

# Theorem of Quantum Gravity

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## ABSTRACT

Lines of Particle Transport (LOPT) are proposed as the means by which energy is transferred between objects. Particles of energy move through connected Lines of Particles (LOP) of various energy states (or perceived energy states) with more open particle patterns (low frequency of particle generation) allowing higher energy compressed particles (high frequency of particle generation) to transfer through their respective interconnected LOP, thus forming Lines of Particle Transport (LOPT). This allows the lower energy object to receive energy and thereby increase the object's energy level until both objects are of the same energy level or state. When both objects are of the same energy level, they have identical particle patterns, and at that point transfer stabilizes along the interconnected LOPT.

The proposed LOPT theory is supported by current observation and resolves the conundrum of the duality of light by eliminating the issue of wave interference, therefore eliminating support for wave theory. The constancy of the speed of light is resolved through LOPT regardless of the speed of the source relative to the observer. This solution opens areas for revised thinking on a number of energy transfer and force issues and thus places particle movement and LOPT theory in a position to solve and resolve numerous physics issues, leading to a quantum explanation for gravity.

## INTRODUCTION

What if there were a single quantum solution to resolve the duality of light, explain the constancy of the observed speed of light, describe Newton's law of motion, explain rotational momentum and provide an explanation of gravity?

What if this solution relied on only one postulate and if that postulate simply stated was: For energy transfer to occur there must be at least two objects of different energy states or perceived energy states, and the control of transfer is governed by the **lower** energy object?

This is very straightforward but somewhat counterintuitive. It is easily explained, however, through current observation. Once we are comfortable with this controlling concept, many unexplained phenomena, as listed above, are resolved.

The resolution of this postulate will require the reader to have a basic knowledge of current energy issues and an understanding of the Doppler Effect. With those tools and some guidance, one can easily understand the solution. This resolution is particle based, thus providing a quantum explanation for these and all related issues.

I use three observable natural phenomena to construct the case that there needs to be two objects of different energies and the object with the lower energy controls the transfer of energy between objects. These three phenomena are:

1. Heat transfer
2. The pinhole camera (aperture diffraction)
3. The double-slit experiment (slit diffraction)

Further, I will use the insight gained from these observations to provide a quantum explanation for the relative constant speed of light, Newton's Laws of motion and gravity.

## THEORY

### Heat Transfer

First we examine a basic observation of heat transfer. By placing a warm object into a perfectly insulated environment, we can glean some insight into how all energy is transferred. If we allow this warm object in the insulated environment to reach equilibrium, we will have a stable environment.

If another object of a cooler temperature is placed into this stable environment, heat energy moves from the warm object to the cool object. This is the only direction in which energy will flow-- from high energy to low energy. If this were reversed, we would see cold objects get colder and warm objects become warmer (This however does not occur unless work is added.). So the natural state of energy flow is from higher energy state objects to lower energy state objects, and transfer stabilizes once equilibrium is reached.

But if we hold the above observation and the fundamental premise of quantum theory that all energy is in the form of mass particles, what is actually going on?

Let us start by stating that both objects, warm and cool, are emitting energy particles. The only difference in the quantum world is that the frequency (period) of particle release from the warm object is more rapid than that of the frequency of the particles released from the cooler object. Thus, we have a tighter, more compact particle pattern for the warmer object, and a more open particle pattern for the cool object. We know, from the above observation, that energy movement is always from the tighter more compacted pattern (high energy object) to the more open expanded pattern (low energy object).

If we visualize these energy particles traveling in lines radiating out from each source object, we can then visualize a harmonic pattern for each radiating line from the object. That line consists of a particle followed by a space and then another particle, with the length of the space set by the energy state of the object. We can refer to these radiating lines of particles as Lines of Particles, LOP.

At various points, the lines between objects of different energy states intersect. At these points of intersection, a theoretical link could now be established between the objects. It is suggested that a communication is then established between the two objects. We will call this linkup, Lines of Particle Transport (LOPT). Now we have a line between the two objects and an assumption that we have a path for communication.

The low frequency object has a more open pattern, and the high frequency object has a tighter pattern, as do their respective LOP. We know from heat transfer observations that transfer occurs from high to low energy objects, and therefore we will assume that the more open pattern line will allow particles to move through it to the lower energy object, thus allowing energy transfer along the LOPT, in a very specific direction from high energy to low energy.

### Postulate

We deduce the following:

**All mass objects have an energy state that radiates lines of particle patterns. Particle lines are a linear progression of particles and holes/spaces followed by particles, etc., repeated uniformly until the energy state of the emitting object is changed, thus changing its associated particle spacing in its associated radiating line. This line of like spaced particles will be referred to as a Line of Particles, LOP. At varying interconnecting points of LOP, compressed particle patterns move in through more open expanded particle pattern lines. This increases the energy level of the more open, expanded pattern emitting object. This movement continues until both objects are of the same energy state and energy pattern frequency. At these times equilibrium is reached and transfers stabilize. Lines of connection, and therefore transfer, will be called Lines of Particle Transport LOPT. For transfer to occur there need to be at least two objects or object areas with energy differential, with the lower energy state object in control of transfer.**

### Postulate Proof Through Application of Known Observations

For the purpose of further discussion we will refer to the tighter particle spacing, and therefore higher energy emitter LOP, as the major force and the more open, lower energy emitter LOP as the minor force.

