



Superconducting String Theory (Gravity explanation)

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Superconducting string theory; gravity; strong nuclear force; unified field; gluon; string theory;

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Theoretical Physics;

SUBJECT CLASSIFICATION

Relativity;

TYPE (METHOD/APPROACH)

Central theories;

ABSTRACT

Gravity explained by a new theory, 'Superconducting String Theory', inspired on initial string theories and completely opposite from actual fields based. Strengths are decomposed to make strings behave as one-dimensional with universe acting as a superconductor where resistance is near 0 and matter moves inside. Strong nuclear force, with an attraction of 10.000 Newtons is which makes strings to curve, generating acceleration. More matter more acceleration. Electromagnetic moves in 8 decimals, gravity is moved from 3 to more than 30 decimals to work as a superconductor.

1. INTRODUCTION

The 'Theory of Everything' is a hypothetical theory of physics that explains and connects all known physical phenomena into one. There is a possible solution to the origin of gravitational force, postulating it as angular piece of this theory, this solution erases gravity as one of the fundamental forces of nature and unify it with strong nuclear force.

Let's analyze the forces that occur in the universe transforming string theory. It allows to explain many physical behaviors that without its existence would be practically impossible to understand, even so, these strings have not been able to be discovered and are only that, a theory that serves as an important support to the world of physics. One of the best known theoretical applications about them is how their vibration can provoke the creation of matter, but this is not about theories already written, we are going to place these strings in a simpler way to answer some doubts in subatomic world.

This theory use 4 dimensions in space and a behavior as one dimension in strings with superconducting capacities. Like an elastic band between V-shaped sticks where the elastic band moves down, the strong nuclear force, makes these strings to curve to move down.

It's not directly related to electromagnetism.

2. ACTORS

2.1 String theory

String theory is a theoretical framework in which the point-like particles of particle physics are replaced by one-dimensional objects called strings. Each string that we cross would be the minimum distance that can be traversed during a displacement.

It's impossible these strings not to act as a superconductor of matter, remember the distance to the most distant object detected by the human being is more than 30 billion light years, that means, there are beams of light which are able to travel that distance without decreasing its speed (they modify only its wavelength). Like light, an object can move in space indefinitely across the universe from one end to the other as long as it does not find a force to stop it. If strings exist, they act as a superconductor of matter with a resistance near 0.

Gravitational waves behaves like ocean's surface which are similar to an uptight net, these tensions can be decomposed as a one-dimensional structure for its study. Strings could have one dimension or 0 dimensions, like points with bound forces, but in order to generate waves it's easier into a strongly linked structure. Think about these strings as something more tense than any cable that hold the heaviest bridge in the world.

The picture we have drawn would be a set of extremely tense strings, with a practically infinite matter conduction capacity.



Fig 1: Example of quantum entanglement
Gravity waves behave as an uptight net

2.2 Strong nuclear force

Strong nuclear force is another variable. This force allows the atomic nucleus to remain together, being the strongest of the so-called fundamental interactions (gravitational, electromagnetic, strong and weak). Gluon is in charge of this interaction, it has a scope not greater than 10^{-15} meters, preventing the matter to separate, exerting a constant attraction strength between quarks of maximum 10.000 N (F).

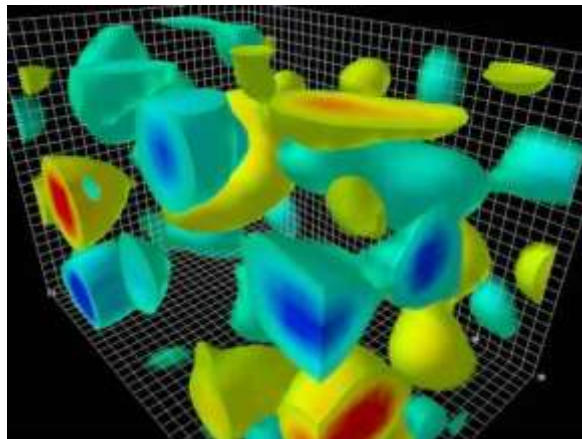


Fig 2: Gluon into vacuum

This picture illustrates the four-dimensional structure of gluon-field configurations averaged over in describing the vacuum properties. The volume of the box is 2.4 by 2.4 by 3.6 fm. Contrary to the concept of an empty vacuum, this induces chromo-electric and chromo-magnetic fields in its lowest energy state. The speed of this example is billions of billions fps (frames per second).

3. SUPERCONDUCTING STRING THEORY (SST)

3.1 Fundamentals

We have created a scenario with a superconductor of matter interacting with a force that makes that matter hold together, but, how can they interact? The most simple is to think about two V-shaped sticks (simulating the strings), and an elastic band that tight them in the most opened side (it would simulate the gluon, with size of 10^{-15} meters). What does the elastic band do if sticks are sufficiently lubricated and tense? They will slide to the thinnest side. More elastic bands, more force will be exerted on the sticks to join them, so next bands will slide even faster (equally, more mass causes more gravity).

We are talking about unknown limits in this world, such as infinite conduction or tensions never seen in materials.

