IN THE ALMIGHTY GOD NAME
Through the Mother of God mediation
I do this research

Lorentz Length Contraction Analysis (SR Discussions) (Part III)

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Abstract

Lorentz Length Contraction Is A Real Phenomenon Done For Particle Own Length And Cause To Be Contracted.

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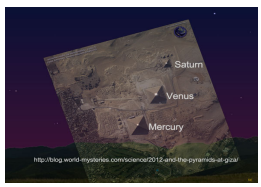
The Assumption Of S. Virgin Mary.
Written in Cairo – Egypt
13th November 2019 (S. George)



1- Introduction

This papers series is written to answer one question which is:
What Does Happen For The Particle Own Nature, If This Particle Suffers From Lorentz Length Contraction Effect?

And I have found that – this question is argued point in the theory – let's first explain why I interest in this question…
I analyze the solar planets data trying to know how this data is created? So my usual questions are similar to the following…. How the matter is created? Why Earth Circumference =40080km? Why Jupiter orbital inclination =1.3 degrees? How Uranus axial tilt be 97.8 degrees?
So – I'm not expert in Special Theory of Relativity (SR) or the general one (GR) – But
In Planets data I have found puzzled fact which is:
Almost 50% of all planets internal and orbital distances are rated to each other with the same rate =1.0725 Why?!
(**At End Of This Paper I Provide An Appendix For This Data**) –

Now I found that, some length or distance contraction can be occurred resulting of high velocity motion– of course there's no high velocity motion can be observed in the solar planets motions but because I have no any other source to solve this question I have decided to study Lorentz Length Contraction Effect may I find explanation for this rate 1.0725 repeated using

During Length Contraction studying I faced this question ….
What Does Happen For The Particle Own Nature, If This Particle Suffers From Lorentz Length Contraction Effect?

Now let's provide some are written in different physics textbooks

(1st Reference)
Mechanics
Berkely Physics Course Volume 1

Page No. 330-331 (last Paragraph)
This is the famous Lorentz-Fitzgerald contraction of a rod moving parallel to its length with respect to the observer. One may worry at this point whether the rod has "actually contracted." **Of Course Nothing Physical has happened To The Rod,** but the process of measurement in the moving frame has given a different result. For a discussion of the figures of rapidly moving objects as photographed with a camera, see the excellent review by Weisskopf. It has been shown, for example, by calculation of trajectories that a moving sphere will photograph as a sphere and not as an ellipsoid.

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(2nd Reference)

University of Nebraska - Lincoln

January 1964

An Introduction to the Special Theory of Relativity

Robert Katz

University of Nebraska-Lincoln, rkatz2@unl.edu

Page No. 36

Is the moving rod really contracted in its direction of motion? Is time really dilated? These questions depend on what is meant by really. In physics what is real is identical with what is measured.

There is no way to assign properties to a rod or to a clock or to an electron except through measurement. **In This Sense The Phenomena We Have Discussed As Time Dilation And The Lorentz Contraction Are Real.**

(3rd Reference)

Costas Christodoulides

The Special Theory of Relativity Foundations, Theory, Verification, Applications

Page 70 – **Last Paragraph**

It Must Be Understood That Nothing Happens To The Rod Due To Its Motion Which Causes Its Contraction. There is no change in its atomic structure, for example. The difference in the results of the measurements of the length in the two frames of reference may be understood if we examine the moments in time at which the measurements were made, as these are observed in the two frames of reference. In frame S′, the measurements at the points x0 A and x0 B were both performed at time t0.

The times at which the measurements were seen to be performed in frame S, are, respectively,

(4th Reference)

The Special Theory Of Relativity

Lecture Notes prepared by J D Cresser

Department of Physics- Macquarie University

Page 22

This phenomenon is known as the Lorentz-Fitzgerald contraction. It is not the consequence of some force ‘squeezing’ the rod, **But It Is A Real Physical Phenomenon With Observable Physical Effects**. Note however that someone who actually looks at this rod as it passes by will not see a shorter rod. If the time that is required for the light from each point on the rod to reach the observer’s eye is taken into account, the overall effect is that of making the rod appear as if it is rotated in space

(6th Reference)

Albert Einstein Book

Relativity: the special and the general theory

Translated by robert w. lawson, University of Sheffield Introduced by nigel calder

Page No. 49

If we now assume that the relative distances between the electrical masses constituting the electron remain unchanged during the motion of the electron (rigid connection in the sense of classical mechanics), we arrive at a law of motion of the electron which does not agree with experience. Guided by purely formal points of view, H. A. Lorentz was the first to introduce the hypothesis that the form of the electron experiences a contraction in the direction of motion in consequence of that motion, the contracted length being proportional to the expression

$$\sqrt{1-\frac{v^2}{c^2}}.$$

This hypothesis, which is not justifiable by any electrodynamical facts, supplies us then with that particular law of motion **Which has Been Confirmed With Great Precision In Recent Years**.

