Theory of Quantized Space: A New Basis on the Nature of Space, Time and the Unified Field Theory

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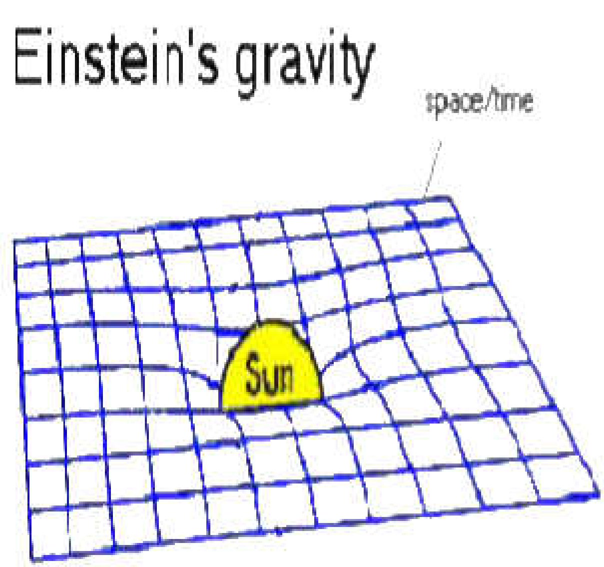
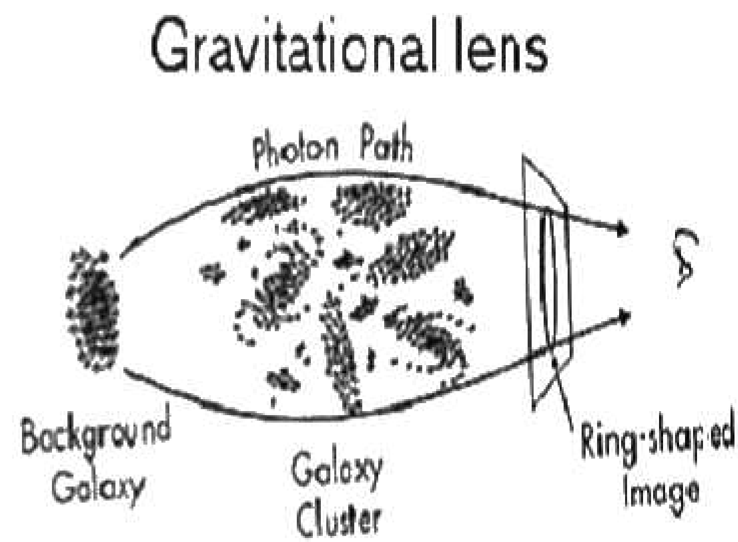
The Nature of Space and Introduction to Spatial Quanta

One of Albert Einstein's great revolutions is relativity. In the beginning, Einstein realized that gravity was not an energy field that pulled objects to one another, but rather it is the altered geometry or condition of space due to the presence of matter. We know today that the presence of matter with its mass causes a "dent" in the fabric of space/time. This is perhaps one of Einstein's most readily recognizable discoveries. Below is the classic illustration of curved space-time. This has even been since proven in an experiment with stars i.e. when looking at a distant star that seems to be right next our Sun; we may find that it is actually *behind* the sun. This is because the path of the distant star's light is bent toward our position on Earth due to the curvature of space caused by the suns intense gravity. Something called a gravitational lens is also another relevant example of this effect. A cluster of bodies such as a hand full of galaxies can magnify the light of a distant background body and provide a method for us to view distant objects.





In these two-dimensional manifestations, we can see that matter creates a curving or warpage in the fabric of space/time. The result, other objects fall toward the more massive body. This is the easiest and arguably the most logical manifestation for most to understand gravity. Of course, it is up to the individual to convert this to real life three-dimensional formats. In such a conversion, Einstein's space-time photo would look more like a 3-D grid but it is easier to comprehend from the two dimensional perspective.

Today there is limited explanation as to how this works. Space is touchless. How can there be a warpage of anything? Look at the example again. Something is obviously happening here. From our perspective, space seems like literally nothing, it is intangible. Nonetheless, there is an apparent interaction from matter, which causes the fabric to bend and bow. Otherwise, we would not be planted on this Earth, nor would the earth be projected around our parent star, the Sun. So just where does the link between space and matter begin? This is something that scientist and physicists have been searching for decades. The Theory of Quantized Space is designed to reveal just that, the sub atomic quantum relation between space and matter. Yes, it is a marriage between relativity and quantum mechanics; Einstein's last and diligently pursued theory. Alternatively, may I say, if not a marriage at least a date.

To provide an understanding of this cosmic relation we should proceed from the ground up. We shall start with quarks since they are amongst the most basic units of matter. Scientists today, suspect that they may never be able to observe free quarks because of their nature. For example in an attempt to separate quarks from the other two the strong force actually increases between them. We should keep this in mind as we study the examples throughout the material. Nonetheless, quarks seemed appropriate to consider as a foundation of our initial focus.

