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"SLA" Atomic Structure

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Abstract: ***A new and very accurate atomic structure is about to be unveiled; based on the inclusion of electric fields. Properties associated with atomic orbitals cannot be realised without the active constituents from which their properties are derived. Little wonder there are so many unexplained phenomena that have no practical applications to a working model. Electric fields expand into all regions of a confined volume of space; or until they interact with other sources of charge. This insinuates that electric fields have an interdependent co-existence, where they interrelate with each other. It also implies that if one electric field undergoes circulatory activity; then all electric fields automatically respond to that motion. Orbiting electrons exhibit properties that are synonymous with the stroke of a rowing paddle. Water left in the wake of a paddles motion follows in the path of the stroke, because of regional disruptions to pressure sensitive distributions; where localized pressure imbalances are endeavouring to be restored. This is exactly what takes place within the circulatory activity of orbiting electrons; in that electric fields establish a swirling undercurrent that develops its own circulating momentum. This single adaption of incorporating electric fields, changes the dynamics of an atomic structure, and transforms it from an incomprehensible figment of the imagination, to a real and actual physical entity that abides by all the laws of physics. In other words; for every action there is a verifiable reaction that comes from a physical source; and these sources ultimately predict each and every property associated with Atomic Structure; namely orbital configuration, orbital priority, quantised energy states, hybridisation, stability of magic number elements, electronegativity, opposite spin, and molecular bonding. This type of circulatory activity is a form of magnetic polarity in which electric fields respond to each other's motions, and bring stability to each other's existence. These are circulating electric wavefronts that draw each other along. It is a property which stabilises multiple electrons within the same orbital pathway. Current classifications refer to these properties as phenomena that have no justifiable reasoning. Predictions are a very powerful tool; so if the science predicts each of these properties based on logical reasoning; then it is because the concepts are credible. Each concept performs a specific role, and together they bring an atom to life, as a functioning entity; for it is the entity that exhibits each of these properties.***

Keywords: SLA, Atomic Structure

1. Introduction

The fundamental principle of circulating electric fields, offers an insight into the micro world of atomic orbitals. An orbital pathway is no longer the sole domain of a single pair of electrons. Atomic structure can now be re-evaluated from a totally different perspective.

A very different approach to the atomic structure is about to be unveiled. Many facets of this new "Stratos Lafcharis Aristomenis" Atomic Structure are radically different from that which science currently embraces. Each new concept fits in with the next to ultimately produce, a very practical and functional working model which abides by all known properties of atomic structure.

1.1 Atomic Orbital Structure

Alignment of Electron Orbitals

The first of many concepts of Atomic Structure to come under investigation; relates to the alignment of atomic orbitals. Current interpretations have "p" orbital lobes aligned along X, Y and Z axis, which are all perpendicular to each other in three different planes (fig 033).

According to the "Stratos Lafcharis Aristomenis" Orbital Configuration Theory; this cannot be further from the truth! The "SLA" concept of swirling electromagnetic fields enables electrons to follow each other along orderly columns of motion; with adjacent orbitals occupying parallel planes (fig 034). They each exist in individual orbital pathways which I have named "Dimitrios Ring Orbital Pathways"; in honour of my late father; who observed me toiling with these theories for decades on end; never questioning my commitment, and always inspiring my creativity.

Admittedly; parallel orbital pathways are somewhat controversial; but not beyond the realm of reasonable possibilities; especially given that current perceptions of lobe shaped orbitals have no clear insight as to what they represent. ***The wave equation is a hypothetical solution, introduced for the purpose of substantiating quantised energy states.*** So it is simply a mathematical solution to an unexplainable phenomenon; and in order to satisfy that equation; electrons are perceived as possessing a type of wave function that annuls the ability to identify an exact location. Atomic orbitals are therefore perceived as probability distributions, in which electrons are neither here nor there, but everywhere at the same time.

However there is no consensus on what lobes represent; so perceptions are not bound, or limited to any specific hypothesis, one way or the other. This implies that nothing can be ruled in or out, and everything is open to interpretation.

"SLA" Concepts resolve the issue of quantised energy states without having to resort to questionable hypothetical solutions; simply by way of incorporating electric fields; which are fundamental to all electrons. Electrons emit electric fields that expand into all regions of available space; and it is that volume of space that is quantized. The "SLA" perception is that electrons within orbitals are not perceived as point sources, but rather as cloud like formations which can be represented in a three dimensional format; incorporating both volume and border parameters. ***The "SLA" interpretation of swirling electromagnetic fields; enables orbitals to be perceived as well defined three dimensional wavefronts, and it is that image that is responsible for orbital shaped lobes (fig 032).***

Electric fields compete for space within confined areas; and if one looks at dissecting a spherical volume into equal portions based on electrons being equidistant around the

perimeter of a sphere; it soon becomes apparent that cone shaped portions is the most efficient division of equal sized segments of a sphere, no matter how many divisions are required (fig 031).

Figure 031

Visual interpretation of equal sized portions of a spherical environment, where the electromagnetic fields of individual electrons are competing for space.

Orbital lobes are therefore consistent with orbitals occupying equal portions of a spherical volume.

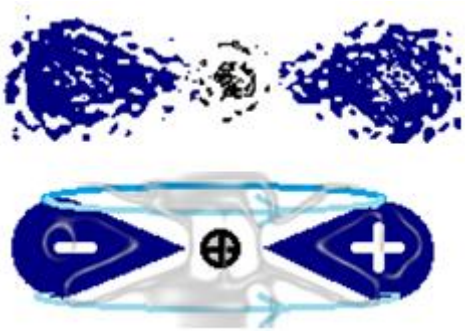


Figure 032

Depiction of a "p" energy atomic orbital

The tear drop shaped lobes are rightly pointing toward the central focal point, for that is the direction of the electrical attraction to the positively charged nucleus. However it is not necessarily the directional plane of an electron's orbiting motion.

The "SLA" Theory perceives each and every orbital as being aligned in one common plane. In other words, the exact same orbital images as depicted in fig 033 can be construed in a manner depicting orbital's moving in parallel planes; as mirror images across a central axis which dissects an atom in half (fig 034).

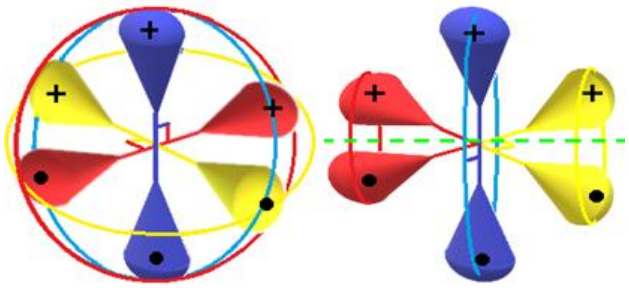


Figure 033 and Figure 034

Note how the same lobe images can be portrayed in two radically different perspectives relating to the direction of orbital motions, no matter which "Conservative model is adopted.

If crosses and dots denote directions of motion! Then it becomes abundantly clear that the same arrangement of lobes accurately reflect both "SLA" and "Conservative" orbital pathways (fig 034). In other words, there is no distinction between the two images; so alignments of atomic orbitals are purely based on a viewer's perception of orbital motions!

Orbital's being attracted, and pointing towards a central nucleus; yet moving in parallel planes, are comparable to moving air pressure systems within the Earth's atmosphere. Gravitational attraction is directed towards the central core of the Earth; however the presence of a Coriolis inspired pressure gradient, insures that high and low pressure weather systems predominantly move in parallel planes, slowly making their way along lines of latitude which never cross the Equator (fig 035).

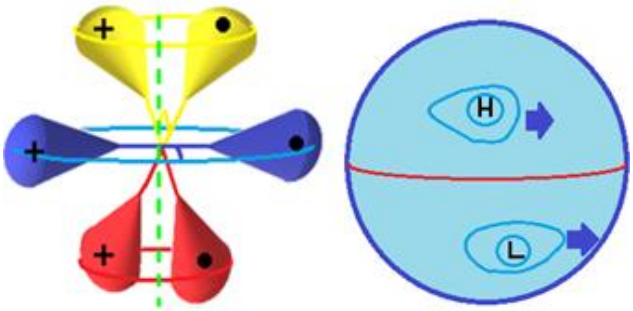


Figure 035

A depiction of orbitals and weather systems moving in parallel planes

Atomic orbitals utilise the same principles; based on a Coriolis inspired lateral electromagnetic intensity gradient, where the first "s" energy orbital replicates the path of a projectile and automatically occupies the largest turning circle circumference around an equatorial mid-region. This is the reason why the first "s" energy subshell is limited to a single orbital. Further numbers of orbitals are then restricted to parallel adjacent pathways on either side of the first. In other words; atomic orbitals conform to each other's presence according to a lateral electromagnetic intensity gradient.

This arrangement of orbitals gives rise to a new and very different interpretation of atomic structure; in which orbitals occupy positions in either hemisphere as mirror images across the initial "s" orbital! A natural consequence of there being two hemispheres; is that successive energy subshells expand their capacity by two orbitals at a time. A single "s" orbital is therefore succeeded by three orbitals in the "p" energy subshell, followed by five orbitals in the "d" energy subshell, and seven orbitals in the "f" energy subshell. This matches perfectly with the actual numbers of orbitals within successive energy subshells.

Distances between adjacent orbitals have been deliberately exaggerated for the purpose of identifying individual orbital pathways (fig 037). In reality; orbitals are likely to fit snugly together with no gaps between them. So in actual fact; atoms are likely to take on a fuller spherical shape (fig 036), but not necessarily a perfect sphere.

"d" energy subshell
Fig 036 Fig 037 Fig 038
Three different visual interpretations of an atom

Orbital Shell Structure

Charges moving in the same direction respond like miniature magnets, bringing stability to each other's proximity as they draw each other along. This is a form of magnetic polarity which is quite profound; in that it permits multiple electrons to follow each other at an atomic level, where they share a single orbital pathway.

An orbital pathway (Dimitrios Ring) is no longer the sole domain of a single, or pair of electrons. Multiple orbitals can therefore co-exist within the same orbital framework; rather like orbital super highways. These "Dimitrios Ring" orbital super highways; assemble themselves in parallel planes. Orderly progressions of varying sized Dimitrios Rings become grouped together in the shape of a sphere (fig 041).

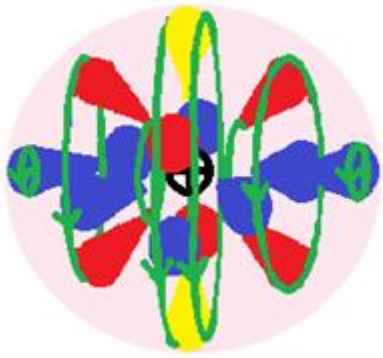


Figure 041

Depictions of colour coded orbitals within five DiRs

Dimitrios Rings & Atomic Spectra

Opposite sides of a moving electric field not only allows for like charges to follow in each other's pathways, but also creates a situation whereby two opposite sides of a single electric field; when moving in a circular motion, conceivably attract and draw each other closer together; until such time that opposite Polarities actually connect to form a continuous circulating electromagnetic field. This establishes a trail like effect that compels a charge to follow in its own slip stream. It is rather like a whirlwind cyclonic motion, which is very energy efficient and makes Dimitrios Ring orbital pathways quite stable. ***It also means that Dimitrios Rings exist as a physical entity, comprising a full-bodied circular shaped electromagnetic field which extends full circle around the whole perimeter of an atom.***

Proof that electrons extend their electromagnetic field's full circle around the whole perimeter of an atom; can be found in the fact that incoming electrons experience a level of resistance which is equivalent to the numbers of electrons occupying a shell.

Even though there may be ample room with many vacancies available for additional electrons; incoming electrons are often excluded in favour of orbitals in external shells. This could be considered as a form of verification that electromagnetic fields extend full circle around the whole perimeter of an atom, in line with the Polar Principle.

Dimitrios Rings are energy efficient electromagnetic slip streams that enable electrons to move around effortlessly as pulses of concentrated charge (fig 051). It is a unique energy efficiency no different to the swirling efficiency of a tornado, that sustains an electrons orbital activity; thereby withstanding natural tendencies for orbiting electrons to be drawn in, and eventually plummeting into the nucleus. This has been a major failing of the Bohr model; as the classical model of an orbiting electron undergoes acceleration, which expends energy; so eventually an orbiting electron is expected to be drawn into the nucleus. Swirling electromagnetic fields conserve energy in what is a frictionless environment; so atomic orbitals sustain their circulating motion by following in their own slip stream.

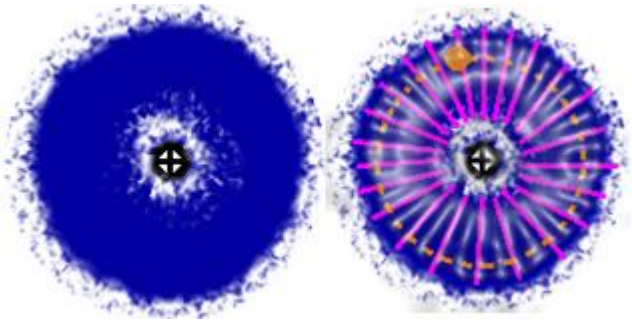


Figure 051

Image of an atomic electromagnetosphere Depiction of a continuously rotating dissected in half electromagnetic field in which an electron travels along in its own slip stream. (Dimitrios Ring)

Polar induced electromagnetic slip streams develop circulating momentums that exist as physical entities in their own right. Dimitrios Rings comprise full bodied circulating electromagnetic fields that occupy defined physical parameters, extending around the entire perimeter of an atom; and it is these border parameters that provide evidence for quantised energy states (Atomic Emission Spectrum).

Energised electrons initially resist breaking away from their energy efficient, electromagnetic slip streams. However at a critical juncture separation does take place; but the energy is quantised, because it must attain enough energy to break away, and move completely clear of the original orbital pathway, before transferring to a new orbital pathway. This means that orbital electromagnetic fields have a dimensional presence, which coincide with the volumetric parameters of their physical existence; otherwise defined as a shell.

This implies that excited electrons are restricted to precise energy states, which are equivalent to the threshold breaking capacities of consecutive engagements and disengagements between successive new Dimitrios Ring energy states.

Dimitrios Rings are orbital super highways which can contain any number of electrons if their size permits. Each electron maintains a set concentration of charge which becomes distributed evenly within the specific parameters of a Dimitrios Ring.

Transitions between shells incorporate quantised parcels of energy; which are equivalent to the energy required for electromagnetic fields to break free from their electromagnetic slip streams. This implies that the discharge of energy reflects the same quantised parcels, but in reverse, when excited electrons return back to their stable states. In other words;

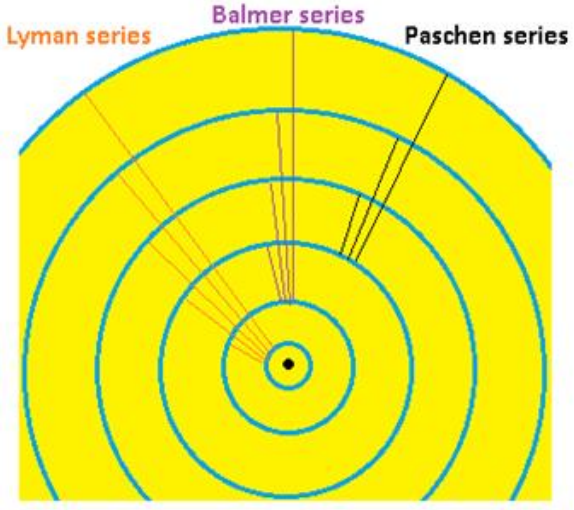


Figure 052

Fig 052 transitioning of electrons between shells, Emission spectral lines of Hydrogen absorb and emit quantised parcels of energy; that are equivalent to the energy required to break consecutive orbital electromagnetic fields.

Each successive energised state has capacity to transit to an even higher state, which is totally dependent upon the supply of energy. This means that the same process is repeated between the second and third shells, and likewise between all shells that have an affiliation to the atomic nucleus. In other words, each spectral line marks an instantaneous shift between successions of shells.

This substantiates the existence of quantised orbital states, as well as the sustainability of atomic orbitals; so they simply fall within the scope of predicted outcomes, based on "SLA" Concepts.

It becomes apparent that "SLA" Concepts resolve the discrete energy states of atomic orbitals, without having to resort to questionable concepts of quantum mechanics, which have no association to the real world.

Energy Subshells

Orbitals are classified in accordance to their distinct "spdf" energy levels. The energy of individual electrons are essentially the same; however it is the manner in which they combine together within an elaborate array of parallel different sized Dimitrios Rings, both radialy and laterally, which has a cumulative effect in terms of concentration of charge. This accumulation of charge develops into a radial electromagnetic intensity gradient that eventually determines the relative positions and energies of individual electrons. Each electron contributes a set amount of energy and intensity, and it is the sharing arrangement that is responsible for different energy classifications. So it is the relative position of an orbital within a radial electromagnetic intensity gradient that determines an electron's energy level.

