Tetryonic Theory

The unified quantum field geometry of charged EM mass-ENERGY-Matter in motion

"...the scientist makes use of a whole arsenal of concepts which he imbibed practically with his mother's milk; and seldom if ever is he aware of the eternally problematic character of his concepts. He uses this conceptual material, or, speaking more exactly, these conceptual tools of thought, as something obviously, immutably given; something having an objective value of truth which is hardly even, and in any case not seriously, to be doubted. ...in the interests of science it is necessary over and over again to engage in the critique of these fundamental concepts, in order that we may not unconsciously be ruled by them." *[Albert Einstein]*

Given the range and applied scope of Quantum Physics in today's modern technologic World there remains a driving desire to rationalise our numerous disparate scientific theories into one coherent theory with a intuitive model that can be applied equally to the Quantum and Cosmological scales of our Universe.

Such a theory would need to preserve the currently observed outcomes and present established theories in a new light, offering additional testable predictions of its own, and ideally do so in a manner that is simpler than that of the established theories and hypothesises.

Many foundational properties of Quantum Mechanics remain unaddressed by scientific theory and in the following pages an overview of the key quantum properties challenging our current scientific advancement will be highlighted, including a number of assumptions that currently impede the development of a fully realised, coherent solution to all of our current scientific questions.

While Mathematics is the language of Science it remains a language that lacks a well-defined physical model on which to test it and further its many and varied solutions to Quantum & Cosmological scale physics. It is this lack of any rigid, enforceable GEOMETRY that has allowed the development of numerous disjointed statistical and probabilistic solutions to physical problems, in turn impeding our scientific understanding and advancement of quantum processes.

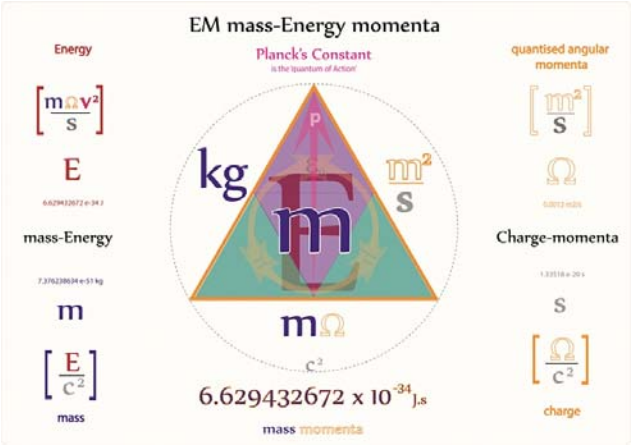
The Standard Model has many observed and testable components to it but more recently new theories have emerged to contest it without being rigorously testable themselves. They rely on the established foundation provided by the Standard Model but try to explain its various deficiencies ad-hoc with various suppositions without any solid footing of their own.

Often the only way to progress further in our scientific endeavours is to retrace our footsteps in science and to develop new physical models on which we can discern our known results and observations thus excluding any false or misleading assumptions (mathematical of otherwise).

In doing so there exists the promise that a simple underlying foundation can be found to the physics of our Universe, revealing new and exciting advances in Science that will allow us to usher in a new age of scientific and technological advancement for the betterment of humanity as a whole.

'Tetryonics – The charged geometry of EM mass-ENERGY-Matter' whose founding principle is that **EQUILATERAL Planck energies are** the foundation geometry for all quantum mechanical processes is presented here as just such a solution to the current quandaries of Quantum Mechanics.

ENERGY



Energy, in Physics, is an indirectly observed quantity of a system that imbues it with the ability to exert a Force or do Work over a distance.

It has been measured and quantified through numerous methodologies over the centuries, most notably through its associated characteristics such as mass, velocity and ElectroMagnetic fields.

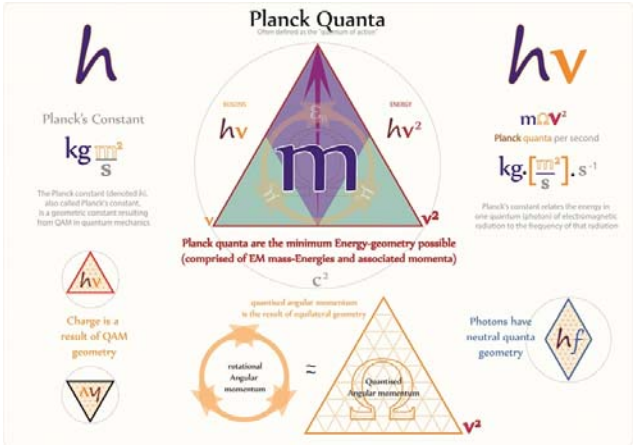
The most recent attempt to quantify its characteristics (with respect to heat and light) led to the discovery of Planck's constant and the development of Quantum Mechanics

The application of a simple proposition (that Energy has an equilateral geometry) opens the door on a greater understanding of the mechanics of the quantum world, a realm that will be forever beyond the reach of our physical eyes.

