

# FAQ: EPEMC & MIMS

Also, PEMS, HEGEME, and other obscure acronyms related to EPEMC research

Vers. 1

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## ABSTRACT

This FAQ regards discussions of frequent questions about the Extended Plasma-electromagnetic Cosmology as well as the Membranous Interface of Material & Spiritual. Furthermore, shorter information is given about the other major acronyms in the EPEMC papers.

It will be helpful for the reader to review **all the material** not only at the Academia page<sup>1</sup>, but in the Electric Universe Memo<sup>2</sup> & EU Primer<sup>3</sup> (single page) documents.

*Keywords* - plasma cosmology - electromagnetism - mythology - material - spiritual - philosophy

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<sup>1</sup> <https://uky.academia.edu/shifucareaga>

<sup>2</sup>

[https://www.academia.edu/40069702/The\\_Electric\\_Universe\\_Memo\\_For\\_Plasma\\_Electromagnetic\\_and\\_Diffusion\\_Catastrophic\\_Cosmologies\\_EPEMC\\_An\\_Electric\\_View\\_Community\\_Publication](https://www.academia.edu/40069702/The_Electric_Universe_Memo_For_Plasma_Electromagnetic_and_Diffusion_Catastrophic_Cosmologies_EPEMC_An_Electric_View_Community_Publication)

<sup>3</sup> [https://www.academia.edu/50897376/Electric\\_Universe\\_Primer](https://www.academia.edu/50897376/Electric_Universe_Primer)

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# Frequently Asked Questions

## 1. What is EPEMC?

To answer this, we must first answer what is PEMC? Plasma-electromagnetic Cosmology is a multi-thousands of years old cosmology dating back to ancient Egypt, China, and more recently the Renaissance starting with Gilbert's "De Magnete" and various discussions of "electricity" (charge mostly). Plasma itself was discovered in the early 1900s. The cosmology was named officially in 1927 to 1928, around the same time as the Big Bang. It was only needed to be named as a response to the competing quantum and relativity based cosmologies. Quantum has always had more in common with PEMC, as has Special Relativity, which was first explored by Henri Poincare. Mass in quantum is measured in electronVolts. This is therefore, not at all controversial. The cosmology is accepted by the IEEE.

EPEMC is an open-sourced cosmology. E means "Extended" meaning that the cosmology - in its proof of its own versatility and substantiality, with evidence, of being an actual cosmology - is used to apply into other areas:

- a. Astronomy
- b. Archaeology
- c. History
- d. Geology
- e. Mathematics
- f. Biology
- g. Medicine
- h. Philosophy
- i. Religion & theology
- j. Economics
- k. Sociology
- l. Psychology
- m. Socio-political topics
- n. Etc.

## 2. What is MIMS?

The Membranous Interface between the Material & Spiritual [realms]

- a. A philosophy
- b. The MIMS is a single instance, could be an invention, tool, idea, project, etc. It is the means by which the individual attains material happiness, via their spiritual sources (psychological or otherwise).

## 3. Why is it a "membranous interface"?

In electrical cells, there is a gradient created between positive and negative, and there is usually a conductor or a dielectric material lying between. Similarly, in a semiconductor, the silicon dioxide is graded to act as an insulator unless voltage exceeds a breakdown, then it conducts between the inlet and outlet of the diode. Therefore, the author envisions an unknown data-based medium which is, nevertheless, a membrane through which the Material & Spiritual realms interact.

## 4. What is the purpose of this philosophy?

To explore (via the EPEMC) how mankind "gets along" in the Universe, by studying the Universe's natural MIMS and mankind's manmade MIMS, to see if there are ways to engineer better and better MIMS, or predictive MIMS

(MIMSOLOGY), for the creation of improved conditions for mankind. A truly scientific endeavor. Some philosophies are philosophical for the sake of philosophy. But MIMS takes from the PEMC in order to give back to the PEMC, or one of the “three Sciences”.

5. What are the “three Sciences”?

- a. Supreme Science - those based on Laws of Nature (Physics or “P power”)
- b. Sacred Science - those based on spirit, psyche, theology, or the “L power”, or consciousness/awareness
- c. Secret Science - MIMScal sciences designed to study arcane, or hidden mysteries, usually of semi-mystical subjects like optics, medicine, geomancy, astrology, magick, etc. But it can be even in harder sciences like chemistry, especially when talking about the core of atoms, quantum realms, etc.

6. What is the “Force”?

The Plasma-electromagnetic Force (PEMF) is the Unified Aether Field (UAF), a Unified Field Theory (or UF for short) which accounts - admits to - the aether in a way that conforms to observed science. Although General Relativity has “evidence” it is a leap through the PEMF, literally, to come to the conclusion that there is a space-time Aether. And while Quantum proposes via the “Planck Distance” that there is a sort of “quantum Foam”, no one has observed that Aether. And of course, no one has found a specific luminiferous aether, nor has any evidence ever been found for strings, branes, dark matter, dark energy, or the like. Void energy (0 point) is not an aether, as it is part of the “spongy counter-space” (SCS), and it may in fact be the opposite of Aether. Most cultures tend to think so. But the PEMF is the unification of the real, so far measured Aether - the “sea of cosmic dust, baryons, and charge” - with the traditional, and as yet incomplete electromagnetic force, on all scales, no matter the phenomenon, effect, or observation.

7. What is the “UAF”?

As a unified field based on the movement of the “sea of charge”, it will include such effects, studies, and scales as follows:

- a. Plasma behaviors
  - i. Liquid, Gaseous, Crystalline (Liquid Metallic)
  - ii. Ultrahot, Cold and Ultracold
  - iii. Dark vs Glow mode
  - iv. Flow vs arc mode
- b. Van Der Waals Forces
- c. Van Allen Belts
- d. Superconductivity
- e. Bose-Einstein Condensates
- f. Cavitation
- g. Levitation
- h. Quantum spin & Quarks
- i. Quantum electrodynamics/chromodynamics
- j. Thermodynamics
- k. Newtonian Mechanics
- l. Chemistry
- m. Biefeld-Brown Effect
- n. Circuits
- o. Etc.

## 8. What is the “SCS”?

The counter space is the opposition, or polar companion, to the Living Universe, which is measurable and observable. So in a tiny matrix of [0 1], the SCS is the gap between the two. While the gradient of 0 to 1 causes energy dynamics to create flux, via pressure or tension, the gap is ignored, though present. This counterspace, absorbs our Order and increases our Entropy. As its own (currently unknown) anatomy dictates, when it achieves Order we become chaotic. However, clearly it discharges that Order in its own entropy, which becomes our energetic Order sources, such as on the Planck Distance level, or when light creates matter, or particles and antiparticles emerge from the “nothing” in experiment, or at Bostickian Super Plasmoids (BSP) currently termed “black holes” (a sure misnomer given what we observe nowadays). This gives rise to what we call “two way entropy” (2WE) or “dual direction entropy” (DDE).

## 9. What is a “BSP”?

Bostick observed plasmoids in a lab in 1957, fully 10 years prior to “black hole” theory (BHT). The fact is that BHT involved division by zero. This is not the case with plasmoids, which in general are asymmetric and fully real. They show the shapes of the galaxies, as do Langmuir and Peratt observations. But the plasmoids display many complex behaviors. A BSP is a toroidal electro-dynamical structure, such as M87, and also asymmetric (unlike classical black holes). As opposed to BHT, in BSP we *expect* the emergence of radio, x-ray, gamma rays and particles, “gas”, “jets”, magnetism, and a current flow and non-neutral charge. These are all modern observations of SGR A\*, M87, and other various AGN. So classical BHT has collapsed, and in media has been replaced by various sized, varying behavior “black holes”. While those have holes, there is no object at the center to be called something, anymore than at the center of your glazed donut. To name the hole and ignore the donut is truly a mistake in Standard Model (Big Bang+BLT) cosmology! In a BSP, the hole is just a hole.

## 10. What is “2WE”/“DDE”?

The second direction of entropy in the cosmos is an inference from the issue of continuity, thermodynamics, conservation, and logic, on the nature of entropy in the SCS.

The SCS is not observed, but it is not a separate “dark matter” that takes up similar space, and is in a ratio to the Living Universe, as in SM physics. Instead, it is literally the polar adjacent. This 2WE is what empowers the “void energy” or “Zero-point energy” by proxy. It “bubbles” up through the Aether.

## 11. What is the Aether in EPEMC?

The “sea of charge” is the physical aether. As light need not propagate through any other medium, then it is supposed that EMF is its own aether. This is the “spiritual” aether, in PEMC. In EPEMC we must differentiate or indeed add to this, that spiritual may mean more (as yet it is unexplored) than the “digitized” or “materialized” spirit, as in psychological and undifferentiated arenas. But the spiritual aether of PEMC, the Potential-Possibility-Probability Cloud (PPPC), is mediated wholly and unapologetically, by the sea of charge and not the Divine. Indeed the motion of said energy constitutes - in PEMC - the Divine itself, whether discussing God, gods, angels, daemons, or spirits and ghosts which are some form of plasmoid, and quite documented through IR and thermography studies, as well as on video in “low light” mode. This may seem limited to some who study the altstream, seeking an escape from the Descartian, Freudian, Aristotelian mainstream. But, after all, Science has limits and requirements. Leastwise, so long as the world’s #1 MIMS - the Scientific Method - is the dominating champion in the ring of history.

12. What is the “PPPC”?

- a. Potential, as in not kinetic, actualized, or currently formalized.
- b. Possibility, set to either 0 or 1
- c. Probability, on a scale of 0% to 100%
- d. Cloud, as in formless, in the Data of the Law of Conservation; ie - not condensed by the Actualization Process (AP)

13. What is the “AP”?

The Actualization Process is a sudden collapse of the PPPC into a singular resultant that the Law of Causality stamps into reality.

14. What is “PEMS”?

The Plasma-electromagnetic Sky is a poetic discussion of the interactions of the Spheres of Heaven (shells of current, voltage, charge, conductance and capacitance), and Spheres of Earth. It is best to review the paper for diagrams of the known shells or spheres, rather than list them all here. Not everything is a plasmasphere, there are other states of matter. Famously the Crust is a series of amalgams of crystals, solids, alloys, ores, etc.

15. What is the “HEGEME”?

The Hollow-Expanding-Growing-Electromagnetic-Earth is our home, part of the PEC, which is above the smaller circuits and below the SSEC, GEC, and SGEC. It is comprised of four conditions of geological expression (at least):

- a. “Hollow” - as in not a core of iron, but some form of fluid, perhaps Liquid metallic Hydrogen, or a ultradense or crystalline plasma, or heavy water, or HHO, etc.
- b. Expanding - physically changing radius, as shown in crustal data
- c. Growing - as in mass increasing, again shown in fossil records and gravity changes
- d. Electromagnetic - that is part of a greater circuit of energy flow

16. What is the “PEC”?

The Planetary Electric Circuit is the continual circulation of the flow of particles and energy-matter within itself, of the Earth. Same for other planets and moons. But on Earth we see Van Allen Belts, and other circulations in the various spheres, as well as within the earth the motion of iron and nickel ions, which will generate the magnetosphere of the planet.

17. What is the “SSEC”?

The Solar System Electric Circuit continuous circulation of solar wind, or particles, and re-circulating as per Lerner/Alfven, gives rise to an interaction between the sun and the planets.

18. What is the “GEC”?

The Galactic Electric Circuit is the continuous plasma electric flow within the galaxies, from AGN outwards, and also deep into the filaments such as our “local chimney.” It provides a constant “cosmic ray” or “intergalactic medium” which pushes against the solar wind/coronosphere.

19. What is the “SGEC”?

The Supra-Galactice Electric Circuit is the flow of plasma current, along Birkeland Currents, which are giant co-axial filaments with electricity and magnetism 90° out of phase but parallel, and counter-rotating. As it happens not only do the galaxies line up like “pearls on a string” but they rotate around the BC superstructures.

Apparently, like stars which get ejected from GEC filaments, occasionally quasars are ejected from galaxies as they rotate and become electrically stressed. These quasars, though touching, do appear to be much closer, as if the light itself is less tired. This is called “intrinsic redshift” (Halton Arp). It is, currently, unaccounted for in the SM physics, mostly because it is inconvenient, not because it is not known.

20. What is a Birkeland Current?

Please refer to the work of Kristian Birkeland, or Donald Scott. However, there are subjects like “jets” and “magnetic tunnels” and “giant coaxial cables” which will more or less expand the literature and article options for the reader.

21. What is the “Dark Matter Scatter”?

As SM cosmology fails, and cosmology’s crisis worsens, they will move towards a cosmology which works. The author predicted, and was vindicated, that they would begin stealing an electrical paradigm. Literature, and the author’s own papers shows this development. Since 2017, when Wiley published “Electric Currents in Geospace and Beyond,” There has been a continuous increase in this behavior. Now BHT, for example, shows not only charge and magnetism, but actual current measurements. AGN as well. Recently, it was admitted that stars have charge and electric fields, and current flow. The “scatter” is the running of all the cosmologists towards a better cosmology.

22. What is a “CDN”?

A Charge Distributive Network is a fractal circuit model of the channel (promo vasculature) and nerve pathways in the body, which helps explain physiology, pathophysiology, etiology, and general disease.

23. What is the “Magnetic Universe”?

As individuals tend to focus on portions, parcels, etc. of the PEMF, some adherents just tend to focus on one or another portion. Hence Electric Universe, Plasma Cosmology, and Magnetic-Current (no electricity) adherents. There are not many. But the author was able to account for much of their work in the PEMC.

24. What is the “Dionysian Irony”?

The complex need for the human psychology to scratch the itch of our “cultural DNA” by nearly experiencing death without dying, while also exploring the cataclysmic motifs and archetypes.

25. What is the “Electrothermal Vine”?

The ETV describes the continuous flow of energy-matter from the sun into the north and south poles of the Earth, which keeps the planet growing like a tomato on the vine. It is analogous to “solar forcing” but a richer concept and image. It is used in the explanation of electroquakes (earthquakes).

26. What is the “BPS”?

The Birkeland Polyphase Superweb describes a potential, as yet unreal, web of electrical signal data that is motivated in the plasmasphere and has increased distance and throughput via SSEC energy motion. This type of data throughput would allow for both energy exchange and data exchange as well. As Birkeland Currents allow for degradation by  $1/\sqrt{r}$  they are much more efficient over long distances.

27. What are “Perattian Thunderbolts”?

56, or 28-rayed plasma beams that blast down from the plasmasphere and are in the hydrogen bomb range of energy and power. The only certain example location at the moment is an octagon shaped site in Versailles, KY called “Big Sink,” but there are other large electrogeological cryptoexplosive sites.

28. What is “electrogeology”?

Various forms of electric excavation, deposition, formation, and transmutation of minerals and even elements, which are mediated via plasma events, electrical arcing or what is called electric discharge machining, or from cryptoexplosive electrocomets and bolides, which explode in airbursts.

29. What are “electrocomets”?

Comets which are in a charged state (possibly all of them?) probably post excavation of Mars, and other satellites of Shamash, Saturn, Jupiter, etc. They create large explosions, such as Shoemaker Levy 9 on Jupiter. Certain events such as the 330AD comet, the 1491AD comet, etc. have left behind vitrification and instant petrification of organic materials. Like thunderbolts, they may have caused some changes in carbon-14 values, leading to wildly different aging results, even among sibling lions, or mammoths in the same zone.

Blasts from thunderbolts and electrocomets have blown mammoths away, leaving only their feet stuck to the Earth (a hallmark of death by step potential). The best evidence of electrocomet cryptoexplosion we have yet is Hicks Dome, IL.

30. What are “plasmaglyphics” and “plasmascripts”?

Dr. Anthony Peratt, and others, made the first connections between plasmoids in lab and simulation, and rock art, earthwork, and hieroglyphics. There are a range of pictographs which are actually discernable plasmaglyphics, which appear to be the first inspired words of the gods to mankind. Many of these plasmaglyphics also became plasmascripts, or written formal languages (such as Chinese, Egyptian, Hebrew, RongoRongo, Etruscan, Coelbren, etc.)

31. What are “diameter ratios”?

Ratios are relationships between two numbers of the same dimension, such as length, or time, or energy, etc. The distances of Equatorial and Polar Diameters put into a ratio, are useful in discerning the relationship or likelihood between actual cosmic bodies, and rock art, earthworks, and plasmaglyphic data. For example the DR on the Ramesses II stele are within 1% of actual satellite measurement of Jupiter and Saturn.

32. What is “Shamash”?

Our previous, likely brown dwarf, star, with a DR of 1.21

33. What is “proto-Saturn”?

After the electrical stressing of Shamash, which resulted in an expansion to 1.41-1.5 and then 1.75, and then even 2.0, the star split into Jupiter and proto-Saturn. Proto-Saturn was an equal brother. It then was described as either the Father or a Mother, for it birthed Neptune immediately following.

34. What is the likely cause of this electrical stressing?

The spiralling approach of the Sun, and its satellite, Uranus, appears to be the cause. Alternatively, the sun could have been in a relationship already, but electrical conditions changed because of conditions in the local chimney either reaching a new height in current, or otherwise.

More information is contained in the 2nd Addendum to the Megafauna Extinction paper.

35. Why do you use comparative mythology over top of archaeology and anthropology?

The latter two rely on specialization and unique vocabulary and definitions. This creates cliques and packets of information which seem unique to that study. As a result, cross motifs and potential archetypes are missed, such as the Cosmic Egg and Handbag glyphs. With comparative Mythology the motifs are identified with their archetypes, for example the cosmic wolf, or fox, or coyote. Or in rock art the exploding deer, horse, goat, camel, cow, etc. Or the eagle claw/turkey foot, awen, peace sign, etc. By comparing mythologies and archaeology/anthropology data between cultures, stories, art, and history information take shape, combining with religious motifs and myths that do not make sense in a typical way, but do in a plasma or stellar astronomical manner. For example Zeus mating with gods, daughters, mortals, and transfiguring demigods and defeating titans. These widely varying powers do not make sense in anthropomorphism, nor as religious themes of morality. We see the same theme with Brahma and Odin. But by understanding that the Earth briefly orbited Jupiter, we can explain not only the Megalithic Period, but also the rise of the Thunder God, War God, Storm God, Great Flood, and much more because of electrostatic behaviors, and arc exchanges. To see myths take meaningful life again is to give mankind his history back, as well as enlighten the future generations with important, hard-earned data about society, religion, politics, and more.

36. Why do the themes of the Father and Son recur in myth and religion?

The original Star was its own father and mother, as well as a fertility and agricultural god. At that time the sky was purple, and the air misty, and there were only wet and dry seasons within the plasma sheath of Shamash. This ended when the “sky fell” and “Heaven and Earth” split. When the sounds were heard worldwide, there were great stresses upon the Spheres of Heaven and Earth. Buckling in the thin crustal membrane was common and easy. The Bible describes the hills as skipping, melting, and valleys becoming high and mountains low. These are worldwide data points. Sudden upthrust in the Andes is an example. What followed these events was a further destruction of the new God, and then the two brothers “wrestled” and the “Son overthrew the Father”. The “father” was turned female by the castration of the balls of Mars and Mercury. Venus, the heart of proto-Saturn emerged also, and the “feathered serpent” caught fire. All of these bodies began to collide, exchange arcs, and there was mating, war, and destruction. Some collided, and created the asteroid belt.

Later, the event repeated as Jupiter moved away and Mars took over Heaven. This “enraged” the war goddess, and she either made war on the war god, or mated with him, depending on the culture and motif. Then she went away, and Mars became the Horus savior motif. This cemented the concept of the Father begat the Son who became the Father and begat the Son. It also created the Messiah phenomenon.

### 37. What is a MESS?

A MESSy paper is a MIMS+EPEMC+SPACERS (or Strategy Series) SHORT paper, with the goal of making it under 5 written pages, if possible. They are ordered 000X+ with the first being the MIMS definition, and the provision of the logo.  MESS0001: MIMS 1.04 - 1.05

### 38. What is SPERR?

MIMS 3.11.5X: absorbed energy from Sunlight, Plasma, Earth Sound, Radio/Cellular recapture, Reflected light/heat

### 39. What is the Philosophæther?

Definitions provided in MIMS 2.21 on the P<sup>7</sup> Resolution

 MESS0024: MIMS 2.21 - Engineering MIMS Philosophy into a Plug and Play Platform (P7 Resolution)

→The philosophies of nature and physics, metaphysics, etc. pertaining to the Aether, and related concepts (mimsical or otherwise)

a. Which, in a MIMS framework, need to rest upon the bedrock of MIMS 1.0, upon the scientific method, the Plasma-electromagnetic Cosmology, or upon other empiricism.

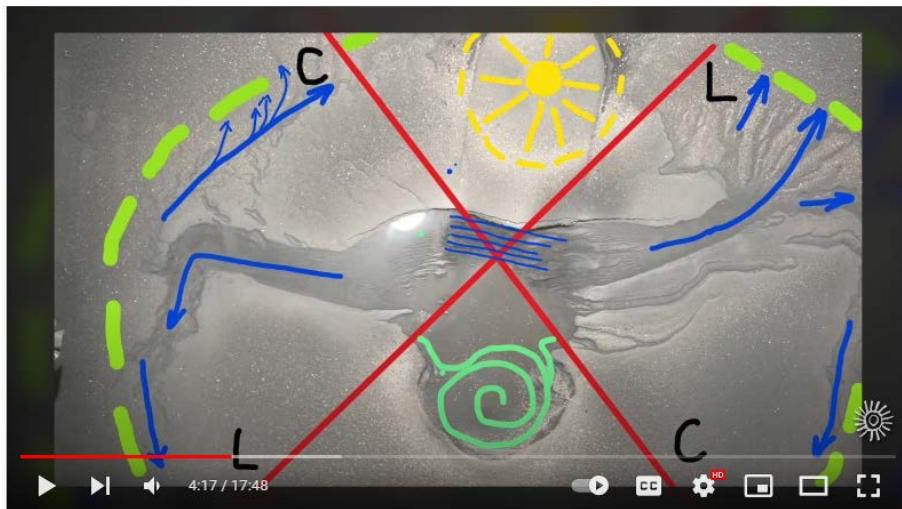
→Aetheric topics having to do with, or pertaining to philosophies that drive mankind's fortunes and/or luck, and ancillary forces of Karma, Destiny, Fate, and CHAOS.

### 40. What is Change Theory?

The application of the Law of Evolutionary-flux (Change) to understanding the natural progress and process of changes that alter systems and sub-constructs, and superstructures, etc.

### 41. What is the Crooked Smile Keystone (CSK)?

The Yelverton-Hall formation, which creates a nearly smoking gun proof of electrical behavior, and is considered A++ evidence in electrogeology:



Andrew Hall: The Keystone Pattern | Thunderbolts



# Useful Tables and Figures, Reproduced for Quick Reference

While it is not necessary to link all referred to data, since links are provided in the first 3 footnotes which lead to all the data, the author felt it might be helpful to reproduce some of the most beneficial tables, figures, and appendices that have appeared in the EPEMC literature.

## The Cosmic Electric Circuit

SGEC	MHD derived jets (theoretical) <sup>4</sup>	$10^{18} + A$
GEC	jet galaxy 3C303 <sup>5</sup>	$3 \times 10^{18} A$
GEC	jet SGR A* <sup>6</sup> <sup>7</sup>	1 THz X-rays
SSC	Solar Corona Currents <sup>8</sup>	$10^{11} - 10^{12} A$
SSC	Solar Wind <sup>9</sup> <sup>10</sup> <sup>11</sup>	$10^{11} A$
SSC	Jupiter Ring currents/ Io Torus <sup>12</sup>	$10^9 A$
SSC	Jupiter Auroral currents <sup>13</sup>	650,000 A
SSC	Magnetic Tunnels to Earth <sup>14</sup>	100,000 A
PEMS	Earth's Ring Current <sup>15</sup> <sup>16</sup>	10 keV - 50 keV (100 keV)
PEMS	Van Allen/Heliosphere <sup>17</sup> <sup>18</sup>	$3 \times 10^9 A$
PEMS	Blue Jets/Sprites <sup>19</sup>	$10^{23} - 10^{24}$ photons or atoms
PEMS	Lightning <sup>20</sup>	30k-500k A
HPG*	Powerline <sup>21</sup>	40 A (avg)
CVS	Electricity in human heart <sup>22</sup>	< 1 mA ( $1.87 \times 10^{-4} A$ ) <sup>23</sup>
HEGEME	Electricity in a plant <sup>24</sup>	$4.5 \times 10^{-8} A$
CNS	Nerve conduction <sup>25</sup> <sup>26</sup>	4-6 nA

<sup>4</sup> <http://adsabs.harvard.edu/abs/1990ApJ...348...61J>

<sup>5</sup> <https://www.newscientist.com/article/mg21028174.900-universes-highest-electric-current-found/>

<sup>6</sup> <https://phys.org/news/2017-12-cosmic-filament-probes-galaxy-giant.html>

<sup>7</sup> <https://arxiv.org/pdf/astro-ph/0102186.pdf>

<sup>8</sup> <http://adsabs.harvard.edu/abs/1997A%26A...318..289K>

<sup>9</sup> <http://adsabs.harvard.edu/abs/1967SoPh....1..220A>

<sup>10</sup> <https://agupubs.onlinelibrary.wiley.com/doi/pdf/10.1029/2000JA900165>

<sup>11</sup> <https://agupubs.onlinelibrary.wiley.com/doi/pdf/10.1029/JA080i034p04719>

<sup>12</sup> <https://www.newscientist.com/article/mg13318093-400-science-the-billion-amp-current-that-flows-round-jupiter/>

<sup>13</sup> [http://www.igpp.ucla.edu/public/mkivelso/refs/PUBLICATIONS/Gerard%20Io\\_footprint-JCG.pdf](http://www.igpp.ucla.edu/public/mkivelso/refs/PUBLICATIONS/Gerard%20Io_footprint-JCG.pdf)

<sup>14</sup> <https://www.space.com/6614-electricity-measured-space-tornadoes.html>

<sup>15</sup> <http://adsabs.harvard.edu/abs/1983SSRv...34..223W>

<sup>16</sup> <https://arxiv.org/pdf/0906.0429.pdf>

<sup>17</sup> [https://www.plasma-universe.com/Electric\\_currents\\_in\\_space\\_plasmas](https://www.plasma-universe.com/Electric_currents_in_space_plasmas)

<sup>18</sup> <https://agupubs.onlinelibrary.wiley.com/doi/pdf/10.1029/JZ066i005p01321>

<sup>19</sup> [http://www.uas.alaska.edu/artssciences/naturalsciences/envs/faculty\\_staff/pubs/chapman.pdf](http://www.uas.alaska.edu/artssciences/naturalsciences/envs/faculty_staff/pubs/chapman.pdf)

<sup>20</sup> [https://en.wikipedia.org/wiki/High\\_voltage](https://en.wikipedia.org/wiki/High_voltage)

<sup>21</sup> [https://www.w8ji.com/power\\_line\\_voltage.htm](https://www.w8ji.com/power_line_voltage.htm)

<sup>22</sup> <http://circres.ahajournals.org/content/circresaha/33/1/39.full.pdf>

<sup>23</sup> 50 mV / 268 ohm <http://circres.ahajournals.org/content/circresaha/9/6/1280.full.pdf>

<sup>24</sup> <https://youtu.be/-MumeA4q-5Q>

<sup>25</sup> <https://pdfs.semanticscholar.org/bb00/967a365c81263abd9ac539f954131ae6f13c.pdf>

<sup>26</sup> <https://physoc.onlinelibrary.wiley.com/doi/pdf/10.1111/jphysiol.1952.sp004734>

# The timeline of important dates in scientific history

Table 1 :: Proper Physics Chronology

Electricity	Ben Franklin	1751
Gaussian Theory	Carl Gauss	1813
Electromagnetism Unification	Michael Faraday	1831
Doppler Redshift	Hippolyte Fizeau	1848
Maxwell's Equations	James Maxwell	1861-62
Quantized Hypothesis	Ludwig Boltzmann	1877
Photoelectric effect	Heinrich Hertz	1887
Electron Theory	JJ Thomson	1897
Quantum Theory	Max Planck	1900
Relativity theory	Henri Poincare	1900-1904
Mass-energy relation	Henri Poincare	1900
Gravity Waves	Henri Poincare	1905
Special Relativity	Albert Einstein	1905
Photoelectric Effect Explained	Albert Einstein	1905
Birkeland Currents	Kristian Birkeland	1908
Atomic Theory Proved	Ernest Rutherford	1911
Particle-Wave Theory of Atoms and Particles	Niels Bohr	1913
General Relativity	Albert Einstein	1915
Proton discovered	Ernest Rutherford	1919
Quantum Radiation Interaction	Paul Dirac	1920
Quantum Mechanics Codified	Born, Heisenberg, Pauli	1924
Bose-Einstein Condensate	Bose, Einstein	1924
Plasma Cosmology	Irving Langmuir	1927
Big Bang Cosmology	Georges Lemaitre	1927
Missing Matter	Edward Zwicky	1933
Magnetohydrodynamics	Hannes Alfvén	1940
QEM/QED	Bethe to Feynman	1947-1960
Electroweak Theory	JC Ward	1959
Quarks	M Gell-Mann & G Zweig	1964
Black Hole Theory	John Wheeler	1967
Dark Matter	Rubin & Ford	1970
Electric Star Theory	Ralph Juergens <sup>27</sup>	1972
QCD	Gross, Wilczek, & Politzer	1973
Axions	Peicci & Quinn	1977
SUSY	Werner Nahm	1978
WIMPs	unclear <sup>28</sup>	1980
MOND	Mordehai Milgrom	1982
String Theory	Green & Schwarz	1984
Dark Energy	Friedman <sup>29</sup> or Sivaram <sup>30</sup>	1924 or 1986
M Theory	Edward Witten	1995
Intrinsic Redshift	Halton Arp <sup>31</sup>	1998
MACHOs	unclear	2002? <sup>32 33</sup>

<sup>27</sup> [https://www.velikovsky.info/Ralph\\_Juergens](https://www.velikovsky.info/Ralph_Juergens)