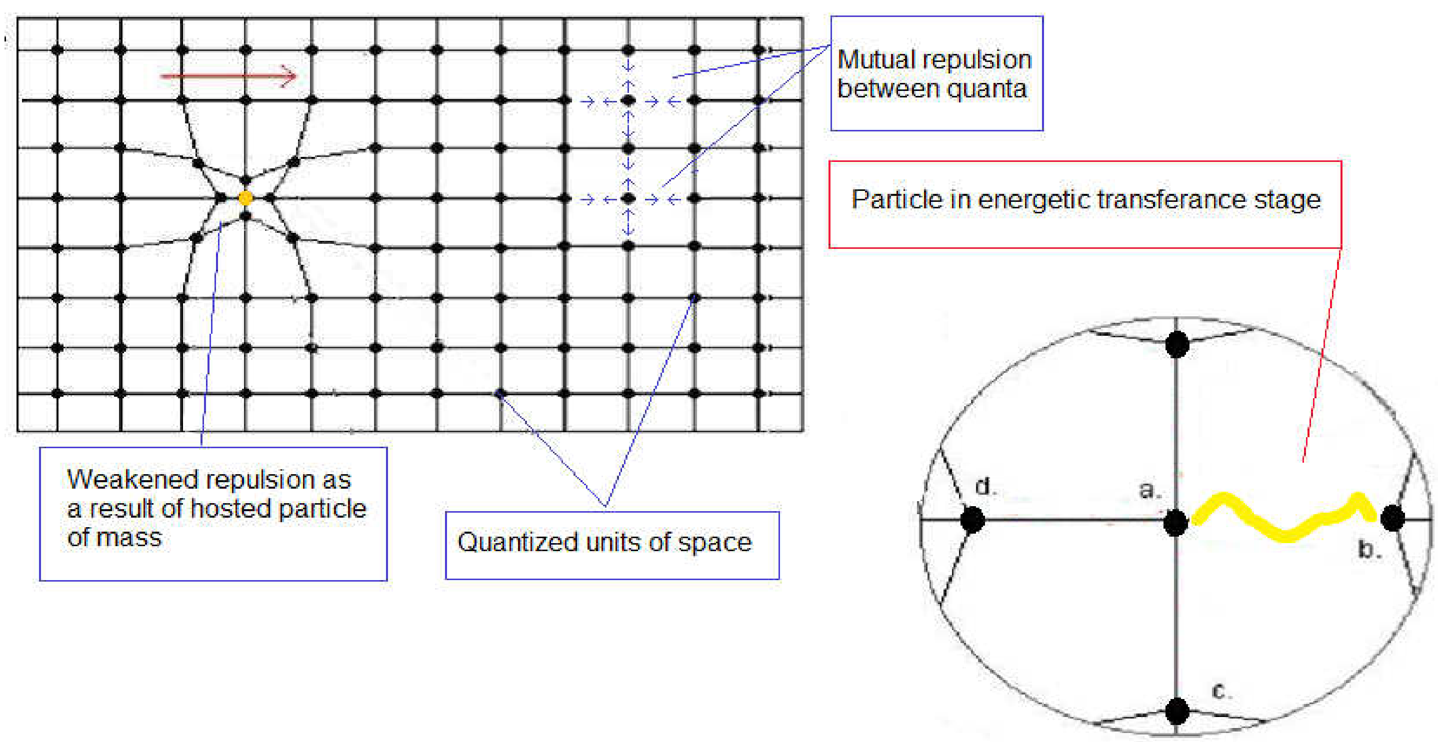
As we zoom in with our imaginary cosmoscope we begin to experience the bizarre and esoteric world of the atomic, ranging from electrons to nucleons. The view becomes clearer with an adjustment to the focusing wheel. We see matter as quantized regions of mass and energy. Although minute, quarks are theorized to have mass and weight. We notice in the quantum mechanical world a different physics and the interaction with space at such sub-baryonic levels reveals the fabric of space also to be of a different physics relative to our macro standards. To put it another way: *the proportion of interaction between space and matter differs with size*. At our level, we see matter as perhaps solid, whole, or clumped. However, we know today that at the atomic measure it takes on a more distinctive essence. The fabric of space-time has a similar distinctiveness at such levels, as we will explore.

Startlingly, we notice that space has changed in comparison to when we first entered the microscopic world. It does not seem smooth, consistent, or elastic anymore. Now we see it in quanta; an expansive three-dimensional grid made of points of space or *quantized units of space each designated by the number 1,* since at this level we find that dimensions starts to break down. However, the accumulation of quantized units of space all adjacently organized allows for additional dimensions to blossom. As long as there are linier units of quantized space there will be multiple dimensions.

From this vista, an intriguing interaction with matter is noticed. Particles do not seem to move smoothly, but we see that they are coupled with or more accurately filling the quanta and handed off to the different points. Their motion does not look consistent any more, but rather matter particles disappear and reappear in other points partially based on direction of travel and time stimulus.

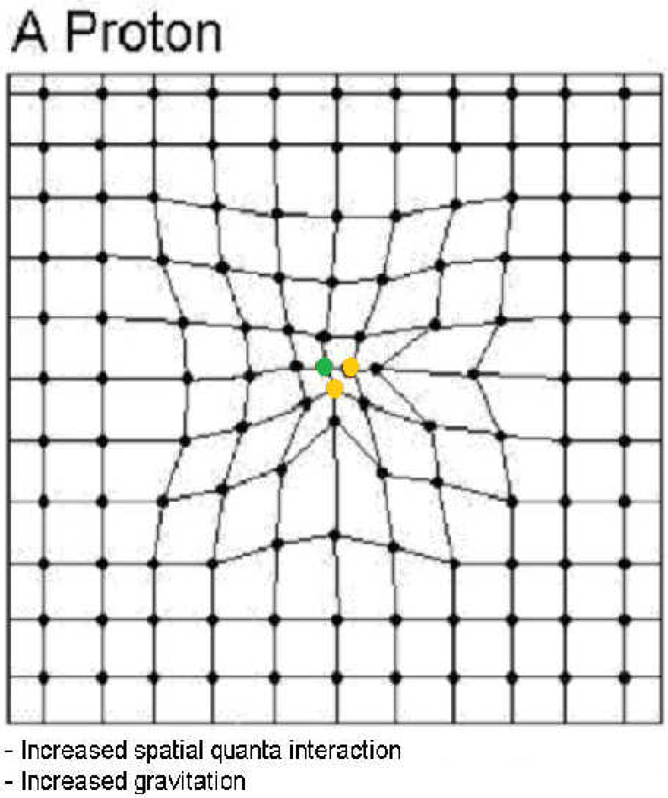
We decide to isolate a single particle of matter to examine. As we focus in even closer, we see to our astonishment that a unit of quantized space hosting a particle of matter attracts the surrounding empty quanta. We opt to move the particle. After a light bump, the particle seems to swell in size inside the quantum of space. It turns out the energy we supplied by bumping it, on this level, corresponds to a mass increase. The particle then exceeds *mass capacity of* the unit of quantized space *a*. and vanishes from site. In between the spatial units there may be a bolt of energy like between the poles of two electric spark electrodes for example then the particle appears in the next spatial quanta unit *b.* If the particle has a uniform velocity it will continue to appear and vanish followed by the interim energy bolt in between spatial units in what is manifested on the subatomic level as a chain of alternations between matter and energy. We are seeing $e = mc^2$. and the manifestation of kinetic energy. The apparent attraction of the units of quantized space is actually caused because spatial units are mutually repulsive and the presence of mass in them diminishes that repulsion. This is what a particle of mass does but a photon, by the way, is in a state which *constantly* exceeds spatial quanta capacity by default and moves continuously.

