
Observational evidence of the Axis of Evil having electron orbital shapes and its possible link with Quantum Gravity

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Abstract:

The anomalous ecliptic aligned Quadrupole and Octopole in the Cosmic Microwave Background has symmetries with electron orbitals. Since electron orbitals are a quantum phenomena, the Axis of Evil may be revealing a relation with Quantum Gravity. The Axis of Evil may be local to the Solar System which would explain its alignment and may have a purpose rather than seeming Evil. The Quadrupole includes a doughnut shape with two lobes just like the $3d_{z^2}$ electron orbital and may be revealing one of the gravity causing particle clouds of either the Sun or the Earth. The gravity causing particle clouds seen via the Axis of Evil may be negatively charged. Positively charged gravity causing particle clouds may exist within the Sun or the Earth that are the nucleus of the Axis of Evil. Gravity is excluded from the Weak Force, Strong Force and Electromagnetic Force currently. Quantum Gravity may operate using these forces resulting in a full unification where ordinary matter accelerates from higher potentials to lower potentials within the gravity causing particle cloud system via Electrostatic forces. The gravity causing particle clouds of a star, galaxy, or galaxy cluster may also accelerate towards lower potentials of its host's even larger gravity causing particle cloud system. We may have been asking the wrong questions. Perhaps General Relativity was a correct approximation analogously via curvature and indirectly describes the other three forces on larger scales yet curvature is not be the real cause of Gravity. Instead we should have asked how can gravity work via the three forces. By using known science at smaller scales and applying it to larger scales especially where we have observational evidence of its manifestation such as the Axis of Evil, we can unify Gravity with the Weak force, Strong force and Electromagnetic force.

Keywords: Axis of Evil, Cosmic Microwave Background Radiation, CMB Quadrupole, CMB Octopole, Quantum Gravity, Dark Matter, Dark Energy, Electron orbitals, Electron Clouds

Introduction:

The Cosmic Microwave Background [1] has a feature aptly named the Axis of Evil. It is called evil due to its alignment with the Ecliptic and nothing in the cosmic microwave background (CMB) should be aligned with the Earth or the Sun since we are not the center of the Universe. The Axis of Evil includes the Quadrupole and the Octopole [2]. The Axis of Evil is also perpendicularly aligned with the Dipole [3] in the CMB which is a cause for further confusion. There has yet to be discovered how Quantum Gravity operates with current models. String theory [4] and Loop quantum gravity [5] have been proposed however it is still a work in progress. The Standard Model of Particle Physics is one of the most well understood and tested fields and involves particle clouds, probabilities and electrostatic forces in the least. Particle clouds such as electron clouds are a description of the probability of finding a certain particle at a certain location from the nucleus. Particle clouds may also be made nucleus

clouds which describe the probability of protons and neutrons. Electron particle clouds have certain probability densities and orbital shapes for each energy level. These orbital shapes can be in the form of one or more spherical shell volumes, donut shapes, or lobes with electrons present within these shapes based on probability. Overlapping, hybridized, or a molecule's electron clouds results in more intricate probability cloud shapes. Electrons will have a negative charge and the nucleus has a positive charge. These charges are what hold the electrons and the nucleus together. Electrostatic forces repel like charges and attract opposite charges. Electron clouds absorb photons which promotes the energy state of the electron cloud to a higher state and these electron clouds also emit photons due to the electron cloud preferring a lower energy state. When a photon is absorbed or emitted the orbital shape of the electron cloud changes from one energy state to another.

Methods:

It bears repeating, by using known science at smaller scales and applying it to larger scales especially where we have observational evidence of its manifestation at larger scales, we can unify Gravity with the Weak force, Strong force and Electromagnetic force when they operate at larger scales.

The Axis of Evil multipoles have an odd symmetry with the shapes of electron orbitals. For example, the Quadrupole includes a donut shape and two lobes. The $3d_{z^2}$ electron orbital also has a donut shape and two lobes and the images will be compared in the Results Section. The Quadrupole also includes multiple four lobed shaped structures which the other 3d electron orbitals have. The Octopole has a shape which appears to be that of a hybridized electron orbital or a multiple lobed electron orbital. This may be a coincidence however there may be something interesting at play and related to Quantum Gravity. Since the Quadrupole is centered around the ecliptic, it may be a local phenomena revealing a relatively exponentially large particle probability cloud of an unknown type non baryonic matter surrounding us which emanates from the Sun, or the Earth, and vastly larger than its similarly shaped electron cloud orbital. This would finally explain the Axis of Evil's alignment. Similar to how electron clouds have nucleus clouds, then so must these Low order Multipoles have a nucleus cloud which holds the oppositely charged massive in scale particle clouds seen through the Axis of Evil. This nucleus cloud attached to the Quadrupole and Octopole may be located within the Sun if the Sun is the origin of these multipoles, or the Earth if our planet is the origin. These particle clouds in the Axis of Evil are revealed to us indirectly through background photons interacting with the gravity causing particle clouds almost similar to how Dark Matter is lensed and in fact *is* Dark Matter however operating much differently than current theory states. However these large particle clouds may be revealing themselves directly instead through CMB measurements thus further research is needed. Known Dark Matter observations via background photons being lensed through Galaxy Clusters also reveal these type of gravity causing particle clouds however on exponentially larger scales than the Axis of Evil which also have electron orbital shapes. The presence that causes the Quadrupole and Octopole or Dark Matter via lensing we can now refer to as an electron related gravity causing particle cloud and within either the Sun or the Earth or Dark Matter Halos of galaxies or clusters may exist what we will refer to as the nucleus related gravity causing particle cloud. The electron related gravity causing particle cloud may be made of non baryons and the nucleus related gravity causing particle cloud may be made of baryons. The Octopole may possibly overlap the Quadrupole similar to how electron orbitals overlap and may be the electron related gravity causing particle clouds of the Sun or the Earth, or one of each. The

electron related gravity causing particle cloud will have a certain charge which is likely negative if we apply principles of the standard model of particle physics to these larger scales, and the nucleus related gravity causing particle cloud will have the opposite charge, likely positive. These charges will hold these gravity causing particle cloud systems of positive and negative charge together via Electrostatic forces analogous to how protons and electrons are held together on smaller scales resulting in ordinary matter atoms. Ordinary matter also has a positive and negative charge depending on the particle and will react to the charges of the gravity causing particle clouds they are located within or near via Electrostatic forces causing them to accelerate from higher potentials to lower potentials within the gravity causing particle clouds they are in. This may result in the acceleration of ordinary matter that we observe as gravity to allow star's, planets and black holes to exist. For example, the electron related gravity causing particle cloud may repel ordinary matter electrons from higher potentials to lower potentials of the electron related gravity causing particle cloud. Additionally it is possible that the nucleus related gravity causing particle cloud may attract ordinary matter electrons from higher potentials to lower potentials within the gravity causing particle cloud the ordinary matter is located within. Furthermore, the nucleus of ordinary matter may be repulsed from the nucleus related gravity causing particle cloud to lower potentials and be attracted towards lower potentials in electron related gravity causing particle cloud they are in. Either repulsion or attraction wins from interaction of the particle clouds of ordinary matter and the gravity causing particle cloud system they are within via electrostatic forces resulting in acceleration of ordinary matter. It is possible that the electron related gravity causing particle cloud is dominant in repulsing electrons of ordinary matter, or the nucleus related gravity causing particle cloud is dominant in attracting electrons of ordinary matter, or a combination of both to form at least the surfaces of stars and planets. An orbiting object such as a planet that is within a larger electron related gravity causing particle cloud such as that of the Sun's may have its own relatively smaller electron related and nucleus related gravity causing particle cloud which may interact with the larger electron related gravity causing particle clouds of the Sun and also with the nearby nucleus related gravity causing particle cloud of the Sun residing within the Sun resulting in acceleration via at least one of Electrostatic forces and Van Der Waals forces between the gravity causing particle clouds of both systems. This acceleration occurs due to the positive charge of the nucleus related gravity causing particle cloud and the negative charge of the electron related gravity causing particle clouds of the Sun interacting with the positive charge of the nucleus related gravity causing particle cloud and the negative charge of the electron related gravity causing particle cloud of the Earth resulting in Earth's gravity causing particle cloud system (which includes both types of gravity causing particle clouds) to accelerate from a higher potential to the lowest adjacent potential of the Sun's gravity causing particle cloud system. The gravity causing particle clouds of the Sun may also interact with the charges of ordinary matter of the Earth via Electrostatic and possibly Van der Waals forces adding further gravitational effects to the planet. Since the Earth's gravity causing particle cloud system holds the Earth together via the atoms and molecules of ordinary matter of the Earth accelerating from higher to lower potentials within Earth's gravity causing particle cloud system, any attraction of Earth's gravity causing particle cloud system Sun ward due to its interaction with the Sun's gravity causing particle cloud system will carry Earth's ordinary matter within the Earth's gravity causing particle cloud system along with it. This above example can be applied for all cosmic structures where instead of the Sun's and Earth's gravity causing particle clouds interacting, it is a star's gravity causing particle cloud system interacting with its galaxy's gravity causing particle cloud system, a galaxy's gravity causing particle cloud system interacting with its galaxy cluster's gravity causing

particle cloud system, or a galaxy cluster's gravity causing particle cloud system interacting with the observable universe's or a portion of the observable universe's gravity causing particle cloud system.

