



Nature of Space And Dimension of Observable Universe and Beyond

Chandrakant V. Darji

Isanpur, Ahmedabad, Gujarat, India

Cite this article: Darji, C.V. (2024). Nature of Space And Dimension of Observable Universe and Beyond. *International Journal of Empirical Research Methods*, 2(2), 147-169. <https://doi.org/10.59762/ijerm205275792220240705094340>

ARTICLE INFO

Article History:

Received: Dec-19-2023

Revised: April-05-2024

Accepted: May-16-2024



Corresponding Author:

Chandrakant V. Darji

Isanpur, Ahmedabad, Gujarat, India

n.chandru78@gmail.com

ABSTRACT

My innovative research of space, space definition, types of space, and space transformation methods resulted in space transformation law and space-matter transformation law. These space transformation methods and laws govern the nature of the entire space. Finally I have covered the entire existence of space-time (Space-time, 2022) and beyond by "Dimension of Observable Universe and beyond". As we know, the universe is defined as all space-time and its contents (Universe, 2022). However, questions are still open for higher dimensions (String theory vs Loop quantum gravity: Wild hunt for Quantum Gravity:, 2020), the singularity (Gravitational singularity, 2022), gravity collapse at the horizon of the black hole, unified gravity, theory of everything (Theory of everything, 2022), dark matter (Dark matter, 2022) (What is dark matter made of? Leading theories explained: Axion, Wimp, Machos, 2020), dark energy (Dark matter, 2022) (What is dark matter made of? Leading theories explained: Axion, Wimp, Machos, 2020), existence beyond the observable universe and for the space itself. These open questions have driven this scientific research of "Nature of Space and Dimension of Observable Universe and Beyond". My research findings indicate that the space itself is an entity with physical properties. The space transforms/converts to matter and v/s. The higher dimension is extended beyond the singularity (Gravitational singularity, 2022), beyond the horizon of black holes and the observable universe (Universe, 2022). Several types of research have been done, which include Minkowski Space (Minkowski space, 2022), General relativity (Quantum Gravity: How quantum mechanics ruins Einstein's general relativity, 2020) (General Relativity Explained simply & visually, 2020), Loop Quantum Gravity (String theory vs Loop quantum gravity: Wild hunt for Quantum Gravity:, 2020), String theory (Standard Model, 2022) (String theory vs Loop quantum gravity: Wild hunt for Quantum Gravity:, 2020) (String theory, 2022) (Theory of everything, 2022), Higgs field (Higgs boson, 2022), Aether medium (Aether (classical element), 2022), the questions are still open for higher dimension, unified gravity, dark matter (Dark matter, 2022) (What is dark matter made of? Leading theories explained: Axion, Wimp, Machos, 2020), dark energy (Dark energy, 2022) (What is Dark Energy made of? Quintessence? cosmological constant?,

2020), theory of everything (Theory of everything, 2022) and space beyond the universe. By researching the existence of matter, I found that the existence of space was just accepted as the void, empty, and space-time background framework. There are well research attempts made to look into space-time as the entity and look for higher dimensions by Loop Quantum Gravity (Loop Quantum Gravity Reveals What Came Before the Big Bang, 2018) and String theory (String theory, 2022). It became very important to define space and to research the relationship between matter and space. It would not be possible without defining higher dimensions. My research reflects the "Dimension of the Observable Universe and beyond" accommodates all existence of the observable universe and beyond the observable universe. The definition of space, type of space, space transformation and space-matter transformation perfectly describe the existence of the entire space universe and its nature at a very fundamental level. Also, the definitions of the GODEYE and GODEYE Model explain the phenomena of universe expansion-contraction and phenomena of gravity at a very fundamental level for the "dimension of the observable universe and beyond". It is the most accurate foundation to answer those open questions. It is the novelty in astrophysics and the foundation of entire existence.

Keywords: Higher Dimension, Space, Space transformation, GODEYE, Universe expansion-contraction, Gravity

1. INTRODUCTION

Thought travel of 'Infinite Space' during my Teenage. It was time starting from my 10th standard (The year 1994) for my interest in science, but I found a personal note written during my first year of college in the year 1997. During my 10th standard, I read my science book. The last lesson was about space shuttles, planets, sun, stars, light years, galaxies, supernovas and so on... as per my knowledge, I traveled in that space shuttle during my 1st year of college. The travel was started at night time from the terrace of my house. I started my journey alone in the space shuttle towards the sky. There were only three things space, me and space shuttle. Travel continued in a straight line in the space to infinite. I thought about how far is the end of space that I could travel to reach to space end. I thought that to bring the end of space, there must be a boundary of matter where space ends. So, I traveled to the infinite in space, where I reached the matter boundary and space ends. Then, I continued in the same straight line through matter. The same question was raised in my mind: How far is the end of the matter that I

could travel to reach the end of the matter? Again, I thought, to bring an end to the matter, there must be a boundary of space. So, I traveled to the infinite in matter, where I reached the boundary of space and matter. Then I continued my journey through infinite space... again through infinite matter... and continues... It was a brave journey for that teenager, and he is still somewhere there in space with his infinite journey.

You just try to look at the end rather in the form of space or matter. To do this, find yourself in it and try to imagine the picture in your mind. The end of the universe is beyond one's imagination. Where is the god in the universe? Thou cannot able to find Thou self is out of the Universe or Thou is also contained in it? Because there is no end, everywhere is the space and matter. How is God also contained in it? If so, then who is capable of creating the Universe? (Note: As a teenager, I did not have an understanding of the Universe (Universe, 2022) definition like modern science has, and now I have).

The story ends here. However, the questions during my teenage infinite jour-

ney are answered now. I recognize this as my teenage infinite-finite concept law from my ambitious teenage thought dream.

After a long break, I continued my research during the years 2018-2019; I had more questions about the existence of space, the existence of matter, the entire existence, Like what is the space itself? What is matter itself? Where do all come from? and how are all created? And what is gravity?

In most existing scientific research, the existence of space is just discussed and accepted as the vacuum, as the empty, as the void, as the space-time fabric (General Relativity Explained simply & visually, 2020), as the isotropic (Relativity 110b: Cosmology - FLRW Metric Derivation (3 possible geometries), 2022), as the homogenous (Relativity 110b: Cosmology - FLRW Metric Derivation (3 possible geometries), 2022), as the Minkowski space (Minkowski space, 2022), with space geometry to define the shape of the space (Relativity 110b: Cosmology - FLRW Metric Derivation (3 possible geometries), 2022), as the filled by any medium (Aether (classical element), 2022), and filled with major existence of dark matter (Dark matter, 2022) and dark energy (Dark energy, 2022). In the Standard Model (Standard Model, 2022), elementary particles are divided into two groups: elementary fermions and elementary bosons. Here, elementary fermions are the matter particles, and the elementary bosons are the force particles. So, the fundamental matter existence is accepted as the quarks and leptons.

Below are some overviews of existing research that matches my research subject to a certain extent.

Minkowski space:

It is a combination of three-dimensional Euclidean space and time into a four-dimensional manifold. The mathematical model of space-time is called Minkowski space, and it is essential in describing general relativity (Minkowski space, 2022).

General relativity:

It mentions the gravitation effect between masses resulting from their wrapping of space-time. Here, space-time tells matter how to move, and matter tells space-time how to curve. Space-time is the background, and the curvature of space-time is gravity (Quantum Gravity: How quantum mechanics ruins Einstein's general relativity, 2020) (Gen-

eral Relativity Explained simply & visually, 2020).

Loop Quantum gravity (LQG):

It mentions that space-time itself is made of discrete quanta, and quanta is made of finite loops with nodes connecting them. It has a minimum value of length, area, volume and time. Space-time quanta volume resides at the nodes' intersection; loops represent a dimension area, and a large network of these loops and nodes is called a spin network. The geometry of this spin network defines space. Moreover, time is defined by the movement of the spin network. It is the theory of quantum gravity (String theory vs Loop quantum gravity: Wild hunt for Quantum Gravity:, 2020).

String theory:

String theory is inspired by the standard model. The fundamental particles of the standard model replaced by even more fundamental one dimensional strings. String theory describes how the strings propagate from space and interact with each other. These strings vibrate in many extra space-time dimensions. It claims to be the Theory of Everything (Standard Model, 2022) (String theory vs Loop quantum gravity: Wild hunt for Quantum Gravity:, 2020) (String theory, 2022) (Theory of everything, 2022).

The theory of aether:

It was postulated by physicists that aether permeated all throughout space, providing a medium through which light could travel in a vacuum. But later through experiments by physicists, it was declared that aether does not exist (Aether (classical element), 2022).

Higgs field:

It exists everywhere in space and has its elementary particle called the Higgs boson. Any elementary particle, while passing through this Higgs field, will interact with the Higgs boson and obtain the mass (The Higgs boson and Higgs field explained with Simple Analogy, 2018).

Dark matter:

It is postulated by physicists that dark matter contributes 27% of the total mass-energy content in the observable universe (Dark matter, 2022) (What is dark matter made of? Leading

theories explained: Axion, Wimp, Machos, 2020).

Dark energy:

It is postulated by physicists that dark energy contributes 68% of the total mass-energy in observable universe (Dark energy, 2022) (What is Dark Energy made of? Quintessence? cosmological constant?, 2020).

Ordinary matter:

In the standard model, it is accepted as the fundamental matter particles called fundamental fermions. They are 'quarks and antiquarks' and 'leptons and antileptons' (Standard Model, 2022).

These existing researches address different individual subjects. Some of them partially match scientific concepts to my research subject. However, even combining them and/or individual research does not give a satisfactory, complete answer to my research questions.

General relativity:

It collapse at singularity inside the black hole and big bang. It does not fit with quantum mechanics. Due to this, General relativity is incomplete. General relativity treats space-time as a bending of the continuous back ground of space-time not as the discrete particle that confer a force (General Relativity Explained simply & visually, 2020) (Quantum Gravity: How quantum mechanics ruins Einstein's general relativity, 2020). It does not talk about what is the space-time itself. How and from where does the existence of space-time and matter come from?

Loop Quantum gravity (LQG):

It extends the general relativity concept with different structures of space-time. It really talks about space-time made of discrete quanta. However, Loop Quantum gravity (LQG) is the theory of quantum gravity only (Quantum Gravity: How quantum mechanics ruins Einstein's general relativity, 2020).

String theory:

It talks about the standard model by replacing fundamental particles of the standard model with even more fundamental one-dimensional strings. Here, Space-time is the background in which strings vibrate, but it does not talk about

what is the space itself. Yes, string theory talks about extra-dimensional space-time in which strings vibrate (String theory vs Loop quantum gravity: Wild hunt for Quantum Gravity:, 2020) (String Theory Simplified: A bunch of BS? Or Answers Why Do We Exist?, 2019) (What is reality? String theory & multiverse visualized, 2019).

The theory of aether:

It did not mention space itself. , not mentioned about space-time and not mentioned the properties of aether itself. The experiments by physicists did not show any presence of aether (Aether (classical element), 2022).

Higgs field:

It talks about the Higgs field everywhere in space. Moreover, how particles obtain the mass (The Higgs boson and Higgs field explained with Simple Analogy, 2018). It does not talk about the Higgs field existence come from? It does not talk about the existence of space-time and where matter comes from.

Dark matter:

Dark matter is an unknown form of matter, and it is limited to the mass-energy content of the observable universe (Dark matter, 2022) (What is dark matter made of? Leading theories explained: Axion, Wimp, Machos, 2020). The scientist is still in search of dark matter.