<sup>28</sup> <https://www.scientificamerican.com/article/dark-matter-exotic-possibilities/>

<sup>29</sup> <http://home.fnal.gov/~skent/early.html>

<sup>30</sup> <https://arxiv.org/ftp/arxiv/papers/0809/0809.3364.pdf>

<sup>31</sup> [https://www.haltonarp.com/articles/intrinsic\\_redshifts\\_in\\_quasars\\_and\\_galaxies.pdf](https://www.haltonarp.com/articles/intrinsic_redshifts_in_quasars_and_galaxies.pdf)

<sup>32</sup> <http://www.astro.caltech.edu/~george/ay20/eaa-wimps-machos.pdf>

<sup>33</sup> <https://theconversation.com/from-machos-to-wimps-meet-the-top-five-candidates-for-dark-matter-51516>

Table 2 :: Falsifications

Cosmic Background Radiation	2007 <sup>34</sup> & 2019 <sup>35</sup>
LCDM	2010 <sup>36</sup> , 2014 <sup>37</sup>
SUSY	2012 <sup>38</sup> - 2017 <sup>39</sup>
CDM	2012 <sup>40</sup> , 2015 <sup>41</sup> , 2016 <sup>42</sup> - 2018 <sup>43 44 45 46</sup>
WIMPs & MACHOs	2017 <sup>47</sup>
Galaxy Rotation and DM	2017 <sup>48 49</sup>
Standard Redshift	2017 <sup>50 51 52</sup>
MOND	2018 <sup>53 54 55</sup>
Galaxy Rotation and MOND	2018 <sup>56</sup>
Higgs-boson as non-standard Quark	2018 <sup>57</sup>
Dark Energy	2018 <sup>58</sup>
LDM	2018 <sup>59 60</sup>
Classical Black Holes	2018
Accretion Model	2019

<sup>34</sup> <http://rnas.asj-oa.am/2542/1/73.pdf>

<sup>35</sup> <https://www.youtube.com/watch?v=p8IKQMEYYLw>

<sup>36</sup> <https://arxiv.org/abs/1011.0004>

<sup>37</sup> [https://astro.uni-bonn.de/~pavel/kroupa\\_SciLogs.html](https://astro.uni-bonn.de/~pavel/kroupa_SciLogs.html)

<sup>38</sup> <http://backreaction.blogspot.com/2016/08/the-lhc-nightmare-scenario-has-come-true.html>

<sup>39</sup> <https://www.space.com/39001-dark-matter-doesnt-exist-study-suggests.html>

<sup>40</sup> <https://arxiv.org/abs/1204.2546>

<sup>41</sup> [http://adsabs.harvard.edu/cgi-bin/bib\\_query?arXiv:1406.4860](http://adsabs.harvard.edu/cgi-bin/bib_query?arXiv:1406.4860)

<sup>42</sup> <http://adsabs.harvard.edu/abs/2016arXiv161003854K>

<sup>43</sup> <https://arxiv.org/pdf/1808.09823.pdf>

<sup>44</sup> <https://academic.oup.com/mnras/article/476/3/3124/4875952>

<sup>45</sup> <https://arxiv.org/pdf/1807.07113.pdf>

<sup>46</sup> <https://arxiv.org/pdf/1805.04817.pdf>

<sup>47</sup> <https://phys.org/news/2017-12-machos-dead-wimps-no-showsay-simps.html>

<sup>48</sup> <https://arxiv.org/pdf/1805.10706.pdf>

<sup>49</sup> <https://arxiv.org/pdf/1811.08843.pdf>

<sup>50</sup> <https://arxiv.org/pdf/1805.03298.pdf>

<sup>51</sup> <https://arxiv.org/abs/1807.09409>

<sup>52</sup> <https://arxiv.org/pdf/1804.03888.pdf>

<sup>53</sup> <https://www.physicsforums.com/threads/falsifications-and-constraints-due-to-gw-measurements.929254/>

<sup>54</sup> <https://arxiv.org/pdf/1804.04167.pdf>

<sup>55</sup> <https://arxiv.org/ftp/arxiv/papers/1809/1809.09019.pdf>

<sup>56</sup> <https://arxiv.org/pdf/1801.09304.pdf>

<sup>57</sup> <https://www.nature.com/articles/d41586-018-06130-9>

<sup>58</sup> <https://arxiv.org/pdf/1810.05027.pdf>

<sup>59</sup> <https://arxiv.org/pdf/1810.10543.pdf>

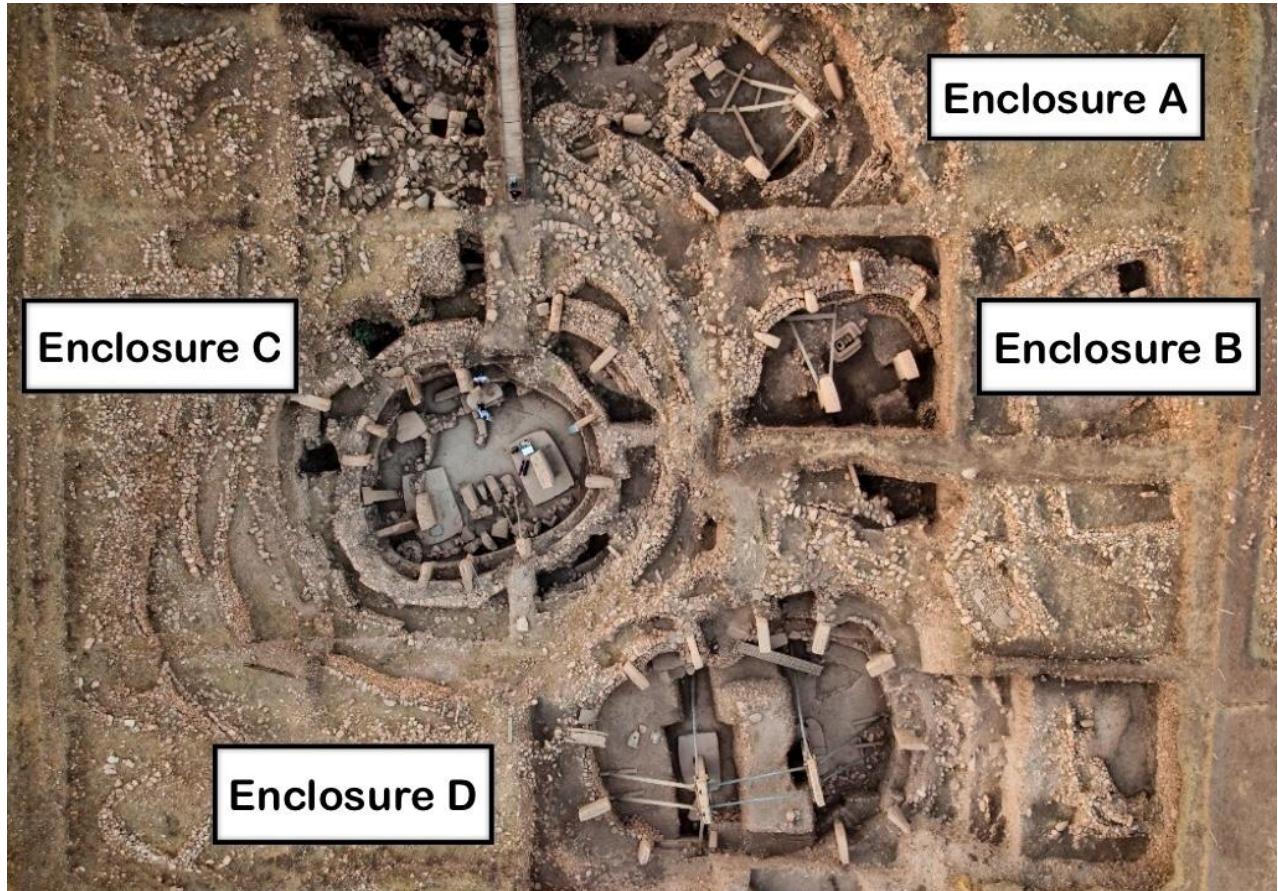
<sup>60</sup> Several, see previous papers to the series

## Images of the Cosmic Egg, bifurcation, and formation of the Three Powers



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# Timetable of the EPEMC

Table 1 Epochs of Man (Roughly speaking)

240 kya - 40/36 kya Antiquarian Period	Biologically modern man	Pure animism is expected
36 kya - 12kya Atlantean Period	“Dream Time” aka “Zep Tepi” Origins of language and art Worship of the “Titans” End of Purple Dawn = end of Double Layer plasmasphere around Saturn	Shamanism, cave paintings, crude pyramids slowly refined into Atlantean-esque cultures, especially in Giza area growing in technological prowess; sense of impending Doom
12 kya - 9 kya Tepe Period	Younger Dryas event (Moon or comet) Origins of religious fear of the gods; destructions of Atlantis, Lemuria, Sundaland, Doggerland, etc... Dwarka sunk -> Vedas	Polytheism begins in the form of worshiping planets and animal-gods (Tepe movement); astronomical data kept, buried, first distinct astronomical worship cult
9 kya - 5 kya Archaic Period	Age of Destructions and “Clash of the Titans” (Aesir vs Vanir, the triumph of Asgard); origins unknown, possibly the Moon again, possibly early Venus; Terminates suddenly and agriculture resumes in full in Sumer and Egypt, India and China	Cave societies, dolmens, more shamanism, use of entheogenic plants, oracles, sky-reading, sorcery and invoking of spirits for protection and prediction of catastrophe
3500 BCE - 600 BCE Megalithic Period	Dynastic Age - the origins of Nobility and the Priest-Royal dichotomy “War of the gods” End of Saturnian and Jovian age worship, planets begin to diverge; 2 more cataclysms afflict the world Roots of civilization take hold worldwide	Egypt and India create transcendentalism; Death cults, Polytheism, Emergence of comet fear and expectation of war. Origins of technocracy and obsessions of prediction mechanisms Origins of both wisdom traditions AND messiah phenomena (savior planets)
600 BCE - 100 CE Transition or Hellenistic Period	Age of War and End of Paganism	Messiah cults spring up worldwide, driving man towards imperialism and unification of efforts and resources; religions politicize and organize officially Origins of energy schools, wizardry, and chemistry. Use of technocracy now devoted mostly to warfare and in pockets megalithic architecture devoted to gods of the past. This extends Paganism and Animism in the Americas and Asia and Africa by allowing for cathartic remembrance. But it stokes religious strife.

		Origins of math and math worship
100 CE - 1900s CE Religious Period	Age of Pisces, and of Productivity and Exploration Aftershock comets and eruptions fortify belief systems in pockets of the world Age of Information roots laid down in the origins of Science as research into causative mechanisms for destruction sought.	Separation of natural self and civilized self; religious fervor intensifies in the form of political, social, and technological (even educational) restructuring. Aftershocks generate unusual war and death cults in the Nordic regions, the Americas (especially mesoAmerica), and former Sundaland. There's a movement over time away from ego-centric explanations of the supernatural into mechanistic and principle-driven explanations. Mankind adjusts religiosity and dogma but continues to seek power of the gods. Discontinuing over time the belief in wisdom traditions' predictive powers.
1700s CE - Present Scientific Period	Modern Age Age of Information and Science End of feudalistic approach to imperialism Age of Money and Finance (intangible tangibles)	Decreasing reliance on superstition alone, origins of modern energy schools and increasing reliance on empirical evidence to form dogma. Decrease in the power of theism in general; where unable to reduce fervor or adjust it with modern knowledge, continued Age of Warfare. Continued modernized versions of Imperialism and Technocracy comes into full; weapons of the gods begin to be understood and sometimes used upon other humans. Continued, even accelerated obsession with space (the Heavens), and with finding out "who are we" and "where do we come from" Shamanism morphs into alien obsessions. Animism laid to rest or melded with paganism, which falls further behind as most non Monotheistic energy/resource efforts are invested into Scientism. Scientific method begins to degrade as it evolves a blend of dogma with accelerated mathematical worship.

# The Gods

Table 2 Cross comparison of the gods<sup>61</sup> & titans with astronomy

Planet/oids, Moons & Stars	Sumerian <sup>62</sup>	Greco-Roman (T/G)	Egyptian <sup>63</sup> (OG/NG)	Indian	Chinese	Norse <sup>64</sup> (A/V)
Sun (Sol)	Apsu <sup>65</sup>	Apollo	Harpocrates	Surya <sup>66</sup>	Yang 陽	Surtur
Moon (Luna) <sup>67</sup>	Anu Kingu Nanna <sup>68</sup>	Janus Pandora <sup>69</sup> Aphrodite Artemis / Diana <sup>70</sup>	Khonsu Hathor <sup>71</sup>	Chhaya <sup>72</sup> Sanjna Tara	Yin 陰 Chang-e 嫦娥 <sup>73</sup>	Vali Nana?
Deceased moon	Sin <sup>74</sup>	Prometheus	Tefnet / Maat	Soma		Balder
Sky	Anu	Uranus / Caelus	Shu/Tefnut	Vishnu?	Tian 天	Freya
Earth	Tiamat / Ki	Gaia / Hera? <sup>75</sup>	Geb	Prithvi	Nüwa 媚皇	Frigg
Jupiter	Enlil [Marduk]	Zeus Jupiter	Set	Indra Shiva	Fuxi Pangu 盘古	Odin/ Wodan Thor

<sup>61</sup> See <https://goo.gl/sQZ3ng> for full table

<sup>62</sup> Sumerian includes all traditions coming down, such as Akkadian, Semites, etc...

<sup>63</sup> <http://rickriordan.com/extra/meet-the-egyptian-gods/>

<sup>64</sup> <http://www.crystalinks.com/norsegods.html>

<sup>65</sup> [http://www.bulgari-istoria-2010.com/Rechnici/Sumerian\\_Dictionary.pdf](http://www.bulgari-istoria-2010.com/Rechnici/Sumerian_Dictionary.pdf)

<sup>66</sup> "When Surya married Sanjna, his wife could not bear the intense light and heat. Therefore, she fled into a forest where she transformed herself into a mare to prevent Surya from recognizing her. But Surya soon discovered Sanjna's refuge. He went to the same forest disguised as a horse. Sanjna gave birth to several children, and eventually reunited with her husband. However, the heat and the light of Surya were so intolerable that Sanjna was always exhausted doing her domestic duties. Finally, Sanjna's father decided to help her and trimmed Surya's body reducing his brightness by an eighth. Thus, Sanjna could more easily live close to her husband." From this we can gather that when the Earth moved closer to the sun, it became too hot, even for our moon. But after some electrical stabilization, we moved into a tolerable orbit  $\frac{1}{8}$  further away, therefore changing the AU to its present distance. [https://www.windows2universe.org/mythology/surya\\_sun.html](https://www.windows2universe.org/mythology/surya_sun.html)

<sup>67</sup> [https://en.wikipedia.org/wiki/List\\_of\\_lunar\\_deities](https://en.wikipedia.org/wiki/List_of_lunar_deities)

<sup>68</sup> <http://history-world.org/sumerianwords2.htm>

<sup>69</sup> "Hephaestus also created the first woman, Pandora, at the command of Zeus, in retaliation for the various tricks by which the Titan Prometheus had benefited mortal men at the expense of the gods. Pandora was given to the Titan's brother, Epimetheus, as his wife. For her dowry she brought a jar filled with evils from which she removed the lid, thereby afflicting men for the first time with hard work and sickness. Only hope remained inside the jar." From this account of myth it becomes clear that the moon was once part of the Jovian system, as is predicted by its composition and appearance, and was thrown off by Triton/Hephaestus, which was later banished from Mount Olympus (when it became Neptune's servant). This corresponds to the end of Zep Tepi, or the arrival of the moon, when men were lost to Eden/Edin and thereafter to slave under agriculture (Tepe Period forward). <http://www.mythweb.com/gods/hephaestus.html>

<sup>70</sup> "Diana believed her body was very sacred, and so no man was to see her naked. One day a wandering hunter came across Diana bathing. She became very angry, and turned him into a stag"; the stag is associated with Loki and Loki's horns. This could mean the Awen conjunction and the moon changing Venus' appearance, or it could mean that the myth was re-visioned as Loki is well known to turn from male to female. [https://www.windows2universe.org/mythology/Diana\\_def.html](https://www.windows2universe.org/mythology/Diana_def.html)

<sup>71</sup> The Coffin Texts; Hathor is later in the New Kingdom associated with Venus (Sekhmet), thus the repetition of destruction as associated with a first female fertility goddess, and then destructive warrior princess (true yin vs. false yin).

<sup>72</sup> Literally "shade."

<sup>73</sup> <https://en.wikipedia.org/wiki/Chang%27e> Heng-i or Chang-e, floated up to Heaven after Hou Yi shot down the 9 stars

<sup>74</sup> Destruction of the first moon by God appears to be the origin of the fear of "living in sin"

<sup>75</sup> Hera's depiction as Mother evolved, from first being the primeval sun (Saturn), which was replaced as male, to that of Earth, which had thereafter a tenuous relationship with Zeus. It is unclear if Hera is Earth itself, or the life-force. She has cross-depictions with Venus in the Jason/fleece myth, associated with the beard and electromagnetic display/auroras.

Saturn	Ea / Shamash Kaimanu	Cronus	Ra / Re Osiris	Brahma Sani	Shangdi 上帝	Bor / Hymir
Mars	Nurgal/Utu/Marduk	Ares / Mars	Horus	Vishnu Rama	Houyi 后羿 <sup>76</sup>	Tyr <sup>77</sup> Thor
Venus / Mother Warrior Goddess	Inanna Ishtar	Aphrodite Athena <sup>78</sup> Minerva <sup>79</sup>	Isis Sekhmet <sup>80</sup> Or Set	Lakshmi	Nüwa 媚皇? <sup>81</sup>	Loki <sup>82</sup> Hel(a)
Titan		Demeter?	Nephthys?			Sif? <sup>83</sup>
Asteroid Belt	“Hammered Bracelet”	Argus				Heimdall? <sup>84</sup>
Deceased planet	Ninhursag?	Metis	Osiris	Krishna		Hod
Mercury	Gudud	Hermes	Thoth	Rama?	Shuixing 水星	Heimdall/Tyr
Milky Way	Babil Nebo	Rhea	Nu'ut	Dharma	Dao 道	Yggdrasil
Uranus		Pluto / Hades	Anubis			Muspelheim
Ariel <sup>85</sup>		Persephone				

<sup>76</sup> “Chinese people believed that there existed ten suns that appeared in turn in the sky during the Chinese ten-day week. Each day the ten suns would travel with their mother, the goddess Xi He, to the Valley of the Light in the East. There, Xi He would wash her children in the lake and put them in the branches of an enormous mulberry tree called fu-sang. From the tree, only one sun would move off into the sky for a journey of one day, to reach the mount Yen-Tzu in the Far West.

Tired of this routine, the ten suns decided to appear all together. The combined heat made the [life](#) on the Earth unbearable. To prevent the destruction of the [Earth](#), the emperor Yao asked Di Jun, the father of the ten suns, to persuade his children to appear one at a time. They would not listen to him, so Di Jun sent the archer, Yi, armed with a magic bow and ten arrows to frighten the disobedient suns. However, Yi shot nine suns, only the [Sun](#) that we see today remained in the sky. Di Jun was so angry for the death of nine of his children that he condemned Yi to live as an ordinary mortal in the earth.”

From this we can see that the Chinese remember a time when there were 10 *highly* visible bodies in the sky during the reign of emperor Yao (Yahweh, Ywahoo - the world sound heard from crustal bending), pre Shang Dynasty, or Sumerian times. **1) Sun, 2) Moon, 3) Mercury, 4) Mars, 5) Jupiter, 6) Venus, 7) Saturn, 8) Callisto, 9) Io, and 10) Ganymede.** It is doubtful Europa would have been considered large enough. However, any one of the bodies could be switched. Please note that by this time, Uranus and Neptune (and Triton) would certainly be too far away, as would any Saturnian moon.

[https://www.windows2universe.org/mythology/ten\\_chinese\\_suns.html](https://www.windows2universe.org/mythology/ten_chinese_suns.html)

<sup>77</sup> Tyr’s “hand” was bitten off by Fenrir; he will get his revenge against Garm (giant dog) at the next Ragnarok. Is this an astronomical prediction?

<sup>78</sup> Athena’s associated animal is the owl, due to Peratte formation, see Appendix B

<sup>79</sup> “Following the Greek myths around Athena, she was born of Metis, who had been swallowed by Jupiter, and burst from her father’s head, fully armed and clad in armor.<sup>[2]</sup> After impregnating the titaness Metis notably forcefully which resulted in her attempting to change shape or shapeshift to escape him, Jupiter recalled the prophecy that his own child would overthrow him as he had Saturn and in turn, Saturn had Caelus.” <https://en.wikipedia.org/wiki/Caelus>

<sup>80</sup> “A New Kingdom religious composition records rebellion against Ra, prompting him to withdraw to the sky. This ‘Tale of the Heavenly Cow’ includes the story of Ra sending his eye out from his body, so as a separate offshoot, a ‘daughter’, to punish mankind. As Sekhmet (meaning ‘the mighty goddess’) she almost annihilates mankind; the gods trick her into becoming sweetly drunk, by colouring a lake of beer red to look like human blood - she reverts to her sweet character as the loving and maternal Hathor.”

<http://www.ucl.ac.uk/museums-static/digitalgypt/religion/deitiescreation.html>

<sup>81</sup> <https://en.wikipedia.org/wiki/N%C3%BCcwaa>

<sup>82</sup> Loki is the “father” of three monsters: Fenrir, Hela, and Jormungand; a mother to Sleipnir, the 8 legged horse.

<sup>83</sup> The little known fertility goddess could have remembered from the age of Saturnian orbit in the Tepe period.

<sup>84</sup> Argus having “100 eyes” and Heimdall’s power of sight could be any of the highly cratered bodies, including Ganymede, Mercury, or Mars.

<sup>85</sup> Assumption that only the brightest moon would be visible at all to ancient Greeks and Romans.

[https://en.wikipedia.org/wiki/Moons\\_of\\_Uranus#Large\\_moons](https://en.wikipedia.org/wiki/Moons_of_Uranus#Large_moons)

Great Comet		Nemesis/Venus	Apep	Lakshmi		
Comet tail / Snake		Typhon		Naga	Hundun 混沌	Jormungand
Neptune	Enki	Poseidon Theseus? <sup>86</sup>				Ymir (Nep?)
Thunderbolt (EMF)		Pluvius <i>Habeant</i> <sup>87</sup>	Bast <sup>88</sup>	Trishula Damaru <sup>89</sup>	Leidian 雷电	Mjollnir
Dipper/ Great Bear		Callisto		Saptarshi <sup>90</sup>	Pih Tow <sup>91</sup> Doumu 斗母	
Thunderbirds			Horus	Garuda		
Savior Mars	Gilgamesh	Hercules	Babi	Hanuman	Sun Wukong	Thor
Traitor Mars		Mars Ultor <sup>92</sup>	Set	Kali		
Io		Io <sup>93</sup>				Sif?
Callisto		Callisto <sup>94</sup>				

<sup>86</sup> Poseidon's changeable character is likely due to the blue planet's wandering nature. The continued worship of the seas, despite becoming further from Neptune (and Saturn), was continued through his progeny. The myths, over time, became vastly more centered around humanity's efforts to survive. Neptune was often invoked as a friend to humanity as well. The "steed" aspect is also referenced in India and Norse, and probably related to a zodiac or plasma shape which changed shape often. This shape may still exist in dark mode, even if the voltage is too small to brighten it nowadays. These shapes may yet return, and be associated with the zodiacs (housing) if, upon leaving the galactic dust blocking our circuit, the [Milky Way's plasma streams reach our outer solar system](#) and [recharge the outer gas giants](#).

<sup>87</sup> Pliny, <https://www.varchive.org/itb/thunder.htm>

<sup>88</sup> Perhaps one of the greatest mysteries of ancient Egyptian religion was the worship of cats. However, research shows that Bast was "like a knife" and his symbol was that of the knife, still a ritualistic ornament in worldwide magical practices. The knife is best symbolized in the Tibetan [Vajrakila or Phurba](#); itself a probable derivative of Kali, goddess of destruction. Bast is therefore associated with electromagnetism. Given the widespread use of the most ancient/Atlantean Period Egyptian "gods" of this mysterious power, the cat therefore symbolised that mysterious power. Their mercurial natures and occasional heterochromia (two different colored eyes) only heightened that mystery and possibly alluded to duality

<sup>89</sup> "the damru is known as the instrument of the deity Shiva, and is said to be created by Shiva to produce spiritual sounds by which the whole universe has been created and regulated." The double bell shape is that noted by David LePoint and is electromagnetic.

<sup>90</sup> <http://www.seasky.org/constellations/constellation-ursa-major.html>

<sup>91</sup> <https://heathenchinese.wordpress.com/2013/09/08/the-big-dipper/> <http://idp.bl.uk/4DCGI/education/astronomy/sky.html>

<sup>92</sup> "Mars Ultor, was among the gods who received sacrifices from Julian, the only emperor to reject Christianity after the conversion of Constantine I. In 363 AD, in preparation for the Siege of Ctesiphon, Julian sacrificed ten "very fine" bulls to Mars Ultor."

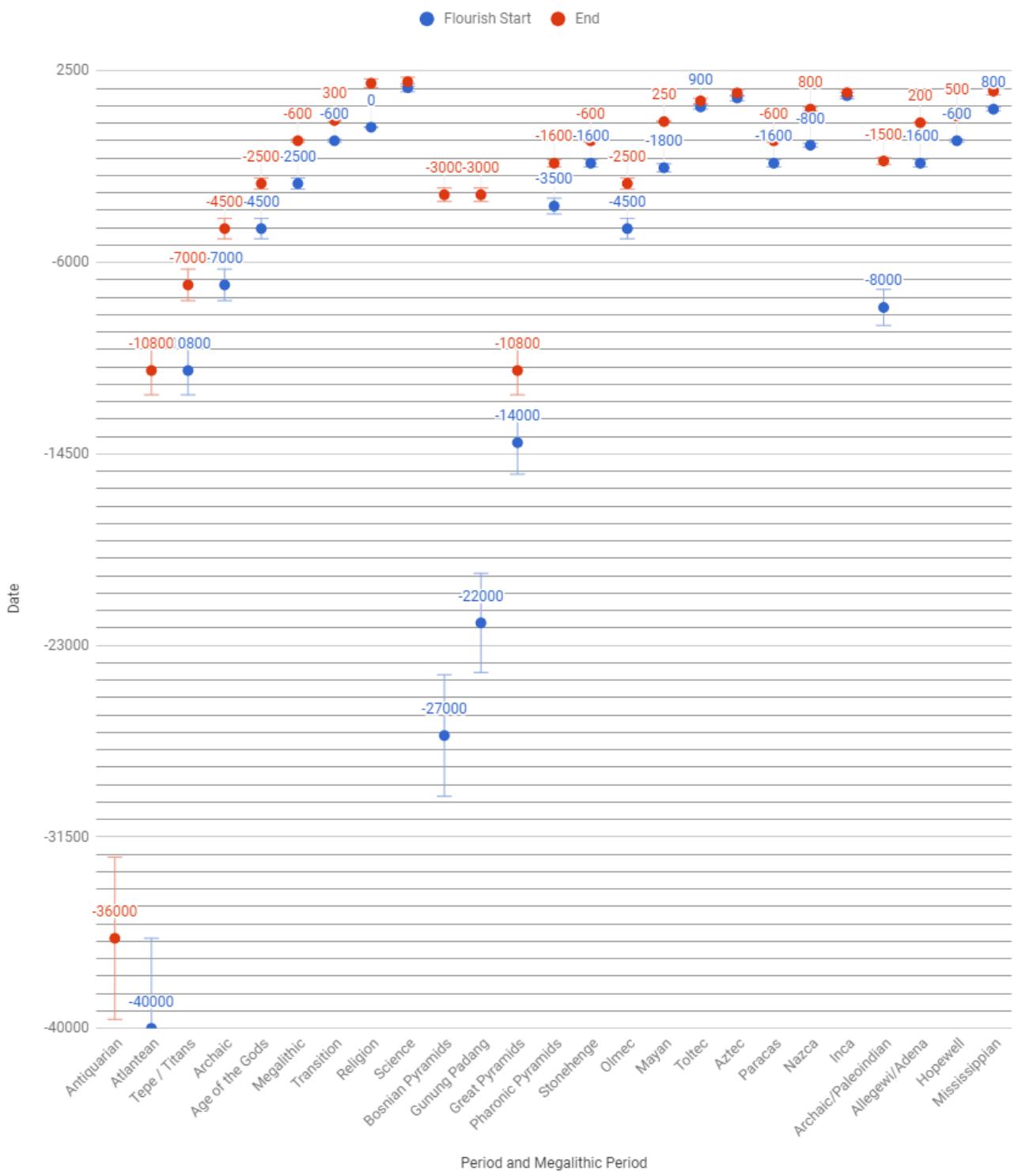
<sup>93</sup> "To free Io, Zeus sent his son Mercury to sing and tell boring stories to make Argus sleep with all his eyes. [Mercury](#) told so many stories that finally Argus closed all his hundred eyes. Only then did Mercury kill Argus and untie Io who ran home free. Yet when Hera discovered what had occurred, she was so furious that she sent a vicious gadfly to sting the cow forever. Meanwhile, Io who was still prisoner into the shape of a cow could not get rid of the malicious gadfly. Finally, after Zeus vowed to no longer pursue his beloved Io, Hera released Io from her inhuman prison, and Io settled in Egypt, becoming the first queen of Egypt." <https://www.windows2universe.org/mythology/planets/Jupiter/Io.html>

This cow is of course related to the cow cult of the Near East. However the "stings" clearly relate to Io's electrical nature.

<sup>94</sup> As a "favorite companion" of Diana, this would suggest that Venus was, for a time, in tidal lock with a Jovian moon.