The Pinhole Camera (aperture diffraction)

Can we find evidence of the effect of these competing forces? Perhaps by limiting the major force's contact with the minor force, we can see the minor force's controlling effect on transfer. I believe the pinhole camera offers the limiting restriction needed to observe this limiting phenomenon.

The setup of a pinhole camera is a small pinhole or aperture in a thin opaque plate and a receiving viewing screen or photographic film on which the image of an object can be seen. The viewing screen is sealed in a box, and the aperture/pinhole is positioned to produce the object image on the screen/film. The image as observed, or when viewed after photographic development of the photographic film, is precise in all detail; however, the image is reversed. (See Figure 1.)

One can argue that this is the only logical way light from various points of the object can travel to the image, and I would agree with that argument. However, I wish to offer another option for consideration.

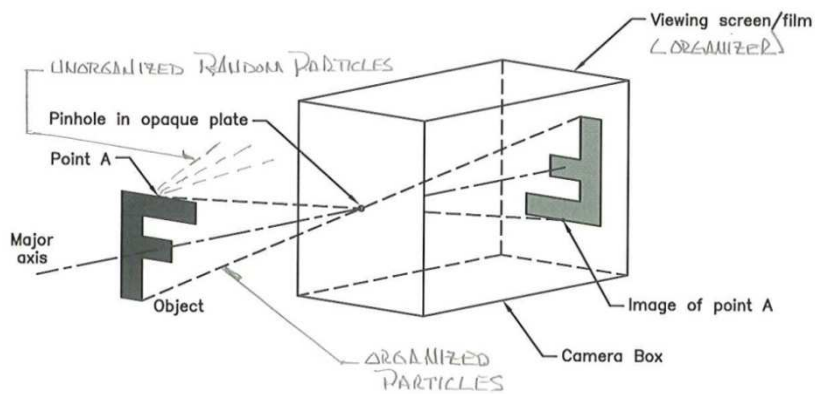


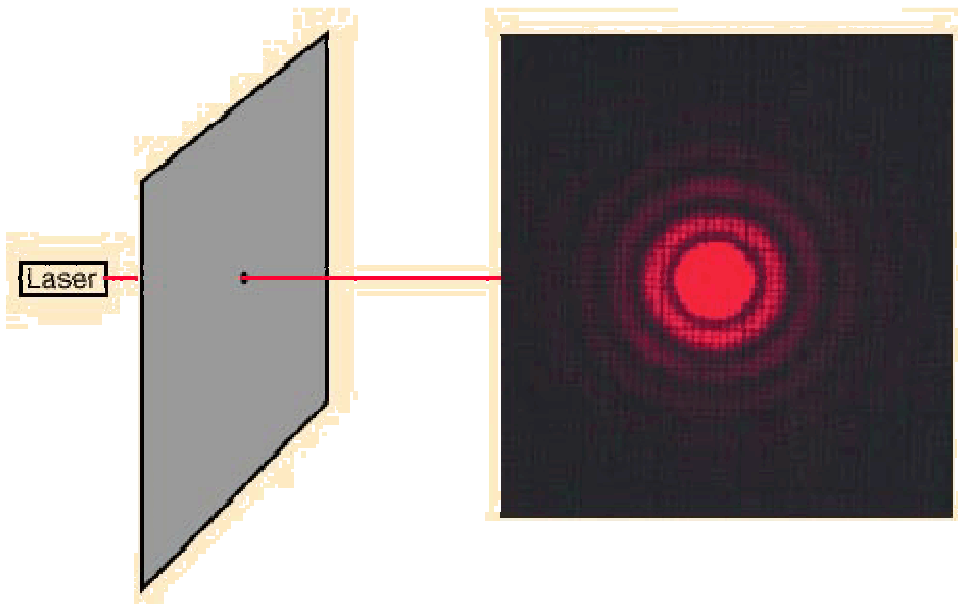
Fig 1  
Pinhole Camera Setup

For years we have been taught that light particles, or wave fronts, travel in parallel rays, radiating out from the source. But as we can see in our pinhole camera setup the actual image is bent, or organized, to the other side, where the object is located. To create the image on the screen/film there could be a force exerted on the particle field of the object. This force sorts the billions and billions of randomly approaching particles of the object at the pinhole, and then this force distributes the particles on the screen/film to produce the image. The exact image is produced even along the center axis where one might expect a non-organized image equal to the size of the pinhole. The image can also be exposed to an infinite number of different views of the object, and the system will **sort** and faithfully reproduce any selected image from any location or angle. (See Figure 1.) I will provide an explanation of this phenomenon using LOP and LOPT.

