

# Unified Wave Theory

Scott Rennie

Electrical and Mechanical Engineer

## ABSTRACT

1. Introduction
2. Electron Wave Trajectory
3. Permanent Magnets
4. The Central Observer
5. Strong Nuclei Force
6. Coulomb's law in MHD
7. MHD Laminar & Turbulent flow
8. Perspectives Of Multiple 3D Waves
9. Toroidal and Poloidal Plasma Flow
10. Superconductivity of Plasma
11. Z-pinch Compression
12. Sailing Around Our Star
13. Inner Atmospheric waves
14. Wave Declination Effects
15. Tropical Storm Pressure
16. Conclusion

## INTRODUCTION

The purpose of this paper is to further explain the mechanism for Coulomb's law in electrical conductors and how this mechanism can be applied to other laws and natural process. These processes have been the inspiration for the Non-Linear Plasma project.

I will describe my theory of how the underlying processes works. Some of these ideas will off course go against what is said to be common knowledge. The hardest part of understanding a new concept for most is putting aside what we thought was already set in stone, however for any attempt to unify all the current known laws of physics this must be mentioned first and foremost. The use of common terminology in this paper, that at the fundamental level of quantum physics are different examples of the same process should all be regarded as a magnetic wave. Examples include the photon and electron as a visual representation of the peak point from the observer's perspective of a magnetic wave produced by any magnet in motion. Eric Laithwaite has given some amazing lectures on magnetic waves, and to quote the Master of Electrical Engineering Nikola Tesla "*I saw spinning magnetic field, and induction motor. I saw them in the sun!*"

## ELECTRON WAVE TRAJECTORY

When 2 conductors carry an electron wave (current) in the same direction they attract (Coulombs law). The reason this happens is shown in Fig 1, the helical trajectory of the wave from the power source is rotating around the central axis of the atomic structure with the energy in the wave passing from 1 atom to the next to create a rotating magnetic chain. The rotational waves path can be seen in the work of [MIT with graphene](#) and the magic angle needed for super conductivity for that specific material, with the wave travelling in a helical trajectory around the design of the graphene lattice resulting in the path of least resistance for the wave. This results in minimal induction of a magnetic field due to zero resistance to the speed of propagation of the "electric field". Resistance would cause the wave to

corkscrew at a higher rate over the same distance, achieved in an electric motor by coil turns as each passing of the wave amplifies the wave height and shortens the period via the additional waveform. Below the central observer will view the trajectory of each "electron" wave around the central axis of the conductor as opposite from his location. The one on the left is turning up, while the one on the right is turning down. This results in the magnetic declination difference between the 2 waves travelling in the same direction to the outside observers. If we were to turn the direction of the electron wave in one of the conductors by 180° we would build a coil, such as those found in an electric motor. Which would then have the declination off South/North/North/South. The 3D trajectory gives a mechanism for understanding Coulombs law in a conductor (opposites attract) and when applied to fluids such as plasma, we find that the central observer will experience a change in pressure of the medium as seen in the Magnetohydrodynamics of a boot strap current which as described later can be explosive.

Note - Fig 1 is using the true direction of the electron wave and thus the Right-Hand Rule cannot be applied since it relies upon the conventional current model (positive to negative). Fig 1 & 2 were drawn prior to my understanding of the electron as a representation of the peak point of the magnetic wave. The spiralling line around the conductor can be viewed as the wave tips motion around the conductor