Dark energy:

Dark energy is an unknown form of energy, and it is limited to the mass-energy content of the observable universe. It is responsible for expansion of the universe (Dark energy, 2022) (What is Dark Energy made of? Quintessence? cosmological constant?, 2020). The scientist are still in search of dark energy.

Ordinary matter:

Ordinary matter existence is accepted in the form of elementary fermions. In the past decades, several research has redefined elementary matter particles (Standard Model, 2022). And questions are still open that what is the ultimate matter particle? Matter particle existence come from where?

None of the above theories as the individual and all together describes the entire ex-

istence and the true nature of the entire existence. Instead, it describes the partial nature of the entire existence, which may not be 100% correct to accept. Especially, I am especially impressed with Loop Quantum gravity (LQG) as it describes space-time as the quanta and quanta mechanics (String theory vs Loop quantum gravity: Wild hunt for Quantum Gravity:, 2020). Also, I feel impressed with one dimensional string and extra dimensions (String theory vs Loop quantum gravity: Wild hunt for Quantum Gravity:, 2020). Moreover, the Concept of Aether medium, which occupies empty space (Aether (classical element), 2022), Higgs field, which is everywhere in the universe (Higgs boson, 2022), Dark matter contributes 27% of the observable universe (Dark matter, 2022), Dark energy contributes 68% of the observable universe (Dark energy, 2022), Ordinary matter contributes 5% of the observable universe (Dark matter, 2022). All these Aether medium, Higgs field, dark matter, and dark energy concerning space and mass-energy or unknown existence part of the space and universe while ordinary matter is the known part of the observable universe (Universe, 2022). But the gap still remains to answer what is the space itself? What is the matter itself? Where do all come from, and how are all created? The gap still remains to unite classical mechanics (Classical mechanics, 2022) and quantum mechanics (Quantum mechanics, 2022), a gap still remains for the entire existence and true nature of the observable universe and beyond.

These questions must be answered to know the true nature of the entire existence and the foundation of an entire existence. So, I continue to research after a long break of two decades, during the year 2018-2022. The right question gives the right answer. In this process, firstly, I researched space and matter and defined pure space by the year 2019, which resulted in more research on space transformation and space-matter transformation by the year 2021. While gravity was already a question for me, what is it? And how does it work? Even after research done during the years 2002-2005. And more theoretical research has been done about space, matter, energy, mass, time, and gravity during the years 2018-2022. The final result, the pure space definition, types of space, space transfor-

mation, and space-matter transformation together answer about space, space-time, and the fundamental nature of entire existence and beyond. It became challenging for me to establish through end-to-end connectivity for the entire existence of space, space-time and beyond, to establish universal and beyond scientific nature, to establish universal and beyond scientific relationship (Which includes singularity (Gravitational singularity, 2022), gravity at the singularity (Gravitational singularity, 2022) and beyond), and to unite the classical world and quantum world into one. By the early year 2022, this universal and beyond nature of existence have been solved, and the unification of classical mechanics (Classical mechanics, 2022) and quantum mechanics, the singularity (Gravitational singularity, 2022) and space-time have been considered with research done about 'Dimension of Observable Universe and beyond'. And this article starts from there on.

My research defines space itself as an entity, describes the true nature of space and matter, describes the existence of matter, and the true nature of the entire existence. This entire existence and its working are covered by the 'Dimension of Observable Universe and beyond'. These new simplified dimensions and methods unite classical mechanics (Classical mechanics, 2022) and quantum mechanics (Quantum mechanics, 2022) into one and also unite the beyond.

My findings explain the true nature of the entire universe and beyond. This is a novelty in theoretical astrophysics research, with new methods, new definitions and new laws. The existing scientific information does not truly mention about the definition of space and the nature of space, the existence of matter, space and matter relationship, the dimension of the entire space, the dimension of the universe, and existence of the universe, and from where and how the entire existence emerge at a fundamental level?

The new definition of space simplifies the various concepts of space like vacuum, void, empty, and filled with medium by uniting them all into one fundamental space. With the new definition of space, methods and laws, it simplifies the various theories for type of space and shape of space like isotropic, homogeneous, and various geometry concepts for shapes of the space by uniting all to one unique space standard.

With new space and space-time structure, it simplifies the various types of space-time fabric (General Relativity Explained simply & visually, 2020) like general relativity's continuous space-time fabric (General Relativity Explained simply & visually, 2020), Loop Quantum Gravity (LQG) quanta space-time fabric (String theory vs Loop quantum gravity: Wild hunt for Quantum Gravity:, 2020), extra-dimensional space in string theory (String theory vs Loop quantum gravity: Wild hunt for Quantum Gravity:, 2020) and unites all to one unique space-time standard. With the new 'End to End dimension'. simplifies the various dimensions like extra dimension and higher dimension by uniting all to one standard dimension.

In fact, more correct answers for those previous research done and more answers about any medium, Higgs field (Higgs boson, 2022), elementary matter (Standard Model, 2022), dark matter (Dark matter, 2022), and dark energy (Dark energy, 2022). It adds more value to the standard model (Standard Model, 2022) for the existence of fundamental matter particles with true nature.

It explains space existence and matter existence and establishes true nature in between space-time (Spacetime, 2022) and fundamental matter particles. The defined end-to-end dimension here ultimately connects the matter world to the space world and v/s. It establishes a truly scientific relationship between the space world and the matter world.

The definition of GODEYE and the developed GODEYE Model explain the phenomena of universe expansion-contraction and define gravity and gravitation force at a very fundamental level for the dimension of the observable universe and beyond.

2 Dimension P(X, Y, Z, T) and Q(X, Y, Z, T), and Totality of Existence

Four Dimensions are commonly known to us. There are three spatial dimensions to determine the position, location, shape, size and volume of the object. The fourth dimension is a dimension of time, dimension is one way to measure physical change. Three spatial dimensions are denoted by (X, Y, Z) (Three-dimensional space, 2022) and Time dimension is denoted by (T). So, they together have four dimensions denoted by (X, Y, Z, T) (Four-dimensional space, 2022).

In our daily life experience, we observe

many objects around us with different shapes, sizes, volumes, locations, positions, changes and colors. We identify these objects by our eye vision and/or by physical touch and/or by feeling with processing by our mind and/or imagination by our mind. In the world of science and in general these objects are known as the 3D objects. Here, 3D represents three dimensions of the object. These three dimensions (3D) are used to know the sizes, volumes, locations and positions of the objects. For example, the size of the room that we are living in has height, length and width. We often label them as the X, Y, and Z of the room. And these 3D (X, Y, Z) values, we multiply to calculate the size or space of the room. Many of the 3D objects like bacteria, humans, animals, computers, cars, trains and aero planes have comparatively more complex shapes. For these objects, we have to apply the 3D geometry function to calculate the sizes, volumes, positions and locations of the objects.

The 3D objects are either stationary or moving or changing; for those objects that are moving and changing positions and locations, some objects keep changing their sizes, volumes, energy, temperature and other properties too. For such additional physical changes and chemical changes or physical events or chemical events, we have an additional Fourth dimension of time (T). So, the Dimension of any object can be described by its four dimensions 4D (X, Y, Z, T) (Four-dimensional space, 2022). Likewise, the physical Universe is described by space-time. So, I take space-time as the 4D dimension of the Universe (Universe, 2022).

Following from above discussion about space-time 4D (X, Y, Z, T), now I derive two 4D planes called $P_{(X, Y, Z, T)}$ and $Q_{(X, Y, Z, T)}$. Fig-1 below demonstrates dimensions $P_{(X, Y, Z, T)}$ and $Q_{(X, Y, Z, T)}$, their properties, scope and entire existence within.

$P_{(X, Y, Z, T)}$ is the 4D plane of 'space-time (pure space-time only)', and $Q_{(X, Y, Z, T)}$ is also the 4D plane of the 'space-time (space-time with matter)'. So, there are space-time and matter only in between the range of $P_{(X, Y, Z, T)}$ 4D plane and $Q_{(X, Y, Z, T)}$ 4D plane. But both planes have different properties of space and different properties of time. So, both planes are totally distinct in existence.

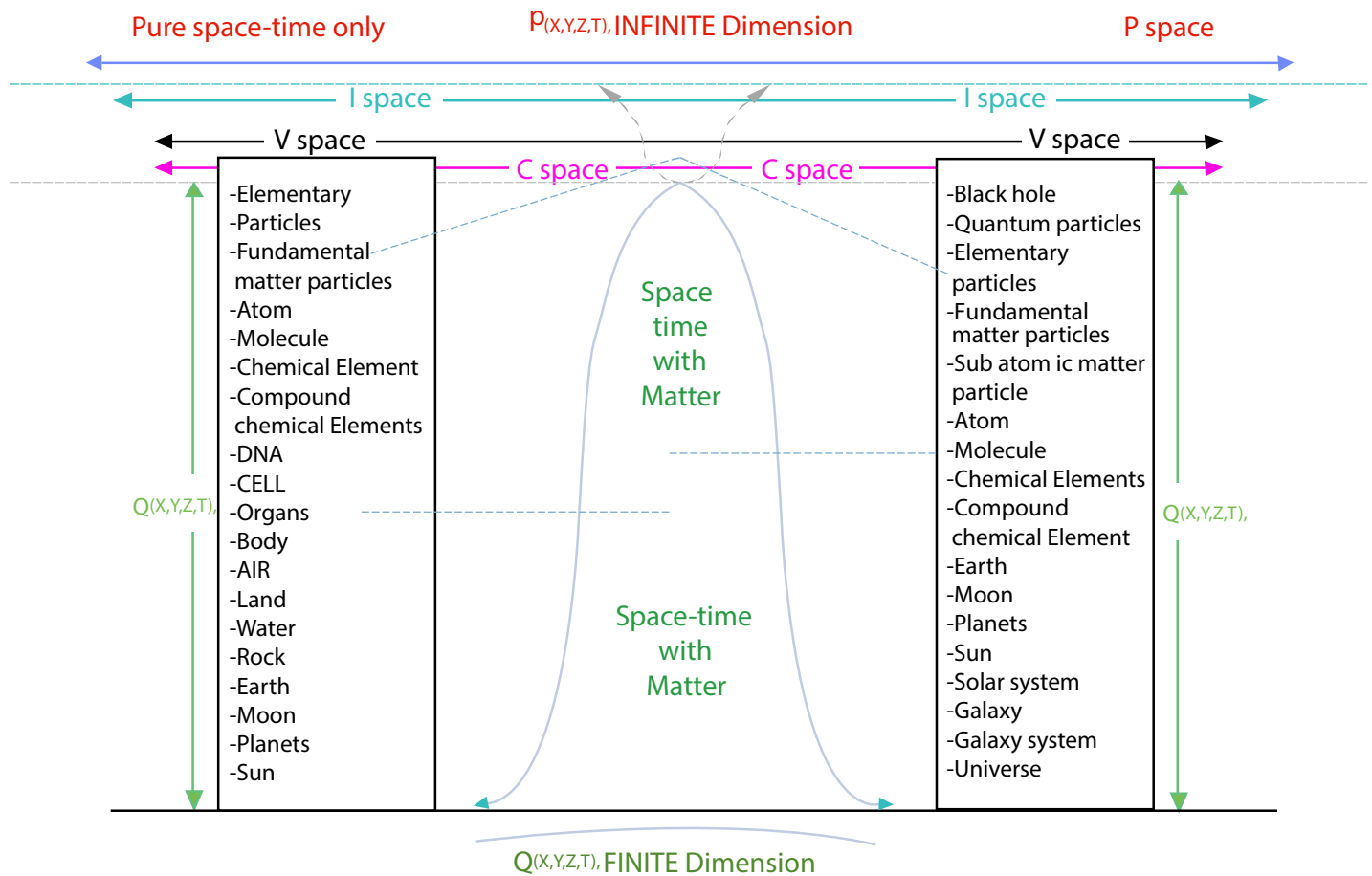


Fig-1.
End to End Dimensions $P(X, Y, Z, T)$ and $Q(X, Y, Z, T)$ and Entire Existence

2.1 Dimension $P(X, Y, Z, T)$

$P_{(X, Y, Z, T)}$ is the dimension of pure space. Pure space is constant in nature, so the dimension is also known as the $C_{(X, Y, Z, T)}$. It is the dimension where space becomes pure, all of Newtonian mass (Mass, 2022), Gravitational mass, Inertial mass, Atomic mass, and Elementary mass (Standard Model, 2022) become zero, all of four fundamental forces (Fundamental interaction, 2022) becomes zero, and pressure (International Systems of Units, 2022) becomes zero, absence of matter (particle less), absence of fundamental temperature (International Systems of Units, 2022) and exist infinite pure energy and exist pure time only. $P_{(X, Y, Z, T)}$ describes having existence of the pure space and pure time with pure energy only. Pure space is just only one in count with dimensions $P_{(X, Y, Z, T)}$. Pure space is uniform and eternal with dimensions $P_{(X, Y, Z, T)}$. And $P_{(X, Y, Z, T)}$ is the infinite dimension.

