How Gravity Works—and related matters

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Abstract: How Gravity Works—a Unified Field Theory

This *explanation of the gravitational mechanism* provides a causal mechanism that reconciles physical phenomena with Newton's equation for the force of Gravity. It shows how electricity and magnetism work together to produce the force of Gravity and in so doing represents the first Unified Field Theory. It explains the reason why the gravitational force is proportional to the masses of the attracting bodies and why the force decreases in accordance with a square law scale. The Gravitational Constant is defined. The reason why objects accelerate to Earth in accordance with a square law scale is explained. The architecture of the atom is explained—the reason why electrons orbit the atom in up to 8 shells/sub-shells; why the shells contain the number of electrons that they do; and why the shells are offset by at least 45°, are all explained.

Conclusion; The hydrogen atom [and helium atom] generate helically polarized electromagnetic radiation (gravity radiation) from polar regions that bombards neighbouring atoms drawing them towards the source of the radiation. Gravity radiation then causes the nucleus of the neighbouring atom to spin axially (the 'motor effect') and, at the same time, synchronizes the spin of the electrons in both atoms. The neighbouring atom then, in turn, generates helically polarized electromagnetic energy (the 'generator effect'). Both atoms spin axially in the same direction. Hence, the gravitational forces from both atoms pull in the same direction and the forces are additive. The gravitational Constant G is shown to be the instantaneous alternating magnetic force between any two electron-magnets in neighbouring atoms and, hence, the gravitational force F is proportional to G x m1 x M2 (where m1 and M2 represent the electron count of neighbouring atoms).

electricity gravity and magnetism

three sides of the same coin

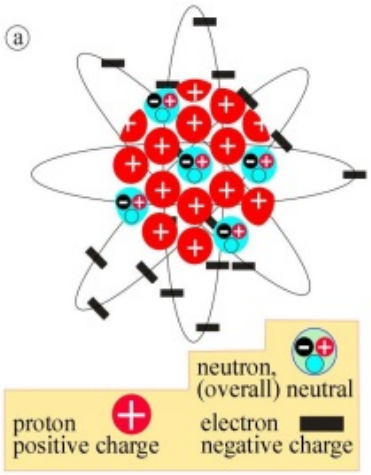
Contents

How Gravity Works

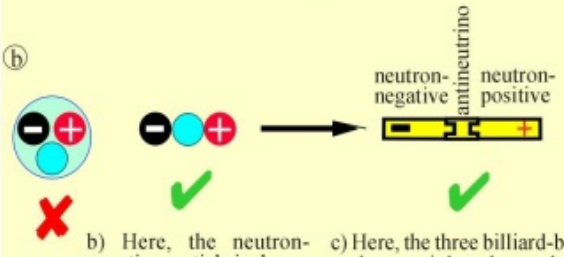
Orthodox Science does not understand the force that causes atoms to attract each other—because scientists do not understand the nature of the force, or the nature of the atom.

The accepted Model of the Atom

The accepted model of the atom (*right*) recognises that complex atoms are made of electric positive charges, protons (shown in red), electric negative charges (black), and neutrons (blue). The neutrons have no overall electrical charge but are known to be made of ½ of a proton, ½ of an electron and a neutral particle sometimes referred to as the 'antineutrino'. But this model *cannot* be correct because it raises three crucial questions; 1. Why—given that positive repels positive—do the positive charges simply not just spring apart? 2. Given that positive attracts negative, what stops the orbiting negative charges from being sucked-in to the positive charges in the nucleus? and, 3. What stops the ½ proton and the ½ electron inside the neutron from being drawn together and annihilating each other?

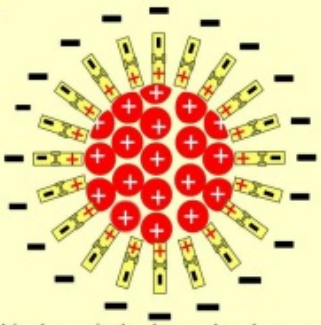


So what makes the complex atom stable (I) ?—the new atom



b) Here, the neutron-negative particle is shown separated from the neutron-positive particle by the neutron-neutral particle (the antineutrino) using the billiard-ball-style convention.

c) Here, the three billiard-ball-style particles have been replaced with a tiny positive battery-like symbol and a tiny negative battery-like symbol that are kept apart by the neutral anti-neutrino. This new representation will from now on, herein, be referred to as the 'spiked-neutron'.



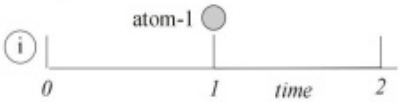
d) In this theoretical scheme the electrons and protons are kept apart by the spiked-neutrons. The positive pole of each spiked-neutron is embedded in the mass of protons contained in the nucleus. The neutron-positive poles push against the positive protons preventing them from springing apart. The neutron-negative poles repel the electrons preventing them from getting closer to the nucleus. The spiked-neutrons act like springs, forcing-out the electrons and forcing-in the protons.

Supporting evidence: Researchers, at the Hahn-Meitner Institute, Berlin, announced that 'neutrons behave like compass needles' (Science Daily, 31.3.2008)

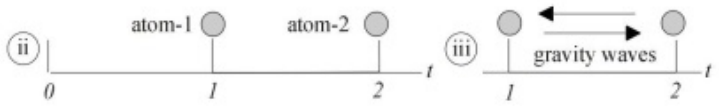
What's the nature of the force?