Knowing that all objects radiate particles, we know that the screen/film radiates an array of low energy particles with a portion of these radiating lines proceeding through the pinhole from the image side of the setup to the object side of the setup. Thus, we have low energy potential, minor LOP projecting beyond the pinhole toward the object. These low energy LOP have been created by the flat plate of film or screen and organized by the pinhole. We also have billions of radiating LOP on the object side of the pinhole radiating infinite unsorted high energy LOP. Now, at various points, we will have straight line intersection communication with the infinite, unorganized, random higher energy side of the setup (the object side) and the organized lower energy side (the film side). When this occurs, particles could then flow from the object to the image through the LOPT. These LOPT are set up by the restricting, organized, lower energy LOP (high move to low). This flow produces a precise image of the object and is by this theory controlled by the organizational array of low energy LOP, which was created by the stable, organized, low energy environment of the enclosed screen/film and the pinhole. The pinhole, by restricting access to the film, limits the pollution of the enclosed image side of the setup by stray, unmatched, high energy light. This segregation of the high energy particles and the low energy particles is thus constructed by the restrictive enclosed pinhole. This allows good **restrictive** communication, and therefore good object image energy transfer, along the LOPT.

All data links and communication are lost when the pinhole controlling the device is expanded to a point where energy floods the film and the restrictive effect of the pinhole on the lower energy LOP is lost. This loss effect of the image can however be reversed by the increase in the lower energy LOP/image side of the setup. If the lower energy side is increased in area and is thus producing more minor LOP, the image will be restored. (A 1/4" diameter hole produced an image at an F-18 fighter hangar at the Marine Corps Air Station in El Toro on July 8, 2006. This 1/4" pinhole would have created a shaft of light in a standard pinhole camera, but as the enclosed film/screen was enlarged to provide more and thus matching minor LOPs, the image moved from a shaft of light to an image that was developable into a photograph. At some point in the process of expansion of the screen the effect of the film overcame the effect of the shaft of light, and the pattern of the landscape image generated into a landscape photo. This shift from shaft of light to photo is all controlled at and by changes on the minor LOPS side of the setup i.e., the enclosed camera side). This suggests that the minor side of the setup plays a stronger part in the control of the image. (It is suggested that there is an energy tension that needs to be matched and in this case it is a deficiency in the minor LPO. This tension could be Dark Energy, which is associated with Dark Matter, but more on this later)

To expand on the pinhole setup and segue into our next observation, let us look at a laser beam (parallel light rays) projected through a small aperture (this is referred too as an airy disc) See figure 1a. Observations include a diffused circle, larger than the aperture, with bands of light and dark rings surrounding the diffused circle. This diffused disc and rings is not what would be expected in this situation because of the parallel rays of light from the laser. What one would expect is a shaft of light the size of the aperture. This however is explained by our LOP and LOPT theory, with minor LOP area setting up a wider pattern. This phenomenon of the rings is nicely explained in our next observation and discussion regarding the double slit. (See figure 1a for the setup)



Airy Disc  
Fig 1a

## Double Slit

Now we will examine the double slit experiment using our restrictive pinhole observation. The double slit effect is demonstrated by changing the slit number and thereby changing particle patterns on the image observation screen. **Wave Theory** is based on the assumption that a cancellation of light occurs at the dark bands on the image observation screen, thus demonstrating that light is not a particle but a wave, with associated areas of destructive interference. (See Figure 2)

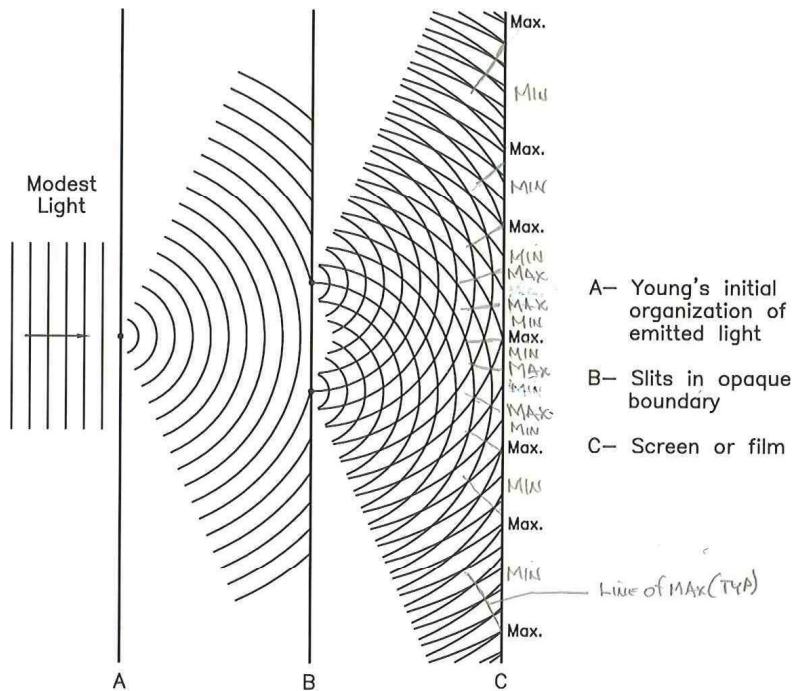


Fig 2  
This is the classic double slit.