2.2 Dimension $Q(X, Y, Z, T)$

$Q_{(X, Y, Z, T)}$ represents a dimension of the space-time with matter. The 'space-time with matter' is variable in nature, so the dimension is also known as the $V_{(X, Y, Z, T)}$. Here, the $Q_{(X, Y, Z, T)}$ is the finite dimension of space-time which transformed/converted from C space, with having matter (particle), having all Newtonian mass, Gravitational mass, Inertial mass, Atomic mass, Elementary mass, with having all four fundamental forces (Fundamental interaction, 2022), with having pressure, having fundamental temperature and having variable energy with variable dimensions.

Space-time of the $Q_{(X, Y, Z, T)}$ comprises quantum particles, elementary matter particles, various forms of mass-energy, atoms, molecules, planets, moons, stars, star systems, and galaxies (Universe, 2022) and has variable dimensions.

$Q_{(X, Y, Z, T)}$ are the multiple dimen-

sions in count, and each $Q_{(X, Y, Z, T)}$ dimension is separate from than other $Q_{(X, Y, Z, T)}$ dimension. It is the transient dimension.

2.3 P(X, Y, Z, T) and Q(X, Y, Z, T)

Both $P_{(X, Y, Z, T)}$ and $Q_{(X, Y, Z, T)}$ are the dimensions of space-time, but both have different properties of space and different properties of time. They represent two different 4D planes, these two planes are opposite to each other with opposite dimensional properties to each other.

In the above Fig-1, from $P_{(X, Y, Z, T)}$ to $Q_{(X, Y, Z, T)}$. It shows P space transforms to I space, I space transforms to V space, V space transforms to C space and C space transforms to space-time with matter (Refer: Transformation of the space, Space and Matter transformation).

In the above Fig-1, from $Q_{(X, Y, Z, T)}$ to $P_{(X, Y, Z, T)}$. It shows space-time with matter transforms to C space, C space transforms to V space, V space transforms to I space, I space transforms to P space (Refer: Transformation of the space, Space and Matter transformation).

Here the Space-time with matter is the transient of charged space-time and ultimately transient of pure space-time. So, the space-time with matter is created from and emerges from pure space-time. The $Q_{(X, Y, Z, T)}$ is created from and emerges out from $P_{(X, Y, Z, T)}$. So, the $Q_{(X, Y, Z, T)}$ is the transient dimension of $P_{(X, Y, Z, T)}$.

2.4 Totality of Existence

As described in Fig-1 above, there are two end-to-end 4D space-time planes, and they are $P_{(X, Y, Z, T)}$ to $Q_{(X, Y, Z, T)}$. From $P_{(X, Y, Z, T)}$ to $Q_{(X, Y, Z, T)}$, in sequence, they contained the P space plane, I space plane, V space plane, C space plane and plane of space-time with matter. From $Q_{(X, Y, Z, T)}$ to $P_{(X, Y, Z, T)}$, in the sequence, they contained a plane of space-time with matter, C space plane, V space plane, I space plane and P space plane.

In general, Dimension $Q_{(X, Y, Z, T)}$ represents the existence of all quantum particles, elementary matter particles, various forms of mass-energy, atoms, molecules, the world we humans live in, planets, moons, stars, star systems, galaxies, physical universe (Universe, 2022). As this $Q_{(X, Y, Z, T)}$ can be extended to 'C space plane' and 'V space plane'.

Dimensional planes of P space, I space, V space, and C space represent all the space existence.

So, Everything that exists and that is non-existent falls within the range of these dimensions $P_{(X, Y, Z, T)}$ and dimension $Q_{(X, Y, Z, T)}$.

3 Space and Type of space, Definition of P space

Space is simply defined as "the matter less volume". The space itself is the entity and has specific physical properties.

3.1 Type of space

There are four types of space and they are P space, I space, V space, and C space. These are described in Fig-1 above, and they all fall within the range of $P_{(X, Y, Z, T)}$ and $Q_{(X, Y, Z, T)}$. P space in full form is called Pure space. P space is composed of unit P space elements, and the unit element is called PS_{UE} .

I space in full form is called an Invisible space. I space is composed of the unit I space elements, and the unit element is called IS_{UE} .

V space in full form is called Vibrating space. V space is composed of unit V space elements, and the unit element is called VS_{UE} .

C space in full form is called Charged space. C space is composed of unit C space elements, and the unit element is called CS_{UE} .

3.2 Definition of P Space

In this article, I keep the space definition limited to P space only. P space is defined here with reference to Dimension $Q_{(X, Y, Z, T)}$ and with reference to Dimension $P_{(X, Y, Z, T)}$.

3.2.1 P space definition with reference to Dimension Q(X, Y, Z, T)

P space – "It is the pure space. It is the space with infinite volume, surfaceless, boundaryless, shapeless, positionless, dimensionless (absence of four fundamental dimensions), massless (absence of all fundamental mass (Newtonian mass, Gravitational mass, Inertial mass, Atomic mass, Elementary mass)), motionless (movementless, vibrationless, waveless), mass-energy contentless (due to absence of all fundamental mass (Newtonian mass, Gravitational mass, Inertial mass, Atomic mass, Elementary particle mass)), (forceless (absence of four fundamental forces), matterless (particleless), temperatureless (absence fundamental temperature), with pure time (absence

fundamental time) and having infinite pure energy (absence of energy of I space plane, V space plane, C space plane and $Q_{(X, Y, Z, T)}$ plane)".

Explanation:

For simple understanding, Dimension $Q_{(X, Y, Z, T)}$ is the dimension of the world we live in, and we define the pure space from there. While the pure space is beyond the world we live in. At the pure space, the dimension $Q_{(X, Y, Z, T)}$ does not exist. So, in pure space, all the fundamental mass-energy contents of the world we live in do not exist. Fundamental physical properties (International Systems of Units, 2022) like mass, energy, force, power, pressure, and temperature of the world we live in do not exist in pure space. The tem-

perature becomes irrelevant in pure space. The fundamental time (time dimension of the world we live in) transforms into a pure time dimension. And the fundamental energy (energy of the world we live in) transforms into pure energy.

3.2.2 P space definition with reference to Dimension P(X, Y, Z, T)

P space – "It is the pure space. It is the space with infinite volume, with pure dimension ($P_{(X, Y, Z, T)}$, where $Q_{(X, Y, Z, T)} = 0$), with pure mass (mass in pure dimension only), motionless (movementless, vibrationless, waveless), pure mass-energy content (mass-energy content in pure dimension only), with pure force (Force in pure dimension only), matterless (particleless), with

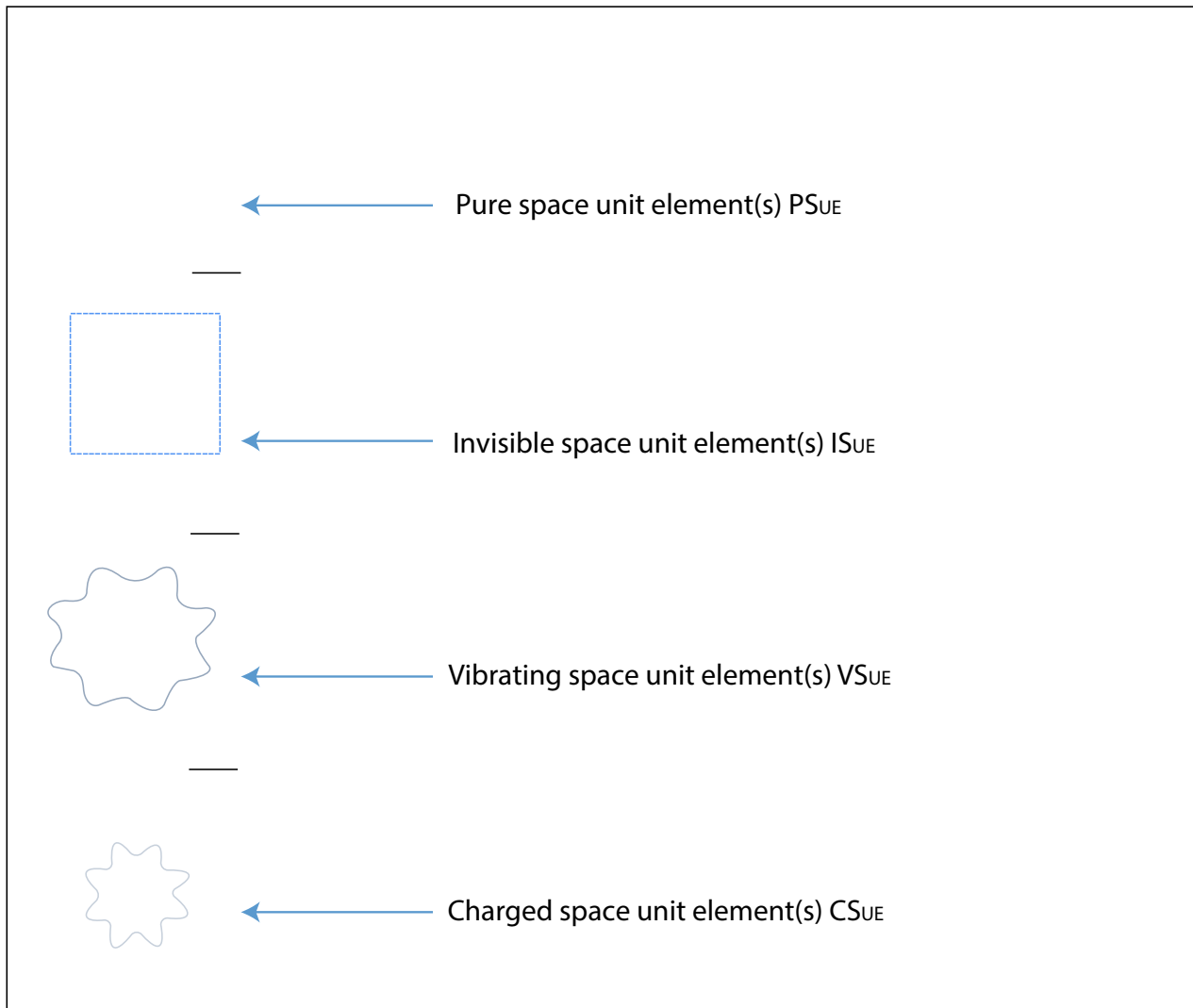


Fig-2.
Space Element transformation

pure temperature (Temperature in pure dimension only), with pure time (Time in pure dimension only) and having infinite pure energy (absence of energy of I space plane, V space plane, C space plane and $Q_{(x, y, z, t)}$ plane)".
"OR"

P space – "It is the pure space. It is the space with infinite volume, surfaceless, boundaryless, shapeless, positionless, with pure dimension ($P_{(x, y, z, t)}$ where $Q_{(x, y, z, t)} = 0$), with pure mass (absence of all fundamental mass (Newtonian mass, Gravitational mass, Inertial mass, Atomic mass, Elementary mass)), motionless (movements, vibrationless, waveless), pure mass-energy content (absence of all fundamental mass-energy content), with pure force (absence of four fundamental forces), matterless (particleless), with pure temperature (absence of fundamental temperature), with pure time ($P_{(x, y, z, t)}$ where $Q_{(x, y, z, t)} = 0$) and having infinite pure energy (absence of energy of I space plane, V space plane, C space plane and $Q_{(x, y, z, t)}$ plane)".

