A new approach to gravity and atomic bindings combining quantum physics with astrophysics –the ilefos model

Article · December 2023

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A new approach to gravity and atomic bindings combining quantum physics with astrophysics – the ilefos model.

Bent Rolf Pettersen, 2023

Abstract

We know atoms create atomic bindings and gravity. Stars and black holes also create gravity. Can the same attractive force create both atomic bindings and gravity? How can this force work in both quantum mechanics and astrophysics? Theories of today do not work in both these fields. This article introduces a new approach to the attractive force, which works with both quantum mechanics and astrophysics. The ilefos model explains atomic bindings and gravity in a universal model combining quantum mechanics with astrophysics.

Introduction

Atoms send out an attractive force. Atomic bindings, or chemical bonds, are explained as lasting attraction between atoms which form molecules, crystals and other structures. This attraction is often explained as an electrostatic force, or as atoms sharing electrons (1). But these theories only work in the quantum chemistry, they do not work with attraction over larger distances (gravity).

Gravity, attraction which work over distance, is in the quantum field often explained through a hypothetical elementary particle, graviton. In string theory graviton is a massless state of a fundamental string. This hypothetical particle has not been detected yet.

In the general theory of relativity (2), Albert Einstein explains gravity as the curvature of spacetime, a bending of the fabric of space. This theory only works with astrophysics, and is based on a folding of a hypothetical fabric, fabric of space and time, which nobody can explain.

Isaac Newton law of universal gravitation (3) explains gravity as force which works between two masses. The masses send out gravity.

Each of these theories only work within a limited field, and is often based on mathematical models which have to use hypothetical elements to explain the models. But no model works in both quantum mechanics and astrophysics. A correct model should work in all fields, with a clear cause-effect explanation. This may indicate that current theories may be incorrect.

In this article I introduce a new approach to the attractive force. This is a qualitative alternative conceptual model of gravity that appears to be able to explain the attractive force in both quantum mechanics and astrophysics.

Discussion

Gravity, dark energy, dark matter and the accelerating expansion of the universe, are some of nature's greatest puzzles we so far have not been able to explain. We can calculate and describe the phenomena, but why are we not able to explain them?

A correct physics should work in all fields. Present theories only work within a defined field. Could the absence of answers and the restrictions of present theories to confined areas, be an indication to that our theories might be wrong?

Due to this, I use a new approach to explain the attractive force. This article tries to explain the attractive force outside present theories.

The attractive force

Atoms are attracted to each other and can form atomic bindings. The power of the attractive force may vary from atom to atom.

The attractive force is often explained as an energy pulling atoms. But this explanation does not work at distance. Gravity is attraction working at distance. To explain gravity we have introduced a particle, graviton. If graviton is to create attraction over distance, we have to have several particles which have mutual attraction toward each other, and also have to have attraction towards the source (atom).

When particles have mutual attraction, they may form a link of particles, a gravity track. The track then consists of particles with attractive force. External gravity tracks will have the same attractive force which will make two different gravity tracks meet and form a weak attraction, gravity.

A particle is concentrated energy put into a system. If an atom is to constantly release particles to create atomic bindings and gravity, the atom has to constantly release energetic elements. This indicates a large energy consumption of atoms. Can a less energy consumption solution be more logic? If the atoms release pulses of the attractive energy instead of energetic particles, the atoms will have a lower release of the energy of the attractive force.

Ilefos energy units

If the attractive force is caused by an attractive energy, we have to define this energy. I call this attractive energy ilefos energy. The ilefos energy then attracts the strong nuclear force, which create a binding to the atom. Photons also must have a quark containing some of this energy, since strong gravity bends light.

The ilefos energy is then concentrated in special quarks in atoms. I call these quarks plus quarks.

In order for the ilefos energy to escape the attraction of the atom's strong nuclear force, the atom has to send out pulses of this energy, in a speed which the energy pules overcomes the attraction from the strong energy.