We love waves. We can see their cancellation in a pool of water. It all makes such perfect sense. The problem with transferring water pool observations to light observations is that we are not dealing with a fluid. There is no fluid or medium in light.

How can a particle be destroyed or nullified, as should be surmised by the lack of light in the dark areas?

These observations are further confused and complicated when a single photon or electron is

released and lands in the previously observed light pattern areas and not in the dark pattern areas, which suggests that the constructive and destructive interference occurs even when only one particle is present. This single particle release experiment observation should thus destroy the wave theory, but no, it is added to the list of the duality of light conundrum.

Now let us review this double slit experiment observation with the proposed LOP and LOPT postulate.

Under our theory, the low energy state of the image side of the slits is ready to communicate with its respective high energy side of the slits through our LOPT. When double slits are exposed, before the light source is energized, the film/screen side (minor force) generates particle fronts that develop alternating pathways for future major particle movement. (This is identical to the min and max distribution as observed in Figure 2.) As these minor LOP are in phase, no loss of particle movement from the image can be expected or witnessed in the representative light band areas on the screen. However, as these multiple minor energy LOP move out of phase, the available hole openings in these restrictive controlling minor LOP are reduced (We see a doubling of particle frequency.). This thereby reduces the density of the potential high energy LOP that could be allowed through that area of slit to the image side. Thus, pathways of low and high resistance have been created.

This setup is similar to the constructive and destructive interference proposed for wave theory, but this is not a function of the transmitter. It is, however, a function of the particle pattern propagated by the receiver through its multiple projected minor LOP and their associated open patterns or their blocking patterns. See Figure 3a.



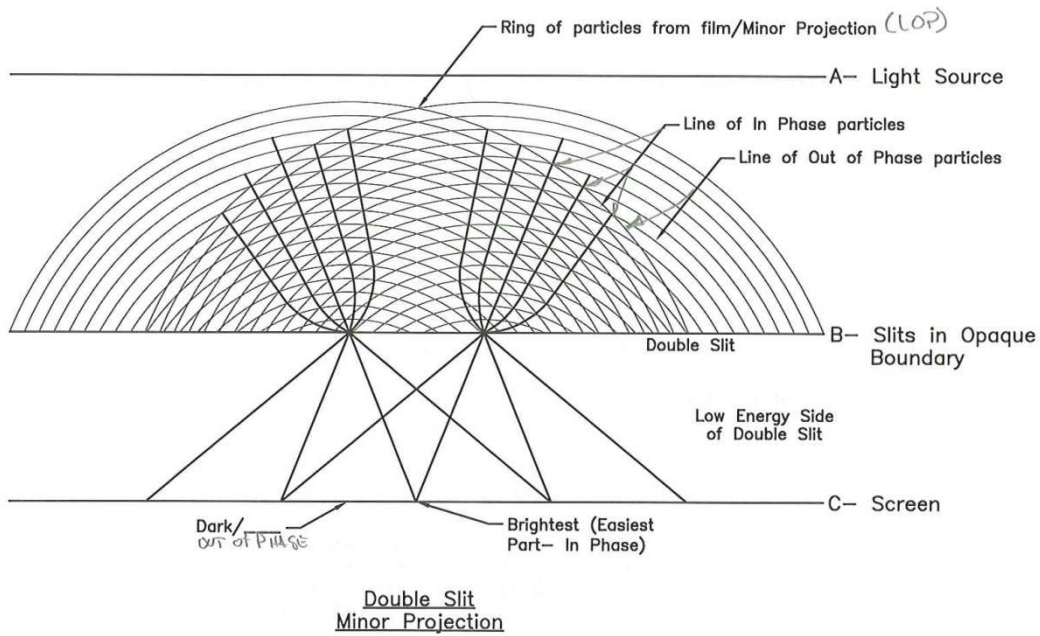


Fig 3a

Once light is emitted from the high energy side of the setup, bands of light and dark are observed. (See Figure 3a.) There is a bending that occurs along our minor LOP interlaced pattern lines, following the pathways of least resistance.

This LOP solution works under all conditions (single or mass particle projection) because it is driven and controlled by the minor LOP of the lower energy side of the setup and not the major LOP generated on the higher energy side of the setup.