Explanation:

For simple understanding, Dimension $P_{(x, y, z, t)}$ is the dimension beyond the world we live in, and we define the pure space from there. At the pure space, the dimension $Q_{(x, y, z, t)}$ does not exist. So, in pure space, all the fundamental mass-energy contents of the world we live in do not exist. Fundamental physical properties (International Systems of Units, 2022) like mass, energy, force, power, pressure, and temperature of the world we live in do not exist in pure space. The temperature becomes irrelevant in pure space. But pure space exists with pure energy, pure mass, pure force, pure temperature and pure time.

4 Transformation of the space

There are four types of space and they are P space, I space, V space, and C space. Here, I space, V space and C space are transformed forms of P space. Below Fig-2 describes the basic model of the P space unit element (PS_{UE}), I space unit element (IS_{UE}), V space unit element (VS_{UE}), and C space unit element (CS_{UE}) transformation. In above Fig-2, it demonstrates, from top to bottom:

- P space unit element/elements (PS_{UE}) transform/convert to I space unit element/elements (IS_{UE}),

- I space unit element/elements (IS_{UE}) transform/convert to V space unit element/elements (VS_{UE}),

- V space unit element/elements (VS_{UE}) transform/convert to C space unit element/elements (CS_{UE}).

In above Fig-2, it demonstrates, from bottom to top:

- C space unit element/elements (CS_{UE}) transform/convert to V space unit element/elements (VS_{UE}),

- V space unit element/elements (VS_{UE}) transform/convert to I space unit element/elements (IS_{UE}),

- I space unit element/elements (IS_{UE}) transform/convert to P space unit element/elements (PS_{UE}).

As the space element(s) transformation demonstrated here in Fig-2, the result is described in Fig-1, from $P_{(x, y, z, t)}$ to $Q_{(x, y, z, t)}$. It shows that P space transforms to I space, I space transforms to V space, and V space transforms to C space. And the result is 'Space transformation law (First Law)' as described in Fig-4 and Fig-5. As the space element(s) transformation demonstrated here in Fig-2, the result is described in Fig-1, from $Q_{(x, y, z, t)}$ to $P_{(x, y, z, t)}$. It shows C space transforms to V space, V space transforms to I space, I space transforms to P space. And the result is 'Space transformation law (First Law)' as described in Fig-4 and Fig-5.

5 Space and Matter transformation

There are four types of space and they are P space, I space, V space, and C space. Here, I space, V space and C space are transformed forms of P space. The below Fig-3, describes the basic model of the P space unit element (PS_{UE}), I space unit element (IS_{UE}), V space unit element (VS_{UE}), C space unit element (CS_{UE}), and matter unit element transformation. In below Fig-3, it demonstrates, from top to bottom:

- P space unit element/elements (PS_{UE}) transform/convert to I space unit element/elements (IS_{UE}),

- I space unit element/elements (IS_{UE}) transform/convert to V space unit element/elements (VS_{UE}),

- V space unit element/elements (VS_{UE}) transform/convert to C space unit element/elements

(CS_{UE})

- C space unit element/elements (CS_{UE}) transform/convert to space unit element/elements (fundamental matter particle).

Below Fig-3, it demonstrates, from bottom to top:

- Matter unit element/elements (fundamental matter particle) transform/convert to C space unit element/elements (CS_{UE}),
- C space unit element/elements (CS_{UE}) transform/convert to V space unit element/elements

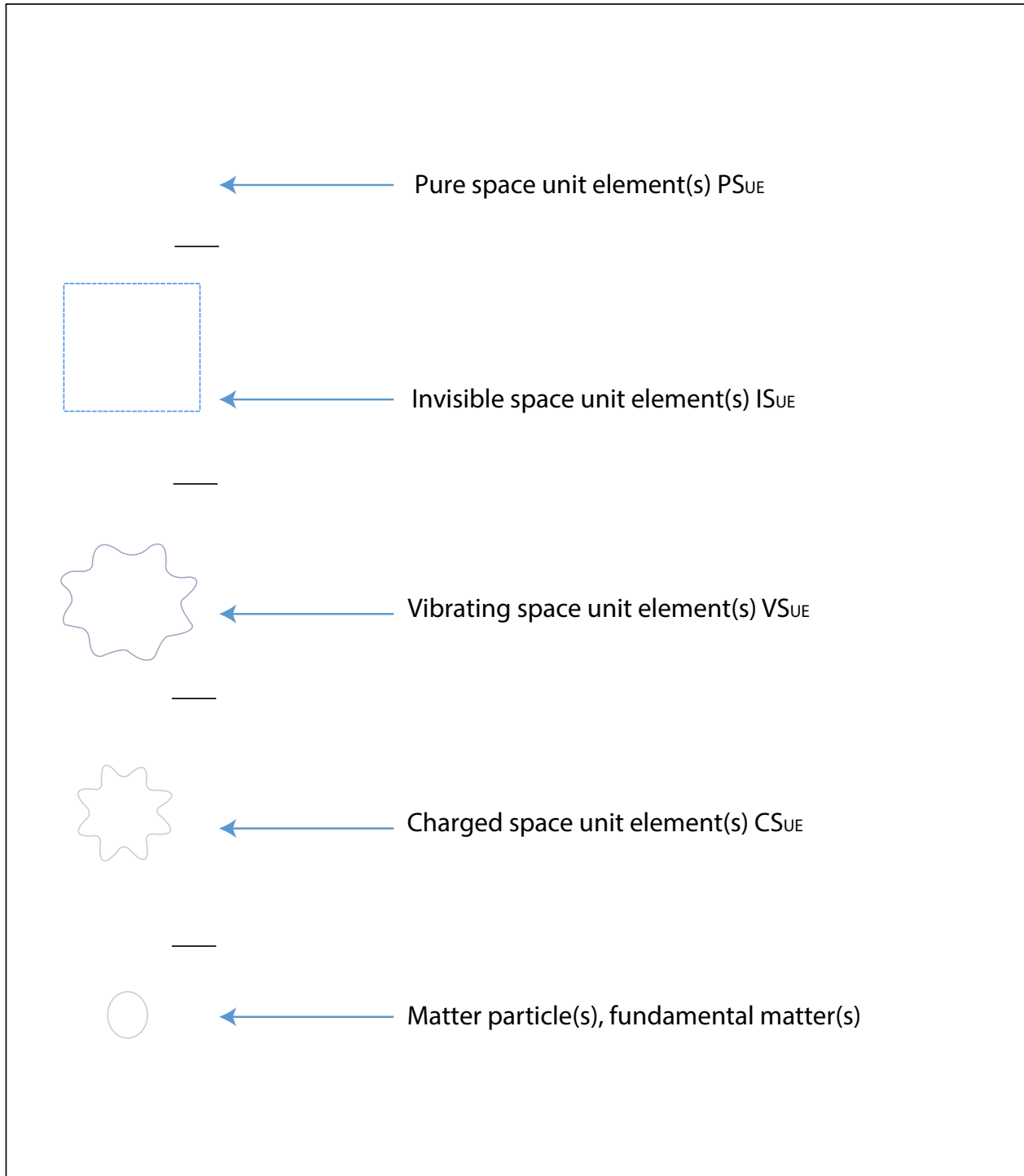


Fig-3.
Space element to Matter element transformation and v/s

- (VS_{UE}),
- V space unit element/elements (VS_{UE}) transform/convert to I space unit element/elements (IS_{UE}),
 - I space unit element/elements (IS_{UE}) transform/convert to P space unit element/elements (PS_{UE}).

As the space element(s)-matter element(s) transformation demonstrated here in Fig-3, the result described in Fig-1, from $P_{(x, y, z, T)}$ to $Q_{(x, y, z, T)}$. It shows P space transforms to I space, I space transforms to V space, V space trans-

forms to C space, C space transforms to V space, V space transforms to I space, I space transforms to P space. And the result is 'Space-Matter Transformation Law (Second Law)'.

6 Space transformation law (First Law)

Fig-4 demonstrates the nature of the First Law. In the below, A represents $PS_{UE}(s)$, A' represents $CS_{UE}(s)$, B represents Pure space, and B' represents Charged space.

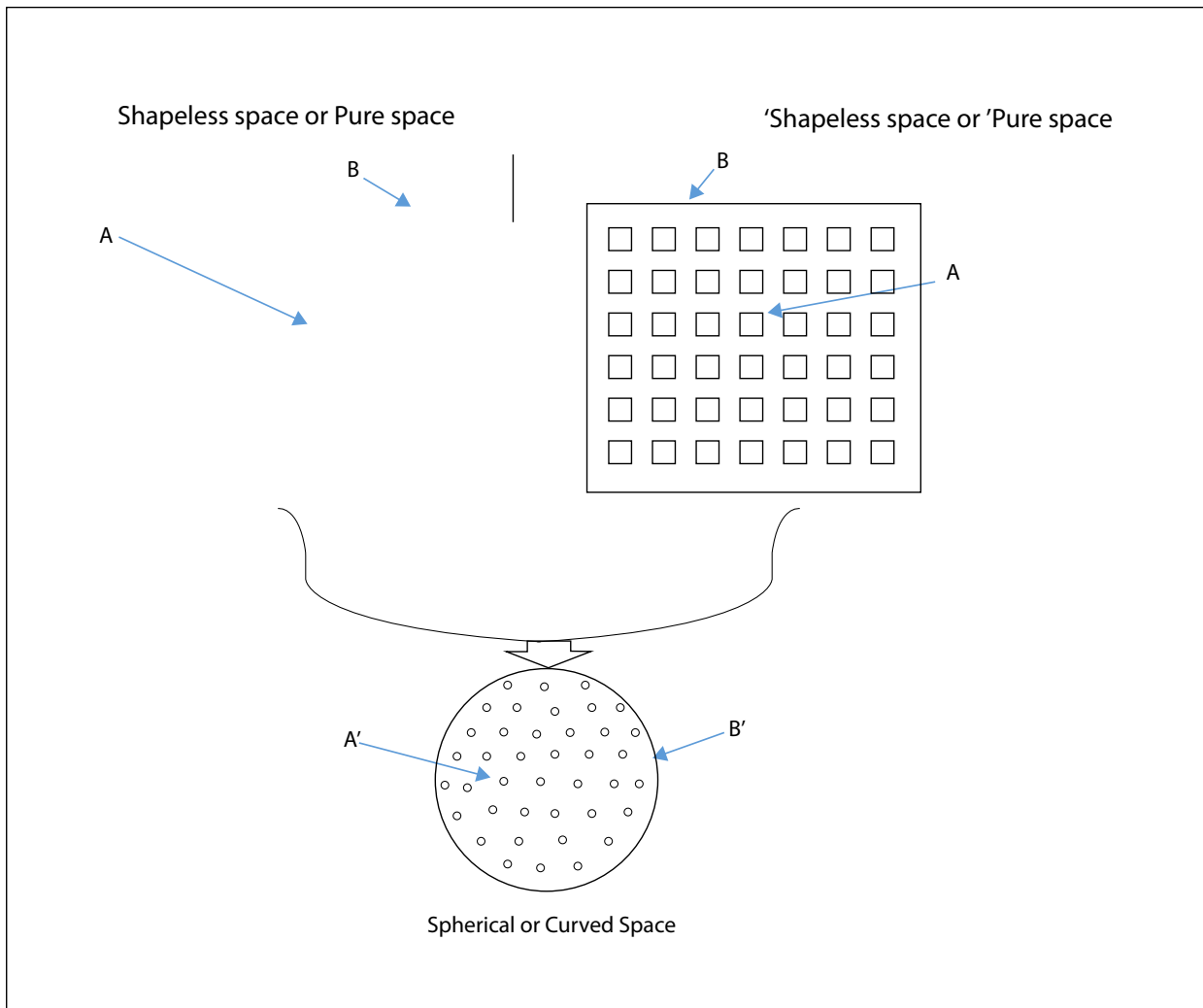


Fig-4.
Space transformation law

forms to C space and C space transforms to space-time with matter. And the result is 'Space-Matter Transformation Law (Second Law)'. As the space element(s)-matter element(s) transformation demonstrated here in Fig-