Isaac Newton defined Gravity as 'the force between 2 bodies' [atoms]—although he never understood what caused it, how it worked, or where it came from. c) However, when we recognise that the Universe began with just 1 atom, it becomes clear that *the force of gravity must travel*. This means that each atom must give-off some form of energy. The only energy known to travel through space is electromagnetic energy, radio waves.

c) Before the creation of the Universe, at time zero, no physical atoms existed. Then, a moment later, at time interval *1*, the first atom, atom number 1, must have appeared.



i) At *time-1* gravity could not exist because only 1 atom exists, and Newtonian gravity is the force between 'two' atoms.

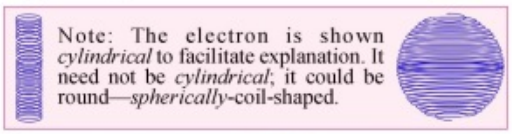


ii) At *time-2* atom-2 appears and gravity exists. Thus, a gravitational force must *travel* from atom-1 to atom-2, and from atom-2 to atom-1, between time intervals *1* and *2*. iii) This means that gravity must *travel* to establish itself between the atoms.

figure 1.

But how could an atom give off radio waves?

In 1831, Michael Faraday demonstrated that when a coil is swiped through a magnetic field, an electric field [a voltage] is produced across the coil. The corollary is also true; whenever a coil is swiped through an electric field [a voltage] a magnetic field is produced [induced] into the coil. In order to make the atom stable, it was firstly necessary to change the shape of the neutron. In order to enable a gravitational mechanism, we must now change the shape of the electron—into a coil-shape.



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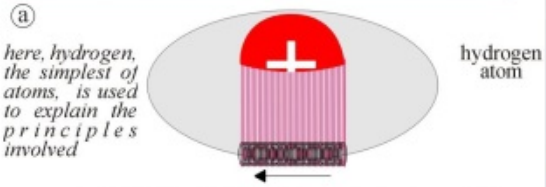

a) An electric field subsists between the orbiting negative electron and the positive proton. The amount of electric field contained in the space between the particles is known as its 'Capacitance'.

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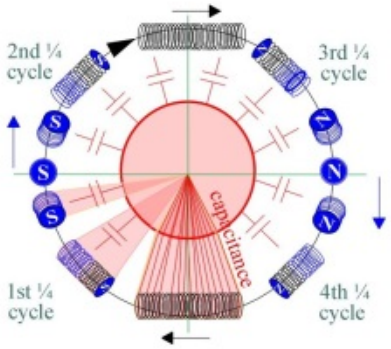
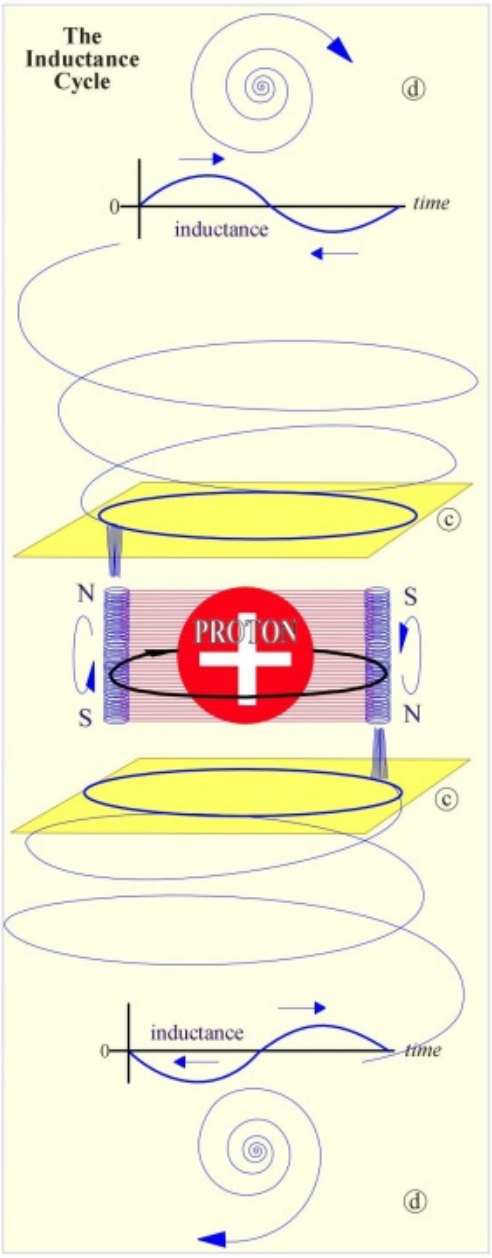
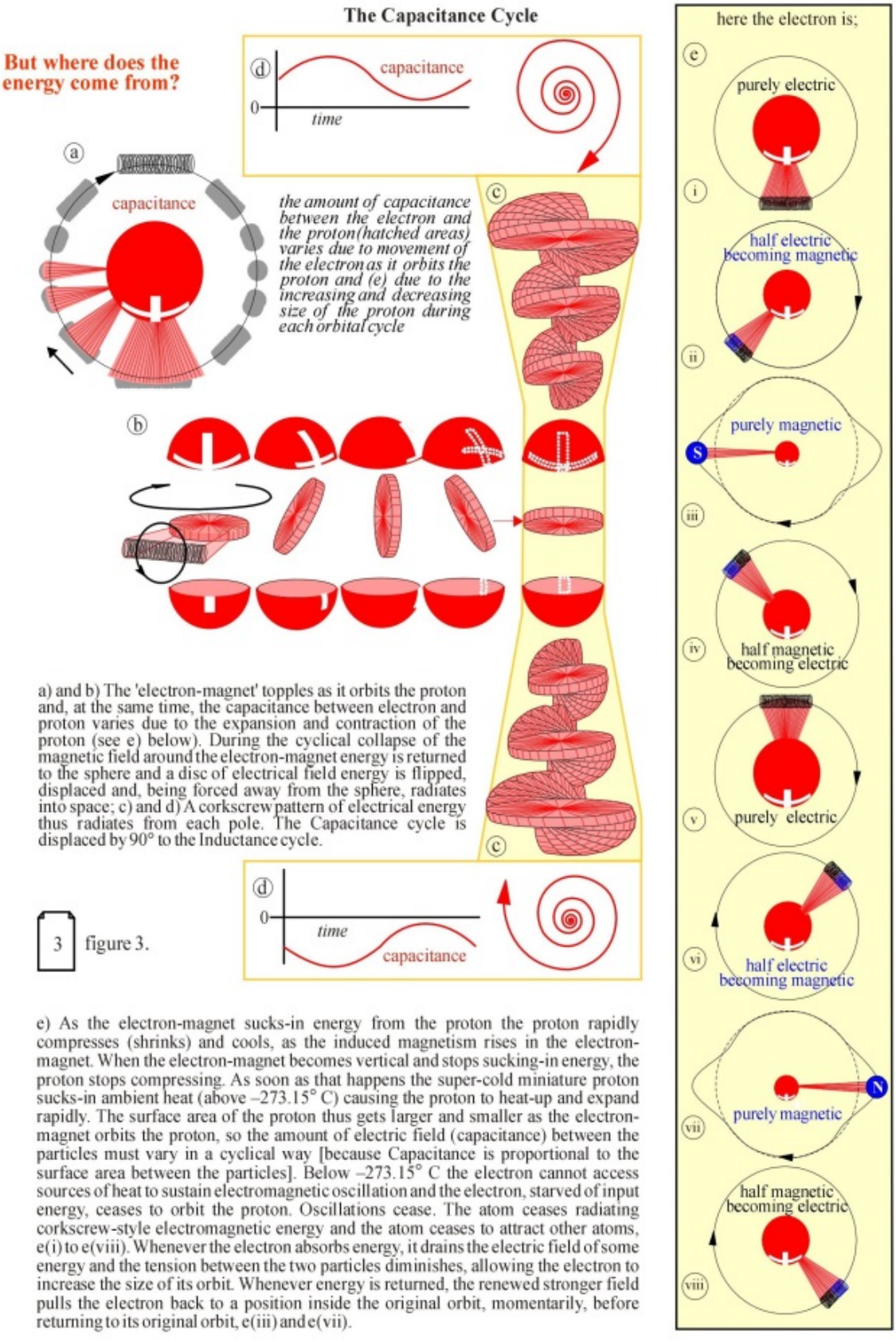