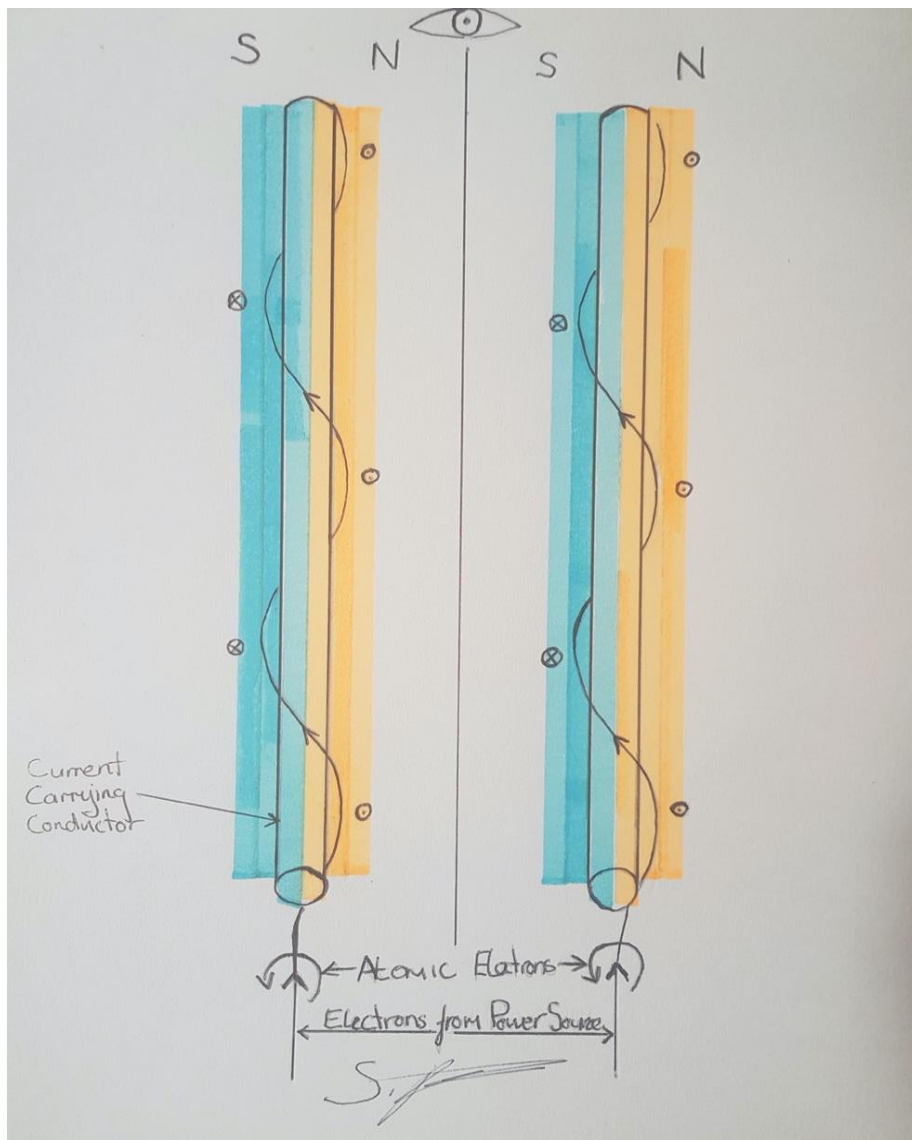


Fig 1

## PERMANENT MAGNETS

Permanent magnets are undeniable proof of perpetual motion (as are super conductors) and occur because of circulating “electron” waves inside the material. The best way to visualise the motion of these waves would be an auger moving through the atomic structure with the polar regions being determined by the outside observer’s viewpoint as in Fig 2 below. The shape of the material and therefore the shape of the wave function determines how these magnetic loops effect the medium around the magnet that results in magnetic flux. The magnetic flux lines themselves are individual rotating wave functions in the medium and each produce their own central axis and magnetic declination.