Table 3 Cultural Phase and Architecture comparison chart (with dates of flourishing)<sup>95</sup>

Table 3: End vs. Flourish Start | Shifu Careaga (c) 2018



<sup>95</sup> Some dates have been modified based on EPEMC evidence. Others follow standard dating, especially the later periods. The start of a Period does not mean, necessarily, that it was built up. There is no known date to start Atlantean peoples, of all fallen continents, therefore the start date is assumed to be Modern man (language plus brain size).

# Debunking Standard Model

Table 4 - Analyzing Absurdities

Assertion	Details	Evidence Offered
Saturn and Jupiter <sup>96</sup> as Brown Dwarf Parent	The Liquid Metallic Hydrogen model expects non-hydrogen lattice exclusion and induced exfoliation; the Electric Sun/stellar model and plasma cosmology also provides a mechanism for individualization via double layering and plasma sheaths Precedence of tiny dwarf stars has recently been found, however the main issue is that energy is mass, and so most of the mass Saturn and Jupiter had previously is not there, due to drop in charge syphoned off to Sol/Apollo	<a href="#">SAFIRE Paper 1</a> <a href="#">Dr. Pierre-Marie Robitaille</a> <a href="#">Ralph Juergens</a> <a href="#">Donald Scott (book)</a> ( <a href="#">video</a> ) ( <a href="#">paper</a> ) <a href="#">Wal Thornhill (video)</a> ( <a href="#">book</a> ) ( <a href="#">Thunderbolts</a> ) <a href="#">Kristian Birkeland (Currents and Nebulae)</a> <a href="#">Marklund Convection (paper)</a> <a href="#">1956 Terrella Experiments (paper)</a> <a href="#">Nebulae (double layers) (z-pinch) (motors)</a> <a href="#">Galaxies (coplanar rotation)<sup>97</sup> (CDM Free)</a> <a href="#">Galaxies "On a String" (Magellanic Cloud)</a> <a href="#">Direct Current Measurement</a> <a href="#">Halton Arp "Intrinsic Redshift" (last talk)</a>
Formation not by Accretion	The accretion has never worked in either simulation or observation. <sup>98</sup> In contrast, many exoplanets have been found by searching near to dwarf stars <sup>99</sup> or main sequence stars, and not farther away where dust could theoretically accrete via [weak] gravity over billions of years. Rather, instead the multiple composition of our own solar system suggests a heterogeneous system. The sheer volume of satellites surrounding Jupiter and saturn argue against accretion and for exfoliation. That they have similar magnitudes of them, and even some with water, but all quite diverse, and many with observed electrical relationships, such as Io and Enceladus bolster not only the Electric Star hypothesis but exfoliation as planetoid genesis.	<a href="#">TRAPPIST-1</a> <a href="#">LMH Model of exfoliation</a> <a href="#">Saturn's Rings made of water (tidal lock)</a> Similarities of Earth with <a href="#">Titan</a> and <a href="#">Europa</a> Similarities of <a href="#">Venus</a> and <a href="#">Mars showing scars of massive discharge and "oversized volcanoes"</a> <a href="#">Venus' superhot, hydrocarbon atmosphere</a> <a href="#">Venus (and Uranus) backwards rotation</a> <a href="#">Venus' rotation slowing down</a> <a href="#">Venus' comet tail</a> <a href="#">Uranus' tilt and this (Sumerian Myth)</a> <a href="#">Retrograde orbits</a> <a href="#">Pluto's eccentric orbit</a> <a href="#">The Asteroid Belt and Boli (Enuma Elish)</a> <a href="#">Lack of evidence of "dirty snowballs" and an "Oort Cloud"</a> <a href="#">Presence of strong solar "wind"<sup>100</sup></a> <a href="#">Quasar Exfoliation (Arp theory)</a> <a href="#">Failure of Dark Matter hypothesis</a> <a href="#">Star dust disks reveal LePoint formations rather than accretion disks. (SPHERE)</a>
Moon late arrival	The two faces of the moon reflect vastly different histories from the standard model. Based upon Accretion, the moon should be uniformly impacted, like	<a href="#">Eclipse Patterns</a> <a href="#">Moon face machining (matches Mars machining)</a> <a href="#">Hi-res imagery shows close knit arc</a>

<sup>96</sup> It is well known for many decades that Jupiter is still, to this day, putting out more heat than it receives, defying standard gas giant models all by itself.

<sup>97</sup> [https://youtu.be/KUqV\\_2si92U](https://youtu.be/KUqV_2si92U) and <http://science.sciencemag.org/content/359/6375/534.full>

<sup>98</sup> <https://www.space.com/2206-death-spiral-theorists-cant-solar-systems.html> Accretion in any working manner requires electromagnetism: <https://goo.gl/wSmxEV> and <https://goo.gl/b4s2bD>

<sup>99</sup> <https://astrobiology.nasa.gov/news/red-dwarf-stars-and-the-planets-around-them-2/>

<sup>100</sup> The Solar charged "wind" is of course not a wind at all, but accelerated ([up to 50% the speed of light](#)) elements and particles. On one recorded occasion the sun's transistor-like behavior was displayed when the [SW turned off for two days](#).

	<p>Mercury, however it has a massively arc machined “front” face, which always faces Earth. The rotation of the satellite precisely (no coincidence) matches that of the Earth, which cannot and would never happen in the Big Whack, due to angular momentum conservation. The chances of this precision are astronomically low by such a method. Over billions of years such a momentum issue would definitely worsen.</p> <p>Moreover the orbit of the Moon is not planar, nor is it even elliptical.</p>	<p><a href="#">craters</a>  <a href="#">Oblique craters are relatively few while crater chains are common</a>  <a href="#">Changing direction crater chains</a> are also common; even defying topography  <a href="#">Moonquakes follow a non-standard behavior that is suggestive of hollowness.</a>  <a href="#">Angular momentum laws themselves should be consulted for issues of revolution.</a> They are never dealt with over any period of time in discussion of the Big Whack but completely ignored.  <a href="#">Myths from certain tribes and cultures specifically mention the Moon as causing destruction worldwide</a>, including the original <a href="#">Tiamat Myth</a> in the <a href="#">Enuma Elish</a></p>
The Purple Dawn	<p>The sky was reported to be an indigo-purplish color. Meanwhile the current sky is blue due to the frequencies put out by the sun.</p> <p>This is contrary to the natural evolution of plants which should absorb green, if Sol was the original sun.</p>	<p><a href="#">Qing (blue-green) is a common color phenomenon all over the world.</a>  <a href="#">Plants prefer red or blue light, even still it is used in hatcheries.</a>  The solar spectrum clearly shows an <a href="#">inordinate volume of green light in the visible spectrum</a>, as opposed to red.</p>
The “Beginning” of Time	<p>Multiple cultures around the world report a “Beginning of the World” that occurred within human memory. It is referred to usually lasting only days. It is usually referred to happening after formation from chaos or the creation of light. This is directly contrary to geological evidence.</p>	<p><a href="#">Zep Tepi</a> and <a href="#">Egyptian records 36 kya “Dream Time”</a> and <a href="#">Aboriginal Creation Myths</a>  <a href="#">Water clocks</a> and off-angle but <a href="#">precise sundials (Worlds In Collision)</a>  <a href="#">Sudden emergence of clocks</a>  <a href="#">Calendrical problems not arising from bad mathematics.</a><sup>101</sup></p>
Change of tilt and/or orbital frequency	<p>Earth and Mars’ tilt axis preclude any possibility of accretion. The phase lock of Earth and Mars<sup>102</sup> to each other, as well as the orbital angles relative to the sun indicate a previous orbital ellipse path around the sun. Meanwhile myth, archaeology, oral traditions, and biological evidence all suggest major changes to Earth’s tilt and orbit.</p>	<p><a href="#">Mammoth stomachs full of species too far north.</a>  <a href="#">Biblical</a> and Chinese myths agree the planet’s North used to be its South<sup>103</sup>  <a href="#">The Piri Reis map shows a clear outline of Atlantis AND its rivers</a>  Astronomical correlations</p>
Lunar/Thunderbolt	The bulk of this is covered in the paper	<a href="#">Delaware myth</a> <sup>104</sup>

<sup>101</sup> It is remarkable that the scientific community feels mound builders, Egyptians, and Mayans (particularly Mayans) are so capable of creating incredibly precise calendar and even mechanisms, such as the antikythera mechanism, and yet are suddenly lax or imprecise with the most important values calculated for farming (and survival): equinoxes. Even the orders of the seasons are reported to have changed, and in sources ranging from the Bible to Chinese record we find reference to vast change in orbit of the sun (as viewed by the observer). This dichotomy, the author speaks of more length in the paper, “Plasma Petroglyphs, Geoglyphs, and the Megafauna Extinction.”

<sup>102</sup> Tidal or phase locking is a perfect example of electromagnetism overcoming newtonian gravity. Examples include: Earth-Mars, Earth-Moon, Earth-Venus ([orbital resonance](#)), Pluto-Charon, and Saturn’s rings.

<sup>103</sup> There appears to be a strange phenomenon currently where Chinese keep visiting Antarctica. <https://goo.gl/9YvSwP>

<sup>104</sup> “In Search of Ice Age Americans,” K Tankersley, p 51-52

causes of megafauna extinction	<p>"Plasma Petroglyphs..."<sup>35</sup> however, there is geological evidence as well as mythological evidence in the extreme that Thunderbolts were the cause of megafauna extinctions.</p> <p>The main argument for them is the overly selective yet unselective almost randomized nature of the extinctions, which has baffled scientists for an explanation. This vector is none other than Step Potential, which kills thousands of people and tens of thousands of animals every year. Only with plasma arc discharge of this magnitude it drastically altered the species populations globally, even where ice and humans had little to no impact on herd populations.</p>	<a href="#">Lakota myth</a> <sup>105</sup> <a href="#">MesoAmerican myths</a> <sup>106</sup> <a href="#">Biblical accounts</a> <sup>107</sup> <a href="#">Greek/Tridents</a> <sup>108</sup> & <a href="#">Typhon battles Zeus</a> <sup>109</sup> <a href="#">Sumerian and Indian Tridents</a> <a href="#">Chinese myths</a> <sup>110</sup> <a href="#">Indian myths</a> <a href="#">Norse</a> <a href="#">Mammoths blown away where they stood</a> <a href="#">Instant Petrification evidence</a> <sup>111</sup> <a href="#">Failure of Carolina Bay theories</a> <a href="#">Barringer Crater</a> and the missing impact fracturing <sup>112</sup> Plus shape and depth issues. <sup>113</sup> <a href="#">Bullseye craters in Hudson Bay</a> <sup>114</sup> <a href="#">South American Chibca and other Myths</a> <sup>115</sup> <a href="#">Devil's Tower</a> <sup>116</sup> <a href="#">Grand Canyon (a lichtenberg formation)</a> <a href="#">Stone Mountain</a> <sup>117</sup> & <a href="#">Ayer's Rock (Uluru)</a> <sup>118</sup> <a href="#">The Knobs Region, KY (lichtenbergs)</a>
Unrealism of Dark Matter/Energy	<p>Dark Matter is actually plasma in "dark mode." Most of the missing matter has been found to be baryons<sup>119</sup>, and the rest is un-needed to explain galactic alignment.</p> <p>Dark Energy is solely evidenced by a misunderstanding of Red Shift. Halton Arp corrected this with Intrinsic Redshift, which means light not only slows down,</p>	<a href="#">Multi-charge CDM</a> <a href="#">Search for electrons in CDM</a> <a href="#">"Black hole" direct current measurement]</a> <a href="#">Baryon induced fluctuations in CDM</a> <a href="#">Dark Matter missing in Galaxy</a> <a href="#">Failure to find Neutrinos in CDM decay</a> <a href="#">Dark Matter non-interactivity with matter</a> <a href="#">Milky Way Halo not showing DM decay</a> <a href="#">Halton Arp's papers on Intrinsic Redshift</a>

<sup>105</sup> "Cycle of Cosmic Catastrophes: How a Stone-Age Comet Changed the Course of the World," Firestone, West, and Smith

<sup>106</sup> Unfortunately most of the relevant Mayan and Aztec codices were burned (on purpose) in a single great fire July 12, 1562. For more info on Mayan myth see <http://www.mythencyclopedia.com/Le-Me/Mayan-Mythology.html>

<sup>107</sup> "He gave up their cattle also to the hail, and their flocks to hot thunderbolts" Psalms 78:48

<sup>108</sup> And <https://en.wikipedia.org/wiki/Trident>

<sup>109</sup> Compare [Greek coin representation of thunderbolt](#) with [Zoroastrian Zervan](#)

<sup>110</sup> Most Chinese Myths refer to the later, Archaic and Transition Periods, and to humanity's survival. Such as that of Houyi.

For more info, please see <https://thediplomat.com/2015/11/the-apocalypse-psyché-a-look-at-chinese-eschatology/>

<sup>111</sup> Google has suppressed searches for "Peter Mungo Jupp", the best continued research of this can be found on his website, [Ancient Destructions](#) or in this forum thread on Thunderbolts.info <https://goo.gl/tX4V7e>

<sup>112</sup> Strange to say, but the study is difficult to find, whereas numerous examples of shallow/surface seismic studying abound [here https://goo.gl/KDSVEs](https://goo.gl/KDSVEs), [here https://goo.gl/Vw3RAc](https://goo.gl/Vw3RAc), and [here https://goo.gl/kMUeCB](https://goo.gl/kMUeCB)

<sup>113</sup> Note the square is not square but octagonal (see below); [the depth is also not conical. The fracture lines are very absent.](#)

<sup>114</sup> Compare with well known impact sites, such as those in my presentation, or the [Chicxulub Crater](#). They lack bullseye rebounds of rim height altitudes.

<sup>115</sup> "Fingerprints of the Gods," G Hancock, p188

<sup>116</sup> [http://www.sylvanrocks.com/devils\\_tower\\_climbing/legends\\_history](http://www.sylvanrocks.com/devils_tower_climbing/legends_history)

<sup>117</sup> [Stone Mountain is 825 ft tall](#), and this very much matches the KY Knobs lichtenbergs which never exceed 900 feet.

<sup>118</sup> <Wiki https://goo.gl/q2eWd2>, [Geology https://goo.gl/YArHDe](#) , [Myth https://goo.gl/3KWRq2](#), [History https://goo.gl/juKr8Q](#) , [More Info https://goo.gl/EQSRUK](#)

<sup>119</sup> <https://www.newscientist.com/article/2149742-half-the-universes-missing-matter-has-just-been-finally-found/>

	but ages, <sup>120</sup> as does everything else.	<a href="#">Birkeland Current Efficiency</a>
Electro-gravity	<p>The Structured Atom is able to accomodate for the weakness of the random nucleus model. Using Platonic Solids, it is able to accurately explain bonding and matter changes in a simple way that negates the need for neutrons and explains the nucleus' cohesion using a single unified force: electromagnetism (at close distances).</p> <p>Furthermore this approach explains the analogs of force/weight and gravity/lorentz force.</p> <p>Gravity is merely the resultant of differential of charge and distance</p>	<a href="#">SAM website</a> and <a href="#">new Periodic Table</a> <a href="#">Electro-gravity (video)</a> ( <a href="#">diagram</a> ) ( <a href="#">paper</a> ) The <a href="#">Weak and Strong Forces</a> are actually <a href="#">just electromagnetism between quarks, bosons, baryons</a> , etc... at <a href="#">very short distances</a> . <sup>121</sup> Note these are <a href="#">already measured in "electronVolts"</a> <a href="#">Physicists eager to make up new matter, energy, and even forces</a> <a href="#">Dinosaur and insect size limits</a> <sup>122</sup> <a href="#">Giants, gigantopithecus</a> , and the <a href="#">decline of megafauna species</a> <sup>123</sup>
Expanding Earth	<p>The <a href="#">expanding Earth</a> is a secret of the USGS. Every year they set the GPS measured growth to 0 and pretend it is an error, however the actual number is closer to 140mm a year in diameter. It is common knowledge that the outer edges of the Atlantic coastlines fit, but few people know that the Pacific coasts and the Indian ocean coasts all fit as well.</p>	<a href="#">Neal Adams Presentations</a> <a href="#">SW Carrey</a> <a href="#">Watch the evidence yourself</a> <a href="#">More Explanations</a> <a href="#">USGS report on growth changes</a> <sup>124</sup> <a href="#">Professore Meyl explains neutrino induced growth (and this series)</a> <a href="#">Tectonic Plates Shifting direction (paper 2)</a> <a href="#">The potential Hollow Earth</a> <a href="#">The potential water core</a> <sup>125</sup> <a href="#">How water is used to trap radiation</a> <sup>126</sup> <a href="#">The direction of radiation from Solar Wind entering at the Earth's poles</a> <a href="#">Robert Distinti explains crustal collapse</a> <sup>127</sup>
Origins of Tao,	Typhon, the Midgard Serpent, the plague	<a href="#">Earth in Upheaval</a> and <a href="#">Ages in Chaos I &amp; II</a>

<sup>120</sup> “Tired light cosmology” is actually just part of EPEMC

<https://www.nature.com/news/cosmologist-claims-universe-may-not-be-expanding-1.13379>

<sup>121</sup> Note how much closer the other forces are to each other, while gravity remains inordinately weak. [Gravity Waves](#) are a concept [invented by Henri Poincare](#), and ultimately they are “bleed off” of charge ripples, which of course exhibit wave-particle duality.

[http://www.science20.com/relativity\\_and\\_beyond\\_it/henri\\_poincare\\_predicted\\_the\\_existence\\_of\\_gravitational\\_waves\\_as\\_early\\_as\\_june\\_5\\_1905-165539](http://www.science20.com/relativity_and_beyond_it/henri_poincare_predicted_the_existence_of_gravitational_waves_as_early_as_june_5_1905-165539)

<sup>122</sup> One of the most horrific aspects of the Paleozoic Era and Triassic Period [is that arthropods](#) and [insects reached gigantic proportions](#). The fact that they do not anymore is a strong indication of gravity changes.

<sup>123</sup> Not ironically, [humans still feel personally responsible for megafauna decline](#), despite the unlikelihood. The politicization of global warming and climate change has given rise to a false consensus about megafauna extinction. But kill sites found worldwide do not agree with the chronology or numbers. The fact that so many edible species remained later on casts doubts, not to mention the general population sparseness.

<sup>124</sup> 0.00000038% or 8mm (radius) per annum. <http://subtleatomics.com/expanding-earth>

<sup>125</sup> In a future Whitepaper, the author will discuss the mechanisms that explain the heavy [EZ] water core and Expanding Earth, as well as crustal displacement and collapse.

<sup>126</sup> Exclusion Zone (EZ) Water: <https://www.pollacklab.org/> and Structured Water: <http://h3o2water.com/>

<sup>127</sup> Related discussion: Solar convection sources - <https://www.youtube.com/watch?v=eTLVAuvT7e4>

Phaethon, Typhon, etc...	of Darkness, Hundun, etc... share in common a "genesis" of watery, chaotic, dusty, and deadly origins. In truth these events were occurring at the end of the Archaic Period and/or repeated during the Megalithic Period. As such, references to an origin in a black soup of chaos are common religious themes globally.	Taoism: <a href="#">Hundun</a> <sup>128</sup> <a href="#">Pangu</a> <sup>129</sup> <a href="#">Wuji</a> <a href="#">Taijitu</a> <sup>130</sup> <a href="#">Norse myth &amp; Jörmungandr</a> ; <a href="#">Fenrir</a> <a href="#">Zeus' battle with Typhon</a> <a href="#">Phaethon Book</a> <a href="#">Hamlet's Mill (audiobook)</a> <a href="#">The Squatter Man/Great Man</a> , and other <a href="#">plasma formations</a> that <a href="#">are not planetoids</a> but behave as titans. <sup>131</sup>
Electroquaking, geo storms, etc...	Weather is well known to be <a href="#">electrically related</a> . The change in cyclone models includes now the understanding that cold wind actually drives tornados, not hot air, and there is no horizontal convection turned upright. Cold air carries static charge. <sup>132</sup>  But the more enlightened understanding comes from Earth Spots <sup>133</sup> : differentials in pressure and temperature, wind vector and intensity and upper <a href="#">atmospheric vortices</a> that induce changes. When thermal energy is added to the equation then powerful vortices can occur. At the next level energy is affecting pressure buildup inside the lithosphere and crust, and a release can be triggered as an earthquake, volcanic eruption, etc... Such geomagnetic storms are related to magnetic tunneling from the sun, driven by Coronal Holes. <sup>134</sup>	<a href="#">Davidson (Suspicious0bservers) (paper)</a> <a href="#">Weatherman's Guide to the Sun</a> <a href="#">Electroquakes</a> <sup>135</sup> <a href="#">Pakistan, October 8, 2005</a> <a href="#">China March 17, 2010</a> <a href="#">Indonesia April 11, 2012</a>  <a href="#">Ionic Precursors M7.0+</a> <a href="#">Solar Polar Magnetic Aa Index</a> <a href="#">Sept 2017 Solar Flare and hurricanes</a> <a href="#">Triple hurricane event associated with flares SpaceNews Interview</a> <a href="#">Magnetic tunnels</a> <a href="#">Pecos Hank interview on formation of tornadoes</a>

<sup>128</sup> "Hundun 混沌 was semantically extended from a mythic "primordial chaos; nebulous state of the universe before heaven and earth separated" to mean "unintelligible; chaotic; messy; mentally dense; innocent as a child". "

<https://en.wikipedia.org/wiki/Hundun>

<sup>129</sup> "Three main views describe the origin of the Pangu myth. The first is that the story is indigenous and was developed or transmitted through time to Xu Zheng. Senior Scholar Wei Juxian states that the Pangu story is derived from stories during the Western Zhou Dynasty. He cites the story of Zhong (重) and Li (黎) in the "Chuyu" section of the ancient classics Guoyu. In it, King Zhao of Chu asked Guanshefu (觀射父) a question: "What did the ancient classic "Zhou Shu" mean by the sentence that Zhong and Li caused the heaven and earth to disconnect from each other?" The "Zhou Shu" sentence he refers to is about an earlier person, Luu Xing, who converses with King Mu of Zhou. King Mu's reign is much earlier and dates to about 1001 to 946 BC. In their conversation, they discuss a "disconnection" between heaven and earth....

*A brother and his sister became the only survivors of the prehistoric Deluge by crouching in a gourd that floated on water. The two got married afterwards, and a mass of flesh in the shape of a whetstone was born. They chopped it and the pieces turned into large crowds of people, who began to reproduce again. The couple were named 'Pan' and 'Gou' in the Zhuang ethnic language, which stand for whetstone and gourd respectively."* <https://en.wikipedia.org/wiki/Pangu>

<sup>130</sup> The swirl of the [original taiji \(yin+yang\)](#) indicate a similar perspective effect in the Venus/Mars separation from configuration as is demonstrated at the Great Serpent Mound. Twisting around each other is the long plasma streamers.

<sup>131</sup> <https://goo.gl/W8xBZn>

<sup>132</sup> The author's paper regarding electrostatic health effects is not yet released. However, [this graph demonstrates this](#).

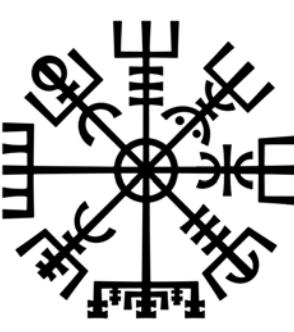
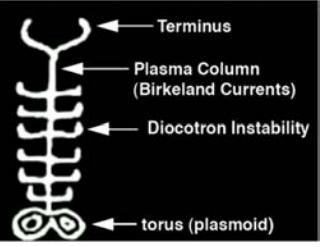
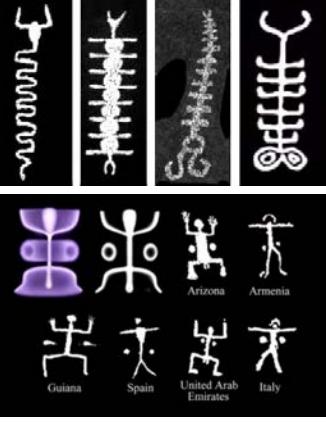
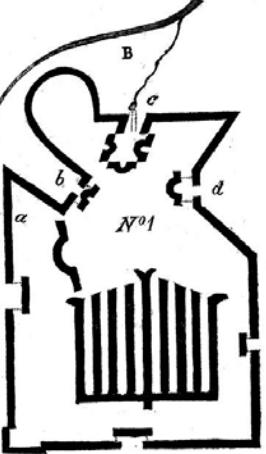
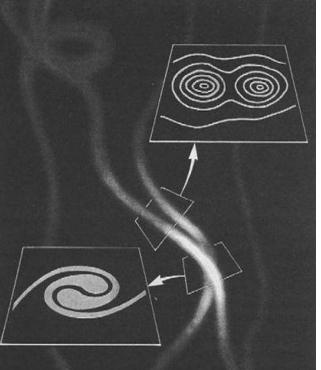
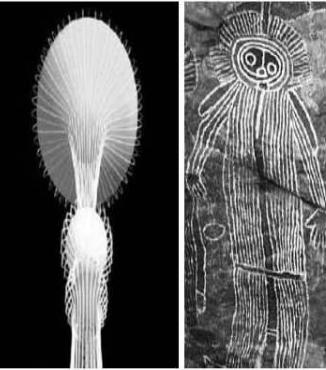
<sup>133</sup> <https://goo.gl/xzeKC8>

<sup>134</sup> <http://www.weatherboy.com/exploring-coronal-holes/>

<sup>135</sup> Podcast discussion: <https://www.youtube.com/watch?v=9XykMcZBolc>

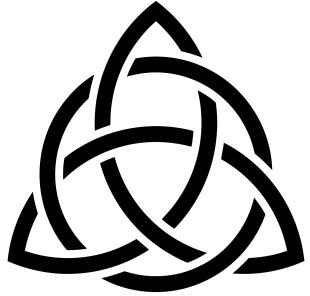
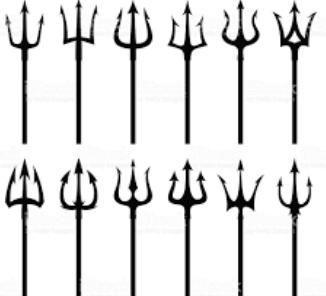
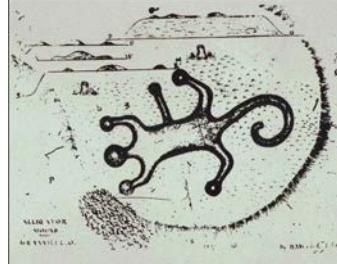
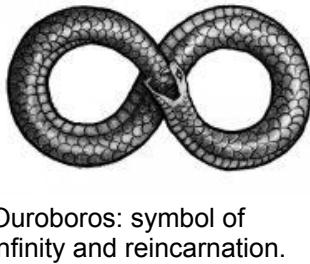
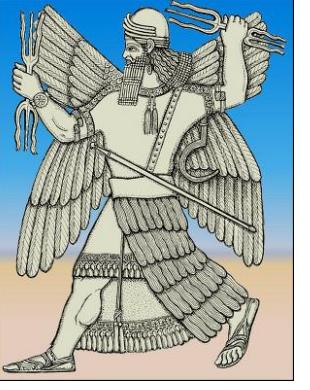
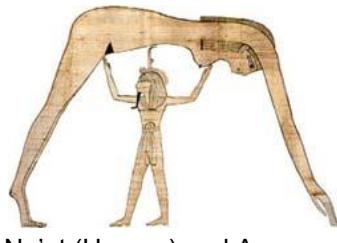
## Appendix from “On the Origins of Religions”

Table 5 - Worldwide Symbols and Plasma-Electromagnetic Model explanations

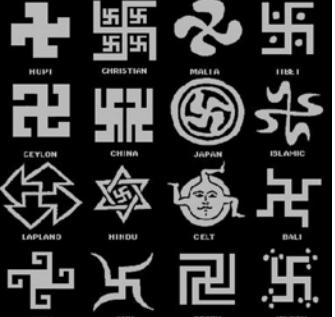
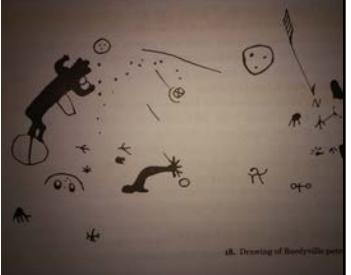
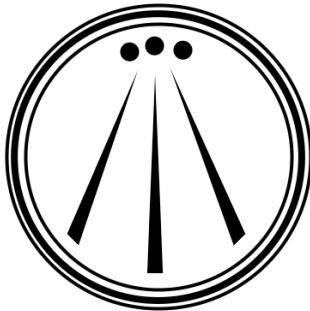
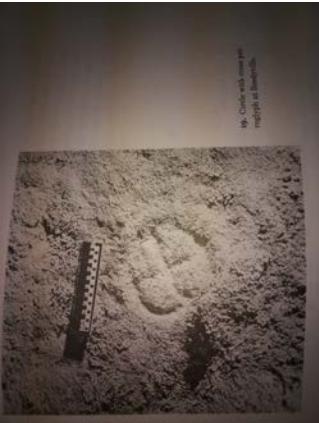
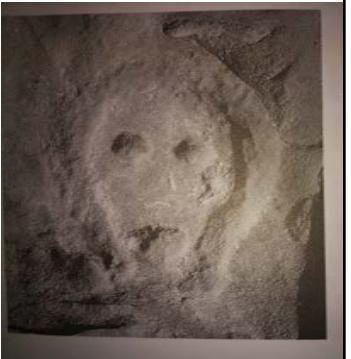
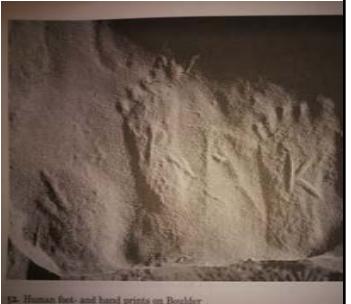
 <p>Taijitu: Mars and Venus (tail) plasma conjunction</p>	 <p>Bagua: Compare with Norse Symbol (next); trigrams are clearly toroids (see Peratt)</p>	 <p>Helm of Awe: Clear depiction of the Bagua and tridents</p>	 <p>Vegvisir: all manner of peratt formations; Note the “Fire” (West) gua appears like a menorah</p>
 <p>Eye of Horus; actually eye of Amon-Ra/ Cronus/ Saturn.</p>	 <p>Peratt Formation: note the bottom “owl eyes” which are also known as the breasts of the Mother Goddess<sup>136</sup></p>	 <p>Credit: Dr. Anthony Peratt</p>	 <p>Khakassia, Siberia: note the Peratt “tree” and the Celtic Cross, as well as the Squatter Man</p>
 <p>Menorah Mound: Hopewell, Ohio<sup>137</sup></p>	 <p>Birkeland Current: Yin Yang and Owl Eye formation</p> <p>Credit: A. Perratt</p>	 <p>Nazca Squatter Man &amp; Thunderbolt Structure simulation - Peratt</p>	 <p>The Great Man: Kentucky; plasma torus clearly depicted (bottom) as well as pole? of Jupiter (Heaven)</p>

