GRAVITY VECTORS[1]

Last edit: 5 January 2024
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ABSTRACT
This paper summarises several prior investigations into the nature of gravity and particle entanglement. These are regarded as critical considerations for interpreting several speculated cosmological features including 'The Big Bang' and 'Dark Matter', as well as observed phenomena including 'Black Holes' and mass attraction through 'Gravity'. Recommended research topics are listed for this subject.

1) Variable G

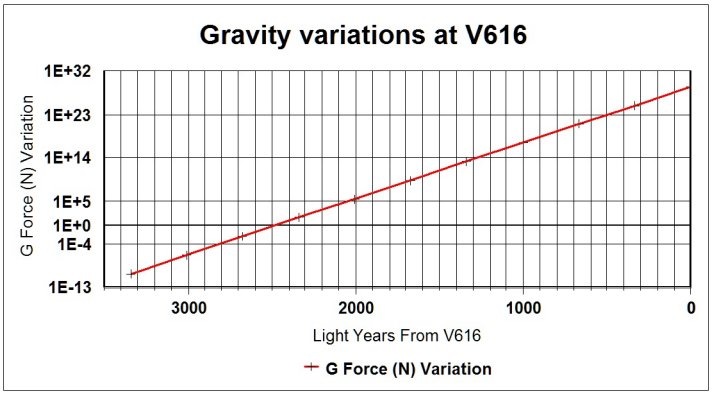
In the Newtonian formula for Force attraction between two masses, we have Exhibit 1 Force:

$$F = G\frac{m_1 m_2}{r^2}$$

Exhibit 1 Force

Where F is the force, m_1 and m_2 are the masses, r^2 is the squared distance between the masses, and G is the universal gravitational constant. However, we have proved that G is not constant in some solar system places. See "Isaac Newton and Planet Mercury".[2] This reference also includes comments which show the laboratory tested values for G are not constant either. G must be subject to a slight natural variation within the Solar System, for unknown reasons.

We have previously calculated that G is much higher near Black Holes to match the observed mass annihilation, see "GRAVISPHERES"[3]. That changing gravity field strength, follows a straight line relationship with distance, shown in Exhibit 2 Gravity variations from Earth to V616.



[1] https://bosmin.com/PSL/GravityVectors.pdf

[2] https://www.bosmin.com/PSL/NewtonAndMercury.pdf

[3] https://bosmin.com/PSL/GRAVISPHERES.pdf

Exhibit 2 Gravity variations from Earth to V616.

2) Solar System Gravisphere

Our Gravisphere, centred on Black Hole V616 is shown in Exhibit 3 Solar System Gravisphere.

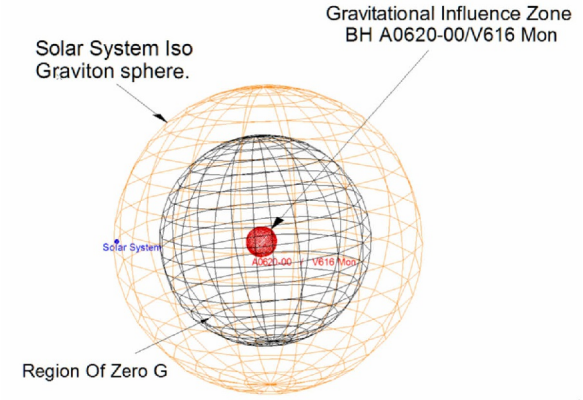


Exhibit 3 Solar System Gravisphere

This exhibit is similar to that shown at[4] where calculations determine the distance to Black Hole V616 is 3,343 light years, and the value for G varies between $6.693x10^{-11}$ and $6.693x10^{+28}$ cubic metres per kilogram second squared. This shows that G turns from negative to positive some 942.9 light years from the Solar system. We expect all the entangled attraction pointers to be directed towards V616, beyond this region.

3) Black Holes

A Black Hole image of Messier 87 was captured by the Chandra X-Ray system,[5] which included a jet of sub atomic particles as shown in Exhibit 4 M87 Black Hole.

