

# A Scientific Study of the Unidentified Flying Objects in accordance with Anti-Gravity

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## ABSTRACT

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Electrohydrodynamics, semi-quantum kinetics, anti-gravity, electro-gravitics, gravito-electrics, all these are classified as the 'black' area of theoretical and experimental physics because, these theories tend to explain the amazing science behind the alien means of propulsion, thereby giving answers to many questions like, how they travel such long distances? Do they need any kind of fuel? If so, then why are they not seen to be massive like the rockets with 80-90% fuel capacities? Do they travel in perpetual motion? Is the fact really true that they can harness energy from the nature? Then, do they travel at a speed faster than that of light? These, along with many facts are still unexplainable to modern day physics, its not unexplainable but rather its covert and classified, government does not want to disclose the science behind UFOs that they have gathered through reverse engineering of 'crashed alien crafts' and through the covert research of many scientists who were engaged in black R&D operations. This paper will answer the researches and physics behind those unexplained phenomena's because, once explained they tend to shake the pillars of modern physics.

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## I. INTRODUCTION

Conventional rockets which are in use today for space exploration, asteroid mining, sending robots to space, human spaceflight, building space structures cannot be the ultimate mode of propulsion. This is because the thrust to efficiency ratio of them is between 0.3 to 0.7 Newton/KiloWatt[1]. And the main constraints that humans are facing right now, is that very large

rockets have to be made with a fuel capacity consisting of 80-90% of the rocket body. Obviously, the payload becomes small, or required to keep small, as the more payload demands more fuel and also the more distance requires more fuels with a higher efficiency with less burnout time. But humans or Earthman's have miserably failed in that both theoretically and experimentally. Another important issue to point out is the time period of the journey

which depends wholly on the velocity of the vehicle. The time is so large for even a journey to a Earth's natural satellite or out neighboring planets, that this is practical to say we are lagging in terms of thrust to weight ratio, thrust to power ratio and velocity. These drawbacks are major sources for the limitation of humans in exploring inter-stellar or inter-galactic space.

- Law's of thermodynamics: This put constraints that energy can't be created nor be destroyed and entropy cannot decrease as its always an increment as a function of time.
- The monopole nature of gravity: This put a constraints that gravity is always attractive in this universe (I'm not considering dark energy which is actually a negative pressure).



**Fig. 1.** *Roswell Daily Record*, July 8, 1947, announcing the capture of a flying saucer, Location: Lincoln County, New Mexico, United States. The most prominent evidence in the history of UFOs.

Some major science pillars that governs these type of rocket propulsions having been used by every rocket industry are,

- Special theory of relativity: This constrains a limitation on the speed of an object at upto the light speed.
- General relativity: This constrains our believe to make gravity as a geometry of spacetime and acts as a plausible source of warping.
- Newton's laws of motions: This put constraints that without imparting any momentum, a force cannot work, and the reaction force is necessary to get a thrust.

Now, pacing with all these constraints, humans can never be able to achieve a scale of a Mega-Parsec ( $10^6$  Pc) or Giga-Parsec ( $10^9$  Pc) (where 1 Pc = 3.28 Lys) within an achievable period of human life spans, with a high speed, and with the least fuel or perpetual motion if necessary.

Therefore, its time to find a new avenue of physics. But where to look out for the evidence? The aliens that have been visiting Earth since the pre-historic times as seen from various cave paintings to architectures to paintings in paper at a much later time, to some remarkably phenomena's that ancients have done which are still unexplainable to modern engineering? Does that mean that our ancestors have been visited by aliens? Yes, it says so, and not only from history but also from several modern 18<sup>th</sup> , 19<sup>th</sup> 20<sup>th</sup> 21<sup>st</sup> century sightings from Earthmen while on farming on the grounds, or during travelling in highways, or the air-force sightings, sightings from the International Space Stations, other man made space vehicles or simply the flushing out of secret government projects that involves 'reverse engineering' of the 'crashed UFOs' or the 'autopsy of the alien bodies' etcetera etcetera.

There are around 2,000 exoplanetary solar systems within a radius of 50 Lys from Earth and among them 64 contains the G-star like our Sun, 15% having Earth-sized planets in habitable or Goldilocks' zone[2-4] therefore, there exists a possibility, that the sightings that are happening are coming from them. Then, there are aliens, and how should we assume that we are the alone in the universe having an

observable part of 93 billion Lys and some billion galaxies with each galaxies holding an immense number of solar systems. Therefore, there are aliens and they are coming to Earth, so, there must have been some planets either nearby or faraway from Earth, from which they are coming. So, it is likely possible that, as per the eye witnesses and witness of ancient sculptures, paintings or stories, those are not shaped like our conventional rockets and are mostly shaped like a disk, which is presumably because, the disc offers greater advantages with a compact size devoting of any fuel, harnessing the ambient gravity field as fuels, utilizes them perpetually, travelling at a speed much more greater than that of light[1], breaking all the Earthian pillars of modern physics with a high thrust to weight ratio as described and explained properly in the book [1]. Here, we will try to explain some important portions of this book [1] by modifying it as per the necessities of the paper and try to incorporate the summary (or as a review of some aspects) which are worth discussing when it comes to explain the 'field propulsion' technology used by aliens in their flying craft and the physics behind it.

**METHODOLOGY:** Most (almost all!) modern rockets used the hybrid propulsion systems as the source of their fuels which is a combination of solid and liquid propulsion systems. Solid propellant when ignited wouldn't come to a stop unless they are exhausted, while, liquid propellants can be released and stopped, in other words controlled as per the needs of the rocket to maneuver. Ion-thrusters are also used in deep space propulsions. There are other unconventional propulsions but the main fact is that none of which are strong enough to fit for inter-stellar or inter-galactic travels. Therefore, new windows of propulsion needs to be searched for and to be opened and here comes the anti-gravitic field propulsion systems.