Galaxies will have their own electron related and nucleus related gravity causing particle clouds. The center of the galaxy will host the nucleus related gravity causing particle cloud and be a major component of black holes. Within the electron related gravity causing particle clouds of a galaxy will reside many of its stars. These stars will also have their own electron related and nucleus related gravity causing particle clouds similar to the Sun and would have their own "Axis of Evil". The gravity causing particle cloud systems of these stars will accelerate from higher potentials to the nearest lowest potentials within the gravity causing particle cloud system of their galaxies through Electrostatic forces and possibly Van Der Waals forces. These stars will be held together by their own relatively smaller nucleus related and electron related gravity causing particle clouds which will also allow planets to orbit where the planets gravity causing particle cloud system interacts with its star's gravity causing particle cloud system resulting in acceleration of the planets. A similar story will occur with galaxy clusters where galaxies within a cluster will accelerate from higher potentials to lower potentials of the larger gravity causing particle cloud of the cluster they are in. These clusters may have simple or complicated gravity causing particle cloud shapes. In the event they are more complex shapes, they may resemble the electron and nucleus clouds of molecules yet on larger scales. The galaxies will be held within their own relatively smaller gravity causing particle clouds and these clouds will accelerate towards adjacent lowest potentials within the gravity causing particle clouds of the cluster. Finally, these concepts can be applied to the observable universe where the galaxy clusters in the observable universe will accelerate from higher potentials to lower potentials within the gravity causing particle clouds of the universe. These clusters will also have their own relatively smaller gravity causing particle clouds which hold the clusters together. All larger gravity causing particle clouds will affect all the smaller gravity causing particle clouds within. For example, any particular star will be affected by the gravity causing particle cloud of its galaxy, its cluster, and the observable universe resulting in an additive gravitational forces upon the star from all the larger gravity causing particle clouds the star is within in addition to its own gravity causing particle cloud which holds the star together also.

Black holes will have a nucleus related gravity causing particle cloud in its center. This means it would have a positive charge gravity causing particle cloud. Electrons from ordinary matter in or near the black hole may be stripped from their nucleus and accelerate towards the nucleus related gravity causing particle cloud of the black hole via electrostatic forces. This would result in the black hole being filled with mostly lone electrons and some unlucky positively charged atoms. This would explain why we cannot see the black holes as it is an electron soup. When electrons are stripped due to the huge temperatures or electrostatic forces near a black hole the resultant positively charged atoms or lone protons will be repulsed from the black hole. Furthermore, the electron related gravity causing particle cloud surrounding the black hole externally may also aid in repulsing lone electrons resulting in further acceleration of electrons to the black hole's center.

Gravity is perhaps a force which seems the most logical rather than a curvature of space time. Albert Einstein's work is magnificent, however something more specific is needed to understand the mechanisms of gravity than a curvature even though it's an amazing framework to simulate gravitational motion however yet still limiting when it comes to galactic rotation curves, repulsive gravity and black holes. There is evidence of Dark Matter halos without any ordinary matter, thus if

curvature existed it can without ordinary matter. However more plausible is these gravity causing particle clouds exists and if ordinary matter is lucky enough to reside in it it will adhere to the acceleration it causes and how it is accelerated from external interactions.

Although not a force, Pauli repulsion may also be a factor causing acceleration upon electron clouds of ordinary matter accelerating ordinary matter from higher potentials to lower potentials of the gravity causing particle cloud it is located within, or via a smaller gravity causing particle cloud accelerating from a higher potential to a lower potential of a larger gravity causing particle cloud it is within, or adjacent electron related gravity causing particle clouds. However Pauli repulsion may be more likely to occur when two cluster are approaching than repulsing after the electron related gravity causing particle clouds interact. This can explain one part of Dark Energy as well. Other causes of Dark Energy may occur through electrostatic forces where gravity causing particle clouds repel each other such that of clusters, or when ordinary matter is let go when the gravity causing particle cloud transitions into a lower energy state. Van Der Waals forces may also be a component of Dark Energy when two gravity causing particle clouds of cluster interact adjacently. Dark Energy may also be caused by matter being located after a certain radius within a larger electron related gravity causing particle cloud where the negative charge of the cloud is dominant and repulsed matter away. However a more plausible explanation of Dark Energy may be gravity causing particle cloud systems of galaxy clusters are transitioning to higher energy states via absorbing whatever they emit thus getting larger and repulsing adjacent gravity causing particle cloud systems of other galaxy clusters away, or gravity causing particle cloud systems much larger than the gravity causing particle cloud systems of galaxy clusters are transitioning to higher energy states thus repulsing the relatively smaller gravity causing particle cloud systems of galaxy clusters away. This may explain the voids in Dark Matter maps where these voids harbour these super massive gravity causing particle cloud systems within which keep galaxy clusters at bay through repulsion resulting in expansion. Whatever is absorbed by these gravity causing particle clouds to result in expansion of the universe may be emitted from outside the observable universe. A similar mechanism yet on smaller scales may also occur in galaxies where the gravity causing particle cloud system of stars are repulsed by larger star free gravity causing particle cloud system between stars aligning these stars are the edges of these relatively larger gravity causing particle cloud systems however still exponentially smaller than the galaxy's gravity causing particle clouds. This mechanism may also occur between galaxies in galaxy clusters keeping the galaxies apart. This than allows the possibility that our observable universe, and other observable universe's, are aligned against the edges of countless gravity causing particle cloud systems exponentially larger than the observable universe's gravity causing particle cloud system which look like Dark Matter Maps however on larger scales where the galaxy clusters are instead mini universes.

The Strong Force, Weak force and the Electromagnetic Force may not be separate from gravity after all. These three Forces may allow the gravity causing particle clouds to exist as they do by holding the electron related gravity causing particle clouds to the nucleus related gravity causing particle clouds and also interact with the ordinary matter within through at least electrostatic forces resulting in the unification of Gravity with the other three forces.

Furthermore, the gravity causing particle cloud systems of galaxies or galaxy cluster's may interact with the gravity causing particle clouds of other galaxies or galaxy clusters similar to how ordinary

matter particle clouds interact on smaller scales. Gravity causing particle clouds may also overlap and ordinary matter may accelerate from higher potentials to lower potentials based on the overlap and the potentials it creates. The gravity causing particle clouds may operate with the same physics that smaller particle clouds operate with to exist, evolve, or how they interact with other particle clouds however on grander scales. For example, the electron related gravity causing particle cloud may absorb a particle to excite it into a higher energy state and emit a particle to go into a lower energy state. This particle may be carried through gravitational waves analogous to how photons are carried through electromagnetic waves. Candidates of these particle may be Neutrinos, Gravitons, Bosons or another particle yet undiscovered. These changes of energy states will also entail changes of acceleration induced upon ordinary matter residing within the cloud and may induce Supernova events, Dark Energy like observations where matter is flung off, planetary atmospheric creation events through volcanic activity, or black hole formations. If an electron related gravity causing particle cloud transitions into a higher energy state via absorption of the particle that excites it, a higher gravitational force will be experienced by ordinary matter within the cloud than previous. If an electron related gravity causing particle cloud transitions into a lower energy state via emission of the particle that previously excited it, a lower gravitational force will be experienced by ordinary matter within than previous. Furthermore, galactic rotation curves may be explained where at least one force of the Electrostatic forces or Van Der Waals forces are enough to hold galaxies together. These electron related gravity causing particle clouds may be seen indirectly through Dark Matter observations via lensing of background photons and Dark Matter is actually gravity causing particle clouds. The nucleus related gravity causing particle cloud may also be observed through radially elongated lensing of background photons however more research is needed. We can also view these gravity causing particle clouds via the CMB and via the shapes of cosmic structures in some circumstances that partially resemble electron cloud shape in certain regions such as the shells around the Milky Way which may belong to an S-orbital shaped electron related gravity causing particle cloud.