[4] https://bosmin.com/PSL/BigBangOrSteadyState.pdf

[5] https://www.nasa.gov/feature/goddard/2017/messier-87

Exhibit 4 M87 Black Hole
This represents convincing evidence that Black Holes exist in nature, and operate to recycle particulate matter.

The jet of sub atomic particles is clearly visible and illustrates an active source of naturally occurring Cosmic Rays with a high portion of Proton material which is further discussed in our 'Connected Gravispheres' paper.[6]

There are several ongoing studies to determine how a Black Hole operates, but this author has offered a possible mechanism which identifies the high gravity field, and the entangled particles necessary to create a gravity field. Both entangled particles and the cause of gravity, are fields of active investigation that have been followed for considerable time, but with limited success.

The current paper provides additional avenues of investigation, starting from the proposed Black Hole model as discussed in Exhibit 5 Formation Of Gravitons.

[6] https://www.bosmin.com/PSL/ConnectedGravispheres.pdf

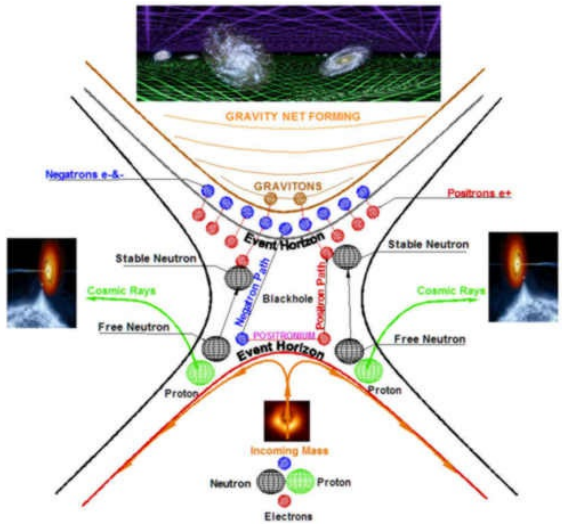


Exhibit 5 Formation Of Gravitons

Gravitons are formed at a Black Hole by the separation of Positronium particles which initially include a Positron and a Negatron as an orbiting pair.[7] The minor particle in this association is usually not distinguished from other electrons, but is now refer to as a Negatron. It is assumed here that the Negatron separates from the Black Hole by a process of QUANTUM TUNNELLING [8].
This distinction is important when considered in the light of entangled particles, and leads to a changed Exhibit 6 Modified Model of Elementary Particles as discussed at[9].

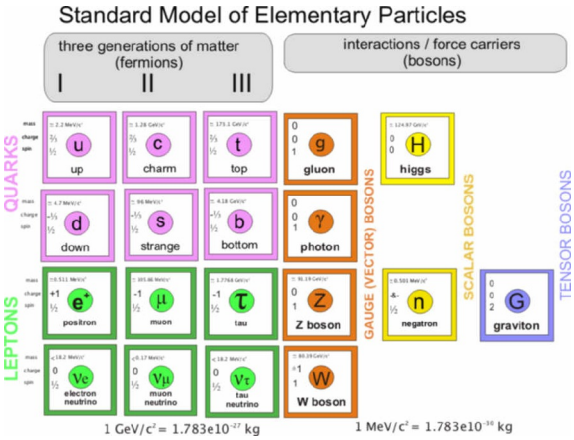


Exhibit 6 Modified Model of Elementary Particles

The Positron is a positively charged Electron which has a magnetic field as illustrated in

[7] https://en.wikipedia.org/wiki/Positronium

[8] https://phet.colorado.edu/sims/cheerpj/quantum-tunneling/latest/quantum-tunneling.html?simulation=quantum-tunneling

[9] https://bosmin.com/PSL/NEGATRONS.pdf

Exhibit 7 Magnetic Field Formation.[10]