Nature never lefts to amuse us. There is gravity everywhere in this cosmos and what if! We can use

this gravity and combining with electromagnetism, harness anti-gravity which would act just like an invisible shield of gravity at the top of the spaceship attracting it towards up, and an invisible shield of anti-gravity which being under the spaceship repels it from Earth and this helps the spaceship to move and maneuver in space[1]. However, this implies that the spaceship is capable of generating its own gravity shield across it and used it or harnesses it to conquer space-time. Now, this shows us an inert link between 'electromagnetism and gravity', the two among the four fundamental forces of nature. Superstring theory shows us that how complicated it is to unify the both forces, but on the other hand the 'semi-quantum' kinetic shows us that, this unification is very easily possible if and only if we consider a simple theory that is,

- ✓ MICHAELSON-MORLEY experiment [5] somehow gone wrong and there is superluminiferous aether or ether in space-time and the spaceship which could unite these two forces, can generate anti-gravity which can provide a thrust to power ratio of more than 70,000 Newton/KiloWatt [1] as compared to normal rockets and travels with the speed which is amazingly high by the vibrations, that is expansions and contractions of the etheronic medium which is a plasma spreaded throughout the space-time. Detailed theory of etheronic explanation with relevance to stress-energy-momentum tensor has been given in equations (39-45).

To construct an effective theory of 'field propulsion' we need to parameterize the relations between the potentials of gravity and electromagnetism along with other two factors, as Gravito-Electric coupling variable and the spatial translation that generates the gravity making a satisfactory equation of 'electro-kinetics'.

Let's consider the electric charge potentials  $\varphi^+$  as positive charge density and  $\varphi^-$  as negative charge density. Now,  $\psi^+$  is taken as attractive gravity of G-well, and  $\psi^-$  as repulsive gravity as G-hill. The spatial coordinates can be defined as  $\Sigma$  which is a conjugation of 3 factors  $\Sigma(x, y, z)$ . This defines a translation factor  $Q$  to generate the 'gravity potentials'  $G$  where  $G \in \psi^+, \psi^-$ . This defines a relation given by,

$$\Sigma \overbrace{\text{oscillates}}^Q G \quad (1)$$

Which can be further broken down to two factors of the  $G$  potential as,

$$\Sigma \overbrace{\text{oscillates}}^{+Q} \psi^+ \quad (2)$$

$$\Sigma \overbrace{\text{oscillates}}^{-Q} \psi^- \quad (3)$$

Further relation developed as flow of charge like positive charges from the top got attracted to repulsive gravity at the bottom (negative charge) and vice versa, thereby, giving a push from the bottom upwards,

$$\psi^+ \propto \varphi^+ \quad (4)$$

$$\psi^- \propto \varphi^- \quad (5)$$

This gives a relation as,

$$\frac{\psi^+}{\varphi^+} = \frac{\psi^-}{\varphi^-} \quad (6)$$

This defines the mass to charge coupling constant as,

$$K = \frac{\psi^+ \varphi^-}{\psi^- \varphi^+} \quad (7)$$

The 'force field' of Anti-Gravity  $\vec{F}_{A-G}$  can be given by,

$$\vec{F}_{A-G} = \tilde{K} * A \quad (8)$$

Where,

$\tilde{K}$  is the Gravito-Electric coupling variable to be determined by parameters of the vehicle.

$A$  is the continuous integrated variable determined by the parameters of the vehicle.

Now, equation (4) and (5) are worthwhile for an elaborated discussion. This clearly indicates that a positive charge can be generated with an attractive gravity of G-well, whereas, a negative charge can be generated by a repulsive gravity of G-hill. This is an indicative proof that, there exists some scope of unification between electric charge and gravitating mass. We will get back to it soon.

Equation (2) and (3) dictates a spatial translation induced vibrations, where gravity rather than a geometry of spacetime, acts as a positive translation induced vibrations when positive  $+Q$  generates an attractive gravity field  $\psi^+$  whereas in negative case  $-Q$  generates a repulsive gravity field  $\psi^-$  all acts as a force acting on the particles by means of contraction and rarefaction of the etheronic medium.

The attractive gravity induces a moment of electric charge moving towards the object  $O$  as,

$$\nabla \cdot \psi^+ = O|_{<0} \quad (9)$$

While the repulsive gravity induces a moment of electric charge moving away from the object  $O$  as,

$$\nabla \cdot \psi^- = O|_{>0} \quad (10)$$

To consider this effect described in equation (9) and (10), consider a hemispherical spaceship with a high voltage DC battery inside. The positive electrode of the battery is attached to the leading edge while the negative electrode to the trailing edge. The battery is charged under 50 Kilo Volts and constantly giving a pulsated charge (pulsated to increase the efficiency and reduce dielectric absorption) thereby generating positive charge  $\varphi^+$  at the leading edge and negative charge  $\varphi^-$  at the trailing edge. This in turn generates

an attractive gravity potential above the leading edge as  $\psi^+$  and a repulsive gravity potential below the trailing edge as  $\psi^-$ . The positive ions emanating from the leading edge of the hemispherical craft would try to spread above and this positive charge will be attracted in the trailing edge by the inward flow of the positive charge interacting with the negative charges of the trailing edge. This creates a toroidal flow of charges below the spacecraft which repels the spacecraft from the bottom and attracts the spacecraft from the top. There is a high K-dielectric like Barium Titanate 'V' shaped in between the leading and the trailing edge where the wide regions of the 'V' shaped dielectric makes the non-uniform charge and mass potential across the spaceship, the more being over the leading edge while the less below the trailing edge and this non-uniform potential creates a gravity field or a force field  $F$  as shown in equation (8) around the spacecraft where  $F$  is dependable on the radius (radial distance)  $r$  as given by,

$$\vec{F}_{A-G} \propto r(11)$$

This non-uniform density of the gravity potentials outside the force field will act uniformly inside the force field as in equation (8), thereby concluding the fact that anything which is there inside the force field experiences a uniform gravity everywhere which is determined by a variable  $\tilde{K}$  as in equation (8) implying that, the object residing inside the force field will not experience any change in acceleration induced gravity as stated contrary in the 'Principle of equivalence' and is always constant at  $1g$  Earth acceleration induced gravity, making the object feels an uniform as equal gravitational acceleration, irrespective of how fast the spaceship moves through the etheronic medium in spacetime.