b) As the electron slices through the electric field, a magnetic field is induced into the electron. Because an electric field and an associated magnetic field are always displaced by 90°, the induced magnetic field parries against the associated electric field causing the elevation of the electron to twist to a more vertical position. Once the electron becomes vertical the coils of the electron no longer slice through the electric field. But the electron continues to spin through its own inertia and as it twists to a more horizontal elevation it once again begins to slice through the electric field. More magnetism is again induced into the electron during the second quarter cycle—at the same time as the magnetic field uploaded during the first quarter cycle begins to collapse. The magnetic field around the electron [although it should now be referred to as an 'electron-magnet'] is thus pushed-out into space; it 'radiates' into space. The electron-magnet changes direction as it slices through the electric field during quadrants 3 and 4, thus the associated magnetic field around the electron-magnet reverses, relative to the first and second quarter cycles.



The electromagnetic interaction between the particles causes the electron-magnet to spin once [through 360°] like the opposing blades of a windmill, during each orbit of the proton. c) and d) It can be seen that the electron-magnet radiates helically polarized (corkscrew-style) magnetic energy from the equatorial region to the polar regions. c) Radiation from the northern sector is displaced by 180° from radiation from the southern sector.

figure 2.



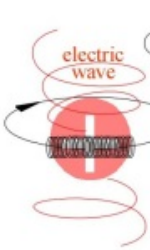
a) and b) The 'electron-magnet' topples as it orbits the proton and, at the same time, the capacitance between electron and proton varies due to the expansion and contraction of the proton (see e) below). During the cyclical collapse of the magnetic field around the electron-magnet energy is returned to the sphere and a disc of electrical field energy is flipped, displaced and, being forced away from the sphere, radiates into space; c) and d) A corkscrew pattern of electrical energy thus radiates from each pole. The Capacitance cycle is displaced by 90° to the Inductance cycle.

 figure 3.

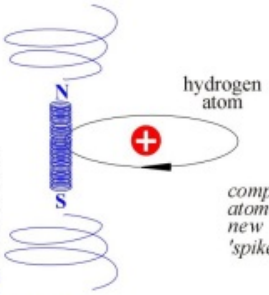
e) As the electron-magnet sucks-in energy from the proton the proton rapidly compresses (shrinks) and cools, as the induced magnetism rises in the electron-magnet. When the electron-magnet becomes vertical and stops sucking-in energy, the proton stops compressing. As soon as that happens the super-cold miniature proton sucks-in ambient heat (above –273.15° C) causing the proton to heat-up and expand rapidly. The surface area of the proton thus gets larger and smaller as the electron-magnet orbits the proton, so the amount of electric field (capacitance) between the particles must vary in a cyclical way [because Capacitance is proportional to the surface area between the particles]. Below –273.15° C the electron cannot access sources of heat to sustain electromagnetic oscillation and the electron, starved of input energy, ceases to orbit the proton. Oscillations cease. The atom ceases radiating corkscrew-style electromagnetic energy and the atom ceases to attract other atoms, e(i) to e(viii). Whenever the electron absorbs energy, it drains the electric field of some energy and the tension between the two particles diminishes, allowing the electron to increase the size of its orbit. Whenever energy is returned, the renewed stronger field pulls the electron back to a position inside the original orbit, momentarily, before returning to its original orbit, e(iii) and e(vii).