<sup>136</sup> [https://youtu.be/n\\_I810EVYSU](https://youtu.be/n_I810EVYSU)

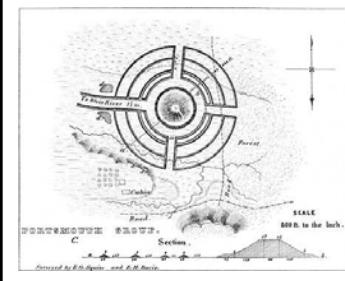
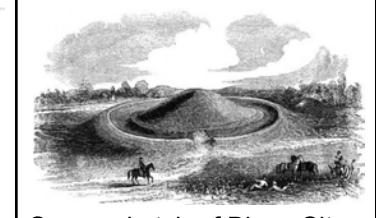
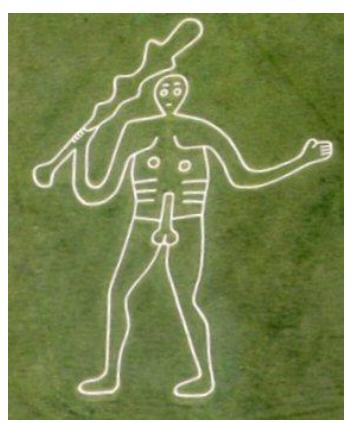
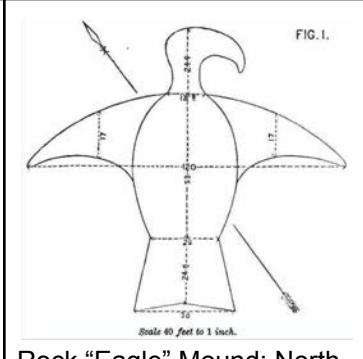
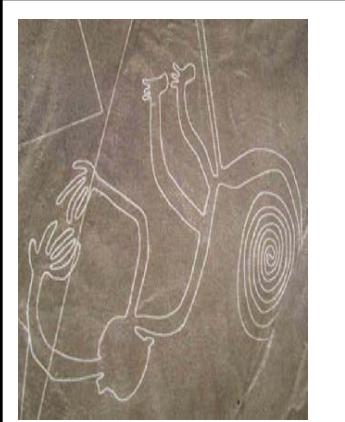
<sup>137</sup> [“Ancient Monuments of the Mississippi Valley”, Squier & Davis](#)

 <p>Mjolnir: trident from angle of Scandinavia, interpreted as hammer of Thor; associates trident with Thor / Mars / Ares</p>	 <p>Valknut: symbol of death, associated with Odin / Jupiter/Baal; Suggested counterparts are Venus and Mercury or Mars</p>	 <p>Triquetra: Suggested as symbol of mystical power passed from father to son: Bor&gt;Odin&gt;Thor Aka electromagnetism</p>	 <p>Trident/Vajra: various thunderbolt shapes, would depend on angle of perspective and cultural adaptations.</p>
 <p>"Alligator" Mound: note the 5 legs and trident formation; Adena culture, Ohio</p>	 <p>"Turtle" glyph: note the 5 legs; Kentucky</p>	 <p>Ouroboros: symbol of infinity and reincarnation. The actual path was elliptical however, some bodies (Moon) in our sky move as an analemma.</p>	 <p>Ishtar<sup>138</sup> (Mother Goddess); ruling on behalf of Shamash, Ishtar was enemies with Gilgamesh</p>
 <p>Sumerian depiction of defeat of Dragon/ Monster (Greek Typhon)</p>	 <p>Hadid /Baal : note the horns and vajra, and conical hats, Lebanon</p>	 <p>Enlil / Zeus wielding thunderbolts, Sumer</p>	 <p>Tawa (Sun Kachina): Planet Jupiter as Helios (the sun)</p>
 <p>Nu'ut (Uranus) and Amon (Anu/Bor/Enki): depicting first beginning, possibly Milky Way, Egypt</p>	 <p>Nu'ut: re-depicted under new religion, associated with wings. Two planets locked together become two Eyes of Horus. Egypt</p>	 <p>"Face" glyph: shows same arrangement as above Nu'ut. Kentucky</p>	 <p>Inanna with wings (see Nazca wings), tridents, and foot on lion. Akkad</p>

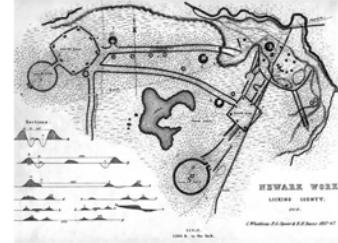
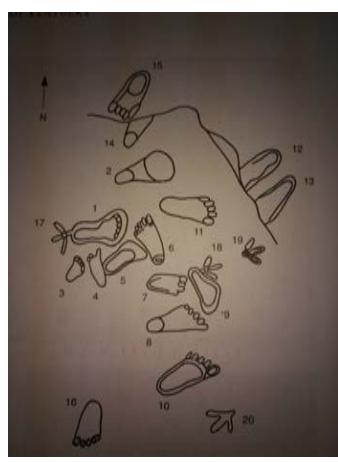
<sup>138</sup> Ishtar (Venus): Innana, Aphrodite (beauty form), Athena (warrior form), Nu'ut & Isis

 <p>Hunab Ku: symbol of balance Nican Tlaca, here we see the chaotic period ending as Liangyi (separation) leads to Taiji (great union)</p>	 <p>Swastika: symbol of balance, life, and peace A worldwide sigh of relief as Venus moved away from Earth</p>	 <p>Great Man depiction reaching from two-faced object towards another object; suggested from Moon towards Mars. Arc-debris noted clearly. Kentucky</p>	 <p>Awen Symbol: subjection symbol of 3 powers in Heavens and plasma streamers</p>
 <p>"Celtic" Cross<sup>139</sup>: Symbol of Mars/Venus or Venus/Saturn/Jupiter conjunction</p>	 <p>Same: Kentucky</p>	 <p>Engraved relief: Mating phase depicted with moon Kentucky</p>	 <p>Astronomy site: "owl" conjunction chiseled more recently, as compared to polar configuration; Awen symbol implicated. KY</p>
 <p>Hand Glyph: contains monkey glyph; Aztec, Mexico</p>	 <p>Great Man, Thunderbirds, and Great Wolf-dog; Nazca?</p>	 <p>"Foot" glyph: the left foot or hand plasma shape; note material in center of foot clearly depicting activity. Kentucky</p>	 <p>"Turkey foot" glyph: asymmetrical (altered perspective) awen depicting conjunction, Kentucky</p>

<sup>139</sup> Celtic is an inappropriate term for Welsh/Khumry and Pictish origins, however it is still standard.

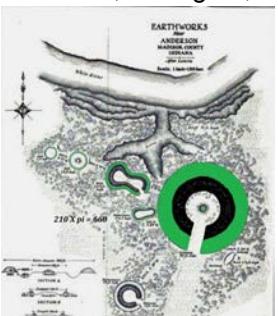
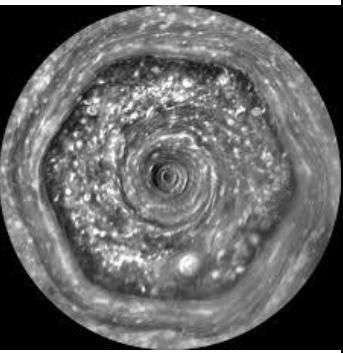
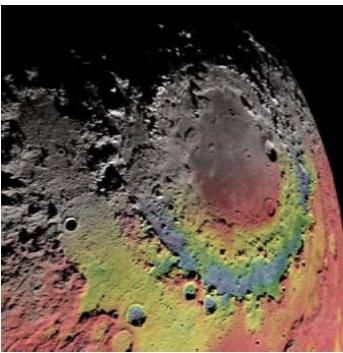
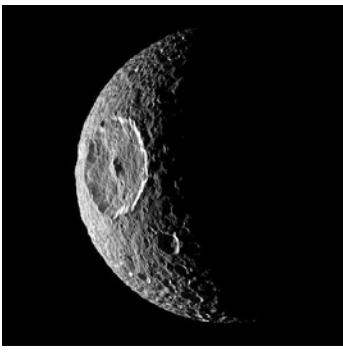
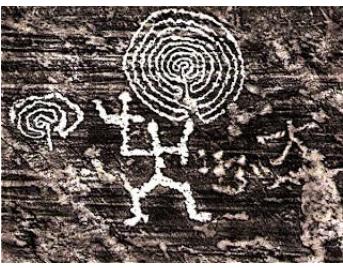
 <p>Hill of Tara: Venus-Mars "mating" with plasma sheaths clearly seen, Ireland</p>	 <p>Same: Kentucky rock art</p>	 <p>Biggs Site Mounds (destroyed): clear depiction of conjunction of Helios, Venus, and Mars, Kentucky</p>	 <p>Same: sketch of Biggs Site; note the conical mound formation, one of the best examples worldwide until destroyed Compare with Sumerian hats.</p>
 <p>Cerne Abbas Hill Giant: masculinized version of Peratt formation; depicts the "owl eyes" as testicles, and the toroids/gua as ribs, and the planets Mars and Venus as nipples. Probably an amalgamation of oral histories to depict God/ Squatter Man, England</p>	 <p>Same figure, depicted upside down, from southern hemisphere; note it is also at a different phase, thus one arm up and one down. Nazca, Peru</p>	 <p>Nazca Thunderbird: Note the shape of the feet The general asymmetry of these earthworks, lines, and glyphs is dealt with in the author's aforementioned paper, "Plasma Petroglyphs..." It is a perspective issue. Peru</p>	 <p>Thunderbird glyph; note the Awen symbol in chest; depicts end of world scenario. Four toed "talons" reach down (thunderbolts). This is after the discharge of one; Kentucky</p>
 <p>Mayan Thunderbird Concentric circles representing Jupiter and Saturn, for the Norse: Aesir and Vanir</p>	 <p>Rock "Eagle" Mound: North American / Cherokee or Creek depiction of Thunderbirds, Georgia</p>	 <p>Monkey Glyph: note the feet and spiral, and compare to above hand glyph of Aztec<sup>140</sup></p>	 <p>Great Serpent Mound: world's largest effigy mound, built on top of Thunderbolt "bullseye" crater; depicts Venus "Great Comet"; note spiral tail is perspective leaving Mars. Ohio</p>

<sup>140</sup> Note also the arms are in octagonal shape, and spiral is circular, and compare to Newark and Amazon.

 <p>New Nazca Lines: note the 5 legged animal and Thunderbird, Peru</p>	 <p>Newark: Hopewell depictions of Heaven and plasma turned into a religious "campus", Ohio.</p>	 <p>Amazon Earthworks</p>	 <p>Keiki Beach Squatter Glyphs: even isolated until Modernity, Hawaiians from ancient times (and Haida in Canada) depict the same Peratt formations. Oahu</p>
 <p>"Concentric circle" relief glyph: depicts planet inside center of polar view of either Saturn (or Jupiter), which have hexagonal poles<sup>141</sup>. A very old motif according to wear, and meaning. Kentucky</p>	 <p>Movement glyph: perhaps reference to gas giants and our quadrad<sup>142</sup> leaving the gods and dispersing. Kentucky</p>	 <p>Dragon motif: same as serpent consuming itself = Jormungand, etc... Mayan</p>	 <p>Kukulkan: Great dragon that devours the world; note the spiral motif and two spheres (compare to movement glyph at left); the movement of Venus into destroyer mode; Mayan</p>
 <p>Great Man: short arm depicts angle has unique perspective as compared to Old World and Peruvian glyphs; Kentucky</p>	 <p>Rock Art: from Conjunction to moon; Mars is in front of Venus, Ontario</p>	 <p>Holy Cow glyph: combines the hand/foot motif with symbolism, possibly tells us the event occurred in the house of Taurus, indicating this is aged to Late and Middle Kingdom; Kentucky</p>	 <p>Feet glyphs: show clear outlines of celestial bodies, Kentucky</p>

<sup>141</sup> <https://www.sciencealert.com/saturn-s-mysterious-hexagon-has-changed-from-blue-to-gold-and-no-one-knows-why>

<sup>142</sup> Earth, Moon, Mars, and Venus

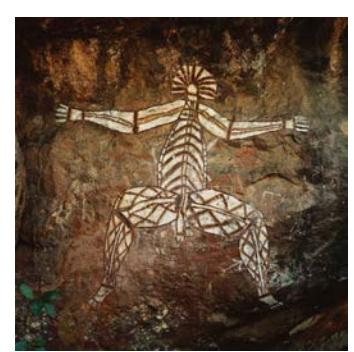
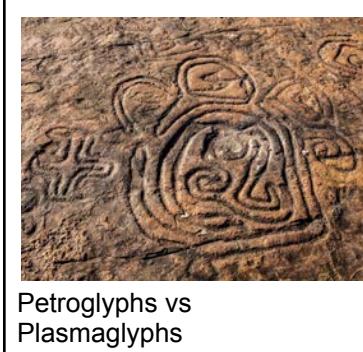
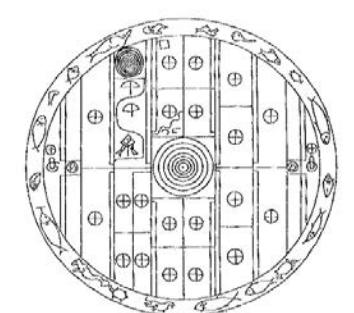
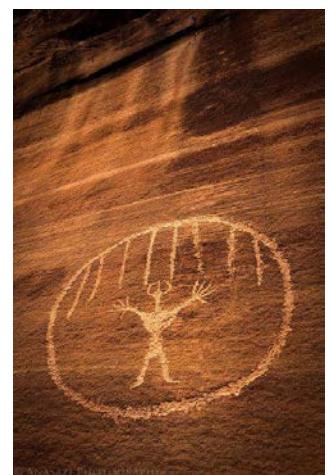
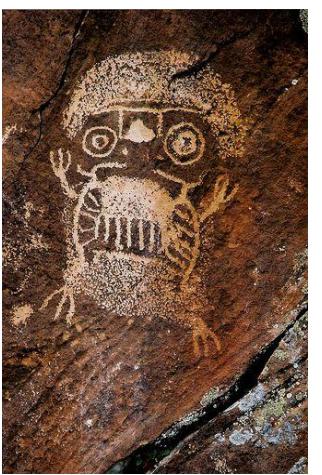
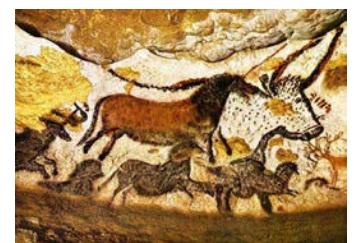
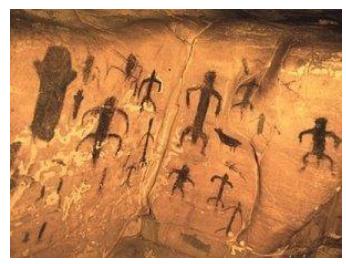
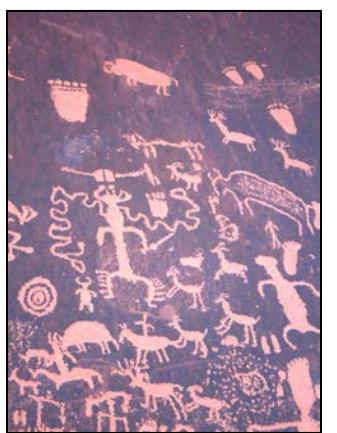
		  <b>Mt. Horeb, Lexington, KY</b>	
<b>Owl Glyph: depicts plasma sheath and conjunction; KY</b>	<b>Awen symbol shows clear asymmetry (subject of other paper); Kentucky</b>	<b>Mounds State Park, Indiana</b>	<b>Henge glyphs: depicting polar configuration; explains entrance mounds such as Mt. Horeb</b>
			
<b>Jupiter's South Pole: hexagonal, with counter-rotating cylinders in atmosphere<sup>143</sup></b>	<b>Jupiter's South Pole (color): Up to 15 layers thick plasma sheathing, as seen in SAFIRE paper 1.</b>	<b>Moon's Bull's Eye Crater: defies impact physics and shows clear discharges<sup>144</sup></b>	<b>Hexagonal Bull's Eye crater: impossible impact physics; Mimas</b>
		 <b>Credit: Andrew Hall Lightning made conical mound, formed by prolonged discharge. This is the anode.</b> <b>Southwest, United States</b>	 <b>Credit: Andrew Hall Maars of Pinacate<sup>146</sup>:</b> <b>showing clear crater rim discharges, Sonora, Mexico</b> <a href="#">(Properties of Shock Waves)</a> <a href="#">(Electric volcanos)</a> <a href="#">(Arc Blasted Mountains)</a> <a href="#">(Torrential Winds)</a>

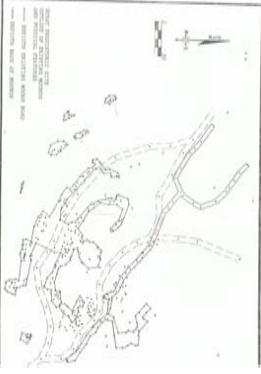
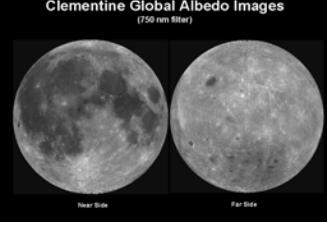
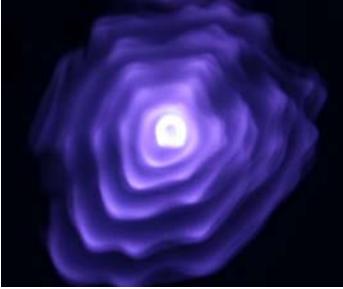
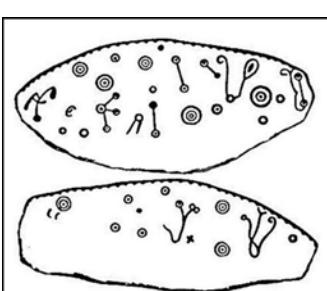
<sup>143</sup> Caused by solar system sized Birkeland “coaxial” currents. [Counter-rotation is expected](#). See Donald Scott and JPL <https://arxiv.org/pdf/1712.08414.pdf>

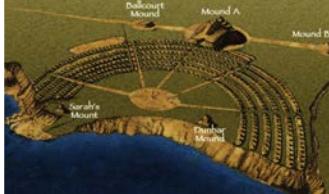
<sup>144</sup> Both the Moon’s bull’s eye(s) and Mimas’ famous one, as well as the millions more especially on Mars, account for the counter-rotational shape of a plasma Thunderbolt discharge. The hypothesis therefore being that seemingly random locations for heng mounds worldwide are not random at all. Earth was heaped up upon worn down craters to keep them viable as worship spaces. The entry-ways were rim discharge burns that wore away, **leaving a pathway into the henge**.

<sup>145</sup> <https://thedailyplasma.blog/category/electric-universe/page/2/>

<sup>146</sup> <https://www.thunderbolts.info/wp/2017/01/20/the-maars-of-pinacate-part-one/>

			
<p>The Squatter Man: proof that the original conception of God was either alien, or more likely, a series of electrical discharged (a world's tree) connected to the radiating star, Ptah/Atum/Re/Kronus - the brown dwarf Saturn. Aboriginal Australia</p>	<p>Petroglyphs vs Plasmaglyphs Combined geometry and familiar shapes, with coronal outlines indicate types of plasma sheaths and protective layers which are indicative of charged atmospheres. Could this be the Titans/angels? Dominican Republic</p>	<p>"Mantis" glyphs: could easily be mistaken for a fascination with the predatory creature, however several of the glyphs reveal a secondary purpose. Compare with "centipede" glyph (KY) and the underlying Z-pinch stratification becomes obvious. The "eyes" are just more Venu/Mars conjunction Alcudia Valley</p>	<p>"Dream-time" (aka Zep Tepi in Egyptian): the time of the first sun. Clearly there was, at one point, a several layer plasma sheath. Compare with SAFIRE Phase 1:</p> 
			
<p>Sakwala Baswati "stargate": a smorgasbord of plasmaglyphs with the same central theme. The "pyramid shape" confirms that the idea for a pyramid or "mountain of Heaven" was visible in stars. This location is very ancient; Sri Lanka</p>	<p>"Rain-Man": clearly not a typical humanoid figure (note: head/trident and arms). The rain, or "hail" are thundereggs from Mars. Peru</p>	<p>"Viracocha": the Zeus figure of Bolivia. This site, Tiwanaku/Tiahuanaco, is of renowned age. The Venus/Mars conjunction or "Owl Eyes" is clearly visible with a backdrop of solar rays. Bolivia</p>	<p>"Dinwoody Site": what at first appears to be a grotesque bearded man is now obviously more conjunction and discharge. Wyoming</p>
			
<p>Lascaux Cave "art": the concept of art is new, but these go back 30,000 YBP. Could have been a record. Why is the bull so large? Is this from the Age of Taurus? France.</p>	<p>"The Great Man": something descended from the mating (or suckling); was it 'ambrosia'? Australia.</p>	<p>Faceless Squatter Man: the conjunctions went through many stages and phases/shapes. Here are several as seen from Sicily.</p>	<p>"Newspaper Rock", Utah</p>

 <p>"Running Man" and Spratt Serpent Mound: sometimes made with stones instead of dirt, making it harder to date. Frenchburg, KY</p>	 <p>"Man on the Moon": aka Janus or Anu. An ancient force of shaping and destruction, responsible for geological changes worldwide that "broke Tiamat in two." The remains of electric arc machining are obvious comparing both faces of the moon.</p>	 <p>"Jack-rabbit" glyph: lacks head and has added feet. Close observation shows distinct bass relief of two hurtling objects with plasma tails (not ears). Legend Rock, Wyoming</p>	 <p>End of Great Conjunction = cause of cometary hail and forming of new mountains. Wyoming</p>
 <p>"Tolar Petroglyph": the menorah and descent of the 9 "stars" (that Houyi shot), the 10th remaining. The animal is interpreted as a horse <b>prior to</b> the return of horses to the area. Thus the plains' Indians' fixation on horses. Note the Great Man was seen above the back as in Kentucky, but here with greater detail. Notice the Nazca like lines. Sweetwater, Wyoming</p>	 <p>"Corn glyph": the American Indians saw the "tree of life" as corn, rather than a tree; other interpretations include the hand conjunction shape, a very clear concentric (plasma sheath) circle glyph, and the "Step Pyramid" shape, as well as the typical Awen and "8" style toroid. Wyoming</p>	 <p>"Square Spirals": Beaver Creek glyphs show a unique presentation of the spirals, more suggestive of the breakdown phase of the plasma sheaths: Compare again with SAFIRE phase 1:</p> 	 <p>Coastal Observatory: this is a strange location for preserving art and heritage, but a perfect (no tree cover) location for astronomical observations. This is also what is found in Ireland and Hawaii. The Canadian coastal Haida people pride themselves in their ancient origins; British Columbia. Each of the following four sites below will repeat this motif. Mainstream archaeology has no explanation or even an attempt for this phenomenon.</p>
 <p>Helluland, Viking</p>	 <p>Arizona</p>	 <p>Loughcrew Eclipse Rock, Ireland</p>	 <p>Etowah River, GA, USA</p>

 <p>7 Pyramids found on the African Island of Mauritius</p>	 <p>"Tenerife Pyramids": At first these were dismissed as later (imitation) creations, but Thor Heyerdahl has pointed to signs of extreme antiquity. Many have speculated they are the remnants of Atlantean Period peoples. The author here contests these are too new, but instead are from the same period as the conjunctions shown in the Wyoming glyphs.</p> <p>Canary Islands, Atlantic Ocean</p>	 <p>"Chichen Itza"; Mayan step pyramids are widely regarded as the most important and best examples.</p> <p>Compare this quality with the well dated Egyptian Step Pyramid of Djoser:</p> 	 <p>"Pyramid of the Sun": Set in Mexico City (formerly Tenochtitlan), this amazing pyramid, the best of the movement, has been called an Aztec pyramid. It can now be laid to rest that indeed, the Pyramid of the Sun referred to the previous Sun, Shamash or Quetzalcoatl, which is the primeval sun (for this culture), which at the time was Jupiter/Zeus, unless it be , as usual, in remembrance of the First Age, and to Saturn.</p>
 <p>"Monk's Mound"; not the real name of the mound. The mysterious Cahokia people did build really large step pyramids, however they were the inheritors of an ancient mound building tradition. St. Louis, Missouri</p>	 <p>"Poverty Point": not the real name of this location, either. Note the original step pyramid. This site is currently dated up to 1700 BC. Considering the conjunction formation, and the shell shape, this location is probably just prior to the Exodus cataclysm (1600 BC).</p>	 <p>Akhenaten worshipping Atum-Re: The fan-rays of the sun are associated with "shell glyphs" The headdress with the Mars/Venus conjunction.<sup>148</sup></p>	 <p>"Kofun" 'keys' mounds: These odd shaped step pyramids should not be misinterpreted to the same period or the same rays. They are newer, from the age of Mars' descent, which caused red dust to stretch forth towards Earth. However, they may call back to the first time in design; Japan</p>

<sup>147</sup> Subtracting the added 600 years Velikovsky discovered were added by erroneous early Egyptology. See "Ages of Chaos: Volume I"

<sup>148</sup> This is a particularly important ceremony being depicted. At the end of the conjunction, Venus started to extend far out of phase, and create a long "bowling pin" shape of plasma. The shell shape of the glyphs meant that the gods were falling from the sky. In this context Akhenaten is praying to the two gods to return to position and re-establish the wonder days of Atum-Re, Zep Tepi. He is famous for failing and his movement towards archaic monotheism is overturned. The panic to appease the gods would have been very intense. Some have speculated, for many reasons he was the pharaoh of Exodus, and indeed may have even been Moses, although there is not much physical evidence to go on.