This phenomena that UFOs are disc shaped with a bulge on the top is due to the fact of the conditions for generating a steep gravity potential around them. the fact that 'aliens' have been utilizing the force field of 'anti-gravity' is because of the sightings which

involved the rising of the water or a huge wave below the UFO when they are passing above the oceans or seas. And, also, the UFOs which landed on the Earth, when rises upwards takes with them a chunk of soil of Earth, all of this is because of the repulsive gravity potential below the spaceships. However, notice one thing, a rocket imparts momentum to the ground in the form of a thrust and the opposite reactions helps it to rise upwards, whereas, in the case of UFOs, there is no thrust rather a repulsive force which repels earth's gravity and makes the UFOs rising upwards.

As described by author in his book [1], we will summarize an important point which have been observed by eye witnesses that the UFOs are making a humming sound as they hover in space along with a radiation coming from its below which is either soft green or blue and the size of the radiation circumference is almost twice the UFO craft size. This phenomenon can be described as "Phase Conjugated Microwave Beams in UHF ranges".

The base of the craft has two more apertures except the middle region where the negative electrode resides. Observational evidence suggests that from the crashed craft, the materials recovered are mostly Bismuth sandwiched between zinc. Why Bismuth is chosen? Because of its negative electrical permittivity parallel to the tri-spatial axis. Any object with negative electrical permittivity would have a negative index of refraction, and will oppose or reflect the Microwaves in the other direction as the resonant frequency of the metal is pervaded. The inner machinery of the craft and the advantage of the negative permittivity plays a crucial role in UFO means of propulsion, that are going to be discussed below.

There are two cylindrical hollow tunnels inside the craft which are connected by a thin hollow tube for the passing of waves from one cylinder to the other. At the far end of the tunnel, contains a 'Gunn oscillator' formed of a 'Gunn diode' which pulsed

microwaves at UHF range. These pulsed waves then are allowed to pass through a waveguide which is in whole number multiple of the pulsed beams and are then made to enter inside an amplifier. All of these are taking place inside the cylinder. The amplifier is a 'parametric amplifier' with a varactor diode and voltage bias where the initial beams are circulated along with a pumped beam to increase the strength of the beams energy. The increment of the energy in such an 'amplifier' makes the beam more energetic and powerful which then allowed to pass through a 'wave-shaping dielectric'. The resultant beam is then allowed to enter inside the flank of a horn for an impedance correction which ultimately passes through a downward convex lens and hits the ground. The microwave beam which hits the ground are made to reflect which are captured by the upward convex lens at the other part of the cylinder. Then the beams are allowed to pass through a mixer diode. This step is very important because in this step the beam has been made phase conjugated, travelling to the other side of the cylinder through the tube and shines again in the ground. In this way, a phase conjugated cycle of radiation has been made to attempt the levitation of the craft having a negative permittivity base allowing for levitation.

In this whole process there is an increase in energy every time the beam reflects back and its time to discuss the mathematics associated with it. If the incident frequency be  $f$  and the reflected frequency be  $f_0$  then the difference between the two frequency can be explained by the relation,

$$f - f_0 = 2f(v/c) \quad (12)$$

Where  $f(v/c)$  is the Doppler-shift in frequency, with  $v$  being the velocity of the radiation and  $c$  being the speed of the light in vacuum.

When the craft is receding away from the ground then there is a Doppler-red shift and  $f_0 < f$ . When

the craft is approaching towards the ground then there is Doppler-blue shift and  $f_0 > f$ .

Now, consider a spacecraft receding away from Earth, the shift in frequency difference would be calculated from equation (12) as,

$$\epsilon - f_0 = 2f(v/c) \quad (13)$$

$f$  in equation (12) be assumed as absolutely small as  $\epsilon$  which can be taken as a vanishing frequency as expressed,

$$-f_0 = 2f(v/c) \quad (14)$$

Or,

$$f_0 = -2f(v/c) \quad (15)$$

The shift in frequency can be calculated as,

$$2f(v/c) - (-2f(v/c)) = 4f(v/c) \quad (16)$$

Which clearly states that the differences in frequency intensity gets more in (16) than equation (12) by a factor of  $2f(v/c)$ . Now, as in each cycle the frequency gets doubled the energy is increased or energy has been created by violating the first law of thermodynamics. And in case of a phase conjugation after each cycle the beam the phase conjugated to a more confined and directed radiating beam with a decrease in entropy violating the second law of thermodynamics.

Now, even if the Gunn oscillator is switched off after a certain number of cycles, the frequency will go on doubling at a twice rate of the previous beam and this cycles of reflection, due to phase conjugation gets increased and increased leading to a perpetual motion of the spaceship.

Considering the atmospheric pressure and the ambient pressures of the craft in necessary as it determines the velocity of the craft.

Remember, at the starting point of the paper we have considered a 'V' shaped dielectric with high K value as Barium Titanate having its large surface area or the upper part of the 'V' at the top emanating positive charges as connected to positive electrode, and the lower part of the 'V' at the bottom emanates negative charges with a comparatively lower spreading area being connected to the negative electrode. The positive electrode emanates Proton  $p^+$  and the negative electrode emanates electron  $e^-$ . Below the spacecraft there becomes a region of negative pressure just like the *Dark Energy* due to the repulsive gravity and the upper part of the craft still having a positive pressure. This inconsistency would result two things

- 1) The sucking of the spaceship upwards.
- 2) The positive pressure upwards would exert a force on the negative pressure region thereby making the spaceship impossible to levitate.

But we will see that the second point won't work because of a quantum mechanical reason. The mass of the Proton is 1800 times greater than an electron. This means that  $p^+$  will make a very powerful attractive gravity shield upwards or at the top of the spacecraft attracting it upwards compared to the  $e^-$  which being 1800 times weaker than  $p^+$  will exert a less powerful repulsive gravity downwards. This high attraction of  $p^+$  would counteract against the 'negative pressure region' below the craft along with the magnitude of  $e^-$  thereby making the spacecraft levitate upwards. This can be expressed by the following equations,

$$|p^+| + P \gg \gg -P + |e^-| \tag{17}$$

$+P$  is positive pressure.