Differences naturally exist between electrons orbiting in different sized Dimitrios Rings; however variations between s, p, d, f energy states are based on successive orbitals sharing a common Dimitrios Ring. This is because the first orbital that enters an empty shell, does so without any interference, as it is the only orbital within that orbital pathway; and therefore possesses a precise energy level that is equivalent to that position. When a second orbital enters that same Dimitrios Ring to share the available space, the energy level must reflect the changing circumstances within that orbital pathway. Essentially the second orbital pushes its way into an established orbital pathway, so it requires a greater amount of energy to settle in that position. This means that successive orbitals which share a common Dimitrios Ring, or indeed a shell; require progressively greater levels of energy so as to enable them to penetrate their way into an increasingly congested space. This is not to say that individual electrons which share a common Dimitrios Ring have differing energy levels to each other. In other words; the level of energy is related to the total numbers of electrons sharing a Dimitrios Ring. Once an electron succeeds in entering a Dimitrios Ring; then all

electrons within that pathway suddenly attain elevated energy levels which are proportional to the overall numbers that share that space. Likewise as each electron is extracted, the remaining orbitals become less energised. It is rather like individual volumes of water which join together to produce a flooding torrent. The addition of each volume distributes the pressure evenly over the whole to create a faster flow. This means that even though subshells are categorised in accordance to their energy levels; in fact at any one time all the orbitals within a particular shell are likely to attain similar energies which are nearly equivalent. I say near to equivalent, because Coriolis inspired variations in intensity are likely to exist between adjacent Dimitrios Rings, based on positions of latitude away from a central alignment.

An electron always enters the highest stable energy orbital that its energy can sustain. It is a natural equilibrium between competing variables that determines the position of an orbital; very similar to the natural equilibrium that exists within the atmosphere and in the oceans around the Earth.

Orbitals are grouped together and classified in equivalent energy clusters; denoted by prefixes “s”, “p”, “d” & “f” energy subshells. As it turns out; individual component orbitals of each of these energy levels do not share a common Dimitrios Ring. They are instead spread evenly across a range of different latitudes, occupying adjacent positions within different sized Dimitrios Rings; with varying numbers of resident orbitals occupying each of the rings.

It is a working interrelationship between orbital’s within individual Dimitrios Rings that creates variations in energy. In other words, the energy of an electron is determined by the numbers of electrons, relative to the dimensional circumference of each DiR.

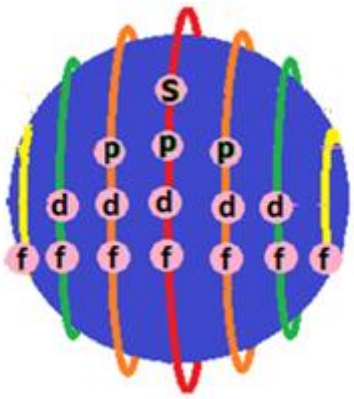


Figure 061

A full range of orbitals within a fourth shell,
δ γ β α β γ δ

Dimitrios Rings
The numbers of orbitals within a given shell is therefore determined by the size of a shell, based on the numbers of Dimitrios Rings that fit within that shell, and the relative position of that shell within a radial electromagnetic gradient.

The “SLA” Configuration positions orbitals within odd numbers of parallel Dimitrios Rings (fig 061). This implies that the capacity of successive energy subshell’s increase by two orbitals, based on even distributions within opposing hemispheres.

The first energy subshell consists of a single “s” orbital occupying a central Dimitrios Ring; however its electromagnetic field is fluid, and thereby envelops the entire spherical surface area of an atom (fig 062). The second energy subshell consists of three “p” energy orbitals within three adjacent orbital pathways (fig 063).

“$2s^2$” “$2s^2 2p^6$”
Beta Alpha Beta

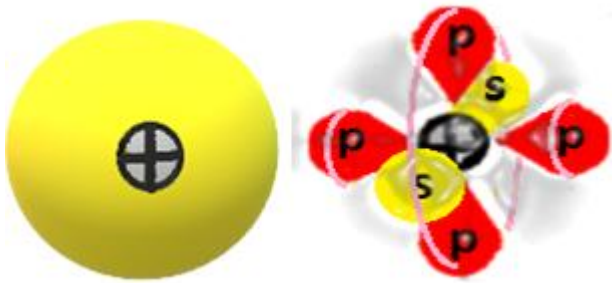


Figure 062 and Figure 063

“$2s^2$”(yellow) &“$2p^6$”(red) energy subshells

It follows that the next “d” energy subshell increases to five Dimitrios Rings (fig 064 & 065), followed by seven Dimitrios Rings for an “f” energy subshell. Note that orbitals in outer flank Dimitrios Rings exist as single lobes; whereas all other Dimitrios Rings come in identical pairs.

Gama Beta Alpha Beta Gama Gama Beta Alpha Beta Gama

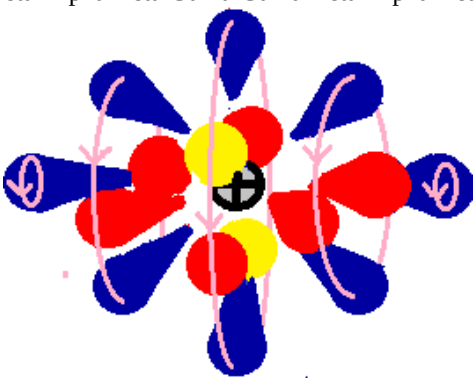


Figure 064 “d” energy subshell

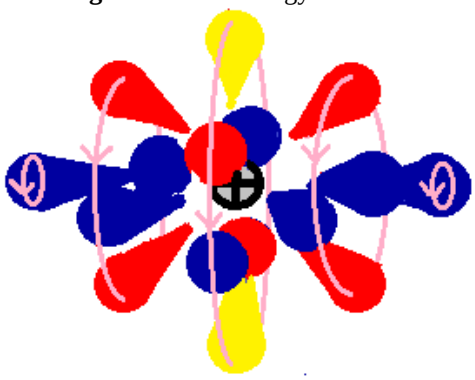


Figure 065

Depiction of “s” “p” & “d” colour coded orbitals Depiction of the same colour coded orbitals within five Dimitrios Rings having been partially rotated

Energy of individual orbitals within equivalent energy clusters (“p” “d” & “f” subshells) are likely to vary slightly in magnitude. This is because each of the orbitals exists within separate DiRs. However within these equivalent energy subgroups, mirror image pairs which exist on either side of the central Alpha DiR are likely to be identical, and therefore possess precisely the same energy level. At this point in time I am not entirely certain if these differences are measurable and whether they exist as a scientific reality. However the physical reality of such distributions; implies that some of the energy orbitals are likely to be more closely related than others within the frame work of an energy subgroup. Differences are likely to be based on a Coriolis inspired intensity gradient towards larger circumferences.

Relative electromagnetic intensities between neighbouring Dimitrios Rings, determines where an incoming electron chooses to settle. However once a shell reaches the limit of its maximum holding capacity in terms of the numbers of electrons, then the intensity of the combined electromagnetic fields reach a saturation point which resist further intrusions from incoming electrons.

References relating to pressure may be easier to understand. When two volumes of air exist side by side, it is their relative pressures that determines whether one can make inroads into the others domain. This is essentially the same in electromagnetic terms, except that it involves unit parcels charge! It is the intensity of a particular Dimitrios Ring, in comparison with neighbouring Dimitrios Rings, both radially and laterally which determines whether an electron can make inroads and enter the space that constitutes joining that group. When a Dimitrios Ring is not filled to capacity, an advancing electron has an ability to penetrate it; in accordance to regional tolerances of electromagnetic intensity; and once inside, it becomes part of that field and bolsters its intensity. On the other hand; if a Dimitrios Ring is completely full to capacity, it functions as an impenetrable barrier where incoming electrons simply bounce off and move to more favourable positions.

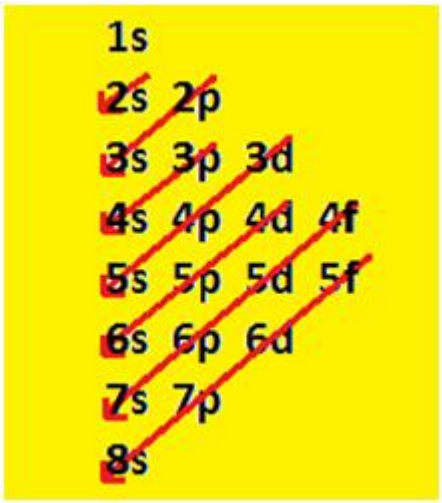
As electrons access specific orbitals within receptive subshells, pressure differentials develop between electromagnetic fields of adjacent Dimitrios Rings; and this is the guiding force which determines the optimal position for an electron to settle. Individual electrons have capacity to cross over when pressure/intensity differences are too large. This is very much in line with pressure equalisation within in gaseous environments.

We have currently addressed the alignments, shapes and energy classifications of atomic orbitals. The next part of this investigation is very significant. In that it is a science based justification which culminates in a very precise and accurate depiction of both, atomic configuration, and orbital priority! These are both unexplained phenomena that seem to defy logical reasoning.

Orbital Priority

This brings us to the Order of Orbital Priority: Shells can acquire as many as four energy subshells co-existing in perfect harmony with each other. There is also a specific order of priority that extends across many successive shells, in accordance to specific “diagonal red arrow” series of energy subshells (table 071).

Table 071



Order of orbital priority

The “SLA” Orbital Configuration is based on the premise, of dual constraints from a combination of both Coulomb and Coriolis influences, which together assign electrons within vertical and lateral parameters of an intensity gradient; and it is this positioning of electrons that gives rise to a systematic layer by layer inclusion of electrons (order of priority), endeavouring to conform to a uniform radial electromagnetic intensity gradient.

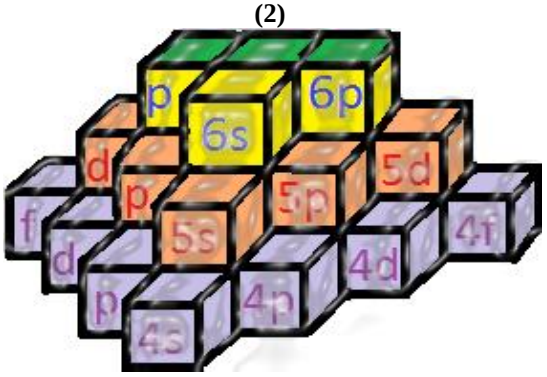
Incoming electrons are distributed laterally in orderly rows spaning across the breadth of successive receptive shells. These distinct orderly rows of charges; classified as energy subshells; follow a well-defined order of priority which always start at the lowest unfilled shell of a uniform radial intensity gradient, where numerically larger energy subshells bolster regional electromagnetic intensities within receptive shells. Each successive receptive energy subshell establishes a stable foundation that can support a series of additions, progressively moving between consecutive shells in order to maintain a uniform radial intensity gradient.

A quantitative portrayal of orbital priority; depicting relative sizes, positioning, and sequences of energy subshells, can be better appreciated with the use of a pyramid structural representation. Let us begin with the element of “Ba” (fig 372); where the “SLA” atomic pyramid structure represents a uniform radial electromagnetic gradient. Any variation’s greater than one energy subshell take on a role as an impenetrable barrier where incoming electrons come to rest. (In real terms, the example given here is not entirely accurate for reasons which shall be covered in a latter segment; but for simplification we are overlooking some regional inconsistencies for the purpose of appreciating the overall sequence of events)

When an atomic structure has a uniform gradient, [fig 372 **(1)**] electrons follow a seamless decline of one energy subshell between consecutive shells, to the lowest unsaturated shell; which in this example happens to be the fourth shell, where there is available capacity to facilitate a new series of "f" energy electrons [fig 372 **(2)**]. Each new additional energy subshell is coloured green so as to clarify the size and position, relative to the existing orbital configuration.

(1)

(2)



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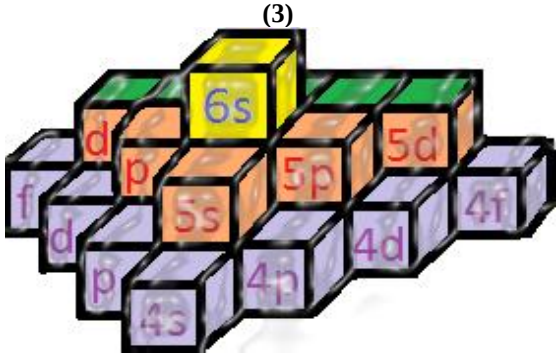

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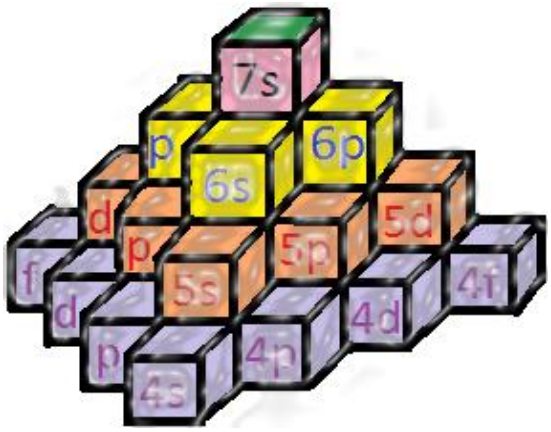


(5)

Figure 372

Complete series of receptive energy subshell additions, starting with a uniform atomic structure **(1)**; whose receptive subshell is located in the foundational base of the fourth shell. Each addition is depicted in green, so as to highlight the size, position, and order of progression as receptive subshells make their way to a new peak.

Each of these green coloured energy subshells signifies a regional spike; approximately doubling the electromagnetic intensity, and representing the site of a receptive shell where electrons come to rest.

While science is well aware of the specific order of orbital priority, there is no known reason why such a specific order is adhered to. In comparison; the "SLA" Orbital Configuration details each and every aspect of this puzzling phenomenon with such meticulous precision, that it accurately predicts each of the complex and intricate orbital sequences as they occur.

It is truly remarkable; that what seems to be a mystifying jumble of organised chaos in terms of Orbital Priority; coincides perfectly with "SLA" Concepts.

Investigations into orbital configuration entail two primary forces; namely Coriolis and Coulomb forces, which collectively substantiate every aspect of an Atomic Orbital Configuration. The interrelationship between Coriolis and Coulomb forces are quite complex, and require that each of these forces be investigated separately, and then in combination in order to come to a final conclusion.

Justification of Orbital Priority

Coriolis Influence

We begin with a very detailed practical analysis of Coriolis principles, which will eventually lead to an accurate portrayal of an atomic orbital configuration. This investigation brings about a comparison between two very unlikely associations! Namely the distribution of air in the atmosphere around the Earth; and that of the distribution of electron orbitals surrounding an atom! If we analyse the forces involved, it becomes evident that there are common similarities which apply to both spheres, regardless of the differences in size between the dimensions of an infinitely small atom, and a massively large planet. Both possess a

central force of attraction, which in terms of the Earth is referring to the force of Gravity; while within an atom it is the Coulomb force of electrical attraction to the positive nucleus by negatively charged electrons. These internally directed forces are responsible for establishing an all-important spherical shape.

Once a sphere is established, then any form of motion on that sphere, or by that sphere in terms of rotation, introduces a new* Coriolis *force. With reference to the Earth it is the actual sphere which is rotating, whereas within an atom it is the electrons which are rotating around a spherical perimeter. The origin of the motion is not important! In both cases it is the application of a range of varied centrifugal forces which produce shift towards regions of larger circumference in the plane of motion. This so called "East-West Coriolis" refers to an automatic Fig 081 perpendicular shift which occurs to any Rotational force field around a spinning sphere straight line motion around a sphere, when the plane of that motion does not dissect the sphere in half.

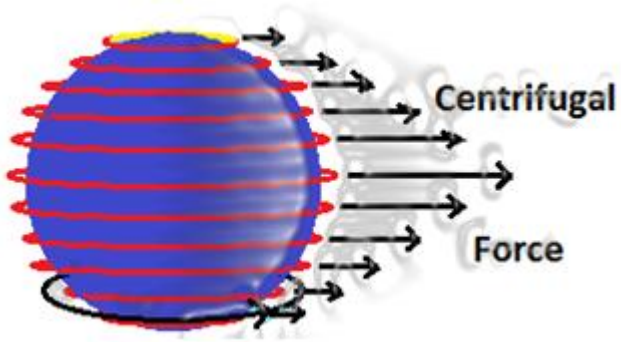


Figure 081

A sphere resembles an assembly of graduating circumferences compiled together along an axis in an orderly sequence of size (fig 081). Under rotation at a constant speed, the magnitude of any associated centrifugal force is determined by the outer perimeter circumference of the turning circle. Since the circumferences have an orderly sequence, then so too do the developing centrifugal forces. .

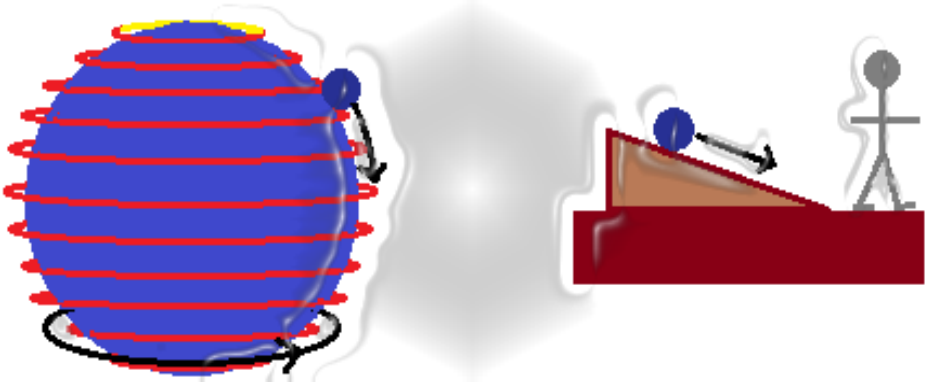


Figure 082

Potential for particles to respond to centrifugal Potential for a particle to respond to a sloping force gradient gradient

This results in a perpendicularly directed centrifugal force gradient which has a capacity to manipulate free flowing matter. Free moving particles (liquids) respond to such a centrifugal force gradient, in the same manner to which particles respond to a gradient slope under the influence of gravity (fig 082), and it goes by the name East-West Coriolis force.