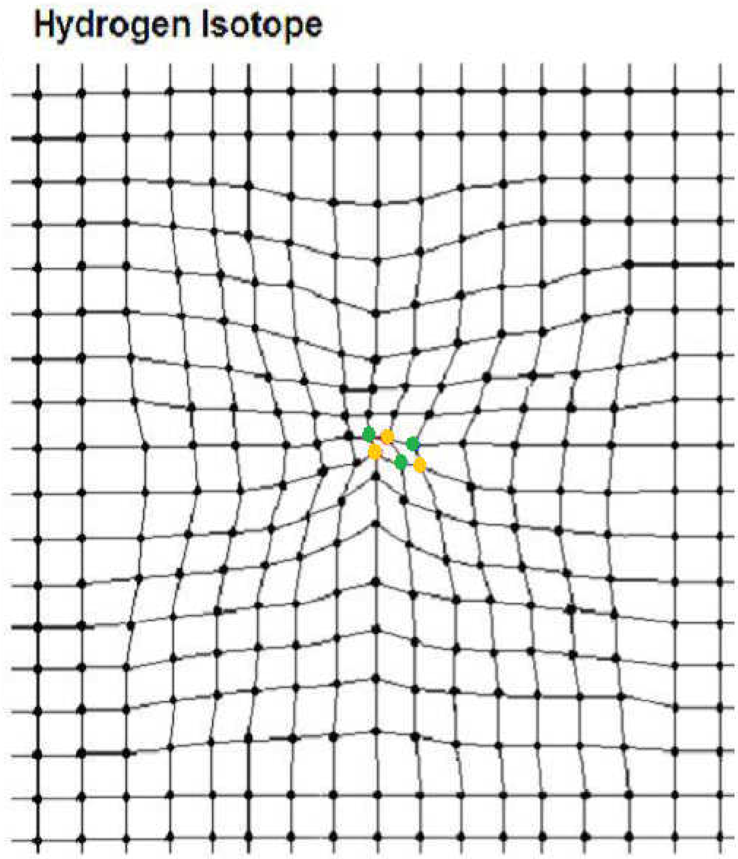
Quantized unit of mass hosted by spatial quanta



These space units have a few features of their own much the way that a quark has fractional charges and is bounded by the gluon boson. The features of a unit of space again are mutual repulsion, which is subsequently weakened by hosted matter, in this case the quark.

Now to get to the unification of gravity and the strong force, let's put three quarks onto the grid to make a proton. Now we have a complete particle because three quarks occupy three spatial quanta equaling three dimensions. The strong force binding the quarks together as seen in the illustration will add to the already weakened repulsion of surrounding units of quantized space and scrunch the spatial units closer together thereby *assisting with the gravitational constant*. The strong force is creating gravity ultimately. We can imagine what a larger nucleus might do.





Quantized Space with Time

It was mentioned a moment ago that direction of travel and also time are responsible for the objects motion. How is time responsible for motion? The particle moves by exceeding the capacity of a unit of quantized space. Time also causes mass increase by default so a particle will never be still and will quaver about within a small set of quantized units of space. What this means is that this quavering motion on this level is a result of a *dose of time* on matter in a given quanta of space causing it to move due to its mass increase. The "dose" of time doesn't affect the intermediary stage in between quanta. Interestingly that time in the intermediary stage, where the particle of mass is transferring between spatial quanta, may be always fixed eluding to some kind of a *temporal constant,* if any duration at all or may occur at the speed of light.

Let us put it another way. Say for the moment that one could step outside of space and time and observe a bit of matter in motion kind of, like we see in the diagrams. We watch the matter show itself in a point, then disappear while at that moment we see the kinetic energy begin to transfer the matter over to the next point *in a flash*. After which, the matter reappears in the next point. As the next transfer stage begins, we decide to time it to get an answer of 0.001t length of time for the energy bolt to complete. The matter appears in the next point and we time it as existing there for 5t time. We are intrigued to see that the next transfer is the same amount of time as before, t0.001. We experiment a little and accelerate the particle to a faster speed. Our new readings show that the matter exists in each quantum for t4 time now, a little less. We wait for the next transfer stage to occur again only to find that the transfer itself is still the same t0.001.

We decide to make the particle accelerate at a constant rate. We see that the matter exists at the next quantum for 3.9t time, and then in the next for t3.7 and the next for t3.5 as it accelerates. When we take more readings we see that the kinetic transfer is still taking t0.001 time even though the matter is getting faster and faster. This is what is meant by temporal constant. Here, again, at this level, a velocity of a particle (or any relative movement) of material motion, represented here as (*v*), is simply the incidental result of time *(t)* (a value related to the constancy of the speed of light*)* *imposed* on a unit of matter (*m*), apportioned by a unit (or units) of space (*u*). Therefore time is acting as a catalyst. I will do my best at creating an equation. It would seem to be as follows: Velocity equals a unit of mass multiplied by three clicks of time square rooted by units of quantized space squared. In essence when we see motion we are seeing a series of multiplications and division.

$$\boldsymbol{v = m(\frac{t^3}{\sqrt{u}})^2}$$

The equation means in essence *mass is multiplied by time and divided by space*. This also provides a further explanation for quantum uncertainty because a stationary particle would be constantly increased in mass by the catalyst of time causing it to exceed its quantized space unit's capacity even while still and move to another quantum in a random direction; the re-division of the particle. Therefore particles will jiggle about in amongst a small set of quantized space units while at rest corresponding to existing within a group of waves, hence the wave aspect of subatomic particles.

