

# Theory of Ultra Particle

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## Abstract

This paper aims to present new ideas in the field of physics; the content is tailored to be easily comprehensible by readers of diverse backgrounds and expertise. This groundbreaking hypothesis offers a fresh perspective that may challenge current scientific beliefs. However, it seeks to make a meaningful contribution to our understanding of quantum particles and the fundamental principles of matter across all scales. While the prevailing knowledge about electrons is that they are elementary particles since they are not composed of smaller particles, this theory proposes otherwise. It suggests that electrons, like protons and neutrons, are composed of other components, so our current understanding of elementary particles needs to be revised. This paper proposes that everything in the universe, including electrons, protons, neutrons, quarks, and everything else, comprises something much smaller called the "ultra-particle" (UP). The reason it is called "ultra" is because its scope is quite remote from ordinary particles. The ultra-particle is a fundamental particle that explains all the forces and fields of the universe, quantum behaviors, and the motion of celestial bodies, including black holes. Although unimaginably small, the ultra-particle permeates the universe, making everything we know of possible.

## **I. Introduction**

The ultra-particle is a fundamental unit of matter that constitutes more than 98% of the universe. It is ubiquitous in the universe as a building block for all matter. Despite its pervasive presence, the ultra-particle's minuscule size and density make it difficult to detect as a single particle. Nevertheless, its wave-like behavior and interaction with electrons provide evidence of its existence. Its wave-like properties and ability to generate forces akin to waves suggest that it shares characteristics with particles such as water and air. The ultra-particle's tiny size and structure are challenging to comprehend, but it can be considered a minute point composed of two poles, with an extremely weaker charge on one side. Comparing an atom to a galaxy is helpful to get an idea of its size. In the same way, an ultra-particle is to an atom what an atom is to a galaxy. Subatomic interactions cause ultra-particles to be pushed together, creating wave-like motions.

The decay or transformation of atoms generates new ultra-particles but also ultra-particles assemble up electrons, quarks, protons, neutrons, and other known elementary particles. Despite the challenges in detecting and comprehending ultra-particles, their force and influence are observable in everyday life. They generate wave-like patterns, such as electromagnetic and gravitational waves, and can be detected by living organisms such as the eye. The bipolar nature of an ultra-particle, with a weak charge on one side, indicates the existence of even smaller particles. Future technological advancements may enable better detection and understanding of ultra-particles and their properties.