Hypothetically speaking; let's presume the Earth had a flat frictionless glass like surface, and water molecules were large five meter diameter spheres, but maintaining the same mass as the molecules they represent. Now if the rotational velocity of the Earth was fast enough (fig 084), and the numbers of particles were limited to a numerical quantity which could fit perfectly around the perimeter of the Earths Equator; then over time the centrifugal force gradient would displace all particles, causing them to become assembled in a single linear formation extending around the perimeter of the largest turning circle (fig 084).

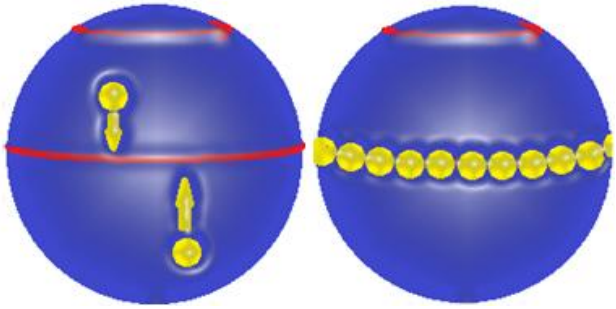


Figure 083 and Figure 084

Centrifugal force of rotation compelling particles Displaced particles forming a single line along to move towards the largest turning circle in the the perimeter of the largest turning circle plane of the rotation.

In Atomic Orbital terms; this is equivalent to the central Alpha Dimitrios Ring position. As more and more particles are introduced, greater numbers of rows develop on either side of the initial alignment. The position of each successive row is dependent upon the order in which they were assembled; and is denoted by the prefixes, Alpha Beta Gama etc. (fig 085).

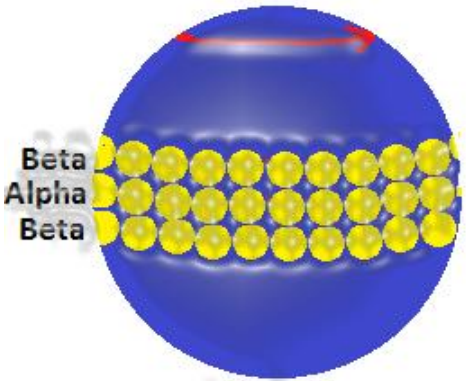


Figure 085

Greater numbers of particles being displaced across an orderly array of multiple rows, on either side of the central alignment

Once the first three rows are in place; then they can act as a platform upon which other particles can climb on to. If the rotational force is powerful enough to give rigidity to the lowest level of particles, so as to resist downward pressure; and the breadth in the numbers of rows is adequate, then the first layer has the capacity to support and therefore sustain a second tier vertically overhead. As long as the magnitude of the centrifugal force is adequate to promote particles the required height to scale the first layer; then future particles will ascend the incline and eventually establish a multi-tiered formation (fig 086).

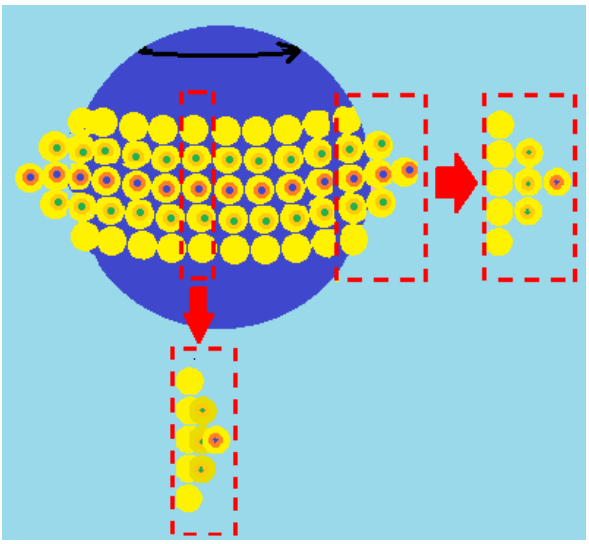


Figure 086
Depiction of a three tiered triangular formation surrounding the Earth's surface, with a side view inserts depicting vertical elevations.

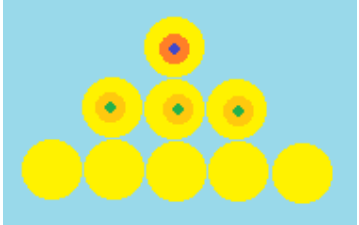


Figure 087
Upright side view showing a three tiered vertical elevation

Putting all this into context! If the rotational velocity develops enough centrifugal force, then there is a critical point at which particles climb to a second tier, as long as the base is wide enough and rigid enough to stabilise the elevated formation. Further levels of vertical elevation continue as long as the centrifugal force of rotation can overcome the height requirements, and the base continues to broaden in order to bring stability to an ever increasing elevation. These circumstances seem to replicate the distinguishing traits found in the atomic orbital priority; keeping in mind, that mass and friction of electrons are insignificant, because they are essentially gliding within circulating fields of electromagnetism. Furthermore; atomic orbitals possess a substantially greater velocity with a markedly smaller turning circle, so it should be of no surprise to find an even higher disproportionate concentration of orbitals in the region of the largest circumference.

Having just compared the similarities between these two different environments; there is one very significant difference which stands out between particles around the Earth, and that of electrons around an atom. Water particles can readily access any position which is not already occupied by another particle. So in the hypothetical of there being fewer particles than are able to fit around a single line formation around the Equator; then all of the particles will eventually make their way into that single Equatorial plane (fig 088).

The situation with electrons is quite different! In one manner electrons respond as particles; however with a very significant difference. Even though electrons within orbitals have a Coriolis tendency to search out the central Alpha DiR with the largest circumference; they have a dual capacity to respond both, as particles, while at the same time exhibiting properties of pressure, in terms of electric field intensity. This means that even though electrons may have enough available space to physically fit within the confines of a central Alpha Dimitrios Ring; they experience a level of resistance, which is proportional to the numbers of electrons occupying that space. This can only mean that electrons discharge a specific amount of charge which is
distributed into whatever space is available to them. Given that electrons orbit around the nucleus within Dimitrios Ring type arrangements, then electromagnetic polarity extends the electromagnetic fields around the whole perimeter of the orbital pathways. It also seems logical that orbital electromagnetic fields

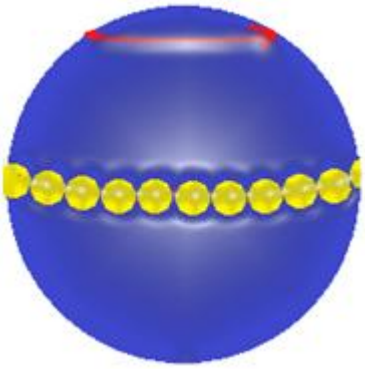


Figure 088

Figure 088 spread laterally into outlying flanks, if neighbouring orbital Alpha DiR positions are not occupied.

It is this so called East-West Coriolis force (which has no affiliation to any East-West orientation of an atom; other than that which relates to the direction of the orbital motion), in association with the Coulomb force of electrical attraction; which determines the specific order of priority of atomic orbitals.

More and more; these properties resemble a pressure gradient; except in this case it is referring to an electromagnetic intensity gradient instead. As a consequence of this electromagnetic intensity gradient, incoming electrons experience graduating levels of resistance that determine which positions are more accessible to their intrusions.

Let us compare the triangular tiered layout of these hypothetical large molecules surrounding the Earth (fig 089); and note how a vertical cross section is identical to the succession of energy subshells in accordance to Orbital Priority (fig 090).

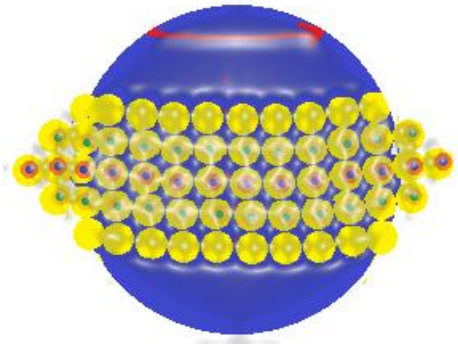


Figure 089

Figure 090

A cross sectional representation of vertical elevation from fig 103(a) depicting a series of energy subshells as they adhere to the orbital priority.

Keep in mind that fig 090) accounts for the lateral arrangement of incoming receptive shells as they abide by the orbital priority; but more often than not, Dimitrios Rings already contain pre-existing orbital subshells. So many of the incoming orbitals depicted in fig 090, actually fit in a linear formation with pre-existing energy subshells (fig 093).

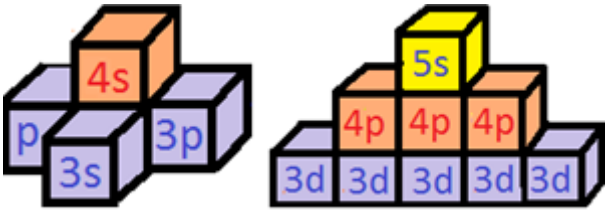


Figure 091 and Figure 092

Pre-existing orbital subshells Series of incoming energy subshells in accordance to the orbital priority

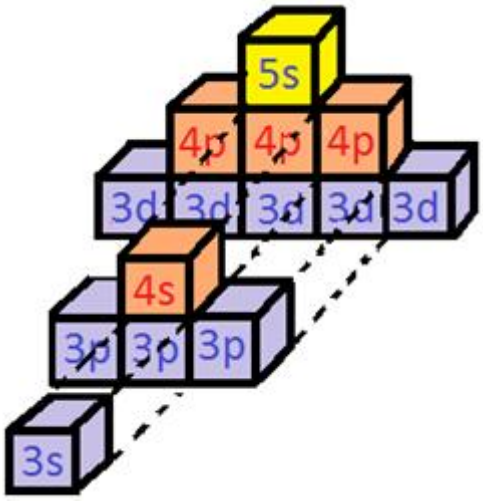


Figure 093

Successive series of new energy subshells being super imposed over existing configurations

So in actual fact, when successive (diagonal red arrow) "series of receptive energy subshells" combine (fig 106), the orbital configuration takes on a pyramid type formation (fig 107).

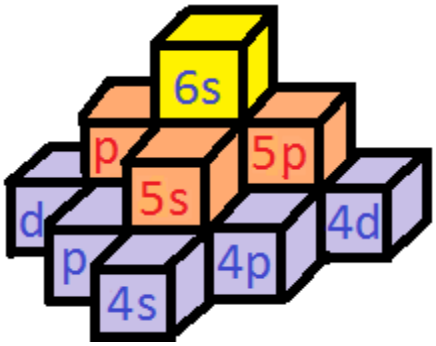


Figure 094

Atomic orbital configurations take on a pyramid type formation

With each new series of additions, the pyramid shape gains greater height; before eventually moving to a new wider base, with every second diagonal "red arrow addition"; and then the process is repeated over and over again.

Coulomb Influence

While the Coriolis influence accurately portrays the specific nature of atomic orbital configuration; there is some conjecture about the role of the Coulomb force.

The Coulomb force is a precursor to the Coriolis force. In other words, the Coulomb force is responsible for the spherical shape of an atom; and it is that spherical shape that activates the Coriolis force within orbiting electrons. An active Coriolis component requires physical contact between individual particles in order for the transfer of force; however actual physical contact is restricted to competing electromagnetic fields; and electromagnetic fields are predominantly Coulomb inspired entities. So it comes down

to comparative contributions as to which of these forces has greater influence on the final outcome. The two forces are in direct competition with each other!

These competitive endeavours are likely to lead to a balancing co-existance; a type of interdependence between the Coriolis and Coulomb forces, where one feeds off the other, and the two are constantly interacting, in an effort to establish a three dimensional electromagnetic intensity gradient; otherwise classified as an atomic electromagnetosphere. It is this atomic electromagnetic intensity gradient that then pre-determines the location of incoming electrons.

"Conservative science" substantiates the relevance of Coulomb force as contributing to an atomic orbital configuration. So the challenge is for the "SLA" Theory to substantiate the Coriolis contribution to the atomic orbital configuration.

Verification of an active Coriolis force, working in conjunction with the Coulomb force, can be demonstrated by the ability of some electrons to transfer between shells. ***By Coulomb force alone, it would not be feasible for an electron to go against a natural trend in order interchange between shells without an active centrifugal force.*** It either succeeds or fails in its attempts to compress or penetrate internal shells; so having electrons interchanging in an outward direction, strongly indicates a significant Coriolis component in attaining up and down fluctuations in orbital priority.

Transitions between shells take place in both directions on many occasions between "s" and "d" orbitals. ***Coulomb force is not reversible, so there is no possibility of an orbital moving between shells without significant Coriolis influences contributing to the eventual outcome*** (fig 095). Keep in mind that a Coriolis force is only relevant to the "SLA" interpretation of parallel orbital pathways.

Figure 095

Depiction of a "4s" electron interchange with a "3d" energy subshell

We have currently analysed the structure of an Orbital Configuration on a theoretical level. Now is the practical association which ties in "SLA" Theoretical Concepts, to the scientifically accepted reality.

Orbital Configuration

This is where everything we have covered till now comes to fruition, and makes the structure of an atom come to life as nature intended.

The centrifugal force of rotation ensures that "s" orbital electrons always occupy the central Alpha DiR, because they are the first electrons to occupy a newly established shell. Just as projectiles always follow a path of largest circumference around the Earth, so do electrons always follow the path of the largest circumference within each empty shell. As more and more electrons converge and endeavour to move into a common shell, a cluster develops enabling electrons to queue inline and/or occupy each of the flanks, before finally ascending and climbing into a multi-tiered formation; based upon a delicate combination of both Coriolis and Coulomb influences. Incoming electrons are faced with a complex three dimensional intensity gradient with varying levels of resistance, both radially and laterally.

Then if there is available capacity, incoming "p" energy orbitals extend that layer by either following in behind to share the same Dimitrios Ring, or spread to adjacent flanks in order to establish new smaller circumference Dimitrios Rings (fig 120).

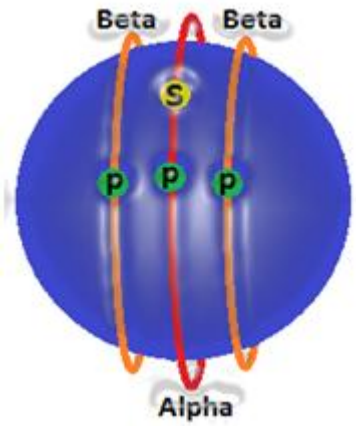


Figure 120

Portrayal of the relative positions of both "s" & "p" orbitals within three Dimitrios Rings

Each new energy subshell within a given shell; exceeds the previous energy subshell by two orbitals on either of the two flanks. It is unclear which of the available options of a particular energy subshell are occupied first; but I suspect that the order varies in accordance to specific properties associated with each shell.

As it turns out; it is eventually concluded that some of the larger energy subshells alternate in the order of occupation; sometime filling from central orbital's, and at other times from outer flank orbital positions, and that some elements have exhibit both options as different variations of the same element.

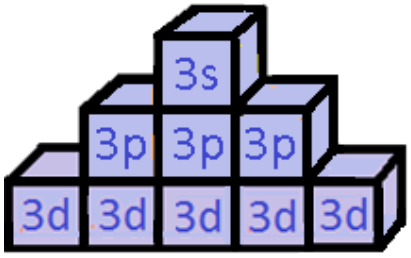


Figure 121

Co-sharing orbitals within the third shell

Pyramid formation **Figure 122 (a)**

Each shell has a triangular configuration. However the radial component of an atomic electromagnetosphere, establish a pyramid orbital configuration [fig 122(a)].

Front-on perspective of a full range of orbitals in each shell by ascending order, with an abstract depiction of how the pyramid structure in fig 122(a) fits within an atomic structure.

There are always odd numbers of Dimitrios Rings within each shell; reason being that the first Alpha Dimitrios Ring can only ever occupy a central position within the largest circumference.

A shell consists of a parallel array of Dimitrios Rings ranging in dimensions, from the largest Alpha, through to Beta, Gamma, and Delta etc; which are progressively smaller in circumference. Apart from the central Alpha DiR, all other Dimitrios Rings come in identical pairs with equivalent energies and circumferences on either side of the central Alpha DiR.

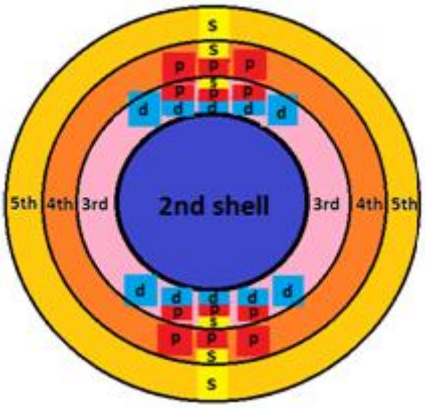
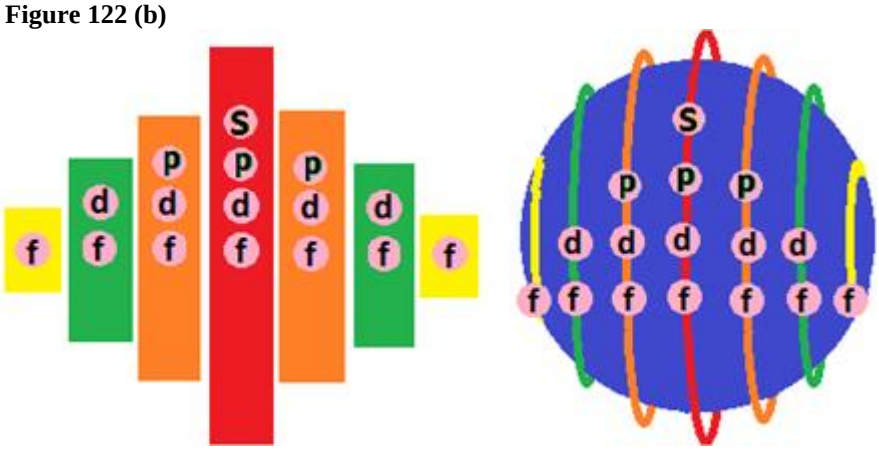


Figure 122 (b)



Dimitrios Rings: Delta Gama Beta Alpha Beta Gama Delta Delta Gama Beta Alpha Beta Gama Delta
Figure 123

Two depictions of the forth shell consisting of seven Dimitrios Rings. [(2n-1) =7 where n=4 (energy subshells)]

The "SLA" Atomic Configuration has now been finalised. It becomes apparent that each electron has its own unique set of coordinates within an Atomic Configuration; which relate to a shell, an energy subshell, the position (Dimitrios Ring) within that energy subshell, and the spin of an electron, depicting the position within the orbital cycle. These co-ordinates identify an exact location of an orbital within an Atomic Structure.