The myriad of perplexing properties of quantum properties (such as Charge, mass & Matter) and the astonishing outcomes of quantum experiments (Interference and Wave-Particle duality) can now all be readily modelled and explained rationally on a solid geometric footing.

Paving the way for new discoveries and a greater understanding of our Universe and its mechanics

Quantised Angular Momenta



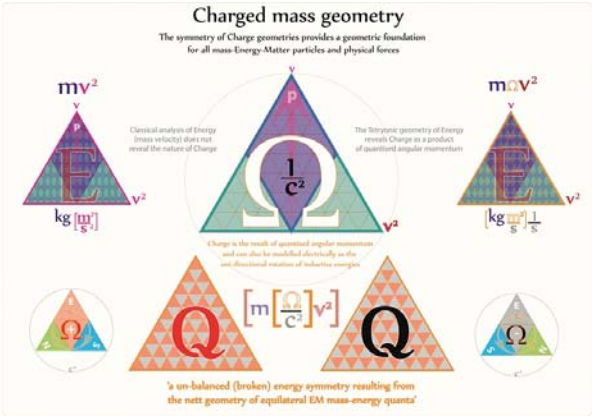
Building on the priori definition of equilateral energy quantisation it can be quickly demonstrated that any energy measurement per unit of Time results in a geometric unit of measurement that has historically be taken to represent rotational motion (specifically Angular momentum)

This unit of motion is found throughout Quantum Mechanics and is directly related to the square energy levels in nuclear processes.

The equilateral EM fields of energy quanta are constrained by its geometry and this geometry lies at the heart of understanding the quantum world in all its beauty.

It determines properties such as Electric permittivity and Magnetic permeability, the vector direction of linear momentum and relates the scalar property of electromagnetic mass directly to velocity.

CHARGE



A fundemental property of all mass-ENERGY-Matter that gives rise to the Forces of electrical Interaction has eluded physical explanation by Physicists since its discovery and led to many 'band aid' additions to the Standard model in attempts to explain its observed properties.

The most recent attempt at an explanation was Special relativity theory which in turn led to our current models of charge from contractions of Matter due to motion.

SR explains Charge as an invariant property of of electrostatic bodies and that the motion of charges creates an additional magnetic moment through the relativistic distortion of spherical bodies of Matter.

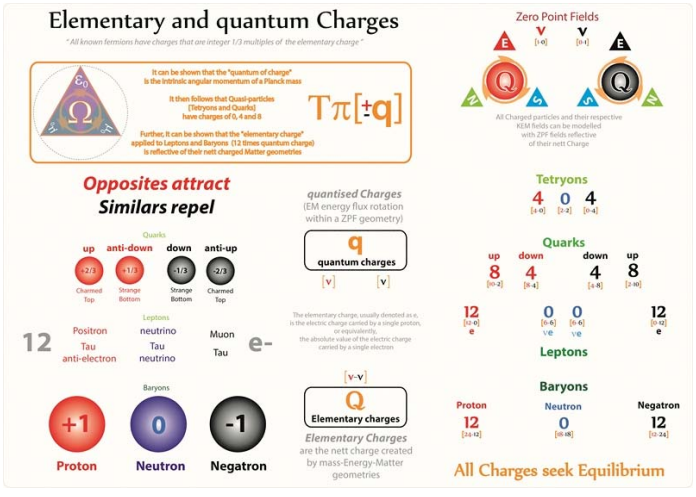
Equilateral Planck energy momenta geometries and Matter topologies offer a completely different explanation for the source of electrostatic charges and their associated magnetic moments.

Positive and Negative charges are revealed to be opposite side of the same quantum energy 'quoin', and can be modelled electrically as ideal quantum inductive loops. It is equilateral geometry that gives rise to the physical properties of quantised angular momenta, inertial mass, elemental charges and even the geometric topology of Matter itself.

In a planar 2D form they form a neutral EM energy momenta geometry but it is when they form the topology of 3D Matter they are expressed as either Positive or Negative electric charge fascia.

ODD number energy quanta [W Bosons] combine via their magnetic bases in fixed quantum steps to create the 'squared' nuclear energy levels so familiar to quantum mechanics and form the basis for ElectroMagnetic Induction.

It is their rigid equilateral geometry that provides the basis for relativistic charge invariance and the quantum mechanism for photo-electron transitions in atoms while the net energy momenta quanta in charged geometries provides the electromotive force known as Voltage.