My Comment

As I have written before this question is arguable – simply the answers from famous textbooks contradict each other….! Why?

The previous contradicted comments aren't found because of any naïve or simple phenomenon – on the contrary – it is found because of the basics contradiction…!
Shortly…
The question is puzzled because we had to start with the basic question "how the matter is created?" …or How does the particle define its original (or proper) length?"
While we don't know how the particle proper length is created, Einstein told us that this length will be contracted! Why it will be contracted?! Now answer

The people assumes Lorentz Length Contraction phenomenon is an illusion of measurement – this people try to save The Matter Eternal Concept – they believe that the matter is found as a fact in the existence depth depending on nothing just itself – now if this matter properties are changing with motion – that may cause some earthquake for the general physics building – specially for the gravity concept –

The people assumes the length contraction is a real one – they try to save the physics research methodology otherwise we will use our concepts in place of the physics research methods…
We will follow both of them in this paper to see if there's a point of agreement can be created between both..

2- Methodology (Methodology Is Repeated In All My Papers) It's written in

Why Don't We Understand The Solar System Geometry? http://vixra.org/abs/1911.0018

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3- Relativistic Effects Reason

3-1 Preface
3-2 Particle length And Distance
3-3 Lorentz Length Contraction Reason
3-4 Matter Creation Description
3-5 Observer effects on the observation results

3-1 Preface

(1st Equation)

$$m = \frac{m_0}{\sqrt{1 - (v^2/c^2)}}$$

(2nd Equation)

$$T = \frac{T_0}{\sqrt{1 - (v^2/c^2)}}$$

(3rd Equation)

$$\gamma = \frac{1}{\sqrt{1 - (v^2/c^2)}}$$

If particle travels with light velocity (approximately), its data (mass –length - time) will be changed by Lorentz transformations
Why? no available answer
But

The feeling that – these 3 changes are done for different reasons is absent completely- all of us know that these changes are done because of the high velocity motion – here the fighting around length contraction effect if it's a real one or not – is a fighting has no meaning because the particle mass also is changing

If particle length is contracted by illusion – what's happened for particle mass? This effect (change) is happened for both particle properties – so if the mass changes (really) – that necessities – the length changes really also – it's not illusion in measurements….

Why?

Because the properties give us a direction of data – we have no chaos here a – on the contrary – the data is arranged and has a clear direction – the particle different data is changed with high velocity motion – the simple conclusion is that this data must be created relative to the particle motion..
This conclusion will be somehow effective because the particle mass will be a function of its motion

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I try to explain that – the length contraction investigation to know if it's real one or mere illusion – this investigation can't help to produce any effect – simply because many other data supports the same direction –

The discussion of time dilation – in many books – is more enjoyable for the author – they write freely without strict care – but for length contraction the fighting is at apex because this phenomenon is related to the matter properties (specially the mass defiantion) which is so effective in the physics education building…
In fact the development is not so easy…

We have to know how the matter is created – this is the way by which we can find answers for the questions concerning the particle properties changing with motions
Then
The simple question will be

Why these 3 properties are changing with high velocity motion?

Why don't other properties change in this high velocity motion?

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3-2 Particle length And Distance

$$\gamma = \frac{1}{\sqrt{1 - (v^2/c^2)}}$$

Einstein uses this equation to refer to Particle length or distance – simply – he referred to Lorentz length contraction for particles and Fezeau experiment for distance as similar to each other!
Have any one explanation why?

How particle length can be equivalent to distance?!

In solar planets data analysis – I have found that there's somehow a real relationship between planet diameter and orbital distance - even in the plants order

(1) "Mercury – Venus – Earth" this sequence tells that greater diameter needs greater orbital distance

(2) "Jupiter – Saturn- Uranus – Neptune – Pluto" this sequence tells that greater diameter needs shorter orbital distance (reversed rule) –

(3) That's why Jupiter (the greatest Mass) isn't the nearest planet to the sun and also Neptune Mass is greater than Uranus but Uranus more near to the sun

I have many proves for this fact – please review my paper

Planet Diameter & Orbital Distance Relationship (A Theoretical Analysis)
http://vixra.org/abs/1908.0567