When the ilefos energy units are sent out from the atom, the attraction between the energy units makes them form a track of ilefos energy units, a gravity track.

Gravity tracks

In order to have a universal theory, the gravity tracks have to be much stronger close to the atom, where it can form atomic bindings with atoms in close proximity, like we see in metal and other atomic structures. The tracks then have to weaken to form weaker bonds at distance - gravity.

Issac Newton's theory of universal attraction (3) suggests such an attraction:

$$F = G\frac{m_1 m_2}{r^2}$$

The force F determines the attraction between two masses (m1 and m2). The force is the gravitational constant (G) multiplied by mass 1 and mass 2 divided by their distance squared.

This formula shows that the attractive force between masses becomes weaker with distance between them.

How can an ilefos track, a trach with ilefos energy units, become weaker with distance from source?

In order to have weaker attractive force over distance, an ilefos (gravity) track has to become less dense. To be less dense, we have to have longer distance between the ilefos energy units. For this to happen, the ilefos energy units have to travel in an accelerating speed. The units have to be released in a speed which make the units move tightly, then the speed of the ilefos energy units have to increase. When the speed increases, we will have longer distance between each energy pulse, and the track will become less dense. When the ilefos track becomes less dense, it will have less attractive force.

For this to happen, the ilefos energy has to also be attracted to the strong force of the nucleus. This attraction will make the ilefos energy units start their journey with a strong drag. This drag, or attraction to the atom's strong nuclear force, will make the units travel slowly close to the atom, after being released from the neutron.

The attraction of the strong nuclear force will create a pull towards the atom. The track therefore will not go straight out, but form a spiral. The speed of the ilefos energy units will increase with distance from the nucleus, where they are less influenced by the strong force. With faster speed, the distance to the atom will increase, and the attraction to the strong force will weaken. The ilefos track will then slowly straighten up. The ilefos track will then form a Fibonacci-like spiral.

With some distance from the atom, the ilefos track will be almost straight. The ilefos energy units will continue to increase in speed in the ilefos track, and the distance between the ilefos energy units will increase. The attractive force of the track will then weaken, much like Isaac Newton's theory of universal attraction.

Eventually, the distance between the ilefos energy units will become too long, and the attractive force between the ilefos energy units will not be able to hold them together in a track. We will then have an ilefos release. In an ilefos release, the ilefos track dissolves. The ilefos energy units become free ilefos energy units, which is not connected to matter or universal phenomena. Free energy units are dark energy. Matter and universal phenomena which produce gravity, then constantly produce dark energy when the gravity tracks dissolves.