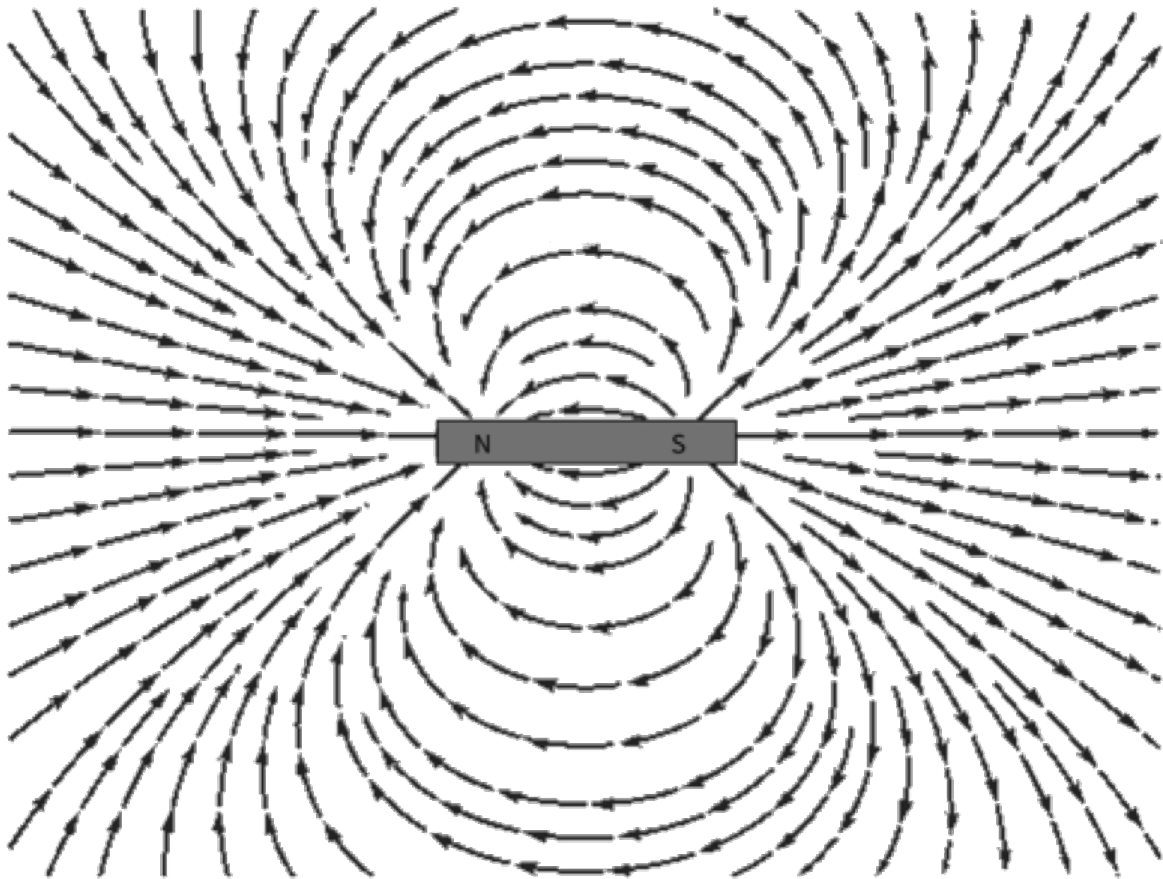
## **II. Fundamental forces**

Scientific observations have established the existence of four fundamental forces of nature: the strong nuclear, the weak nuclear, the electromagnetic, and the gravitational force. Among these forces, the effects of the gravitational and electromagnetic forces can be observed directly in everyday life. As these two forces are directly perceptible, it becomes easier to elucidate how the ultra-particle gives rise to such forces. Before a comprehensive explanation, attaining a mutual consensus on the definitions of force and field is crucial, and this will serve as a fundamental prerequisite for a coherent and systematic discourse. A force describes the actual effect on a charge, whereas a field describes the potential impact. The best way to imagine a force and a field is to think of wind and air. The wind is a force in a field of air. Although invisible to the naked eye, the wind is the motion of atoms or air molecules in the atmosphere that give rise to it. The force of the wind can create water waves, make trees sway, and exhibit other behaviors. The ultra-particle manifests similar behaviors but on different scales, and understanding its behavior is crucial for comprehending the complex workings of the universe at the most fundamental level.

### **1. How does electromagnetic force emerge?**

Electricity and magnetism are two fundamental forces of nature that are closely related. They are two aspects of the same thing: a changing electric field creates a magnetic field, and a changing magnetic field creates an electric field. However, ultra-particle is a constituent of both phenomena at play. The interaction between ultra-particles and electrons is most effectively showcased in metallic materials, thanks to their atomic structure. The arrangement of electrons in magnets generates an almost one-directional flow of ultra-particles, which gives rise to bipolar magnetism. Here is a tentative analogy: Imagine a pipe that is 20 centimeters long and 5 centimeters in diameter submerged inside a pool of water. This pipe doesn't have one large hole; it has millions of small holes where almost all point in the same direction. Within the pipeline, a vast number of minuscule water wheels are present, all of which turn in a nearly identical direction. These wheels draw water into the pipe and push it out the other end to create a powerful force of movement. The water wheels represent the electrons interacting with the ultra-particle, and the better the atom/electron alignment, the stronger the magnetic force. When a magnet is moved around a coil of wire, or a coil of wire is moved around a magnet, it is electrons pushing and pulling ultra-particles that create electricity. When electricity travels through a wire, it is not the electrons that are moving

but rather ultra-particles that are channeled via the wire with the help of the electrons. The motion of ultra-particles excites the electrons and vice versa. This phenomenon is not limited to physics; cells and molecules use ultra-particle waves to communicate. The mechanism of how cells communicate using ultra-particle waves will be described in a separate paper.