Results:

The three dimensional shapes of the Quadrupole will be compared to 3d electron orbital shapes and there is a high symmetry between the two. Furthermore, the shapes of the Octopole and the Dipole in the CMB will also be compared in a similar manner where the dipole resembles a 2p electron orbital and the Octopole resembles a hybridized electron orbital shape. To establish another confident connection with electron orbitals and the CMB, graphs representing certain characteristics of the CMB were superimposed with graphs representing data characteristics of electron orbitals. These graphs include The CMB Lensing Power Potential curve [6] and the CMB Black body radiation [8] which have the same curve shapes as the probability density curve of the 3d electron orbital. This may support the 3d electron orbital shaped electron related gravity causing particle cloud being that of the Sun's and these graphs represent a local phenomena. Furthermore, Neutrino Detection graphs were overlaid with probability curves of electron orbitals and the curve shapes matched. This may be due to the electron related gravity causing particle cloud of the star emitting these neutrinos and has the same shape of its related electron orbital. The electron orbital graphs may have been scaled on at least one axis to relate to the parameter scales of the graph it is being compared with revealing another scaled relationship when aligned. The curve representing Gravitational waves detected by LIGO was compared with the 3d electron probability density curve and they have similar shapes. The FIRAS monopole curve is the

same shape as the 1s electron orbital radial probability distribution curve revealing a space time particle cloud of the Sun or the Earth having an S-orbital electron related gravity causing particle cloud shape yet larger in scale. The flyby anomaly curves also have the same shapes of the 1s electron orbital radial probability distribution curve revealing the electron gravity causing particle cloud of planets having similar shapes yet exponentially larger scales. From this we can work out how ordinary matter accelerates towards lower potentials. Stars may have s-orbital shaped electron related gravity causing particle clouds and an image with such a shape will be shown around star GRB 221009A which was illuminated by gamma-rays. Galaxy cluster Cl 0024+17 may also have an s-orbital shaped electron related gravity causing particle cloud revealed by lensed photons. Dark Matter contour maps will also show matter accelerating from higher potentials to lower potentials within the Dark Matter contour maps which is actually reveals the presence of gravity causing particle clouds. The gravity causing particle cloud may be a type of Dark Matter seen through lensing of photons and the CMB, however behaves much differently than we currently thought and does not create curvature, yet forces upon ordinary matter and smaller gravity causing particle clouds.

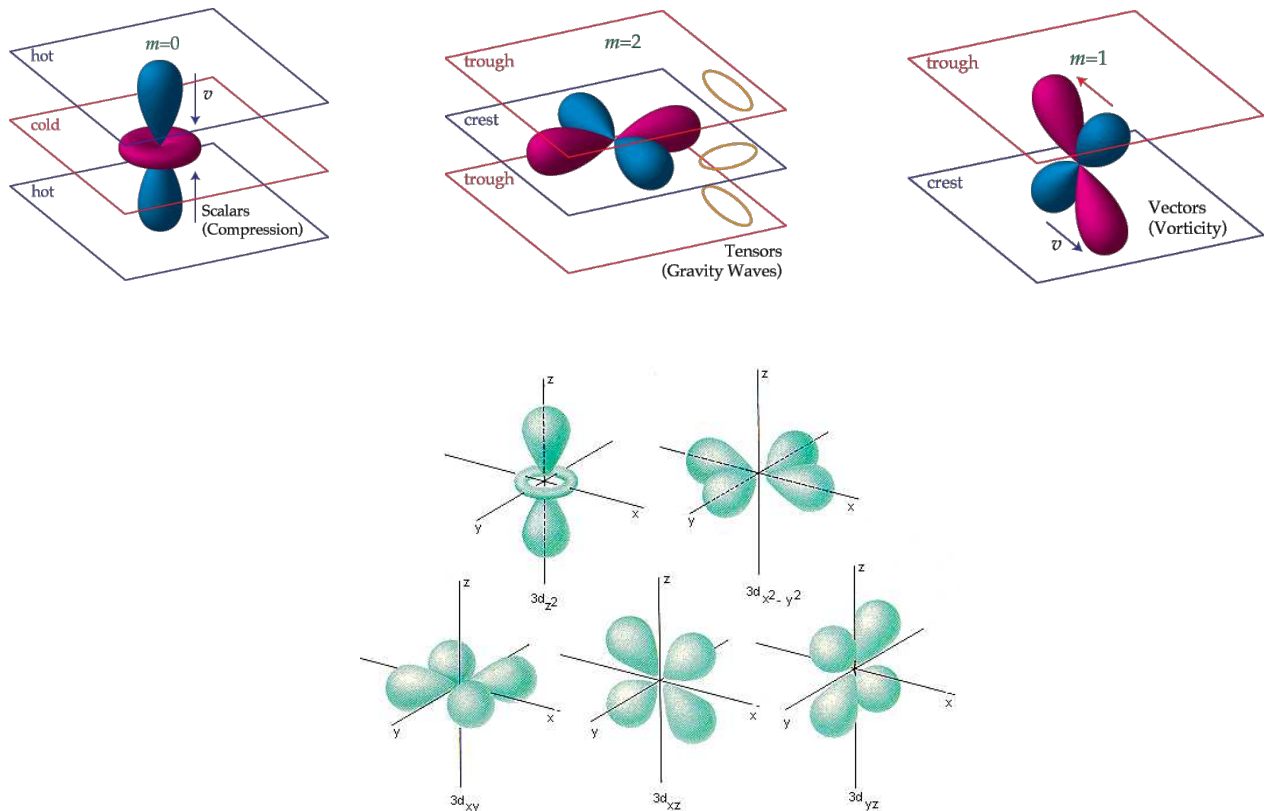


Figure 1. (Top) CMB Quadrupoles [7]. (Bottom) 3d electron orbitals [8].

The Quantum Mechanical Model

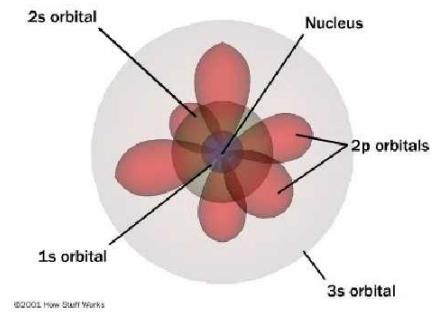
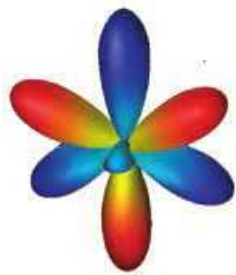


Figure 2. (Left) CMB Octopole [9]. (Right) Electron orbitals with three pairs of 2p orbitals in Pink [10] is similar to the Octopole however a hybridized electron orbital would be a better match.

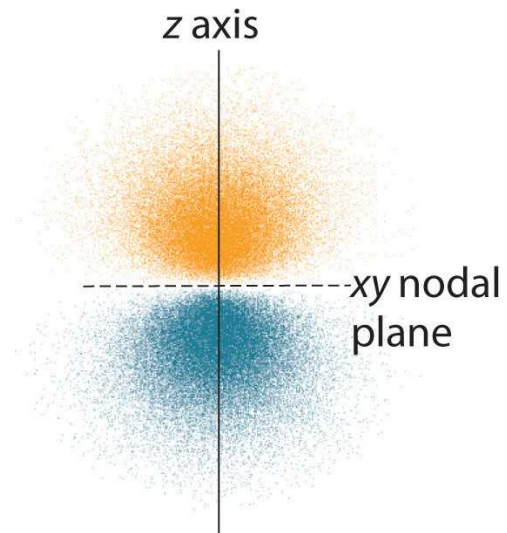
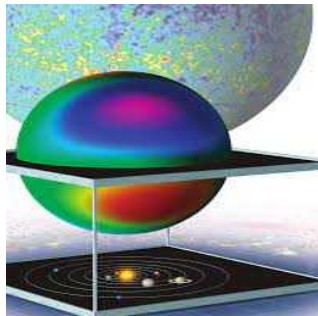


Figure 3. (Left) CMB Dipole [11]. (Right) 2p electron cloud [12].