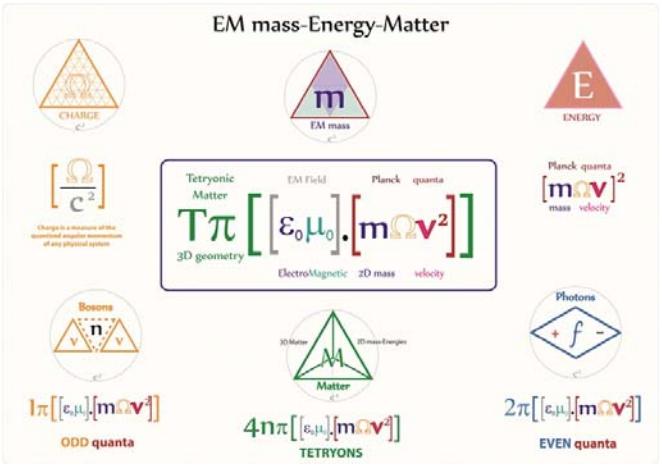
Equilateral geometry reveals an intrinsic connection between EM Energy, mass and Charge.

As separated charges seek equilibrium they provide motive energies & the quantum scaffolding for large scale Matter topologies and their force interactions throughout our Universe.

mass-ENERGY-Matter

All Energy has an EM mass equivalence and equally any object with EM mass has energy equivalence

But there has never been a formal scientific definition and associated equation to distinguish the property of EM mass from that of Matter.



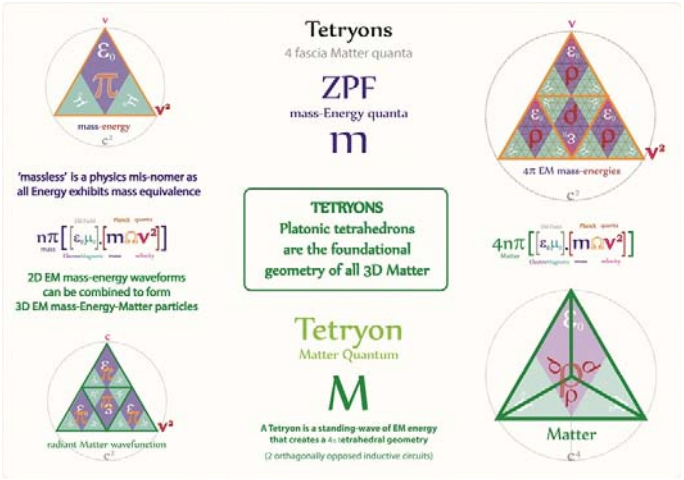
Using Tetryonic geometry it can be clearly demonstrated that ElectroMagnetic mass is NOT Matter – it is the Energy content of a system per unit of time [E / c^2] in total agreement with Einstein (and all before him) however, lacking a formal definition of either the two terms have become mired with each other so much that they are often used for each other inappropriately even in scientific peer-reviewed literature.

ElectroMagnetic mass is the two dimensional (planar) measurement of Energy per unit of Time whereas Matter is a measure of the tetrahedral energies found in a spherical volume of 3D space.

Mass-energy can be viewed as the paper from which 3D Matter is created when it is folded into a tetrahedral shape (the quantum canvas covering the topology of Matter)

The often used tem of 'massless' is now shown to be a misnomer that should be removed from the scientific vocabulary except where it specifically refers to empty space (devoid of any energies).

Matter is now formally defined geometrically as 4nπ tetrahedral standing wave of EM energy and it is the tetrahedral topology of Tetryons that forms the foundation for all large scale Matter in the Universe (not spherical point particles).



Charge allows EM masses to form a Tetryonic topology giving volume to Matter and its energy momenta provides the interactive forces between them imbuing motion into our Universe.

Matter at rest is comprised of EM mass-energies that are always in motion and propagating in a tetrahedral EM standing wave.

To cause at will the birth and death of matter would be man's grandest deed, which would give him the mastery of physical creation, make him fulfil his ultimate destiny."

[Nikola Tesla]