$-P$  is negative pressure.

$|p^+|$  is the magnitude of the force exerted by proton.

$|e^-|$  is the magnitude of the force exerted by electron.

Equation (17) modifies to a more generalized form given by,

$$|e^-| - |p^+| \ll \ll 2P \tag{18}$$

Therefore, from equation (18) it is evident that from bottom to up, the positive pressure dominates.

And this also concludes that  $P$  becomes smaller and smaller as the height increases and a point will come when,

$$|e^-| - |p^+| \gg P \tag{19}$$

Indicating the magnitude difference of the repulsive gravity is greater than the pressure itself and the craft will get a massive speed attaining a very thrust to power ratio with power almost become negligible (due to perpetual motion) and the craft attains a speed comparable to that of light.

According to the theory of relativity, the Hamiltonian (H) of an object is given by the relation as a sum of potential energy (U) and kinetic energy (T) stated as,

$$H = U + T \tag{20}$$

Here, as the craft moves at the speed of light the kinetic energy increases with an increase of total energy or the Hamiltonian as,

$$H(\uparrow) = U + T(\uparrow) \tag{21}$$

But here, in this case as the spaceship is already inside a force field  $\vec{F}_{A-G}$ , the kinetic energy could not dominate as the object is embedded inside a Anti-gravitating sphere, therefore, no increase in total energy or the Hamiltonian is observed as in equation (21) and the spaceship attains a constant energy as in equation (20) without getting dragged away by inertia while crossing the speed of the light.

Now, its also not correct to say that the kinetic energy is not increased. Rather when the kinetic energy increased, the potential energy being in an anti-gravity force field with no gravity induced acceleration got decreased as given in equation,

$$H = U(\downarrow) + T(\uparrow) \tag{22}$$

This equation (22) is essentially same as equation (20) where in (22), the increment in kinetic energy got compensated by the decrement of potential energy. And as stated in equation (19), the gravity potential increases as the craft moves away from earth and this also induced a greater proportionality of anti-gravity force fields which makes the gravity potential lesser and lesser compensating with the increased kinetic energy potential.

As the vehicle crosses the speed of the light, in relativistic models, there automatically comes a warp factor in spacetime as  $\delta$ . This warp factor in an induced factor that helps to create closed timelike curves and a wormhole devoid of any singularity and event horizon. A non-compact spacetime. And as the spacecraft gets increased in velocity, it enters ultimately at a constant domain of time and vanishes within the warped space  $\delta$ . Now, many relativists would argue that, the stability of a wormhole is limited and is governed by some exotic matter having negative energy potentials; therefore, the wormhole is prone to get collapsed immediately after creation destroying the space craft. However, in this case, the scenario is different, the force field  $F$  of anti-gravity in equation (8) having surrounding the spacecraft in a bubble of negative potentials, this will act as a repulsive gravity to prevent the mouths of the wormhole from collapsing thereby making it stable and traversal.

This induced phenomena could explain the fact that humans have witnessed “*the alien ship rises upwards at a great pace and suddenly vanished in thin air*”.

The formula of the **Anti-Gravitic** force field as given in equation (8) is,

$$\vec{F}_{A-G} = \tilde{K} * A \tag{23}$$

Or, it can be represented by further expanding as,

$$\vec{F}_{A-G} = \left[ \frac{\psi^+ \varphi^-}{\psi^- \varphi^+} * A \right] \tag{24}$$

$$\vec{F}_{A-G} = \left[ \frac{-1e(-\nabla \cdot \vec{F}_E)(-U_{(x)})(\delta)}{+1e(\nabla \cdot \vec{F}_E)(U_{(x)})} * A \right] \tag{25}$$

$$\vec{F}_{A-G} = \left[ \frac{-1e \left( (-\nabla) \cdot \frac{1}{4\pi\epsilon_0} \frac{-q_1 q_0}{(x_1 - x_0)^2} \vec{r}_{1,0} \right) * - \int_{\mathbb{R}^3} \frac{G}{|x-r|} \rho(r) dv(r) (\delta)}{+1e \left( (\nabla) \cdot \frac{1}{4\pi\epsilon_0} \frac{q_1 q_0}{(x_0 - x_1)^2} \vec{r}_{0,1} \right) * \int_{\mathbb{R}^3} \frac{G}{|r-x|} \rho(r) dv(r)} (\nabla \cdot V_e) (-4\pi G \rho) (\nabla \cdot [D(\rho, \vec{r}) \nabla \rho(\vec{r}, t)]) \right] \tag{26}$$

Where,

$\vec{F}_{A-G}$  is the force due to **Anti-Gravity**.

$\tilde{K}$  is the Gravito-Electric coupling variable to be determined by parameters of the vehicle.

$A$  is the continuous integrated variable determined by the parameters of the vehicle.

$\vec{r}_{1,0}$  is the vector from  $x_1$  to  $x_0$ .

$\vec{r}_{0,1}$  is the vector from  $x_0$  to  $x_1$ .

$q_1 q_0$  are the same charges that repels.

$-q_1 q_0$  are the opposite charges that attracts.

$\epsilon_0$  is the ‘electric permittivity’ of the free space.

$\nabla \cdot$  is the divergence operator.

$\nabla$  is the gradient.

$G$  is the ‘Gravitational Constant’.

$\rho$  is the charge/mass density.

$\mathbb{R}^3$  is the 3-Dimensional space.

$r$  satisfies distance.

$t$  is the time variable.

$V_e$  is the voltage.

$v$  is the volume.

$\vec{F}_E$  is the electric field.

$U_{(x)}$  is the repulsive gravity.

$-U_{(x)}$  is the attractive gravity.

$D$  is the diffusion coefficient.

$(\delta)$  is the warp factor.



$$K := \frac{[-1e^{(-\nabla \cdot \vec{F}_E)}(-U_{(x)})(\delta)]}{1} \tag{28}$$

One thing needs to be mentioned here that, the UFO sightings that have happened are only believed to be the extraterrestrial entities visiting from other faraway planets, but that's, not true for some cases. The theory of relativity shows us that past, present and future exists simultaneously, however, they are indeed separated by space and time at so vast scales that its almost impossible for a person to view his past or future while he is at present. Moreover, relativity theory obstructs the backward time travelling as because, this creates paradoxes and how to travel in forward time? There are many theories but not any concrete solutions.