I try to show that – If Einstein used the same equation for particle length and distance that's not very strange that because the planets data tell something similar – which supports such relationship claim…
Then the question will be produced immediately… how the space (distance) can be created relative to the matter? Or is the matter created relative to the space?!
The question we faced before when we have asked why we see the sun disc = the moon disc? Because (the sun diameter / the moon diameter) = (Earth Orbital Distance / Earth Moon Distance) – then the next question is …why?
Why the distances rate = the diameters rate? …. This argument provides many different points support the same data direction that there's some relationship between the matter and space creation….
Now the basic definitions could help us greatly… What's The Space?
If there's a relationship between the matter and space – and if the matter is created of Energy because ($E=mc^2$) that means the space must be created of energy also
This definition we have discussed before

(**Please Note** some physicists tell us that – Einstein used the distance equal the particle length in this equation – that means both players are distances …. But in contraction effect the contracted distance is found by contracted length of particle- means we deal with the particle itself – it's not the distance because it's the result made by particle own length)

3-3 Lorentz Length Contraction Reason

Now let's ask this same question again….
Is Lorentz length contraction a real phenomenon or illusion of measurements?

Is there a theoretical reasoning to help us?

These are 2 clear directions, let's try to choose from:

(1^{st}) to accept that – the particle own nature doesn't change and the contracted length is seen by illusion measurements – which will make the physics measurements methods un-trustee
Or
(2^{nd}) to accept that – the particle own nature changes with particle motion –

I choose the 2^{nd} choice- Why?

Because – the 1^{st} choice tells us that – The particle own nature is defined clearly when no difference in motions velocities between me and this particle – that means – I'm **The Universe Reference Point** – and this is similar to a person looks at a mirror

Specifically for the previous reason we should refuse the assumption that **"Particle Own Nature doesn't Change"** or "**Proper Length L_0 Never Change**"….
Simply these statements are untrue

Our brave action to refuse these statements – produce a real challenge before us – Because

This argument will lead us automatically to suppose that – **Particle Own Properties Are Created Based On Particle Motion – Or Relative To Light Velocity- And Also May Relative To Human Realization Process**

Shortly
Matter properties are created depending on 3 factors – at least-

1- Matter Own Motion Velocity
2- Light Velocity
3- Human Realization Process

Do we know now how the matter is created? Let's extend this discussion a little in following…

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3-4 Matter Creation Description

I suppose the whole universe is created of electromagnetic waves, and we see these waves in different forms as matters, distances, and many other forms…. All these forms are created from the same source which is "electromagnetic waves"
Based on that

I have supposed that the solar planets are created of electromagnetic waves

Based on this description I suppose

(1) The Solar Group is similar to puppet theater – all puppets (planets) are connected with each other by one force (one trajectory of energy)

i.e.

(2) The Solar Group (all planets) Is One Building And Each Planet Is A Part Of It

(3) The Solar group (all planets) moves as a train – all planets move together as train carriages move together

(4) The planets are crated depending on each other – that explains how can a relationship be found between Earth and Pluto Data

Based on that
I have asked why we don't understand the solar planets motions? Because these motions are electromagnetic motions (light beams motions) which should be studied under relativistic consideration and we don't use the correct science in its study.

I have discussed that deeply in my papers

Why Don't We Understand The Solar System Geometry?
http://vixra.org/abs/1911.0018

also please see

My Research Hypotheses http://vixra.org/abs/1909.0406

So, why particle length is contracted by high velocity motion (according to lorentz length contraction phenomenon)?
Because
Matter Creation process is done depends – at least- on:

4- Matter Own Motion Velocity
5- Light Velocity
6- Human Realization Process

Appendix (1) at end of this paper shows many data can support clearly this description – please see it…
To see that as deep as possible we may ask if the observer effect on the observation results

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3-5 Observer effects On Observation Results

Why an electron or a subatomic particle would behave like a particle and not wave when it is observed?

(1)

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 the human mind realization process depends on light velocity – and that means we may see the world around us under relativistic effects while we don't know….

(2)

How the human can effect on the subatomic particle?

By knowledge and thinking process!

I suppose the human realization process depends on light velocity (or use light beam) and the thinking process may produce **Light Beams**

So – if the universe is created of electromagnetic waves (light beams) – so the human mind light beam may cause interaction or coherence with universe light beams and by such way the human realization process may effect on the universe around

(3)

Shortly

Based on the previous argument we have to suppose that – the universe of matter is created relative to light velocity and human mind realization process…

Where human realization process itself depends on light

That means

This universe is **A Continuum**

It's NOT separated particles from each other – it's something continuum while the matter is created connecting with the energy depending on light motion and relative to human mind realization process

We live in a house made of our thinking and we think by this house effect on us

It's an environment similar to the sea and fish – but the effect is more deep – so our knowledge is created connecting with this same house

(4)

Now the Equation $E=mc^2$ tells us why it express all matters masses regardless its type – because the light velocity is a player in all matters creation process- the motion is a player where the matter can't produced without motion

OBJECTION

This previous idea must be very imaginary one and untrue – because the universe doesn't change each minute based on the human thinking process…!