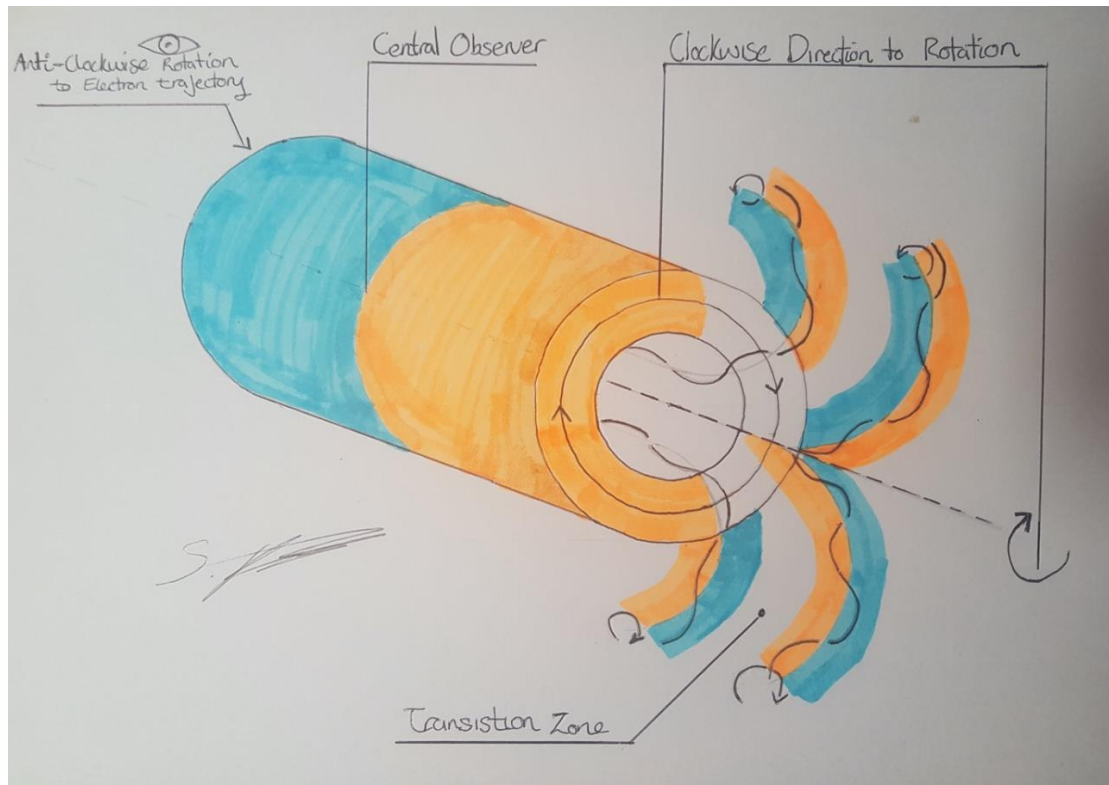


Fig 2

The top left of the diagram we can see that the “South” pole observer views the “electron” wave direction in the material of the magnet as anti-clockwise. The central observer’s location can be changed by adding additional magnets or cutting any magnet in half. Finally, the “North” pole observer notices the clockwise rotation of the wave function. I like to use the example of tightening a nut on to a clockwise threaded bolt, looking from the nut end we must turn the nut clockwise. While looking from the bolt end the nut must be turned anti-clockwise to achieve the same result. In Fig 2 the wave function emulating from the core of the magnet again flows in the same helical rotational pattern and induces rotation into the atoms they travel through as above and thus producing the magnetic declination according to the viewer standpoint. The North/South divide between the first and second flux lines produces a transition zone as can be visually seen in Fig 3. The helical waves of the magnetic flux lines begin to intertwine if another similar rotating wave is positioned progressively closer, before the helical patterns fully intertwine with each other and the two wave forms rotate around one axis when compressed fully, at this point the amplitude of the wave increases and the period between the 2 waves is halved as before.

The transition zone of a tesla coil below can be seen on the LED board between the 2 magnetic waves of the electromagnet. An observer in this location is seeing the amplitude of each wave cancel out resulting in less energy to energize the LED’s.