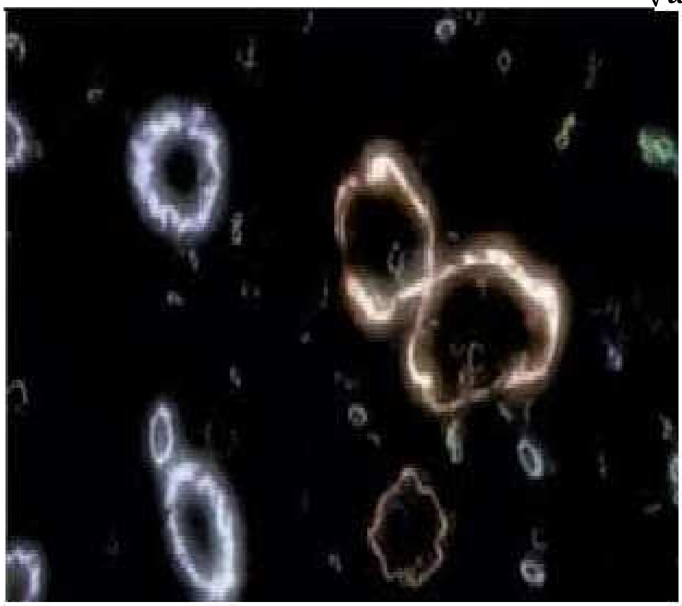
If we recall how it was said that the units of quantized space all equal 1 spatial dimension apiece then a particle not affected by time would barley exists as a one dimensional particle. However with it being that time multiplies mass and a stationary particle moves about in a small group constantly exceeding the spatial quanta capacity limits due to time stimulus the particle can have form in 3 dimensions at least, motion defines dimension

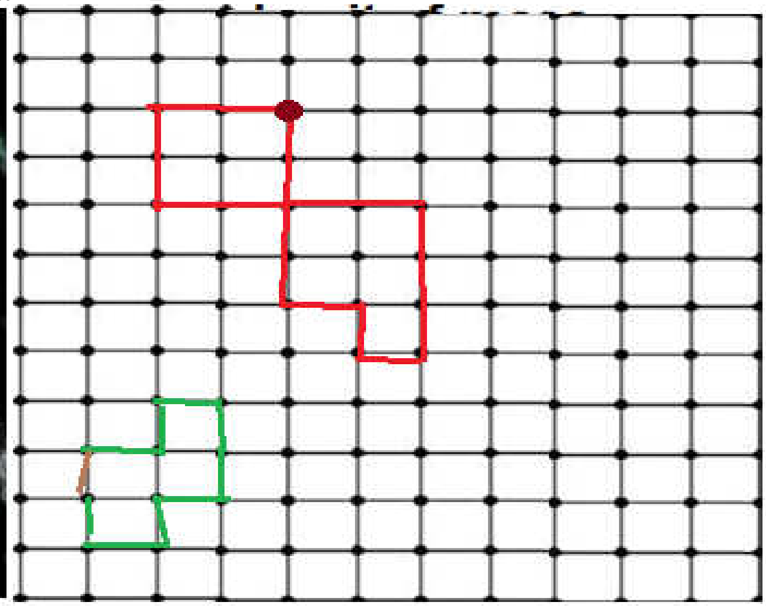
When there is an attempt at linier motion we get occasional amplitude along the path of velocity to move at that trajectory as a result of the kinetic energy. This means that on occasion the particle as it moves in a line will not be where expected and will make it harder to predict where it will be and end up in its motions. Further to stretch our imaginations again if we knock the particle with a pool stick it doesn't necessarily mean it will move in that direction, it might move to any of the other units of quantized space yet again we get an amplitude to move in the intended path. This relates to Quantum Electrodynamics timer clock ideology where they predict the motion of a particle by using a dial and needle spinning around and after some time where the needle lands is the probability of the direction of a subatomic particle. How could we apply TQS with the phenomena of diffraction?