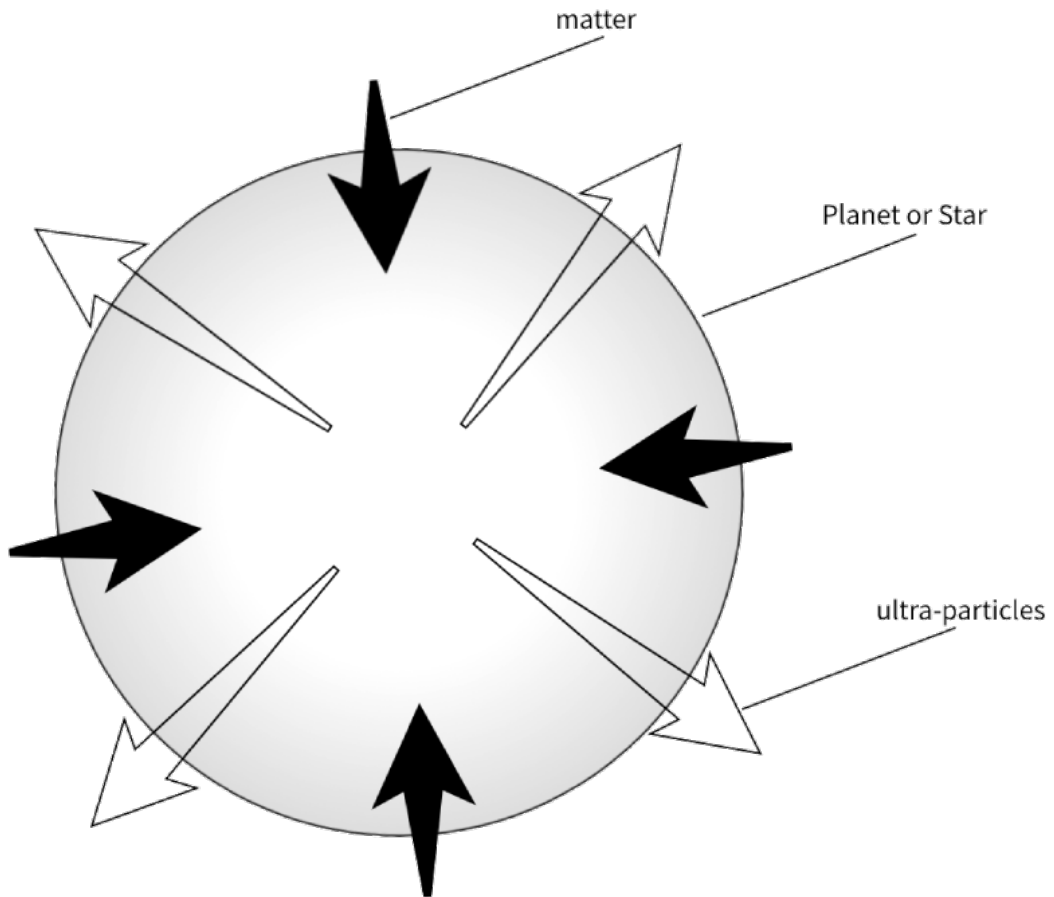


**Figure 1.** This is an illustration of the magnetic field north-flowing towards the south. It's a force created by the interaction of electrons with ultra-particles; the magnet's size and strength (atom/electron arrangement) determine the direction flow of the ultra-particles.

## 2. How does gravity emerge?

Gravity has been a subject of theoretical inquiry for centuries. While numerous theories have been proposed to explain its behavior, the origin of gravity remains elusive. Many theories provide compelling explanations of gravitational behavior, but their origin relies on fictional attributes.

Then how are ultra-particles related to gravity? Imagine that ultra-particles are everywhere in all space, and everything is made of them. All atoms "live" and cannot exist without ultra-particles. Let's take planet Earth as an example; at the very center of Earth, the pressure is so high that atoms are pushed against one another, which, in turn, some atoms decay and are transformed into different atoms, and some decay to become ultra-particles. Assuming one hydrogen atom is equivalent to  $10m^3$  of ultra-particles, the transformation of atoms into ultra-particles results in a pushing outward motion that pulls heavier atoms closer. This constant expansion of ultra-particles leads to the inward pull of matter, which gives rise to the gravitational force. The outward motion of ultra-particles from the center of the Earth is likely to be small. As our planet travels through the vast expanse of ultra-particles, the iron and other similar elements throughout and within the Earth's core act as conduits to channel these ultra-particles, creating magnetic fields. Due to cosmic dust and other sources, new elements are constantly being formed and added to our planet. It's a fascinating reminder of the ever-changing nature of our world.