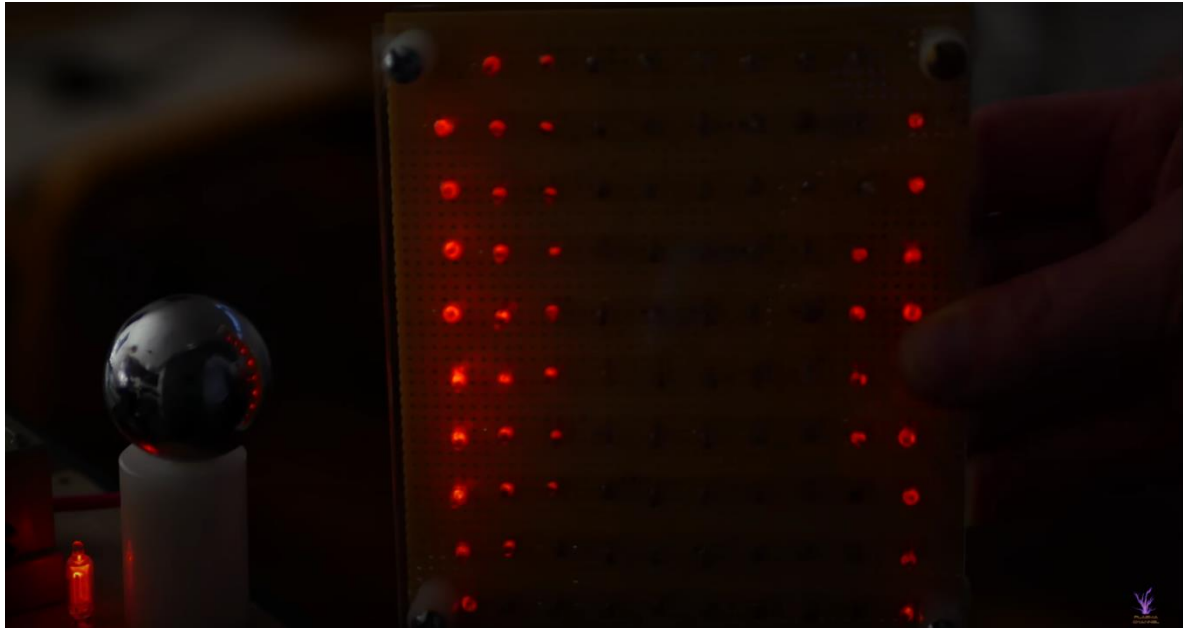


Fig 3 Image courtesy of the Plasma channel

## THE CENTRAL OBSERVER

The central observer's location to a sine wave that has been generated from the helical trajectory of a particle can be represented by the function of a bridge rectifier in an AC to DC electrical circuit; Fig 4 provided for reference. The effect on the central observer's location is that positive X propagates out in all directions from the central axis. This means that the force that induces rotation in the helix can only do so in the corresponding y axis (manifests as the right-hand rule for conventional current). For any sinus wave function, we must consider at least 3 observational perspectives at any one time, the first an outside observer who perceives a clockwise rotation or a positive value for X, secondly, the opposite observer who perceives an anti-clockwise rotation or a negative value for X and most importantly the central observer who perceives only the positive value of X from any point along the Z axis in all directions with the Y axis always equal to 90 degrees (as any numerical value of Y is equal to X).

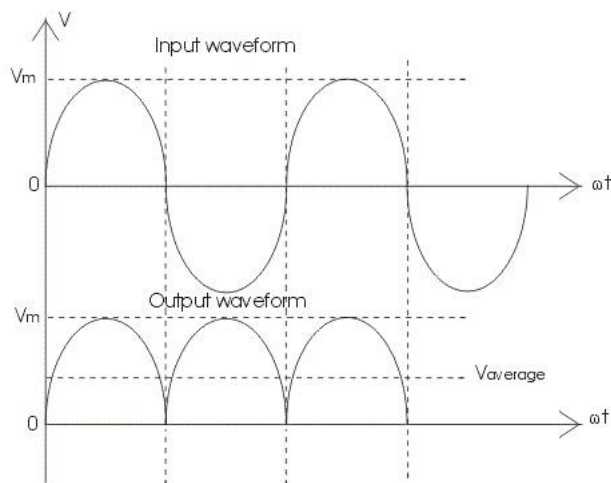


Fig 4

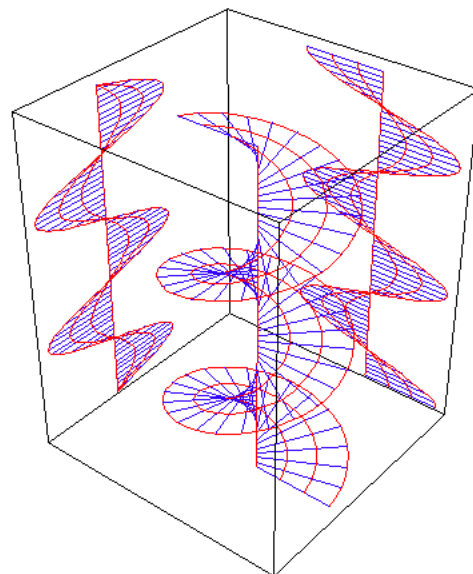


Fig 5

This simple concept of viewing perspective applied to all sine waves can help understand complex issues, such as spin direction of a magnetic wave function in quantum mechanics, to the direction of the wave in permanent magnets and electromagnets, all the way up to the gravitational effects of Black holes, stars and planets as will be described as you read further. The smallest magnetic waves are that produced by the protons as they rotate around the atomic nuclei, the wavelength (density) of this electromagnetic wave is determined from induction of all higher waves. (Black hole, Sun, Planet, Ions in a Pressure cell, etc). If 2 atoms travelling with geosynchronous waves at a speed of  $z$  and accelerating, then the magnetic wave function of the atoms in the direction of travel is compressed by the acceleration while the wave function behind the atom is stretched. The resulting compression in the forward-facing magnetic wave will cause the distance separating both atoms to decrease (increased density of medium). Again, the wave function will appear to the outside observer to be rotating in the same direction, however a central observer between each wave function (atom) will view spin direction as opposite thus causing the attractive force (opposites attract) that ultimately closes the distance between the atoms as seen above with the 2 conductors carrying an electrical wave/current. The speed of acceleration that is compressing the forward wave will determine the convergence angle between 2 atoms. A real-world experiment of this can be done using laminar flowing water with the acceleration provided by gravity.