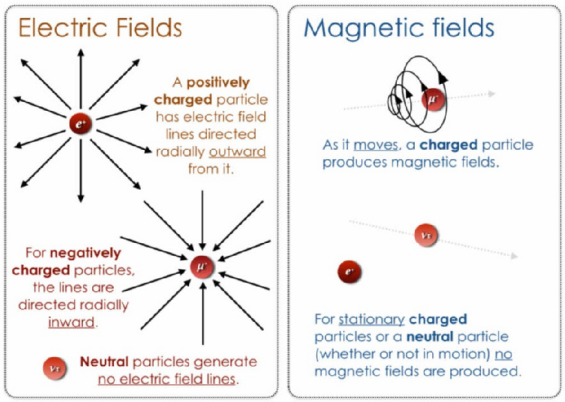


Exhibit 7 Magnetic Field Formation

A Positrino operating inside a Black Hole is an orbiting particle with its entangled Negatron operating outside the Black Hole, which constitutes the Positron pair.

An effect of this orbiting association is the formation of a magnetic field which stabilises the free Neutron, after its separation from the Proton at a Black Hole site. Another effect is to cause the Negatron to carry a double negative charge. I conclude this changes a Negatron, to the particle responsible for the formation of a gravity field, otherwise termed a Graviton.[11]

> "In theories of quantum gravity, the graviton is the hypothetical quantum of gravity, an elementary particle that mediates the force of gravitational interaction. There is no complete quantum field theory of gravitons due to an outstanding mathematical problem with renormalization in general relativity. In string theory, believed by some to be a consistent theory of quantum gravity, the graviton is a massless state of a fundamental string."

Gravitons distributed from a Black Hole follows the Inverse Square Law.[12] This provides a weakening concentration of Gravitons, with increasing distance from the Black Hole.

4) Entanglement

Entanglement is an emerging quantum science investigation, with repeatable results, leaving observers in a quandary as to the cause. The issues are summarised in the Wikipedia entry[13] which includes:

> "According to some interpretations of quantum mechanics, the effect of one measurement occurs instantly. Other interpretations which do not recognize wavefunction collapse dispute that there is any "effect" at all. However, all

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[10] https://www.drbakstmagnetics.com/how-does-a-magnetic-field-work/

[11] https://en.wikipedia.org/wiki/Graviton

[12] https://en.wikipedia.org/wiki/Inverse-square_law

[13] https://en.wikipedia.org/wiki/Quantum_entanglement

interpretations agree that entanglement produces correlation between the measurements, and that the mutual information between the entangled particles can be exploited, but that any transmission of information at faster-than-light speeds is impossible.
Quantum entanglement has been demonstrated experimentally with photons, electrons, and even small diamonds. The use of entanglement in communication, computation and quantum radar is a very active area of research and development."

The concept of entanglement is employed in this paper as it matches an equally mysterious explanation for the cause of gravity. Combining Entanglement with Electrons, provides an explanation to match various observations associated with Gravity.[14]

"Gravity is the force by which a planet or other body draws objects toward its center. The force of gravity keeps all of the planets in orbit around the sun."

5) Hydrogen Atoms

The hydrogen atom consists of a single proton and a single electron. The electron can operate at four levels of energy, as discussed at, [15] and illustrated in Exhibit 8 Atomic Structure,

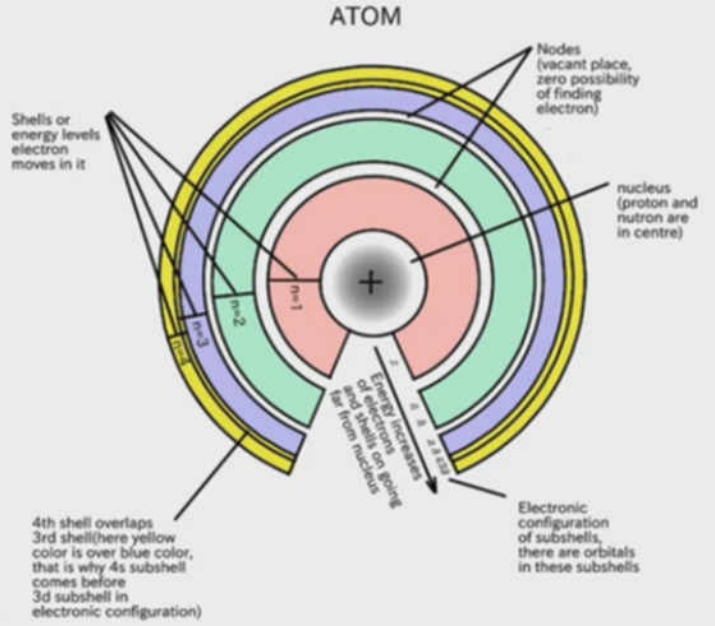

Exhibit 8 Atomic Structure

and at [16] Exhibit 9 Electron Energy Levels.