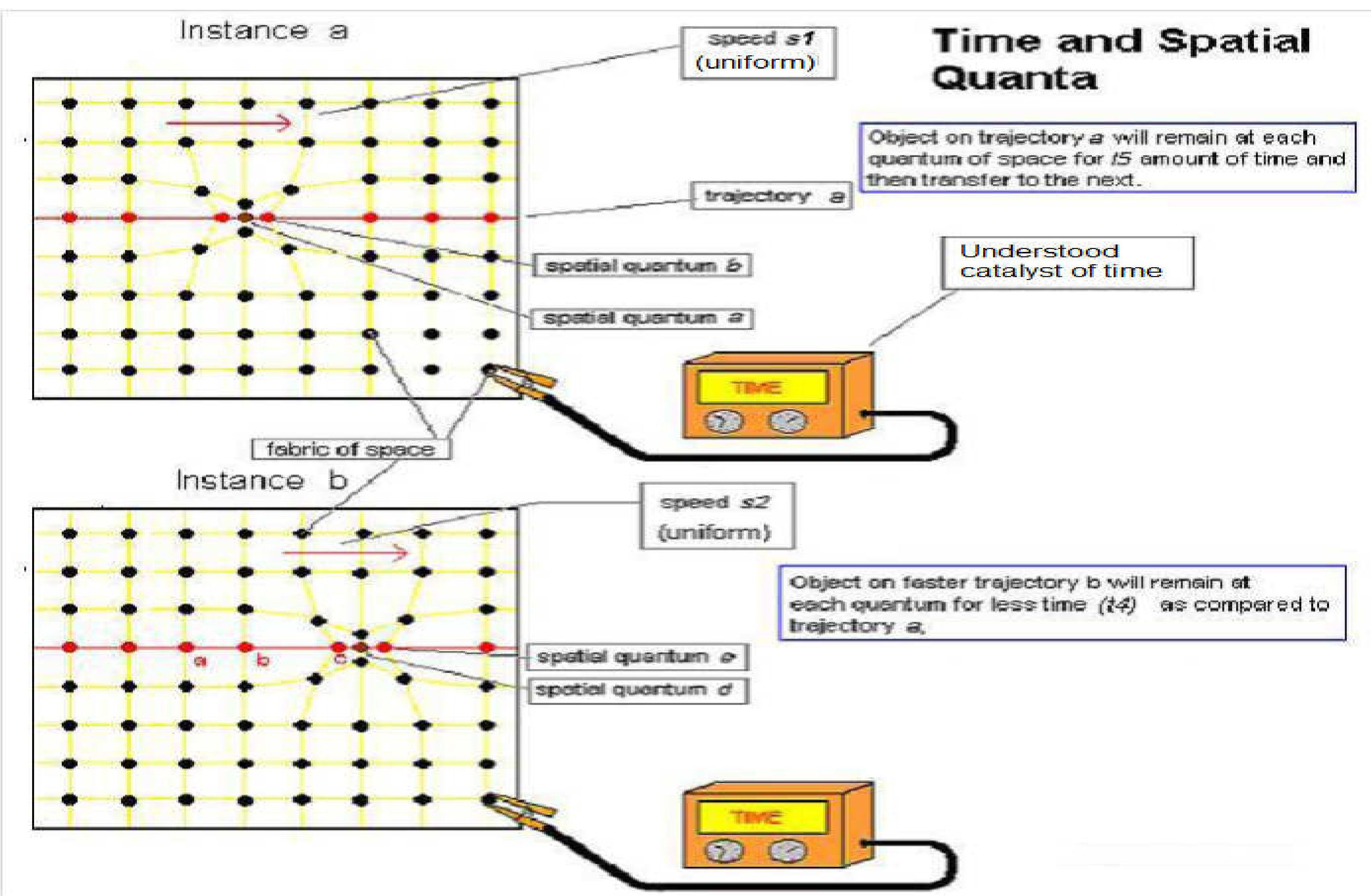
Time vibrates space as theorized here. The vibration is in proportion to velocity through space corresponding to time dilation with faster speeds. The vibration of space proceeds at the speed of light. The fact that time stops when one reaches the speed of light elaborates on this. The vibration of space shall cause mass increase in what appear to be stationary particles. It is predicted by this theory that a particle made to be at rest will yet appear to vibrate or jiggle around a small region of space. What we are seeing in this event, predicted by TQS, are time beats. Mentioned earlier a particle is only a one dimensional barely massive object just as the space quanta it occupies is one dimensional. We can predict that it will take a series of movement between 3 quanta along the x, y, and z axis for the particle to establish form. So we can see that a particle jiggling about in a small region over time is occupying enough quanta to take form in 3 dimension. A beat of time again increases the mass of the particle by vibrating space forcing it to exceed the capacity of a unit of quantized space and move to another. The constant beat of time causes rapid intermittent increases of mass and we get a jiggling particle. Time is indeed a 4th dimension. An experiment may be formulated to take note of this with the collaboration of the proper personnel.

The constant vibration from time resulting in intermittent mass increase of 1 dimensional quanta of matter effecting a quavering about a set of units of quantized space within a region is reminiscent of a super string and potential evidence of the time beats. The angular momentum equation may be inserted yet explaining the string as a closed loop. The pattern predicted and portrayed in images of superstrings match the matter quantum transference pattern shown below and may be relevant in showing how the one dimensional particle forms a whole particle by its susceptibility to time beats.

$$v = m\left(\frac{t^3}{\sqrt{u}}\right)^2 \rightarrow \frac{1}{2}h/2\pi$$







The Higgs Phenomena

What's more is that this touches on Higgs Mechanics where we want to interpret massive particles and objects as perhaps initially being massless therefore able to attain a motion on the order of the speed of light yet the universal Higgs field (like moving an object under water) slows this motion down corresponding to mass increase in the objects in question. There may be an association of units of quantized space with the Higgs boson.

Support for TQS and more examples

The Expanding Universe

The mutual repulsion between units of quantized space may be what is at least in some major part responsible for the universe's expansion. In addition, we can also see how too little matter might mean an increase in spatial quanta repulsion, while simultaneously dwarfing the gravitation of sparse matter. The nature of the spatial quanta force relative to one another is to push away. One quantum pushes another while being counteracted by the repulsion of the surrounding quanta, therefore, matter and space are codependent. If there is too little matter, then a repulsive force builds. On the other hand if there is too much matter then the spatial quanta may come into .contact after having their mutual repulsion overwhelmed. (We might identify this situation on our level as a black hole event where time, space, and matter are squelched out of existence.) Once again as more and more empty space is uncovered a subtle force of expansion builds which again turns out to be the repulsive force units of quantized space. This may be the source of **dark energy**.