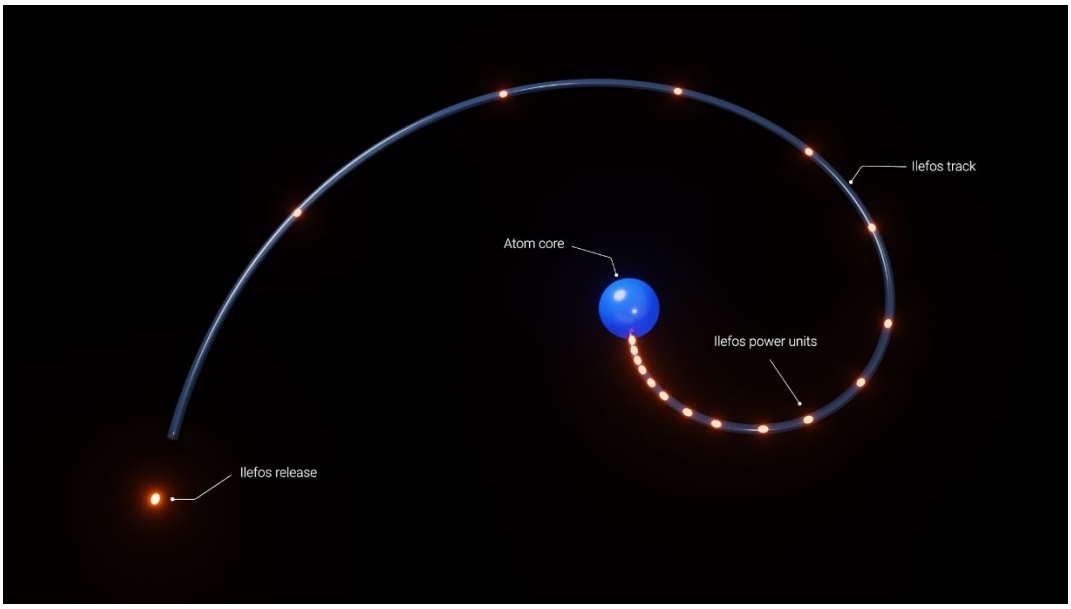

Figure 1: An atom releases ilefos energy units. The attractive force between the units makes them form an ilefos (gravity) track. The accelerating speed of the units make the track weaken over distance.

In the ilefos model, all matter and phenomena which produce gravity, constantly consume and release energy. For the atoms to be in energy balance, they must constantly receive/ harvest the same amount of energy.

According to the Lambda -CDM model (4), 68% of the visible universe is dark energy (Λ). Most of the environment around atoms is dark energy. We can therefor assume that atoms constantly harvest dark energy to be in energy balance. The atoms must have special harvesting tracks to collect free energy units/ dark energy. The atoms then recycle energy units through dark energy to be in energy balance.

The creating of atomic bonds and gravity

An ilefos track (gravity track), consists of ilefos energy units, pulses of ilefos energy. The ilefos energy units have attractive properties. The attractive force between the energy units makes them form a track of ilefos energy units, a gravity track. The attractive force between ilefos energy units, also make them attract ilefos energy units in external ilefos tracks. Ilefos (gravity) tracks from other atoms and universal phenomena, will be attracted to the atom's gravity track.

When two ilefos tracks meet, we will have an ilefos binding. The strength of this binding is determined by the weakest ilefos track. When two strong ilefos tracks meet, we will have strong almost permanent connection, an atomic binding, like we see in metals.

Different atoms have different strength in their ilefos tracks. The quark composition in the atom determines which energies the atom prioritises, and the capacity to store and handle these energies. If an atom has several ilefos quarks (plus quarks), it has strong ilefos energy handling capacities, and it will prioritise ilefos (gravity) energy units. This gives the atom strong ilefos tracks. Iron is an example

of an atom with many ilefos quarks. Gases have fewer ilefos quarks, and therefore weak ilefos tracks, which create weak atomic bindings.

When two ilefos (gravity) tracks meet, the attractive force makes the tracks connect. The ilefos energy units which travel fast in the track, will continue their travel after the connection. Both tracks continue, but they might change the angle and split/ divide. The tracks do not exchange ilefos energy units.

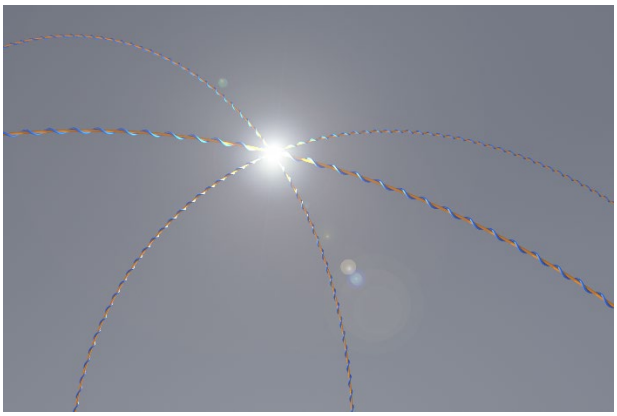

Figure 2: Two ilefos tracks meet and split.

With distance from source, the acceleration of the ilefos energy units will make the gravity track weaker and weaker. The ilefos track then behaves much like Isaac Newton's law of universal gravitation.