The First Law is derived from the space transformation method as demonstrated and described in the above 'Transformation of the space'. and it is mentioned in different ways. First Law: "When PS_{UE} transforms to CS_{UE} Then space trans-

forms from shapeless space to spherical shape space."

Or

"When PS_{UE} transforms to CS_{UE} Then space bends to spherical."

Or

"When PS_{UE} transforms to CS_{UE} Then space transforms from shapeless space to curved shape space."

Or

"When PS_{UE} transforms to CS_{UE} , Then space bends to curve."

Or

Or

"When PS_{UE} transforms to CS_{UE} Then space transforms from shapeless P space to curved C space".

It describes more clearly about 'space transformation law'. When space element(s) transform from A to A', then space transforms from B to B' (Where A is $PS_{UE}(s)$, A' is $CS_{UE}(s)$, B is Pure space, and B' is Charged space).

The above Fig-4 can represent alternate way as describes in below Fig-5, with same meaning about 'space transformation law'. It also describes when Space element(s) transform from A to A', then space transforms from B to B'.

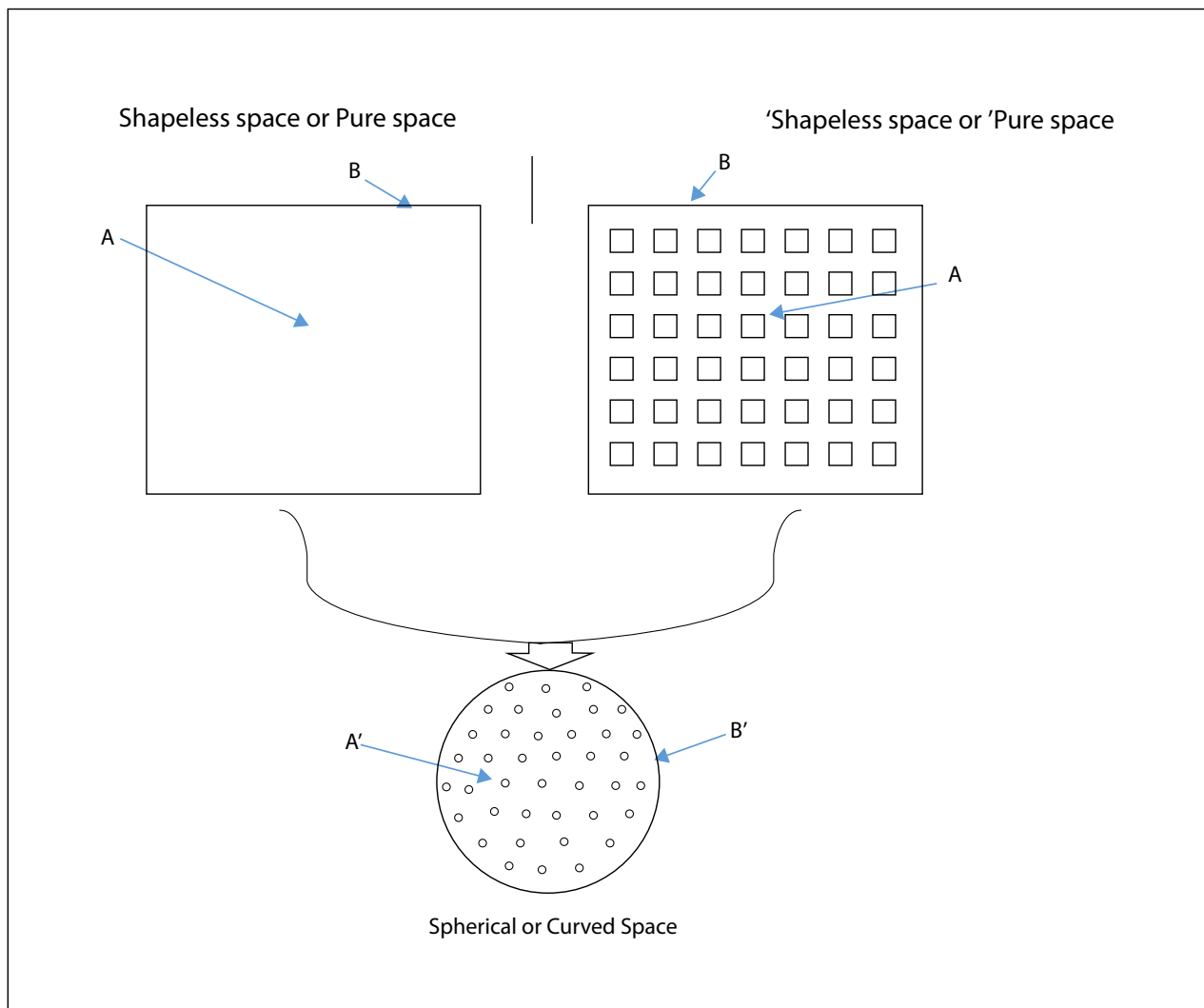


Fig-5.

Alternate way, Space transformation law

"When PS_{UE} transforms to CS_{UE} Then space transforms from shapeless P space to spherical C space."

(Where A is $PS_{UE}(s)$, A' is $CS_{UE}(s)$, B is Pure space, and B' is Charged space). So, with the above simple explanation, the

first law demonstrates "when A transforms to A' then B transforms to B'". In this law, two events, A to A' and B to B', are happening jointly, and both events depend on each other.

7 Space-Matter Transformation Law (Second Law)

The second Law is derived from the space-matter transformation method as demonstrated and described in the above 'Space and Matter transformation'.

Second Law:

"Space converts/transforms to Matter, and Matter converts/transforms to Space."

It is the law that explains the existence of all the matter in the universe (Universe, 2022). Each

and every matter object in the universe, like quantum particles, elementary matter particles, subatomic atoms, molecules, moons, planets, and stars are the transformed form of the space.

In our daily life, what we can see with our open eyes, like food, water, houses, paper, pen, book, computer, mobile, human, animal, bicycle, car, train, road, airplane, land, rock, mountain, water, ocean, fire, iron, gold, earth, moon, planets, sun, stars all these made of/made from space. All these are transformed form of the space.

8 GODEYE and GODEYE MODEL

8.1 GODEYE

Definition of GODEYE "At the same moment of the time which has vision perpendicular outward and has vision perpendicular inward on the unit surface of each and every unit elements that is

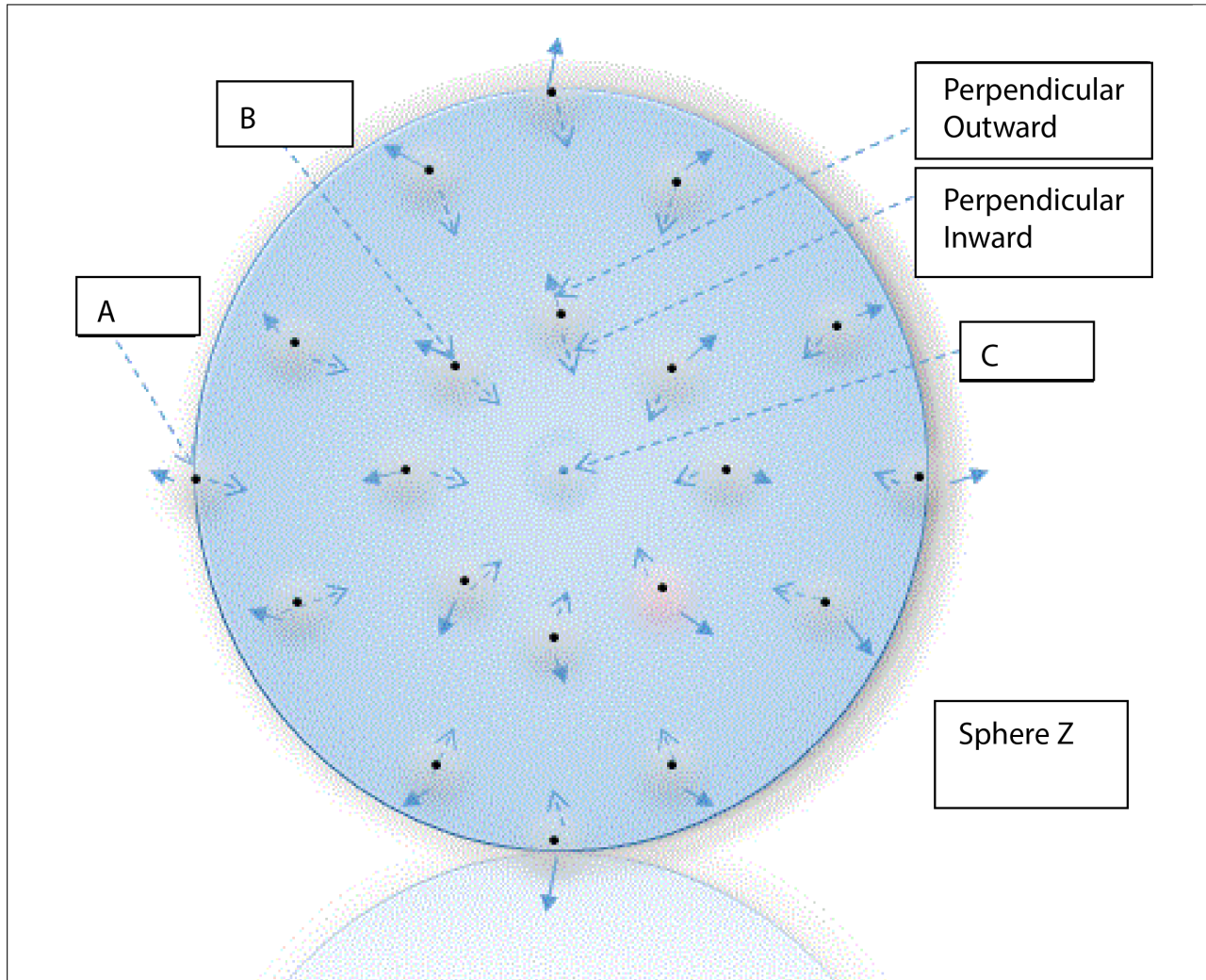


Fig-6.
GODEYE

called GODEYE”

Each and every object(s) and each and every element(s) that exist between Dimension $P_{(x, y, z, t)}$ and Dimension $Q_{(x, y, z, t)}$ are under continuous GODEYE vision for all the time.