Galactic Tidal Tails

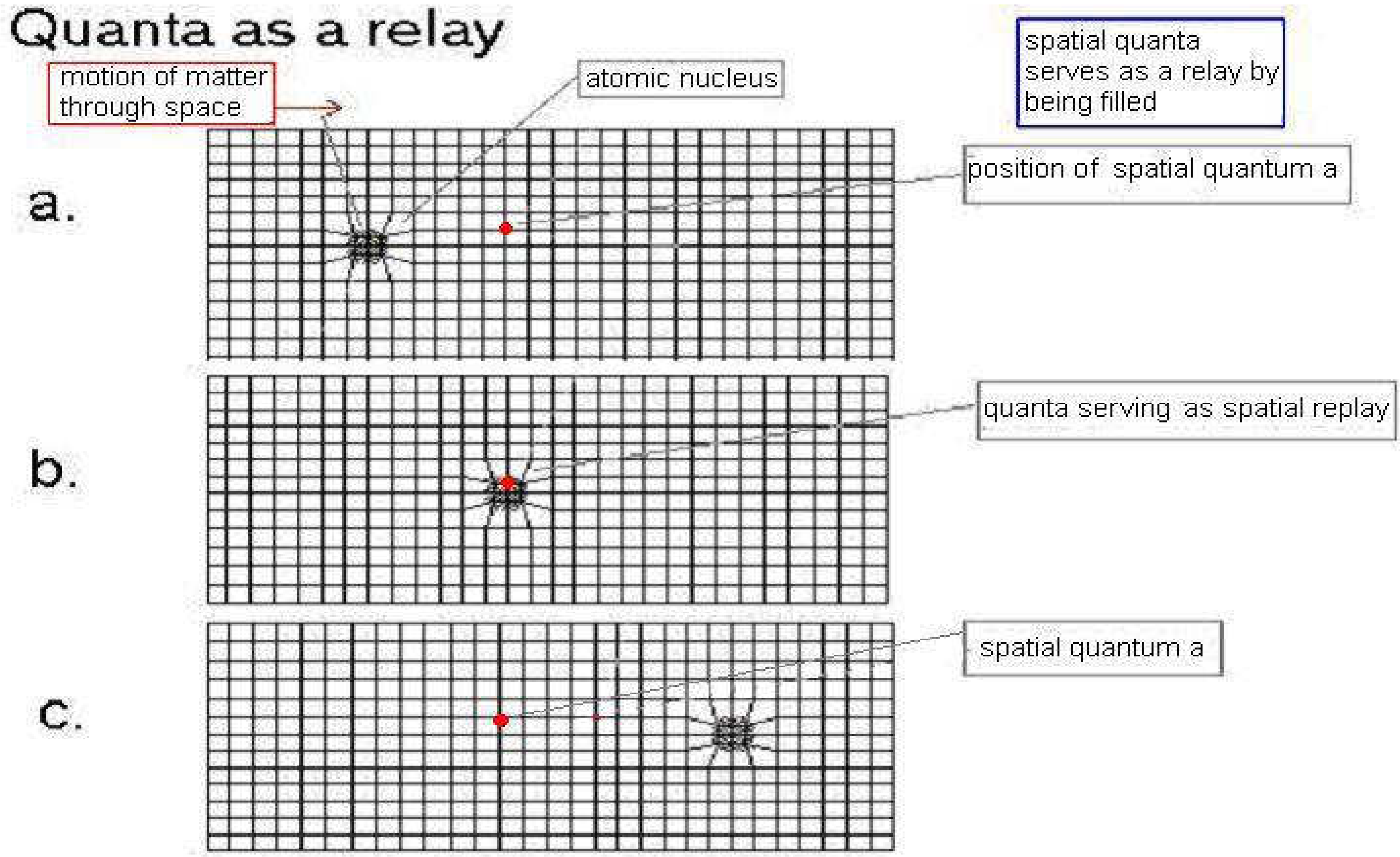
Consider a galaxy or large globular cluster. Within that cotton candy-like structure are what appear to be large conglomerations of matter and vast *vacuitous volumes* which have built up force due to lack of matter. The strange stellar density wave seen in galactic arms may be a result of a combination of dark energy cause by repulsive quanta and gravitation. In them we see matter attracting at one end of the motional arm and seemingly ejected at the other end. An analogy for this may be like a j-tube in a faucet and sink setup.

The Relaying Nature of Space

We can now zoom out a little on our cosmoscope to the level encompassing the entire nucleus. From this view, we find it difficult to see the diminutive interactions with quanta. Therefore, it appears that the nucleus is "trapping" the quanta inside; minuscule exchanges are not noticed. If the atom were to move, the quanta would flow through the nucleus having to go through the handoff interaction processes, which again, cannot be seen,

For example, take spatial quantum *a,* which is alone, not coupled with any matter. A stray nucleus moves toward that point in space. Soon quantum *a,* is now "inside" the nucleus going through the sub-atomic hand off process thus, handing off a given portion. As the nucleus moves on, quantum *a,* is no longer inside and has fulfilled its task of being a quantum relay. This is an example of how space .flows through matter as it moves revealing the *relaying nature* of space. It also takes a minute amount of time for every quantized unit to complete this relay process and that time increases with speed.

Notice how we can only see the imaginary lines of attraction as we view the entire nucleus. In addition, we can see that the matter under observation here contains a number of protons, which corresponds to about triple the amount of quanta. Compare this with the three-quark proton figure seen earlier. If we were to zoom out to a level revealing complete molecules and greater combinations we may find the picture taking on something that looks more like Einstein's original warped space/time illustration, a smoother more elastic appearance in a three dimensional geometry, of course. We are unable to see the point quanta and space goes back to looking consistent.