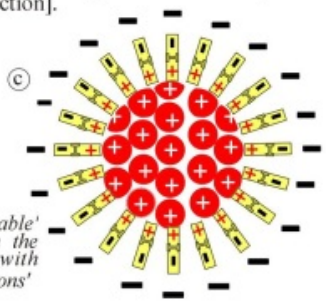
How do corkscrew-style electromagnetic radio-waves affect other atoms?

Gravity requires that every atom attracts every other atom in every different direction. Hence, for a gravitational mechanism to be enabled by corkscrew-style radiating waves three conditions must be met: 1. All hydrogen atoms throughout the Universe must be randomly orientated. 2. Corkscrew-style radio-waves from a hydrogen atom must *not* interfere with corkscrew-style radio-waves from other hydrogen atoms, and 3. If corkscrew-style radio-waves from the hydrogen atom are the prime-mover in the gravitational mechanism then other [non-hydrogen] atoms *must* be affected [in some way *switched-on*] by the corkscrew-style radio waves from the hydrogen atom [in order to satisfy Newton's observations that bodies in alignment, like the Sun and Moon, pull in the same direction].

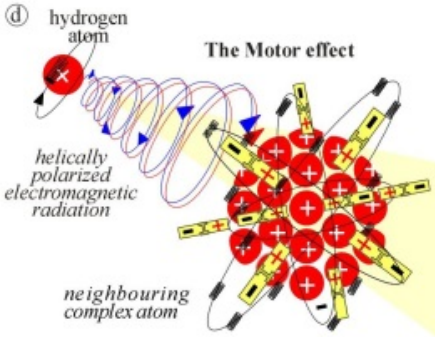


a) and b) Hydrogen is electrically and geometrically symmetrical, allowing it to spin axially and radiate corkscrew-style radio waves—helically polarized electromagnetic waves.

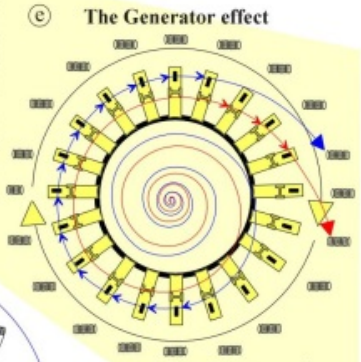




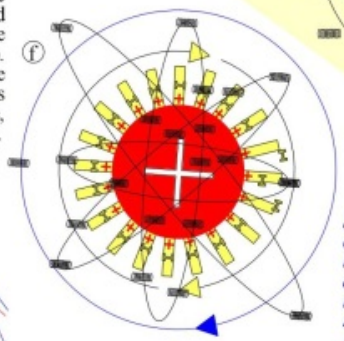
c) In this theoretical scheme the electrons and protons are kept apart by the spiked-neutrons. The positive pole of each spiked-neutron is embedded in the mass of protons contained in the nucleus. The neutron-positive poles push against the positive protons preventing them from springing apart. The neutron-negative poles repel the electrons preventing them from getting closer to the nucleus. The spiked-neutrons act like springs, forcing-out the electrons and forcing-in the protons.



d) and e) However, when helically polarized electromagnetic radiation from the hydrogen atom bombards more complex atoms it acts on the negative charges of the neighbouring atom causing the nucleus and the electron-cage to spin axially. The mass of the electron is twice that of the neutron-negative charge, hence the torque on the electron-cage is twice that on the neutron-negative charges in the nucleus. Thus, the electron-cage spins faster than the nucleus.

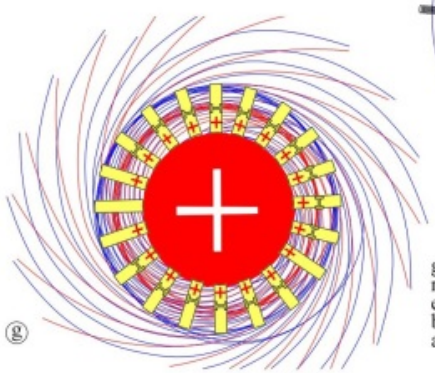


f) Orbiting electron-magnets [electrons], in axially spinning atoms, generate helically polarized electromagnetic energy that radiates from the atom. The power output of the atomic generator is proportional to the differential speed between the nucleus and electron cage and also proportional to the number of orbiting electrons (atomic mass). Elements with more mass thus generate more electromagnetic energy which pulls them towards the Earth with more force, making them more difficult (heavier) to lift.



cross-section of new model with spiked-neutrons

Supporting evidence: 'when electrons are bombarded by helically polarized radiation they align themselves—like compass needles—and follow the corkscrew spin of the waves' [Nature, 2009; 458 (7238):610DOI:10.1038.07871 (persistent spin helix)].