There is one thing, that's worth mentioning is the analogy that many people have seen with the UFOs *being risen up and vanished in the thin air* with teleportation. But this seems to be a classical teleportation rather than a quantum teleportation, and even if this is a pure quantum teleportation then teleporting each atoms individually within a cluster of atoms and then again assembled the atoms in a proper mapping by additive element of time evolution is beyond human thinking and capacity. Therefore this sort of *vanishing phenomena* can be explained in a rather easy ways by virtue of equation (7, 8 , 23, 24, 25, 26) which we will discuss now.

From equation (7 and 25) we found,

$$K = \frac{\psi^+ \varphi^-}{\psi^- \varphi^+} = \frac{-1e^{(-\nabla \cdot \vec{F}_E)}(-U_{(x)})(\delta)}{+1e^{(\nabla \cdot \vec{F}_E)}(U_{(x)})} * A \tag{27}$$

This equation shows us a simple thing that if  $\psi^+, \varphi^-$  is the attractive gravity and negative charge density respectively, and  $\psi^-, \varphi^+$  be the repulsive gravity and positive charge density respectively, then, equation (27) shows that if  $\psi^+ \varphi^- := (\psi^- \varphi^+)^2$  then, the repulsive gravity and positive charge density vanishes giving the ratio of *Gravito-Electric coupling variables*,

Where  $[-1e^{(-\nabla \cdot \vec{F}_E)}(-U_{(x)})(\delta)]$  contains the positive mass or attractive gravity as a factor of curvature coefficient ( $\delta$ ) which warps the spacetime and absorbs the  $(\psi^- \varphi^+)$  or  $[+1e^{(\nabla \cdot \vec{F}_E)}(U_{(x)})]$  by space-time warp factor ( $\delta$ ). Therefore, from this analogy it can be said that, if the spacecraft initially makes an attractive gravity shield upwards and repulsive gravity shield downwards, then after some height if the magnitude of attractive gravity and negative charge  $|\psi^+|, |\varphi^-|$  becomes squared the magnitude of repulsive gravity and positive charge  $|\psi^-|, |\varphi^+|$  then, the UFO would vanish in the spacetime warp ( $\delta$ ). This can be described by a simple equation with the *vanishing coefficient* be  $\aleph_v$  as,

$$\aleph_v = \left\{ \frac{(\psi^+ \varphi^-)^2}{(\psi^- \varphi^+)} \text{ where } |\psi^+| |\varphi^-| = |\psi^-| |\varphi^+| \right. \tag{29}$$

As the space got warped up, that we see in some previous equations namely (25 and 26) by the effect of the force field, so, it is highly plausible that, a closed timelike curve gets created and any object which enters the warped space either goes forward or backward in time and therefore, its easy to conclude this warped space as some kind of wormhole devoid of any singularity and of higher dimensions inside which time gets constant, thereby moving to a vast distance from source to destination takes no time at all, as time is infinitely dilated. The equation can be given as,

$$ds^2 = \pm e^{(f-f_0)} dt^2 + \frac{dr^2}{1 - \frac{\partial^u b(\mathbf{F})}{\delta}} + \Pi \tag{30}$$

Breaking down the factors of equation (30), we can find,

- ✓  $\pm e^{(f-f_0)}$  as the shift function of frequency dependent on time component  $dt^2$ .
- ✓  $1 - \frac{\partial^u b(\mathbf{F})}{\delta}$  of which  $\partial^u$  is the dimensions of hyperspace with  $u \geq 4$ ,  $b(\mathbf{F})$  is the throat

function of force field  $F$  with the throat as  $b$ , the warp factor being  $\delta$ , and solving this equation equating with '0' we can see  $\partial^u b(F) = \delta$  where  $\delta$  is not equal to '0' and hence devoid of any singularity, all being a radial dependent component  $dr^2$ .

- ✓  $\Pi$  being the shape factor metric of the hyperspace.

Based on two factors, that is toriodal flow in equation (9), equation (10) and oscillation of equation (1) and (3), a field propulsion can be explained in a different way as that of the 'warp drive' or 'Alcubierre drive', however, the resultant metric that Alcubierre has given have been modified to include the oscillations' of the space generating a toriodal bubble of anti-gravity around it, thereby helping for a warp drive that is superluminal and can get a Lorentz boost upto  $10c$ [6,7].

$$ds^2 = -(\alpha^2 - \beta_i \beta^i) dt^2 + 2\beta_i dx^i dt + \gamma_{ij} dx^i dx^j + (\partial\tau, \Sigma(-Q)) \tag{31}$$

Breaking down the equation (31), the parts explained as,

- $\alpha$  is the interval of proper time between the ambient hypersurfaces ( $\mathcal{H}$ ) where 4-Velocity  $u^i \perp \mathcal{H}$ .

The 4-Velocity has been calculated on the  $x$  coordinate as  $u^i = \frac{dx^i}{dt}$  where,

$$\text{Spatial component is } \begin{bmatrix} \frac{dx^1}{dt} \\ \frac{dx^2}{dt} \\ \frac{dx^3}{dt} \end{bmatrix}$$

$$\text{Temporal component is } \left[ \frac{dx^0}{dt} \right]$$

- $\gamma_{ij}$  is the metric of the hypersurfaces which is positive definite and  $\beta^i$  is the shift of coordinates

in hypersurfaces as hypersurfaces is considered as a foliation of spacetime.

- $\partial\tau$  is the toroidal ambient boundary.
- $\Sigma(-Q)$  represents the oscillation  $-Q$  of  $\Sigma$  which gives rise to negative gravity potentials as  $\psi^-$  represented in equation (3).