Current Electron Quantum States

"Conservative" quatum numbers entail a Principle Quantum Number "**n**", equating to the shell number, and three vague expressions: Angular Momentum Quantum Number "**l**", Magnetic Quantum Number "$\mathbf{m_l}$", and Spin Quantum Number $\mathbf{m_s}$ [**n, l,** $\mathbf{m_l}$**,** $\mathbf{m_s}$].

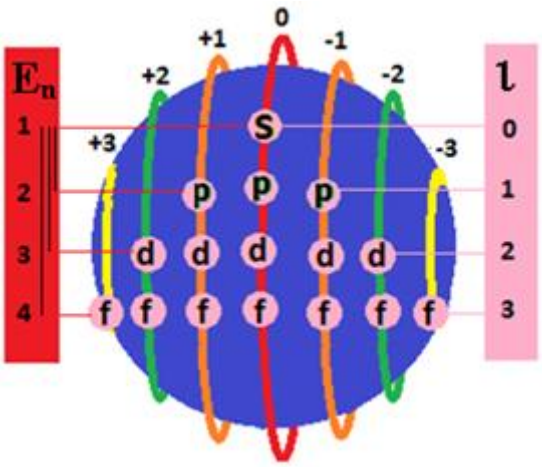
Four Electron Orbital Quantum Numbers based on "Conservative science": [n, l, m, m_s]
1. Principle quantum number = "n" (shell number) {distance from the nucleus}
2. Angular Momentum Quantum Number = **l** = 0, 1, 2, 3,
Each **l** value equates to a specific energy subshell = s p d f

where there are "n" different **l** states in each shell.
3. Magnetic Quantum Number "$\mathbf{m_l}$" has (2**l** +1) different states.
ie. **l** = 2 = d = (2x2+1) = 5 different orbital states for **l** = 2 = d energy subshell.
4. Spin quantum number = $\mathbf{m_s}$ = +/- 1/2

"SLA" Quantum States

The same four Electron Orbital Quantum Numbers based on "SLA" Concepts: [n, E_n, DiR, $\bar{s}_+$]
1. Principle quantum number = "**n**" (shell number) {distance from the nucleus}
2. "$\mathbf{E_n}$" depicts the energy of an electron, based upon s^*, p^*, d^*, f^* energy classifications; of which there are "n" different energy states/subshells in each shell; where "n" equates to the number of a shell.
*Successive energy subshells increase their capacity by two Dimitrios Rings at a time
[ie. s = 1, p = 3, d =5, f = 7]; based on Coriolis principles of a central orbital with successive orbitals in either hemisphere.
3. "**DiR**" **(**Dimitrios Ring) depicts the location of an orbital orbital within an energy subshell; classified as Alpha, Beta, Gama, & Delta alignments; of which there are (2n-1) separate Dimitrios Ring alignments; where "n" equates to the number of a shell
4. Spin quantum number = **"$\bar{s}_+$"** = +/- 1/2

Each of "SLA" Quantum numbers refers to a specific co-ordinate on a three dimensional model:
Radial Height - shell number
Line of longitude - energy subshell
Line of latitude - Dimitrios Ring
Spin - relative position within an orbital cycle
"m" = (2ι + **1)**



Delta Gama Beta Alpha Beta Gama Delta
Dimitrios Rings (DiR) = (2n-1)
Figure 124

Note the similarities between the "SLA" & "Conservative" Quantum Numbers:
Dimitrios Rings **DiR** => "$\mathbf{m_l}$" Magnetic Quantum Number
Numbers of energy subshells $\mathbf{E_n}$ => "**l**" Angular Momentum Quantum Number
Spin $\bar{s}_+$ => "$\mathbf{m_s}$" Spin
Shell number **n** => "**n**" Principle Quantum Number

The four "SLA" quantum numbers are quite unique; in that the* [n, E_n , DiR, $\bar{s}_+$] *values correspond to exact locations on a tangible surface area (fig 124); thereby identifying a specific shell, a specific spdf energy subshell, a specific location within that energy subshell (DiR), and a spin of an electron; depicting the relative position of an electron within its orbital cycle.

Both sets of four Quantum Numbers represent exact locations within an atomic structure; except that the "SLA" quantum numbers take away any ambiguity regarding what these numbers represent, by adapting them to actual physical co-ordinates on a tangible surface area. Whereas "Conservative" Quantum numbers relate to imaginary figments of the imagination, with complex cross referencing between vague "$\mathbf{m_l}$", "**l**" and "**n**" expressions.

It is reasonable to conclude that the "Conservative" and "SLA" Quantum Numbers are one and the same, because they always hold the same values; and since the "Conservative" Quantum Numbers have no clear insight as to what they represent; then it makes it all that much more plausible that both values are referring to the same set of co-ordinates.

Inexplicable Phenomenons

Justifications & Rationalizations
The time has finally arrived for "SLA" Theoretical Concepts to be tried and tested against challenging phenomeneons of Hybridisation and Magic Number Elements; which have perplexed scientists since their inception.

SP_3 Hybridisation
Hybridisation relates to two distinct energy levels; one "s" orbital and three "p" orbitals which bind together to produce four equivalent hybridized bonds. "Conservative logic" advocates that an "s" orbital would be expected to have a different angle of alignment relative to three equivalent "p" orbitals, which in turn are expected to possess identical angles of alignment relative to each other. There are two contentious issues regarding "sp_3" Hybridisation. The first relates to the fact that there are two resident "s" orbital electrons, before two "p" energy electrons co-share the same shell. So how is it possible that one "s" orbital electron convert's to a "p" energy orbital? The second issue of contention relates to why two distinct "s" & "p" energy subshells suddenly attain equivalent energies, when they are clearly derived from different quantum energy states?

These are valid arguments; however once "SLA" Concepts are applied, it immediately becomes apparent that even though there are two distinct "s" and "p" energy states; differences between them actually relate to the energy required for each electron to penetrate and consolidate their position within a designated shell. And yes! Successive subshells do require increasing amounts of energy, based on the numbers of resident electrons. This is because the energy requirement for electrons to access a shell is proportional to the Coulomb resistance from the sum of the combined resident charges within that space. However once an electron succeeds in infiltrating a particular Dimitrios Ring; then the energy requirement to penetrate the space is distributed evenly amongst each of the resident electrons that share the orbital Dimitrios Ring pathway. This means that orbitals

cohabitating within a common Dimitrios Ring possess identical energies, even though successive orbitals require progressively greater amounts of energy in order to penetrate an increasingly congested space.

Following on from this revelation; it is acknowledged that "p" energy orbitals are perceived as having equivalent energy levels. Yet we have identified one of these "p" energy orbitals as an equal sharing partner of the central Alpha Dimitrios Ring; and since the other two "p" energy orbitals are sole occupiers of adjacent Dimitrios Rings. Then it stands to reason that intensity is distributed equally amongst all existing orbitals; in a process of intensity/pressure equalisation.

It follows; that "s" & "p" energy electrons, and indeed all orbitals cohabitating within a given shell, actually possess equivalent energies. This is not withstanding slight variations due to Coriolis influences which may result in minor variations within orbitals of different latitudes.

The issue of Hybridisation has been resolved; and "s" and "p" orbitals in the Alpha DiR have been shown to be interchangeable (fig 131); so there are no differences between the two energy states.

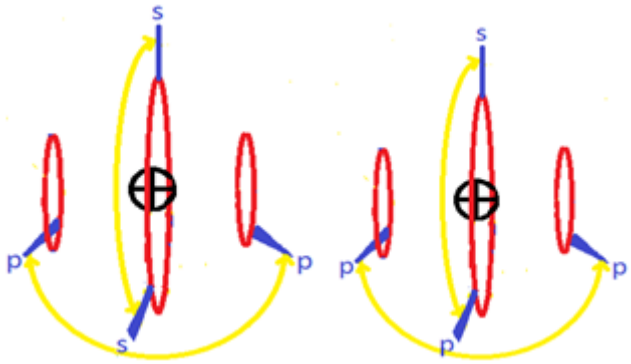


Figure 131

These images show how "s" & "p" orbitals within the Alpha DiR are interchangeable

It is plausible that slight differences may possibly exist between the two pairs of angles; because the orbtials are derived from different Dimitrios Rings?

Stability of Magic Number Elements

Magic Number elements have atomic numbers of 2, 10, 18, 36, 54 & 86. These Magic Number Elements attain greater than expected stability. They are a group of elements classified as Noble gasses: He, Ne, Ar, Kr, Xe, & Rn.

Apart from "He", the rest of these elements do not possess full outer shells, so the level of stability is somewhat unexpected and a little perplexing. Upon closer examination it becomes apparent that all Magic Number elements have completely filled "s" and "p" subshells in their outer most shell, which is described as an **"Octet Rule"**, to exemplify what is perceived to be a complete isolation of the positively charged nucleus by way of an s^2p^6 shielding action; thereby giving rise to elevated levels of stability.

This rule of complete isolation is somewhat irrational; given that; internal shells can contain upto 18 electrons over smaller surface areas; so why would eight electrons, distributed over a much larger surface areas, be of greater significance in regard to isolating a positive charged nucleus?

"SLA" Perspective

From an "SLA" perspective; atoms are not made up of empty space, with minute electrons orbiting at enormous distances from the nucleus. Quite the contrary; electrons exhibit properties associated with electric fields; so from an "SLA" perspective, an atom represents a sphere of electrical activity. It therefore makes it somewhat illogical to define properties associated with atomic structure, without consideration for the active constituent's from which those properties are derived.

Figure 141

Orbital configuration of a Magic Number Element

The significance of the "s^2p^6" outer shell; is that it represents a differential of more than one energy subshell between the 6^{th} and 7^{th} shells; which defines the outer shell as an impenetrable barrier (receptive shell) where electrons come to rest. This is nothing new; for impenetrable layers exist at every junction as receptive shells progress from one layer to the next.

So what makes Magic Number elements stand out from all other elements?

These are neutral atoms; and as such, electrical activity does not extend beyond the last layer of electrons. So if the outer shell is impenetrable, then it implies that orbitals on the outer periphery have no affiliation to the internal positive charged nucleus. It therefore becomes apparent, that it is the position of the next receptive energy subshell, that has no possible means of reactivity with the positive charge of the internal nucleus; and there lies the secret to the stability of the so called Magic Number elements. There is nothing magical about the stability of these elements; and it has nothing to do with eight electrons (Octet rule), but rather with the position of next available receptive energy subshell. So from an analytical standpoint; Magic Number elements not only resist incursions, but actually inhibit interactions that are thrust upon them; because the outer shell acts as a physical barrier which cannot be penetrated. Prospective chemical reactions cannot therefore proceed, because orbitals from external sources have no possible means of interaction with the positively charged nucleus.

The "SLA" Theoretical Concepts take away the Magic component associated with inert Group VIII elements. These elements simply fall within the expected properties associated with the "SLA" Atomic Structure.

Justifiable Proof of "Sla" Theoretical Concepts

The following puts any reservations regarding the validity of the "SLA" Theoretical Concepts to rest on a permanent basis; because the results are so compelling. It turns out; that Stern-Gerlach experimental outcomes, which are totally inconceivable by "Conservative reasoning"; are in total agreement; and actually predicted by "SLA" Theoretical Concepts.

There are two inexplicable outcomes about which "Conservative science" is somewhat perplexed and unable to substantiate. The first, relates to the revelation; that orbitals are shown to possess two precise quantum states; which is inconsistent with the classical model of an electron orbital; and the other correlates to an ability for one spin quantum state to be interchangeable with its opposite spin counterpart. These are both unfathomable contradictions based on current suppositions!

In order to resolve the puzzling phenomenon of two interchangeable quantum spin states; science has introduced an equally inconceivable quantum property, in which measurement becomes an active constituent. Prior to measurement, an electron is perceived as having quantum superpositions of spin up and spin down, both at the same time; whereas the act of measurement compels the electron to assume a definite value, based on one of these spin options.

You would be forgiven if your perception becomes somewhat confused and disoriented; but this is the actual officially accepted reasoning to explain the Stern-Gerlach experimental outcomes Yet surprisingly; both of these phenomenon's are not only in total agreement with "SLA" ideology; but are actually predicted, based on "SLA" Theoretical Concepts.

These Stern-Gerlach experiments are very significant in that they provide justifiable verification that orbital electromagnetic fields abide by "SLA" reasoning, and extend around the entire periphery of an atom. This is in reference to the theoretical concept of Magnetic Polarity and the inauguration of cloud like electromagnetic fields, encompassing the entire perimeter around an atom.

The Stern-Gerlach experiment; emboldens what till now was a hypothetical concept about the embodiment of an atomic orbital. This experiment actually proves the "SLA" Concept of Magnetic Polarity, and the hypotheses of cloud like atomic orbitals; thereby transforming what was a theoretical concept, and bringing it into the realm of actual reality. Furthermore; "SLA" concepts provide consistency, in which atomic orbitals abide by the laws of physics. In other words, for every action there is an associated reaction; which insinuates that there are verifiable justifications behind each observed outcome; and every reaction is derived from a tangible force.

Stern-Gerlach Hydrogen Experiment

The Stern-Gerlach deflection pattern of a Hydrogen atom moving through an inhomogeneous magnetic field, stipulates that there are two distinct and opposite deflections in each of the vertical and horizontal planes, but crucially there are no in-betweens. In other words, there are only two discrete outcomes associated with each orbital alignment. Hence the conclusion of the existence of two quantum orbital spin states!

Each of the many dot points in fig 151, which make up the red outline on the screen represent different degrees of angular deflection; the outcomes of which can only be attributed to the orientation of atomic orbitals, as they move through a perpendicular inhomogeneous magnetic field. In other words, there are only two paths a hydrogen atom can follow which are exact opposites of each other. This denotes the existence of two Fig 151 quantum orbital states, without transitioning Quantum Stern-Gerlach deflection pattern between the two states (fig 151); otherwise one would expect a classical full bodied image to develop.

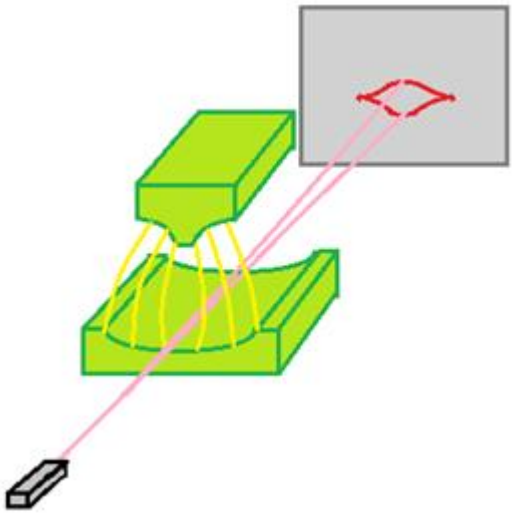


Figure 151

The classical model of an electron orbiting around a nucleus, is always accompanied with alternating dipolar moments of delta positive, and delta negative localised charge, constantly oscillating between

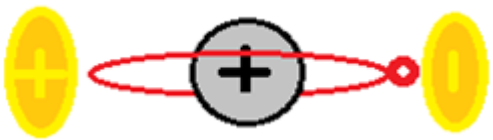


Figure 152 extremes

Illustration of a Delta +ve and Delta –ve localised charge of a Hydrogen atom at an instant in time. Such continual oscillations can only ever produce a classical full bodied image (fig 153), where electrons occupy varying locations along the whole length of an orbital pathway. So it is somewhat unexpected that similar incremental variations do not exist between the two extreme deflections as an atom makes its way through an inhomogeneous magnetic field. The evidence of the Stern-Gerlach experiment does not support this supposition, and therefore represents a

catastrophic failure of the classical model (fig 153) of an atomic orbital; for it is not able to explain two precise quantum spin states!

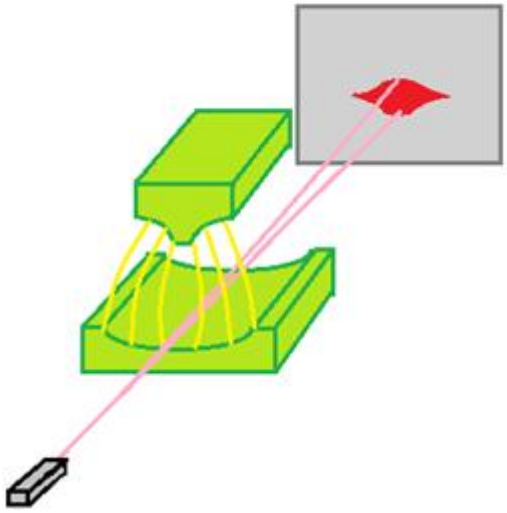


Figure 153

Classical Stern-Gerlach deflection pattern

This outright failure of the classical orbital model is actually a positive endorsement for the "SLA" Concept of Magnetic Polarity, and the supposition of an orbital as a continuous swirling electromagnetic field extending full circle around the perimeter of an orbital pathway.