8.2 GODEYE Model

In this section, we learn about GODEYE working by applying to any object. When we apply GODEYE to any object, we can say the object itself has perpendicular outward and perpendicular inward vision, and each unit element of the main object has a perpendicular outward and perpendicular inward vision at the same moment of the time.

Here, perpendicular outward vision and perpendicular inward vision, we can say the “Vision” is the “Act”. Now we apply the GODEYE definition in general form with Act. Then, it is called the GODEYE Model Act. This Act can be Vision, can be Dimension, can be Force, can be Flow, can be Transformation, can be Effect and Act itself.

When the Act is the Act, it is called the GODEYE Model Act.

When Act is the Vision, it is called GODEYE Model Vision.

When Act is the Dimension, it is called GODEYE Model Dimension.

When Act is the Force, it is called GODEYE Model Force.

When Act is the Flow, it is called GODEYE Model Flow.

When Act is the Transformation, it is called GODEYE Model Transformation.

When Act is the Effect, it is called the GODEYE Model Effect.

When we apply the GODEYE Act to any object, it is called the GODEYE Model Act on that particular object.

GODEYE Model Act is defined as “the object itself has perpendicular outward and perpendicular inward vision, and each unit element of the main object has a perpendicular outward and perpendicular inward vision at the same moment of the time.”

So, when we apply the GODEYE definition for any Act to any object, it’s called the GODEYE Model Act on that object. Or can say the object is under the GODEYE Model Act.

Let us continue for Vision Act on the object, and we can say the object has GODEYE

Model Vision. In Fig-6 Above, we are applying GODEYE Model Vision to sphere object Z. Working of the GODEYE Model Vision for sphere Z is described as under. Let us apply the GODEYE Vision model to the above sphere object Z. Point A: is the point object on most outer spherical surface of sphere object Z.

Point B: is the point object on the inner spherical circumference of sphere object Z.

Point C: is the central point object of sphere object Z

Most outer spherical circumference of sphere object Z.

Point object A is on the outer spherical circumference of sphere object Z. With applied GODEYE Model Vision on point object A, it has perpendicular vision outward and perpendicular vision inward to the center of the sphere object Z, as represented in Fig-6 above. Like this, each and every point object on most outer spherical circumference has perpendicular vision outward and perpendicular vision toward the center of the sphere. All inner spherical circumferences of sphere object Z

In Fig-6 above, we can see many more points toward the center of the sphere object Z. All those point objects lie on inner spherical circumferences. All those spherical circumferences represent inner sphere objects with the same center point. Point object B is on those inner spherical circumferences of sphere object Z. With applied GODEYE Model Vision on point object B; it has perpendicular vision to outward and perpendicular vision to the center of the sphere object Z as represented in Fig-6 above. Like this with applied GODEYE Model Vision to all those point objects on inner spherical circumferences of those inner sphere objects have perpendicular vision outward and perpendicular vision to the center of the sphere object Z.

Center of sphere object Z

In above Fig-6, the point object C is the center point object of sphere object Z. With applied GODEYE Model Vision, it has perpendicular vision outward and perpendicular vision inward. For more details, The GODEYE Model Vision applied to Point object C as represented and described in Fig-7 below.

Like this with applied GODEYE Model Vision on sphere object Z, all the point objects on most outer spherical surfaces to all inner spherical sur-

faces have perpendicular vision inward and perpendicular outward at the same moment of the time. By Integration of the above processes, we can say

circumferences and for central point element object of the sphere Z are described as under. Level 1: represents spherical object Z

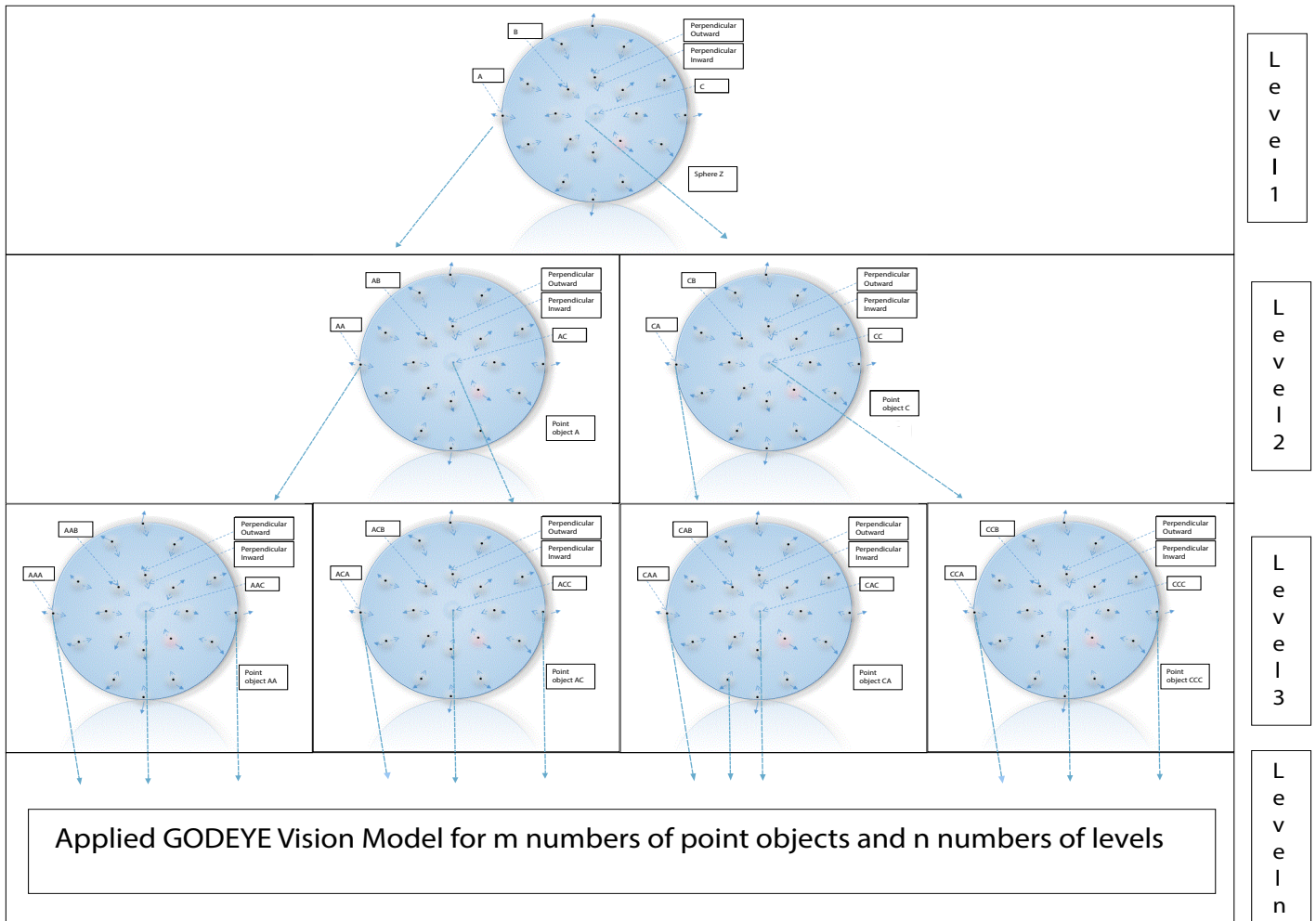


Fig-7.
GODEYE Model

the sphere as the individual object has a spherical vision perpendicular outward from the surface and perpendicular inward from the spherical surface.

AND

By Integration of the above processes, we can say all the inner spherical circumferences including central spherical circumference's spherical bodies have spherical vision perpendicular outward from their surfaces and perpendicular inward from their surfaces.

Next, In Fig-7 below, we continue applying the GODEYE Model Vision to point element objects on the outer spherical circumference, on the inner spherical circumference and center point element of object sphere object Z. Working of the GODEYE Model Vision for sphere Z and for point element objects on all spherical

Level 2: represents point object A on most outer spherical surface of sphere object Z

Level 2: represents point object C at the center of sphere object Z

Level 3: represents point object AA on the most outer spherical surface of a point object A

Level 3: represents point object AC at the center of point object A

Level 3: represents point object CA on most outer spherical surface of point object C

Level 3: represents point object CC at the center of point object C

Point object A, point object B, and point object C are point objects of sphere Z.

Point object AA, point object AB, and point object AC are point objects of a point object A

Point object CA, point object CB, and point object

CC are point objects of point object C
Point object AAA, point object AAB, and point object AAC are point objects of point object AA.
Point object ACA, point object ACB, point object ACC are point objects of point object AC
Point object CAA, point object CAB, and point object CAC are point objects of point object CA.
Point object CCA, point object CCB, and point object CCC are point objects of point object CC.

Level 1: represents

Sphere object Z has vision following the GODEYE Model Vision as described in Fig-6 above. Point object A, point object B, and point object C are point objects of sphere Z.

Level 2: represents

Point object A on most outer spherical surface of sphere Z and Point object A has vision following GODEYE Model Vision as described in Fig-6 above (same as sphere Z) Point object AA, point object AB, and point object AC are point objects of a point object A

Level 2: represents

Point object C at the center object of sphere Z and Point object C has vision following the GODEYE Model Vision as described in Fig-6 above (same as sphere Z) Point object CA, point object CB, and point object CC are point objects of point object C

Level 3: represents

Point object AA on the most outer spherical surface of a point object A and Point object AA has vision following GODEYE Model Vision as described in Fig-6 above (same as sphere Z) Point object AAA, point object AAB, and point object AAC are point objects of point object AA.

Level 3: represents

Point object AC at the center object of point object A and Point object AC has vision following the GODEYE Model Vision as described in Fig-6 above (same as sphere Z) Point object ACA, point object ACB, point object ACC are point objects of point object AC

Level 3: represents

Point object CA on most outer spherical surface of point object C and Point object CA has

vision following GODEYE Model Vision as described in Fig-6 above (same as sphere Z) Point object CAA, point object CAB, and point object CAC are point objects of point object CA

Level 3: represents

Point object CC at the center object of point object C and Point object CC has vision following the GODEYE Model Vision as described in Fig-6 above (same as sphere Z) Point object CCA, point object CCB, and point object CCC are point objects of point object CC.

Likewise all point object B, point object AB, point object CB, Point object AAA, point object AAB, point object AAC, Point object ACA, point object ACB, point object ACC, Point object CAA, point object CAB, point object CAC, Point object CCA, point object CCB, point object CCC have vision following GODEYE Model Vision as described in Fig-6 above (same as sphere Z).

Level n: represents n numbers of level

Point objects m are m numbers of point objects of n numbers of level. And all point objects m have GODEYE Model Vision as described in Fig-6 above (same as sphere Z).

Level 1, level 2, level 3... Level n is acting at the same moment of time. So, we find sphere Z and all the point elements of sphere Z have spherical vision perpendicular outward and spherical vision perpendicular inward at the same moment of time. There is nothing left without vision as the act is in the same moment of time.

9 Universe Expansion and Contraction

The phenomena of universe expansion and contraction is the change in universe volume itself, which is happening due to space elements and matter elements transformation. With reference to $Q_{(X, Y, Z, T)}$ 'Matter elements' transform to 'C space elements (CS_{UE})' transform to 'V space elements (VS_{UE})' transform to 'I space elements (IS_{UE})' transform to 'P space elements (PS_{UE})' is the phenomena of expansion of the universe.