Wave theory is thus abandoned, but it is replaced by the gatekeeping characteristics of the slits and their restriction of the high energy major LOP to the low energy side of the setup (as previously demonstrated by the organizational set up of the pinhole camera).

All geometrical patterns previously observed in the double slit are the same because the particle front generated by the screen is identical to the so-called wave front generated by the source under the wave front theory. It is noted that when light particles generation is monochromatic a shift in pattern occurs as the monochromatic shift occurs because a shift in white screen particles occurs caused by color subtraction.

I believe these observations provide validation of our postulate and can lead to a much greater understanding of energy/particle transfer issues and beyond, through the major and minor lines of particle pairing.

Now back to our airy discs. Any time we have an edge (sides of the aperture are similar to the sides of our slits), we generate a shadow area for the minor LOP development. With the two edges (either side of the aperture), we develop two minor areas that generate competing minor LOP, and therefore we have areas where minor LOP are in and out of phase, thus generating the rings of light and dark, that surround the diffused disc of light.

## EXPANSION OF THEORY

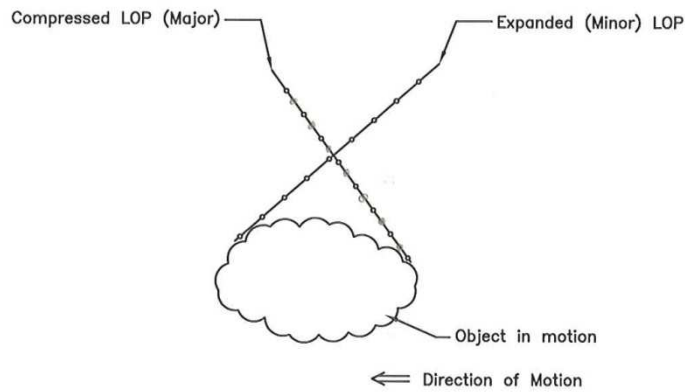
Why is  $C$ , the speed of light, constant?

I feel confident now in stating that by resolving the duality of light through the use of the pairing of major and minor LOP and the associated LOPT that the observed speed of light is constant because that speed is controlled by the observing LOP and not the relative speed of the emitter. This makes the observing LOP the gatekeeper and controller of the speed, thereby rendering the speed of light constant to the observer (Particle speed through the minor LOP, propagated by the observer, is constant.). Perhaps it would be better to state that the “observed speed of light is constant.”

If all this is so, then what other effects of nature/physics can be explained by our pairing of particles through associated major and minor LOP and their associated LOPT?

Let us examine the phenomenon of a body in motion using this particle pairing phenomenon (LOPT). We will start with the assumption that all objects radiate mass particles and that this particle production is directly proportional to object mass (The object's mass is proportional to particle density, and the object's energy (frequency of particle production) is proportional to the object's momentum.).

What we are looking for are our major and minor LOP. These can be found in any moving bodies with major LOP being produced in the direction of motion and minor LOP being produced in the opposite direction (Think of Doppler shift.). See Figure 4.



Object in Motion

Note— The major particles <sup>STRIKE</sup> the object ~~THRU~~ the minor LOP and thereby KEEP object in motion in the direction ~~in~~ of motion.

Fig 4

Thus a body or object in motion sets up a self-bombarding phenomenon with high energy particles generated from the object, striking itself through the object's own minor LOP. This bombardment of the object by its own self-directed high energy major particles keeps the object in motion, and in the direction of the motion. Inversely, a body at relative rest will remain at rest because its LOP are not organized into major and minor LOP.

A similar example of this observation is produced by a rotating object. Again, once an object starts to rotate, particle pairing through major and minor LOP develop and a "cloud" of organized LOPT starts to form around the rotating object with major LOP formed by compression of LOP in the direction of

rotation and minor LOP created in the direction counter to rotation. This cloud thus starts to stabilize the object around its axis of rotation because of the bombardment of major LOP through the minor LOP. This phenomenon is referred to as rotational momentum, and it is nothing more than particle pairing caused by an objects rotation and the associated bombardment of the object by high energy particles created by the body's rotation, thus keeping the body in motion and stabilized around the bombarded axis of rotation. (While each concentric ring of the body sets up LOPT, there are also always minor LOP available on the next interior ring, thus causing a collapse of particles around the axis of rotation.) This force can overcome some forces of relative object movement and isolate the rotating object from surrounding object effects. See Figure 5 and Figure 6.