<https://grahamhancock.com/moses-akhenaten-same-person-osman/>

## Important Diagrams from “Plasma-electromagnetic Sky”

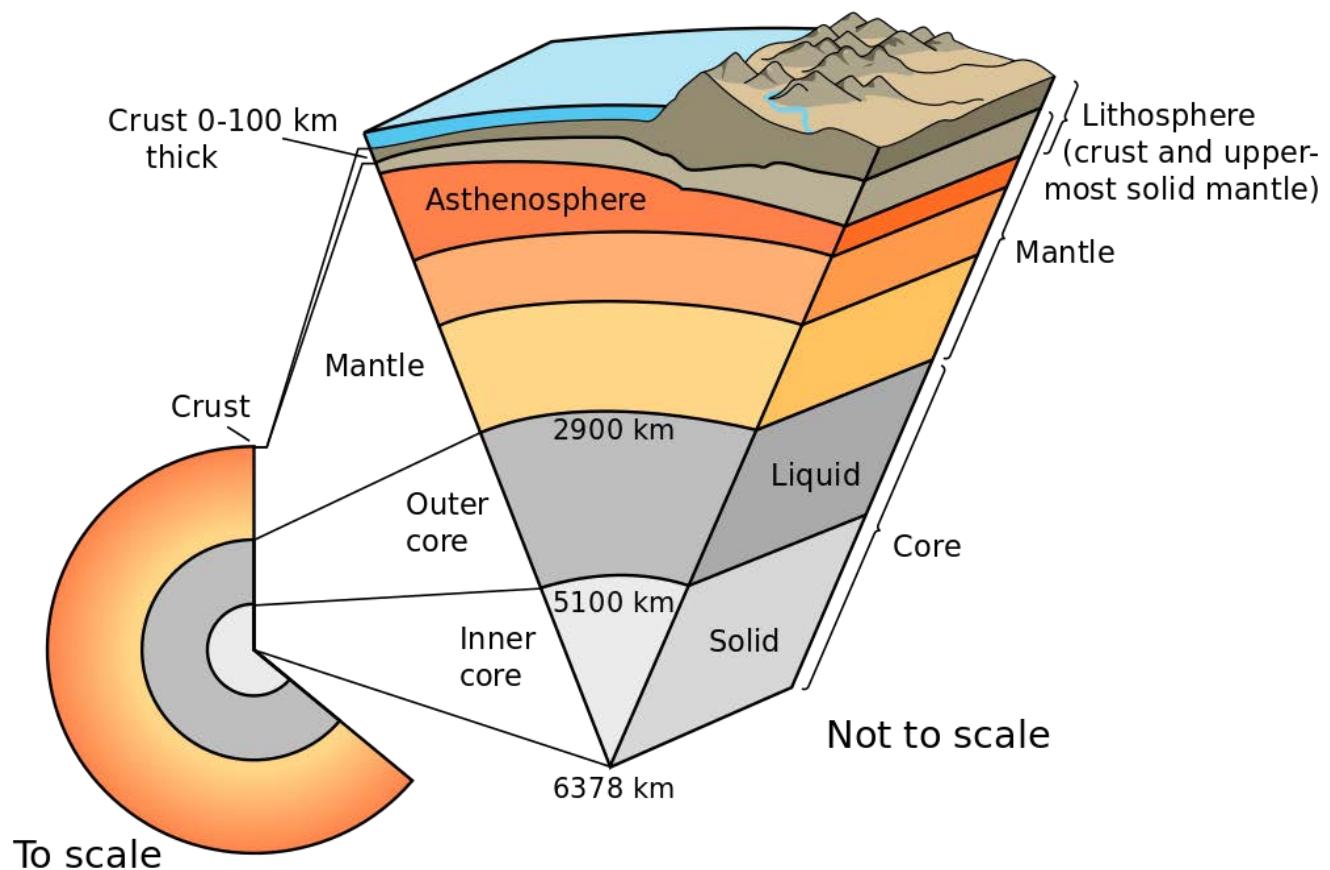


Figure 3 - Standard Geology model of the Earth; credit: SEG Wiki

# Earth Core Diagram

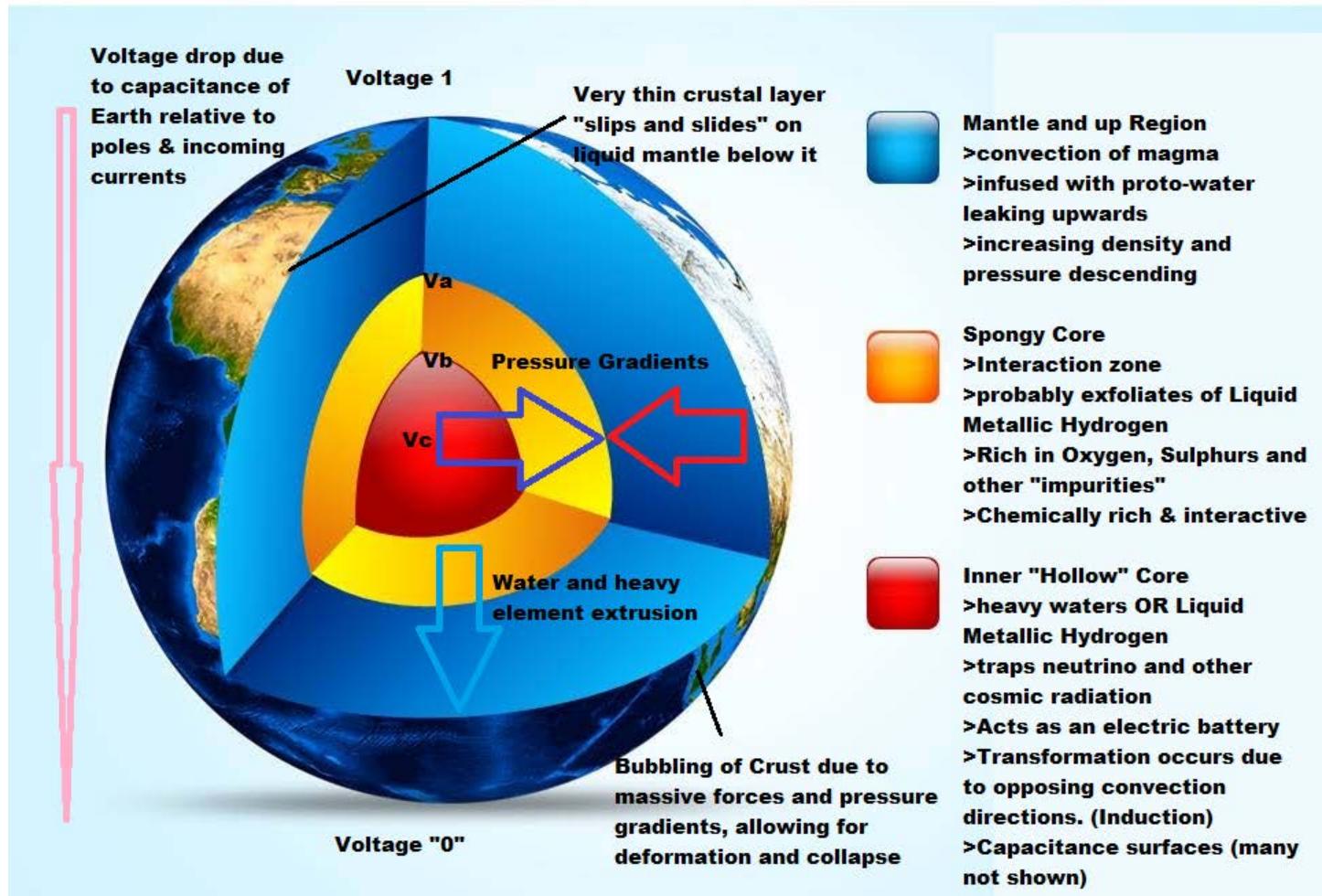


Figure 6 - HEGEME; basic level model; Careaga

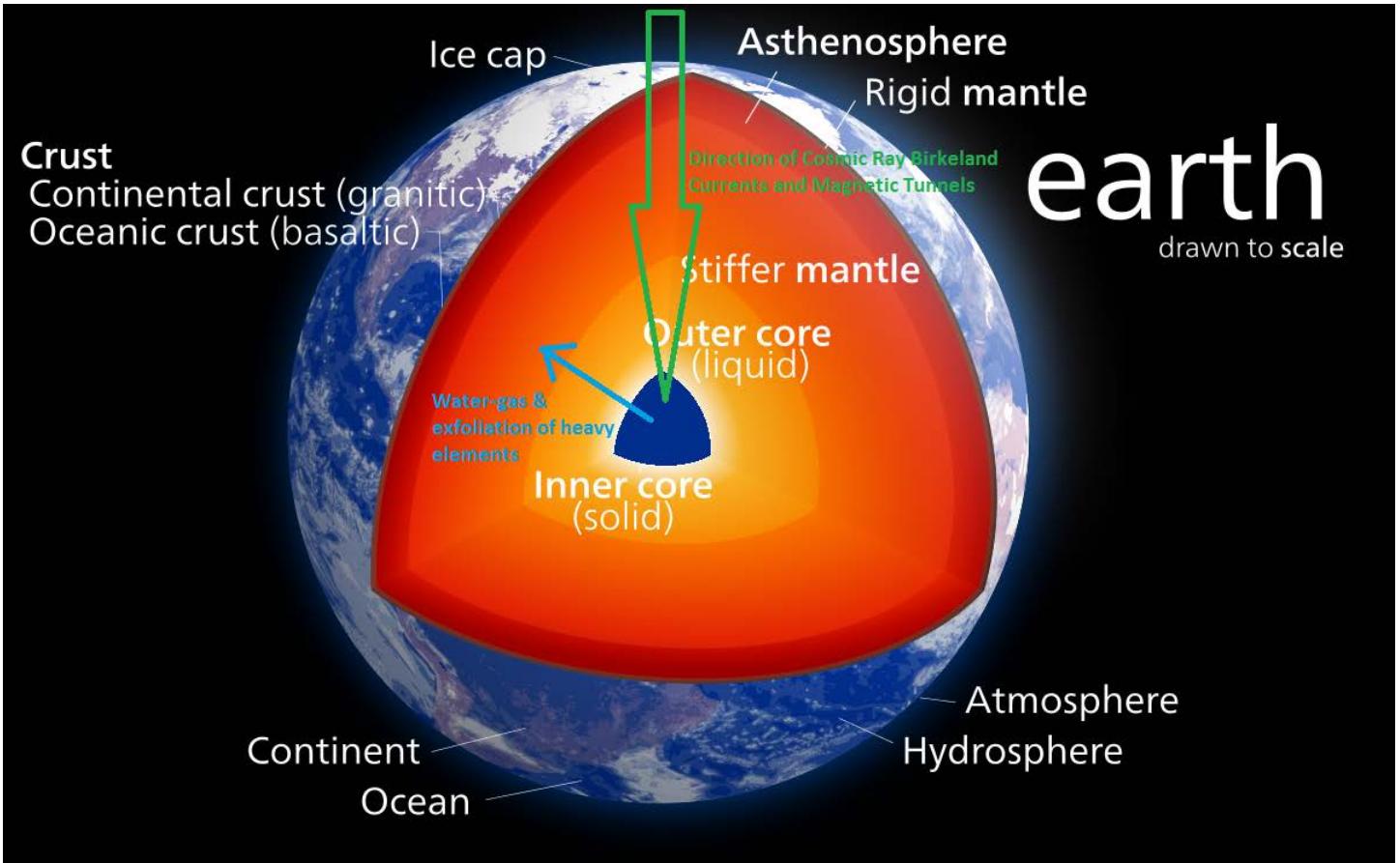


Figure 9 - Source of EGE

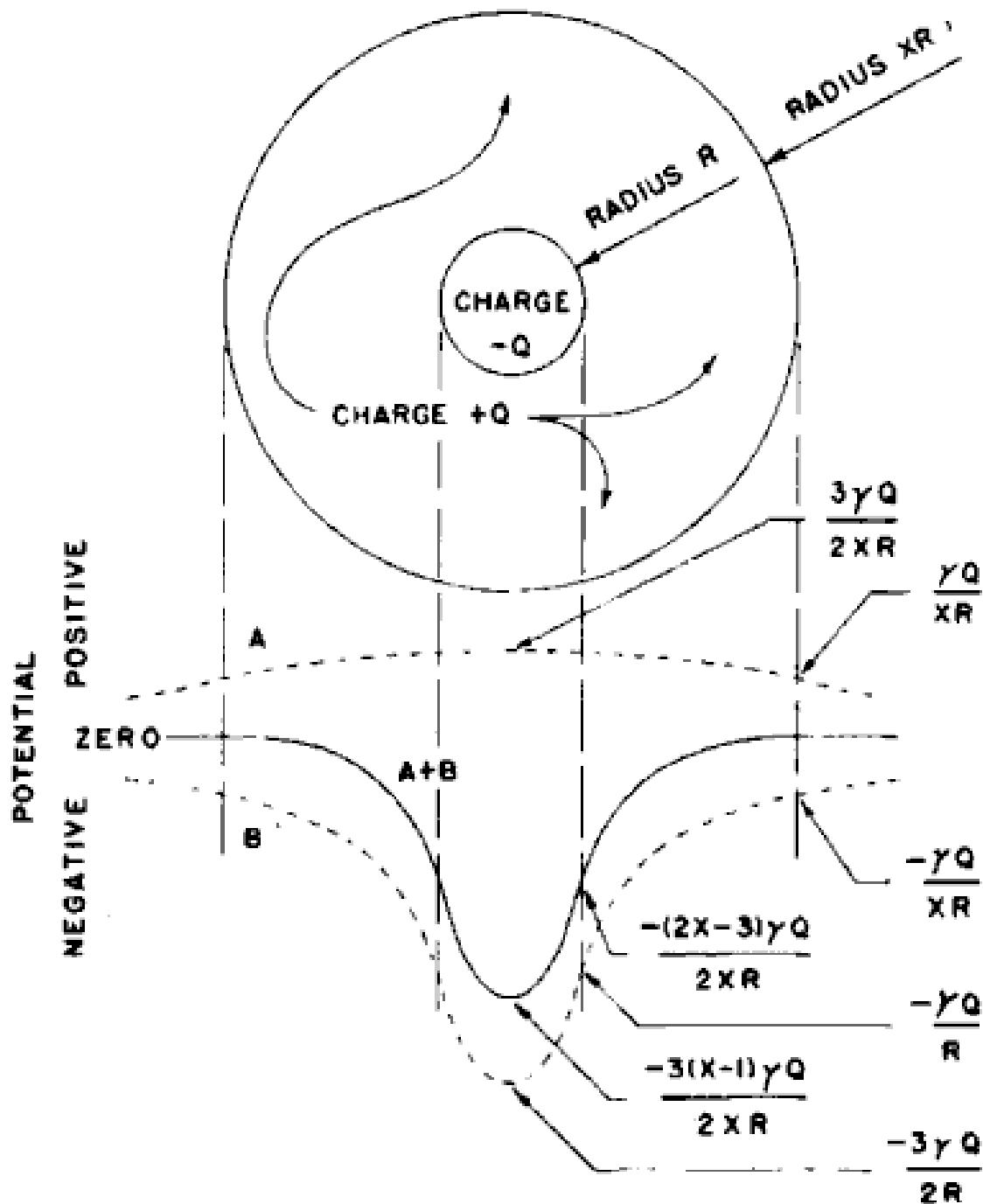


Figure 12 - Electric Sun model, credit: Juergens, kronos-press.com<sup>149</sup>

<sup>149</sup> "Electric Discharge as the source of Solar Radiant Energy," Juergens, 1982  
<https://www.kronos-press.com/juergens/k0802-electric-ii.htm>

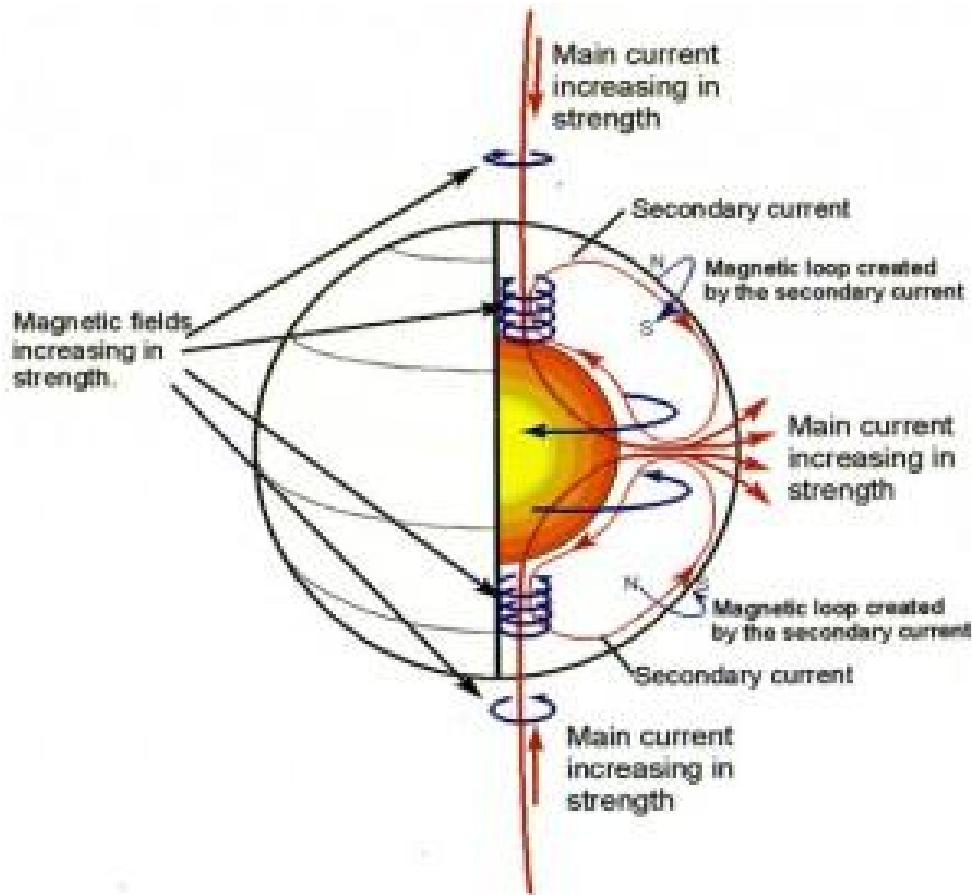


Figure 13 - Electric Sun, credit: D. Scott, electric-cosmos.org

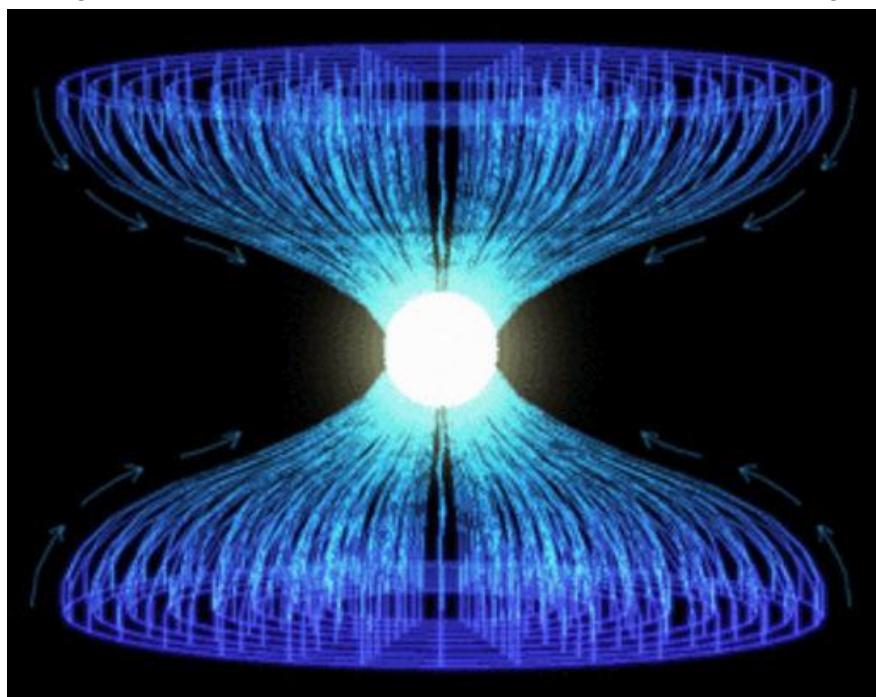


Figure 14 - Bennett Pinch (Z-Pinch) formation of a Star, note the concentric circles<sup>150</sup>

<sup>150</sup> A major discussion of these is contained in the author's paper, "On the Origins of Religions," [1]; as well as in Project SAFIRE's phase 1 paper, also cited in that discussion. See [1]: Appendix A&B for citations and visual study.

Note that the Electric Star theory<sup>151</sup> in general relies upon Marklund convection:

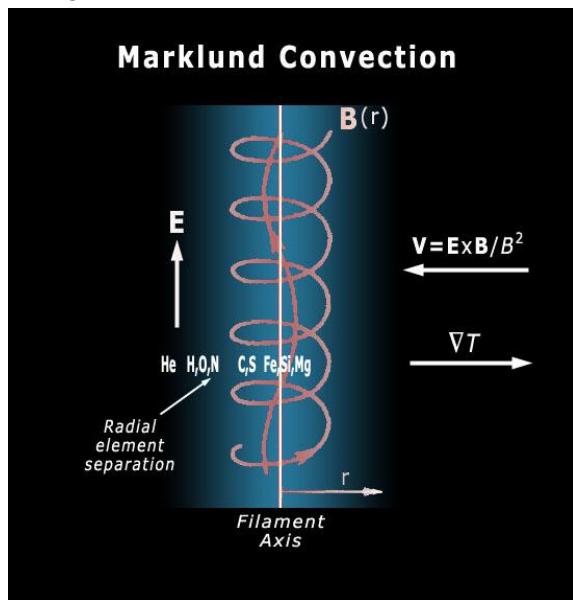
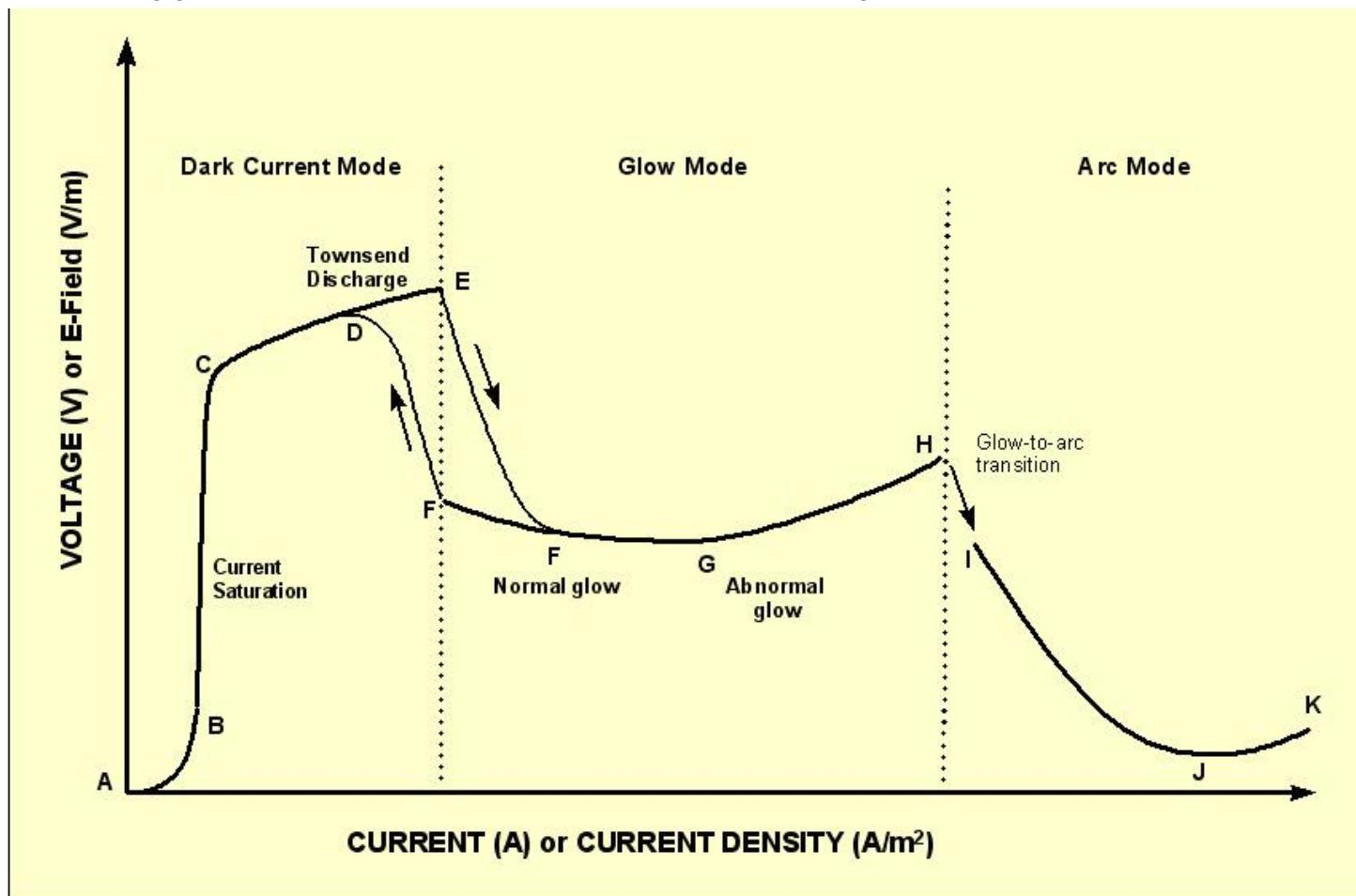


Figure 15 - Marklund Convection<sup>152</sup>

The following graphs demonstrate the plasma-electric function of voltage on the sun:



<sup>151</sup> <http://www.holoscience.com/wp/our-misunderstood-sun/>

<sup>152</sup> <https://sites.google.com/site/electricuniversegateway/recent-news/marklundconvectionandz-pinchesexplained>

Figure 16 - Voltage vs. Current for plasma modes, replicate what the Sun shows.<sup>153</sup>

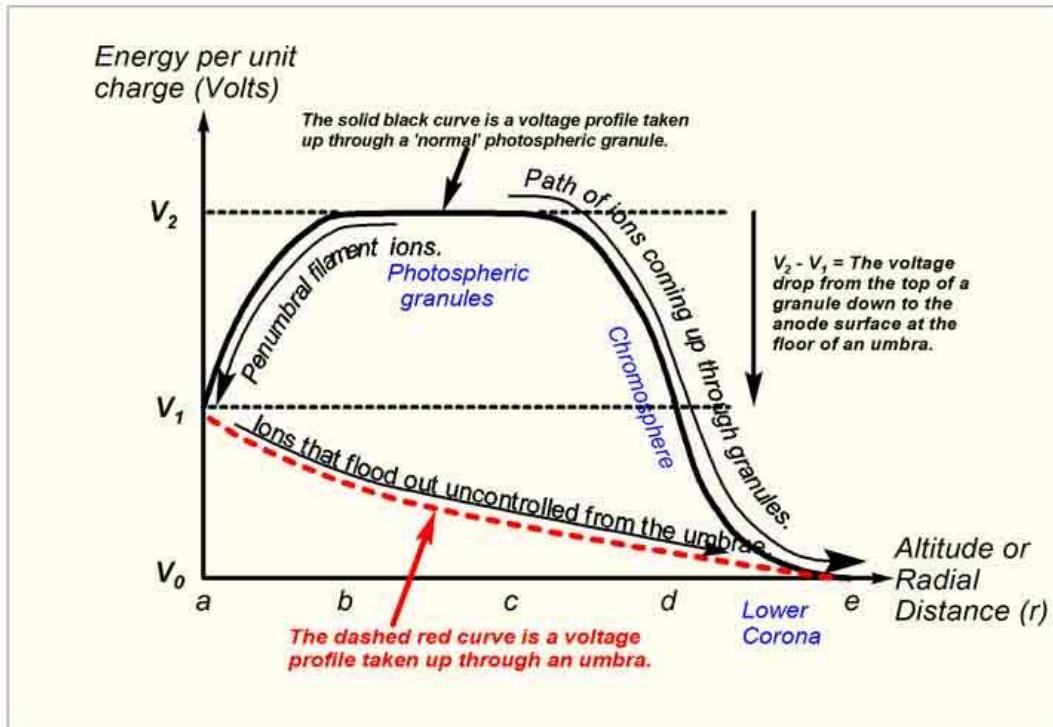


Figure 17 - Voltage vs. distance from surface of the sun; credit: everythingselectric.com

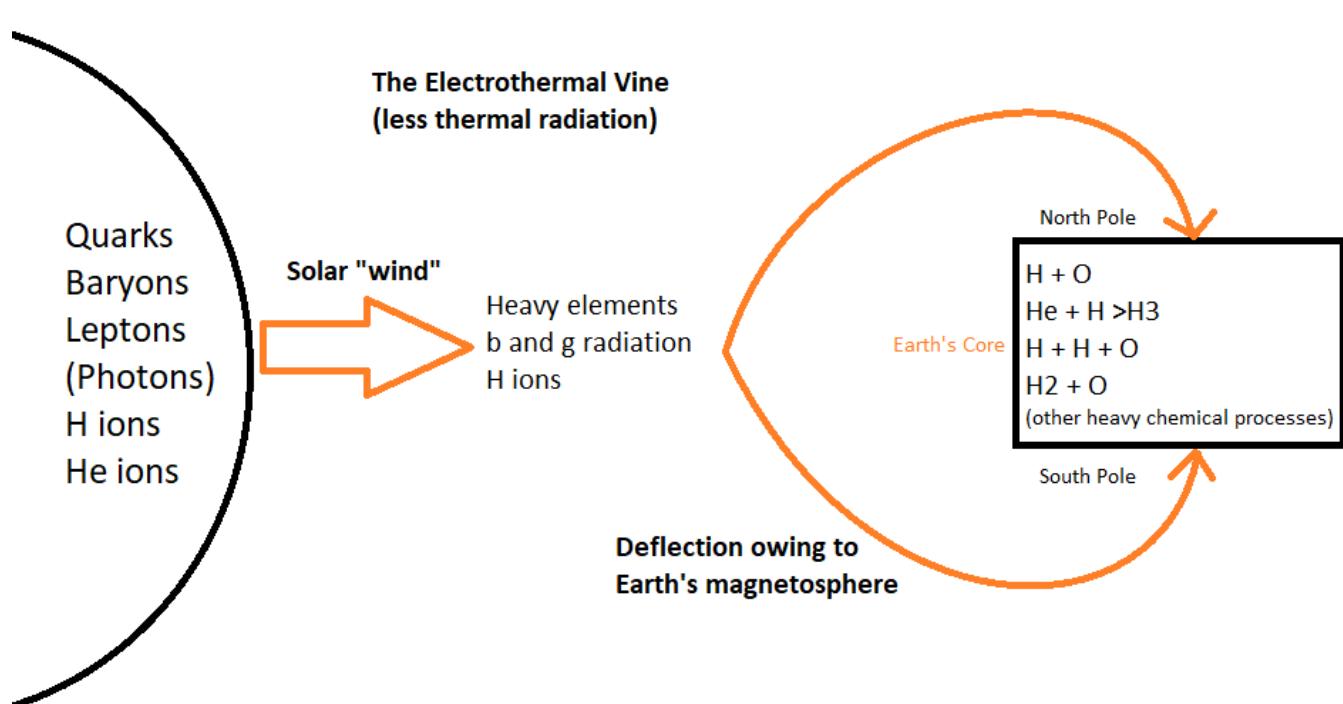


Figure 18 - The Electrothermal Vine; credit: Careaga

<sup>153</sup> Credit for both: everythingselectric.com

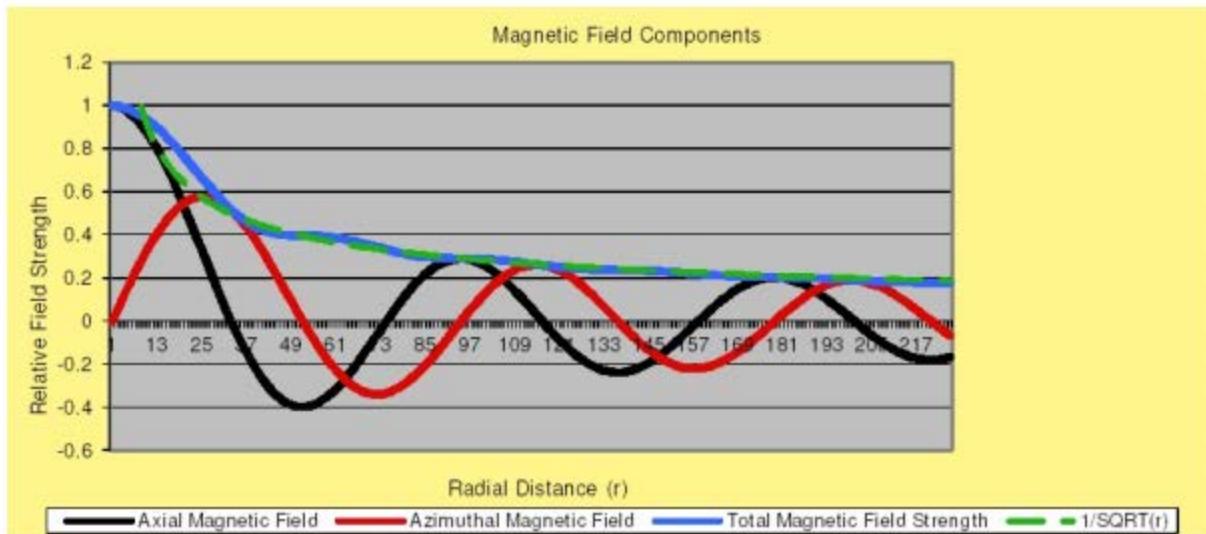


Fig. 2: Axial Magnetic Field component  $B_z$ , the Azimuthal Magnetic Field component  $B_\theta$ , the magnitude of the Total Magnetic Field; and, for reference, a plot of  $1/\sqrt{r}$  – all vs. radial distance quantized to integer multiples of the step-size  $h = 0.1$ . The value of  $\alpha$  arbitrarily selected in (36) and (37) to achieve adequate resolution of the Bessel functions with this step-size is 0.075. The horizontal axis in this plot is the radius  $r$ -axis. Note in Table I that in every case (row) the inherently dimensionless Bessel function argument,  $x = \alpha r$ , thus demonstrating the scale factor utility of  $\alpha$ . (e.g.,  $2.4048 = 0.075 \times 32$ .)