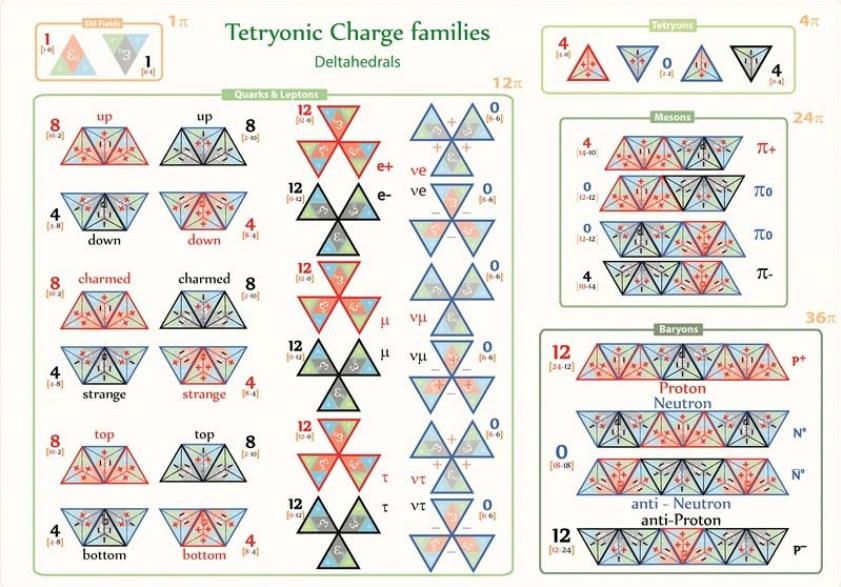
Sub-Atomic Particles

Using equilateral energy all the mass-energy geometries & mass-Matter topologies of EM fields and particles can be physically modelled revealing the known Standard Model particle sand a few more.

Bosons are shown to be transverse EM fields that facilitate EM induction and Photons are revealed as longitudinal dual-charge pairs possessing a neutral EM charge and inherent magnetic moment.

The net unidirectional momentum of Bosons then distinguishes them from Photons that possess a bi-directional momentum

Closer examination of the geometries highlights a long-standing error in the mathematical formulation of QM energy formulas, namely the mistaken interchanging of Planck's quanta [*v*] for Einstein's frequency [*f*] in relation to Energy.



2D EM masses [bosons-photons] do not have the physical property of 3D topology possessed by Matter [Fermions]

Fermions can now be defined as the standing wave energy topologies that create all the known sub-atomic particles – the building blocks of large scale Matter and structure in the macro world.

Historically these particles have been classified according to their charges and masses, Tetryonic geometry now provides a 3D physical model of all the particles highlighting the physical source of the 1/3 charges of Quarks and revealing charge to be the foundational geometry of all Matter.

Tetryons are 4π charge topologies that are the foundational quanta of Matter and surprisingly have a mass-charge ratio identical to that of Leptons explaining how these particles have remained hidden from accelerator experiments.

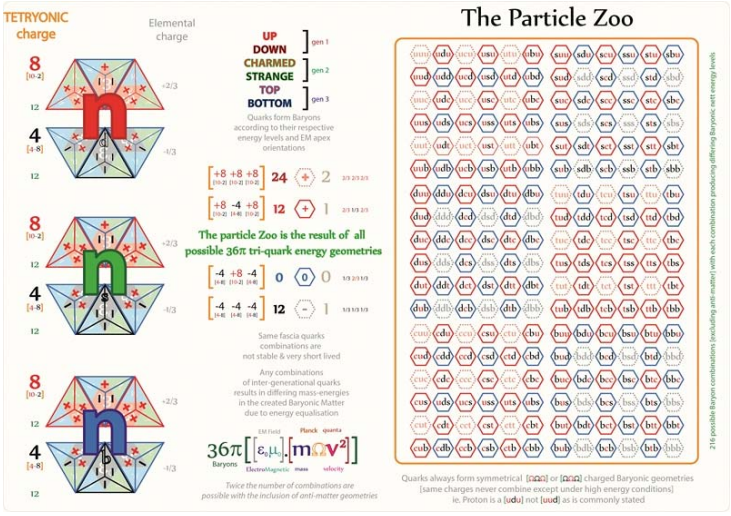
Quarks are 12π charge geometries where the attractive strong charge interactions between their fascia form 8π particle topologies with entirely different properties to that of Leptons

Leptons also have 12π charge geometries but with repulsive fascia that result in them forming the quantum equivalent of a 6 loop rotor

Protons and Neutrons are 36π charge geometries [that result in 20π Baryon topologies] and have identical masses (against the current model of baryonic masses which derived from an entirely different process where Neutrons are formed by Protons absorbing electrons).

The Particle Zoo

Baryons – the building blocks of atomic nuclei can be formed from many tri- quark combinations and energy levels and this is of particular note when modern accelerators are used to probe atomic structures.