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[14] https://spaceplace.nasa.gov/what-is-gravity/en/

[15] https://www.youtube.com/watch?v=gAQy7Kio1kA&t=68s

[16] https://www.slideserve.com/arthur-casey/the-quantum-mechanical-model

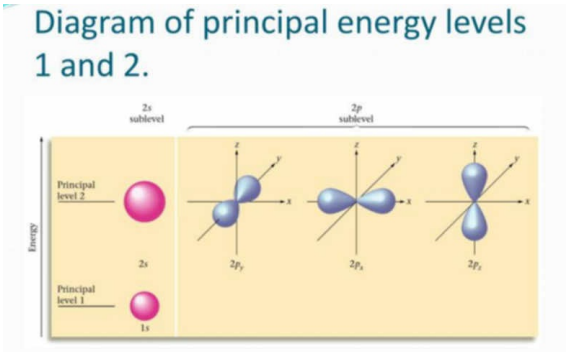

Exhibit 9 Electron Energy Levels

The orbit electrons follow is described in quantum mechanic terms as a probability orbit location. These are diagrammatically represented in Exhibit 10 Hydrogen with Electron orbiter:

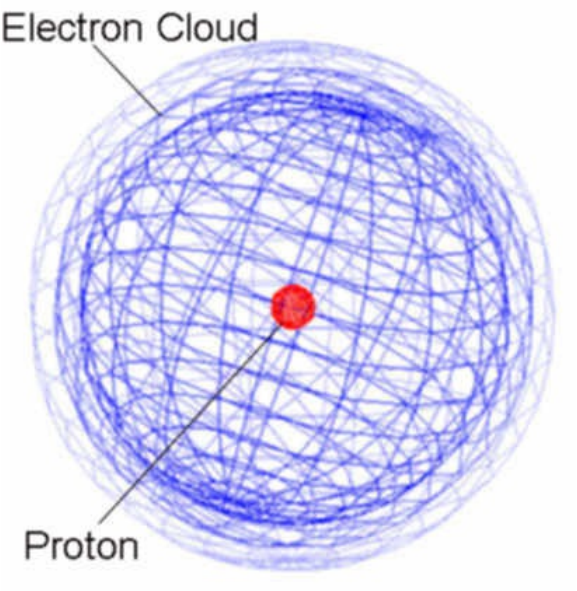

Exhibit 10 Hydrogen with Electron orbiter

The Electron may be present associated with a Negatron, entangled to another particle. In this event, a Hydrogen atom may be represented as illustrated in Exhibit 11 Hydrogen with Negatron orbiter.

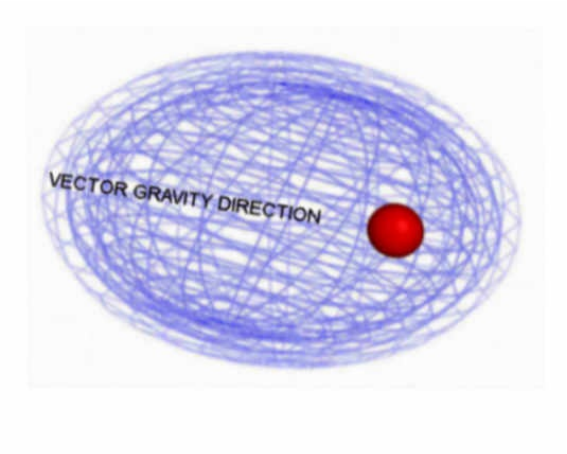

Exhibit 11 Hydrogen with Negatron orbiter.

