

The Special Theory of Relativity Analysis (Questions and Answers) (I)

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Abstract

The paper provides questions and answers concern the special theory of relativity, trying to see its depth... the questions are in order as following:

Question No. 1

Is Lorentz Length Contraction A Real Phenomenon Or Illusion Of Measurements?

Question No. 2

Why Light Velocity Is Constant In All Frames?

Question No. 3

How Can Observer Effect On Observation Results?

Question No. 4

Is There A Contradiction In The Physics Book?

Question No. 5

Are There Relativistic Effects In The Solar System?

Question No. 6

Is The Solar Planets Order In Harmony With The Sun Gravity Concept?

Question No. 7

Do We Understand The Solar System Geometry?

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Question No. 1

Is Lorentz Length Contraction A Real Phenomenon Or Illusion Of Measurements?

Lorentz Length Contraction Is A Real Phenomenon And Not Illusion Of Measurements

This conclusion we have reach based on 2 reasons which are:

- (1) The length Contraction Is Measured By Measurements Devices, Where In Physics **What's Measured = What's Real** (By this rule we save the physical experiments methodology credibility)
- (2) If we refused the measurements claiming that there are illusion of measurements – in this case- the particle properties correct definition will be found only when no difference in velocity between my motion and this particle motion – that means – I'm **The Universe Reference Point**
Specifically for this reason we have to accept that Lorentz length contraction is a real phenomenon occurred for particle own nature and can't be illusion of measurements (Particle Length Contraction Is Similar To Its Mass Increasing)
That means
Particle length and mass are changed by particle high velocity motion, that lead to conclude that –
Particle Data Is Created (Almost) Relative To Its Motion.

Please review

Lorentz Length Contraction Is A Real Phenomenon & Not Illusion Of Measurements
<http://vixra.org/abs/1911.0468>

Lorentz Length Contraction (More Discussion)
<http://vixra.org/abs/1911.0431>

Lorentz Length Contraction Analysis (SR Discussions) (Part III)
<http://vixra.org/abs/1911.0234>

Lorentz Length Contraction Analysis (SR Discussions) (Part II)
<http://vixra.org/abs/1911.0205>

Lorentz Length Contraction Analysis (SR Discussions)
<http://vixra.org/abs/1911.0181>

Question No. 2

Why Light Velocity Is Constant In All Frames?

Let's summarize the answer in 3 hypotheses as following:

1st Hypothesis : Matter is created of electromagnetic waves

(A) How we reach to this idea?

Lorentz Length Contraction Phenomenon & Mass Increasing, which are effects done for Particle own nature because of high velocity motion – tell that Particle data is changing with high velocity motion...

(B) Is Lorentz Length Contraction a real effect occurred for particle own nature or illusion of measurements? We have answered this question

The contraction is a real effect because

(i) The experimental measurements devices prove this contraction

(ii) If we claim that the measured values are illusions of measurements – that means – particle properties correct definition is found when no difference in velocity between mine and this particle motions – means – I will be **The Universe Reference Point** – this is similar to a person looks at mirror – that's why we accept Lorentz effects (length contraction – mass increasing ...etc) as real phenomena..

2nd Hypothesis : Light is found originally with velocity 1.16 million km/ second

From this light energy 2 components are produced which are

(1) The matter (2) light known velocity 0.3 mkm/sec

That means light known velocity (0.3mkm/sec) and matter are created together complementary to each from the original light energy (whose velocity 1.16 mkm/sec)

That explains why $E=mc^2$? i.e. why light velocity is a factor in all-matters energy?

Because matter and light (0.3mkm/sec) were created complementary to each other from the original light beams (1.16 mkm/sec)

3rd Hypothesis: because we have bodies (matters) – our 5 senses can realize only the known light velocity =0.3mkm/sec – where our senses can't realize the original light velocity 1.16 million km/ sec

That's why light velocity is the max velocity in our universe – because our 5 senses can't realize the higher velocity light (original light beam 1.16 mkm/sec)

Does Particle Data Depend on Its Motion? (Lorentz Transformations Analysis)

<http://vixra.org/abs/1912.0134>

There's A Light Beam Travels With 1.16 mkm per sec

<http://vixra.org/abs/1904.0236>

Why The Light Is The Universe Highest Velocity?