## **STRONG NUCLEAR FORCE**

The protons and neutrons that make up the nucleus of an atom are tightly bound together by the peaks of their own magnetic wave function that is continually cast out in front of the spinning magnetic mass. A proton and neutron are interchangeable with each other depending on the spin direction from the observer's viewpoint, the neutron being given its name because it appears to neutralise the waveform of the proton due to its opposing spin direction. The magnetic wave's role in the atom can be visualized easily by naval architects by looking at a ship with a displacement hull being pushed through the water and producing a wave of water in front of it. This wave of water takes enormous amounts of energy to push over. Now swap the ship for 2 magnetic balls trying to spin over the top of their own magnetic bow wave and the closer they get the larger the amplitude of the wave between them (electrostatic force) before they finally have the energy to enter the same wave trough (fusion). The tips of these waves when measured from an outside observer's location manifest as electrons. As more complex atomic structure materialise, so too does the wave function. To keep this written explanation process simple, we will focus on smaller nuclei; if we look at the H<sub>2</sub>O molecule the inner 2 wave peaks of the hydrogen atoms and outer peaks of the oxygen atom form standing waves as they rotate inside their combined wave. The wave function of the H<sub>2</sub>O molecule acts like a poorly balanced gyro by producing an uneven wave function that has been termed Dielectric. This is important because an unbalanced magnetic wave will always try to organise into geosynchronous rotation with other uneven magnetic wave functions. To visualize this, I use a levitating weighted magnet spinning with an off-center axis of rotation producing an offset magnetic wave with each rotation, any object near this magnet would feel the effects of the oscillating magnetic wave and any similar weighted spinning magnetic object would dance to the same tune (frequency). With each object in the same phase of rotation to an outside observer and opposite to a central observer between the 2 objects.

If we apply this logic to uneven waveforms (plasma) flowing in a  $z$  pinch, the 2 atoms producing these waveforms will "fuse" together when their rotational spin and velocity (energy) are fast enough to outrun their own bow wave and remain in the same trough. If we say the uneven waveforms were 2 single protons and both remained protons in the new atom, then the atom will be in a higher energy state and will gradually slow down once removed from the energy source before 1 of the protons will lose enough energy to flip into a neutron changing the wave function as it does so. This process is called the nuclear half-life of the atom and gives off large amounts of energy when it does so, a similar process of energy release occurs when water changes state. Non-linear fusion will require less and more precise energy

levels and as a result produces lower energy isotopes via collisions with other “protons” that because of the opposing direction they are travelling are already spinning in the opposite direction and thus would appear as a neutron to the same observer. Once inside the same tough (same atom) each object of mass will rotate depending on the direction of spin and its axis of rotation to the next magnetic mass. A proton and neutron can basically touch while rotating as if connected by magnetic teeth, like a hydraulic oil pump. 2 protons on the other hand would rotate at 180° to each other around a central axis (twin star systems). These slight differences in the resulting wave form produce isotopes which are not as balanced thus are more energetic/reactive in nature.

The energy released when H<sub>2</sub>O changes state is a low energy version of the fission process which occurs as radioactive isotopes lose energy and either a flip occurs, or a proton/neutron is ejected completely. The flip in wave function that results when water changing state from liquid to gas increases the size of the atoms wave function by a ratio of around 1:1250, and if the hydrogen is ejected completely from the wave function the resulting acid and alkaline components of water are produced.