The Negatron with its entangled ties to another particle, has a vector proclivity in that direction, as shown in Exhibit 12 Gravity Attraction. The physical effect is that an atomic attraction follows the vector direction, causing adjacent masses to experience a mutual attraction force, or gravity. This effect extends to all materials with electrons.

The relative concentration of atoms with Negatron orbiters determines the strength of the Gravity field as illustrated

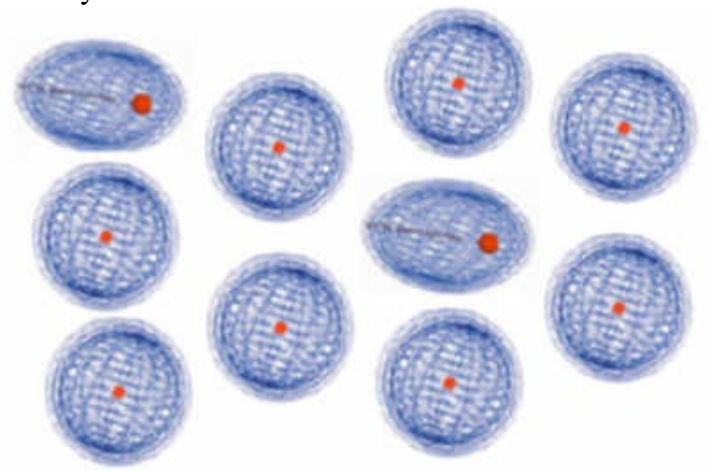

Exhibit 12 Gravity Attraction

However, while G is still in a region of negative value, it is expected that the entangled attractive pointers will be directed towards the greatest mass at the closest distance, which in the Solar System is the Sun, as illustrated in Exhibit 13 Sun Earth and Earth Moon Attractions.[17] In the case of the Earth Moon system, it is the Earth. This is why Earth orbits the Sun, and Moon orbits Earth, as also happens at other planets with satellites in the Solar System.

[17] https://www.bosmin.com/PSL/NatureOfGravity.pdf

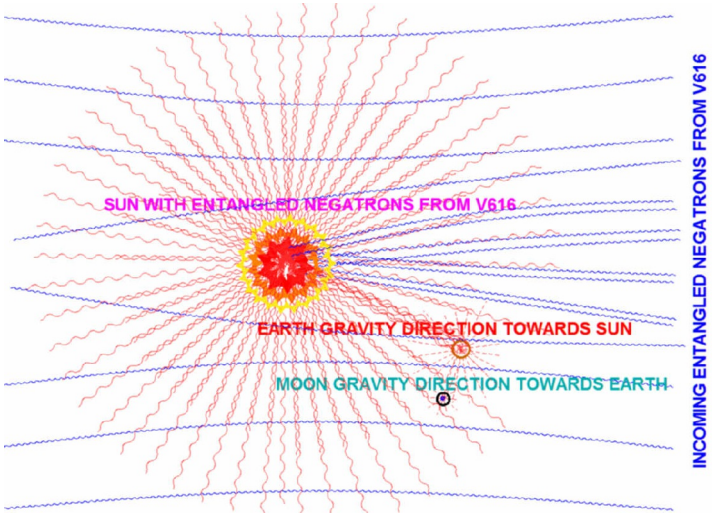

Exhibit 13 Sun Earth and Earth Moon Attractions

We conclude that the larger mass objects have a greater number of Negatron orbiters, which in turn attracts the smaller mass Negatrons, to point in that direction.

An important implication, is that all masses in the same object tend to even out the number of Negatrons in each type of molecule. This effectively balances the gravity force in each mass object (Planet).

This feature does not apply in regions closer to V616, and above the Zero line shown in Exhibit 2 Gravity variations from Earth to V616 where all Negatrons point towards the Black Hole.

6) Conclusions

6.1 We have shown that G is not constant in some solar system places.

6.2 G must be subject to a slight natural variation within the Solar System for unknown reasons.

6.3 G is much higher near Black Holes.

6.4 G turns from negative to positive some 942.9 light years from the Solar system.

6.5 Black Holes exist in nature, and operate to recycle particulate matter.

6.6 Both entangled particles and the cause of gravity, are fields of active investigation that have been followed for considerable time, but with limited success.