**Figure 2.** This illustration shows how ultra-particles (hollow arrows) move outwards while atmospheric and crustal matter/atoms (solid arrows) rush towards the Earth's center.

### **III. Black holes (space bubbles)**

Black holes represent a relatively recent discovery in the field of astronomy, as compared to other celestial phenomena. Due to their elusive nature, studying and observing black holes have been challenging, albeit intriguing, for astronomers. There are numerous theories surrounding how black holes interact with matter, with some positing that the gravitational force at the center of a black hole is so strong that even light cannot escape its pull. However, within the frame of reference of ultra-particles, black holes are considered "Space Bubbles" or voids within space, devoid of any ultra-particles and their associated components. Neither wave lights, magnetic nor gravitational forces can penetrate this space, and no particle or atom can exist. Despite the lack of clarity surrounding the creation of these "Space Bubbles," it is believed that they are formed due to large-scale explosions, such as those resulting from the collision of stars. This collision may result in the reorganization of ultra-particle poles to become a complete vacuum. Ultra-particle waves bounce back or pass over the space bubble, similar to how water waves pass over and around a solid object. It's possible that Space Bubbles may contain other elements that could refract ultra-particle waves, such as a different type of matter.



**Figure 3.** Here is an illustration of a "Space Bubble" depicted in two dimensions. It is difficult to determine the composition of the Space Bubble, but it has a unique interaction with ultra-particle waves. The picture is from Rockall Island, and the copyright belongs to the Irish Times website.

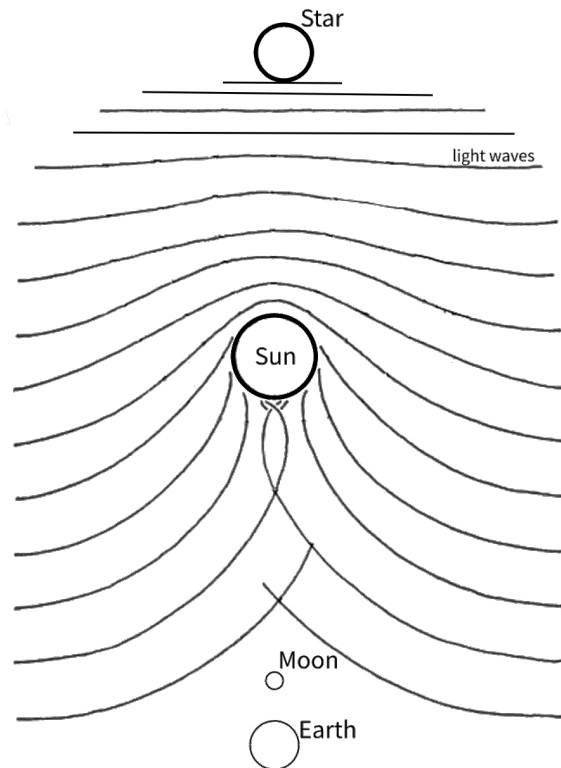
#### **IV. Universe expansion/speed of electromagnetic waves**

Numerous theories and beliefs exist regarding the universe's origin, with the most widely accepted one being the Big Bang theory. According to this theory, the universe began from a single point and has expanded ever since. However, recent scientific observations have revealed that the universe's expansion is not slowing down but rather accelerating, which contradicts the idea of the Big Bang. Furthermore, several questions regarding the origin of the Big Bang, such as how everything could fit into a single point, still need to be answered, and some even bring forward supernatural ideas.

From an ultra-particle's perspective, it can be argued that the universe has always existed, albeit constantly changing. This concept is well-known on Earth and beyond, where matter and ultra-particles recycle and transform. This perspective can also help explain why the universe is expanding, specifically why galaxies are moving away or towards each other. As more and more ultra-particles are recycled from the galaxies, they are propelled away or towards one another. The motion of the matter within the ultra-



particles, created by stars, planets, and moons during the transformation (particle to ultra-particle and vice versa), is why some galaxies have a spiral shape. If one zooms out far enough, the universe would resemble an ocean of ultra-particles with matter scattered around.



**Figure 4.** The following illustration portrays how ultra-particle waves traverse through space in a non-linear or photon-like trajectory, akin to a wave that travels through water or air. It is like stars oscillate and produce waves while randomly discharging their constituent particles. This is why, during a solar eclipse, it's possible to see stars behind the Sun. Objects are not to scale.