Figure 22 - Birkeland Current degradation as a function of distance; D Scott, Progress in Physics, 2015<sup>154</sup>

<sup>154</sup> <http://www.ptep-online.com/2015/PP-41-13.PDF>

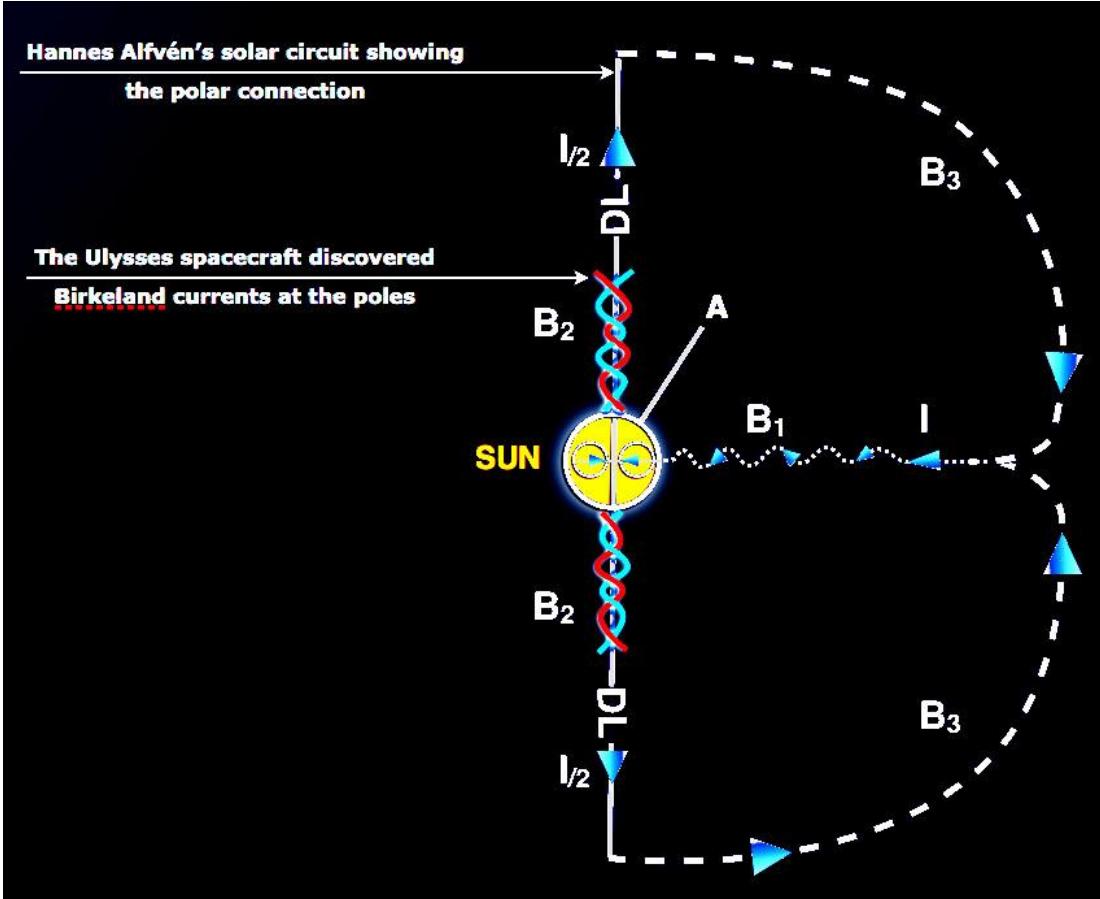


Figure 24 - Alfvénic Magnetic Tunnels discovered by Ulysses spacecraft<sup>155</sup>

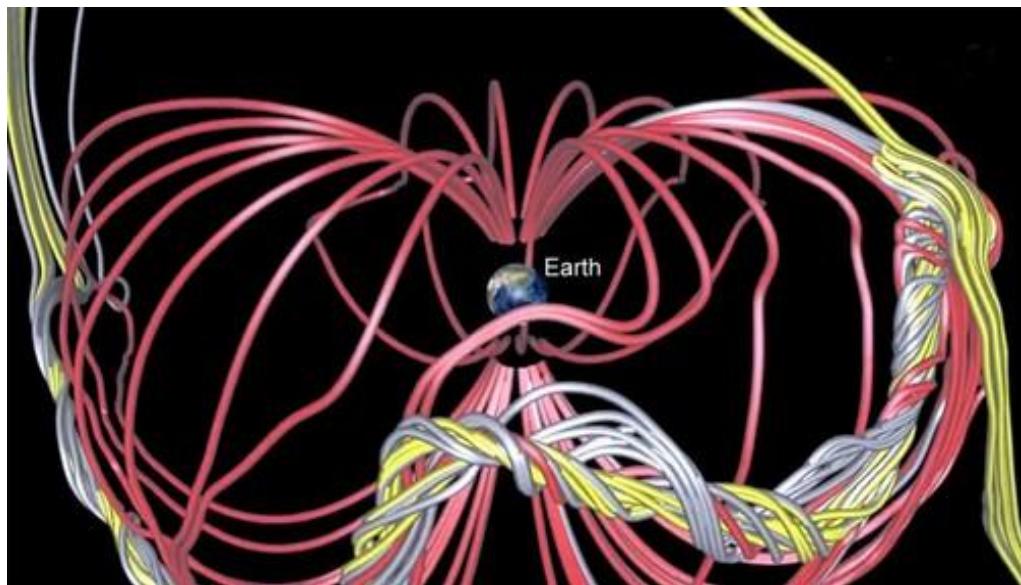


Figure 25 - Electromagnetic fields from the SSC connecting to Earth; credit: NASA<sup>156</sup>

<sup>155</sup> Credit: everythingelectric.com

Compare with [https://www.plasma-universe.com/Electric\\_currents\\_in\\_space\\_plasmas](https://www.plasma-universe.com/Electric_currents_in_space_plasmas)

<sup>156</sup> <https://electrotectonics.weebly.com/electrotectonics-pg-11-19.html>

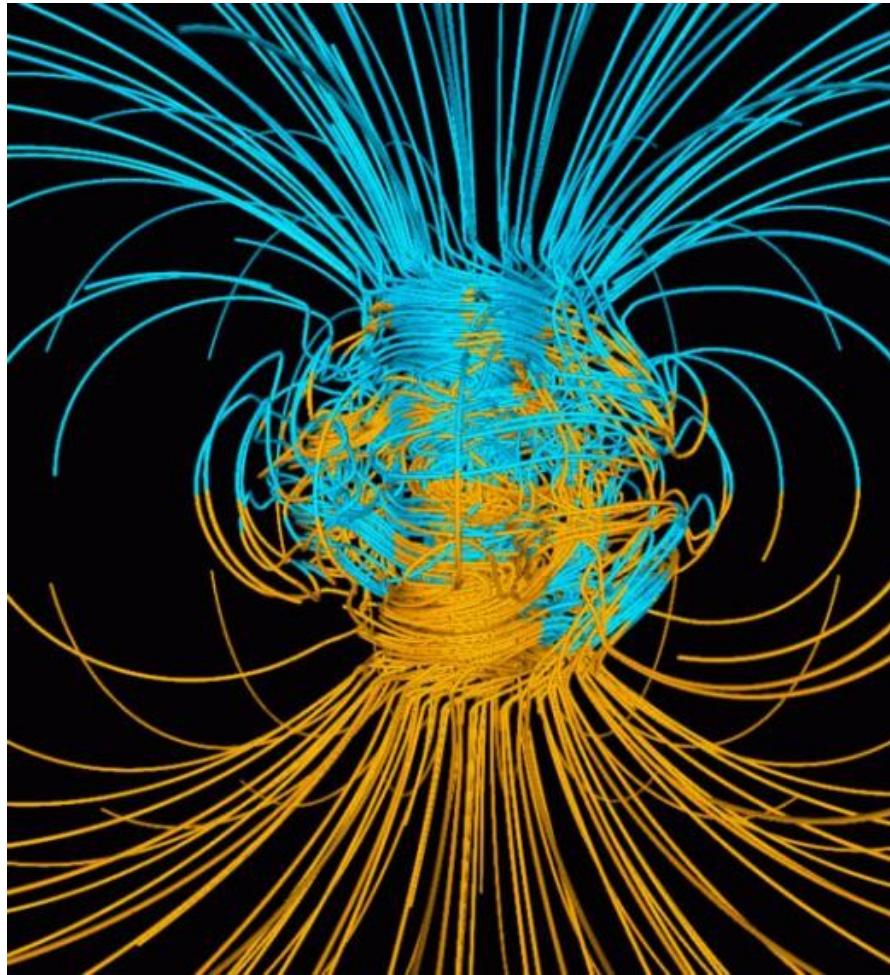


Figure 26 - Earth's Magnetosphere modeled by computer hydrodynamical methods; credit: ESA<sup>157</sup>

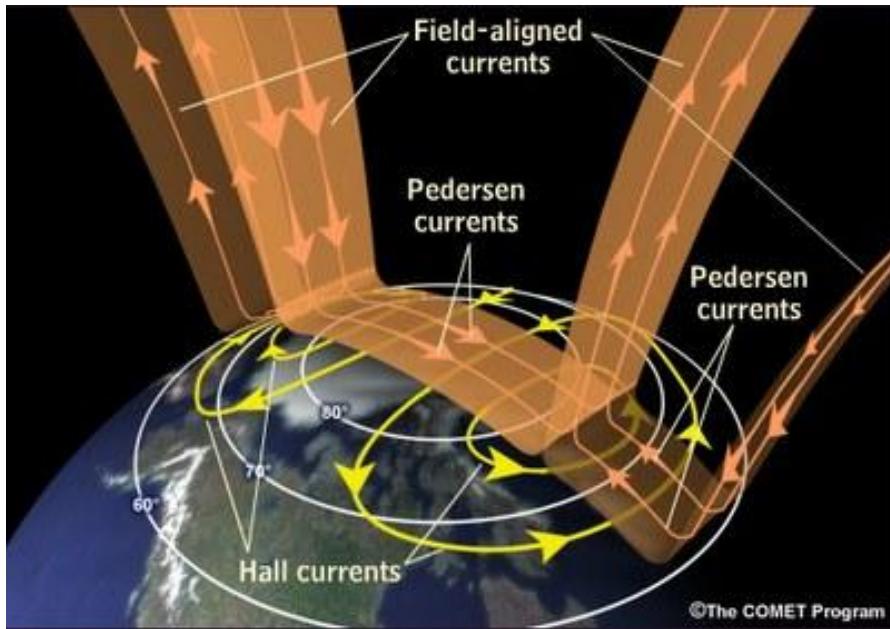


Figure 27 - Hall and Pederson "Field aligned" currents, proof of Alfvén models<sup>158</sup>; credit: ESA/COMET

<sup>157</sup> <http://theday.co.uk/attachments/2017/2017-02/earth-s-magnetic-poles-could-be-about-to-flip.pdf>

<sup>158</sup> University of Leicester,

[https://www2.le.ac.uk/departments/physics/postgraduate-study/research-degrees/image-slideshow-1/auroral-currents/vie\\_w](https://www2.le.ac.uk/departments/physics/postgraduate-study/research-degrees/image-slideshow-1/auroral-currents/vie_w)

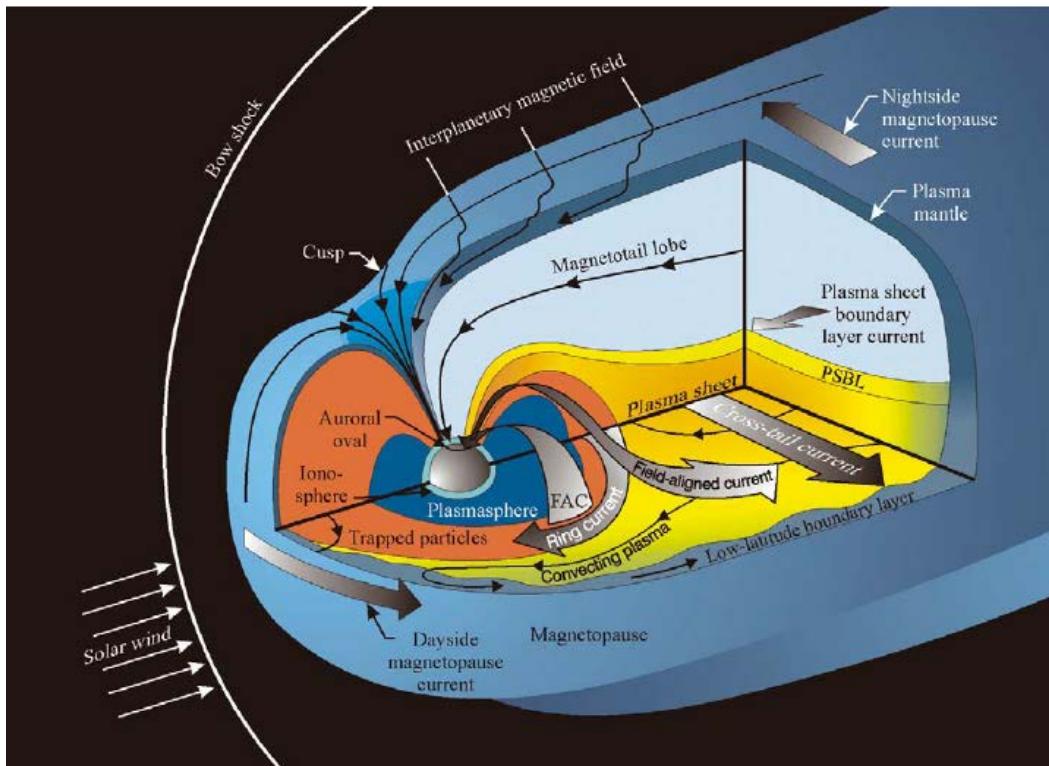


Figure 28 - Earth's magnetosphere responding to the plasma of the solar wind.<sup>159</sup>; credit: Pollack

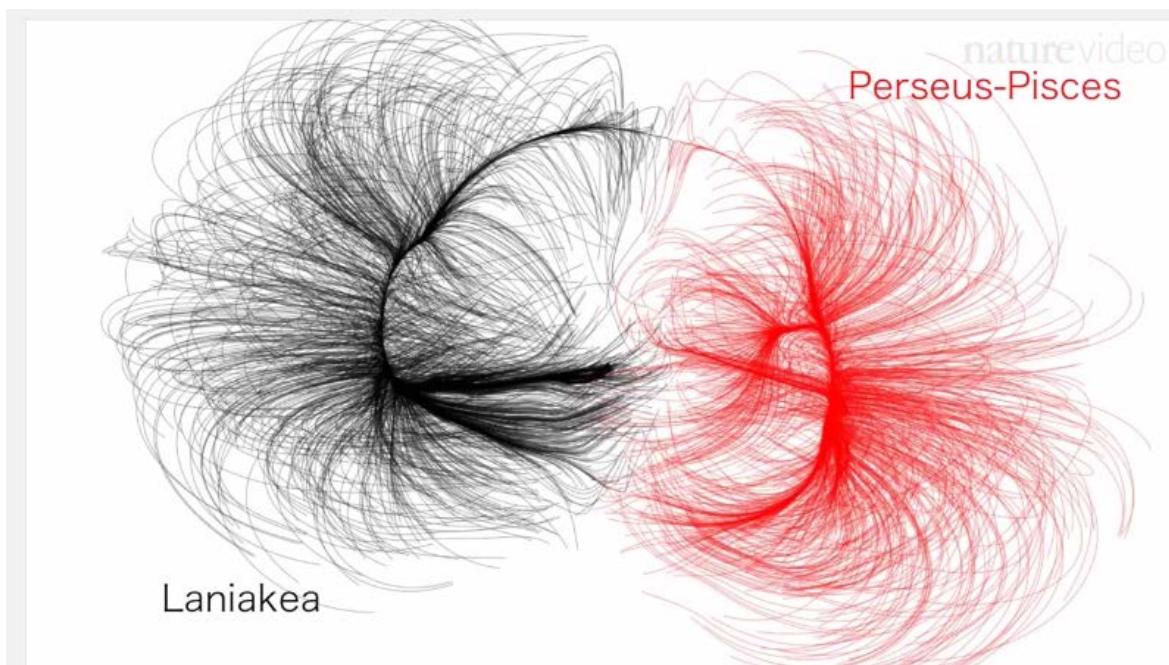


Figure 31 - Polar behavior of Laniakea and Perseus-Pisces superclusters<sup>160</sup>; credit: Nature

<sup>159</sup> Pollack, et al..., 2003,

[https://www.researchgate.net/figure/Schematic-illustration-of-Earths-magnetosphere-illustrating-major-distinct-regions-and-fig1\\_226991880](https://www.researchgate.net/figure/Schematic-illustration-of-Earths-magnetosphere-illustrating-major-distinct-regions-and-fig1_226991880)

<sup>160</sup> Organization rather like mitosis, which is, of course, guided and powered by electromagnetic processes.

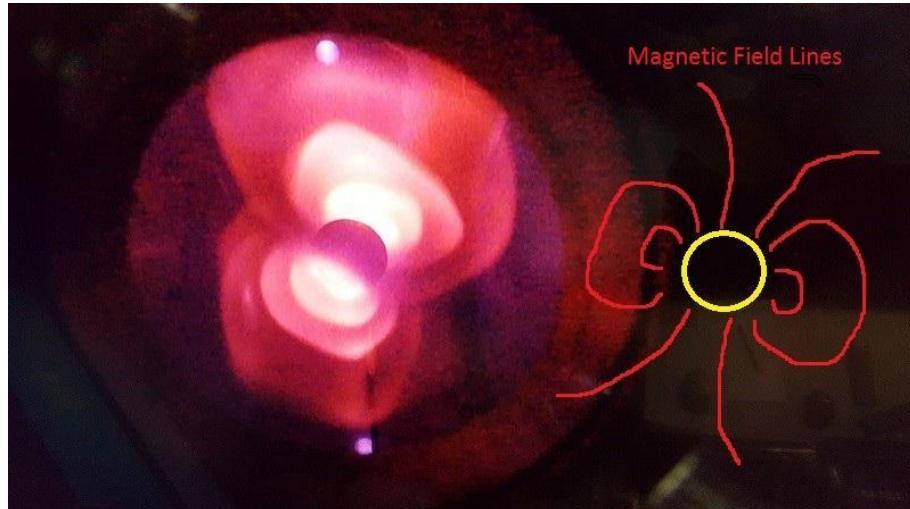


Figure 36 - Magnetism in LePointian “double bell” shape in SAFIRE phase 2

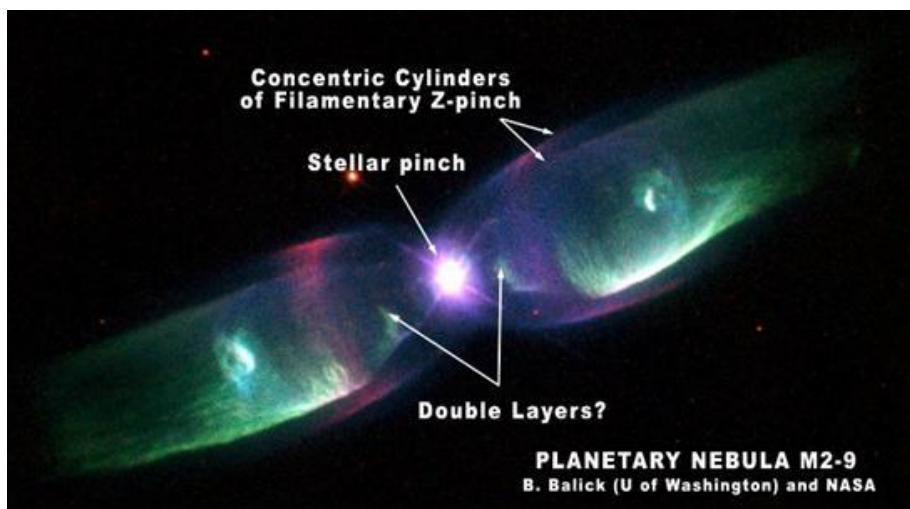


Figure 37 - Nebula M2-9 - proof that Supernova are stella Z-pinches; credit: Balick/NASA



Figure 38 - False color of Crab Nebula “electric motor” and DL’s

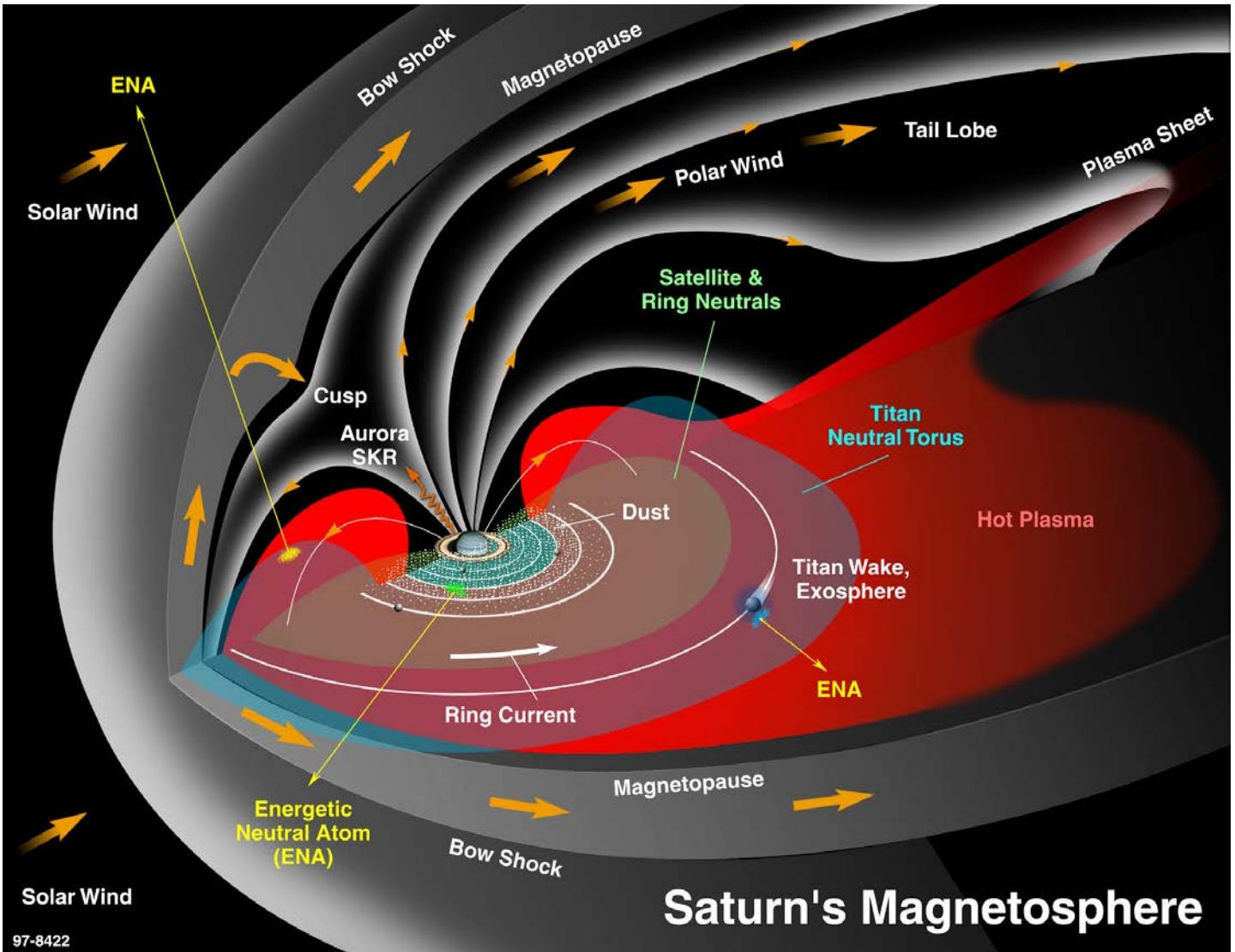


Figure 41 - Saturn's Enormous Magnetosphere; credit: NASA/Cassini<sup>161</sup>

<sup>161</sup> <https://saturn.jpl.nasa.gov/science/magnetosphere/>

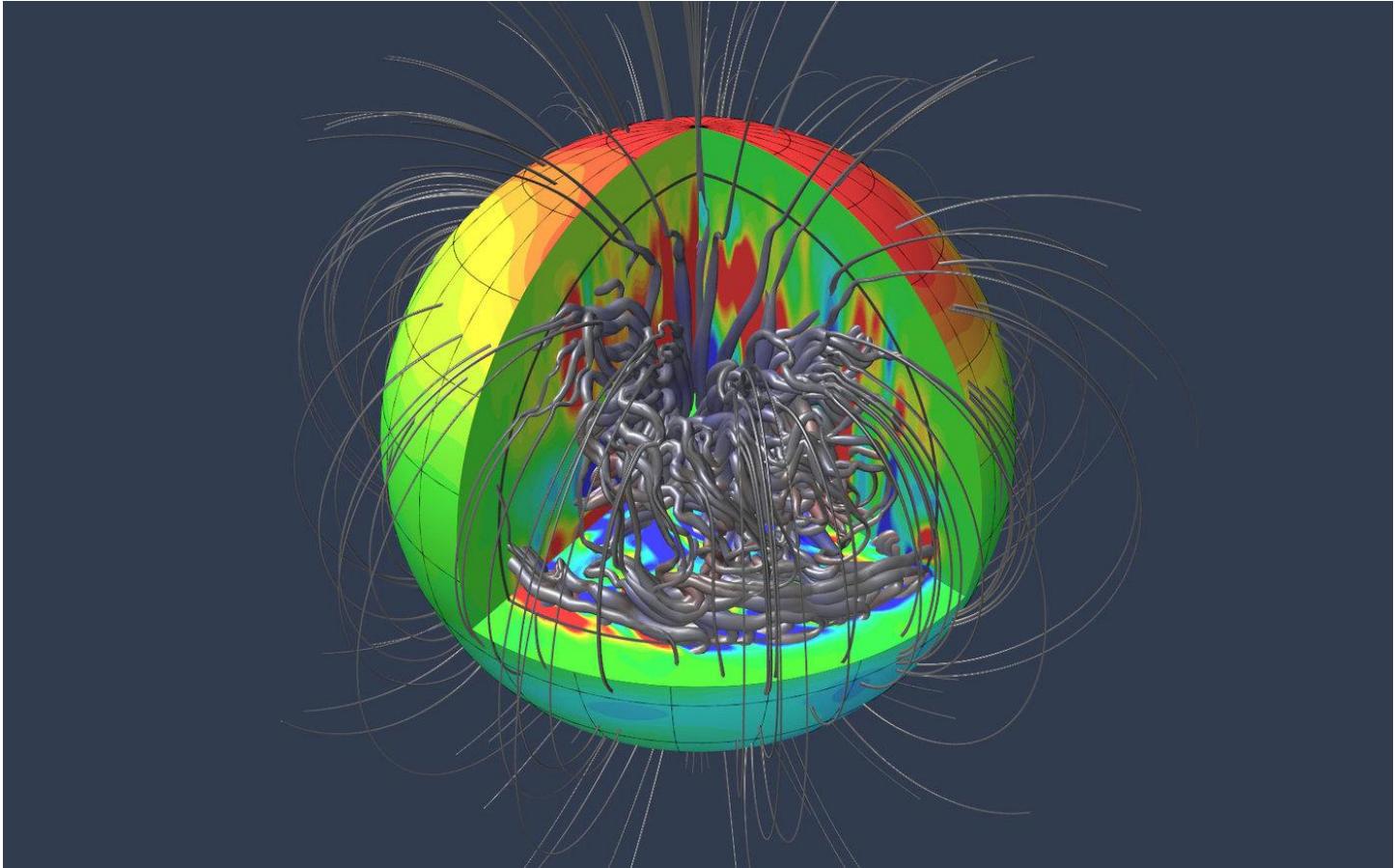


Figure 42 - Jupiter's TWO magnetic engines; credit: Planck Institute<sup>162</sup>

Table 3 - Ratios of large satellites/planetoids to Earth-masses

Body	# Satellites	Mass	Ratio
Earth	1	$0.972 \times 10^{24}$ kg ( $1 M_{\oplus}$ )	$1/(1 M_{\oplus}) = 100\%$
Sol (Sun)	[13] <sup>163</sup>	$1.989 \times 10^{30}$ kg ( $3.33 \times 10^5 M_{\oplus}$ )	.0006% <sup>164</sup>
Jupiter	53	$1.898 \times 10^{27}$ kg ( $317.8 M_{\oplus}$ )	16.7%
Helios (Saturn)	62	$5.683 \times 10^{26}$ kg ( $95.16 M_{\oplus}$ )	65.2%
Uranus	27	$8.681 \times 10^{25}$ kg ( $14.54 M_{\oplus}$ )	185.7%
Neptune	14	$1.024 \times 10^{26}$ kg ( $17.15 M_{\oplus}$ )	81.6%

<sup>162</sup> [https://www.mpg.de/8373381/two-dynamos\\_Jupiter](https://www.mpg.de/8373381/two-dynamos_Jupiter)

<sup>163</sup> Not including comets and asteroids, or Planet X/Nine

<https://www.space.com/38431-new-evidence-planet-nine-existence.html>

<sup>164</sup> This low value would suggest that the sun is a relative newcomer to the solar system or recently charged up.