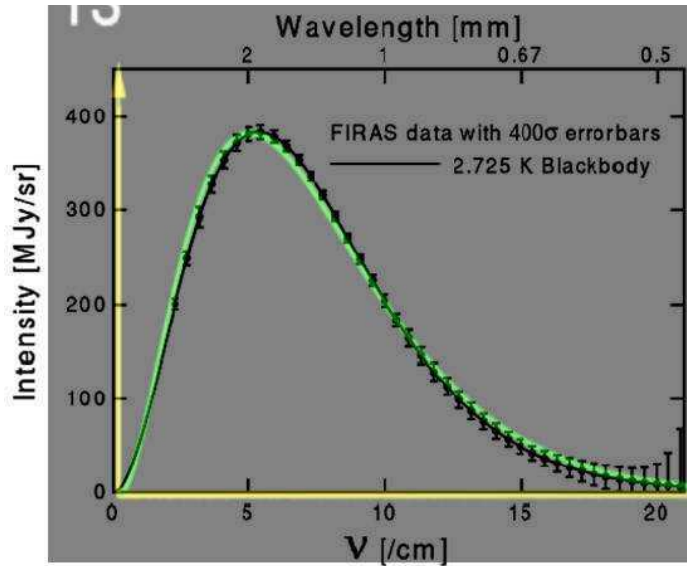


Figure 4. 1s electron radial probability distribution curve (Green) [13] super imposed on CMB FIRAS Curve (Black) [14]. The Earth likely has a 1s orbital shapes electron related gravity causing particle cloud.

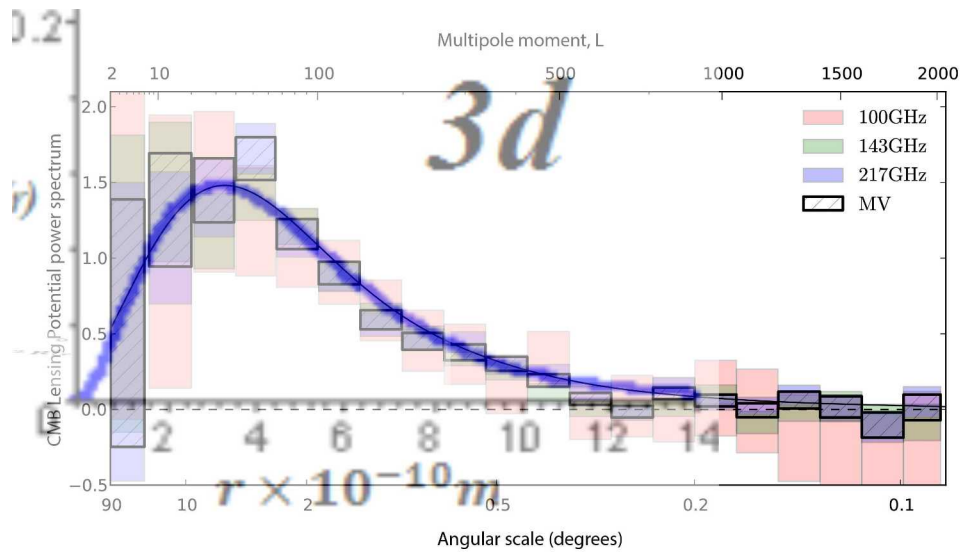


Figure 5. 3d electron orbital probability density curve [15] (Blue) super imposed on CMB Lensing Potential Power Spectrum. This curve may be showing us the fluctuations of photons caused by the 3d electron orbital shaped electron related gravity causing particle cloud of the Sun.

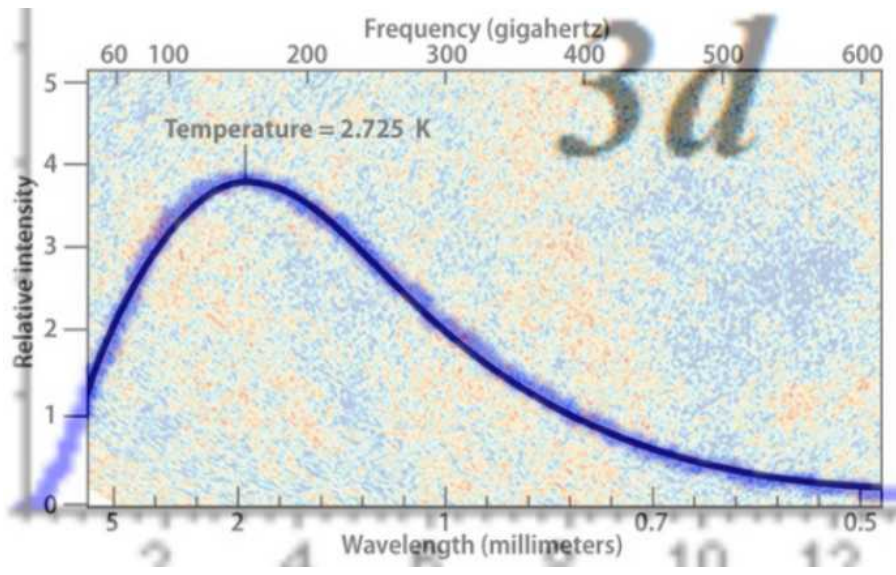


Figure 6. 3d electron orbital probability density curve (Blue) [15] super imposed on CMB Black Body Curve (Black) [16]. This may also be revealing the 3d orbital shaped electron related gravity causing particle cloud of the Sun. The beginning of the curve (blue line) off the CMB graph may be due to Earth's distance away from the Sun resulting in no visibility of the beginning of the frequency curve.

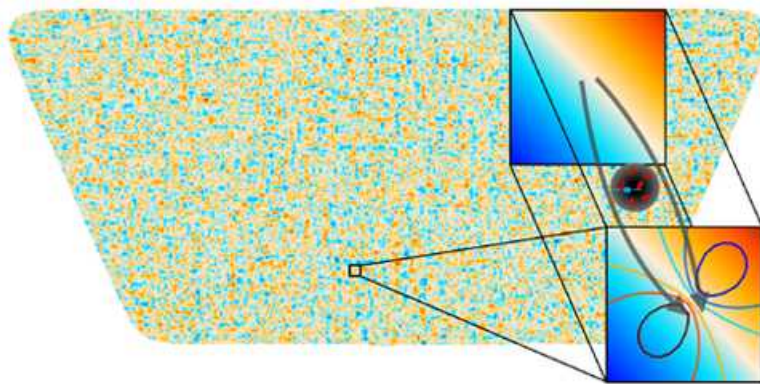


Figure 7. Galaxy Cluster located between hot and adjacent colder region. Stars are located between hot and cold regions in the CMB similarly. These hot and cold regions reveal the electron related gravity causing particle clouds. Image reference [17]

