quantity of mass is same –equal on both the earth and moon.

But The converted kinetic energy values are not equal. The quantity of converted kinetic energy consumed up to 6 times extra on this earth than on the moon. Increased mass quantity is same on the earth and moon. But the converted or consumed quantities of kinetic energy are different. Thus $E= mc^2$ can't preserve the equilibrium between mass and energy. So $E=mc^2$ can't convert mass into energy in same way, energy into mass (Already we say that any physical Interaction cannot work as constant. There is no conservation between mass and energy.)

5. Dependent velocity of light rays - The single quantity can predict MASSIVE PHOTON:

When 'c' is not constant, 'c' cannot stand constant for conversion between mass and energy
This no conversion leads to single quantity – massive energy or energetic mass.

The single quantity can predict MASSIVE PHOTON:

What about the deficit or missing mass quantity in the fusion nuclear process in the Sun?

Because of no conversion between mass and energy. The missing mass should be in the emitted photons from the Sun. So mass should be in photon.

So massive photon should be there.

-END-