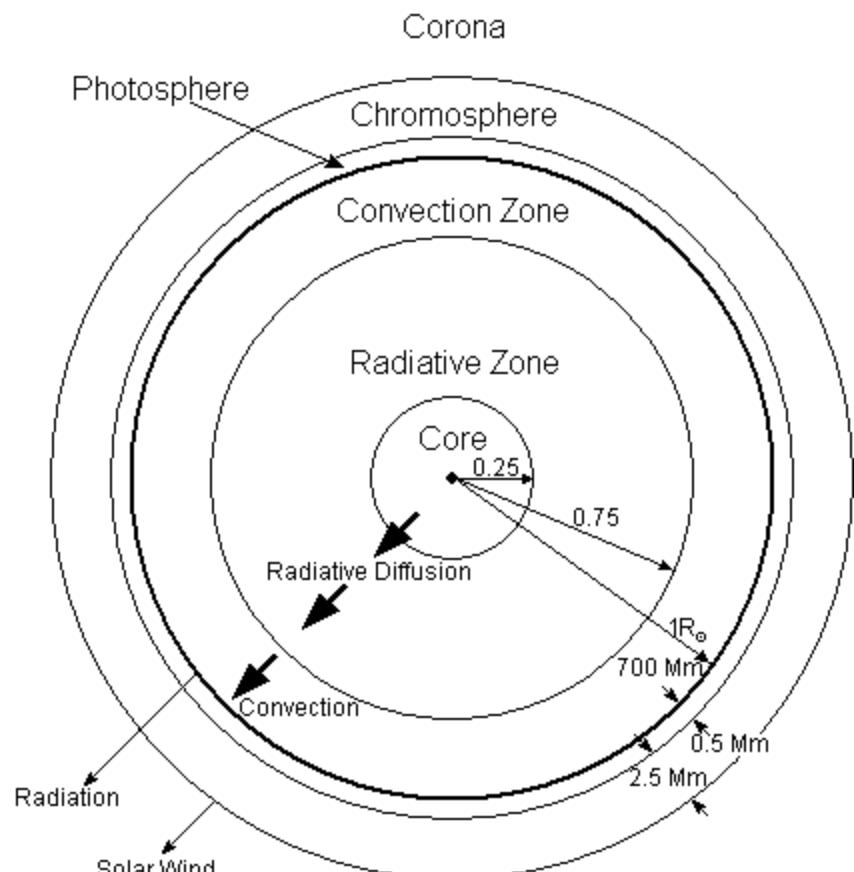


Figure 43 - Spherical Shells of Earth, with directions of movement; credit: [greatians.com](http://www.greatians.com)<sup>165</sup>

<sup>165</sup> <http://www.greatians.com/physics/universe/earth.htm>

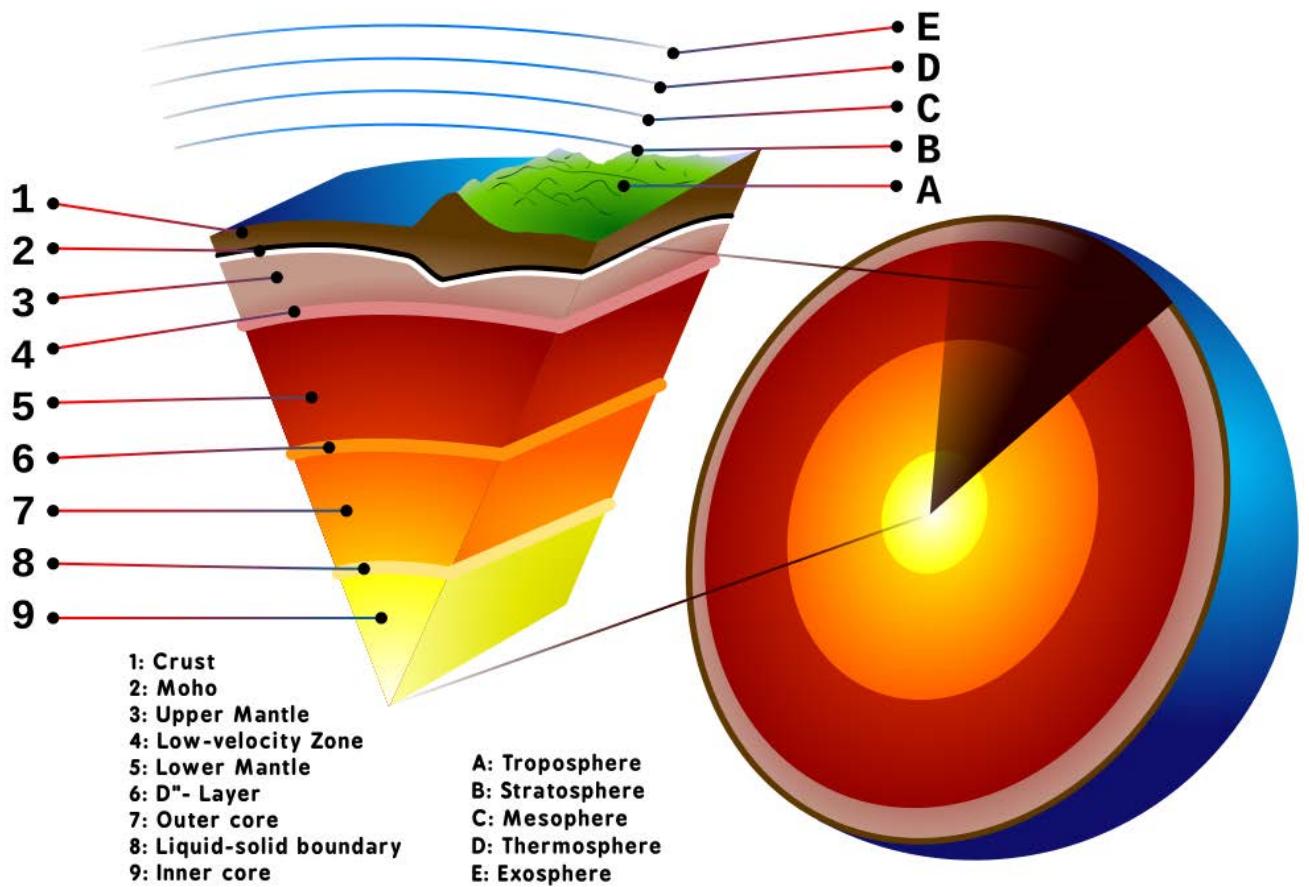


Figure 44 - Spheres of the Earth; not shown: asthenosphere=3+4

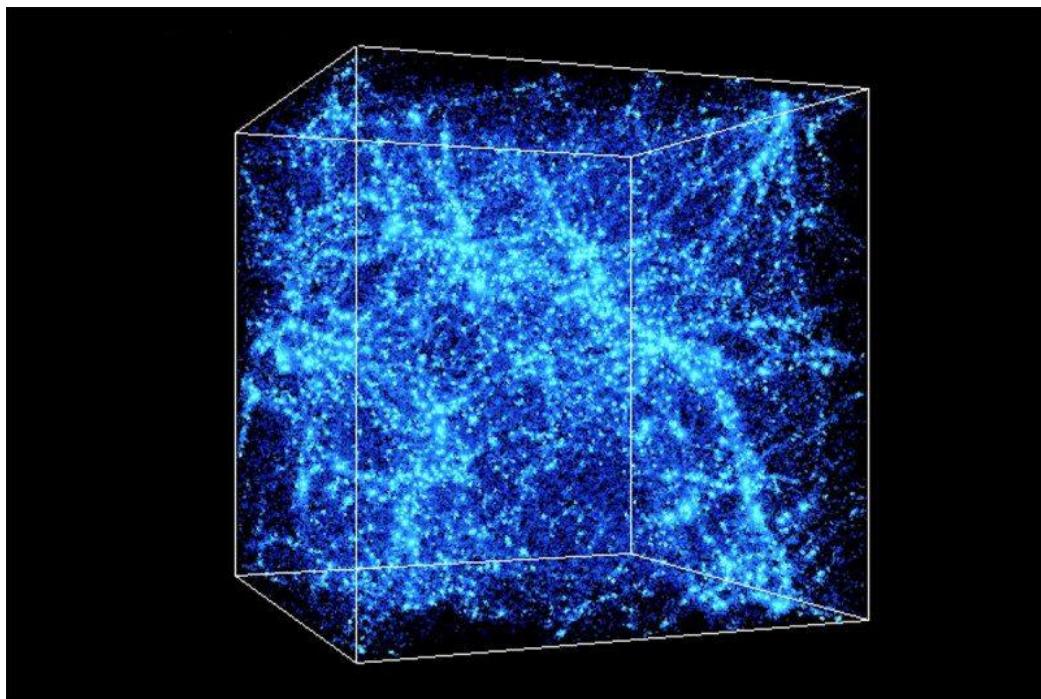


Figure 45 - The Universe seen with half the matter found (as baryons).<sup>166</sup>; credit: A Kravtsov

<sup>166</sup> Note: baryons are quarks (measured in eV).

<https://www.newscientist.com/article/2149742-half-the-universes-missing-matter-has-just-been-finally-found/>

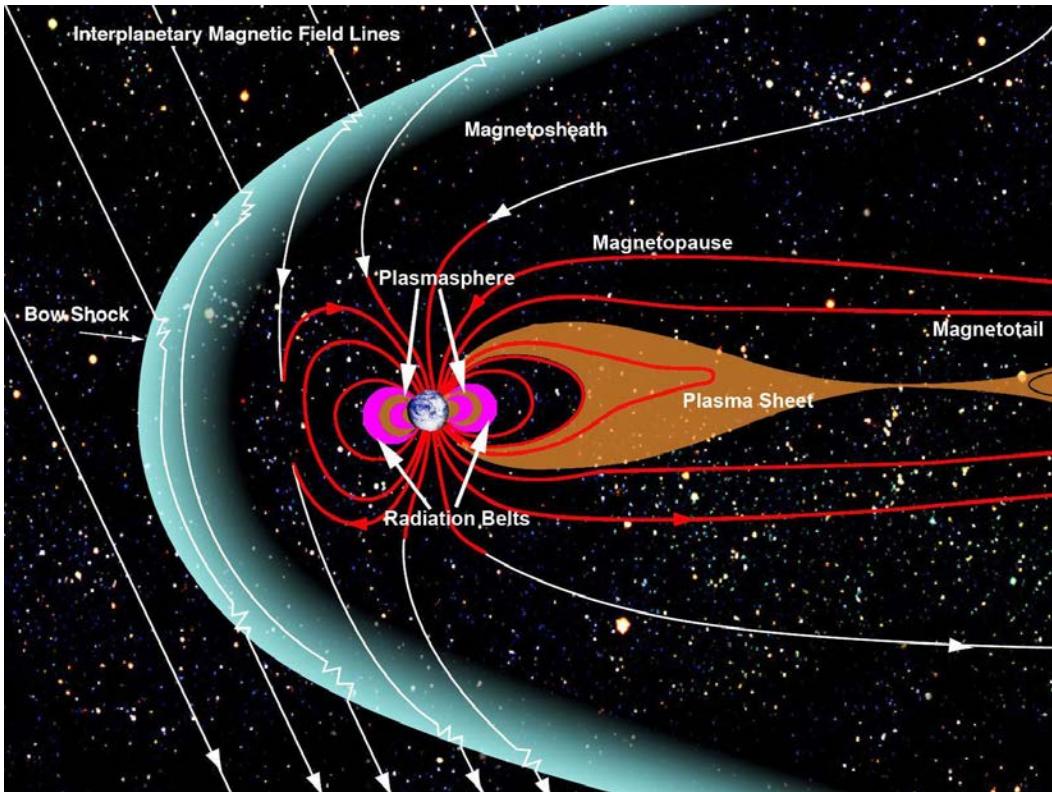


Figure 46 - Spheres of Heaven are nothing short of plasma layer interactions, frequently described using magnetohydrodynamics (rather than plasma physics, despite Alfvén's warnings)

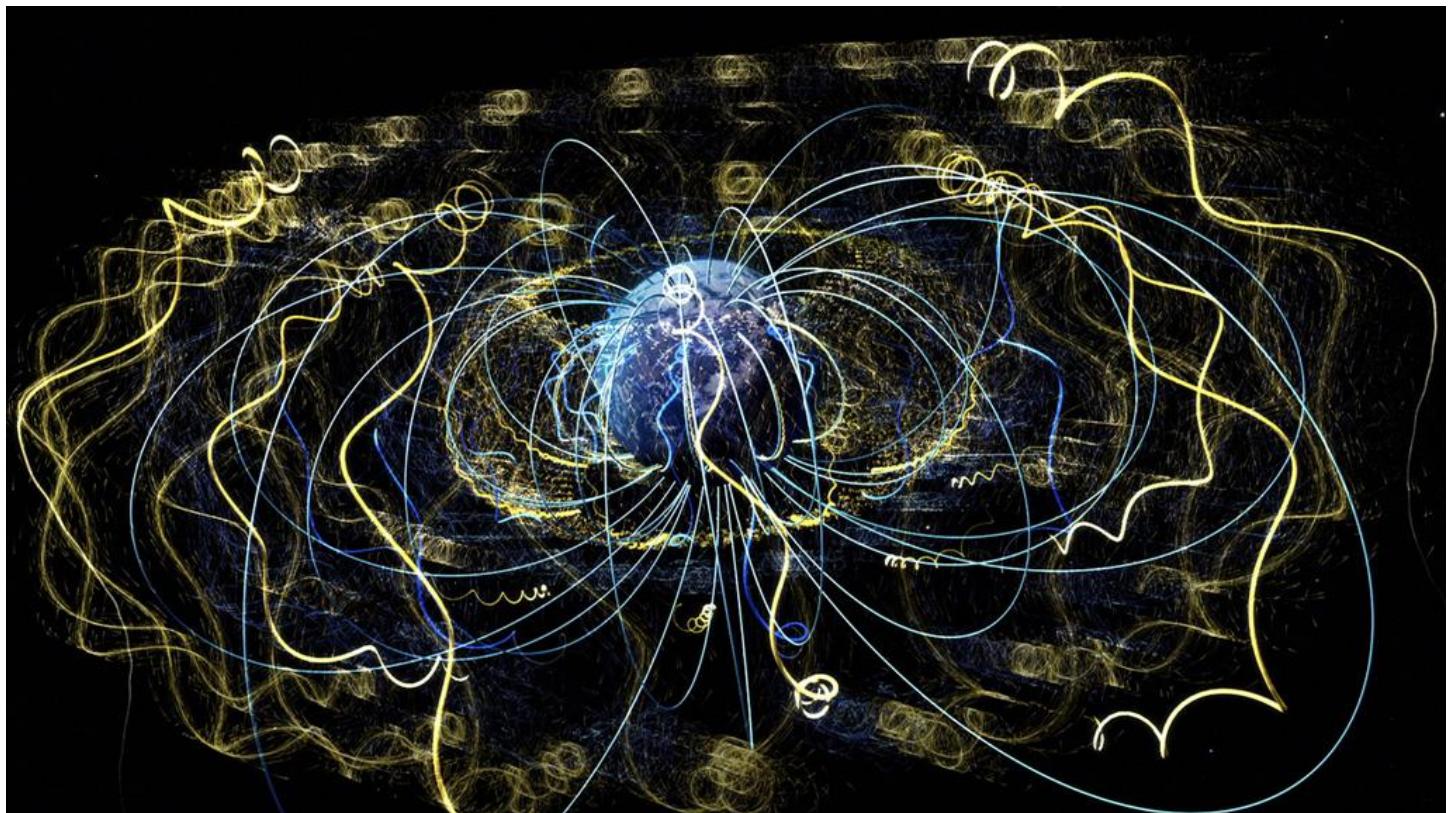


Figure 47 - Earth's Dynamic Magnetosphere; credit: NASA<sup>167</sup>

<sup>167</sup> <https://svs.gsfc.nasa.gov/12249>

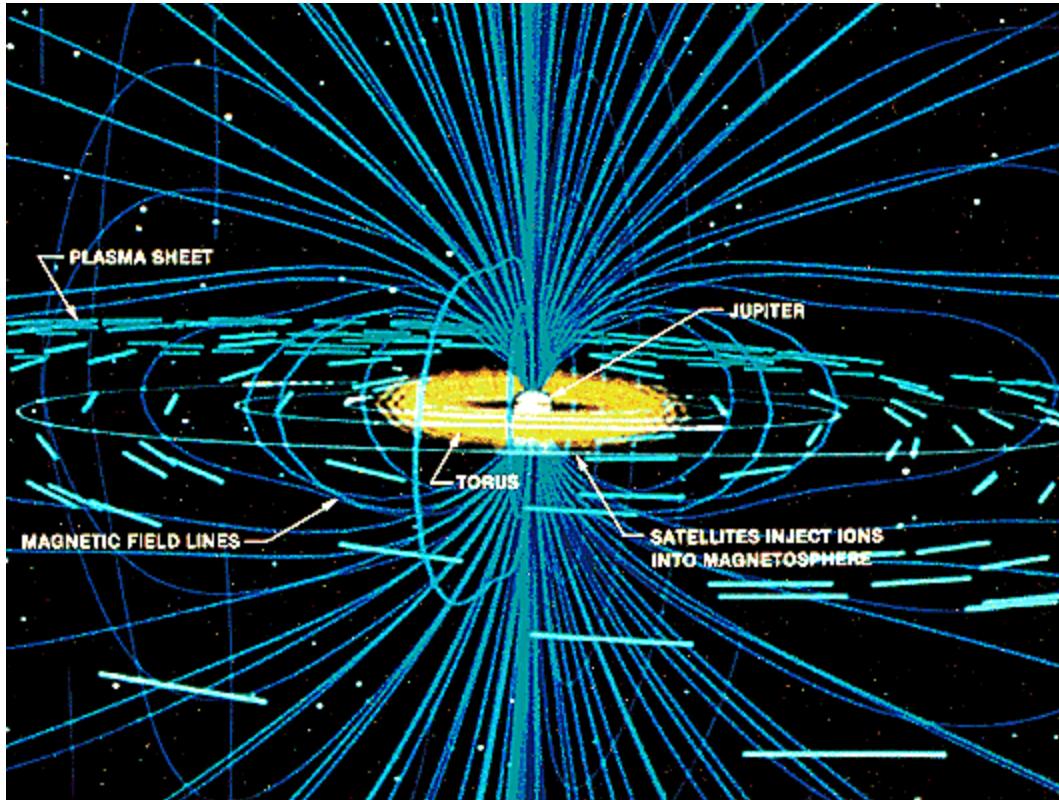


Figure 48 - Jupiter's Magnetosphere<sup>168</sup>; credit: NASA

<sup>168</sup> <http://www.pas.rochester.edu/~blackman/ast104/jmagnetic.html>

# Appendices from “Magnetic Universe Theory”

## Appendix A - Glossary of Terms<sup>169</sup>

**Active Galactic Nuclei** - An active galactic nucleus (AGN) is a compact region at the center of a galaxy that has a much higher than normal luminosity over at least some portion—and possibly all—of the electromagnetic spectrum, with characteristics indicating that the excess luminosity is not produced by stars.

**Aether/Ether** - a very rarefied and highly elastic substance formerly believed to permeate all space, including the interstices between the particles of matter, and to be the medium whose vibrations constituted light and other electromagnetic radiation.

**Alfvénic Magnetism** - In magnetohydrodynamics, the Alfvén's theorem, also known as Alfvén's frozen in theorem, states that in a fluid with infinite electric conductivity, magnetic field lines are frozen into the fluid and have to move along with it.

**Amplitude** - the maximum extent of a vibration or oscillation, measured from the position of equilibrium.

**Angular Momentum** - the quantity of rotation of a body, which is the product of its moment of inertia and its angular velocity.

**Anode** - the positively charged electrode by which the electrons leave a device or the negatively charged electrode of a device supplying current such as a primary cell.

**Anticyclone** - a weather system with high atmospheric pressure at its center, around which air slowly circulates in a clockwise (northern hemisphere) or counterclockwise (southern hemisphere) direction.

**Antimatter** - “molecules formed by atoms consisting of antiprotons, antineutrons, and positrons. Stable antimatter does not appear to exist in our universe.”

**Birkeland Current** - A Birkeland current is a set of currents that flow along geomagnetic field lines connecting the Earth's magnetosphere to the Earth's high latitude ionosphere. The strength of the Birkeland currents changes with activity in the magnetosphere (e.g. during substorms).

**c** - The speed of light in vacuum, commonly denoted c, is a universal physical constant important in many areas of physics. Its exact value is 299,792,458 metres per second.

**Capacitance** - the ability of a system to store an electric charge. The ratio of the change in an electric charge in a system to the corresponding change in its electric potential. The SI unit of capacitance is the farad (symbol: F), named after the English physicist Michael Faraday. A 1 farad capacitor, when charged with 1 coulomb of electrical charge, has a potential difference of 1 volt between its plates. symbol: C

**Cathode** - the negatively charged electrode by which electrons enter an electrical device or the positively charged electrode of an electrical device, such as a primary cell, that supplies current.

**Charge** - Electric charge is the physical property of matter that causes it to experience a force when placed in an electromagnetic field. There are two types of electric charges; positive and negative (commonly carried by protons and electrons respectively). Like charges repel and unlike attract. SI unit: Coulomb. symbol: Q

**Charge Density** - the electric charge per unit area of a surface, or per unit volume of a field or body.

**Coaxial** - having a common axis. (of a cable or line) consisting of two concentric conductors separated by an insulator.

### Conductivity

**Electrical:** the degree to which a specified material conducts electricity, calculated as the ratio of the current density in the material to the electric field that causes the flow of current. It is the reciprocal of the resistivity.

**Thermal:** the rate at which heat passes through a specified material, expressed as the amount of heat that flows per unit time through a unit area with a temperature gradient of one degree per unit distance.

<sup>169</sup> Sources: Google and Wikipedia, unless otherwise noted.

**Convection** - the movement caused within a fluid by the tendency of hotter and therefore less dense material to rise, and colder, denser material to sink under the influence of gravity, which consequently results in transfer of heat.

**Coriolis Effect** - an effect whereby a mass moving in a rotating system experiences a force (the *Coriolis force*<sup>170</sup>) acting perpendicular to the direction of motion and to the axis of rotation. On the earth, the effect tends to deflect moving objects to the right in the northern hemisphere and to the left in the southern and is important in the formation of cyclonic weather systems.

**Counter-rotation/rotating** - (of two corresponding or similar moving parts) rotating in opposite directions.

**Curvature** - the degree to which a curve deviates from a straight line, or a curved surface deviates from a plane.

**Cyclone** - a system of winds rotating inward to an area of low atmospheric pressure, with a counterclockwise (northern hemisphere) or clockwise (southern hemisphere) circulation; a depression.

**Dark Energy** - a theoretical hypothetical repulsive force that counteracts gravity and causes the universe to expand at an accelerating rate.

**Dark Matter** - (in some cosmological theories) non-luminous material that is postulated to exist in space and that could take any of several forms including weakly interacting particles (*cold dark matter*) or high-energy randomly moving particles created soon after the Big Bang (*hot dark matter*).

**Diamagnetic** - (of a substance or body) tending to become magnetized in a direction at 180° to the applied magnetic field.

**Dielectric/Effect** - the energy storing capacity of the material (by means of polarization). A common example of a dielectric is the electrically insulating material between the metallic plates of a capacitor.

**Diffusion** - the intermingling of substances by the natural movement of their particles: "the rate of diffusion of a gas"

**Dwarf Star** - a star of relatively small size and low luminosity, including the majority of main sequence stars.

**e (Euler's Number)** - The number e is a famous irrational number, and is one of the most important numbers in mathematics. The first few digits are: 2.7182818; The natural log of e is 1.  $\ln(e)=1$

**Earthspot** - The hypothetical<sup>171</sup> junction of low pressure zones changing temperatures, with electromagnetic tunnels observed in correlation with sunspot+solar flare activity, or coronal hole activity, depending on charge.

**Eigenvector** - a vector that when operated on by a given operator gives a scalar multiple of itself.

**Electric/current sheet** - A current sheet is an electric current that is confined to a surface, rather than being spread through a volume of space.<sup>172</sup>

**Electrical Circuit** - a path in which electrons from a voltage or current source flow. The point where those electrons enter an electrical circuit is called the "source" of electrons. The point where the electrons leave an electrical circuit is called the "return" or "earth ground".

**Electrical Tension** - Voltage, electric potential difference, electric pressure or electric tension (formally denoted  $\Delta V$  or  $\Delta U$ , but more often simply as **V** or **U**, for instance in the context of Ohm's or Kirchhoff's circuit laws; see Appendix B.IV) is the difference in electric potential between two points.

**Electric Field** - a region around a charged particle or object within which a force would be exerted on other charged particles or objects. The SI unit of electric field strength is **newtons per coulomb** (N/C) or volts per **meter**(V/m). The force experienced by a very small test charge q placed in a field E in a vacuum is given by  $E = F/q$ , where F is the force experienced. Symbol: **E**

**Electrogravity** - a research subject based upon the original work of Nikola Tesla, and hypotheses advanced by Thomas T. Brown and Brown's subsequent extensive experimentation and demonstrations of the effect.

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<sup>170</sup> Please note this is not a real force, and this is not a correct theorem, but is included for thoroughness. See Birkeland, Bagashov

<sup>171</sup> Sf. Careaga, see "Weatherman's Guide to the Sun," B Davidson, 2017

<sup>172</sup> <https://phys.org/news/2012-08-thin-current-sheets-space-action.html>

**Electromagnetic Force** - (EMF) A fundamental force in nature, the electromagnetic force acts between charged particles and is the combination of all electrical and magnetic forces. The electromagnetic force can be attractive or repulsive.

**Electronegativity** - a measure of how strongly atoms attract bonding electrons to themselves

**Electrotropism** - a kind of tropism which results in growth or migration of an organism, usually a cell, in response to an exogenous electric field.

**Electroquake** - Earthquakes induced by the plasma-electromagnetic sky, especially solar coronal holes.<sup>173</sup>

**Electroweak Force** - relating to or denoting electromagnetic and weak interactions regarded as manifestations of the same interaction.

**Energy** - power derived from the utilization of physical or chemical resources, especially to provide light and heat or to work machines.

**Euler's Formula** (see right)

$$e^{ix} = \cos x + i \sin x$$

**Evolutionary Theory** - The theory of evolution by natural selection, first formulated in Darwin's book "On the Origin of Species" in 1859, is the process by which organisms change over time as a result of changes in heritable physical or behavioral traits.

$$x \rightarrow x \ln b$$

$$e^{i(x \ln b)} = \cos(x \ln b) + i \sin(x \ln b)$$

$$= b^{ix}$$

**Extrapolation** - the action of estimating or concluding something by assuming that existing trends will continue or a current method will remain applicable. In mathematics: the extension of a graph, curve, or range of values by inferring unknown values from trends in the known data.

**Extrinsic** - not part of the essential nature of someone or something; coming or operating from outside.

**EZ Water** - H<sub>3</sub>O<sub>2</sub> is more viscous, more ordered, and more alkaline than regular water (H<sub>2</sub>O), and its optical properties are different. The refractive index of EZ water is about 10% higher than ordinary water.<sup>174</sup> (see: Structured Water)

**Flux** - In electromagnetism, electric flux is the measure of flow of the electric field through a given area

**Force** - strength or energy as an attribute of physical action or movement; something that causes a change in the motion of an object. F=ma (SI unit is N for Newtons)

**Fractals** - a curve or geometric figure, each part of which has the same statistical character as the whole.

Fractals are useful in modeling structures (such as eroded coastlines or snowflakes) in which similar patterns recur at progressively smaller scales, and in describing partly random or chaotic phenomena such as crystal growth, fluid turbulence, and galaxy formation.

**Frequency** - the rate at which a vibration occurs that constitutes a wave, either in a material (as in sound waves), or in an electromagnetic field (as in radio waves and light), usually measured per second.

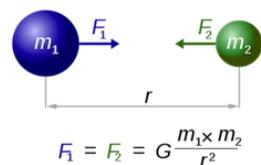
**Friction** - the resistance that one surface or object encounters when moving over another.

**Gaia Hypothesis** - the theory, put forward by James Lovelock, that living matter on the earth collectively defines and regulates the material conditions necessary for the continuance of life. The planet, or rather the biosphere, is thus likened to a vast self-regulating organism.

**Galactic Electric Circuit** - the electric circuit composed of or pertaining to the galactic scales: clusters, globulars, nebulae, dwarf and galactic superstructures.<sup>175</sup>

**Gaussian** - being or having the shape of a normal curve or a *normal distribution*.

**Gravity** - the force that attracts a body toward the center of the earth, or toward any other physical body having mass. For most purposes Newton's laws of gravity apply, with minor modifications to take the general theory of relativity into account. (see figure at right)



<sup>173</sup> Sf. Careaga

<sup>174</sup> [www.pollacklab.com](http://www.pollacklab.com)

<sup>175</sup> Sf. Careaga

**Gravity Waves** - a wave propagated on a liquid surface or in a fluid (Aether) through the effects of gravity.<sup>176</sup>

**$\hbar$  (Planck's Constant)** - the unvarying ratio of the energy of a quantum of radiation to its frequency and that has an approximate value of  $6.626 \times 10^{-34}$  joule-second.