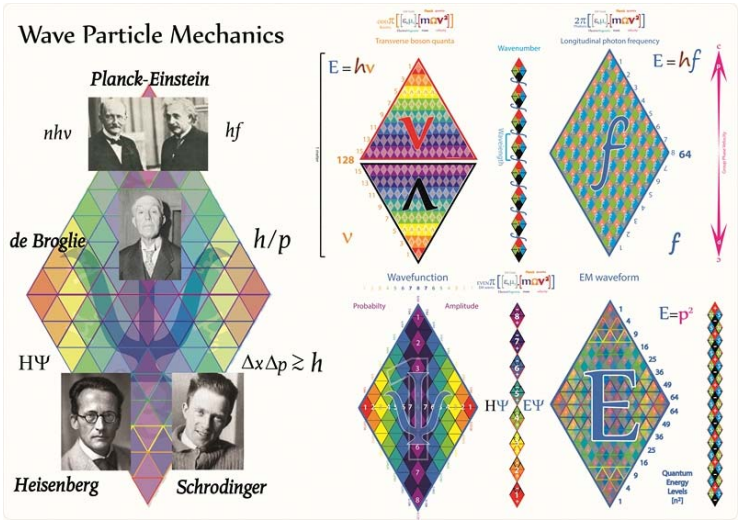
The higher energies they employ when colliding particles together results in higher 2D kinetic energies (and increased energy quanta) which recombine after collisions into a plethora of similar particles called the Particle Zoo.

A sound understanding of EM mass-energy geometries & the charged topologies of all sub-atomic Matter particles reveals the true genesis of all of the Baryons to be found in the particle zoo.

Tetryonic geometries facilitate the precise 3D modelling of all the periodic elements, allotropes and compounds enabling the development of new classes of materials and medicines providing us with many new insights into Quantum Chemistry and large scale Matter in general.

Quantum Electro-Dynamics [QED]

Adding to the mysteries of quantum mechanics is a number of well-known QED effects that have also eluded physical explanation – to date



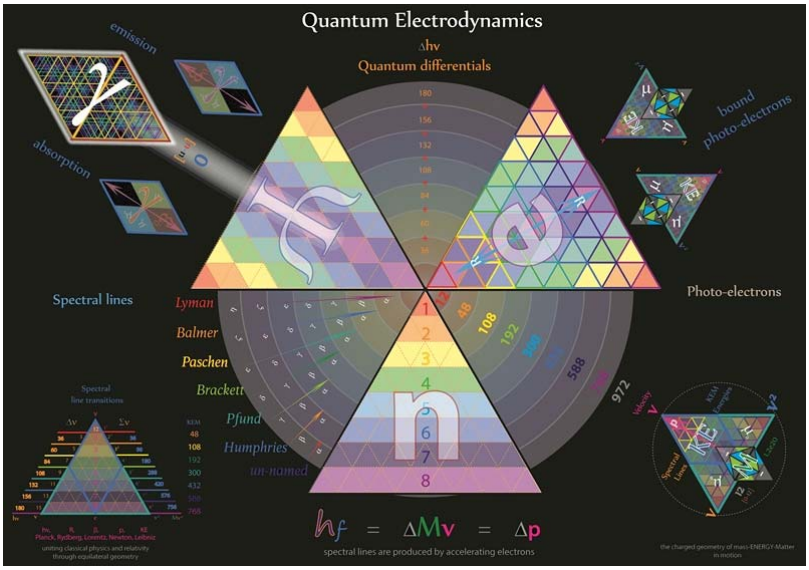
In 1865, James Maxwell Clerk unified the then disparate theories of Electric and Magnetic fields into a theory of Electromagnetism and related then to the velocity of light.

The exact quantum geometry for EM wave geometries (and the photons comprising them) that explains their Wavefunctions and observed inference patterns represents one of the greatest challenges to developing a concise fully realised quantum theory of EM radiation.

Wave-Particle duality dating back to the 17th century is perhaps the best known example of quantum behaviour that has defied precise modelling despite intense effort by scientists around the World for over two centuries

The application of equilateral energy momenta to the charged geometries of Photons and EM waves not only explains these long standing mysteries but also removes the quantum fuzziness introduced by Heisenberg's Uncertainty principle, in turn clearing the way for Science to develop an advanced understanding of Electricity, its role in Quantum ElectroDynamics and provide new clean forms of energy from quantum processes.

Photo-electrons and spectral lines



The physical relationship between Spectral lines, Rydberg's Constant and the Kinetic energies of Photo-electrons as they interact with photons and atomic nuclei is quickly revealed when equilateral energy geometries are employed

It is the rigid geometry of equilateral Planck energy momenta that gives rise to the invisible forces of Faraday's Electric and Gauss' Magnetic fields as well as Newton's Action-at-a-Distance.

Quantised Angular Momentum, a direct measure of the long hidden equilateral geometry of Energy, is revealed as the source of Charge, the physical constants and even the geometry of EM mass-energy & Matter itself.

The geometry of Nuclear Forces and Constants

Charge interactions resulting from equilateral EM energy geometries have been mistakenly developed into three disparate nuclear forces:

The EM Force is the result of $2n\pi$ charge geometries acting along transverse or longitudinal directions (or in superposition) in the forms of Bosons and Photons

The Weak Force is the inductive coupling of the magnetic permeability of adjacent energy geometries

The Strong Force is the attractive force between opposite charged fascia of Tetryonic Matter. It can also form a repulsive force between similar charged fasciae resulting in charged Leptons [electrons].