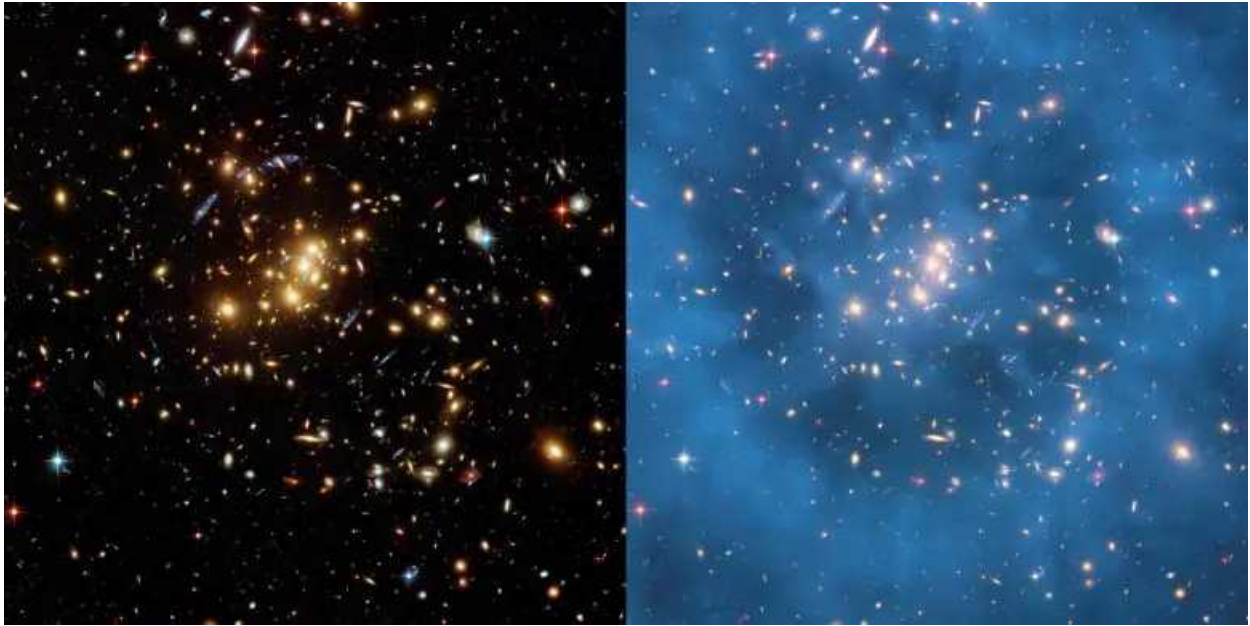


Figure 8. Dark Matter via lensing reveals a particle cloud shape likely that of an S-orbital and more particularly a 2s electron orbital. Image reference [18]

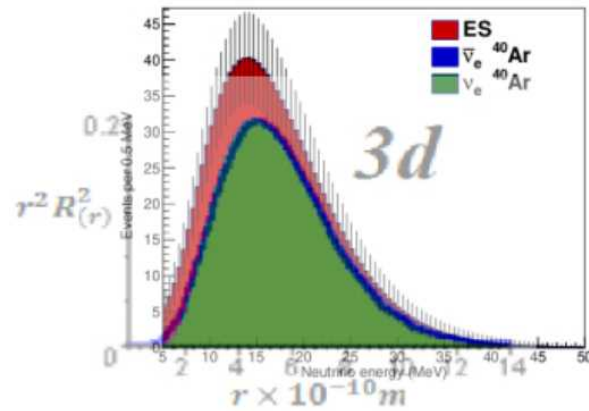


Figure 9. A Neutrino Emission curve [19] of a Supernova and the radial probability distribution curve of the 3d electron orbital super imposed (Dark Blue). This shows a possibility that if the electron related gravity causing particle emits Neutrinos it may be used to determine the shape of the gravity causing particle cloud that emitted it by inferring its relation to an electron orbital.

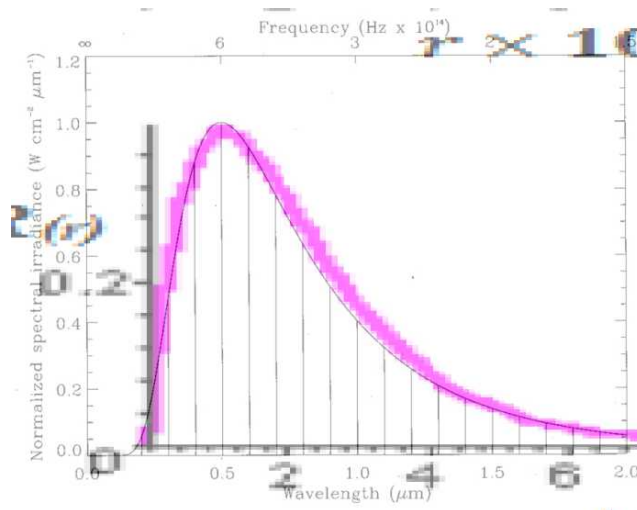


Figure 10. A Neutrino Emission curve [20] (Black) and the probability density curve of the 2p electron orbital (Pink) super imposed.

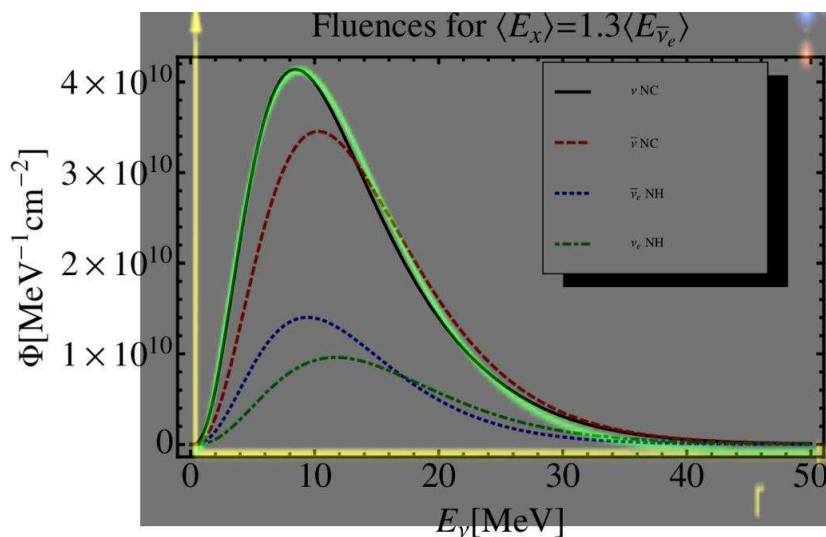


Figure 11. A Neutrino Emission curve of a Supernova [21] (Black) and the probability density curve of the 1s electron orbital (Green) super imposed.

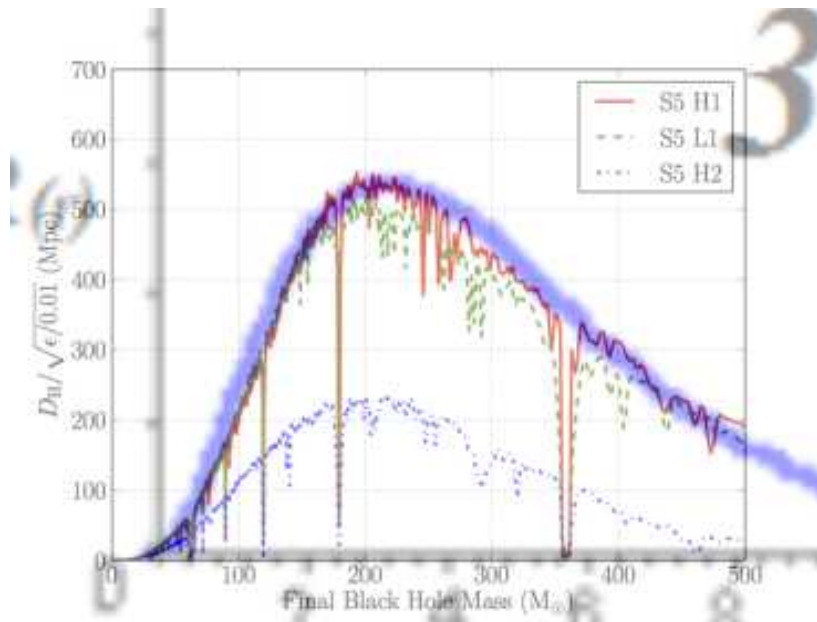


Figure 12. Gravitational waves detected by LIGO [22] (Red) and the 3d electron probability density curve (Blue) super imposed. This shows a possibility that whatever the electron related gravity causing particle cloud emits in the form of gravitational waves may be used to determine its shape by inferring the electron cloud with similar probabilities. Since there haven't been observations of gravitational waves accompanied with Neutrinos, it may be that gravitational waves passed through gravity causing particle clouds of Earth or the Sun while Neutrino detections are a result of interactions of gravitational waves with the Sun's or Earth's gravity causing particle clouds analogous to photons exciting electrons.