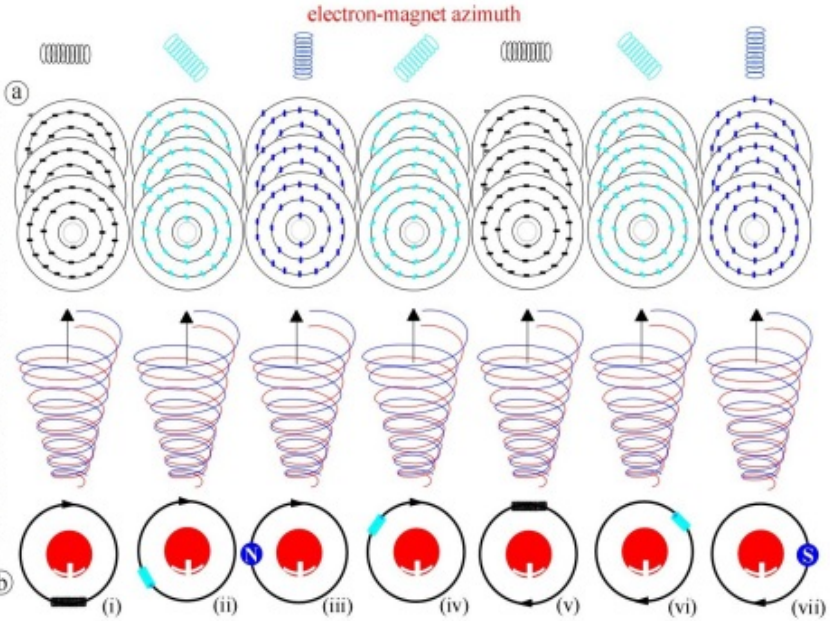


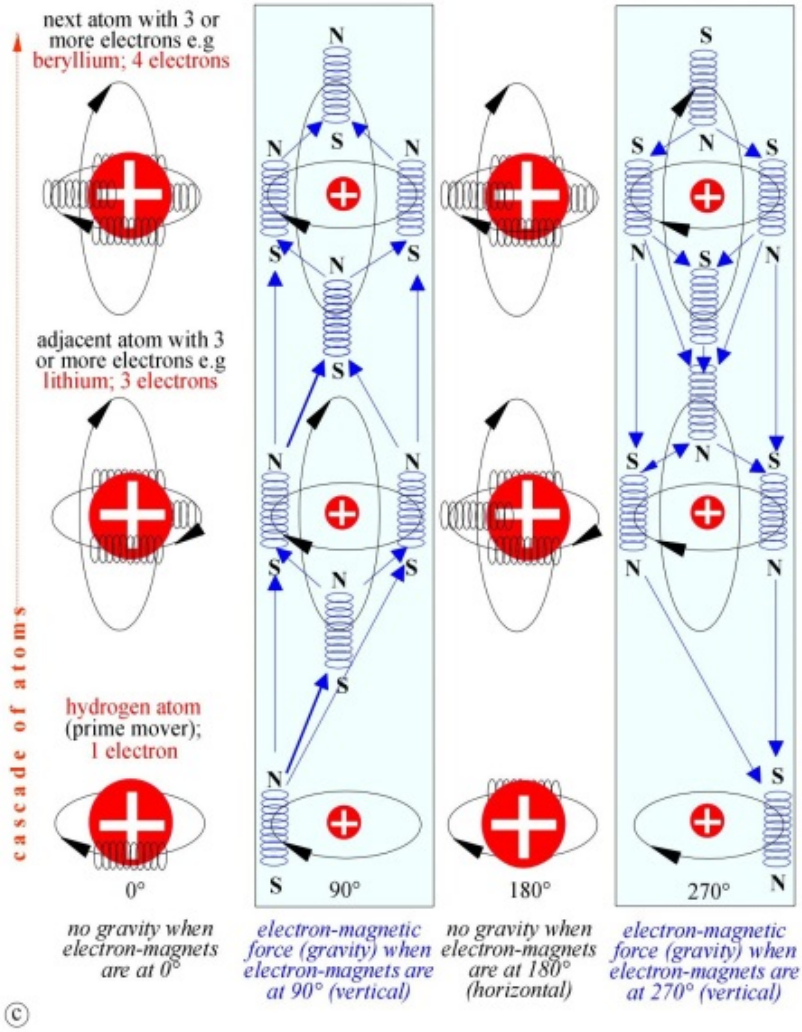
g) The neighbouring atom now radiates helically polarized electromagnetic radiation that bombards other neighbouring atoms in alignment.

figure 4.

Summary; Hydrogen synchro-spin

b) As the electron-magnet orbits the hydrogen proton it changes from a purely electric particle (shown in black) to one that is half electric and half magnetic (light blue), and then to one that is purely magnetic (deep blue). At the same time it radiates helically polarized electromagnetic energy into space that synchronizes the spin of electrons in nearby atoms causing them to spin—like windscreen wipers rotating through 360°. [*Seven consecutive snapshots of the electron-magnet orbiting the hydrogen proton are shown; time i, ii, iii, iv, v, vi and vii*].





no gravity when electron-magnets are at 0°

electron-magnetic force (gravity) when electron-magnets are at 90° (vertical)

no gravity when electron-magnets are at 180° (horizontal)

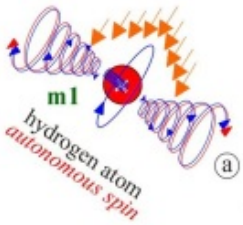
electron-magnetic force (gravity) when electron-magnets are at 270° (vertical)

c)