"SLA" Perspective

The "SLA" hypothesis of Magnetic Polarity accurately resolves a very significant impediment relating to electron orbitals being identified as having only two quantum states. ***The Concept of Magnetic Polarity insures that electrons within orbitals lose their individuality as point sources of charge, and instead take on broad cloud like electromagnetic manifestations, which extend around the entire perimeter of an atom. In other words, the property of a swirling electromagnetic cloud of negative charge; is such, that the exact location of an electron becomes irrelevant for the purpose of this experiment***.

Swirling electromagnetic fields are characterised solely in terms of the direction of their circulating motion. This concept of an electron orbital occupying an entire periphery around an atom; suddenly gives credible meaning to an electron orbital being identified as only having two quantum states; for a simple inversion of an atom translates into Fig 161 two opposite spinning cycles (fig 161); which Two mirror image opposite spin states mirror are images of each other.

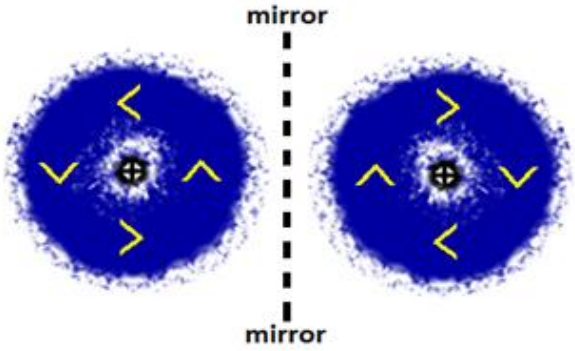


Figure 161

Even though there is only one single orbital pathway in terms of the "SLA" Theory; the symmetry of a three dimensional sphere, implies that a simple inversion represents two entirely different states which are exact opposites of each other.

It may therefore be concluded, that the direction of swirling activity differentiates between the two opposite spin states, both of which are mirror images of each other.

From an analytical perspective; an electron orbital has two distinct idiosyncrasies when it comes to interacting with a perpendicular inhomogeneous magnetic field; and depending on the direction of an electron's spin, an atom becomes deflected in opposite directions. This matches perfectly with the experimental results, where orbitals possess two distinct quantum states. In fact there is only one electron orbital which can be inverted; and it is that inversion that interacts with an inhomogeneous magnetic field to produce two distinct deflections. So it is the interaction by inversions of the same atomic orbital that are perceived as having two quantum states.

Each of the two quantum orbital alignment's responds differently, relative to the two perpendicular planes of a perpendicular inhomogeneous Magnetic Field. In other words, the two quantum orbital alignments are deflected in opposite directions; relative to both the vertical and horizontal planes of a perpendicular inhomogeneous magnetic field.

This implies that there are two distinct properties associated with an inhomogeneous magnetic field! One associated with the vertical North-South alignment of the Magnetic Field, and the other associated with the horizontal plane of the Magnetic Field. In other words; each of the opposing swirling atomic orbital Electromagnetic fields become deflected in opposite directions, based on the orientation of the atomic orbital relative to both perpendicular planes of an inhomogeneous Magnetic Field.

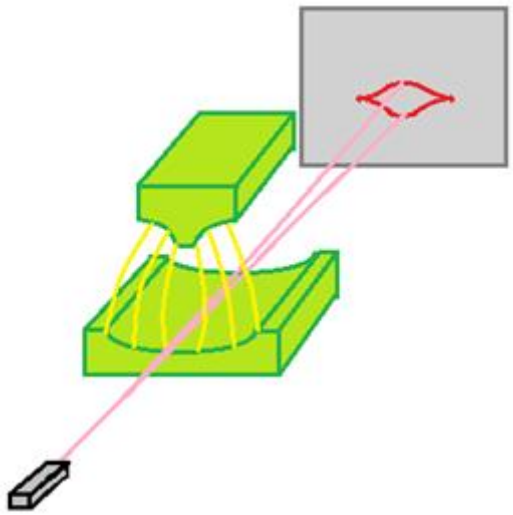


Figure 162

Stern-Gerlach Hydrogen experiment

These deflections insinuate that there are only four different variations at how atomic orbitals interact with an inhomogeneous magnetic field. So the resulting deflections by Hydrogen atoms entail different proportions of those outcomes. This is in perfect agreement with the Stern-Gerlach experimental results; in which interaction takes place between two quanta orbital spin states of a Hydrogen atom, and the two distinct planes of an inhomogeneous magnetic field, to produce deflections along four vertices representing different proportions of each alignment.

The accuracy of "SLA" depictions are truly remarkable in terms of depicting the Stern-Gerlach quantum states of a Hydrogen atom. However affirmations do not stop there! Each Stern-Gerlach experiment outcome is in total agreement with "SLA" Theoretical Concepts.

Stern-Gerlach Silver Experiment

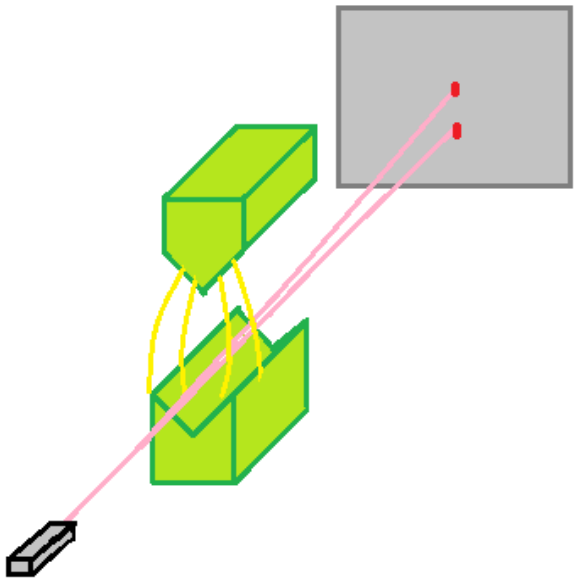


Figure 171
Silver Stern-Gerlach experiment deflections

Let us now utilise these "SLA" Concepts, in order to investigate another Stern-Gerlach experiment entailing Silver atoms. Once again the deflections abide by the same principles as in the Hydrogen example, where inverted atomic orbitals are deflected in opposite directions. The notable absentee in this Silver atom experiment, is that there are no horizontal deflections perpendicular to the plane of the magnetic field. This seems to suggest that the inhomogeneous magnetic field enacts a force which compels "Ag" atomic orbitals to become aligned with or against the plane of the magnetic field.

This unique trait adds a further dimension of conformity to the "SLA" Theoretical Concepts! When a spin filter is utilised to isolate one of the diverted streams of single spin atoms, and the remaining stream of single spin atomic orbitals is directed through a series of aligned inhomogeneous magnetic fields; the ongoing stream of single spin Silver atoms remain unchanged and continue being deflected in the same direction, based on their single spin status. Both the "SLA" and "Conservative" logic are in agreement with this part of the experiment.

However a variation of this experiment; incorporates a second inhomogeneous magnetic field being rotated to a perpendicular plane relative to the first inhomogeneous magnetic field. It is found that the initial stream of single spin atoms, suddenly switch to twin opposing deflections which are in a perpendicular plane to the first deflections. This result is once again indicative of two opposing spins states, which is essentially a repetition of the initial results; except that these deflections are in a perpendicular plane to the original deflections (fig 172).

The second stage of the experiment is somewhat surprising; but not beyond the realm of possibilities, with regard to both "Conservative" and "SLA" perceptions; as there is alot of uncertainty about why atoms become deflected in the first place. So it may be argued that opposite spins have some unknown affiliation to specific alignments, and that a change of alignment somehow extricates a new series of opposing spins, based on a perpendicular plane.

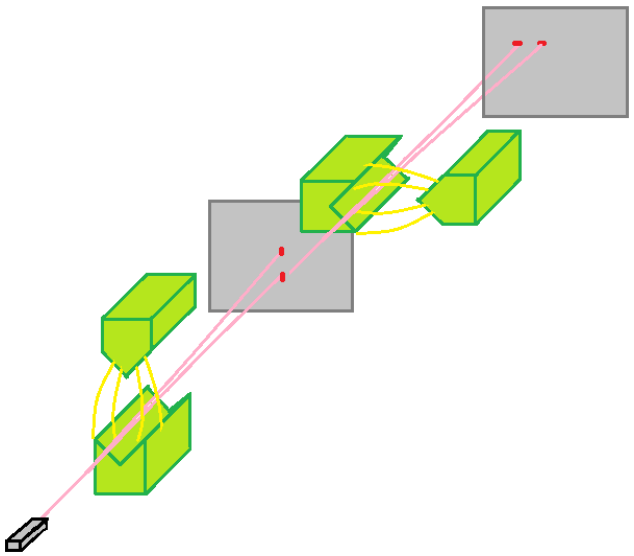


Figure 172

Stern-Gerlach Silver atom experiment, incorporating a spin filter and a second perpendicular inhomogeneous magnetic field

Until now both concepts are equally feasible; because even though the spins have been deflected in opposite direction in the second part of this experiment; the deflections are in different planes, so there is some uncertainty regarding how spins respond to perpendicular planes of an inhomogeneous magnetic field?

The next stage of the experiment takes away any uncertainty, and shatters the collaboration that may have existed between "Conservative logic" and "SLA" Theoretical Concepts; because after a sequence of two consecutive perpendicular deflections (fig 173), the experimental results conclude that some of the original single spin atomic orbitals have totally reversed their spin orientations, as exact opposites of the original spin from which they originated. This conclusion is based on the fact that the first and last inhomogeneous magnetic field alignments are identical; so if all atoms have identical spins in the first instance, then they should not undergo opposing deflections in the final part of the experiment, because the third part of the experiment is an exact replication of the first experiment (fig 173). So how is it possible, for one spin to be transformed to an opposing spin? This is inconceivable in terms of "Conservative reasoning", which portrays opposing spins in terms of magnetic quantum states of plus or minus 1/2; as they are intrinsic opposite spin states, and therefore not interchangeable! So it is inconceivable based on "Conservative logic", for an initial stream of single spin atomic orbitals to suddenly revert to their opposite spin counterparts. Yet this is exactly what takes place!

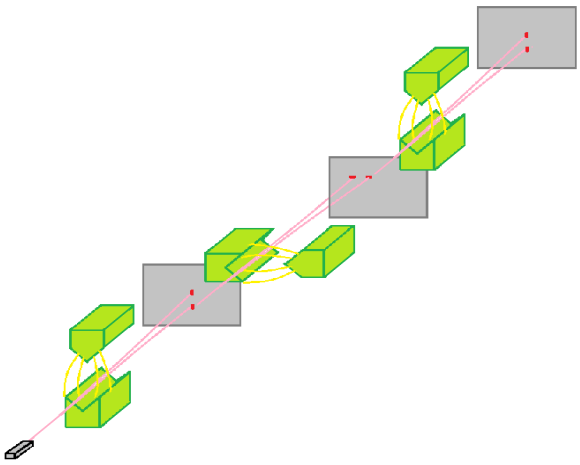


Figure 173

Silver atoms undergoing deflections via a series of perpendicular inhomogeneous Magnetic Fields

"SLA" Perspective: Interchangeable Spin Quantum States

Let us now evaluate this inconceivable experimental outcome, from the perspective of "SLA" principles.

Each of the two quanta (inverted) orbital spin states, responds differently relative to the two perpendicular planes of a perpendicular inhomogeneous Magnetic Field. In other words, the two inverted orbital orientations are deflected in opposite directions, relative to both the vertical and horizontal planes of a perpendicular inhomogeneous magnetic field. Silver atoms experience deflections along a single plane (fig 181), which implies that they are in some way coerced or compelled to align their orientations along the plane of an inhomogeneous magnetic field. Exactly why this realignment takes place is somewhat uncertain; Fig 181

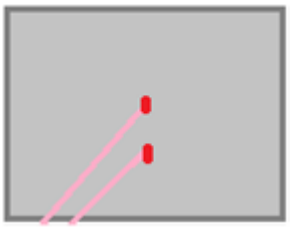


Figure 181

However reasonings shall be deferred to latter investigations into Stern-Gerlach Silver experiment Magnetic Fields . At this moment we are solely concerned with justifying opposing deflections based on"SLA" interpretations of orbital spin, without having to demonstrate reasoning based on impending "SLA" investigations into Magnetic Fields.

Symmetry in a deflection patterns is indicative that there are no preferences of one orientation over the other. In other words, there is an equal probability for each of the opposite spins being deflected based on the orientation of atomic orbitals.

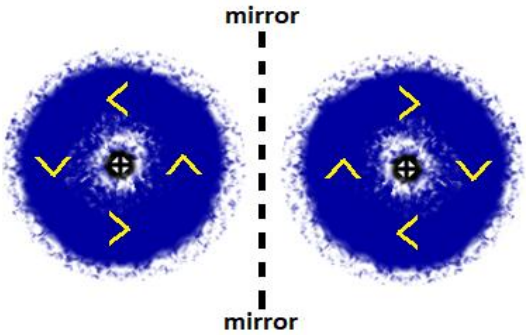


Figure 182

Two atoms of opposite spin; mirror images of each other

Symmetry in a deflection patterns is indicative that there are no preferences of one orientation over the other. In other words, there is an equal probability for each of the opposite spins being deflected based on the orientation of atomic orbitals.

When a stream of Silver atoms moves perpendicularly through an inhomogeneous magnetic field; opposing spins become deflected in opposite directions, in the plane of the inhomogeneous magnetic field. As part of the second part of this experiment; one of the single spins is blocked, while the other stream of single spin atoms is directed through a second perpendicular inhomogeneous magnetic field. Orbitals once again switch to a second series of opposing deflections, at a perpendicular plane to the first series of

deflections. This outcome is once again indicative of two opposite spin quantum states (fig 173).

It becomes apparent that the second perpendicular inhomogeneous magnetic field; induces the orientation of the atomic orbital's to undergo perpendicular realignments; in line with North-South plane of the inhomogeneous magnetic field. The significance of a perpendicular realignment; is that there is an equal probability in terms of which way an atomic orbital is rotated in order to attain the desired realignment, even though deflections are derived from a stream of single spin atoms.

The illustrations in fig 183 & 185 clearly indicate how a simple transition to the left or to the right (fig 183 & 185), starting from a single (fig 184) spin state, culminates in two opposite spin outcomes; which is exactly what takes place in the second part of the Stern-Gerhard (fig 173).

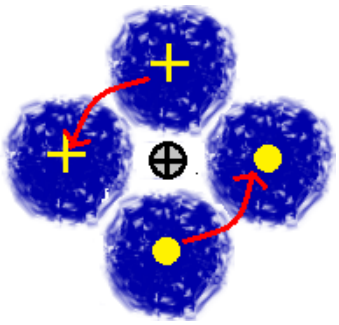


Figure 183

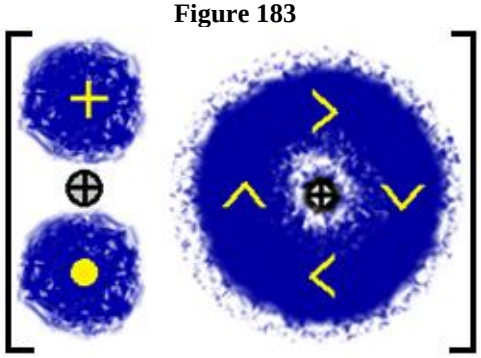


Figure 184

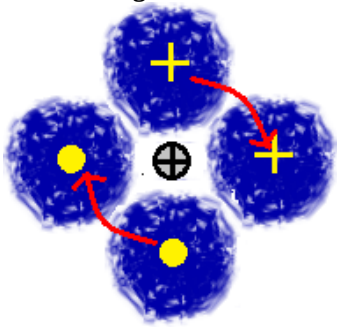


Figure 185

A single spin atomic orbital A side-on and head on view A single spin atomic orbital with a transition to the left of a single spin atomic orbital with a transition to the right

If we take a head-on cross-sectional view of an orbital spin cycle, and represent the inbound phase as a cross, and the outbound phase as a dot (fig 184); then it becomes apparent that a quarter turn to the left or to the right, results in orbital's having opposite spins relative to each other [fig 183 & 185]. This is what takes place when a stream of single spin atomic orbital's undergo perpendicular realignments relative to the plane of an impending inhomogeneous magnetic field.

Orbital re-alignments can go in either direction based on equal probability; however the two outcomes are exact opposites in terms of their spin orientations.