The respective values are,

$$\alpha = 1$$

$$\beta^x = -v_s(t)f(r_s(t))$$

$$\beta^y = \beta^z = 1$$

$$\gamma_{ij} = \delta_{ij}$$

Where,

- ✓  $\alpha = 1$  Represent the geodesic and free fall trajectory.
- ✓  $v_s(t) = \frac{dx_s(t)}{dt}$
- ✓  $r_s(t) = \sqrt{(x - x_s(t))^2 + y^2 + z^2}$

While,

$$f(r_s(t)) = \frac{\tanh(\sigma(r_s+R)) - \tanh(\sigma(r_s-R))}{2 \tanh(\sigma R)} \tag{32}$$

Satisfies the bi-relation,

$$f(r_s(t)) = \begin{cases} R \gg r_s, \text{ low tidal field} \\ R \approx r_s, \text{ high tidal field} \end{cases} \tag{33}$$

$R$  defines the radius of the ambient surfaces around the spacecraft and  $\sigma > 0$ .

$\partial\tau$  can be represented as a surface area of  $(2\pi r_s)(2\pi R)$  and as  $r_s$  is the minor radius,  $R$  being the major radius if  $R - r_s \approx \epsilon$  where  $\epsilon$  is a small amount then the oscillating field  $\Sigma(-Q)$  represents a repulsive gravity field of high tidal force around the spacecraft.

This is sufficient enough to warp the spacetime around the spaceship.

Equation (26) states the force field as,

$$\vec{F}_{A-G} = \left[ \begin{aligned} & -1e \left( (-\nabla) \cdot \frac{1}{4\pi\epsilon_0(x_1-x_0)^2} \vec{r}_{1,0} \right) * - \int_{\mathbb{R}^3} \frac{G}{|x-r|} \rho(r) dv(r) (\delta) \\ & + 1e \left( (\nabla) \cdot \frac{1}{4\pi\epsilon_0(x_0-x_1)^2} \vec{r}_{0,1} \right) * \int_{\mathbb{R}^3} \frac{G}{|r-x|} \rho(r) dv(r) \end{aligned} \right] (\nabla \cdot V_e)(-4\pi G\rho)(\nabla \cdot [D(\rho, \vec{r})\nabla\rho(\vec{r}, t)]) \quad (34)$$

And equations (31-33) states the energy density field as,

$$T^{\alpha\beta} l_\alpha l_\beta |_{E(\rho)^{A-G}} = -\frac{1}{8\pi} \frac{v_s^2 \rho^2}{4r_s^2} \left( \frac{df}{dr_s} \right)^2 \quad (35)$$

Here it is clearly seen that  $\vec{F}_{A-G} \propto T^{\alpha\beta} l_\alpha l_\beta |_{E(\rho)^{A-G}}$  and null energy conditions has been violated and satisfied as discussed at the beginning of the paper. Here, this satisfies the opposite stress-energy of the Einstein-Tensor of Einstein Field Equations (EFE) violating the Null Energy Conditions (NEC) as an inverse proportionality given by,

$$G_{\mu\nu} \equiv R_{\mu\nu} - \frac{1}{2} R g_{\mu\nu} = T_{\mu\nu} l^\mu l^\nu (1/\alpha) T^{\alpha\beta} l_\alpha l_\beta |_{E(\rho)^{A-G}} \quad (36)$$

The complete metric can be given by,

$$ds^2 = \left( v_s(t)^2 f(r_s(t))^2 - 1 \right) dt^2 - 2v_s(t)f(r_s(t))dxdt + (\partial\tau, \Sigma(-Q)) + dx^2 + dy^2 + dz^2 \quad (37)$$

This satisfies the relation of warp drive to that of anti-gravity propulsions where violating Null Energy Conditions (NEC) is already denoted in the force field  $\vec{F}_{A-G}$  which ultimately agrees with the energy conditions in equation (35, 36). The vehicle will simply glide through the spacetime covered in a warp

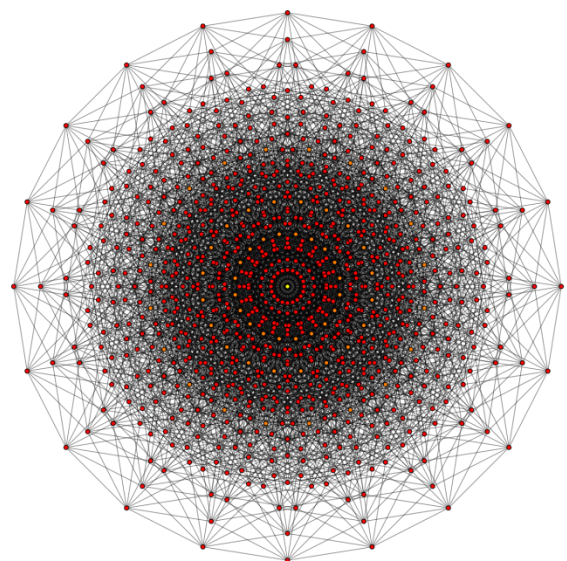
bubble (toroidal) of a repulsive anti-gravity and moves by expanding spaces behind it and contracting at the front of it.

Another possible source of the UFOs are parallel worlds. By parallel words, I don't try to mean any multiverses or multiple universes, rather what I would try to say is that, there are worlds in our universe different than ours which are not perceivable or observable as they are separated by a thin hypermembrane. This hypermembrane will act as the potentials walls separating each world from another and I will try to emphasize on this now.

Extra-dimensions have already been computed by physicists and string theorists believe our world to be of 10+1 dimensional with 10 spatial and 1 temporal dimensions. The metric of the extra-dimensions is given by[8],

$$\begin{aligned} ds^2 &= \tilde{g}^{MN} dx_M dx_N \\ &= e^{A(x^m)} g^{MN} dx_M dx_N \\ &= e^{A(x^m)} (g_4^{\mu\nu}(x_\mu) dx_\mu dx_\nu + \sum_m dx_m^2) \end{aligned} \quad (38)$$

Where Greek indices for 4-dimensions and lowercase Latin indices for extra-dimensions. If we consider a 10-spatial dimensional universe, then we obtain a convex hull figure and it is given as,





$$\mathcal{L}(x^\mu) \rightarrow \mathcal{L}(x^\mu - \epsilon_H \delta_H^\mu) \quad (42)$$

Then,

$$\Psi_H^\mu = -\delta_H^\mu \mathcal{L} \quad (43)$$

And thus if  $H$  be replaced by  $\nu$ , by Noether's theorem, we get the stress-energy-momentum tensor  $T_{\nu}^\mu$  [15] and its expressed as,

$$T_{\nu}^\mu = \left(\frac{\partial \mathcal{L}}{\partial \epsilon_{,\nu}}\right) \cdot \epsilon_{,\nu} - \delta_{\nu}^\mu \mathcal{L} \quad (44)$$

With,

$$T_{\nu,\nu}^\mu = 0 \quad (45)$$

Hence,  $T_{\nu,\nu}^\mu$  appears to be a conserved current (or quantity as the stress-energy tensor) and its relationship with etheronic medium has been established.