<http://vixra.org/abs/1801.0369>

Question No. 3

How Can the Observer Effect On The Observation Results?

I claim the observer effects on the observation results

I have 4 reasons to do that

(1)

Why does Particle travel with high velocity, suffers from Lorentz Transformations (effects)? Because the matter is created (almost) of electromagnetic waves That explain why light velocity ($c=0.3\text{mkm/sec}$) is an effective factor on all universe matters (according to the equation $E=mc^2$)

(2)

The human body contains electromagnetic pulses – the pulses travels through the human liquids with slow velocity but we know that in vacuum the electromagnetic waves will restore its c velocity- that may suggest that the human mind realization process depends on light velocity – and that means we see the world around us under the relativistic effects while we don't know....

(3)

Why an electron or a subatomic particle would behave like a particle and not wave when it is observed? How the observer effects on this observation result?

We have supposed that- the human realization process may use light velocity- that's specifically what the Special Theory of relativity tells..!

Particle length will be contracted, mass will be increased, time will have dilation, and distance will be contracted...!

These changes are found because (as I conclude)

Particle properties are defined (and realized by the human mind) based on stable situation relative to light velocity – Where the human mind uses light velocity in the realization process – now particle high velocity motion causes changes for this stability of mind realization process that's why the data is changed

That means

SR tells that the matter is created as an effect of the human mind realization on the electromagnetic waves from which the universe is created, and by the mind effect we see the electromagnetic waves as matters

That explains the equation $E=mc^2$

Telling that the matter in universe is found basically as an effect of the human mind realization process

Now

The human realization process can effect on this subatomic or particle by sending light beam from the mind because the mind uses light velocity in its realization process – now by sending this light beam- the human mind can effect (materially) on the particle and change its case to be particle and NOT wave after its observation

(4)

Shortly

How the observe effect on the observational results? How the human can effect on the universe around?

By knowledge and thinking,

Because the knowledge is a light beam, producing by human mind thinking & realization processes – by such way the human mind can effect materially on the universe around

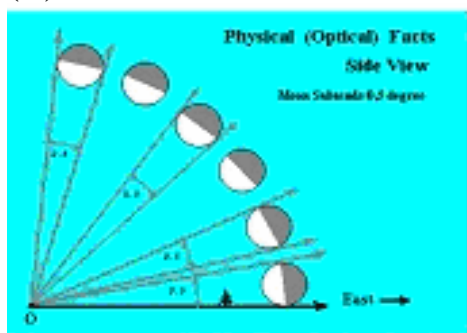
(5)

Example For Explanation

(A)

why we see the sun disc = the moon disc? –because (the sun diameter/ moon diameter)= (Earth orbital distance / Earth Moon distance) – that means the distances rate = the diameters rate which suggest that there's a relationship between the planet diameter and orbital distance - and how such relationship can be found?

(B)



The moon angular diameter =0.5 degrees

Means 0.5 degrees defines 3475 km (the moon diameter) ...what about the full cycle?

360 degrees defines 2.5 million km

But

The moon orbital circumference =2.5 million km

That means

The human vision angle defines the moon diameter and its orbital circumference

I don't by what mechanism that can be happened!

But we can easily that – this data can be used as application for the previous argument – that means we have not only theoretical logical argument but also planets data can support this same argument –

Note please, The Sun Diameter Follows This Same Rule Also..!

Please review my papers

Observer Effects on Observation Results (II)

<http://vixra.org/abs/1911.0040>

Observer Effect On The Observation Results

<http://vixra.org/abs/1810.0343>

Question No. 4

Is There A Contradiction In The Physics Book?

I claim there's a contradiction in the physics book, let's explain it:

Lorentz Transformations Effect

Lorentz Transformations tell us that, Particle data is created relative to its motion, basically because Particle mass and length are changed because of particle high velocity motion...