6.7 The current paper provides additional avenues of investigation.

6.8 Gravitons are formed at a Black Hole by the separation of Positronium particles which initially include a Positron and a Negatron as an orbiting pair.

6.9 The minor particle in some electrons is now referred to as a Negatron, which is an important distinction when considered in the light of entangled particles.

6.10 A Positrino operating inside a Black Hole is an orbiting particle with its entangled Negatron operating outside the Black Hole, which makes up the Positron pair.

6.11 The Negatron carries a double negative charge, which changes a Negatron into a Graviton.

6.12 The orbiting Positrino generates a magnetic field within the Black Hole.

6.13 A magnetic field stabilises free Neutrons sited within a Black Hole.
6.14 Entanglement is a quantum science investigation offering repeatable results.
6.15 Combining Entanglement with Electrons, provides an explanation to match observations associated with Gravity.
6.16 Electrons may associate with a Negatron entangled to third particle.
6.17 An Electron with a entangled Negatron, has a vector proclivity towards similar atoms.
6.18 The relative concentration of atoms with Negatron orbiters, determines the strength of a Gravity field.
6.19 Entangled Electrons will point towards the greatest mass, at the closest distance.
6.20 Larger mass objects have a greater number of Negatron orbiters, which attracts smaller mass Negatrons, to point in that direction.
6.21 Each mass object effectively balances the gravity force by equally distributing Negatron orbiters throughout the mass object (Planet).
6.22 In regions closer to V616, all Negatrons point towards the Black Hole.

7) Recommended Research Topics

7.1 Check electron orbits for direction bias.
7.2 Check for changing values for G, and identify causes.
7.3 Review stabilising free neutrons with positrinos.
7.4 Review Modified Model of Elementary Particles.
7.5 Review Negatron to Graviton methodology.

8) Keywords

Entanglement, Black Holes, V616, G, Gravity, Gravity Attraction, gravitational constant, gravispheres, Messier 87, Positronium, Positron, Negatron

9) References

9.1 https://bosmin.com/PSL/GravityVectors.pdf
9.2 https://principia-scientific.com/wp-content/uploads/2022/11/Beatty-Newton-and-Mercury-paper-r1.pdf
9.3 https://principia-scientific.com/wp-content/uploads/2022/01/Gravispheres.pdf
9.4 https://bosmin.com/PSL/BigBangOrSteadyState.pdf
9.5 https://www.nasa.gov/feature/goddard/2017/messier-87
9.6 https://principia-scientific.com/discover-connected-gravispheres/
9.7 https://en.wikipedia.org/wiki/Positronium
9.8 https://phet.colorado.edu/sims/cheerpj/quantum-tunneling/latest/quantum-tunneling.html?simulation=quantum-tunneling
9.9 https://principia-scientific.com/entangled-attractions-a-story-of-negatrons-gravitons-strings/
9.10 https://www.drbakstmagnetics.com/how-does-a-magnetic-field-work/
9.11 https://en.wikipedia.org/wiki/Graviton
9.12 https://en.wikipedia.org/wiki/Inverse-square_law
9.13 https://en.wikipedia.org/wiki/Quantum_entanglement
9.14 https://spaceplace.nasa.gov/what-is-gravity/en/
9.15 https://www.youtube.com/watch?v=gAQy7Kio1kA&t=68s
9.16 https://www.slideserve.com/arthur-casey/the-quantum-mechanical-model
9.17 https://principia-scientific.com/wp-content/uploads/2022/02/TheNatureOfGravity2cPSI.pdf