**Heavy Water** - water in which the hydrogen in the molecules is partly or wholly replaced by the isotope deuterium [ a hydrogen isotope], used especially as a moderator in nuclear reactors.

**Heisenberg Uncertainty Principle** - The statement in quantum mechanics, formulated by Werner Heisenberg, that it is impossible to measure two properties of a quantum object, such as its position and momentum (or energy and time), simultaneously with infinite precision.

**Hysteresis** (magnetic) - the dependence of the state of a system on its history.

**Ideal Gas** - a hypothetical gas whose molecules occupy negligible space and have no interactions, and that consequently obeys the gas laws exactly.

**Imaginary Number (i)** - An imaginary number is a complex number that can be written as a real number multiplied by the imaginary unit i, which is defined by its property  $i^2 = -1$

**Inductance** - the property of an electric conductor or circuit that causes an electromotive force to be generated by a change in the current flowing. (symbol: L; Reduced to base SI units, one henry (H) is the equivalent of one kilogram meter squared per second squared per ampere squared ( $\text{kg m}^2 \text{s}^{-2} \text{A}^{-2}$  ))

**Inertia** - a property of matter by which it continues in its existing state of rest or uniform motion in a straight line, unless that state is changed by an external force.

**Instant Petrification** - rapid organic mineralization via electrolytic ion diffusion in high energy arc discharge<sup>177</sup>

**Intrinsic** - belonging naturally; essential.

**Intrinsic Redshift** - Intrinsic redshift specifically refers to variations in the observed redshift of individual objects (galaxies, quasars ...) that vary from object to object such that two objects at the same distance might have vastly different redshifts.

**Ions/Ionized** - an atom or molecule with a net electric charge due to the loss or gain of one or more electrons.

**Langmuir Probe** - a device used to determine the electron temperature, electron density, and electric potential of a plasma. It works by inserting one or more electrodes into a plasma, with a constant or time-varying electric potential between the various electrodes or between them and the surrounding vessel.

**Langmuir Waves** - Plasma oscillations, also known as Langmuir waves (after Irving Langmuir), are rapid oscillations of the electron density in conducting media such as plasmas or metals in the ultraviolet region. They are parallel in form to *Jeans instability waves*, which are caused by gravitational instabilities in a static medium.

**Laplace Transformation** - an integral transform named after its discoverer

Pierre-Simon Laplace (/lə'plā:s/). It takes a function of a real variable t (time) to a function of a complex variable s (frequency). (see right)

$$\begin{aligned}\mathcal{L}\{\sin(at)\} &= F(s) \\ &= \int_0^\infty e^{-st} \sin(at) dt \\ &= \lim_{n \rightarrow \infty} \int_0^n e^{-st} \sin(at) dt\end{aligned}$$

**Lattice** - a regular repeated three-dimensional arrangement of atoms, ions, or molecules in a metal or other crystalline solid.

**Lightyear** - a unit of astronomical distance equivalent to the distance that light travels in one year, which is  $9.4607 \times 10^{12}$  km (nearly 6 trillion miles).

**Liquid Metallic Hydrogen** - Metallic hydrogen is a phase of hydrogen in which it behaves like an electrical conductor.

**Lorentzian** - the set of equations that, in Einstein's special theory of relativity, relate the space and time coordinates of one frame of reference to those of another.

**Magnetar** - a "neutron" star with an extremely strong magnetic field.

**Magnetic Field** - a region around a magnetic material or a moving electric charge within which the force of magnetism acts. SI Unit: Gauss. Symbol: **B**

<sup>176</sup> In Einstein's theory of General Relativity, this fluid medium is space-time. In electromagnetic cosmologies, it is the EMF force field itself.

<sup>177</sup> Sf. Careaga; see: P. Mupp, "Ancient Destructions."

**Magnetic Flux** - In electromagnetism, the magnetic flux(often denoted  $\Phi$  or  $\Phi_B$ ) through a surface is the surface integral of the normal component of the magnetic field **B** passing through that surface. The SI unit of magnetic flux is the weber (**Wb**) (in derived units: volt seconds), and the CGS unit is the maxwell.

**Magnetic Reconnection** - is a physical process in highly conducting plasmas in which the magnetic topology is rearranged and magnetic energy is converted to kinetic energy, thermal energy, and particle acceleration.

**Magnetic Flux Ropes** - Magnetic flux ropes are twisted bundles of electrical current and magnetic field which can exist in magnetized plasmas<sup>178</sup>

**Magnetosphere** - the region surrounding the earth or another astronomical body in which its magnetic field is the predominant effective magnetic field.

**Marklund Convection** - named after Göran Marklund, is a convection process that takes place in filamentary currents of plasma. It occurs within a plasma with an associated electric field, that causes convection of ions and electrons inward towards a central twisting filamentary axis.

**Mass** - the property of matter that measures its resistance to acceleration. Roughly, the mass of an object is a measure of the number of atoms in it. The basic unit of measurement for mass is the kilogram (**kg**). (See Newton's laws of motion; compare weight, inertia.)

**Membrane** - a pliable sheetlike structure acting as a boundary, lining, or partition of various kinds.

**Modulation** - the process of varying one or more properties of a periodic waveform, called the carrier signal, with a signal that typically contains information to be transmitted.

**Momentum** - the quantity of motion of a moving body, measured as a product of its mass and velocity.  $P=mv$

**MOND** - a class of theories known as modified gravity, and is an alternative to the hypothesis that the dynamics of galaxies are determined by massive, invisible dark matter halos.

**Nebulae** - a cloud of gas and dust in outer space, visible in the night sky either as an indistinct bright patch or as a dark silhouette against other luminous matter.

**Neutron Star** - a [hypothetical] celestial object of very small radius and very high density, composed predominantly of closely packed neutrons.<sup>179</sup>

**Nonlinear** - In mathematics and physical sciences, a nonlinear system is a system in which the change of the output is not proportional to the change of the input.

**Nova/Supernova** - a star showing a sudden large increase in brightness and then slowly returning to its original state over a few months.

**Ozone Layer** - a layer in the earth's stratosphere at an altitude of about 6.2 miles (10 km) containing a high concentration of ozone, which absorbs most of the ultraviolet radiation reaching the earth from the sun.

**P-wave** - a longitudinal earthquake wave that travels through the interior of the earth and is usually the first conspicuous wave to be recorded by a seismograph. Expand. Also called primary wave.

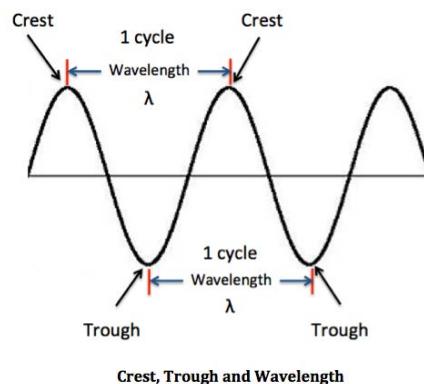
**Penumbra** (of the sun) - the less dark outer part of a sunspot, surrounding the dark core.

**Period** - A Time period (denoted by 'T') is the time needed for one complete cycle of vibration to pass in a given point. As the frequency of a wave increases, the time period of the wave decreases.

**Permittivity** - the ability of a substance to store electrical energy in an electric field. Symbols:  $K$ ,  $\epsilon$ ,  $\epsilon'$  or  $\epsilon_r$

**Pinch** - A pinch is the compression of an electrically conducting filament by magnetic forces.

**Phi** - The Golden ratio  $\phi$  is a special number (1.6180339887) found by dividing a line into two parts so that the longer part divided by



<sup>178</sup> <http://iopscience.iop.org/article/10.1088/0741-3335/56/6/064002>; see: Birkeland Currents

<sup>179</sup> Without any other mechanism of explanation, gravity is expected to be capable of doing this; however, high rotation rates proposed preclude this possibility.

smaller part is also equal to the whole length divided by the longer part.

**Photoelectric Effect** - the emission of electrons or other free carriers when light shines on a material.

Electrons emitted in this manner can be called photo electrons. This phenomenon is commonly studied in electronic physics, as well as in fields of chemistry, such as quantum chemistry or electrochemistry.

**Photovoltaic Effect** - the creation of voltage and electric current in a material upon exposure to light and is a physical and chemical property/phenomenon. The photovoltaic effect is closely related to the photoelectric effect.

**Photon** - a particle representing a quantum of light or other electromagnetic radiation. A photon carries energy proportional to the radiation frequency but has zero rest mass.

**Planck Distance/Length** - The Planck length is the scale at which classical ideas about gravity and space-time cease to be valid, and quantum effects dominate. This is the quantum of length, the smallest measurement of length with any meaning. And roughly equal to  $1.6 \times 10^{-35}$  m or about  $10^{-20}$  times the size of a proton.

**Plasma** - an ionized gas consisting of positive ions and free electrons in proportions resulting in more or less no overall electric charge, typically at low pressures (as in the upper atmosphere and in fluorescent lamps) or at very high temperatures (as in stars and nuclear fusion reactors).

**Plasma Sheath (aka Double Layer)** - The *Debye sheath* (electrostatic sheath) is a layer in a plasma which has a greater density of positive ions, and hence an overall excess positive charge, that balances an opposite negative charge on the surface of a material with which it is in contact. See: Langmuir, Tonks, Bohm<sup>180</sup>

**Platonic Solids** - one of five regular solids (a tetrahedron, cube, octahedron, dodecahedron, or icosahedron).

**Plumes** - A mantle plume is an upwelling of abnormally hot rock within the Earth's mantle. As the heads of mantle plumes can partly melt when they reach shallow depths, they are thought to be the cause of volcanic centers known as hotspots and probably also to have caused flood basalts.

**Polarized** - restrict the vibrations of (a transverse wave, especially light) wholly or partially to one direction.

**Power** - the rate of doing work, the amount of energy transferred per unit time. In the International System of Units, the unit of power is the joule per second (**J/s**), known as the watt (**W**) in honour of James Watt, the eighteenth-century developer of the steam engine condenser.

**Pulsar** - a celestial object that emits regular pulses of radio waves and other electromagnetic radiation at rates of up to sixteen thousand pulses per second.

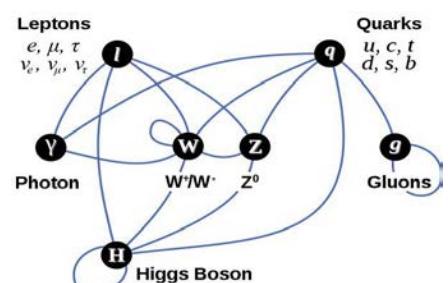
**Quanta** - a discrete quantity of energy proportional in magnitude to the frequency of the radiation it represents.

**Quarks** - any of a number of subatomic particles carrying a fractional electric charge, postulated as building blocks of the hadrons. Quarks have not been directly observed, but theoretical predictions based on their existence have been confirmed experimentally. (See right)

**Quasar** - a massive and extremely remote celestial object, emitting exceptionally large amounts of energy, and typically having a starlike image in a telescope.

**Radiation** - the emission of energy as electromagnetic waves or as moving subatomic particles, especially high-energy particles that cause ionization.

**Radio Jets** - An astrophysical jet is an astronomical phenomenon where outflows of ionised matter are emitted as an extended beam along the axis of rotation. When this greatly accelerated matter in the beam approaches the speed of light, astrophysical jets become *relativistic jets* as they show effects from special relativity (see: Relativity Theory).



<sup>180</sup> <http://iopscience.iop.org/article/10.1088/0963-0252/18/1/014004>

**Ray Tube** - The cathode ray tube (CRT) is a vacuum tube that contains one or more electron guns and a phosphorescent screen, and is used to display images. It modulates, accelerates, and deflects electron beam(s) onto the screen to create the images.

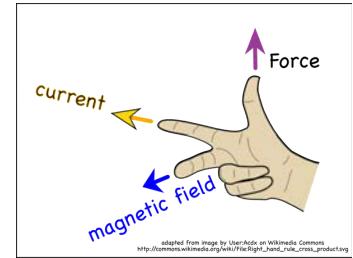
**Redshift** - the displacement of spectral lines toward longer wavelengths (the red end of the spectrum) in radiation from distant galaxies and celestial objects. This is interpreted as a Doppler shift that is proportional to the velocity of recession and thus to distance.

**Relativity Theory** - a theory-hypothesis, formulated essentially by Albert Einstein, that all motion must be defined relative to a frame of reference and that space and time are relative, rather than absolute concepts.

**Resistivity** - a measure of the resisting power of a specified material to the flow of an electric current.  $R = V/I$  (see: Ohm's Law, Appendix B.IV.9)

**Right-hand Rule** - uses the shape the right hand to established the standard orientation of vector quantities normal to a plane, especially when calculating a vector product or the helicity of particle spin. (see right)

**Rossby Waves** - also known as planetary waves, are a natural phenomenon in the atmosphere and oceans of planets that largely owe their properties to rotation. Rossby waves are a subset of inertial waves. Atmospheric Rossby waves on Earth are giant meanders in high-altitude winds that have a major influence on weather.



**Schrödinger's Cat Phenomenon** - a cat imagined as being enclosed in a box with a radioactive source and a poison that will be released when the source (unpredictably) emits radiation, the cat being considered (according to quantum mechanics) to be simultaneously both dead and alive until the box is opened and the cat observed.

**Schumann Resonances** - a set of spectrum peaks in the extremely low frequency (ELF) portion of the Earth's electromagnetic field spectrum. Schumann resonances are global electromagnetic resonances, generated and excited by lightning discharges in the cavity formed by the Earth's surface and the ionosphere.

**Solar System Circuit** - the electric circuit composed of or pertaining to the solar system scales: the sun, planets, moons, comets, asteroids, and rogue objects, as well as the stellar sheath and boundary region.<sup>181</sup>

**Solar Wind** - the continuous flow of charged particles from the sun that permeates the solar system.

**Space-time** - the concepts of time and three-dimensional space regarded as fused in a four-dimensional continuum.

**Space-time dilation** - the stretching of space-time of a moving object relative to a second stationary observer or to differently moving objects in different reference frames.<sup>182</sup> (see right for time-dilation equation of Special Relativity)

**Starwater** - a multi-episode literature review of water in the universe, where it comes from, why earth has so much water, and the latest discoveries; water made from solar wind interaction with the Ozone Layer.<sup>183</sup>

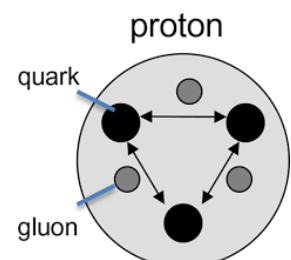
**String Theory** - (aka M Theory) a cosmological theory hypothesis based on the existence of cosmic strings in an 11-dimensional (hypothetical) space-time. See: Supersymmetry

**Strong Force** - the force that holds particles together in the atomic nucleus and the force that holds quarks together in elementary particles. Note: As the name implies, this is the strongest force known in nature. (see right)

**Structured Atom** - an atomic theory based upon Platonic solids, electrons, and protons alone; comprising solely of electromagnetic forces (ie; eliminating the strong force)<sup>184</sup>

$$t' = t\sqrt{1 - V^2 / c^2}$$

Where:  $t'$  = dilated time  
 $t$  = stationary time  
 $V$  = velocity  
 $c$  = speed of light



<sup>181</sup> Sf. Careaga

<sup>182</sup> Sf. Careaga; <http://www.emc2-explained.info/Time-Dilation/#.Wvopx0gvzrc>

<sup>183</sup> <https://www.suspicious0bservers.org/starwater/>

<sup>184</sup> <https://ethereal-matters.org/sam>

**Structured Water** - a molecular arrangement of water molecules that exists when water is near hydrophilic surfaces. (see EZ Water)

**Sunspot** - a spot or patch appearing from time to time on the sun's surface, appearing dark by contrast with its surroundings.

**Supersymmetry** - a very general type of mathematical symmetry that relates fermions and bosons.

**Surface tension** - the tension of the surface film of a liquid caused by the attraction of the particles in the surface layer by the bulk of the liquid, which tends to minimize surface area.

**Tau** - An arc of a circle with the same length as the radius of that circle subtends an angle of 1 radian. The circumference subtends an angle of  $2\pi$  radians.<sup>185</sup> Symbol:  $\tau$

**Terrella** - a small magnetised model ball representing the Earth, that is thought to have been invented by the English physician William Gilbert while investigating magnetism, and further developed 300 years later by the Norwegian scientist and explorer Kristian Birkeland.

**Thermodynamics** - the branch of physical science that deals with the relations between heat and other forms of energy (such as mechanical, electrical, or chemical energy), and, by extension, of the relationships between all forms of energy.

**Tropism** - the turning of all or part of an organism in a particular direction in response to an external stimulus.

**Tufting** - (aka solar granules) when the [solar surface (heliopause)] current density is too high for the anode surface to accommodate, a bright secondary plasma forms within the primary plasma.<sup>186</sup>

**Unified Field** - a type of field theory that allows all that is usually thought of as fundamental forces and elementary particles to be written in terms of a pair of physical and virtual fields.

**Vacuum Tube/Crookes Tube** - an electron tube containing a near-vacuum that allows the free passage of electric current.

**Van Der Waals Forces** - weak, short-range electrostatic attractive forces between uncharged molecules, arising from the interaction of permanent or transient electric dipole moments.

**Viscosity** - the state of being thick, sticky, and semifluid in consistency, due to internal friction or a quantity expressing the magnitude of internal friction, as measured by the force per unit area resisting a flow in which parallel layers unit distance apart have unit speed relative to one another.

**Vortex** - a mass of whirling fluid or air, especially a whirlpool or whirlwind.

**Vortrix Algebra** - Vortex-matrix Algebra; a subset of linear algebra that postulates the cross product of two vectors is a matrix rather than an orthogonal vector.<sup>187</sup>

**Wave-particle Duality** - is the concept in quantum mechanics that every particle or quantic entity may be partly described in terms not only of particles, but also of waves. It expresses the inability of the classical concepts "particle" or "wave" to fully describe the behavior of quantum-scale objects.

**Waves** - a wave is a disturbance that transfers energy through matter or space, with little or no associated mass transport. Electromagnetic waves do not require a medium.<sup>188</sup>

**Weak Force** - the weak interaction (the weak force or weak nuclear force) is the mechanism of interaction between subatomic particles that causes radioactive decay and thus plays an essential role in nuclear fission.

**Work** - measure of energy transfer that occurs when an object is moved over a distance by an external force at least part of which is applied in the direction of the displacement.

**Z Pinch/ Bennett Pinch** - also known as a zeta pinch, is a type of plasma confinement system that uses an electrical current in the plasma to generate a magnetic field that compresses it; see: Pinch.

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<sup>185</sup> <https://tauday.com/>

<sup>186</sup> <https://www.everythingselectric.com/electric-sun/>

<sup>187</sup> Sf. Careaga; see "Votrix Algebra," R. Distinty, 2018

<sup>188</sup> A strong hint that they are the medium.

## Appendix B - Known Physical Laws of the Universe

### I - The Laws of Energy<sup>189</sup>

The laws of energy encompass general statements of known facts about energy, according with studies of the 8 major laws of the Universe: Causality, Evolution/Flux, Relativity, Conservation, Vibration, Rotation, Polarity, and Resonance. To be one of the laws of energy, the axiom must comply with all 8 laws simultaneously (albeit it may appear in different form or applicability), as well as unify the laws, especially their compliments.

1. Energy is abundant; however it prefers wells (sinks) of lowest states of equilibrium.
2. Energy tends to flow along lines of least resistance and highest conductivity; but not always.<sup>190</sup>
3. Energy is produced via differential gradients inducing tension between polarities.
4. Energy is relatively difficult to attain freely.
5. Entropy is balanced with Order, but the ratio between them will affect overall relative appearance of abundance or scarcity of energy.
6. Energy left alone tends to dissipate rather than condensate.
7. Forces bind energy into concentrations and potential reservoirs.
8. Energy may freely transform along prescribed mechanisms and principle controlled means, through forces and fields (force and non-force).
9. Energy conforms to thermodynamic principles in the main, except during reversion or abnormal (forced) circumstances, where it may flow along balancing lines.
10. Energy is neither permanently consumed nor permanently destroyed, it merely transforms, even into quiescent/etheric states which are not directly measured.
11. Energy is.
  - a. The forms of Energy are infinite.
  - b. The time of Energy is eternal.

### II - The Laws of Thermodynamics

1. Zeroth law of thermodynamics – If two thermodynamic systems are each in thermal equilibrium with a third, then they are in thermal equilibrium with each other.
2. First law of thermodynamics – Energy can neither be created nor destroyed. It can only change forms. In any process, the total energy of the universe remains the same. For a thermodynamic cycle the net heat supplied to the system equals the net work done by the system.
3. Second law of thermodynamics – The entropy of an isolated system not in equilibrium will tend to increase over time, approaching a maximum value at equilibrium.
4. Third law of thermodynamics – As temperature approaches absolute zero, the entropy of a system approaches a constant minimum.<sup>191</sup>
5. Fourth law of thermodynamics - Intensive properties are independent of the mass of the system; Extensive properties depend on the mass of the system<sup>192</sup>; all equations must balance intensive and extensive properties.<sup>193</sup>

<sup>189</sup> By Sf. Ramon Careaga, BSEE, MSTOM

<sup>190</sup> One of the most paradoxical facts regarding the Way/Dao of Energy is this “balancing” clause.

<sup>191</sup> <http://physicsforidiots.com/physics/thermodynamics/>

<sup>192</sup> P.T. Landsberg, Thermodynamics with Quantum Statistical Illustrations, Interscience Publishers, New York, 1961, p. 142

<sup>193</sup> <https://www.youtube.com/watch?v=t8Nm9bnWOTs>

6. Planck's Law - The spectral radiance of a body for frequency  $\nu$  at absolute temperature  $T$  is given by

$$B_\nu(T) = \frac{2\hbar\nu^3}{c^2} \frac{1}{e^{\hbar\nu/kT} - 1} \text{ where } k = \text{Boltzmann's constant}$$

$$= 1.38 \times 10^{-23} \text{ Joules /}^\circ\text{K}$$

194 195

7. Boyle's Law - The absolute pressure exerted by a given mass of an ideal gas is inversely proportional to the volume it occupies if the temperature and amount of gas remain unchanged within a closed system.<sup>196</sup>
8. Ideal Gas Law - The ideal gas law is the equation of state for an ideal gas, given by:  $PV=nRT$  where
- $P$  is the pressure
  - $V$  is the volume
  - $n$  is the amount of substance of the gas (in moles)
  - $R$  is the gas constant ( $8.314 \text{ J}\cdot\text{K}^{-1}\cdot\text{mol}^{-1}$ )
  - $T$  is the absolute temperature<sup>197</sup>
9. Joule's Gas Law - The internal energy of a fixed mass of an ideal gas depends only on its temperature (not pressure or volume).<sup>198</sup>

### III - The Laws of Motion and Gravity

1. Newton's First Law - In an inertial frame of reference, an object either remains at rest or continues to move at a constant velocity, unless acted upon by a force.
2. Newton's Second Law - In an inertial reference frame, the vector sum of the forces  $\mathbf{F}$  on an object is equal to the mass  $m$  of that object multiplied by the acceleration  $\mathbf{a}$  of the object:  $\mathbf{F} = m\mathbf{a}$ . (It is assumed here that the mass  $m$  is constant.)
3. Newton's Third Law - When one body exerts a force on a second body, the second body simultaneously exerts a force equal in magnitude and opposite in direction on the first body.<sup>199</sup>
4. Newton's Law of Gravitation - In non quantum, non-relativistic space,
5. Einstein's General Relativity derivation - In relativistic space,<sup>200 201</sup>
6. Euler's First Law - The linear momentum of a body,  $\mathbf{p}$  (also denoted  $\mathbf{G}$ ) is equal to the product of the mass of the body  $m$  and the velocity of its center of mass  $G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi G}{c^4} T_{\mu\nu}$
7. Euler's Second Law - The rate of change of angular momentum  $\mathbf{L}$  (sometimes denoted  $\mathbf{H}$ ) about a point that is fixed in an inertial reference frame (often the mass center of the body), is equal to the sum of the external moments of force (torques) acting on that body  $\mathbf{M}$  (also denoted  $\mathbf{T}$  or  $\Gamma$ ) about that point.<sup>202</sup>

### IV - The Laws of Electromagnetism

1. Gauss' Law - The electric flux leaving a volume is proportional to the charge  $\mathbf{Q}$  inside.
2. Gauss' Law of Magnetism - There are no magnetic monopoles; the total magnetic flux through a closed surface is zero.

<sup>194</sup> <https://www.physicsforums.com/threads/plancks-law-wavelength-frequency-angle.788629/>

<sup>195</sup>  $h = \text{Planck's constant}, 6.626070040(81) \times 10^{-34} \text{ J s}$  or  $4.135667662(25) \times 10^{-15} \text{ eV s}$ ; such that  $E = hf$

<sup>196</sup> [https://en.wikipedia.org/wiki/Boyle%27s\\_law](https://en.wikipedia.org/wiki/Boyle%27s_law)

<sup>197</sup> [https://en.wikipedia.org/wiki/Ideal\\_gas#Ideal\\_gas\\_law](https://en.wikipedia.org/wiki/Ideal_gas#Ideal_gas_law)

<sup>198</sup> [https://en.wikipedia.org/wiki/Joule%20%93Thomson\\_effect#Joule's\\_second\\_law](https://en.wikipedia.org/wiki/Joule%20%93Thomson_effect#Joule's_second_law)

<sup>199</sup> [https://en.wikipedia.org/wiki/Newton%27s\\_laws\\_of\\_motion](https://en.wikipedia.org/wiki/Newton%27s_laws_of_motion)

<sup>200</sup> Gravity is not a factor in quantum scales as it is far too weak to be measured and is generally regarded as basically 0.

<sup>201</sup> Tensors notwithstanding, this law of gravitation will stand until overthrown with something better.

<sup>202</sup> [https://en.wikipedia.org/wiki/Euler%27s\\_laws\\_of\\_motion](https://en.wikipedia.org/wiki/Euler%27s_laws_of_motion)

3. Faraday's Law of Induction - The voltage induced in a closed loop is proportional to the rate of change of the magnetic flux that the loop encloses.<sup>203</sup>
4. Ampere's Circuit Law - The magnetic field induced around a closed loop is proportional to the electric current plus displacement current (rate of change of electric field) that the loop encloses.<sup>204</sup>
5. Lorentz Force Law - the combination of electric and magnetic force on a point charge due to electromagnetic fields. A particle of charge  $q$  moving with velocity  $\mathbf{v}$  in the presence of an electric field  $\mathbf{E}$  and a magnetic field  $\mathbf{B}$  experiences a force:
6. Lenz's Law - the direction of current induced in a conductor by a changing magnetic field due to induction is such that it creates a magnetic field that opposes the change that produced it.<sup>205</sup>
7. Kirchhoff's First Law of Currents - At any node (junction) in an electrical circuit, the sum of currents flowing into that node is equal to the sum of currents flowing out of that node or the algebraic sum of currents in a network of conductors meeting at a point is zero.
8. Kirchhoff's Second Law of Voltages - The directed sum of the electrical potential differences (voltage) around any closed network is zero, or The algebraic sum of the products of the resistances of the conductors and the currents in them in a closed loop is equal to the total emf available in that loop.<sup>206</sup>
9. Ohm's Law - Resistance is defined by the ratio of electrical tension to electrical current;  $V = I \cdot R$ <sup>207</sup>
10. Ampere's Law with Maxwell's Addition - magnetic fields can be generated in two ways: by electric current and by changing electric fields.<sup>208</sup>
11. Steinmetz's Law - Hysteresis, lagging of the magnetization of a ferromagnetic material, such as iron, behind variations of the magnetizing field.<sup>209</sup>

$$\vec{F} = q\vec{E} + q\vec{v} \times \vec{B}$$

Electric force      Magnetic force

## V - The Laws of Life<sup>210</sup>

1. The life-force (Qi)<sup>211</sup> is mysteriously abundant, but conforms otherwise to the above listed laws.
2. Life orders structure and material, and acts contrariwise to Entropy.
3. All objects follow the pattern: conception, birth, growth, steady state/stagnation, decrease, death, decay, conversion, transformation, re-emergence. This is the *Axiom of Becoming*.
4. Life is found in various modes and scales and conforms to no known pre-set ideals.
5. Life's fundamental elements do not conform to predetermined principles but may spontaneously evolve.
6. Life's balancing principles alternate between (relatively) long-term peaceful or uniform periods and (relatively) short-term violent or sudden (even cataclysmic) periods of forced evolution; the so-called "catch up" phenomenon.
7. Life is. It is neither likely nor unlikely, though it may be influenced into more or less likelihood by the availability of resources.

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<sup>203</sup> [https://en.wikipedia.org/wiki/Faraday%27s\\_law\\_of\\_induction](https://en.wikipedia.org/wiki/Faraday%27s_law_of_induction)

<sup>204</sup> [https://en.wikipedia.org/wiki/Maxwell%27s\\_equations](https://en.wikipedia.org/wiki/Maxwell%27s_equations)

<sup>205</sup> [https://en.wikipedia.org/wiki/Lenz%27s\\_law](https://en.wikipedia.org/wiki/Lenz%27s_law)

<sup>206</sup> [https://en.wikipedia.org/wiki/Kirchhoff%27s\\_circuit\\_laws](https://en.wikipedia.org/wiki/Kirchhoff%27s_circuit_laws)

<sup>207</sup> V=voltage (volts), I = current (amps), R = resistance (ohms)

<sup>208</sup> [https://en.wikipedia.org/wiki/Amp%C3%A8re%27s\\_circuital\\_law](https://en.wikipedia.org/wiki/Amp%C3%A8re%27s_circuital_law)

<sup>209</sup> <https://www.britannica.com/science/hysteresis>

<sup>210</sup> By Sf. Ramon Careaga, BSEE, MSTOM

<sup>211</sup> Qi seems to be related to, but not equivalent with, Charge (Q) in all manners of behavior.