### COULOMB’S LAW IN MHD

MHD (Magnetohydrodynamics) is the terminology we have given to describe the interactions between unbalanced waveforms flowing in a medium. Applying the same electrical laws to plasma as we do to the electrical current flowing in a wire, we can explain the interactions we see in any liquid or gaseous plasma. Most notable that “parallel currents attracts while anti-parallel current repels”. The wave function produced by ions flowing in a medium act on (via induction) the quantum wave function of the atomic structure of the medium, thus a change in density occurs in the medium. The most important place we find this interaction is on the surface of a yacht’s sail, the “tell tales” (cotton ribbon seen below) are used to show the flow of ions as the wind bends around the sail cloth, this creates diffraction and refraction of the ions magnetic wave as it rotates thus creating an area of lower density in front of the cloth and higher density behind the sail cloth to move the yacht forward. Keeping the wind in laminar flow is the most efficient way to harness the energy from the ions wave function in this scenario as turbulent flow causes the sail cloth to change shape and “stalling” occurs just like it does on an aircraft wing. “Lift” is produced when the ionic waves energy density is lowered by the shape of the wing (wave



diffraction). “Drag” is produced when the ionic waves energy density is compressed by refraction. Drag can also be associated with stall, this occurs when laminar flow between ions can no longer be maintained and becomes chaotic which then results in ever growing pressure gradients (non-linear plasma) generally associated with the changing state of the H<sub>2</sub>O wave function.

## MHD LAMINAR & TURBULENT FLOW

Let us consider water flowing in a pipe of fixed diameter under the influence of a steadily increasing head pressure, laminar flow will be maintained in the pipe so long as the atoms in the pipe can maintain a parallel path to each other as they flow (current) along the pipe. As head pressure increases so does the current of water in the pipe, we have already discussed the effect this has on convergence of the atoms closest to the center of the pipe, so let's now consider the atoms closest to the walls of the pipe. As they slowdown from interactions with wave function of the atomic structure of the pipe (drag), this causes the current closest to the walls to become more anti-parallel as flow increases (diffraction) until eventually they become so anti-parallel that the flow turns from laminar to turbulent and the pressure inside the pipe increases rapidly from the repulsive force of the anti-parallel flow (see Nicola Tesla's "tesla valve"). Moving on to fluids found inside the highly ionised plasma of a tokomaks reactor and we find pressure gradients caused by "kinks" in the flowing plasma. If allowed this flow will eventually reaches the critical point between laminar flow and turbulent flow. The resulting density changes producing ever greater chaos in the plasma with waves to match and these result in further pressure gradients, as talked about above and from the extracts below from this 2010 paper

<https://www.mdpi.com/1996-1073/3/11/1741/htm>

"MHD Stability of Advanced Tokamak [128]

*"Plasma current in a tokamak act as a free energy source to drive MHD modes such as kink modes. The bootstrap current is linked to the pressure gradient and this linkage produces new MHD modes."*