And

'P space elements (PS_{UE})' transform to 'I space elements (IS_{UE})' transform to 'V space elements (VS_{UE})' transform to 'C space elements (CS_{UE})' transform to 'Matter elements' is the phenomena of contraction of the universe.

10 Gravity and Gravitational Force

Before we learn about Gravity and Gravitation Force, let us recall the GODEYE Model to define the GODEYE Model Flow, GODEYE Model Transformation, and GODEYE Model Force.

GODEYE Model and When Act is Flow, it is called GODEYE Model Flow.

GODEYE Model Flow is defined as "the object itself has perpendicular outward and perpendicular inward Flow, and each unit element of the main object has perpendicular outward and perpendicular inward Flow at the same moment of the time."

GODEYE Model and When Act is Transformation, it is called GODEYE Model Transformation.

is Force, it is called GODEYE Model Force.

GODEYE Model Force is defined as "the object itself has perpendicular outward and perpendicular inward Force, and each unit element of the main object has perpendicular outward and perpendicular inward Force at the same moment of the time."

In Fig-8 below, we are applying the above GODEYE Models to define Gravity and Gravitation Force. From above Fig-8 , we define Gravity and Gravitation Force, and describes scope of gravity and its force as under.

10.1 Gravity

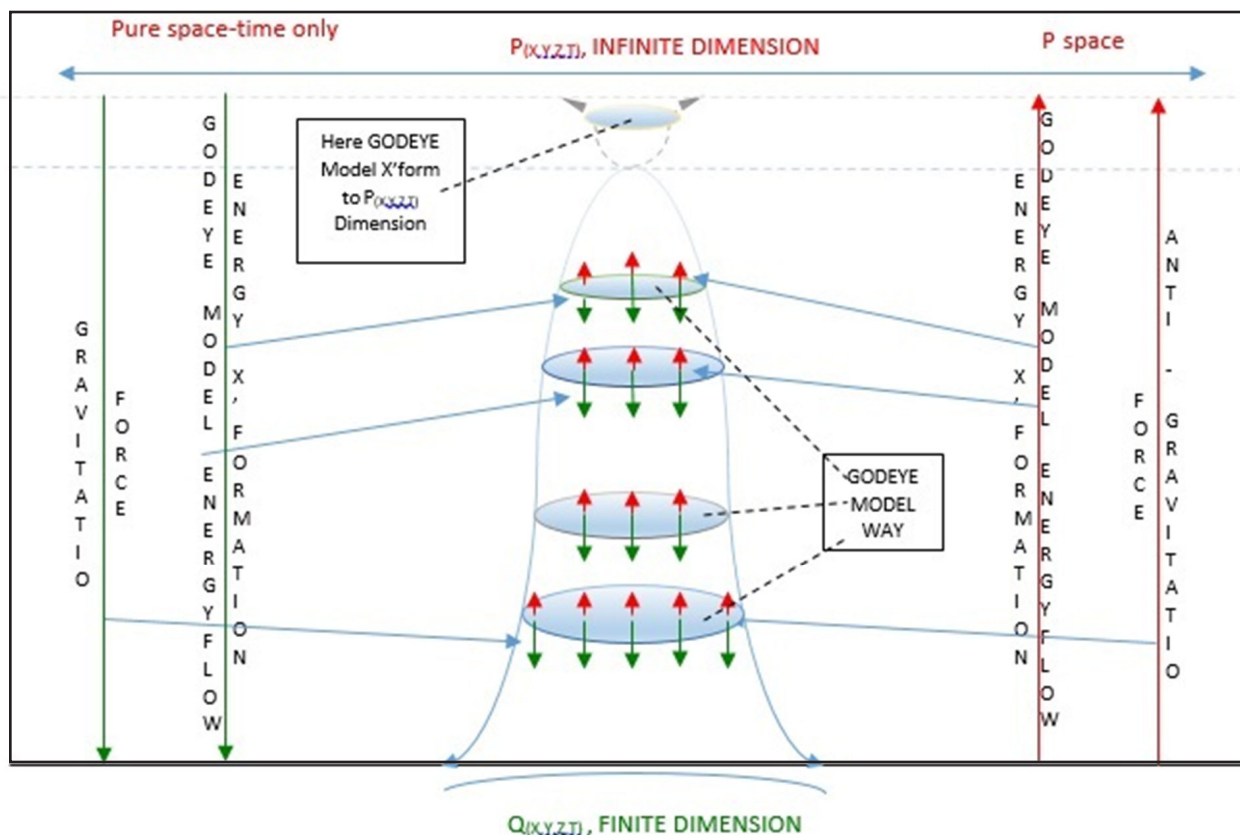


Fig-8.
Phenomena of Gravity

GODEYE Model Transformation (X' formation) is defined as "the object itself has perpendicular outward and perpendicular inward Transformation (X' formation), and each unit element of the main object has perpendicular outward and perpendicular inward Transformation (X' formation) at the same moment of the time."

GODEYE Model and When Act itself

Definition of Gravity: The transformation/Flowing of energy following 'GODEYE MODEL Transformation/Flow' from Dimension $P_{(x, y, z, t)}$ to Dimension $Q_{(x, y, z, t)}$ is called Gravity.

Definition of Anti-Gravity: Transformation/Flowing of energy following 'GODEYE MODEL Transformation/Flow' from Dimension $Q_{(x, y, z, t)}$ to Dimension $P_{(x, y, z, t)}$ is called Anti-Gravity.

10.2 Gravitation Force

Definition of Gravitational Force: Force applicable for transformation/flowing of energy following 'GODEYE MODEL Transformation/Flow' from Dimension $P_{(x, y, z, t)}$ to Dimension $Q_{(x, y, z, t)}$ is called Gravitational Force.

Definition of Anti-Gravitational Force: Force applicable for transformation/flowing of energy following 'GODEYE MODEL Transformation/Flow' from Dimension $Q_{(x, y, z, t)}$ to Dimension $P_{(x, y, z, t)}$ is Anti-Gravitational Force.

10.3 Scope of the Gravity

Gravity is the continuous effect on each and every element from Dimension $P_{(x, y, z, t)}$ to Dimension $Q_{(x, y, z, t)}$ and from Dimension $Q_{(x, y, z, t)}$ to Dimension $P_{(x, y, z, t)}$. Gravity applies to all the objects including Space, CMB, COSMOS, Multi universe, Universe, Galaxy, Black hole, Star, planet, atomic, sub atomic, fundamental particles, Quantum particles which exist between Dimension $P_{(x, y, z, t)}$ and Dimension $Q_{(x, y, z, t)}$. Gravity works on each and every object(s), each and every element(s) for all the time and everywhere.

11 Dimension of Observable Universe and beyond

Everything that exist within observable universe (Universe, 2022) and beyond all fall within range of $P_{(x, y, z, t)}$ and $Q_{(x, y, z, t)}$. Thus the dimension $P_{(x, y, z, t)}$ and $Q_{(x, y, z, t)}$ together called as the 'dimension of totality of existence' or 'dimension of observable universe and beyond'. It is the dimension of space-time and beyond. It is the dimension of the totality of existence, the existence of universe, and existence beyond. It is an 'end-to-end dimension'. Everything that exists and that does not exist falls within these dimensions. We can also call as the 'finite-infinite dimension'.

12 Results and Discussion

With my continuous deep interest in science since my 10th standard (Year 1994). In the year 1997, I wrote a personal note about my thought travel of 'infinite Space'. During the year 2002-2005, again I wrote a personal note about relativity which combined examples from academics and my daily journey experience by train to my working station and wrote about gravitation with many questions in mind, with daily observations, with daily life experiences.

Lastly my deep theoretical research from 2018-2022, which I present here in this research article. It talks about existing space-time dimensions (X, Y, Z, T) (Four-dimensional space, 2022). From this dimension, I have derived two dimensions, $P_{(x, y, z, t)}$ and $Q_{(x, y, z, t)}$, and associate these dimensions with space-time only and space-time with matter. These dimensions, $P_{(x, y, z, t)}$ and $Q_{(x, y, z, t)}$ contain the entire existence of space and the entire existence of the universe (Universe, 2022) within. In basic, this existence is divided into two categories space and matter. The definition of space as an entity with physical properties further derives the transformation of space in various forms of space and the transformation of space element(s) to matter particle(s) and v/s. These transformation methods explain the fundamental nature of space and matter within $P_{(x, y, z, t)}$ and $Q_{(x, y, z, t)}$. Finally, these changes in space element(s) derive the 'First Law of Space Transformation'. and changes of space element(s) and changes of matter element(s) derive the 'Second Law of Space-Matter Transformation'. The most popular theories of general relativity (General relativity, 2022) (General Relativity Explained simply & visually, 2020), Loop Quantum Gravity (LQG) (Loop Quantum Gravity Reveals What Came Before the Big Bang, 2018) (String theory vs Loop quantum gravity: Wild hunt for Quantum Gravity:, 2020), Higgs field (Higgs boson, 2022), aether medium (Aether (classical element), 2022), string theory (String theory, 2022), theory of everything (Theory of everything, 2022), dark matter (Dark matter, 2022), ordinary matter (Standard Model, 2022) and dark energy (Dark energy, 2022) have matching subject within my research. My research is partially in contrast with general relativity in terms of existence of the space and it is partially inline in terms of bending of the space (General Relativity Explained simply & visually, 2020). My research is partially in line with Loop Quantum Gravity (LQG) in terms of existence of the space quanta (Loop Quantum Gravity Reveals What Came Before the Big Bang, 2018) (String theory vs Loop quantum gravity: Wild hunt for Quantum Gravity:, 2020). My research is partially in contrast with string theory in terms of the existence of the space, and it is partially in line with string theory in terms of extra dimensions (String theory, 2022) (String

Theory Simplified: A bunch of BS? Or Answers Why Do We Exist?, 2019) (String theory vs Loop quantum gravity: Wild hunt for Quantum Gravity:, 2020). My research is partially in contrast with the Higgs field in terms of the existence of the Higgs field in space, and it is partially in line with the universal existence of the Higgs field (Higgs boson, 2022) (The Higgs boson and Higgs field explained with Simple Analogy, 2018). My research is partially in contrast with Aether in terms of the existence of the medium in space, and it is partially in line with the concept of filling the space with an aether medium (Aether (classical element), 2022). The model presented here also consider unification of classical mechanics (Classical mechanics, 2022) and quantum mechanics (Quantum mechanics, 2022) including singularity (Gravitational singularity, 2022). Actually, it presents the true nature of space within the observable universe (Universe, 2022) and beyond.

My research may address the most mysterious subjects in recent days. The space itself is the major part of existence within the observable universe (Universe, 2022) and beyond. The major space of the universe (Universe, 2022) is in the form of V space and C space. These forms of V space and C space have energy and mass, which directly match the most discussed concepts of dark energy (Dark energy, 2022) and dark matter (Dark matter, 2022), which constitute a major part of the universe (Universe, 2022).

Also, my research may put more light on research field of elementary particle (Standard Model, 2022) , duality nature of quantum particle (Quantum mechanics, 2022), standard model (Standard Model, 2022) and theory of everything (Theory of everything, 2022).

Here, the definitions of gravity and gravitation force overcome the limitations of gravitational theories of Sir Isaac Newton and Sir Albert Einstein at very fundamental level.