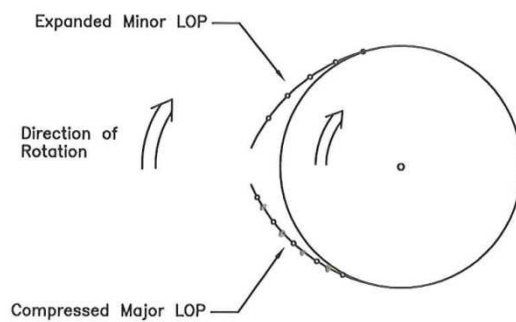


Fig 5

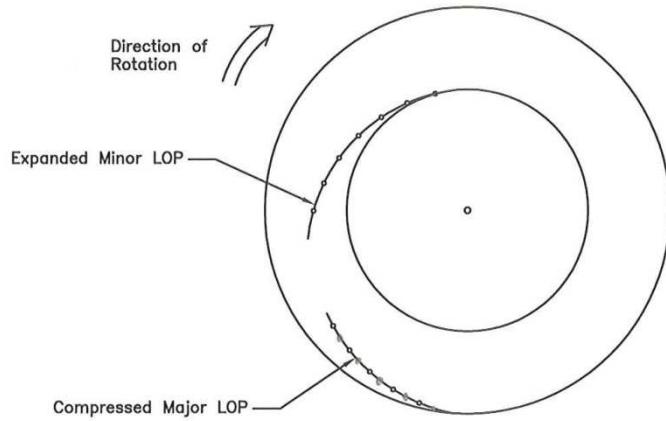


Fig 6

There are many examples of this rotating object phenomenon, from the simple child's top to the gyroscopic compass.

(Note that once a particle leaves an object it is no longer connected to the object and the particles mass and the associated striking force is independent of the generating object.)

I inserted the term "relative rest" in the paragraphs above because no object in the universe is at rest. Because all objects are in motion, they all have major and minor LOP. Thus they all have LOPT with respect to the object's mass particle. The relative size and density of the clouds of LOPT surrounding

an object are directly proportional to their mass. The energy of the LOPT is associated with their speed and thus their frequency. These clouds of LOPT around an object can interact with other objects' LOPT clouds. The denser, higher energy cloud produces a stronger effect on the less dense lower energy cloud. This effect is called gravity and can be explained as follows:

The one fact that we know about gravity is that there is an attraction between objects of mass and that this attraction is proportional to mass (as mass increases, attractive forces increase), and inversely proportional to a function of the distance (as distance increases the attractive force decreases). This force is  $G$ , the Universal Gravitational Constant.

To apply our theory to gravity we need to find our major and minor LOP. But do gravity particles (gravitons) come in various energy states, i.e. frequency changes? I think not. We can have different field density in gravitons, caused by distance and mass, but all are of the same frequency (i.e. graviton spacing).

So how can a change in frequency be achieved in a constant frequency environment? Let us start by visualizing two objects both of the same density, both with a cloud of gravitons emitting from each, in proportion to the objects mass.

For the purpose of discussion we will have one object of a greater mass than the second. We will also impose two axes for reference and discussion. The first axis will run through the centroid of both objects and be referred to as the primary axis. The second axis will intersect the primary axis at right angles to the primary axis and again through the centroid of each object and be referred to as the transverse axis. Both objects are producing particles at the same frequency but a different field density. See Figure 7a.