## PERSPECTIVE'S OF MULTIPLE 3D WAVES

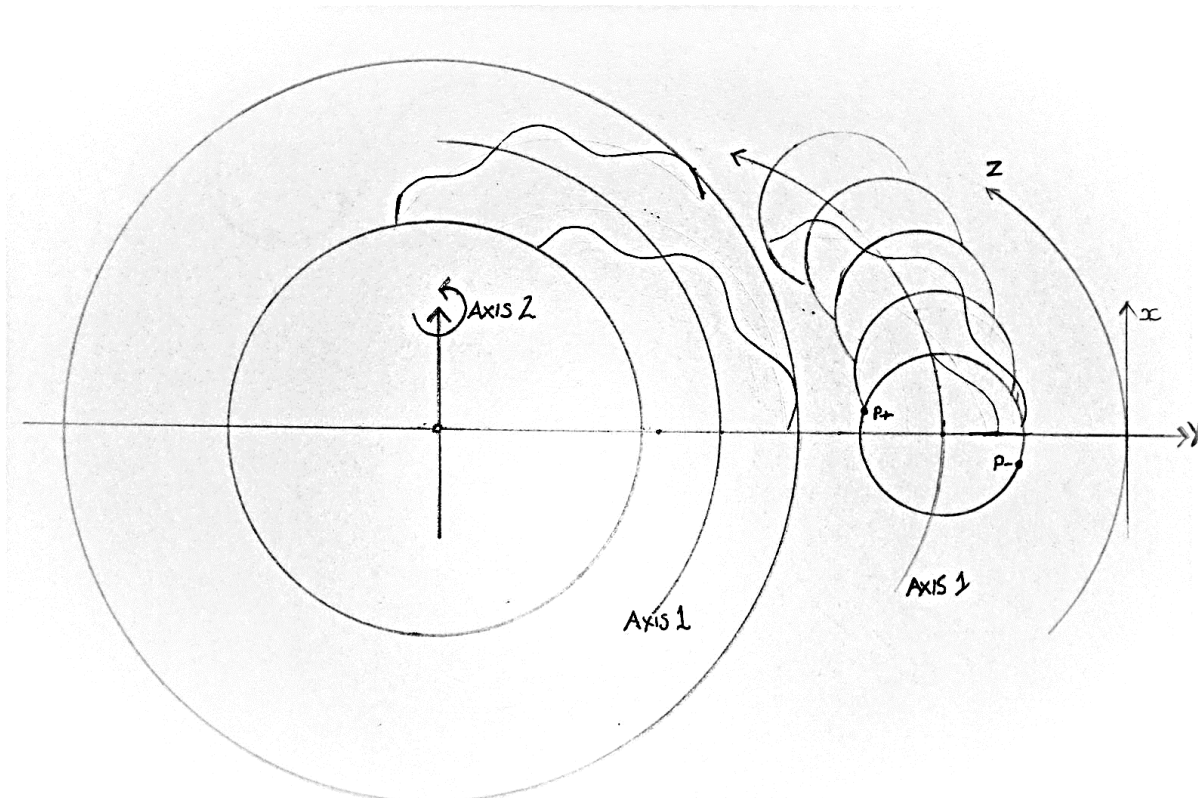


Fig 6

Let's look at some of the different perspectives of the waves produced in a torus like Fig 6. The first thing we notice is the system has 2 axes of rotation or central observers, however only axis 1 is producing a wave therefore differences exist between the 2 central observers. For a central observer on Axis 1 we see every particle circling it is attracted to it, however for each particle there is a corresponding opposite particle with an opposing magnetic wave. The symmetry of the toroid always has an opposite and thus equals zero to an observer outside the toroid. The RMS calculation around a central observer for the combined waveform on a single Z point of axis 1 can be calculated using the area of a circle due to every point above the axis equal to positive X. The RMS value for the total length of Z can now be calculated using the volume of a cylinder of which axis 1 is the center of. The effects off these waves around axis 1 on the density of plasma travelling through axis 2 results in fluid motion in the center column, this process is the main source of fluid motion inside any spherical celestial object. It should be noted that Fig 6 has been simplified to describe either wave, i.e., the particle wave or Magnetic wave. The particle wave rotates around Axis 1 in 1 direction while the magnetic wave produced by the particle wave is travelling at 90 degrees in the opposite rotational direction around the axis (Fig 8 thumbs point along z-axis). Given the magnetic wave has the opposing effect to the particle wave to the outside observer, as can be seen by their commonly referred to names of "negative electron" and "positive proton". The 2 different waves also push each other around the torus due to the opposing spin direction of the auger like shape of both waves. Due to the symmetry of these waves around axis 1 and due to axis 2 not being the central axis of the waves converging on its location, we can no longer say that the negative cancels out the positive. The resultant effect is that axis 2 becomes a Z-pinch due to the 2 opposite features of the magnetic wave to the particle wave, perspective is key,  $-1 + -1 = ?$  If we use Fig 8 to represent the spiralling of both waves as they cross the equator on the inside of the torus, we will notice that both helixes are "pushing" to the north pole and when the 360 degrees of waves reach the center column they merge to form the z pinch of the toroid which blasts plasma to the north pole. To summarise; the effect of the particles wave and magnetic waves in a torus can only cancel outside on their own axis. The center of the toroid is not the central axis of either waveform; therefore, it amplifies all the waves that meet at that location due to symmetry and an inability of x to be viewed as a negative value.