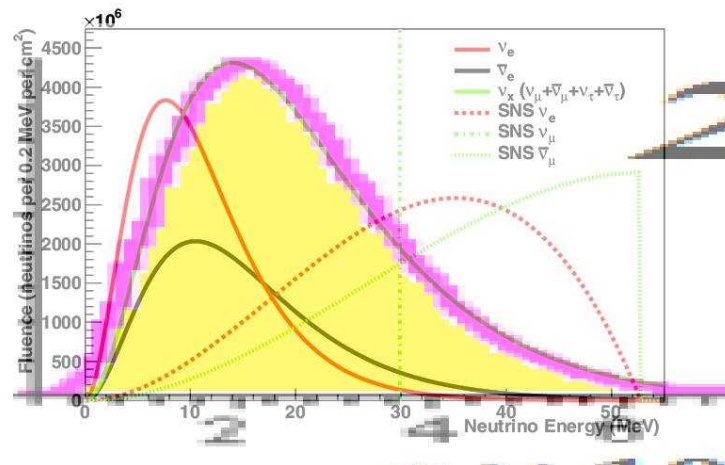


Figure 13. 2p orbital radial probability distribution curve (Pink) super imposed on a neutrino curve [23] (Black).

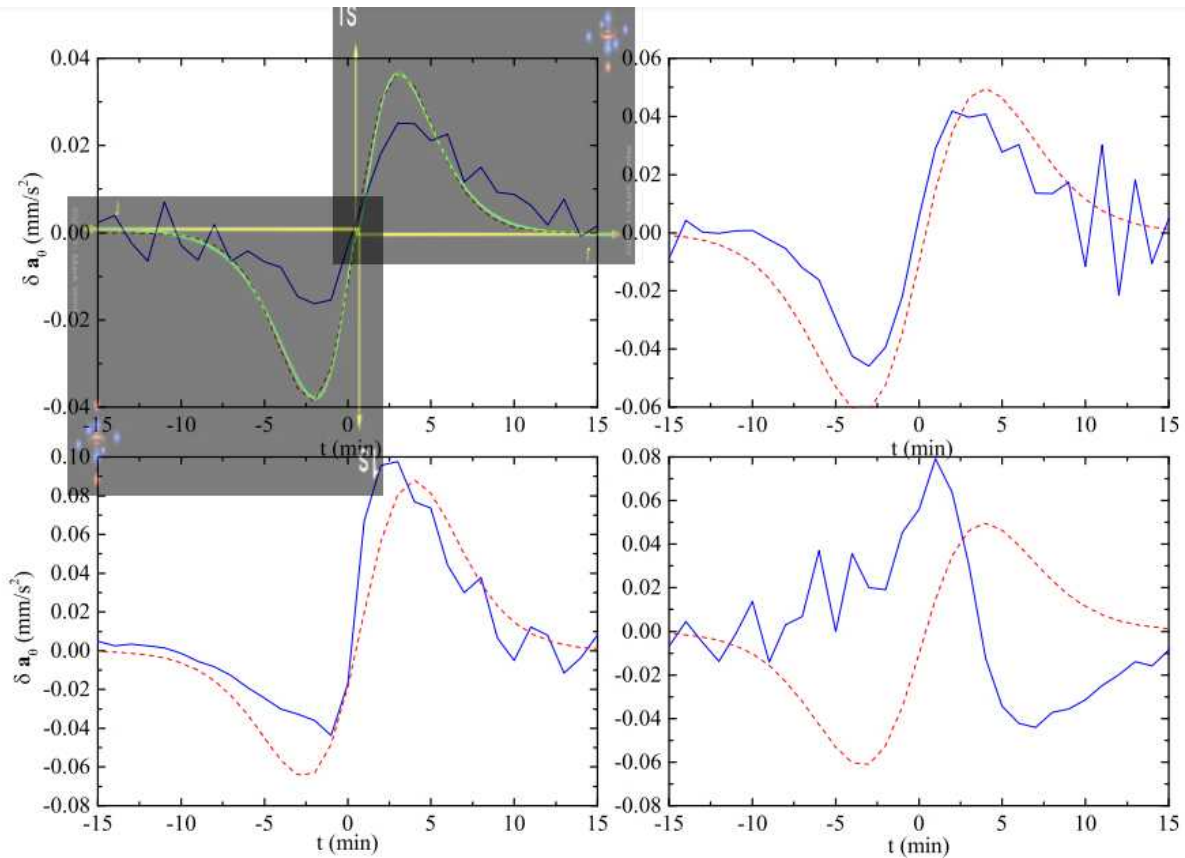


Figure 14. The flyby anomaly acceleration curve [24] and the 1s electron radial probability distribution curve (Blue) is super imposed. This is observational evidence of planets having a s-orbital shaped electron related gravity causing particle cloud where the space craft decelerates before the highest potential in the cloud than accelerates after the highest potential in the cloud as it traverses the 1s electron orbital shaped cloud. Just after $t=0$ the inner part of the cloud will accelerate the craft as it catches up and moves towards the craft from behind since the planet's gravity causing particle cloud is in motion around the sun. The gravity causing particle cloud's highest potential will pass through and move in front of the craft which will repulse the craft away causing deceleration of the craft until the craft leaves the gravity causing particle cloud of the planet. The Earth will likely have an electron related gravity causing particle cloud in the shape of a 1s electron orbital in addition to others if more exist. The time dilation curve which is also related to the gravitational potential curve for an S-orbital shaped electron related gravity causing particle cloud may be obtained from determining the radial probability distribution curve of the electron related gravity causing particle cloud. Each point within a radius value will have the same potential or time dilation value. For an electron related gravity causing particle cloud having a non s-orbital type shape, the gravitational potential curve and time dilation curve can be obtained from the radial probability distribution of this cloud however the time dilation and potentials are averaged within each radial shell volume. The highest point in the gravitational

potential curve separates gravitational forces directed towards the nucleus and away from the nucleus of the cloud.

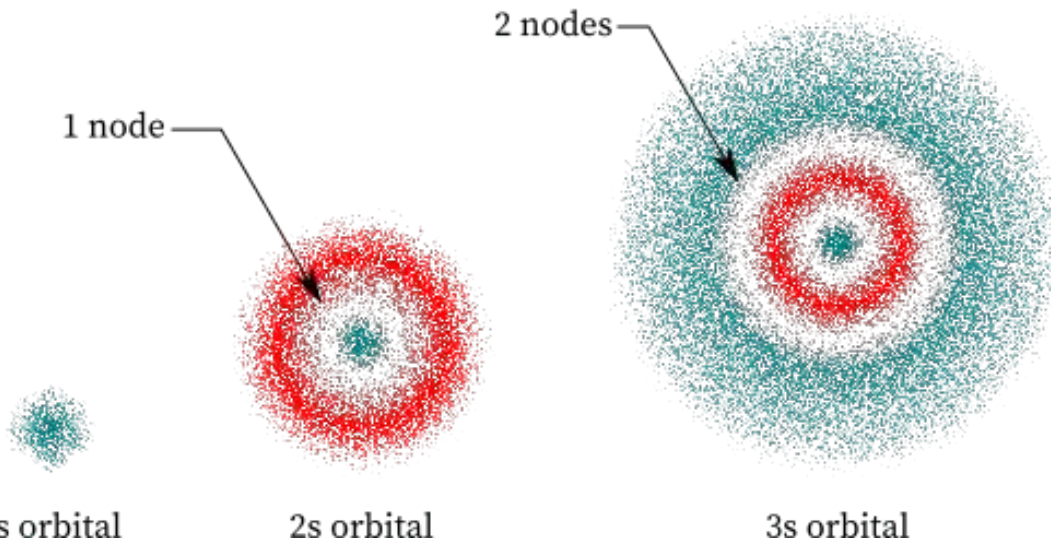
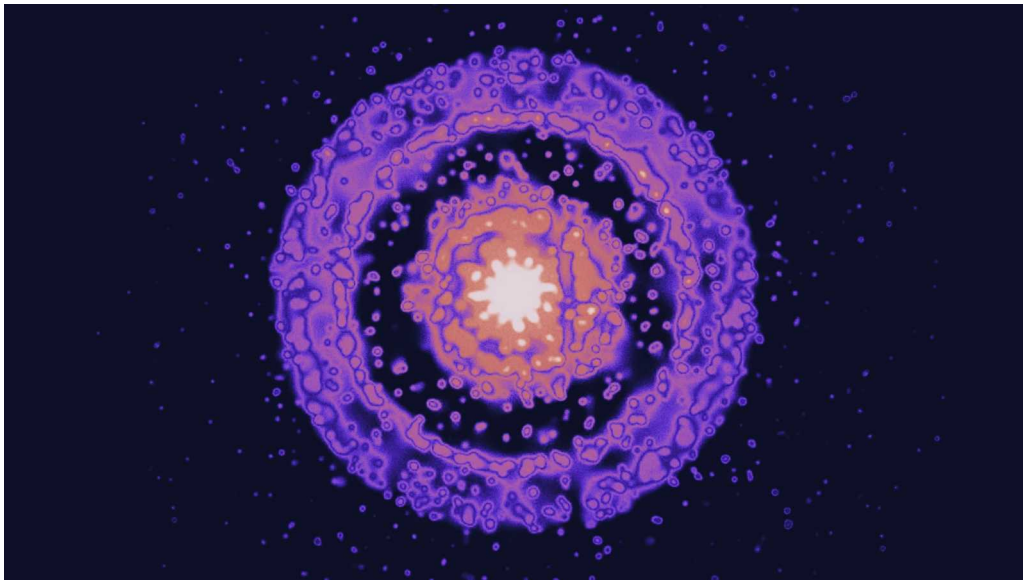