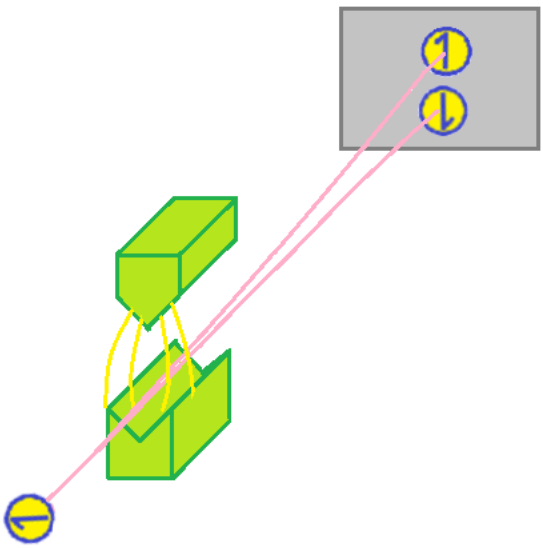


Figure 186

A Silver single spin orbital orientation, perpendicular to an impending inhomogeneous Magnetic Field, undergoes two quarter turn rotations to end up with two opposite spin states

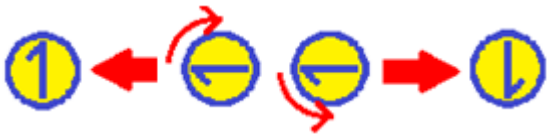


Figure 187

A horizontal single spin with two equidistant outcomes of rotations which are exact opposites in terms of their spin orientations

This implies that atomic orbital spins are interchangeable based on whether a transition to the left or right takes place.

In accordance to the "SLA" Concept of Orbital Configuration, each time the orientation of an atomic orbital finds itself at a perpendicular orientation relative to the North-South plane of an impending inhomogeneous Magnetic Field, then there is equal probability of opposite spins outcomes; whether or not the original source of atoms are made up of one spin or both spins. In other words; each time "Ag" atomic orbitals are induced into a perpendicular realignment, then both spin options have equal probability; and it is this principle that makes it perfectly natural and predictable for atoms of one spin to switch over to an opposite spin. This is in total agreement with the observed outcomes of the Stern-Gerlach rotating alignment experimental results..

The accuracy of these predicted outcomes actually substantiate two fundamental "SLA" suppositions; namely Magnetic Polarity and the ability for an orbital electromagnetic field to extend around the perimeter of an atom; while at the same time justifying the quantum spin states as being simple mirror image inversions of the same orbital cycle. This is a huge breakthrough of enormous proportions that gives credibility to the entire group of "SLA" Concepts pertaining to Atomic Structure.

The "SLA" logic applies equally well to the next of a series of Stern-Gerlach experimental outcomes. This following experiment incorporates an adjustable rotating facility which attains a gradual re-alignment of a pending inhomogeneous magnetic field mid way through an experiment.

Stern-Gerlach Rotating Aligment Silver Experiment

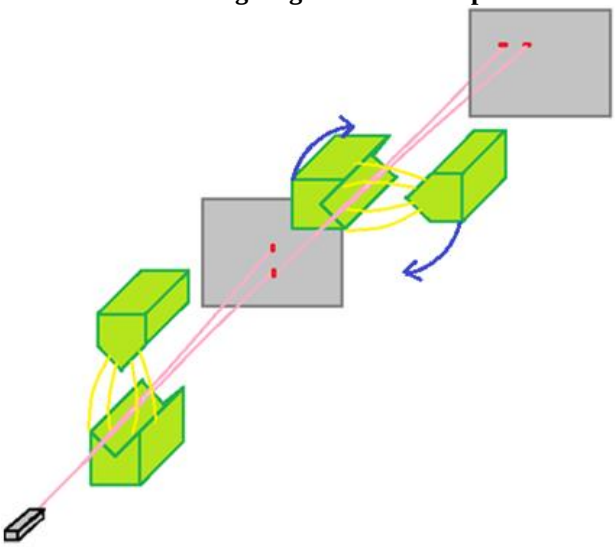


Figure 191
Rotating second half of the Stern-Gerlach experiment

The rotating Stern-Gerlach experiment once again engages a spin filter in order to eliminate one of the Stern-Gerlach single spin deflections; thereby permitting a 50% proportion of the original stream of (single spin) electrons to move through to a second inhomogeneous magnetic field! As the orientation of a second inhomogeneous magnetic field is slowly rotated from 0^o to 90^o degrees relative to the first; then increasing numbers of the 50% portion of single spin electrons gradually change their orientations to that of an opposite spin state; but in the same plane as the second inhomogeneous magnetic field. At an angle of 90^o, a maximum of half the original deflected stream of single spin electrons have reversed their spins. As the orientation of the second inhomogeneous magnetic field rotates even further, past the 90^o angle; the portion of opposite spin electrons gradually decreases until they are totally eliminated at an angle of 180^o; which is an exact reversal in the alignment relative to the first inhomogeneous magnetic field.

Basically it means that the portions of electrons changing their spins are totally dependent upon the angle of an inhomogeneous magnetic field, relative to the orientation of an electron. It is consistent with the "SLA" perspective, where the comparative angles of rotations determine the probability of one spin over its opposite counterpart. In other words; the probability of one spin increases, as the probability of a reverse spin decreases; where the smallest angle represents the greatest probability. At 90^o, the angle represents a mid way point which is equidistant to both spin outcomes, resulting in a 50% transition to an opposite spin status. Angles of rotation greater than 90^o gradually decrease the transition to an opposite spin; from a high of 50%, down to a minimum of 0% at an angle of 180^o.

Current Perceptions

In order to resolve the two interchangeable quantum spin up and down states; science has introduced an equally inconceivable quantum mechanical property, in which measurement becomes an active constituent. Prior to measurement, an electron is perceived as having quantum superpositions of spin up and spin down, both at the same time; whereas the act of measurement compels that particle to assume a definite value, based on one of these spin options.

You would be forgiven if your perception becomes somewhat confused and disoriented; but this is the actual officially accepted reasoning to explain the Stern-Gerlach experimental outcomes.
Quantum mechanics; incorporates "super positions" and "quantum entanglement" of spin up or spin down states; in order to explain the inexplicable Stern-Gerlach experimental outcomes. These are highly controversial states, because they are both based on hypothetical concepts that are far beyond the realm of actual reality. They are concepts that rely on mystical properties, where quantum objects have an ability to communicate, or do not assume a definite value; and that the act of measurement compels a particle to take a definite identity.

The Stern-Gerlach experimental outcomes are only inconceivable from the current scientific perspective; whereas the "SLA" perspective cannot be more accurate; in that it is not only in total agreement with these findings, but actually predicts all of the Stern-Gerlach experimental outcomes, based on real and actual interaction between tangible entities.

As a matter of fact; the Stern-Gerlach rotating experiment rebuffs such an assertion of quantum states; because the rotating Stern-Gerlach experiment shows that spin outcomes are directly related to the relative alignments, between two rotating inhomogeneous magnetic fields. In other words; the probability of a particular spin outcome varies in accordance to the comparative angle between two inhomogeneous magnetic fields. This implies that it is not a haphazard determination between two uncontrolled quantum states; but rather; a mathematical evaluation, where one outcome has a greater or lesser probability as compared to the other outcome. In other words; the assertion of unpredictable quantum states is not relevant in this example, because the outcomes are totally dependent upon physical properties within the experimental apparatus. It may therefore be concluded that observed measurements have no role in determining this particular outcome; and if measurement does not influence this outcome; then it is not likely to

influence any other Stern-Gerlach experimental outcome; because they are all based on similar assumptions.

The "SLA" Theoretical Concepts are remarkably accurate in their depiction of Stern-Gerlach experimental results; and it is truly astonishing in the way they not only replicate the outcomes; but actually predict each and every outcome based on "SLA" principles.

Coordination of Orbitals Surrounding the Nucleus

Following on from earlier references to Orbital shapes! If one looks at dissecting a spherical volume into equal portions based on charges being equidistant around the perimeter of a sphere; it soon becomes apparent that cone shaped portions is the most efficient division of equal sized segments, no matter how many divisions are required (fig 201).

Figure 201

Visual interpretation of equal sized portions of a spherical environment, where the electromagnetic fields of individual electrons are competing for space.

Individual electron orbitals congregating within a common shell need to conform to the spherical volume of that shell. This is based on the premise that electrons occupy equal sized portions within a given volume of space; and that shells are always spherical.

The "SLA" Concept of atomic orbitals is founded on cloud like electromagnetic fields. In other words; orbital electromagnetic fields are identified as physical entities which abide by the laws of physics. This essentially means that orbital lobes have tangible properties, and therefore conform to the physical outline of a spherical shell.

Figure 202

Depiction of a "p" energy atomic orbital

The "SLA" perception is that electrons within orbitals are not perceived as point sources, but rather as cloud like formations which can be represented in a three dimensional format; incorporating both volume and border parameters. Magnetic Polarity is derived from the motion of an electric field, so it is this property which gives rise to the shape of an atomic orbital.

The "SLA" interpretation of Magnetic Polarity enables the movement of such cloud like formations, to be perceived as well defined three dimensional wavefronts, and it is these images that are responsible for the orbital shapes (fig 202).

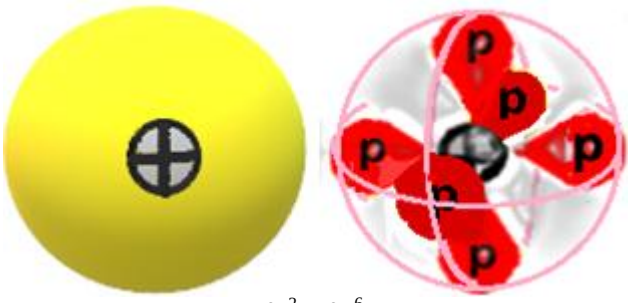
In terms of the "SLA" Theory, an electron is located within the mid-region of an orbital lobe, which essentially represents a cross sectional view of a circulating electromagnetic cloud. ***The outline of the lobe represents the outer perimeter of the cloud, so it maps out a broad area as it moves along within its orbital pathway.***

Electromagnetic fields exhibit similar properties to that of a gas, in being able take on the shape of any container, and for this reason, orbitals can generate any shape as they conform to the environment in which they exist.

This implies that an "s" orbital electromagnetic field expands to encompass the entire spherical perimeter surrounding a nucleus. The shapes of "s" orbitals are consistent with both "Conservative" and "SLA" perspectives (fig 203). However the inclusion of three "2p" energy orbitals brings about the first discrepancy between the two perceptions.

The subsequent subgroup of electrons to enter and share the same shell, integrates a series of three additional "p" energy orbitals, which when taken in context of the "SLA" orbital configuration, places them in the same vicinity as the initial spherical shaped "s" orbital. This suggests that the "s" and "p" orbitals somehow overlap and share the same volume of space.

In accordance to "Conservative reasoning"; the depiction of one "s" and three "p" orbitals are as follows (fig 204).



"$2s^2$" "$2p^6$"

Figure 203 and Figure 204

"Conservative science's interpretation of "2s" orbital and three "2p" energy orbitals

There is no known association between "Conservative" "2s" and "2p" energy subshells; so it is presumed that one is somehow super imposed upon the other, without any clear insight about how the two interrelate? So what happens to the spherical "s" orbital once successive energy subshells co-share the same space? There is no determination on this matter, because successive energy subshells have no known way of conforming to each other's presence; they simply co-exist. In other words; "Conservative science" perceives orbitals crisscrossing in all directions, so it is difficult to envisage what sort of physical interaction is taking place.

The "SLA" perspective is somewhat different, because it perceives individual electric fields as occupying set volumes

of space. The "s" orbital is always spherical, because it is a sole resident which expands to occupy the entire spherical volume. The three "p" energy orbitals run parallel to the "s" orbital, and annex proportional percentages of the original spherical "s" orbital electromagnetic field; and in so doing, restrict the original "s" orbital electrons along with the three "p" energy orbitals into equal sized portions of the initial spherical volume (fig 205). This implies that successive orbitals congregate together in order to share a common ground.

The "SLA" representation starts with an identical depiction of a "2s" orbital (fig 203); however the inclusion of three "p" energy orbitals changes the configuration into an arrangement that appears similar, but is distinctly different. The depiction of an "SLA" "$2s^2p^6$" orbital configuration (fig 205) appears identical to the "Conservative" "$2p^6$" configuration (fig 203), except for one very significant difference! One of the pairs of lobes is classified as being an "s" energy orbital (fig 205), rather than the presumed "p" energy orbital lobes of "Conservative reasoning".

"$2s^2$" "$2s^22p^6$
Beta Alpha Beta
"$2s^2$"(yellow) &"$2p^6$"(red) energy subshells

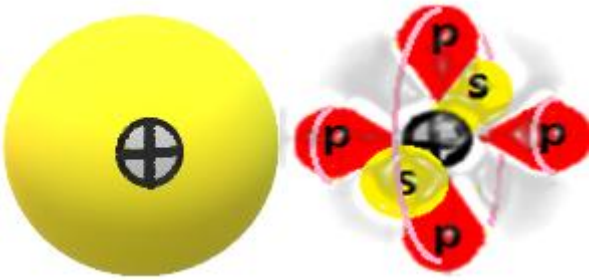


Figure 203 and Figure 205

An "SLA" interpretation of a "$2s^2$" orbital on its own in Fig 074; followed by a combination of a yellow "$2s^2$" orbital & red "$2p^6$" energy orbitals within three distinct Dimitrios Rings in Fig 075.

All four "SLA" orbital lobes occupy positions in three perpendicular X, Y, & Z planes (fig 075); which are puzzlingly similar to the shape and alignments of "Conservative" orbital lobes. It is strangely peculiar that the two sources of orbital shapes are so similar, when they are derived from totally different conceptual means.

From an "SLA" perspective; it is evident that "2p" energy orbitals cannot exist in isolation; without the inclusion of resident "2s" energy electrons. So the "SLA" interpretation is inclusive of all orbitals within a given shell.

In accordance to the "SLA" perspective; orbital lobes depict the motion of electrons moving into, and out from the plane of the page; without being able to distinguish between the opposing motions. In other words; the orbital lobes depict motions heading toward or away from the viewer; without differentiating which direction. Whereas "Conservative science" percieves the lobes as preferred directions of angular momentum; but with huge reservations regarding what the lobes represent.

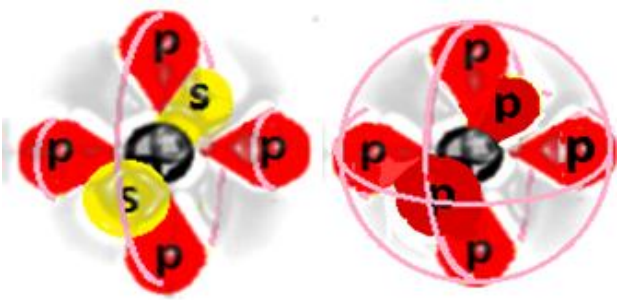


Figure 204 and Figure 205

"Conservative" "p^6" orbitals

The "SLA" interpretation, stipulates that all atomic orbitals rotate in parallel alignments. This implies that the yellow pair of Alpha Dimitrios Ring orbital lobes (fig 205) represent opposite spin "s" energy electrons; while the other perpendicular red lobes in the same Alpha Dimimitrios Ring (fig 205) represent a pair of opposite spin "p" energy electrons. In other words; there are alternating pairs of yellow $2s^2$ & red $2p^2$ energy electrons following each other in the

Fig 205 same Dimitrios Ring. Meanwhile; the left and right lobes represent "SLA" "s^2p^6" orbitals individual orbital Dimitrios Rings positioned on either of the two flanks. Each of these outlying orbitals host a pair of opposite spin "2p" energy electrons within a single lobe; with opposite spin electrons orbiting in such tight formation, so the two lobes overlap into a single blended image!

The left and right lobes may at first seem somewhat inconsistent; however it becomes clearer as more information comes to hand! Basically; ***the "SLA" Concept incorporates odd numbers of Dimitrios Ring orbital of pathways in parallel formation; where the first orbital in each shell; and each of two outlying orbitals in successive energy subshells appear very different to all other orbitals. This is because opposite spin electrons are overlapping, and circulating within the same volume of space. All other orbitals exhibit discrete opposite spin lobes in either hemisphere of an orbital rotation; for reasons there is clear and identifiable separation between opposite spin motions.*** When there is continuity between backward and forward motions, to the extent where the opposite cycles are not discernible; then two opposing electromagnetic spin cycles blend into a single image. Essentially the outlying lobes are no different to "s" orbitals; in that they represent different proportions of forward and backward motions merging into a single blended image.

This means that each of the outlying "p" energy orbital lobes, retain a pair of opposite spin electrons within a single lobe image; whereas each of the yellow and red lobes within the central Alpha Dimitrios Ring, contain individual 2s & 2p opposite spin electrons within a single orbital pathway.

It may therefore be concluded, that tear drop shaped lobes represent boundaries of individual cloud like electromagnetic fields, which are competing for equal portions of a spherical volume, as electrons orbit around the perimeter of an atom. Each of the orbital

electromagnetic fields is expanding independently until they reach the perimeter of neighbouring orbitals within the same shell. So lobe shaped electromagnetic fields represent the most efficient division of a three dimensional spherical volume; where individual electromagnetic fields compete for space, and are restricted by each other's expansion.

While issues relating to orbital shapes are nearing resolution; there one more confliction regarding orbital shapes that needs to be addressed. Lobe shaped orbitals work well for shells with direct connections to the nucleus (fig 206); however as shells become more distant from a nucleus, based on an accumulation of successive layers; tear drop shaped lobes are not compatible with the parameters of individual layers! In other words; lobe shapes do not conform to the confines of individual do-nut shaped shells (fig 207). This essentially means that lobe shaped divisions need to extend all the way to the nucleus (fig 206); otherwise gaps arise between lobes; or orbitals cease to be identified as having lobe shapes (fig 207).