**Force of attraction of gluon
(10.000 Newtons max., constant, 10⁻¹⁵ meters)**

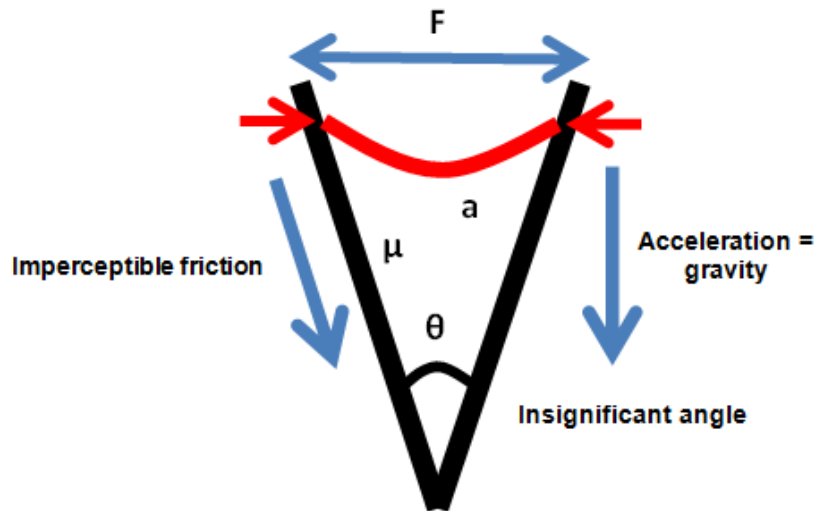


Fig 3: Implied forces

Suddenly, we have erased one of the fundamental forces of nature, gravity force does not really exist, exists the strong nuclear force interacting with strings. I have called this theory 'Superconducting String Theory' (SST).

3.2 Calculations

Formulas from inclined planes are allowed. Friction is imperceptible and we know acceleration down the plane to simulate this force into our planet. Vertical force is not gravity, its gluon force, it can be calculated considering vertical angle but this is depreciable and gluon force is estimated, so we keep 10.000 N.

**Acceleration now is gravity
Gluon force acts as vertical attraction**

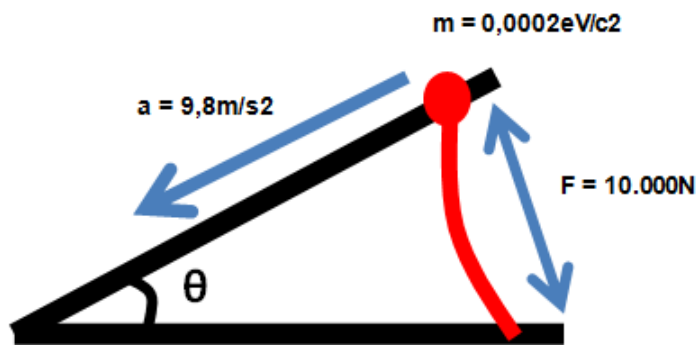


Fig 4: Inclined plane forces (gluon catching strings)

$$m_1 \times g \times \text{sen}(x) = m_2 \times a$$

Equiparate vertical force (F) with the attraction force from one gluon (estimated 10.000 N), $m_1 \times g$.

$$F_1 = m_1 \times g = 10.000 \text{ N}$$

$$F_1 \times \text{sen}(x) = m_2 \times a$$

Convert variables to metric system considering the mass of one gluon (0,0002 eV/c²).

$$1\text{eV}/c^2 = 1,782662 \text{ e-}36 \text{ kg}$$

$$m_2 = 0,0002 \times 1,782662 \text{ e-}36 = 3,565324 \text{ e-}40 \text{ kg}$$

$$a = 9,8 \text{ m/s}^2$$

$$F_2 = m_2 \times a = 3,565324 \text{ e-}40 \times 9,8 = 3,49401752 \text{ e-}39 \text{ N (Kg/(m/s}^2))$$

Angle calculation.

$$x = \arcsin(F2 / F1)$$

$$F2 / F1 = 3,49401752 \text{ e-}35 \text{ N}$$

$$x = \arcsin(3,49401752 \text{ e-}35) = 3,49401752 \text{ e-}35 \text{ }^\circ$$

x angle from all the strings gluon can catch.

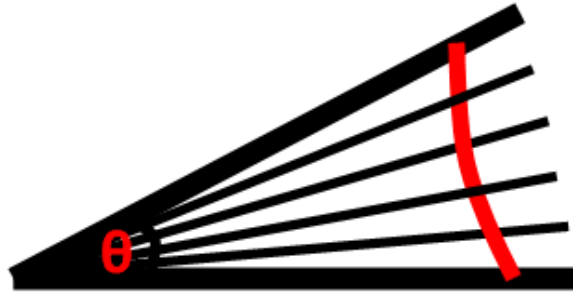


Fig 5: θ angle and strings gluon can catch

4. CONCLUSIONS

It can explain:

- Explanation for gravity force.
- Unified field theory between gravity and strong nuclear force.
- Einstein field equations.
- Behaviors like spherical movements in universe, due to strings-matter interaction in movement, curving strings (the hypotenuse from calculations could be insignificantly curved). Kepler's laws of planetary motion.
- Schrödinger equation, to describe how the quantum state of a quantum system changes with time, similar to Newton's second law.
- Why gluon size is bigger far from earth...

REFERENCES

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Author' biography



Sergio Pérez Felipe, was born in León, Spain in 1979.

He graduated from Computer Science.