Gravitation (mathematically identical to Coulomb's Force save for strength and source) can also be modelled as the geometric mean of super-positioned EM waves.

All of which are determined by the Fine Structure Constant – the mysterious hand of GOD – setting the strength of EM interactions and determining Charge on the quantum level.

Applying equilateral geometry to energy momenta quanta, the Tetryonic model of EM mass-ENERGY-Matter quickly evolves to explain many additional electrical properties such as Voltage, Current and Power

Quantum Chemistry

Applying tetrahedral Matter topologies to quantum chemistry leads to a number of significant advances in the understanding of chemical processes most notably:

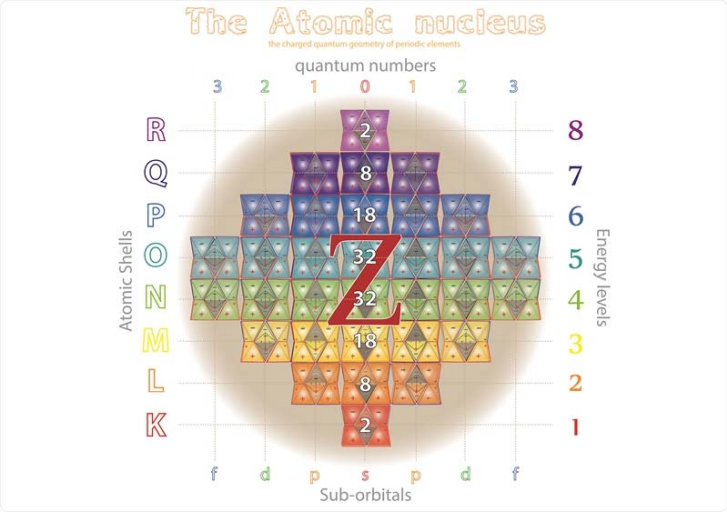
- **Accurate models for all periodic elements and their associated allotropes**
- **Advanced molecular orbitals plots**
- **Exact rest masses for all elements and**
- **A new Periodic table based on the charged topologies of Matter**

Improving upon and extending the Aufbau principle with charged geometries leads to many refinements in chemical engineering and facilitates the building of accurate 3D models of all elements, isotopes and compounds.

Every element can be analysed from the quantum level upwards revealing its exact 3D topology, quark configuration, rest mass-Matter-energies and chemical properties.

And number of misconceptions can be quickly clarified and corrected in turn advancing our understanding to the physical mechanics underlying chemical processes like chemical bonding, element family properties and the structures of complex chemical compounds.

Hydrocarbons and Carbohydrates have already been modelled using equilateral charge topology with the results matching the established chemical models of Nobel gases, Core electrons, Lewis diagrams and the most recent electron photographs of these chemical properties of atoms.

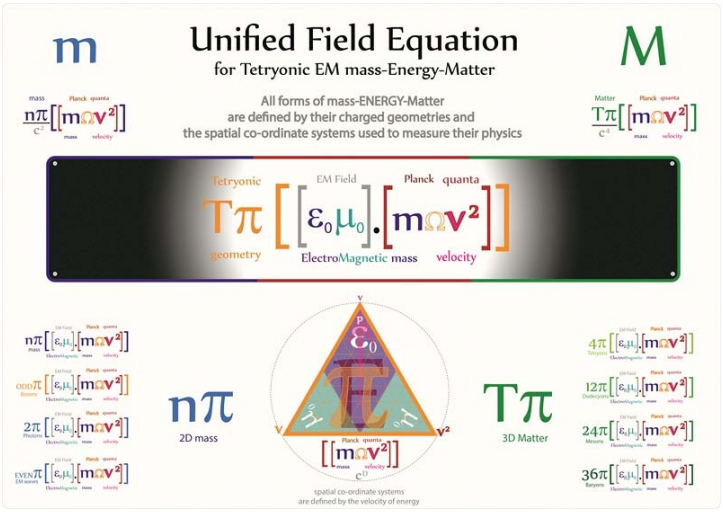


Even DNA can be modelled in 3 dimensions leading to a greater understanding of the role of quantum mechanics in biological processes and the interaction of EM radiation on organic compounds.

A highly developed quantum model of chemical elements and compounds will allow us to model chemical and biological structures in hitherto unimagined detail and facilitate the building of complex (and increasingly accurate) models of all chemical compounds and biological processes.

A Unified field equation

In physics a Unified Field Theory is a type of theory that allows all that is usually thought of as a fundamental force or elementary particle to be formulated in terms of a single equation that explains all their disparate properties.