How gravity works

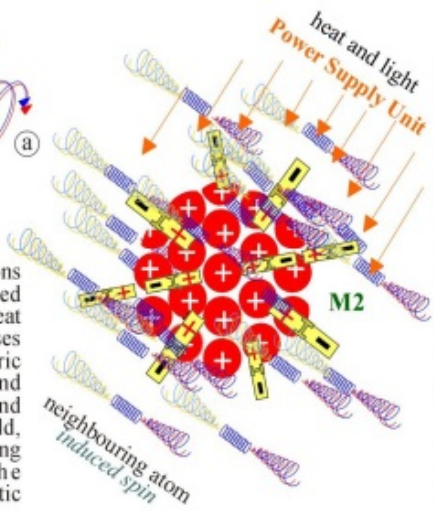
c) A vertical cascade of atoms; helically polarized electromagnetic energy (not shown here) from the hydrogen atom bombards the lithium atom synchronizing the spin of its electron-magnets with that of the hydrogen electron-magnet. The lithium electron-magnets then spin axially and radiate helically polarized electromagnetic radiation that bombards the beryllium atom, synchronizing the spin of its electron-magnets with that of the hydrogen atom. The beryllium electron-magnets then spin axially and the beryllium electron-magnets radiate helically polarized electromagnetic energy etc. It can be seen that, in a cascade of atoms, helically polarized electromagnetic radiation from the hydrogen atom synchronizes the spin of all electrons in atoms in alignment with the hydrogen atom. As a result the magnetic moments of orbiting electron-magnets in a cascade of atoms attract each other. This is the force of gravity. The electron-magnetic moments alternate during each orbital cycle of the hydrogen electron-magnet, hence gravity cannot be measured.

figure 5.



The Gravitational Constant [G]

a) The energy to sustain oscillations in the hydrogen atom is obtained from ambient heat. Ambient heat sucked-in by the proton causes changes in the amount of electric field [with the expansion and contraction of the proton] and changes to the magnetic field, caused by the toppling orbiting electron-magnet. G is the 'instantaneous alternating magnetic force between any two electron-magnets in neighbouring atoms'.



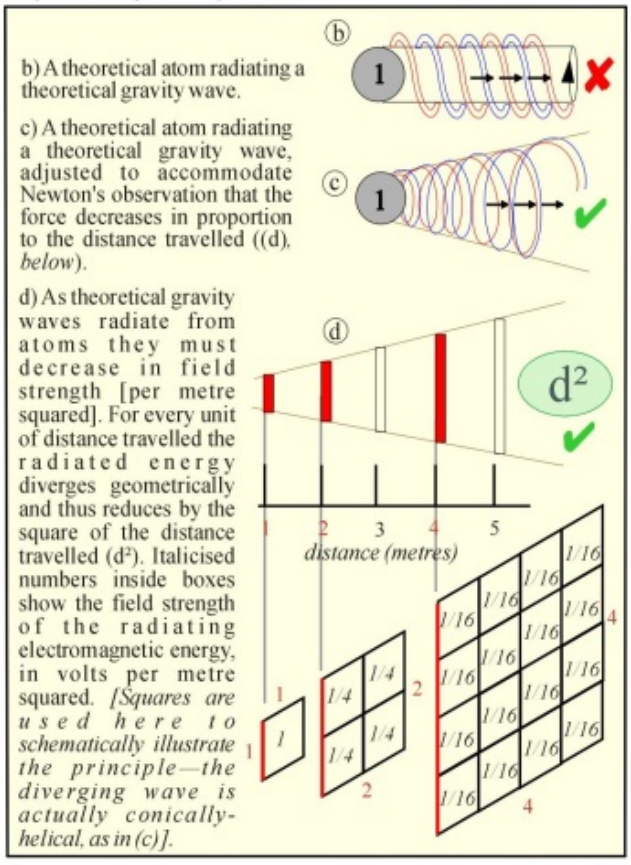
Derivation of Newton's equation

The magnetic force between any two magnets is proportional to the magnetic force of one magnet multiplied by the magnetic force of the second magnet. The magnetic force between two atoms can therefore be calculated by multiplying the electron-magnetic force of one electron-magnet [G, the gravitational Constant] by the number of electron-magnets in atom 1 (a proportion of the mass of atom 1, m1) multiplied by the number of electron-magnets in atom 2 (a proportion of the mass of atom 2, M2); or as Newton said, the force (F) can be calculated by multiplying G [the magnetic force of 1 electron-magnet] multiplied by m1 x M2. (b) – (d) explain why the result must be divided by the distance (between the two atoms) squared.

b) A theoretical atom radiating a theoretical gravity wave.

c) A theoretical atom radiating a theoretical gravity wave, adjusted to accommodate Newton's observation that the force decreases in proportion to the distance travelled ((d), *below*).

d) As theoretical gravity waves radiate from atoms they must decrease in field strength [per metre squared]. For every unit of distance travelled the radiated energy diverges geometrically and thus reduces by the square of the distance travelled (d^2). Italicised numbers inside boxes show the field strength of the radiating electromagnetic energy, in volts per metre squared. *[Squares are used here to schematically illustrate the principle—the diverging wave is actually conically-helical, as in (c)].*



Hence Isaac Newton's equation for the force of gravity; where the force is proportional to the masses (**m** & **M**) of the two attracting bodies and the strength of the force decreases inversely with the square of the distance between them (d^2).