Ilefos release - dark energy

When the ilefos (gravity) track increase in length, the distance between the ilefos energy units become longer. The ilefos energy units will continue to accelerate until they achieve the energy speed. The energy speed is the natural speed for the energy units to travel in the universe.

Before they reach this speed, the energy units have accelerated to a speed where the distance between the ilefos energy units become too long. The mutual attraction between the ilefos energy units will not be strong enough to hold them together in a track. The ilefos (gravity) track will then dissolve, and the ilefos energy units will become free energy units. Free energy units are energy units which are not connected to, or accumulated in, organized energy systems. Organized energy systems are quarks, particles, matter, dark matter, stars and black holes.

Dark energy are free energy units. Free ilefos energy units and other free energy units constitute dark energy. Universal phenomena and matter, which produce the attractive force, constantly feed the universe with dark energy.

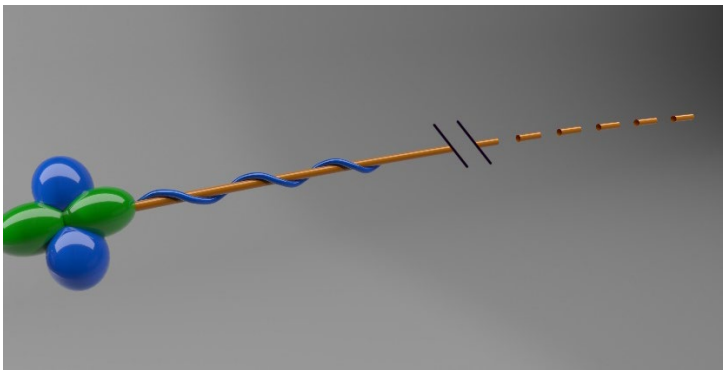

Figure 3: In ilefos release, an ilefos (gravity) track dissolves into free ilefos energy units

The repulsive force

The attractive force pulls atoms toward each other. This can make nuclei collide and may destroy the atomic cores. To prevent this, atoms have the repulsive force (5).

The repulsive force works close to the nucleus. The force has limited range, and prevent the atoms from colliding. This force also stabilizes the ilefos (gravity) tracks and prevent them from spinning. The repulsive force keeps the atoms in stable and fixed positions, where they can form atomic bindings with atoms close by. External force can break the atomic bindings.

Conclusion

A correct physic should work with both quantum mechanics and astrophysics. Today's theories only work within a limited area. I therefore have made a new approach to the attractive force which can work in all fields.

This model, the ilefos model, explains how the same gravity track (ilefos track), can produce an attractive force which works with quantum mechanics and astrophysics. This attractive force produces a gravity track which is strong close to source (nucleus), producing an atomic binding when the strong track connects to an external strong gravity track. The attractive force of the track decreases with distance from the source. When the weaker gravity track connects to an external gravity track, it forms a weaker connection, gravity.

Matter, dark matter and universal phenomena like stars and black holes, send out gravity tracks.

The gravity track consists of pulses of an energy, which I call ilefos. Ilefos energy units have attractive force between each other. This attractive force makes the energy units form a track of attractive energy units, a gravity track, when released from their source.
In order to produce atomic bindings and gravity, the gravity tracks have to weaken in strength with distance from source. When released from nucleus (source), the units have to overcome attraction from the strong nuclear force. This makes the gravity track dense and move slow close to source. With distance from the source, the drag from the strong nuclear force is reduced and the units move faster, thus the gravity track become less dense and the attractive force weakens.

This can explain how the attraction between objects may behave according to Isaac Newton's law of universal attraction at distance, and same attractive force can also create stronger atomic bindings

close to source. Isaac Newton's law of universal attraction start working when the gravity track no longer is affected by the strong nuclear force from the atom.

This explanation can also be used with release of attractive *particles,* which form a gravity track due to their mutual attraction. This approach can therefore also be used with gravitons forming a gravity track.

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