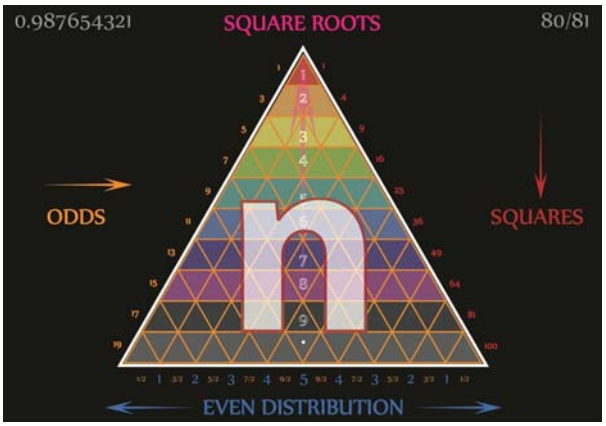
It is considered the holy grail of Science, offering the promise of advances in Technology, Energy and Medicine unparalleled in Human history.

Equilateral energy provides the foundation for the creation of a single equation that expresses EM mass-ENERGY and Matter as the result of geometric & topological charge interactions.

Applying equilateral geometry to Planck energy momenta quanta has been shown to firmly resolve many of the current mysteries plaguing the Standard model and provides a firm foundation for the development of a single unified quantum theory uniting all quantum and macroscopic forces.

It effortlessly merges all the tested features of Classical mechanics with the statistical probabilities of quantum mechanics and scales up to the cosmological scale of General Relativity.

Equilateral charged energy geometries provide a quantifiable foundation for advances in:



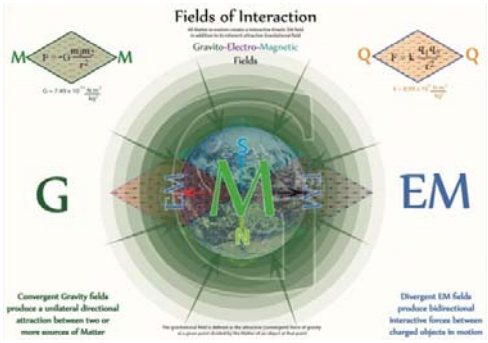
- **Quantum Mechanics**
- **Quantum Electrodynamics**
- **Quantum Chemistry**
- **Quantum Cosmology**

Explaining the quantum mysteries of mass & Matter, Wave-Particle duality and gravitational Singularities by challenging the very foundational assumptions of Relativity and the role of charge in our Universe.

Mathematical principles such as re-normalisation, probabilities and square roots of negative numbers can all be geometrically modelled through Tetryonics leading to further advances in fields such as biology, medicine, quantum computing and telecommunications

Through the charged geometry of Tetryonics many of the erroneous theories that have been developed during the last 1oo years can be falsified at last providing a solid foundation for further advances in science and mathematics.

Gravitation

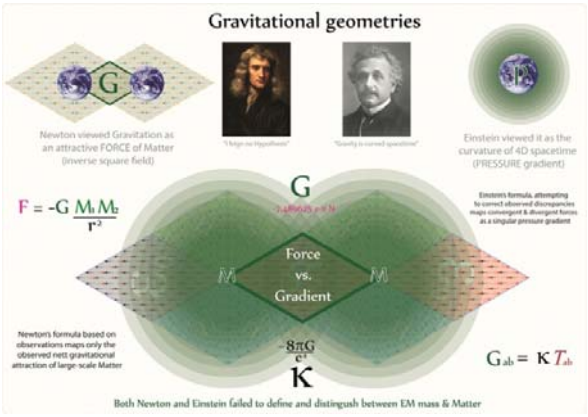


The force of Gravity has been long-held to be the mysterious force that holds our Universe together, shaping the Stars and holding us to the Earth as we orbit our own SUN.

Tetryonic geometry reveals its quantum mechanics to be the result of electromagnetic fields and the effect produced by the geometry of Matter in these fields.

Newton saw Gravity as a force that acts instantaneously on distant bodies of Matter while Einstein dismissed the force between the bodies and explained it as the result of the 'curvature of Spacetime'.

In fact the Gravitational field is comprised of 3 separate components, each of which produces differing forces of interaction, but all combine to produce the nett Gravitational field that we observe and describe as strictly convergent Gravity.