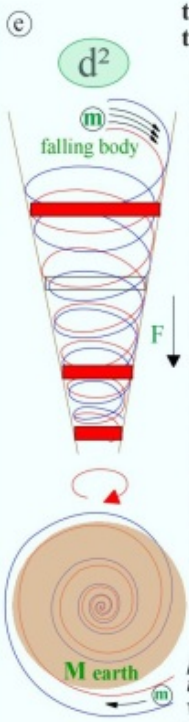
$$F = GmM/d^2$$

G is Newton's gravitational Constant

6.672×10^{-11} N m^2 kg^{-2}

—the instantaneous alternating magnetic force between any two electron-magnets in neighbouring atoms

Why objects accelerate to Earth in proportion to d^2



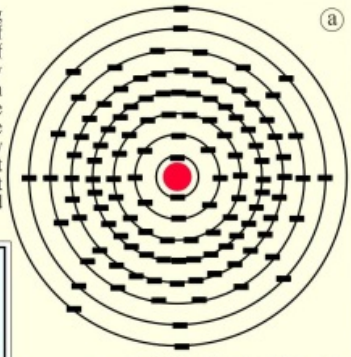
e) The frequency of the helically polarized EM radiation from the Earth remains constant. However, as m approaches M the spiraling EM radiation accelerates the differential rotation between each atomic nucleus and electron cage of which m is made. As a result the 'relative' atomic frequency increases and hence the output of the 'atomic generator' increases, increasing uniformly the attracting EM Force between m and M in accordance with a square-law scale as m proceeds along the EM spiral. M thus attracts m with square-law [d^2] uniform acceleration.

[m is shown spiralling towards M with the EM wave stationary but, in actuality, m approaches M in a straight line as the wave spirals across m]

figure 6.

Proof that the electron is a coil-shaped electron-magnet—and electron-shell architecture explained

a) Schematic showing the theoretical maximum numbers of electrons filling the maximum number of available shells in an atom. The maximum number of electrons in the shell closest to the nucleus is 2. The maximum number of electrons in the next outermost shell/subshell is 8, followed by shells/subshells containing a maximum of 18, 32, 32, 18, 8, 2. It can be seen that, theoretically, the heaviest atom (illustrated) contains 120 electrons. The number of electrons orbiting an atom is usually balanced [but there are exceptions] with the same number of protons in the centre and (in our 'new atom') the same number of spiked-neutrons protruding from the centre (not shown). This also means that there are a maximum of only 120 different fundamental materials (elements). The heavier ones are more '*mass*ive' and hence said to contain more *mass* (electrons, protons and neutrons).



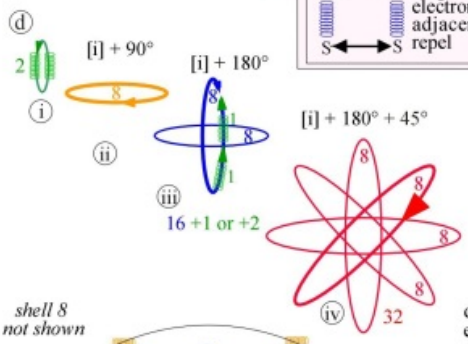
orthodox Science does not understand why the atom is structured the way it is—the reasons are given below

b(i – iv) illustrate the electric – magnetic tipping point of the orbiting electron-magnet [EM] at 45° intervals: bi) From 45° – 90° (1/8 of the time) the magnetic field of the EM rises [and it is more magnetic than electric]. bii) From 90° – 135° it falls [but is still more magnetic than electric]. b(iii – iv) The same thing happens between 225°– 270°, and from 270° – 315°, but with opposite magnetic polarity.

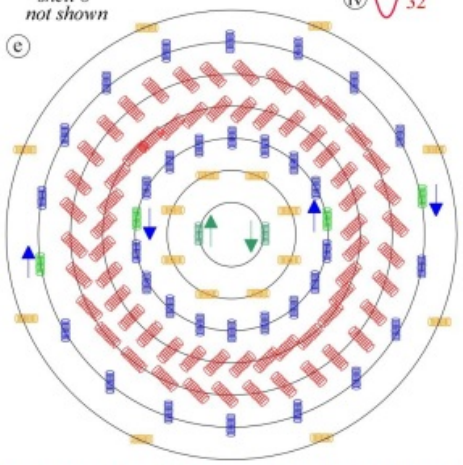
c
i
N ◄► N
S ◄► S
when a N-S electron-magnet meets a N-S electron-magnet in an adjacent shell they repel

ii
SN
NS
when a S-N meets a N-S the two coalesce and the pair can no longer remain in the shell. Only atoms with a [maximum] sequence of 2.8.18.32.32.18.8.2 survive.

c(i – ii) when a northsouth [N-S] EM meets a northsouth [N-S] EM the two repel each other, and when a northsouth [N-S] meets a southnorth [S-N] the two attract, stick together, and exit the host shell. Hence, as subatomic particles accrete into atoms, EMs inside shells/sub-shells must be separated by at least 45° to avoid annihilation and EMs in one shell must be separated by at least 45° from those in adjacent shells. Hence the constraint of up to 8 EMs per shell/sub-shell [8 x 45° = 360] and the requirement for different shell/sub-shell planar orientations.