How to solve this dilemma?

The change is done based on quantized measurements- the human thinking energy (light beams) is stored and made the change based on quantized measurements…! ….What does that mean? based on public knowledge the universe reacts – the individual person does very little – he needs to make many other believe in his ideas – and by such way the change can be done

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Appendix (1)

1- Planets Orbital And Internal Distances

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 x π
- Earth Neptune Distance = Mercury Saturn Distance x π
- Jupiter Uranus Distance = Venus Jupiter Distance x π
- Jupiter Pluto Distance = Uranus Neptune Distance x π
- Uranus Pluto Distance = Earth Orb. Circumference x π
- Neptune Orb. Distance = Saturn Orb. Distance x π
- Pluto Orbital Distance = Earth Orb. Circumference x π

Why These Distances Are Equal?

Group No. 2

1. $\frac{\text{Earth Daily Motion 2.58 mkm}}{\text{Moon Orbital Circumference 2.41 mkm}} = 1.0725$ (No Error)

2. $\frac{\text{Apogee orbital radius (406000 km)}}{\text{Total Solar Eclipse radius (378500 km)}} = 1.0725$ (No Error)

3. $\frac{\text{778.6mkm Juppiter Orbital Distance}}{\text{720.3 mkm Jupiter Mercury distance}} = 1.0725$ (0.7%)

4. $\frac{\text{720.3 mkm Jupiter Mercury distance}}{\text{670 mkm Jupiter Venus Distance}} = 1.0725$ (No Error)

5. $\frac{\text{670 mkm Jupiter Venus Distance}}{\text{629 mkm Jupiter Earth Distance}} = 1.0725$ (0.6%)

6. $\frac{\text{Saturn Orbital Distance (1433.5 mkm)}}{\text{Sarurn Venus Distance (1325.3 mkm)}} = 1.0725$ (Error 0.8%)

7. $\frac{\text{Saturn Earth Distance (1284 mkm)}}{\text{Sarurn Mars Distance (1205.6 mkm)}} = 1.0725$ (Error 0.7%)

8. $\frac{\text{Uranus Orbital Distance (2872.5 mkm)}}{\text{Uranus Mars Distance (2644 mkm)}} = 1.0725$ (Error 0.7%)

9. $\frac{\text{Jupiter Orbital Circumference (4894 mkm)}}{\text{Neptune Orbital Distance (4495.1 mkm)}} = 1.0725$ (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?

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And

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

Because

These All Distances Are Light Beams Reflected To Ach 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

And that's the claim which I try to prove
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…

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2- Planets Axial Tilts

Equation No. (2)

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

II-Discussion

How to explain Equation No. (2)? 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 50% of all solar planets distances are rated by this same rate

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3- The Rate 0.99

I-Data

(A)

17.4 degrees (inner planets orbital inclinations total) x **0.99** = 17.2 degrees (Pluto orbital inclination)

(B)

23.6 degrees (outer planets orbital inclinations total) x **0.99** = 23.4 degrees (Earth Axial Tilt)

(C)

(180 degrees /π) x **0.99** = 28.3 degrees (Neptune Axial Tilt)

(D)

Earth Moon Distance At Perigee 0.363 mkm = **0.99** x0.366 mkm (Outer Planets Diameters Total) **(and the moon diameter = 1% of** Outer Planets Diameters Total)

II-Discussion

The previous data is an example of many similar where the rate **0.99** is used frequently as a rate between different planets data – and the question is that **Why This Rate 0.99 Is Used So Frequently In Different Data** (axial tilts – orbital inclinations…etc)? The answer is told by **Einstein himself** – let's read it:

Book / Relativity: The Special and General Theory (Einstein book)

Section 13 (in Fizeau experiment which is repeated frequently by others)

"According to recent and most excellent measurements by Zeeman, the influence of the velocity of flow v on the propagation of light is represented by formula(B)(x'=wt') to within **one percent (1%)**

I claim the difference 1% is found in the solar planets data by light motion as in Fizu experiment measurements- someone will refuse, claiming that we have no Fizu experiment here – no light beam –no tube and no liquid-

I don't know how that's happened – but it's a property of light motion – and as in Fizu experiment there was a reason to find this percentages 1% and 99%- this same geometrical reason can be found in the solar planets data and motions to use frequently the rates 99% or 1% which we have seen before– simply we need to analyze and discover how the matter is crated and how the distance is formed and based on such analysis we should find that it's the light motion which creates the using of the rates 99% and 1% in the solar planets data.

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