Theory of Everything by Illusion 2.0

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Abstract

Theory of Everything is The Holy Grail in physics. Physicists and like all over the world have searched the theory for a very long time. Modern day technological advances are finally opening the vast universe in all scales for curious human beings to explore. What we have accomplished is two theoretical platforms, relativity theories and quantum mechanics which are usable in their own domains. Obviously we have done good but we are still missing the theory. Due to all unsuccessful searches for the theory some people have suggested that there won't be such a theory.

Theory of Everything by Illusion 2.0 is based on the good ideas in previous Theory of Everything by Illusion. In an addition, few new ideas have emerged and at the same time few old, not so good, ideas have vanished as well.

Keywords: Theory of Everything, Unification

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Theory of Everything by illusion

Theory of Everything by Illusion (**TOEBI**) demonstrates that gravitational, strong, weak and electromagnetic interactions can be described by the same artifacts and mechanisms. TOEBI is based on one hypothesis: **Our universe consists of very tiny spiked spherical objects called Force Transfer Ether Particles (FTEPs).**

Basic Properties

Based on TOEBI hypothesis we know that Force Transfer Ether Particles (FTEPs) are spherical objects, hence we define

Definition 1. *FTEP radius is r_0 m*

One FTEP occupies a volume

$$V_0 = \frac{4}{3}\pi r_0^3.$$

If two FTEPs are put together, they would occupy a volume twice that size.

Velocity

Definition 2. *Single FTEP can have a velocity $\vec{v}$.*

In truly empty space there is nothing which would collide, hence interact, with a single FTEP. If a single FTEP is moving into some direction it would continue doing so infinitely.

Mass

Because FTEPs must be the ingredient of all mass in TOEBI we define

Definition 3. *FTEP mass is m_0 kg.*

Momentum

Definition 4. *FTEP momentum $\vec{p} = m_0\vec{v}$.*

Postulate 1. *FTEP momentum is conserved quantity.*

Force Transfer Ether

Force Transfer Ether (FTE) consists of FTEPs

Definition 5. *FTE density*

$$n = \frac{Number\ of\ FTEPs}{Volume}$$

What can we say about FTE density? Is it the same through out our universe or does it vary from one location to another? It surely can vary, just by putting additional FTEPs into a volume its FTE density increases. How can we do that? We need a source of the additional FTEPs.

One such potential source could be a flux of FTEPs. If targeted at a specific volume it would increase the number of FTEPs in that volume. Sounds plausible, but what would generate such a flux of FTEPs in TOEBI? At least imaginary spherical object made of FTEPs moving inside FTE would generate FTEP flux. Faster the object moves faster those deflected FTEPs would move, but more importantly those displaced FTEPs would increase our FTE density, at least for momentarily.

Another plausible scenario could be a spinning spherical object which would gain its spinning from incoming FTEP vortex-like fluxes through its spinning axis poles. That kind of configuration would generate also the outgoing FTEP flux due to the conservation of momentum. This scenario would also provide us more manageable tool for increasing FTE density at will. FTE density gradient provides us also a vector field.

Definition 6. *FTEP flux is a flow of FTEPs through an area.*

Particle

What is particle? What kind of an entity mainstream particle can be in TOEBI? Our building blocks are very limited, we only have FTEPs. And if we just put some FTEPs together we won't create very interactive systems, do we? It depends...how those FTEPs are put together. What kind of object or system made out of FTEPs generate more interesting and dynamic phenomena?

Let's start with a hypothesis that we have a spinning spherical object made out of FTEPs. It can for example spread around possible incoming vortex-like FTEP fluxes on the poles of its spinning axis or it can function as blocking object for other colliding FTEPs.

Definition 7. *TOEBI particle refers to electron.*

Definition 8. *A_c is TOEBI particle's (physical) cross section towards another particle.*

A_c has a significant role in particle interactions, it functions as the ultimate stopping wall for the FTEPs ejected from other particles.

Definition 9. *FTEP flux received by particle via the area around of particle's spinning vector poles due to*

particle spinning is called particle input FTEP flux (I).

Definition 10. *FTEP flux outwards of particle generated due to particle spinning is called particle output FTEP flux (O).*

Postulate 2. *The equatorial speed of TOEBI particle is c.*

At the speed of c changes in the input FTEP flux are reflected to the output FTEP flux, and at equilibrium $I = O$.

Drag

Because our previous postulate TOEBI particle is able to eject FTEPs at the speed of c. Because particles exist inside FTE they should experience resistance from the surrounding FTE in case we decided to move them. Movement of particle pushes FTEPs away from its trajectory hence it should experience a drag and slow down, right? That's partly right because when particle pushes FTEPs away at the same time increased FTE density in the direction of particle's heading directs more input FTEPs into the opposite direction of the heading.