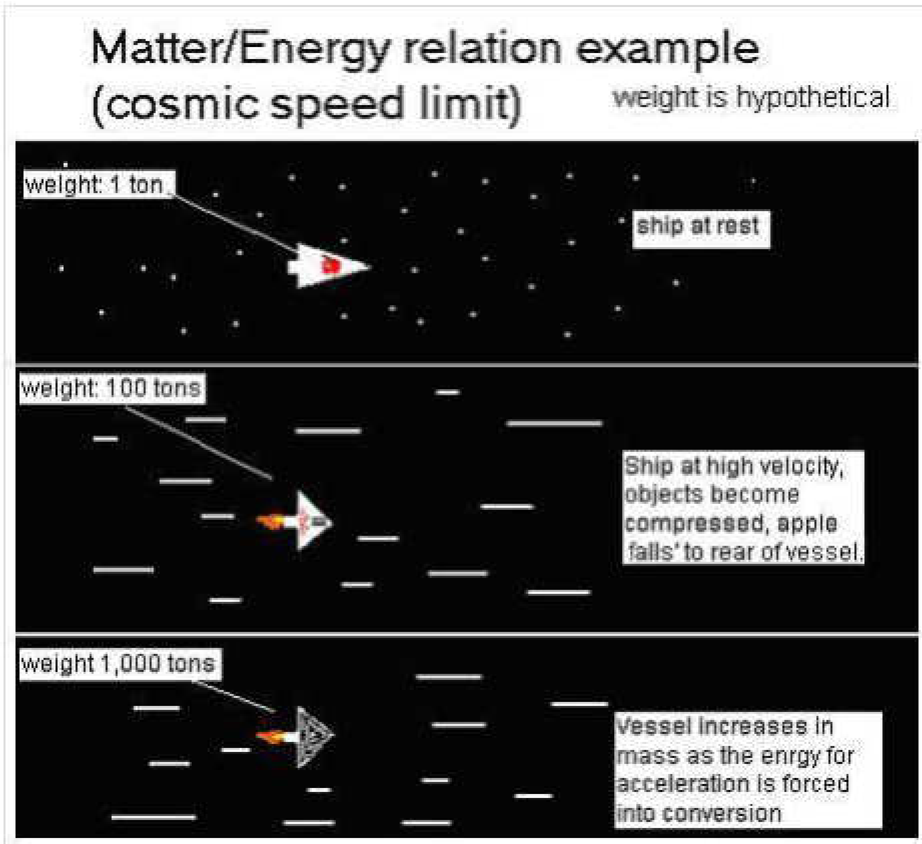
Matter Compression

If we recall it was said that it takes a minute amount of time to relay mass through space which increases with speed. Many in the world, physicist or not, may have wondered at some point just how fast can we, or anything for that matter travel? Many who ask the question are not aware that science has actually answered some of this. We have discovered that there is a speed limit in the universe. This does not mean that there are numbered signs scattered throughout the cosmos, rather it reveals that there is an actual restriction on just how fast matter can move.

All matter whether plastic, wood, or steel will compress as it attempts to reach such great velocities like that of light. Strangely enough, it turns out that more energy being used to accelerate will not propel the object any faster, but instead will increase the objects mass. This seems perplexing and unnatural. Why can we not we go any faster? Why is it any different than normal speeds? The Theory of Quantized Space offers an intriguing explanation for this curious reality.

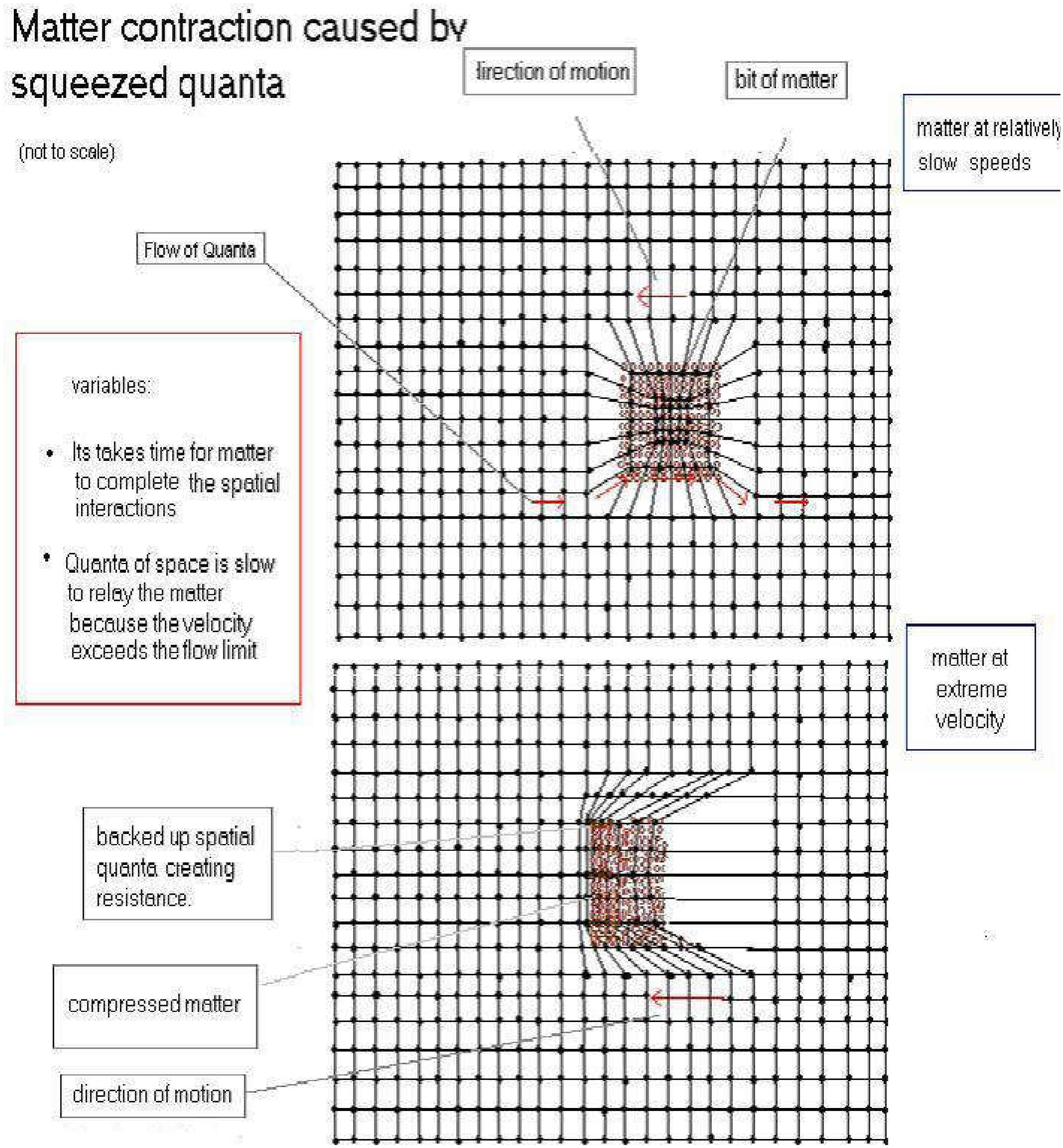
We remember how the spatial quanta flow through matter and interact on the way through, something that does take time although minute. What do you suppose would happen if we tried to make that quanta cram through faster than the interactions can hand off? We would need to send a block of matter say, made of concrete for no good reason, off at high speeds in order to compete with the fast spatial interactions. As the velocity increases, we find that the amount of quanta getting past is less and less as they become backed up by other quanta hurrying to make the particle handoffs. We see that space is becoming compressed ahead and the matter becomes compacted. This effect has been known for some time. All matter will compress as it reaches extreme velocities. Could it be that it is a result of numerous spatial quanta being crammed through matter and not getting through fast enough? Speed and acceleration are forcing the matter over to the next point faster than the spatial interaction can complete its task. We see that there is not enough time and the block is squeezed.