UFOLOGY has been considered as pseudoscience by the mainstream scientific community rather than being actual science, however, if proper classifications could be made from the 'close encounters' as proposed by J. Allen Hynek [16-19], Jacques Vallee and Steven M. Greer then evidence and mechanism of the craft is possible to interpretation. We will discuss this now.

UFO sightings classified in 10 groups as [20-23],

1. Some lights appearing in the night sky.
2. The disc shaped UFO seen in broad daylight.
3. UFOs detected as radar visuals.
4. Visual sighting of a craft less than 150 m away showing considerable details referring to as 'close encounters of the first kind'.
5. An extraterrestrial craft that interferes with the ambient machinery of the passing by vehicles or when landed and uplifted, alters the impressions on the ground, affected vegetations or leaves a

chemical trace refers to as 'close encounters of the second type'.

6. Humans who have witnessed extraterrestrial biological entities inside the craft either as the pilot or the occupants refers to as 'close encounters of the third type'.
7. In case of alien abduction, in which the extraterrestrial biological entity abducts a human is referred to as 'close encounters of the fourth type'.
8. If a direct means of communication is involved between aliens and humans referred to as 'close encounters of the fifth type'.
9. If any death of a human is reported by extraterrestrial biological entity then, this can be referred as 'close encounters of the sixth type'.
10. The extreme point where the reproduction takes place between humans and extraterrestrials either through physical contact or by other unknown advanced means is referred to as 'close encounters of the seventh type'.

Here, among the 10 factors of 'encounters with aliens' evidence can be taken from all the first 9 points by which a reliable theory could be developed either by contacts or the leftover traces and this leads to the development of the different secret projects taken by organizations either government or private leads to the way of making several 'Black R&D' projects that leads to the development of the theories and sciences behind UFO means of propulsion. Also, many independent scientists worked around 1930's, 1940's and 1950's gives many explanations to the sciences behind unexplained aerial phenomena's. The last point numbered 10, is around myths and histories around several books and conspiracy theories and needs further researches.

## II. CONCLUSION

Several factors have been interpreted related to the experiments (covert or non-covert) from different scientists and organizations mixed with my own

interpretation helps in developing a theoretical and mathematical groundwork for the science behind UFOs and their propulsions, their machinery, aerodynamics and strange mechanisms violating the known laws of physics. At the end 'close encounters' have been taken into account with a resultant disclosure of its effects (or affects) on humans to form a collective lists of UFO sightings from which evidences have been extracted both in modern and in historic times. Moreover, further analysis has been made depending on the A-G potential, wormhole, warp drive, etheronic medium and a connection of this medium to the stress-energy momentum tensor. The inverse relation has been developed and it has been showed rigorously that, the effect of A-G might act like a anti-potential of attractive gravity thereby violating the NEC without any exotic matter.

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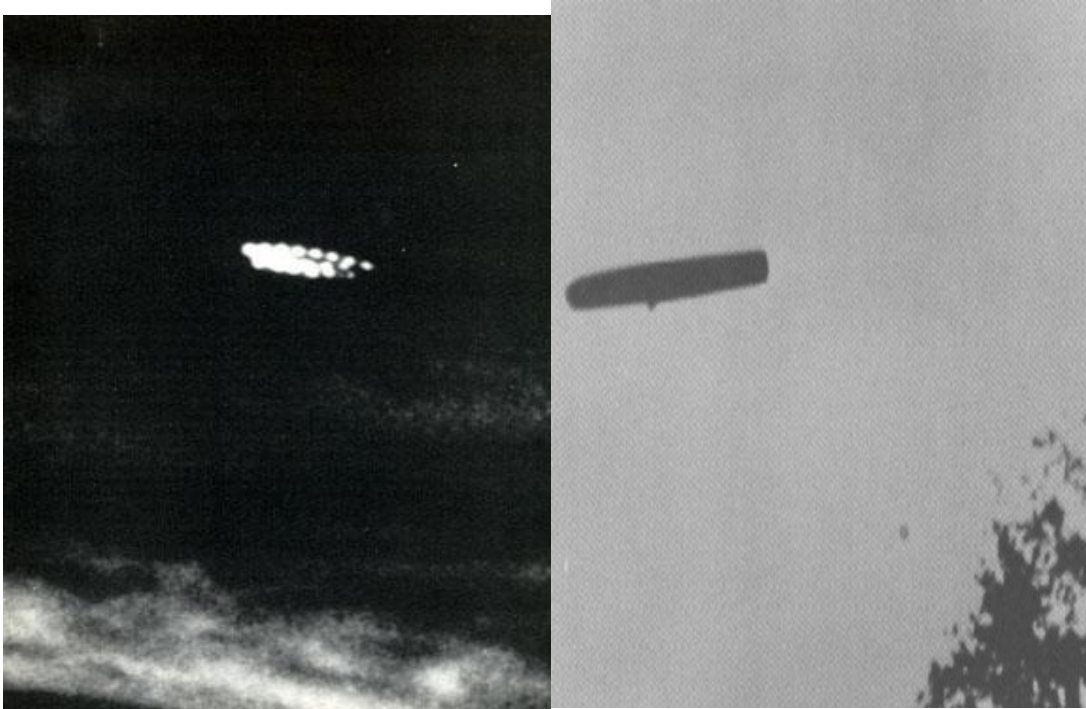
**APPENDIX (A) - SOME UFO SIGHTINGS AROUND THE WORLD**



Photograph of a purported UFO in Passaic, New Jersey, taken on July 31, 1952 (Courtesy : George Stock • Public domain, Wikipedia)



On April 27, 2020, the US Department of Defense released three “UFO” videos taken by US Navy pilot. This is one shot from the video.