Let's assume that we have a TOEBI particle travelling at c. Of course, in reality that can't happen because there is no way to accelerate that particle to that speed, photons can't deliver enough momentum for it but more about that later. So we have

$$p = m_e c$$

Now we can conclude that because our particle has the maximum momentum p it means that O is totally guided to the opposite direction compared to the particle's heading. If it wasn't we could increase its velocity (i.e. by colliding two such particles at some proper angle) hence its velocity can't be c. The drag experienced by the particle from incoming FTEP collisions due to its velocity and O are at balance. This means that the drag equals O which equals p **at every given moment**.

Conflict With Einstein's Relativity Theories

According to special relativity speed of light is c in every reference frame. According to TOEBI that can't be always true and the claim is fairly easy to verify. Let's have the classical thought experimental train at use, but this time in actual experiment involving one way speed of light measurement.

Train is moving on a plain area, so that the movement happens all the time at the same distance from the center of Earth. Train has a light source on it and at least two photon detectors at the same distance from the light source opposite to each other (in-line with the light source).

Synchronized clocks, synchronized by a trigger event (light) from the light source at the center while the train is not moving, are attached to each detectors so that we can record the time when photons first hit them. If the train moves so that the line connecting the detectors and the light source is parallel to the train's heading then according to TOEBI there should be **different times recorded** on those clocks when light from the source has first hit the detectors. However, according to general relativity those clocks (if the train has accelerated slow enough) should have recorded a much smaller time difference.

Why TOEBI predicts different times? First of all, Earth provides the FTE for our train and other equipments and nothing can move faster than c in it. Top speed c means that the time of flight (of our test light) to the different detectors must be different because the train is moving at the same time. Rear detector will record earlier time than the front detector. Sounds impossible? However, you can't find any mention of this experiment actually made (or equivalent) from the scientific literature.

Another wrong idea with Einstein's relativity theories is the blind usage of the equivalence principle saying that gravitational influence on a system is equivalent to the influence from an acceleration. Using gravitational time dilation equation for calculating the time difference between the two clocks in our train exercise is a wrong idea. According to TOEBI, there is no FTE based mechanism which would affect the clocks synchronisation during the acceleration which is happening perpendicular to a gravitational source. And again, no experimental proof exists for supporting the usage of the equivalence principle in our train experiment.

Gravitational Wave Detection

Based on previous experiment it's possible to construct gravitational wave detection system. Setup consists of independent atomic clocks in geostationary orbit in connection with one ground station.

Each satellite sends its own signal to the ground station at the selected sampling rate. Each signal's receiving time on the groud station will be recorded for the further analysis.

***continue must clean variations due to Earth's orbit around Sun and effects from Moon and other*

effectic masses.

Energy

What is the essence of particle's energy? It have to be in connection with its mass and its equatorial speed c because those are the only viable options in TOEBI. Particle mass and FTEPs ejected at the speed of c are essential also in the interactions between TOEBI particles.

Based on drag equals O equals $m_e c$ and the fact that TOEBI particle ejects FTEPs away from it at the rate of c we define

Definition 11. *Particle's FTEP distribution capacity at rest is $E = mc^2$.*

At rest we mean at particle's reference frame, hence $E = mc^2$ is invariant. As we can see our definition matches contemporary physics energy concept, so it's advisable to speak about particle's **energy** rather than particle's FTEP distribution capacity at rest.

Particle Interactions

Force

Interactions between TOEBI particles happens via FTEPs. What factors are involved with these interactions? Naturally the total amount of delivered FTEP momentum per second matters. Based on particle's FTEP distribution capacity (energy) we conclude that ejected FTEP momentum per second on any plane that includes the whole spinning axis of TOEBI particle matches

$$\frac{mc^2}{\pi R_{A_c}}$$

where R_{A_c} is the radius of A_c. Hence ejected FTEP momentum per second for one TOEBI particle "side" matches

$$\frac{mc^2}{2\pi R_{A_c}}$$

On the other hand, the amount of ejected FTEPs per area in the line of initial ejection obeys, due to geometric reasons, the inverse-square law

$$\frac{1}{d^2}$$

where d is the distance from the FTEP source.

Another, receiving, TOEBI particle experiences the ejected FTEP particles via its cross section A_c towards the FTEP source particle, hence

Definition 12. *The overall FTEP momentum delivery rate (**Force**) between TOEBI particles is*

$$F = \frac{mc^2}{2\pi R_{A_c}} \frac{1}{d^2} \pi R_{A_c}^2 = \frac{mc^2 R_{A_c}}{2d^2}$$

The reason why we have chocen symbol F for the overall FTEP momentum delivery rate comes from the fact that the equation above gives us the units as

$$\frac{\text{kg*m}}{\text{s}^2} = \text{N}$$

****angle between spinning axes is essential (add it)*

Can we calculate or otherwise deduce the value for R_{A_c}? At least rough value can be calculated based on Coulomb's law. Calculated value doesn't mean that we can't put particles at closer proximity, it's just the effective radius of cross section A_c in interactions between free non-relativistic TOEBI particles.

The Mechanism

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