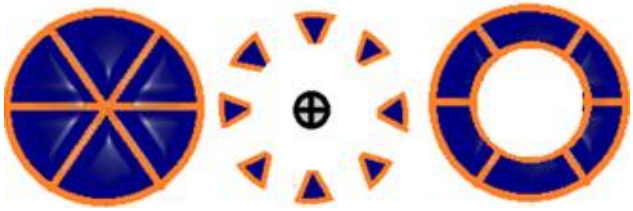


Figure 206 and Figure 207

Lobe shaped orbitals extending through to Gaps between lobes, or orbitals cease being identified the core of an atom as having lobe shapes

Whilst the basic principles relating to orbital shapes are quite straightforward in terms of geometric composition; practical adaptability is much more challenging, in terms of having to synthesis a multilateral orbital structure, incorporating successive shells. The endeavour is not necessarily to provide absolute proof of a multilateral interrelationship; but simply to establish a credible portrayal that conforms to the existing "SLA" atomic model.

The only viable solution; is that orbitals in successive shells somehow incorporate segments of previous shells in order conform to the distinct lobe shapes (fig 208); for it is difficult to envisage how atomic orbitals distinguish between internal and external shells when there is continuity between shells. For this reason; it is assumed that orbital images include contributions from internal orbitals; thereby providing consistency between shells, in terms of orbital shapes.

In other words, if it is assumed that orbitals permeate through multi-layers of an electromagnetosphere, in order to maintain direct links to the internal nucleus. Then orbitals from successive shells are likely to align their orientations so as to envelop orbitals within underlying shells. This upholds a consistency in the shape of orbitals between successive shells, so that each shell adds a new layer to an existing lobe (fig 208).

Figure 208

Successive orbital lobes enveloping underlying lobes to produce a single image

Atomic Bonding

This investigation examines identifiable links between "SLA" atomic orbital structural configurations and atomic bonding, in order to examine how and why atoms establish bonds in the process of forming molecules. Bonds are generally depicted in two distinct forms. One form perceives bonds as symmetrical linear shaped orbitals that extend between two nuclei. These bonds are generally utilised to depict double and triple bonds (fig 212). The other option incorporates two contrasting orbital lobes positioned on opposite sides of a parent atom, in order to establish single covalent bonds between adjoining atoms (fig 211).

Figure 211

Figure 212

Lobe shaped sigma bond Linear sigma bond as part of a double bond

From the outset, these two very distinct characterizations present the researcher with a challenging conundrum in trying to understand how and why such differences exist. At first glance these profound differences seem implausible and somewhat contradictory. But in reality they represent a momentous breakthrough of enormous significance, in that they actually substantiate the parallel nature of atomic orbitals. This is because each of these two variations seems to associate the shapes of their bonds, with the relative orientations of atomic orbitals between conjoined atoms. One having head-on and the other side-on orbital affiliations between bonding atoms.

Characteristics of Dimitrios Rings

The "SLA" structural model resembles an assembly of varying sized donut shaped electromagnetic fields (Dimitrios Rings), positioned side by side along a plane which is perpendicular to the alignment in which orbitals rotate (fig

223). The parallel nature of atomic orbitals creates two very distinct schematic representations; one of which offers a view of parallel disk shaped orbital pathways positioned side to side (fig 223); while the other perspective exposes a range of concentric circular orbital pathways of varying dimensions, fitting snugly inside each other (fig 221).

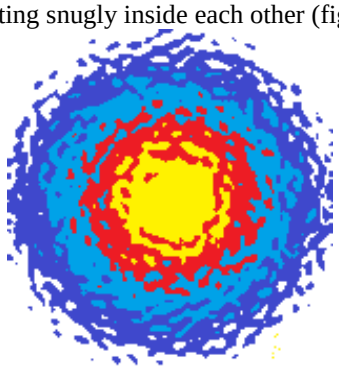


Figure 221

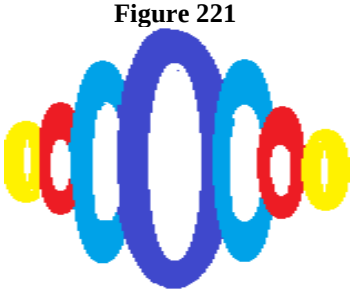


Figure 222

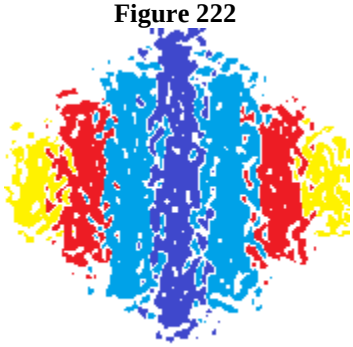


Figure 223

Side view Frontal view Head-on view
Side-on view revealing colour coded Revealing both side-on and Head-on view of Dimitrios Rings do-nut shaped Dimitrios Rings head-on characteristics in the plane of the orbiting motion

These vastly different physiognomies create a conundrum; whereby specific alignments are conducive to two vastly different bonding opportunities:

Side-On and Head-On

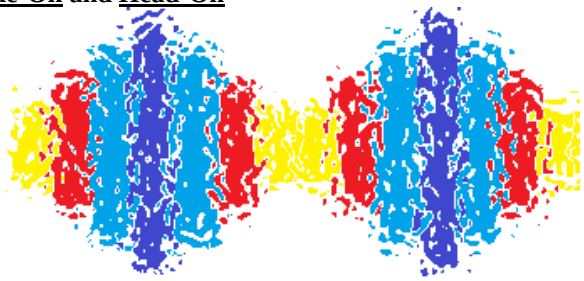


Figure 224

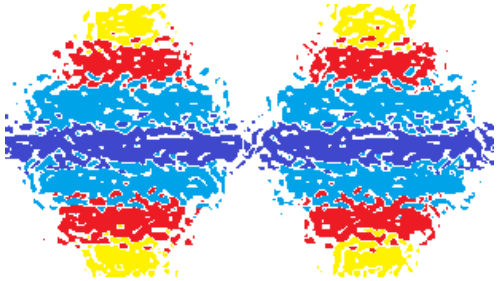


Figure 225

S**ide-on** Dimitrios Rings H**ead-on** Dimitrios Ring

The two physiomitries are so dissimilar, that each exhibits vastly differing properties when establishing bonds. These differences are so prominent and incompatible; that they require separate independent investigations, in an effort to distinguish how different bonds form.

Head-On Bonding

The first of these contrasting orientations is characterised by orbitals having head-on alignments, where the plane of atomic orbitals run parallel to an impending bond, and as such facilitate head-on bonding opportunities.

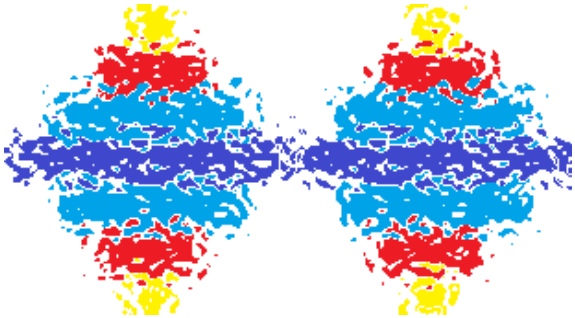


Figure 231

Alignment of two sets of atomic orbitals with a head-on alignment

Let us focus on possible transmutations as orbitals come within range of each other's influences. For the sake of argument, we shall portray bonding as being between Alpha DiR "p" energy orbitals, because they protrude the farthest. Unattached Alpha DiR "p" energy orbitals maintain evenly balanced symmetrical distributions, the likes of which can be clearly portrayed in the illustrations of fig 232 & 233.

Figure 232

Figure 233

A cross-section in the plane of the orbital motion. A cross section view which is perpendicular to the Side on view which is perpendicular to the central plane of the orbital motion; representing a vertical view Alpha orbital. looking down in the same plane as the orbital motion.

When two nuclei come within range to establish a head-on covalent bond; the normally symmetrical orbital (fig 234), suddenly takes on a lopsided elliptical orbital pathway with huge distributional disparities, that reflect the proximity of the competing nuclei (fig 235). Each electron maintains its orbit around its parent atom; however the close proximity of a neighbouring positive charge attracts the orbiting electron, causing its orbit and associated electromagnetic field to become distorted in the direction of the second nucleus.

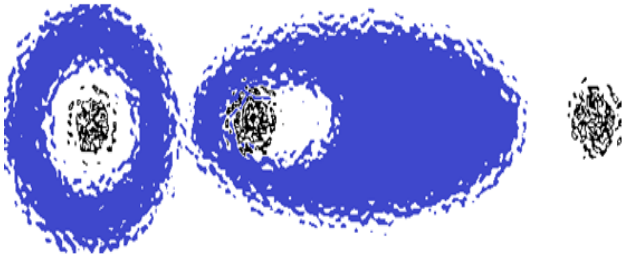


Figure 234 and Figure 235

Side view which is perpendicular to Side view of a distorted bonding orbital, which is the plane of a normally symmetric perpendicular to the plane of the orbital motion atomic orbital

Figure 236

Top view looking down on the same orbital depicted in fig 235

Electric fields are highly flexible and very responsive to regional changes in their immediate environments. Such is the case within the mid-region between two nuclei; the negatively charged electromagnetic field undergoes expansion, which substantially enlarges the volume of the tear shaped lobe (fig 236). While in the other extreme, furthest away from the direct link which binds the atoms together; the tear drop shaped lobe contracts and shrinks to a fraction of its former size (fig 236). Orbiting electron alternates between contrasting extremes, always expanding and contracting as part of the orbital cycle..

It becomes apparent, that such contrasting environments develop a very asymmetrical shaped bonding orbital which is heavily lop-sided in the direction of the shared space. A covalent bond incorporates two such elliptical orbits from opposite sides which overlap in the middle ground between two bonding atoms.

Side-On Bonding

The second of the two incongruent orientations, is characterised as orbitals having perpendicular alignments to an impending bond (fig 241). This is a side-on interrelationship which positions concentric circular shaped orbitals (DiRs), so that they face each other in side-on lateral arrangements.

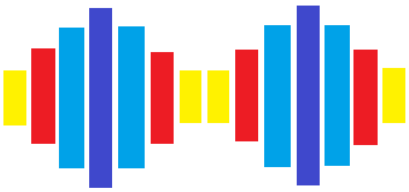


Figure 241

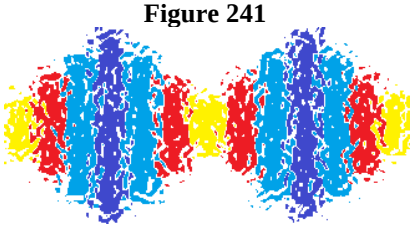


Figure 242

Two atoms with their Dimitrios Rings aligned Two atoms bonded together, where the bonding perpendicularly to an impending bond pair of electron share a common Dimitrios Ring. This side-on sharing arrangement is vastly different to the previous head-on interrelationship. Single unpaired electrons from opposing atoms pair up by conjoining together within a common Dimitrios Ring. This is another interpretation of opposite spin electrons (fig 244); in they exist on opposite sides of the same orbital pathway.

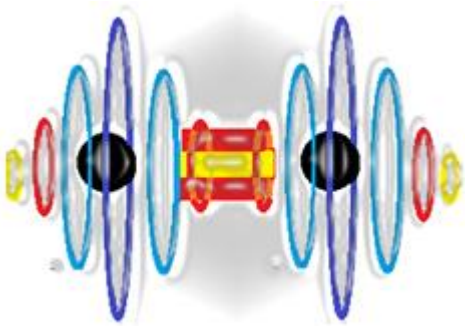


Figure 243

Figure 244

Side-on interactions enable bonding electrons to spend their entire time within the mid region between two nuclei, while maintaining their normal orbital motions (fig 244). These

linear Sigma bonds seem to reflect the nature of having two opposing forces from competing nuclei tugging from opposite sides. It could explain the transformation from tear shaped lobes, to narrow linear molecular bonds which remain attached to both adjacent nuclei (fig 244). Fig 244
Linear double bond.

It is of significant interest to note that in such linear bonds; all the bonding activity is derived from a single hemisphere of an atom, and bonding electrons always maintain a constant position in the middle ground between the two nuclei.

The end result is that rotating electromagnetic fields maintain unvarying elongated shapes throughout the whole cycle of their orbiting motion; given that regional forces are consistently the same in any position of an electrons cycle.

Quadruple Bonding

Let us test the apllicablility of "SLA" Concepts on a quadruple bond molecule. "Conservative" interpretations of a quadruple bond; incorporate the establishment of a Sigma bond derived from two spherical "s" orbitals, and two perpendicular "p" orbital lobes (fig 251) in the Z and X axis, which bend across to establish a pair of "Pi" bonds; while the third "p" energy orbital becomes inverted in order to form a fourth bond that goes around the outer perimeter. An example of a molecule with four bonds is a rare Carbon to Carbon quadruple bond.

The difficulty with this model is that it is very vague, and lacks clarity! Orbitals are symbolised as static directional extensions with no clear insight about what is being represented. There is no information regarding interrelationships before and after the bond (fig 251).

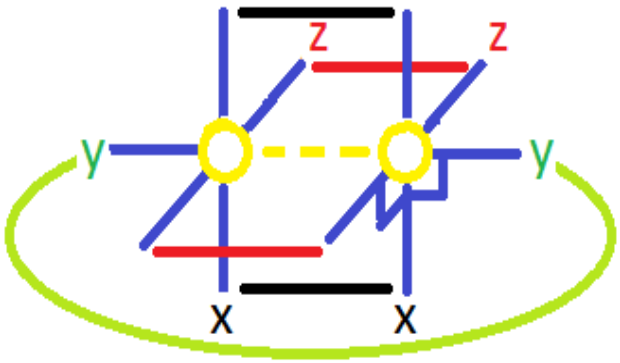


Figure 251
----- "Sigma bond ----- "Pi bond -----Zed bond ----- Inverted bond
"Conservative" interpretation of a quadruple bonded molecule

There are major inconsistencies in this model! For instance; how does a supposed circular "s" orbital sideline one of the established "p" orbitals in the "y" axis; which in accordance to "Conservative logic", is already in that alignment, in the same plane as the sigma bond; just prior to the circular "s" orbitals linking together. Then the opposite sides of the "x" and "z" co-ordinate "p" energy subgroups become attached to form two perpendicular "Pi" and "Z" bonds. Yet one side of the "y" co-ordinate is totally disregarded, even though it starts off with identical properties as the other two "p" orbitals. In its place, the "s" energy orbital is triumphant in forming a bond for no logical reason. There are many inconsistencies with this model; least of all concerning the ability for the "x" & "z" co-ordinate "p" energy orbitals to bend and form bonds which are perpendicular to the direction in which they are aligned; yet the closer "y" coordinate is totally disregarded, in favour of an inverted bond which is directed away from each other. All of these inconsistencies are addressed with near perfect reasoning, by simply incorporating concepts associated with the "Stratos Lafcharis Aristomenis" Orbital Configuration.

Distinct characteristics of the "SLA" model of atomic orbitals; presents a unique insight into all forms of bonding. When adjacent atoms interact, there is potential for two distinctly different types of bonds. Double, triple and quadruple bonds favour side-on interactions, whereas single covalent bonds seem more adapt to head-on interrelationships.

In other words; the Sigma, Pi and Z bonds, and even the Inverted bonds, are extensions of natural alignments of the pre-existing "SLA" Atomic Orbitals. The accuracy is truly astonishing! If there was no information to go bye; the physical characteristics of "SLA" Atomic Orbitals would predict that multiple bonds exhibit the precise same elongated shapes, with the exact same alignments and directions of motion; as well as the same relative positions as those of the known Sigma Pi & Z bonds. The same applies to all other types multiple bonds. Essentially the "SLA" Orbital Configuration achieves a perfect match with current interpretations regarding multiple bonding!

It is apparent that a Z bonding electron has its origins in the same Alpha Dimitrios Ring along with the Pi bonding electron. For this reason the characteristics of both Pi and Z bonds are identical, and therefore classified as being the same. It also follows; that bonding pairs of opposite spin electrons occupy locations on opposite sides of the same Dimitrios Ring. This restricts the positional allocation of Pi and Z bonds to perpendicular planes. As it turns out; this model is a precise replication of current "Conservative" interpretations of a triple bond; where the third Z bond is actually a second Pi bond; and together they establish a tubular co-existence of two alternating pairs of electrons with a sigma bond at its core. There is no question, that the two depictions are describing the same set of circumstances.

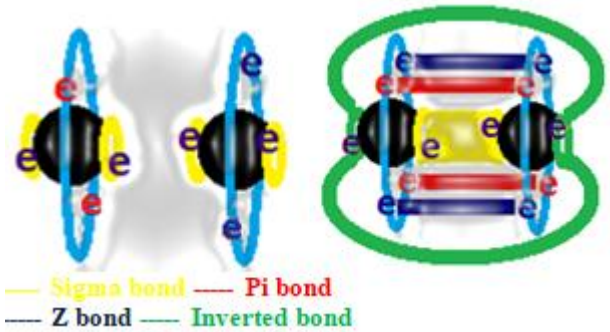


Figure 252
"SLA" interpretation of a C_2 Quadruple bond

Using the "SLA" Orbital Configuration; the quadruple bond is once again a perfect match. Not only does it offer an accurate portrayal of σ π & z bonds, but also clarifies how the fourth inverted bond comes into fruition (fig 251 & 252). Keep in mind, that each of these orbitals is rotating in a circular motion, so the Polarity Principle is likely to produce cylindrical characteristics which encircle the entire molecule.

The "SLA" Orbital Configuration reveals why orbitals positioned on the outer side of a central Alpha Dimitrios Ring, do not have a physical capacity to establish direct links. This is because they exist in opposite hemispheres which are facing away from each other. A "C_2" molecule has two externally positioned Beta orbitals which must divert around the perimeter of the existing Sigma, "Pi" and "Z" bonds if they are to successfully establish a fourth bond. It implies that triple bonds retain three layers of bonding; starting with a "Sigma" bond at the core, followed by a second cylindrical layer, consisting of two opposite spin "Pi" and "Z" bonds in alternating positions; and all of this is enclosed and encrusted within a final external cylindrical Inverse bond. This logic far exceeds the incoherent suppositions based on "Conservative reasoning".