This is a very basic and limited research. In this research, the space is composed of unit elements. Pure space has a unit element PS_{UE} , I space has a unit element IS_{UE} , V space has a unit element VS_{UE} , and C space has a unit element CS_{UE} . In the space transformation and space-matter transformation methods, it is not exactly mentioned that either it is a single unit element or multiple unit elements are transforming. Here,

the $Q_{(x, y, z, T)}$ is the variable 4D plane of the 'space-time (space-time with matter)' and transient of $P_{(x, y, z, T)}$, but the scope of $Q_{(x, y, z, T)}$ is limited to 'space-time with the matter' and it is not well extended and discussed in details to 'charged space-time'. and not extended and discussed in details to 'vibrating space-time'. Also, Definitions of PS_{UE} , IS_{UE} , VS_{UE} , CS_{UE} , I space, V space and C space are not mentioned in this research article. So, the space transformation model, space-matter transformation model, and model for the 'dimension of the observable universe (Universe, 2022) and beyond' are at their very basic level which do not include an explanation for the unification of classical mechanics (Classical mechanics, 2022) and quantum mechanics (Quantum mechanics, 2022), for singularity (Gravitational singularity, 2022), and for unified gravity in this research article. Similarly, the space definitions and methods here do not include any mathematical values.

The next crucial research to follow shall include definitions of PS_{UE} , IS_{UE} , VS_{UE} , CS_{UE} , and I space, V space, C space with its physical properties like energy, mass, force and more. These definitions shall advance the definition of P space, the models for space transformation, a model for space-matter transformation, and the model for 'finite-infinite dimension'. Especially, it shall advance the model of 'end to end dimension'. shall extend the scope of $Q_{(x, y, z, T)}$ to 'charged space-time'. to 'vibrating space-time'. and that will put more light on the understanding of the observable universe (Universe, 2022). Also, the most important open questions for gravity collapse at the horizon of a black hole (What would we see if we fell INSIDE a BLACK HOLE? What's beyond the Event Horizon?, 2019), singularity (Gravitational singularity, 2022), and unified gravity (Quantum Gravity: How quantum mechanics ruins Einstein's general relativity, 2020) to be answered with following up research.

To know the mystery of space is very important to know the mystery of the universe and beyond. To know the nature of space is very important to know the nature of the universe and beyond, which would not be possible without the existence of extra dimensions (String theory, 2022). The extra dimensions are required to unite quantum mechanics (Quantum mechanics, 2022) and classical mechanics (Classical me-

chanics, 2022), to describe the true nature of the universe (Universe, 2022) and beyond, and describe the geometry, a mathematical model of the universe (Universe, 2022) and beyond.

The $P_{(x, y, z, t)}$, which is constant in physical nature, is also called $C_{(x, y, z, t)}$ and $Q_{(x, y, z, t)}$, which is variable, is physical nature is also called $V_{(x, y, z, t)}$ are together the dimensions of the observable universe (Universe, 2022) and beyond. It is the 'end-to-end dimension'. Everything that exists and that does not non-exist falls within these dimensions. I may also call it the 'finite-infinite dimension'.

The finite and infinite limit of the universe (Universe, 2022), the existence of space and matter and its boundaries. The limit or boundaries are covered by 'dimensions of the observable universe and beyond'. and the existence in between with its true nature of behavior is perfectly governed by space itself and by its transformation laws. It is the fundamental nature of entire existence that is considered to unite quantum mechanics (Quantum mechanics, 2022) and classical mechanics (Classical mechanics, 2022) and beyond. It covers the true dimension of the observable universe (Universe, 2022) and beyond. It simplifies the dimension of existence and non-existence (beyond the universe).

There are possibilities that with future progress of this research may require and may cause any changes in the naming of space, in the naming of dimension, in the definition of standard model (Standard Model, 2022), in nature of space-time (Spacetime, 2022), in definition of universe (Universe, 2022) with its contents and universal law, definition of gravity (General relativity, 2022), even it may cause any changes in understanding of dark matter (Dark matter, 2022) and dark energy (Dark energy, 2022).

13 Conclusions

This research article represents the fundamentals of the entire existence of space, matter and universe (Universe, 2022), like what is it? Where does it come from? How does it come? And how does it exist? And what is the gravity? It explains the existence of space, matter, and space-time (Spacetime, 2022) with matter and extra dimensions at a very fundamental level. By defining the 'end to end dimension'. all the existence of space, matter, the observable uni-

verse (Universe, 2022) and beyond falls within the range of these dimensions. These extra dimensions will play an important role in describing geometry, mathematical models of the universe and beyond. With the definition of space, space transformation method, space-matter transformation method, space laws and extra dimensions, it demonstrates the fundamental behavior of entire existence and establishes a fundamental relationship between space and matter, which fall within these 'finite to infinite dimensions'.

The definitions of GODEYE and the GODEYE Model explain the phenomena of universe expansion-contraction and phenomena of gravity-anti gravity and gravitational force-anti gravitational force at a very fundamental level for the dimension of the observable universe and beyond. While all other properties already included in P space definition only and for the rest of type of space the definitions are mostly limited to physical properties of volume, so the methods and models represented here are at its very basic level. The follow up research may require more definitions of P space element, I space and its element, V space and its element, and C space and its element, to advance the methods and models. This theoretical research is the foundation for follow-up future research in continuation with more definitions, advanced methods, and models with more properties like energy, time, mass, force and more. In the future, the subject of the dimension of the observable universe (Universe, 2022) and beyond shall be broadened by involving the behavior of the time dimension and other properties of space and matter.

This research, being the foundation, will be applied to carry out more research in the future. Those include the advanced model for space transformation, advanced model of dimension, dimension transformation, end-to-end gravity, singularity (Gravitational singularity, 2022), gravity collapse at the horizon of black hole (Theory of everything, 2022), theory of everything (Theory of everything, 2022), expansion-contraction of space & universe, dark matter (Dark matter, 2022) and dark energy (Dark energy, 2022).

References

- Aether (classical element). (2022, September 9). (Wikipedia) Retrieved September 19, 2022, from Wikipedia: [https://en.wikipedia.org/w/index.php?title=Aether_\(classical_element\)&oldid=1109302417](https://en.wikipedia.org/w/index.php?title=Aether_(classical_element)&oldid=1109302417)
- Classical mechanics. (2022, August 30). (Wikipedia) Retrieved October 1, 2022, from https://en.wikipedia.org/w/index.php?title=Classical_mechanics&oldid=1107569634
- Dark energy. (2022, September 24). (Wikipedia) Retrieved September 27, 2022, from https://en.wikipedia.org/w/index.php?title=Dark_energy&oldid=1112144068
- Dark matter. (2022, September 22). (Wikipedia) Retrieved September 27, 2022, from https://en.wikipedia.org/w/index.php?title=Dark_matter&oldid=1111746451
- Four-dimensional space. (2022, July 25). (Wikipedia) Retrieved September 19, 2022, from https://en.wikipedia.org/w/index.php?title=Four-dimensional_space&action=history
- Fundamental interaction. (2022, October 3). (Wikipedia) Retrieved October 5, 2022, from https://en.wikipedia.org/w/index.php?title=Fundamental_interaction&oldid=1113901126
- General relativity. (2022, September 1). (Wikipedia) Retrieved September 19, 2022, from https://en.wikipedia.org/w/index.php?title=General_relativity&action=history
- General Relativity Explained simply and visually. (2020, June 20). (YouTube) Retrieved September 28, 2022, from <https://www.youtube.com/watch?v=tzQC3uYL67U>
- Gravitational singularity. (2022, August 28). (Wikipedia) Retrieved October 1, 2022, from https://en.wikipedia.org/w/index.php?title=Gravitational_singularity&oldid=1107233804
- Higgs boson. (2022, September 1). (Wikipedia) Retrieved September 19, 2022, from https://en.wikipedia.org/w/index.php?title=Higgs_boson&oldid=1107958999
- International Systems of Units. (2022, September 5). (Wikipedia) Retrieved September 19, 2022, from https://en.wikipedia.org/w/index.php?title=International_System_of_Units&oldid=1108667575
- Loop Quantum Gravity Reveals What Came Before the Big Bang. (2018, December 27). (YouTube) Retrieved September 19, 2022, from <https://www.youtube.com/watch?v=dpmx8D5CXRA>
- Mass. (2022, September 2). (Wikipedia) Retrieved October 5, 2022, from <https://en.wikipedia.org/w/index.php?title=Mass&oldid=1108111942>
- Minkowski space. (2022, August 11). (Wikipedia) Retrieved September 19, 2022, from https://en.wikipedia.org/w/index.php?title=Minkowski_space&oldid=1103788203
- Quantum Gravity: How quantum mechanics ruins Einstein's general relativity. (2020, October 17). (YouTube) Retrieved September 19, 2022, from <https://www.youtube.com/watch?v=S3Wtat5QNUA>
- Quantum mechanics. (2022, September 29). (Wikipedia) Retrieved October 1, 2022, from https://en.wikipedia.org/w/index.php?title=Quantum_mechanics&oldid=1113030086

- Relativity 110b: Cosmology - FLRW Metric Derivation (3 possible geometries). (2022, July 2). (YouTube) Retrieved September 30, 2022, from https://www.youtube.com/watch?v=iERBF2_TnXo
- Spacetime. (2022, September 1). (Wikipedia) Retrieved September 19, 2022, from <https://en.wikipedia.org/w/index.php?title=Spacetime&oldid=1107878726>
- Standard Model. (2022, September 3). (Wikipedia) Retrieved September 19, 2022, from https://en.wikipedia.org/w/index.php?title=Standard_Model&oldid=1108241997
- String theory. (2022, July 16). (Wikipedia) Retrieved September 29, 2022, from https://en.wikipedia.org/w/index.php?title=String_theory&oldid=1098548243
- String Theory Simplified: A bunch of BS? Or Answers Why Do We Exist? (2019, February 1). (YouTube) Retrieved September 29, 2022, from <https://www.youtube.com/watch?v=37JKlkow7v0>
- String theory vs Loop quantum gravity: Wild hunt for Quantum Gravity:. (2020, October 31). (YouTube) Retrieved September 19, 2022, from <https://www.youtube.com/watch?v=3jKPJa-f3cQ>
- The Higgs boson and Higgs field explained with Simple Analogy. (2018, September 15). (YouTube) Retrieved September 19, 2022, from <https://www.youtube.com/watch?v=zAazvVIGK-c>
- Theory of everything. (2022, September 18). (Wikipedia) Retrieved September 27, 2022, from https://en.wikipedia.org/w/index.php?title=Theory_of_everything&oldid=1110883215
- Three-dimensional space. (2022, August 23). (Wikipedia) Retrieved September 19, 2022, from https://en.wikipedia.org/w/index.php?title=Three-dimensional_space&action=history
- Universe. (2022, September 3). (Wikipedia) Retrieved September 19, 2022, from <https://en.wikipedia.org/w/index.php?title=Universe&oldid=1108241156>
- What is Dark Energy made of? Quintessence? cosmological constant? (2020, March 14). (YouTube) Retrieved September 19, 2022, from <https://www.youtube.com/watch?v=YQq0VdJApzU>
- What is dark matter made of? Leading theories explained: Axion, Wimp, Machos. (2020, February 29). (YouTube) Retrieved September 19, 2022, from https://www.youtube.com/watch?v=915Vky7r_gk
- What is reality? String theory & multiverse visualized. (2019, November 23). (YouTube) Retrieved September 29, 2022, from <https://www.youtube.com/watch?v=DpFlqcMwh2U>
- What would we see if we fell INSIDE a BLACK HOLE? What's beyond the Event Horizon? (2019, August 10). (YouTube) Retrieved September 19, 2022, from https://www.youtube.com/watch?v=iUr8Obv_DeA