Figure 15. (Top) A Supernova observation [25]. **(Bottom)** S electron orbital shape [26]. This may be a visual of the current energy state of the electron related gravity causing particle cloud around the star possibly having a 3s-orbital shape and the energy state. Our sun will also likely have an electron related gravity causing particle cloud in the shape of an S-orbital type in addition to others if more such as the Quadrupole, Octopole or Dipole.

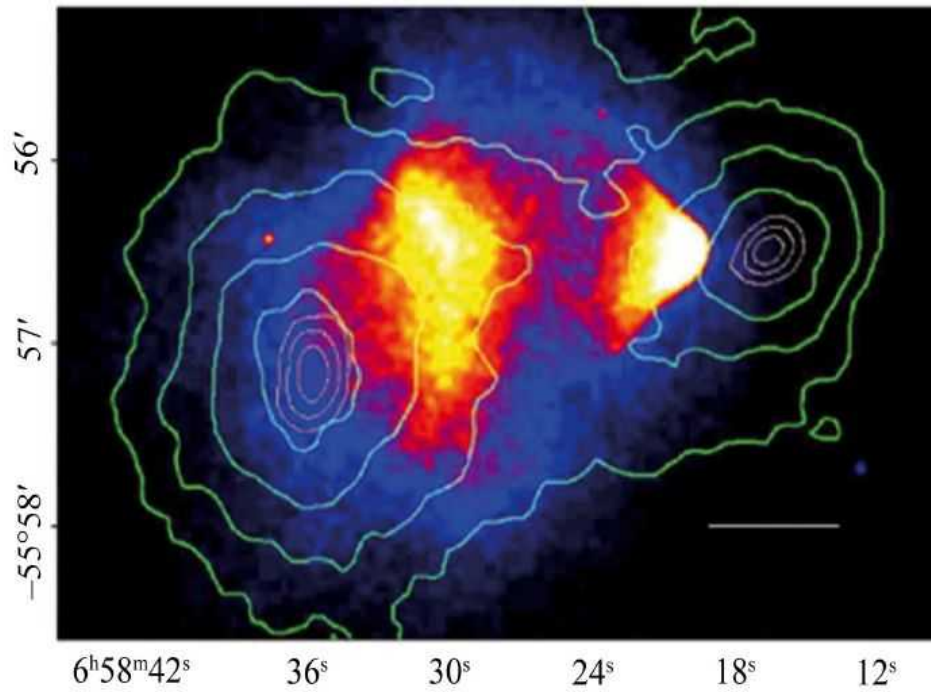


Figure 16. The Bullet cluster's [27] Dark Matter lobes represented by contour lines which is actually an observation of electron related gravity causing particle cloud and its densities and likely having scaled up characteristics of the 2p electron orbital. Ordinary matter in Orange is accelerating from higher potentials to lower potentials within the lobes of the gravity causing particle cloud.

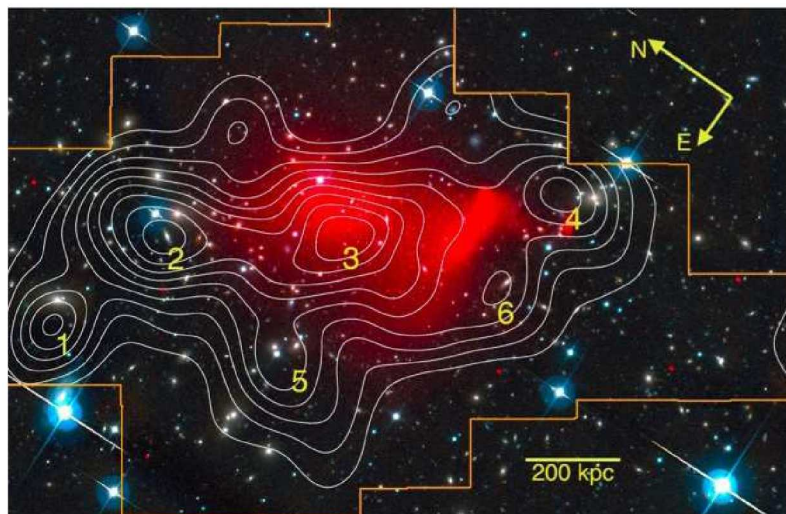


Figure 17. Dark Matter contour map [28] which is the observation of gravity causing particle clouds. Ordinary matter in Red is seen accelerating from higher potentials to lower potentials within these gravity causing particle clouds.

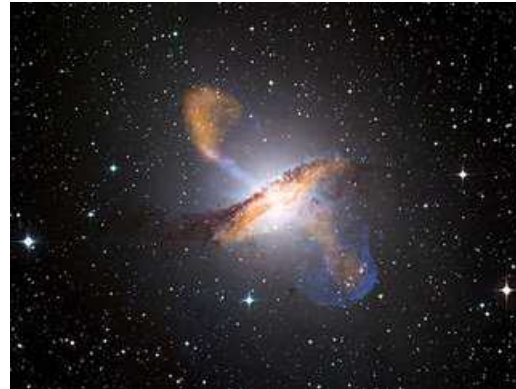
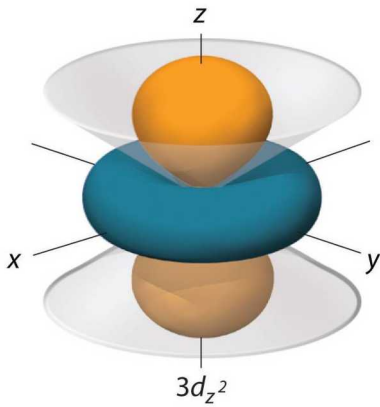


Figure 18. We can also see that quasars [29] (Right) assume the shape of the $3d_{z^2}$ electron orbital shapes [30] (Left) thus it may have a gravity causing particle cloud in the same shape.

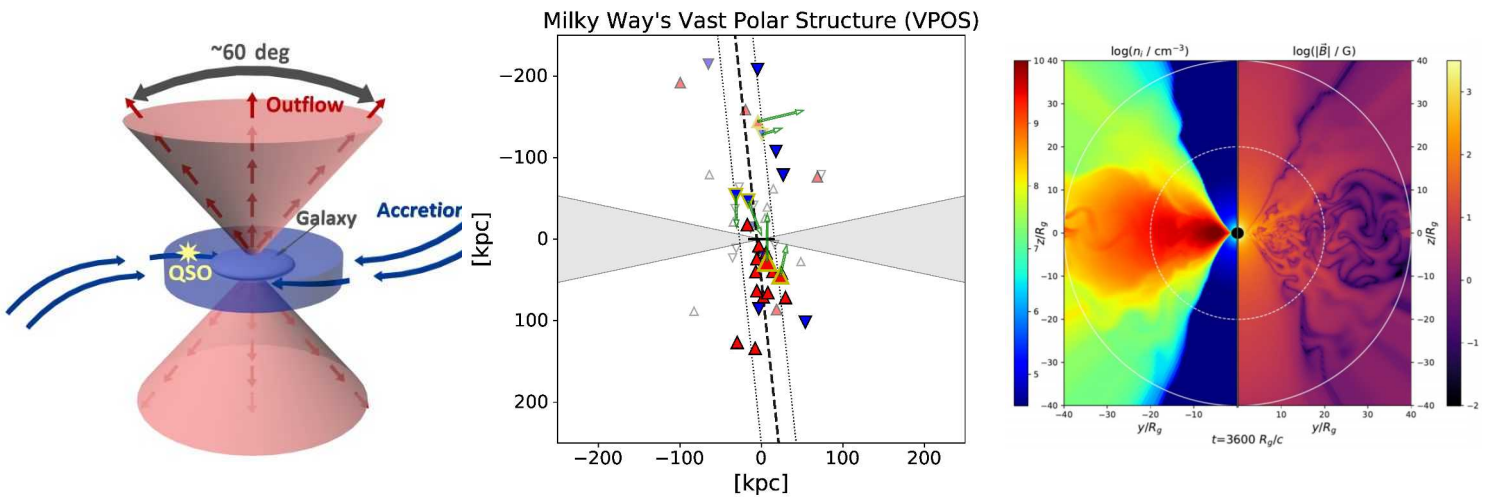


Figure 19 : More structures having $3d_{z^2}$ electron orbital shapes. (Left) Galaxy [31]. (Middle) Milky Way's Vast Polar Structure [32]. (Right) Black hole [33].