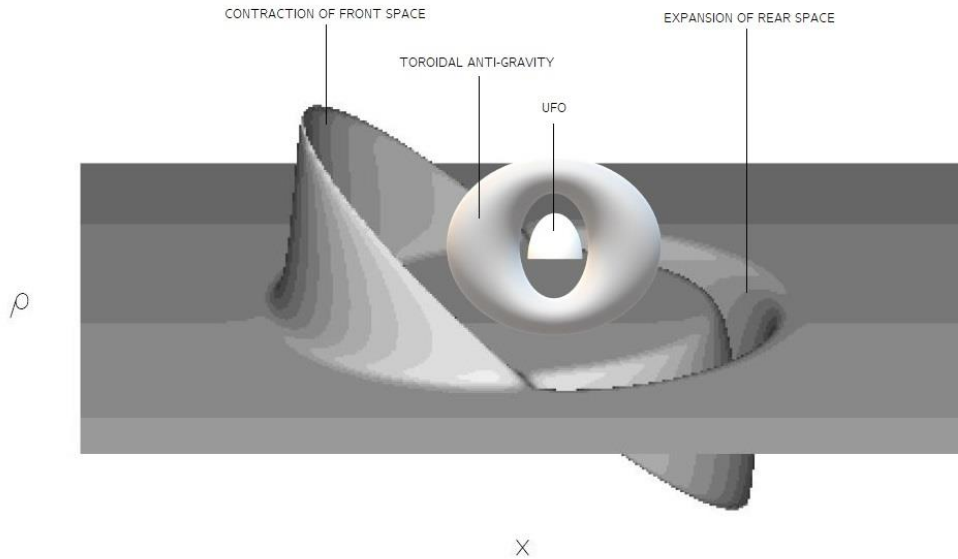


Two former New Zealand Air Force photographic analysts described this photograph as "inscrutable". It was one of a series taken in the early morning on October 27, 1979 from a plane over Motonau, New Zealand (Courtesy: <https://www.telegraph.co.uk/news/newstopics/howaboutthat/3452381/UFO-sightings-140-years-of-UFO-pictures.html?image=4>)

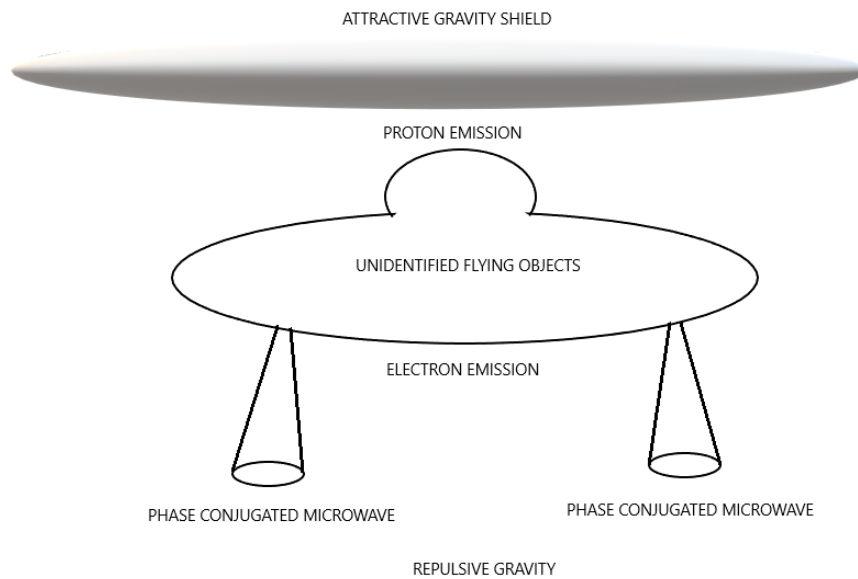
This picture was taken by Joe Ferriere on July 3, 1967 in Cumberland, Rhode Island, New York. It shows a large cigar shaped UFO having size of 700 feet. (Courtesy: <https://www.telegraph.co.uk/news/newstopics/howaboutthat/3452381-sighting-140-years-of-UFO-pictures.htm?image=4>)

## APPENDIX (B) – SPECIAL DIAGRAMS





This picture is taken from REFERENCE (6) and modified in need of this paper. Here, if Anti-Gravity field acts as an exotic matter, then, the UFO could be shielded by a bubble of Anti-Gravity which can make the warp drive as discussed in this paper.



Electrohydrodynamic, Anti-Gravitic, Phase Conjugated Microwave UFO configuration as stated in REFERENCE (1) and at the beginning of this paper.

**APPENDIX (C) – DIMENSIONAL WORKOUT**

To obtain the maximum dimensions one has to construct Lorentz-Generators as,

$$[M^{-i}, M^{-j}] = -\frac{1}{(p^+)^2} \sum_{n=1}^{\infty} (a_{-n}^i a_n^j - a_{-n}^j a_n^i) (\Delta_n - n)$$

$$\Delta_n = n \left( \frac{D-2}{8} \right) + \frac{1}{n} \left( 2a_{NS} - \frac{D-2}{8} \right)$$

To maintain Lorentz invariance, we must have  $[M^{-i}, M^{-j}] = 0$

This can only be true when  $n\left(\frac{D-2}{8}\right)$  collapses to  $n$  and when it is equal to 1, and  $\frac{1}{n}\left(2a_{NS} - \frac{D-2}{8}\right)$  becomes 0 when  $\left(2a_{NS} - \frac{D-2}{8}\right)$  is equal to 0.

Therefore,

$$n\left(\frac{D-2}{8}\right) = 1$$

Or,  $D = 10$

And,

$$\left(2a_{NS} - \frac{D-2}{8}\right) = 0 \text{ and } D = 10$$

Or,  $a_{NS} = \frac{1}{2}$  which is the normal ordering constant of  $NS - Sector$  in superstring theory.

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