If Lorentz length contraction is a real effect on particle own nature or just illusion of measurements! This question we have discussed before- and we have found that- Lorentz Length Contraction is a real phenomenon effects on Particle own nature similar to Particle mass increasing as a result of high velocity motion

The previous consideration we have adopted for the next reasons:

- (1) The measurements show this contraction and in physics what's measured is what's real
- (2) If we consider the length contraction is an illusion of measurements, that tells Particle properties correct definition is found when no difference in motions velocities between me and this particle, which supposes that **I'm The Universe Reference Point** – that's similar to a person looks at mirror – which pushes us to refuse the claim that the contraction is an illusion of measurement

Conclusion

- I. Lorentz Length Contraction is a real phenomenon effects on Particle own length
- II. Particle Data is created relative to this particle motion

The last conclusion leads us to a contradiction with Newton mechanics

Newton had interpreted Planet motion based on the masses gravity between this planet and the sun – So Planet Mass is the reason of its motion

But Lorentz transformation tell us that – Particle Data (and mass) is created based on this particle Motion...!

i.e.

Planet Motion – according to Lorentz Transformation- must be the reason of Planet Mass – so Planet doesn't move by Masses Gravity – because planet mass is created depending on its motion which tells that Planet motion is found before any other planet data! **So how does planet move?**

Is There A Contradiction In The Physics Book?

<http://vixra.org/abs/1911.0470>

or

https://www.academia.edu/41109422/Is_There_A_Contradiction_In_The_Physics_Book

or

<https://www.slideshare.net/Gergesfrancis/is-there-a-contradiction-in-the-physics-book>

Question No. 5

Are There Relativistic Effects In The Solar System?

I- Data

(Group No. 1)

- Mercury Neptune Distance = Saturn Pluto Distance
- Mercury Saturn Distance = Neptune Pluto Distance
- Saturn Orbital Distance = Saturn Uranus Distance
= Mercury Orbital Circumference
= 2 Mercury Jupiter Distance
= Pluto Eccentricity Distance

- Jupiter Pluto Distance = Uranus Neptune Circumference
- Earth Neptune Distance = Mercury Saturn Circumference (Error 0.5%)
- Jupiter Uranus Distance = Jupiter Saturn Circumference (Error 1.5%)

More Data

- Mercury Jupiter Distance = Mars Orbital Distance $\times \pi$
- Earth Neptune Distance = Mercury Saturn Distance $\times \pi$
- Jupiter Uranus Distance = Venus Jupiter Distance $\times \pi$
- Jupiter Pluto Distance = Uranus Neptune Distance $\times \pi$
- Uranus Pluto Distance = Earth Orb. Circumference $\times \pi$
- Neptune Orb. Distance = Saturn Orb. Distance $\times \pi$
- Pluto Orbital Distance = Earth Orb. Circumference $\times \pi$

Why These Distances Are Equal?

Group No. 2

1. $\frac{\text{Earth Daily Motion } 2.58 \text{ mkm}}{\text{Moon Orbital Circumference } 2.41 \text{ mkm}} = 1.0725$ (No Error)
2. $\frac{\text{Apogee orbital radius } (406000 \text{ km})}{\text{Total Solar Eclipse radius } (378500 \text{ km})} = 1.0725$ (No Error)
3. $\frac{778.6 \text{ mkm Jupiter Orbital Distance}}{720.3 \text{ mkm Jupiter Mercury distance}} = 1.0725$ (0.7%)
4. $\frac{720.3 \text{ mkm Jupiter Mercury distance}}{670 \text{ mkm Jupiter Venus Distance}} = 1.0725$ (No Error)
5. $\frac{670 \text{ mkm Jupiter Venus Distance}}{629 \text{ mkm Jupiter Earth Distance}} = 1.0725$ (0.6%)
6. $\frac{\text{Saturn Orbital Distance } (1433.5 \text{ mkm})}{\text{Sarurn Venus Distance } (1325.3 \text{ mkm})} = 1.0725$ (Error 0.8%)
7. $\frac{\text{Saturn Earth Distance } (1284 \text{ mkm})}{\text{Sarurn Mars Distance } (1205.6 \text{ mkm})} = 1.0725$ (Error 0.7%)
8. $\frac{\text{Uranus Orbital Distance } (2872.5 \text{ mkm})}{\text{Uranus Mars Distance } (2644 \text{ mkm})} = 1.0725$ (Error 0.7%)
9. $\frac{\text{Jupiter Orbital Circumference } (4894 \text{ mkm})}{\text{Neptune Orbital Distance } (4495.1 \text{ mkm})} = 1.0725$ (Error 1.5 %)

Why These Distances Are Not Equal?