Experimentally testing Quantum Gravity in Quantum Field Theory:

We can use Quantum Field Theory fields to recreate the gravity causing particle clouds of the Sun and the Earth's within the Fields. These clouds can be reconstructed from electron orbitals having the same gravity causing particle cloud shapes that surround the Sun and the Earth and scaled up to match the size relationships between the Sun and the Earth. The density and energy density of electrons for each orbital can also be scaled up appropriately to match how much the orbitals were scaled up. We must then determine the potential for each region within the clouds that match the electrostatic forces that would exist to cause such gravitational acceleration of the Earth around the Sun at larger scales while still having the same scaled up potentials of an electron cloud. Van Der Waals forces and or Pauli

repulsion can also be used, however one force may dominate such as the electrostatic force or it is the culmination of these forces, thus testing the model should try differing combinations of which force to use. The electron related gravity causing particle cloud of the Sun may also interact with the probability clouds of ordinary matter within the Earth further causing acceleration. The nucleus clouds of the electrons orbitals may also be placed within the electron clouds within Quantum Field Theory using the same procedures as above and determining the size of the nucleus related gravity cloud based on the size of the electron related gravity causing particle clouds. We can then determine how the gravity causing particle clouds relating to the Earth orbits within and near the gravity causing particle clouds of the Sun via at least electrostatic forces between the two. This experiment will also allow us to peer into the activities occurring with the Sun. We can perform a combination of tests where the Quadrupole and the Octopole is related to the gravity causing particle clouds of the Sun and The Dipole is that of the Earth. Other tests may use the Quadrupole, Octopole, Dipole and a 3s orbital shaped gravity causing particle cloud system belonging to the Sun and we can use a 1s electron orbital shaped cloud system for the Earth. Furthermore, other gravity causing particle clouds that are not observed in the Axis of Evil or CMB may need to be added. At least an s-orbital electron cloud shaped gravity causing particle cloud will need to be added to the fields belonging to either the Sun and or the Earth as an electron related gravity causing particle cloud due to the FIRAS Monopole. This Monopole may mimic a higher S-orbital gravity causing particle cloud around either the Earth and or the Sun as well. Since we do not know which Low Order Multipoles belongs to the Sun or the Earth, different combinations may need to be tested as well if the above tests do not produce satisfactory results. Below is a list of possible combinations that can build the initial gravity causing particle cloud foundations in QFT and clouds in other shapes may be added later.

- 1.Sun: Quadrupole, Octopole. Earth: Dipole.
- 2.Sun: Quadrupole, Octopole, Dipole.
- 3.Earth: Quadrupole, Octopole, Dipole.
- 4.Sun: Octopole. Earth:Quadrupole, Dipole.
- 5.Sun: Quadrupole. Earth:Octopole, Dipole.
- 6.Sun: Dipole. Earth:Quadrupole, Octopole.
- 7.Sun: Dipole, Quadrupole. Earth Quadrupole.
- 8.Sun: Dipole, Octopole. Earth:Quadrupole.

Within QFT we can also a build a black hole by constructing gravity causing particles clouds with enough energy and size to allow ordinary matter to move towards and interact with the nucleus related gravity causing particle cloud to determine what goes on inside black holes.

Furthermore, galaxy rotations curves can be simulated using the correct gravity causing particle clouds within QFT.

Lastly Dark Energy can be tested where relatively larger gravity causing particle cloud systems that surround the gravity causing particle cloud systems of galaxy clusters are transitioned into a different energy state creating repulsion of the galaxy cluster's gravity causing particle clouds at their edges resulting in expansion. Gravity causing particle clouds transitioning from on state to another which hold galaxy clusters together may also be tested. Gravity causing particle cloud systems interacting

adjacently may also be tested. Lastly, matter located after a certain radius in a gravity causing particle cloud system may be repulsed away from the nucleus of the cloud system and this can also be tested.

Other manifestations of Quantum Gravity, which may also be considered for experimental tests:

The electron related gravity causing particle cloud may be made of one of the following:

- 1)Gravitons
- 2)Neutrinos
- 3)A negatively charged particle
- 4)Electrons
- 5)An unknown Fermion Lepton

The nucleus related gravity causing particle cloud may be made of one of the following:

- 1)Protons/Neutrons composed of Quarks
- 2)Unknown Fermion Quarks

The particle emitted from the electron related gravity causing particle cloud may be one of the following:

- 1)Gravitons
- 2)Neutrinos
- 3)Gravitational waves
- 4)Very high energy Electromagnetic waves above Gamma Ray range
- 5)Very low energy Electromagnetic waves below Infrared Range
- 5)Unknown Bosons

Other possibilities in lieu of or in addition to mentioned forces causing acceleration:

- 1)Radiation pressure from particles emitted from the gravity causing particle cloud that interacts with ordinary matter
- 2)Transfer of kinetic energy from particles emitted from the gravity causing particle cloud that interacts with ordinary matter
- 3)The Strong force
- 4)The Weak force
- 5)The Electromagnetic force

Lastly, much like particle clouds can be attracted to each other via Ionic bonds, Covalent Bonds and Hydrogen bonds, so can the gravity causing particle clouds of two objects be attracted to each other and interact similarly however on larger scales. The ordinary matter will follow within the movement of the gravity causing particle clouds. Gravity causing particle clouds may also become hybridized.

Discussion:

The FIRAS Monopole may be revealing to us the electron related gravity causing particle cloud of the Sun or the Earth or both since it will appear almost symmetrical around Earth's viewpoint. The CMB

Lensing Potential Power Spectrum may be revealing to us that the solar system has an electron related gravity causing particle cloud in the shape of the 3d electron orbital. Furthermore, the universe may also have a cosmic sized electron related gravity causing particle cloud and its nucleus related gravity causing particle cloud may be the Cold Spot location in the CMB. A connection with quantum mechanics at small scales is also supported with the CMB black body curve matching the probability density curve of the 3d electron orbital. Each Multipole in The Axis of Evil and The Dipole may be revealing to us the electron related gravity causing particle cloud of either the Sun or the Earth. Furthermore, it is possible that the electron related gravity causing particle cloud is the most dominant or fully dominant in causing acceleration upon ordinary matter and in particular to the electron clouds of ordinary matter from higher to lower potentials, however more research needs to be done.

There is an interesting connection between quantum manifestations of small particle clouds and the larger observations of the CMB and Dark Matter. Quantum Gravity and the Axis of Evil are two fields which need answers. Perhaps these two separate fields of cosmology and chemistry that when united and thereafter applied to Quantum Mechanics may reveal Quantum Gravity.

Conclusion:

There has yet to be a model which may explain Quantum Gravity after much effort. Any theory with a small chance of plausibility should be considered if it has a novel approach since current theories are not working. This article if correct has significant implications for humanity. This is because if there is a gravity causing particle cloud, so with it comes the physics that it will transition to a lower energy state via emission analogous to electron clouds when emitting photons. This will pose a risk to Earth's atmosphere which may be stripped due to the lower gravitational forces upon the Earth that comes with such a lower energy state gravity causing particle cloud than we currently have. This cause of atmospheric loss may have already occurred to other planets or Moons within the Solar System. The opposite may create atmospheres where the gravity causing particle clouds of a planet is promoted to a higher energy state resulting in higher gravity forces causing increased volcanic activity causing ejection of atmosphere making materials through eruptions.

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