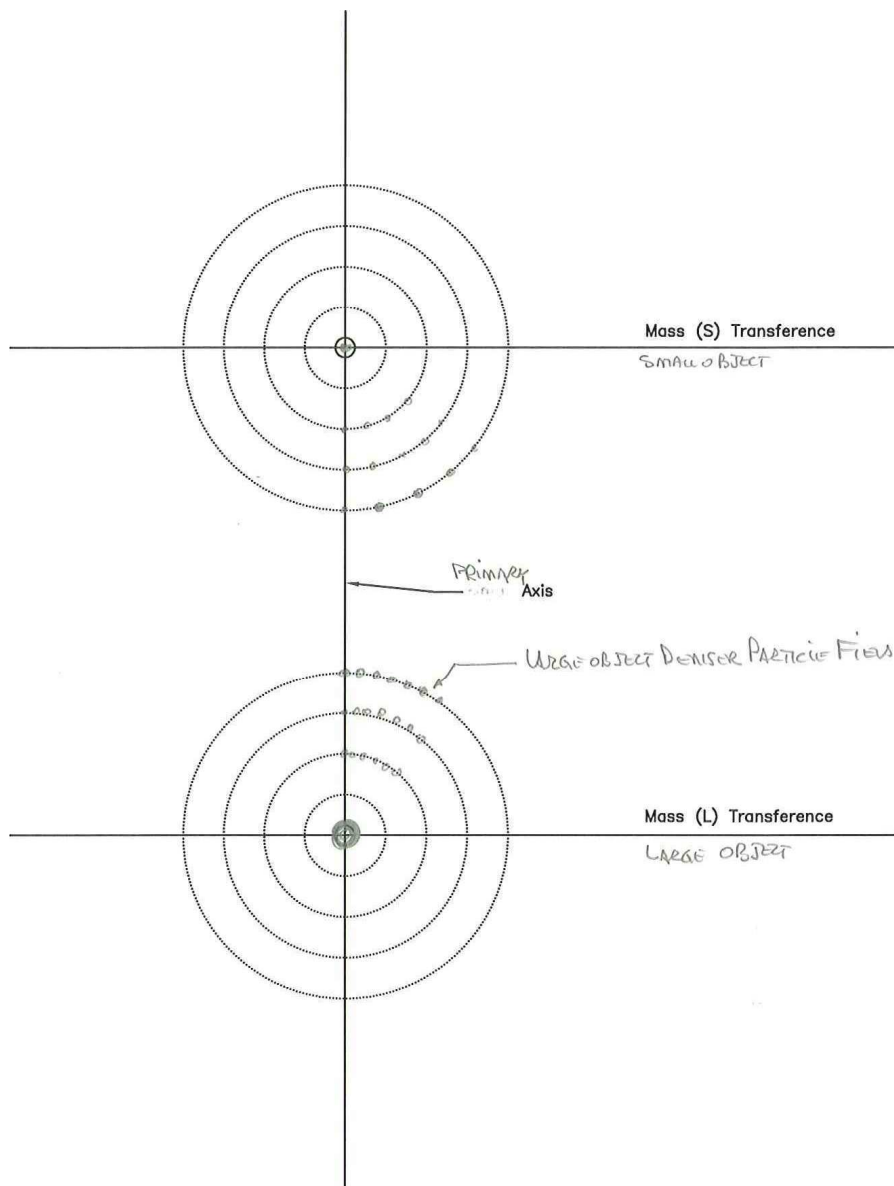


Fig 7a

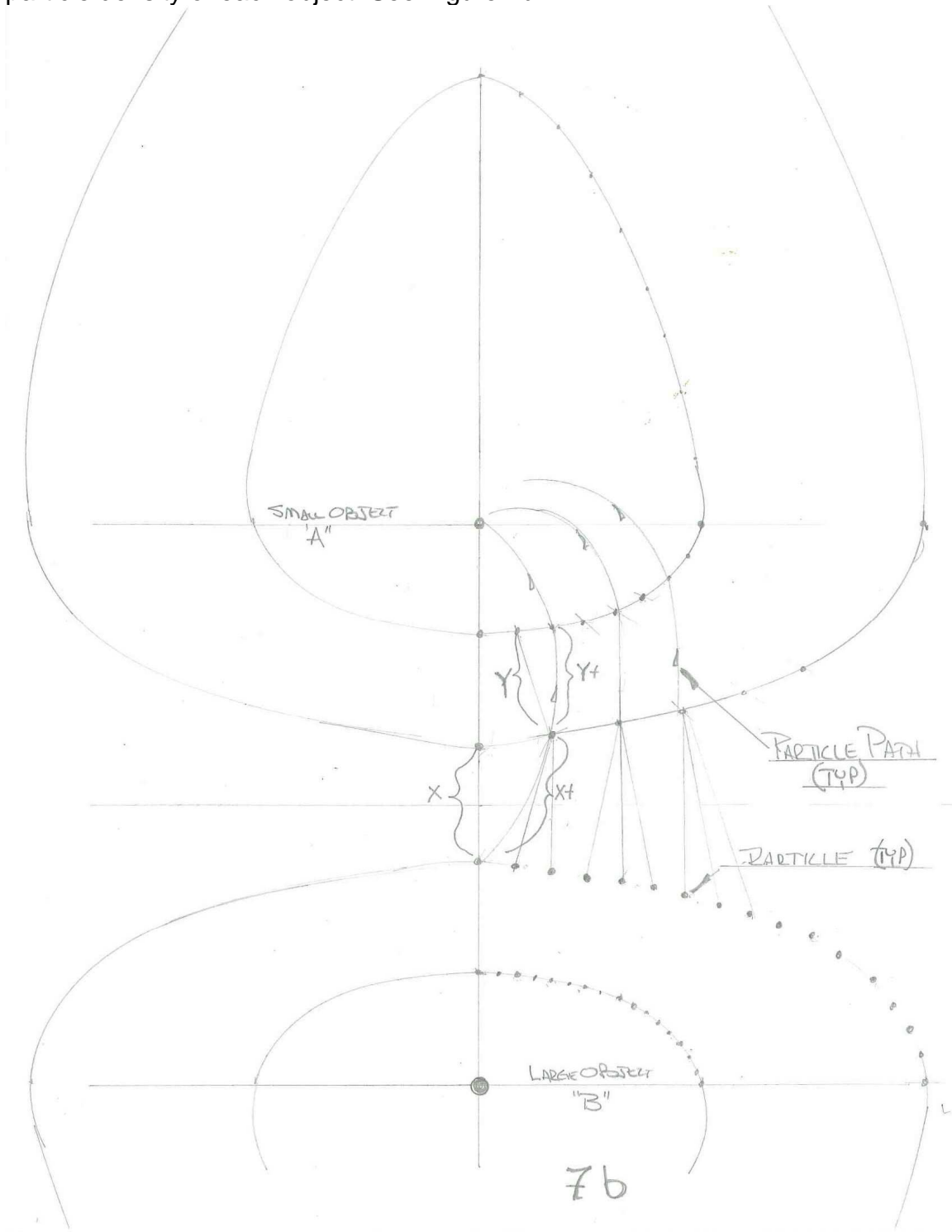
### Particles as Observed from Objects

The particle field of the larger object eventually reaches the smaller object's particle field. As the particles approach, we can expect to see the Doppler Effect shift as seen from the particle perspective, seen in the diagram in Figure 7b. We see compression of particles on the forward side of the objects, no change in particle pattern along the transverse axis, and an expansion of particles along the retreating primary axis.