II- Discussion

The previous data is clear and we have seen it before – so let's summarize the idea:

The solar planets have 45 orbital & internal distances

30 of them are equal each other (Data Group no.1)

And

18 of them are rated to each other by the rate 1.0725 (Data Group no.2)

Let's ask

Why These Distances (Groups No.1) Are Equal?

And

Why The Others (Group No.2) Aren't?

Because

These Distances Are Light Beams Reflected To Each Other

But

The distances in Group no. 2 –

These distances are 2 types of distances – half of them pass through another frame – because we deal with light motions – and because of their passing through another frame they suffered from length contraction effect with rate 1.0725

The distances rest half didn't pass through this frame – and they didn't suffer from any length contraction effect –

That produces the rate 1.0725 which we see in the previous data, this rate is found by relativistic effects... How?

Velocity $v=0.99c$ will produce a length contraction effect with rate =7.1

So

$$\frac{7.1}{100} + 1 = 1.0725$$

The rate 1.0725 depends on the high velocity $v=0.99c$

But the rate isn't used directly but used by some complex geometrical process..

So the previous distances tells that –

The Planets Motions Are Equivalent To Light Motions

Please review

Why Don't We Understand The Solar System Geometry?

<http://vixra.org/abs/1911.0018>

Let's see the rate 1.0725 in one new equation to be sure that this rate is found as a general effect in the solar group and not specific for any planet...

Equation (I)

$$\frac{25.2 \text{ Mars axial tilt}}{23.4 \text{ Earth axial tilt}} = \frac{26.7 \text{ Saturn axial tilt}}{25.2 \text{ Mars axial tilt}} = \frac{28.3 \text{ Neptune axial tilt}}{26.7 \text{ Saturn axial tilt}} = 1.0725$$

Discussion

How to explain Equation No. (I)? Let's try to do that in following:

(I claim that the rate 1.0725 is found As Length Contraction Effect Rate)

- Neptune Axial Tilt 28.3 degrees is the master value in this equation because Neptune reflected Jupiter energy toward the solar inner planets
- Neptune Axial Tilt 28.3 degrees will be contracted with the rate 1.0725 to produce 26.7 degrees (Saturn Axial Tilt) (and that may explain why Neptune orbital distance = Saturn Orbital Distance x π)

Then

- Saturn Axial Tilt 26.7 degrees will be contracted by the same rate (1.0725) to produce 25.2 degrees (Mars Axial Tilt) (that may explain Why Mars Orbital Circumference = Saturn Orbital Distance=1433.5 mkm)

Then

- Mars Axial Tilt 25.2 degrees will be contracted (1.0725) to produce 23.4 degrees (Earth Axial Tilt) (that explain Why Earth Orbital Distance = Earth Mars Distance x Mars Orbital Inclination)

For Relativistic Effects Discussion Please Review

A Summary Of My Research -Part 3- (Relativistic Effects Discussion)

<http://vixra.org/abs/1907.0523>

A Conclusion

The Rate 1.0725 in the solar system geometry is found as a general effect on the solar system geometry – it's not related to any specific planet, instead, It's a general rate found effective on the solar system data generally

My Explanation is that – this rate 1.0725 is found as a length contraction effect – but if this explanation is incorrect- the data still needs explanation – because we have almost 40% of all solar planets distances are rated by this same rate

Question No. 6

Is The Solar Planets Order In Harmony With The Sun Gravity Concept?

I claim No

Let's analyze this answer in following....

(1)

- The inner planets order (Mercury – Venus – Earth) shows that there's some relationship between planets diameters (or masses) with their orbital distances, means **Greater Diameter (Or Mass) needs Greater Orbital Distance** ...

(2)

- The outer planets order (Jupiter- Saturn- Uranus- Neptune – Pluto) tells that the rule is reversed where **Greater Diameter needs Shorter orbital Distance** But.... The order depends **on diameter and NOT Mass** because Uranus Diameter is greater that Neptune where Neptune Mass is greater than Uranus..