Addendum - Peer Reviews

This draft paper was reviewed by Joe Olson and Chris Towsey who made the following comments:
On 7/6/2023, Chris Towsey Wrote:
An interesting concept.
I've always wondered why there wasn't a negative pole for gravity. It obeys the same Newtonian physics as magnetic and electric fields - the intensity of all three vary with the square of distance, and electric & magnetic fields are polar (positive, negative, north, south). I've always assumed that gravity must also be polar but we haven't been able to see the opposite pole - gravity appears to us to be one-way only.
Your concept that G changes from negative to positive at some 942.9 light years from the solar system may provide a clue on how to find the opposite gravity pole.
We have used the torque produced by positive and negative electric fields and north-south magnetic fields for propulsion, so finding the positive and negative poles in gravity fields could allow high speed space travel propulsion. Einstein seems to limit speeds to the speed of light.
Best regards Chris
On 12/6/23 10:09 am, Joseph Olson wrote:
I have limited confidence in relativity or dark matter. Protons becoming massless is questionable. The term Solar System is generally assumed as OUR solar system and a gravisphere of 3,343 Light Years would include hundreds of adjacent stars.
PSI likes to encourage debate. This hypothesis might be useful in the galactic reality debate. Notify us if you are going to clarify these issues
Respectfully Joe Olson
Beatty reply of 13/6/2023
"I have limited confidence in relativity or dark matter."
The chances of dark matter existing seem, to me, to be very slim. My paper on the subject is Titled 'GRAVISPHERES - What's the matter with Dark Matter?' https://bosmin.com/PSL/GRAVISPHERES.pdf
Special relativity explained E=mc2 which seems to be applicable in many cases. However, the space-time concept leaves much to be explained in my mind, not the least of which is the nature of Gravity. My work covering this aspect has developed over several years and now includes the current paper 'Gravity Vectors'
https://www.bosmin.com/PSL/GravityVectors.pdf
The work has revolved around the Newtonian 'constant' value for G. This seems to me, to be a major problem, both here in
the solar system and, by observation, near black holes (bh). I conclude G is a vector quantity emanating from bh, as discussed in the paper.
"Protons becoming massless is questionable."
This is a difficult problem to resolve with limited information available. My supposition is that gravity is a condition associated with entanglement. A particle which I have called a Negatron is tied by entanglement to a black hole via a positronium orbit. Negatrons appear to provide the property of gravity to any mass they are associated with. This more obviously involves the electrons in the mass, but I see no reason why it could not also include particles associated with the proton.
A somewhat more remote possibility is that Negatrons only associate with Protons and not electrons?
One of the reasons, which draws me to that conclusion, is the stream of cosmic rays coming from a bh. If G is a vector variable, then protons in a cosmic ray must assume the local value for gravity when they settle out. This would require Negatron entanglement back to the bh. It also seems logical that the Negatron entanglement is stripped away when the proton (or electron) re-enters a bh.
"The term Solar System is generally assumed as OUR solar system"
True, but there are other planetary systems within the galaxies. Many include double, or triple stars, which makes the mind
boggle when anticipating the several possible planet orbiting arrangements. To keep it simple, I employ ed the term once to
cover a discrete gravity example.
"and a gravisphere of 3,343 Light Years would include hundreds of adjacent stars"
Yes, but no other bh have been discovered at this stage. (https://en.wikipedia.org/wiki/Stellar_black_hole#Candidates)
Most are from regions where there is higher gravity, while a few are from regions of lower gravity. I conclude this produces
red and blue shifted light as discussed in my paper 'Photon Gravisphere Speeds - Exposed Light'
https://bosmin.com/PSL/ExposedLight.pdf and as illustrated in Figure 4.
Best regards, Bob
Chris Towsey Query of 13/6/2023
I saw the comment:

"Protons becoming massless is questionable."
If E=mc2, then if a proton becomes massless (m=0) then it would have zero energy.
My assumption is if something has zero mass and therefore zero energy, it cannot exist.
Best regards Chris
Beatty reply of 13/6/2023
If Negatrons are required to provide mass with the property of gravity. Then, no Negatron, no mass for the gravity to react with. In the case of E=mc2 we have no mass, but as with cosmic rays we have 100% energy. Best regards, Bob
On 13/6/2023 Joseph Olson Replied:
Since this is for discussion purposes, may I suggest posting your excellent replies as addendum and we'll guage PSI reader responses. We are all about thought provoking debate, thanks J