This leads to the approaching particles avoiding the forward facing quadrant of the object. (In this area the particle pattern equals the oncoming particle pattern, thus the particle moves laterally to the next open pattern. See Figure 7b.) Particles move to a normal pattern along the transverse axis. Then

as the particles move to the rear quadrant of the intersecting axis, particles do not see a pattern of the retreating particles along the primary axis but do see a pattern at the back side, "shadow side," of the smaller object, thus moving into this as the only pattern available. (Bending occurred in this particle path. This is not a new or unusual phenomenon. Remember our bending of particles in our double slit and Airy Disc discussion. This is a similar issue and, of course, in the control of the minor LOP.)

This leads to graviton particles not striking the forward face of the object but striking the object in the back quadrants. As the particles strike the object in the rear, a force is created in proportion to the particle density of each object. See Figure 7b.



Particles as Observed from Particles



If the objects are in a free environment, the smaller object will accelerate towards the larger object because of an ever increasing compression at the forward face and a proportionate increasing expansion at the rear quadrant. This produces “g,” the acceleration due to gravity.

This process can be modified by changing mass density and therefore particle frequency (note mass density delta is observed in a mass spectrometer)

By changing particle frequency the particle bombardment rate is changed by particles either being allowed in or out at an accelerated or decelerated rate thus creating more or less force of attraction thus lead weighs more than a similar size of iron because the lead piece's frequency of particle is less rapid thus placing it as if it had been decelerating iron, thus giving it more ability to receive gravitons giving it the greater mass density effect i.e. it weighs more per unit volume ( gravity and acceleration are equivalent under this quantum solution, thus giving a quantum solution to a theory proposed a century ago)

The graviton is the lowest frequency particle in the particle spectrum, which allows matter to accept all other particles.

Equilibrium can be reached in the gravity world as exhibited by orbiting satellites, i.e. the moon.

The subject of Dark Energy and Dark Matter can now be explained by the fact that there is insufficient high energy LOP to support the number of low energy LOP in our universe, Just as there were insufficient low energy LOP in our pinhole camera at El Toro, until the screen and therefore low energy LOP were respectively enlarged and increased, providing matching LOP and therefore LOPT.

## SUMMARY

The following is to summarize the sequence of the proof to focus on observations relied upon to draw the conclusions in support of the theory.

1. Energy particles move from high energy to low energy, (insulated box).
2. To expand on this we limited the low energy exposure to higher energy objects, to determine if we could observe the restrictive forces in effect. We achieved this through the demonstration of the use of the pinhole camera and its restrictive pinhole.
3. From this we examined the forces involved with the double slits, Airy Disc and the associated controlling minor forces from the minor energy side of the setup. With this we surmised that the minor forces set up the varying densities LOP on the minor LOP side and therefore control the pattern of projection of the major LOP on the minor LOP screen, no matter the number of high energy particles present.
4. Moving forward, if in fact the minor force or observer is in control of the observed pattern, then it can be assumed that observed light is under the control of the observer and thus its speed is under the observer's control, thus making it constant to the observer.
5. Then the theory is expanded to look for other areas where there are major and minor LOP. A moving body is one area where this setup exists, and it is therefore suggested as the reason a body in motion stays in motion-- by the impact of the body's own released high energy LOP into the body through the body's own low energy LOP.
6. This leads to rotational bodies and their developed major and minor LOP consolidation

around the axis of rotation, with the impact of the high energy LOP striking the body through the body's low energy LOP, thus keeping a rotating body's orientation stable around its own axis of rotation.

7. This leads to a discussion of gravity and how via Doppler shift of an object's approaching and receding particles a bombardment of particles occurs on the shadow side of competing objects, causing a force and or movement in the direction of the denser particle cloud.
8. A balance of high and low energy LOPs is needed too for LOPT to exist. If a balance is not reached we find Dark Matter and Dark Energy with reference to energy transfer.

## CONCLUSION

The unresolved observation of the duality of light (via the double slit experiment) finds resolution in this theory that two differential energy states are required for transfer to occur and that the lower state provides the pathway for the higher energy transfer. The use of LOP and LOPT resolves this duality of light and thus leads to the expansion of the theory that provides a quantum explanation of gravity.