(3)

- **(The Conclusion)** there's some relationship between the planet diameter and orbital distance but this relationship is reversed after **Mars** for some reason- (Also The Data Direction doesn't support the relationship between the planet mass and orbital distance which disproves the sun gravity concept)

When I asked this question... the answer was because of the "**Initial Points**"

But I couldn't accept this answer...because

- The inner planets and outer planets orders provide 2 different forms **For The Same Rule** So the nearest conclusion is that there's a relationship between the planet diameter and orbital distance where Mars position in the solar group order causes disturbance for this relationship.

Mars Orbital Distance Is Changed Through History (Part II)

<http://vixra.org/abs/1910.0509>

Mars Orbital Distance Is Changed Through History

<http://vixra.org/abs/1905.0510>

Question No. 7

Do We Understand The Solar System Geometry?

I claim NO ...

Why ?? Because

Planets Motions Depend On Light Motion Which Should Be Studied Under Relativistic Motions Considerations

PROVES SUMMARY

I have 3 reasons to provide this claim – let's summarize them in following:

1st Reason – Light Velocity Effect

(a)

Why the particle which moves by light velocity (approximately) will suffer A Length Contraction Effect? What's happened for this particle own nature? Special Theory of Relativity may refer to that – there's some relationship between Light velocity and the human mind realization process!

(b)

The human body contains electromagnetic pulses – the pulses travels through the human liquids with slow velocity but we know that in vacuum the electromagnetic waves will restore its light velocity- that also may refer to some a relationship between light velocity and the human mind realization process

2nd Reason –Mass Creation

Gamma Rays (1.2 Mev) may produce electron and positron – From electromagnetic waves 2 Particles are created equal in Mass and different in charges

The matter (mass) can simply be produced from electromagnetic waves – that may support the claim – but the question is – what's happened for the 2 particles after creation? Are their motions effect on each other? Of course yes because they have different charges if there's no more particles in the universe except these 2 particles- they will direct each other motion....

That means the source (Gamma Rays) still effect on the produced (electron and positron) and this effect is done by the other particle – where no particle of both can be produced alone...

That means simply

The matters (masses) can be produced by the light (electromagnetic waves) and after Creation the light still can effect on the particle (matter) motion –that enable me to provide my claim "**Planet Motion = Light motion**"

(Note Please – in Double Production Experiment we see the 2 products and we know their properties and behaviors – but this is a special case because we can do it in the lab- but in nature the light (electromagnetic waves) can produce matters by different ways (hypothesis) and we may not see or know the complementary product – we may see one product only (A Planet) and by such way the light (the source) directs the product – and based on that – I can claim that – **The Planet Motion depends on A Light Motion...**

3rd Reason – Planet Data Analysis

The planet data analysis shows some a strange feature for the solar planets motions

Which is ...**The Continuous Effect !**

i.e.

There's a great hand found behind the data – works geometrically – and use the different data to produce geometrical effects...

Let's provide one Example for better explanation

Example No. 1

How the total solar eclipse is done? And Why? The main reason is the following:

Because we see **The Sun Disc = The Moon Disc**

For that reason – the moon can cover the sun for a period – if we don't see the sun disc = the moon disc – the total solar eclipse never be occurred...

Why we see the sun disc = the moon disc?

Because

(The Sun Disc /The Moon Disc) = (Earth Orbital Distance /Earth Moon Distance)

(Equation No. 1)

So

The Diameters Rate = The Distances Rate ...Why?

It's a great hand behind – uses the diameters and distances to produce one specific Geometrical Job – Simply we don't know why the total solar eclipse is useful at all!

We even don't know what geometrical effect it practices on the solar system geometry – but our weak knowledge can't prevent the effect –

We don't discuss here what's found by pure coincidences...! We overstepped this answer – What I'm trying to do here is that – to prove that there's a wise power uses the solar system components to produce geometrical jobs – and for that – the planets diameters – masses – orbital distances – orbital inclinations – axial tilts ...etc

All planets data are created relative to each other **THROUGH THE SOLAR SYSTEM** this is the basic point – that the connection between the planets data is done by some continuous effect passing from planet to another – based on that we have discovered the relationship between Earth and Pluto – regardless the great distance –

Conclusion / **Planet motion depends on light motion**

Research Paper "Why Don't We Understand The Solar System Geometry?"

<http://vixra.org/abs/1911.0018>