shell 8 not shown



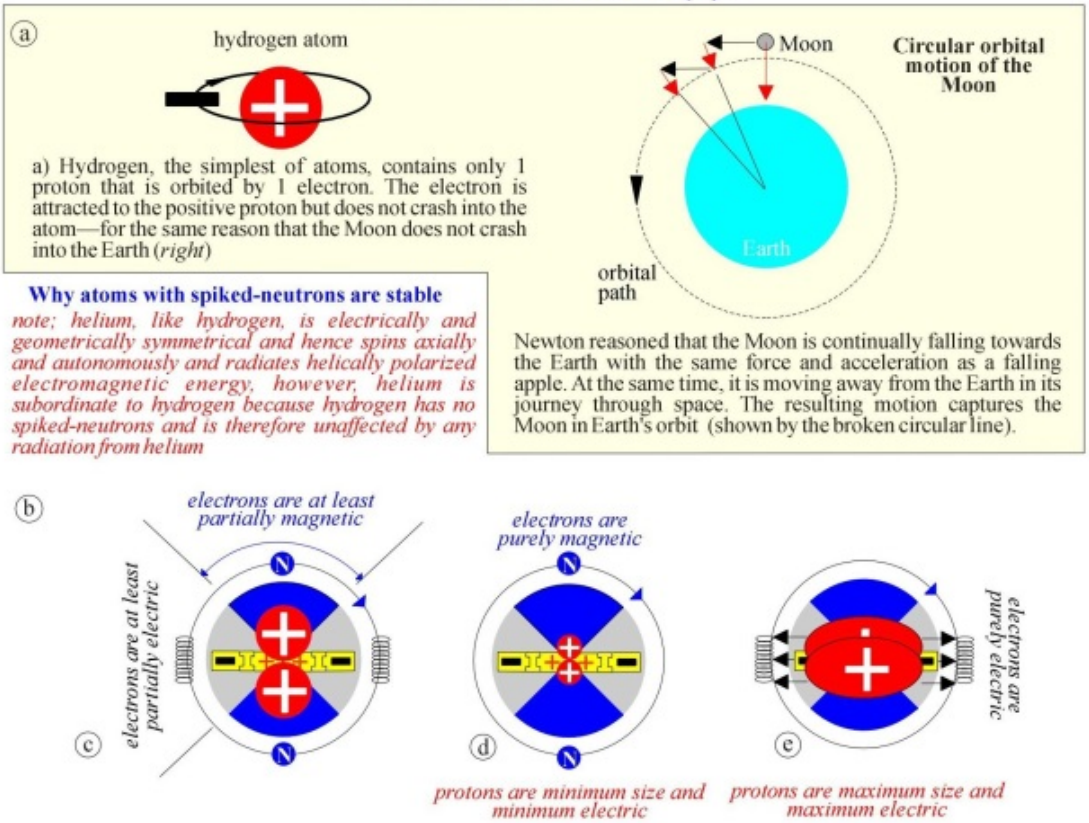
schematic only—EMs are actually synchronized by gravity waves and [instead] the inclination of each shell/sub-shell is progressively offset as shown in d(i – iv)

d) and e) As a general rule orbital shells [or sub-shells of equidistant radii] cannot sustain more than 8 EMs because of considerations set down in b(i – iv) and, to avoid magnetic conflict *between* shells/subshells, the plane of successive shells/subshells must be progressively offset by at least 45°. However, shells 3 and 6 can sustain up to 2 more EMs in the scheme proposed in (d) and (e) because the magnetic moments from the 2 EMs in shell 1 (being equal and opposite to 2 EMs in shell 3) cancel, and magnetic moments from 2 EMs in shell 3 cancel those of 2 EMs in shell 6, allowing those shells/sub-shells to sustain up to 18, rather than 16, EMs.

here, (left) to further illustrate the relationship between magnetic moments, EMs in successive shells are shown reorientated: in shell 2 by 90°, in shell 3 by a further 90°, in shell 4, by a further 45°, in shell 5 by a further 90°, in shell 6 by a further 45° and in shell 7 by a further 90°. It can be seen that no magnetic conflicts occur in such a scheme and that the 2 EMs in shell 1 (green) influence the magnetic moments of those in shells 3 and 6, so that those shells can sustain up to 2 more EMs (green) than generally possible. This defined structure confirms that the electron must be coil-shaped and that it behaves as an electromagnetic particle

figure 7.

What makes the atom stable (II)?



plan view of a helium atom with 2 electrons, two protons and 2 spiked-neutrons. The electron-magnets alternately possess an increasing and decreasing magnetic field that alternates with an increase and decrease of atomic capacitance. The two forces unite in self-sustained oscillation. The spiked-neutrons prevent the electric-electrons from crashing into the atom

Figure 5c) showed how the electron behaves as a permanent magnet at 90° and 270° from its starting position and how it does not possess a magnetic field at 0° and 180°. The electron is magnetic therefore during only half of the time it orbits the nucleus. We note further that, because a purely magnetic field and a purely electric field are displaced by 90°, a particle cannot be both purely electric and purely magnetic simultaneously, the two are mutually exclusive. It follows that if an electrically negative electron possesses magnetic qualities for half of the time it cannot be simultaneously electrical during that same part of the cycle. The electron, therefore, can only be considered as having electrical properties for half of the time. c) Shows the electric and magnetic possibilities, in plan view, of two electrons as they orbit the nucleus of a helium atom. d) When the electrons are each purely magnetic they cannot be attracted to an electric particle (the proton). Hence the magnetic electron is not attracted towards the nucleus during the quadrants shaded in blue. e) 90° later, the electron is maximum electric, but the charge on the nearby neutron-negative prevents them moving closer to the nucleus. Thus, the electrons cannot be sucked-into the nucleus. b) We also note that during the blue quadrants the protons, drained of energy, physically shrink, compress rapidly, release heat and cool. Hence the capacitance between electrons and protons reduces during the blue quadrants [because capacitance varies with distance between particles and the surface area of each particle]. In regard to the proton; during the blue quadrants, when the electron is maximum-magnetic, the positive electrical charge of each proton (and the force of repulsion between protons) is minimal, hence the protons have little propensity to move apart during the blue quadrants. e) As the electrons move into the grey quadrants the protons begin to suck-in ambient heat and rapidly expand. As the protons expand the distance between them and the electrons reduces and their surface area increases, increasing the amount of capacitance between them. It can thus be seen that when the electric particle is maximum-electric, the proton is also maximum-electric and attraction between the electrons and protons is maximum. The protons are thus stretched between the pair of electrons and have no propensity to spring apart; which explains why the maximum, and minimum, number of electrons in the first orbital shells of atoms containing spiked-neutrons must always be 2.