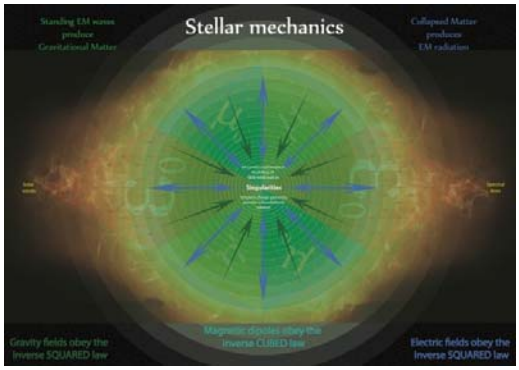


Gravity fields are created by the topology of Matter itself as it displaces and distorts the Vacuum energies surrounding it.

Electric fields diverge radially from all Matter as it is heated, or placed in motion by other forces creating an interactive field with both divergent and convergent equatorial regions of force and acceleration.

Dipole Magnetic fields located around the Polar Regions of all Matter also create a perturbative force on bodies close to them

Although Newton's and Einstein's theories were both correct in their respective analysis of the forces at work they both failed to define and distinguish between EM masses and Matter leading to the continued debate over the true nature and physical formulation of quantum gravity.



These three quantum forces [G+E+M] combine to produce a field of gravitational acceleration that was so eloquently modelled by Newton back in the 16th century through his inverse square law.

And these 3 distinct forces also combine to produce the stellar mechanics that power the Stars – a Gravito-Electro-Magnetic pinch.

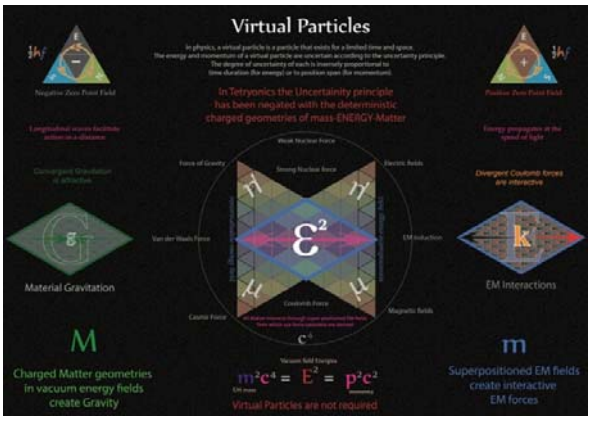
The force of Gravity, created by the geometry of Matter draws Matter toward the core of Stars.

And the GEM pinch singularity at the core of the Star destroys Matter (collapsing its 3D geometry), turning it into radiant 2D ElectroMagnetic radiation (Light).

Energy from the Stars

Virtual particles, Dark Energy and Dark Matter (were all developed to explain the observed mechanics of our Universe) and can now be revealed to be differing manifestations of the electromagnetic force interacting at various angles to, and with, the standing-wave topologies that create it.

Quantum fields of Planck energies combine to create charged 2D geometries of radiative ElectroMagnetic fields that in turn spread out interacting with each other to give us the fundamental laws of Attraction and Repulsion.



The 3D standing-wave topologies of Matter provide a rigid structure that displaces the surrounding Vacuum energies and creates a pressure gradient which we call Gravity.

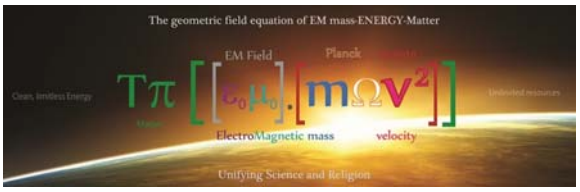
And the destruction of these Matter topologies in turn creates radiant energies that propagate out into the surrounding space to weaken and form the Vacuum energies that permeate all of Space.

The eternal cycle of Matter creation and destruction within Stars and Galaxies is what drives the Universe we see today causing it to contract as it forms gravitational Matter and to expand as it restructures the standing-wave Matter into radiant forms of Energy (Light and heat).

The same process offers us clean, limitless energy for all our needs as well as unlimited resources from the restructuring of this energy into its varied elemental and compound forms.

Our toxic stockpiles of radioactive wastes can be completely eliminated from the environment and electrical power can be safely stored as mass within large-scale models of the deuterium nuclei and distributed worldwide to any location without the need for transmission lines.

Even hydro-electric storage schemes can be eliminated, returning water courses to their natural states of flow in turn reducing conflicts stemming from the flow of this precious resource worldwide.



Through the geometries of equilateral Planck energies and the application of the Tetryonic unified field equation of mass-ENERGY-Matter in motion to our needs, for the first time in Humanity's history, we have the chance to advance our civilization to new pinnacles of technology and understanding in turn leaving our World a better place than we found it to be.

The age old dilemma of technological advancement versus environmental pollution is at an end

We stand on the threshold of realising one of the greatest advances in scientific understanding ever witnessed but we must also endeavour to redress our current social challenges with an equally rigorous determination to ensure all of Humanity benefits from this discovery

…… *ABRAHAM [2012]*