In the figure, the block was drawn larger than the amount of quanta needed to support that much matter, but we get the idea. Nonetheless, it shows that matter cannot move its properties to the adjacent points faster than nature can relay it; hence matter compression. Moreover, the resistance is strong enough that all energy of acceleration can go nowhere but into conversion.



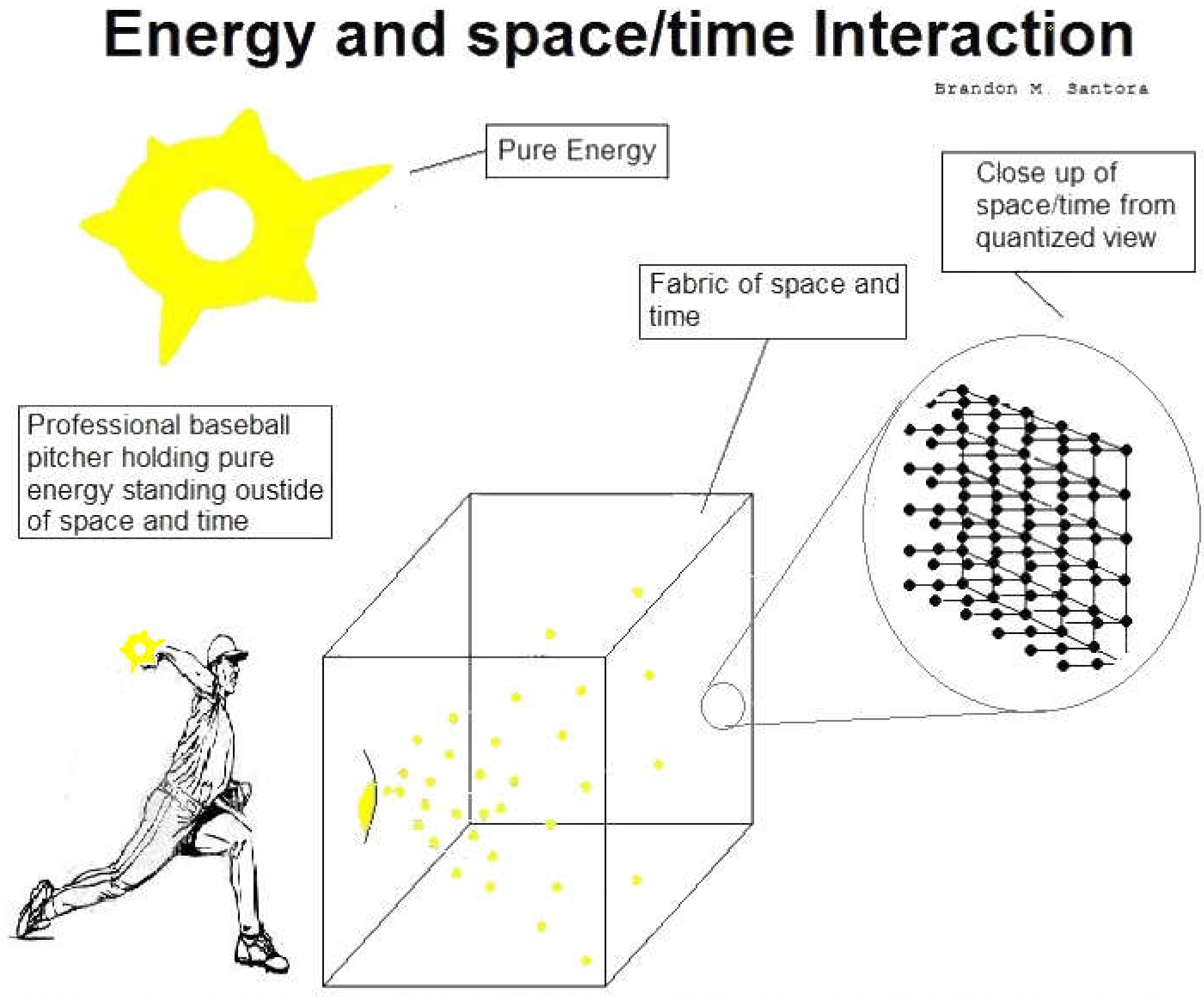
Gravity Waves

TQS also elaborates on gravity waves. One compelling idea would be noticed in the place where gravity waves occur naturally. The most common time and place is in the event of a super nova explosion. The concept is simple. The supernova explosion is so immense that the dense star matter is blasted away at such tremendous speeds to the point that weak gravity waves are produced. The matter is not blasted off at the speed of light, but they are traveling fast enough to produce a little quanta traffic as the speeding stellar mass is handed off through space. We would be seeing weak effects of what is shown in the following example coming from the swift motion of exploding material. Therefore, if a bit of super nova matter were blasted off at high speeds, we would see a small buildup of quanta ahead of it.


Matter contraction caused by squeezed quanta
(not to scale)
direction of motion
bit of matter
matter at relatively slow speeds
Flow of Quanta
variables:
• Its takes time for matter to complete the spatial interactions
• Quanta of space is slow to relay the matter because the velocity exceeds the flow limit
matter at extreme velocity
backed up spatial quanta creating resistance.
compressed matter
direction of motion

Quantumless Light

A new concept important in the understanding of SQT is called quantumless light or coagulated energy. This is essentially the "stuff" that the universe emerged from before the big bang event. The illustration below is intended to demonstrate why light is quantized. The term congealed light quanta are unobservable in the physical universe and can be put on paper with drawings. Light that does not exist in space is not quantized, or limited by the volume boundaries of units of quantized space. Congealed energy would be, as some have quoted, "soupy". The allegory representation below provides a way of understanding quantumless light and adjacently its shattered symmetry in space.



The pitcher hurls the orb of pure energy at the three dimensional grid of space time. Upon striking the grid the energy fragments into light quanta or high energy photons. Each individual quantum of energy retains some of its energy component within the volume of a quantum of space. Outside that volume when observing from a wider scope the energy takes on a more quantum variation and can act like a particle under circumstances where the quantum of energy acts as an incident body.