It also becomes apparent that the σ bond is derived from a Beta DiR "p" energy orbital; rather than an "s" energy orbital; whereas the two "s" orbitals from the Alpha DiRs of both atoms, form one of the "π" bonds. Meanwhile the second π bond, and inverted bond, are derived from the two remaining "p" energy orbitals.

Comparisons between "SLA" and "conservative" orbital configurations

Let us now make some comparisons between the "SLA" Orbital Configuration and that of the "Conservative" Orbital Configuration which is currently accepted by science.

The probability of "SLA" Concepts resolving a single inexplicable phenomenon; may be deemed as an extraordinary coincidence. However when "SLA" Concepts accurately resolve each and every phenomenon; such as atomic configuration, orbital priority, stability of the magic number elements, hybridisation, quantised energy states, electronegativity, atomic bonding, and opposite spin; then it is no longer by coincidence; but rather because these "SLA" Concepts are real and accurate. In other words; the probability of all these findings being a coincidence; is virtually impossible.

However it is difficult for new theories to supersede existing theories that have been embedded into our psyche, as part of our educational learning. This is what the "SLA" research is faced with!

Current interpretations of Atomic structure are full of contradictions. For instance; the alignments of some orbitals within "Conservative reasoning" are so diverse, that it becomes impractical for electrons to change their direction of motion so radically, for them to facilitate a transfer from one orbital to another, when electrons switch between shells. It is also challenging for electrons to access internal shells, when they must pass through an intricate crisscross web of established outer orbitals.

These inconsistencies arise, because properties of electrons are electric in nature; yet current interpretations of atomic structure totally ignore the active constituents from which properties are derived. For instance; electric fields expand until they meet resistance from other charged sources; so the direction of motion has major implications about the sustainability of orbitals within an atomic structure. The parallel nature of "SLA" atomic orbitals implies that there is no interference between competing electric and magnetic fields, since the fields are moving in the same direction; whereas current interpretations portray orbitals in perpendicular planes; which are somewhat contentious, because of the prospect of interference when orbitals crisscross each others pathways.

If we include the plethora of unexplained phenomena, such as hybridization, octet rule, quantum energy states, opposite spin, orbital priority; then the present interpretation of atomic structure is very dysfunctional and somewhat contentious. Science presently resolves these inconsistencies, by incorporating solutions that are as inconceivable as the phenomena they are endeavoring to solve. So it is not surprising that present interpretations of atomic structure are subject a multitude of unexplained phenomena; for there is no unifying consistency that even comes close to a functional working model.

In comparison; The "SLA" model complies with all known properties of atomic structure; without having to contend with incomprehensible contradictions. This is because each of the properties attributed to atoms are natural inclination that conform to the laws of physics. There is no prospect of interference between competing electric and magnetic field, so electrons can move harmoniously within and between shells; and where orbital priority is as simple as water flowing down a sloping embankment to the lowest point. The ultimate proof comes in the form of predicted Stern-Gerlach experimental outcomes.

Symmetry of a Spherical Surface

The "SLA" concept of dual orbitals in opposing hemispheres implies that orbitals have a natural inclination to a symmetrical disposition.

This is where energy subshells come into their own; as odd numbers of orbitals are perfectly adapted to symmetrical distributions across a range of different latitudes and longitudes. In other words, odd numbers coincide with balanced distributions across both hemispheres, with the centre being located on the Alpha DiR. However symmetry on a spherical surface; entails the positioning of electrons along two planes; incorporating lines of latitude and longitude. This is where orderly sequencing of progressively larger energy subshells, appropriately spaced along different lines of longitude [ie. 4s, 4p, 4d, 4f], correspond perfectly to a uniform distribution of electrons around a spherical volume of space (fig 261 & 262).

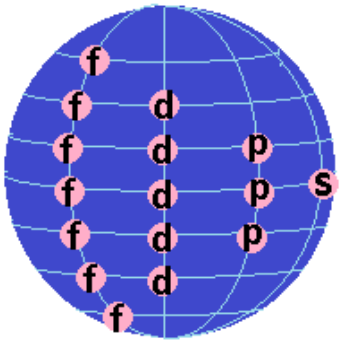


Figure 261

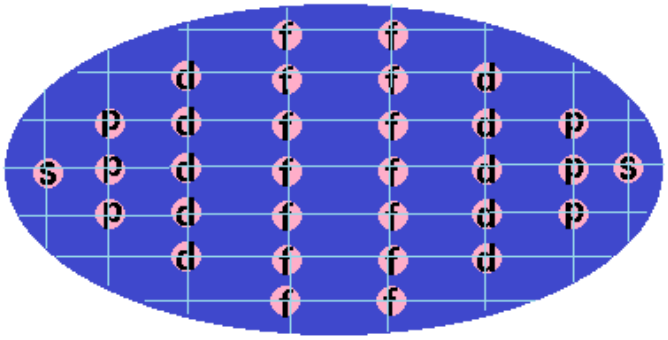


Figure 262

Atomic orbital configuration depicting a uniform distribution of electrons; where opposite spin electrons exist on opposite sides of a sphere.

In other words, just as a quadratic equation defines a point on a curved graph; energy subshells represent a type of function that allocates orbitals within equidistant locations on a spherical surface area; while allowing for slight variations in intensity due to the Coriolis Effect. Energy subshells represent a means by which quantised individual particles of charge, attain a uniform electromagnetic distribution on a spherical surface area.

It may therefore be concluded that Atomic Configurations are symmetrically balanced entities; with uniform distributions of atomic orbitals within each shell. It therefore becomes apparent, that odd numbers of orbitals within energy subshells facilitate uniform distributions across, both lines of latitude and longitude on a spherical surface area; and that opposite spin facilitates a uniform distribution on opposite sides of a circular perimeter. In other words, atomic configurations are perfectly balanced entities that retain harmonious equilibriums across each tier of an atomic structure. As more information comes to hand; it becomes apparent that Atomic structures are not sustainable without perfect symmetry across all constituent particles. It is a property which becomes apparent when applied to the configuration of protons and neutrons within Atomic Nuclei.

This means that each orbital's unique set of four quantum numbers **[n, E_n , DiR, $\bar{s}_+$]** represent equally spaced co-ordinates, of a uniform distribution of elementary particles around a spherical surface area.

Opposite Spin

While staying on the theme of symmetrically balanced distributions! Opposite Spin is a means by which individual electrons are symmetrical distributed around a circular perimeter.

Electron pairs are thereby located on opposite sides of an atomic orbital; thereby ensuring an equidistant distribution of electrons around a circular perimeter. This implies that opposite spin electrons are allways moving in opposite directions relative to each other (fig 271); thereby defining the origin of the term "Opposite spin"!

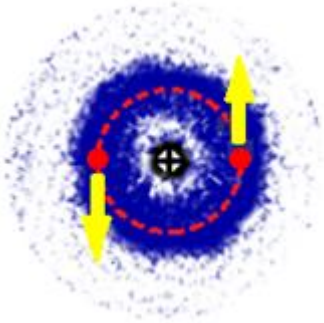


Figure 271

Pair of opposite spin electrons

Bonded molecules have two different types of opposite spin. One relates to head-on covalents bonds, where opposite spin denotes electrons in alternating cycles from two competing atoms (fig 272).

Figure 272

Whereas opposite spin based on side-on multiple bonds, positions electrons on opposite sides of a shared Dimitrios Ring orbital pathway, located between two competing atoms (fig 273).

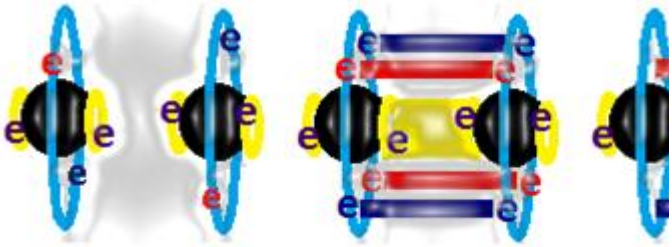


Figure 273

Opposite spins pairs of electrons occupying the mid-region between two atoms

***NOTE** : There is some uncertainty in respect to opposite spin, and the definition of "even distribution" when multiples of orbitals are rotating around the entire perimeter of a sphere. In other words; orbitals can simply adjust their relative positions around a circumference, thereby fulfilling the definition of an even distribution of charge. This means that there is no distinction between opposite sides of a circular perimeter when there are more than two electrons around a circular perimeter. This was a major failing in the "SLA" Theoretical concept! Until a solution became apparent!*

Solution: Electrons hold static positions relative to adjacent orbitals, so orbitals do not easily adjust their positions in order to accommodate a new electron around a circular perimeter? In other words; there may be some level of asymmetrical imbalance associated with the inclusion of single electron's that imbalances the harmony of an atomic configuration. It would therefore require two orbitals to attain symmetrically balanced distributions on both sides of a circular perimeter. This seems to offer the best explanation to a challenging shortcoming of the "SLA" Theory.

Electronegativity

This is an investigation into the properties of Electronegativity! In an effort to ascertain what role an "SLA" orbital structure may play in determining the reactivity of elements.

The logic is based on a premise, that since the positional allocation of incoming electrons is based on an atom's electromagnetic intensity gradient (otherwise referred to as an element's orbital configuration); then it is reasonable to assume that the same properties may also regulate the dynamic potential of any interaction; both in terms of attracting and extracting electrons from an orbital structure; thereby defining the properties of Electronegativity.

An Atomic Electromagnetosphere is in a continual state of equilibrium, In other words, the positioning of incoming electrons is based on regional electromagnetic equilibriums, rather than any direct correlation to specific imbalance of positive charge within the nucleus. It may therefore be concluded that an atomic nucleus plays little to no role in the positional allocation of electrons within an atomic electromagnetosphere; other than a general internal attraction that hold an atom together. This Concept seems at odds with "Conservative" logic! However the same principle applies to the distribution of air particles within the atmosphere. It is regional pressure differentials that determine the configuration of air molecules; with gravitational attraction simply confined to a general internal attraction that has little to no bearing on regional imbalances. This then raises some doubt about whether nuclei of competing atoms, play any primary role in the exchange of electrons between neutral atoms; except in terms of a general internal attraction once a process has been enacted. Especially given that these are interactions between neutral atoms.

"Conservative science" generally perceives Electronegativity as being a measure of attraction between an element's nucleus and its orbiting electrons; thereby culminating in a quantifiable evaluation of reactivity between competing elements. In terms of "Conservative science"; all aspects of Atomic Structure and associated properties, which includes Electronegativity, are solely and exclusively reliant upon a Coulomb force of electrical attraction to the positively charge atomic nucleus. There is no other reasoning, other than an inclination for electrons attaining an s^2p^6 outer shell; and at which point there is an abrupt cessation of electronegativity (Octet Rule); describing it as a shielding influence which culminates in a complete and total isolation of the positively charged nucleus.

The "SLA" Concept of Electromagnetic Polarity is somewhat different, and quite unique in its depiction of Electronegativity as a tangible force, based on frictional properties associated with electromagnetic wavefronts! This "SLA" Concept of magnetic polarity on circulating electromagnetic fields produces a physical entity in its own right, with a quantifiable capacity to interact with atoms of other elements when critical distances have been breached.

An atomic electromagnetosphere has a natural inclination to conform to a uniform electromagnetic intensity gradient; and it is this tendency which drives a layer by layer orbital priority. This represents the site of a receptive shell, and it is the manipulative capacity of swirling electromagnetic fields (Electromagnetic Polarity) within a receptive shell, that regulates the strength of an elements Electronegativity.

In other words; the ability to attract or extract electrons is dependent upon rivalry between two competing electromagnetic whirling actions, whose strengths are determined by their relative intensities. This hypothesis leads to an unescapable conclusion; that zero Electronegativity can only ever be attained if a receptive shell is completely vacant. ***From an "SLA" perspective; inter-atomic interactions are not feasible if there is no manipulative capacity within a receptive shell to interact with another atom. It is the impetus of an interaction.***

Proof comes in the form of Magic Number elements, which provide a valuable insight into the source of Electronegativity. Magic Number Elements are unique in being the only elements in the whole of the periodic table of elements, which have an Electronegativity of "zero". This zero electronegativity is consistent with Magic Number

Elements possessing a vacant receptive shell; which completely annuls any potential Electronagativity.

A good analogy, relating to the reactivity of "SLA" Electromagnetic Orbital Polarity can be found in the funnel of a tornado! The manipulative force attributed to a tornado, is a direct consequence of a physical swirling motion. It has a well-known capacity to ravage surrounding environments; but as close as one may stand to that funnel, if there is no direct contact with the circulating wind, then there is absolutely no force to speak of. This is precisely the same in terms of electronegativity; the forces are cyclonic in nature, and the drawing potential is measured in terms of Electromagnetic Polar intensity. But alas! As close as one may be to the circulating activity, if there is no circulating electromagnetic fields at the point of contact, then there is no interactive potential between atoms.

It is important to appreciate that zero electronegativity values can only be realised when an entire shell is completely vacant, and should definitely not to be confused with an empty subshell; because the moment even a single electron occupies an empty shell, whirling electromagnetic fields have capacity to spread out and engulf the entire region within that shell, which is inclusive of all the unoccupied subshells. Yet by definition, unoccupied energy subshells are deemed as being empty. So in reality an empty subshell which exists within the perimeter of an occupied shell; is only a figment of the imagination which relates to the capacity for a shell to accept more electrons! In real terms, empty only applies to a shell which has yet to receive any orbitals; and so "empty", is an inappropriate term to describe an unoccupied subshell when it is part of an established shell structure.

The definition of Electronegativity; conveys a contest between competing Electromagnetic Polarities, whose electrons are poached or bequeathed to one another, based on competing intensities.

Electronegativity is much like a strong wind system overcoming a weaker system when they interact.

External receptive shells procure the greatest electronegativity relative to the numbers of resident electrons; substantiating what seems to be a direct correlation between the intensity of charge within a receptive shell, and proximity to the surface. In other words; there is a significant decrease of Electronegativity in accordance and the internal depth of a receptive shell for reasons which are uncertain.

Electronegativity associated with internal receptive shells are somewhat difficult to ascertain; for there is uncertainty regarding the role of external layers of non-receptive shells, which are unavoidable when atoms interact. However external non-receptive shells are penetrable, and as a consequence may not offer any resistance against electrical incursions. This implies that non-receptive shells possibly do not play an active role in Electronegativity? References of no resistance to electrical incursions, implies that a shell's electromagnetic field is permeable to incoming electrons. This assumption is based on a deemed property associated with outer penetrable layers of an atomic electromagnetosphere, where incoming electrons readily penetrate and/or compress their way into the site of an underlying receptive shell.

This essentially means that weak Electronegativity associated with internal receptive subshells, may possibly be related to a cushioning influence by inactive external non-receptive shells, acting as buffers which diminish the effective Electromagnetic Polarity of internal receptive shells. Alternatively; weak electronegativity may instead be a direct consequence of weak Electromagnetic Polarity within external non-saturated shells; before ultimately being relayed to sight of an internal receptive shell.

Lexicon

Catalogue of new terminology used in this text

"SLA" Theories & Concepts - Initials of "Stratos Lafcharis Aristomenis"; being the preferred name of the author; and the initials by which these Theories and associated Concepts have been named.

Electromagnetic field – Refers to an electron orbital's moving electric field.

Atomic Electromagnetosphere – Refers to the distribution of electromagnetic fields surrounding an atom, defining it as a physical entity that occupies a set volume of space.

Uniform Electromagnetic Intensity Gradient – Refers to a natural inclination for electromagnetic fields to attain a uniform radial intensity gradient, of one energy subshells between successive unsaturated shells; that extend to the peak of an orbital structure.

Magnetic Polarity – Is a force of interaction between forward and rear segments of a moving electromagnetic wavefront; depicting wave like characteristics associated with incremental increases and decreases in electromagnetic intensities.

Dimitrios Ring – Represents an electron orbital's path of motion. It is a "Polar" induced circulating electromagnetic field; defined as a physical entity that compels electron's to follow in their own slip stream.

"Conservative"/"Conventional" Science – Current science based reasoning; as compared to "SLA" Theoretical Concepts and Theories.

Saturated Shell – Refers to a shell which is deemed as having attained a maximum electromagnetic intensity; thereby being classified as being completely full, and having no available capacity to retain extra electrons.

Unsaturated Shell – Refers to a shell which has not reached its maximum capacity, in terms of electromagnetic intensity; thereby having an available to retain extra electrons.

Receptive Shell/Subshell/site – Refers to the lowest penetrable shell/subshell/site that is in the process of

accommodating incoming electrons; based on an order of priority.

Non-Receptive Shell – Permeable Unsaturated shells; that are not in the process of facilitating incoming electrons

Permeable/Penetrable shell – Shells that are penetrable and/or compressible by incoming electrons

Active Site – Refers to a specific receptive orbital within a receptive shell or subshell.

"SLA" Electron Quantum Numbers [n, E, DiR, $\bar{s}_+$] :

- **n -** Shell numerical number {numbers of tiers out from a nucleus}
- **E -** s, p, d, f energy classifications of group cluster of equivalent electrons.
- **DiR -** Lateral positions of adjacent Dimitrios Rings (Alpha, Beta, Gama Delta).
- $\bar{s}_+$ **-** Spin Quantum number = +/- 1/2