## TOROIDAL AND POLOIDAL PLASMA FLOW

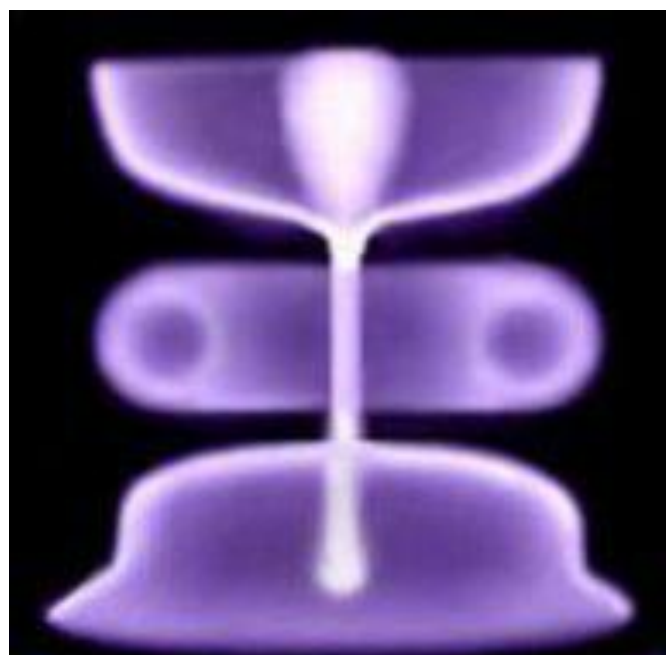


Fig 7



Anthony Peratt has been a pioneer of Plasma physics and his studies have led him to rock art from around the world to assist in our understanding of the plasma world and his work has been invaluable to this paper. In Fig 7 we find a laboratory example produced by Anthony Peratt of the squatter man figures that have been drawn in rock all around the world. The plasma rotates in the same direction in both polar flows and the toroidal flow if observed by an outside observer, the polar flow at the bottom of the image feeds plasma into the z pinch. The plasma is compressed/pumped vertically by the toroidal flow via the convergence of the waves (z pinch) on the central axis, before colliding with the plasma rotating in the opposite polar flow. This collision of non-linear plasma expands to release the energy it accumulated in the z pinch and this energy release can be seen by the high level of electromagnetic waves produced by the expanding plasma. Notice the reduced brightness off the toroidal plasma flows, this is a result of lower vibrations of the linear plasma flows, as the waves produced by the spiralling geosynchronous lattice can propagate itself at the same speed of its rotation, which eventually leads to superconductivity (dark matter).

## **SUPERCONDUCTIVITY PROPERTIES OF PLASMA**

Superconductivity is a property found in certain elements generally when the atomic structure has an extremely low energy level. In this scenario the atomic structure becomes superconductive when the rotation of the atoms matches the flow of the wave through the atomic structure without causing resistance to the wave. The 3-dimensional wave that passes through any fluid acts like an auger for pumping the medium via density changes. The wave has energy, and this energy moves in the opposite spiralling pattern to the plasma medium in the toroidal donut. This conclusion is a result of applying the concept of the current understanding of an electron travelling in the opposite helical trajectory to the proton around the toroid and realising that the different masses of the 2 particles would result in a different frequency between the 2 trajectories of each particle as the fluid approached superconductivity, which would manifest on a celestial object with a different number of magnetic declinations between each pole. All models and measurements to date say that celestial objects have the same number of field lines between poles, meaning that the mass of plasma and its opposing magnetic wave must travel at the same speed around the toroid. Saturn seems to be unique in that the toroid has 6 phases; a whole religion has been built based on this uniqueness.

## **Z-PINCH COMPRESSION**

The waves trajectory around the toroid is in an anticlockwise direction looking in the direction of travel represented by the Right-hand thumb in Fig 8, and the nuclei's trajectory is in the clockwise direction represented by the left-hand thumb in Fig 8, each finger can represent the helical movement of the particles of mass and their magnetic waves on the opposite hand. The interlocking opposing sin waves push the lattice around the toroid, in a similar manner to twin-screw compressors pumping air inside a supercharger. The true free energy source of the toroidal flow is the wave amplification in the z pinch as all wave peaks converge on the center axis of the poloidal flow and the pumping effect of this is amplified to continuously pump plasma from the south pole to the north pole and thus creating a circulating fluid within the celestial object. The creation of stars can also be contributed to the larger z pinches we find around the spiralling waves of the galactic plane, these produce Birkeland currents (waves change density, density changes cause flow/current) in the gas cloud. The atoms in the cloud rotate in their own sinusoidal wave pattern around the central axis of the wave which when the frequency increases from compression and the rotations of each turn of the axis gets closer to the next, before 1 rotation snaps and joins the end of itself to form a toroid at right angles to the central axis of the original wave/ filament, eventually multiply toroids form around the filament. As the toroids continue to collect material via their new free energy source of the poloidal flow, eventually the toroidal flow with the most material becomes the dominant flow and begins collecting more material and a star is born,

the likelihood is that the smaller toroids that were competing against the biggest for material become planets around the newly formed star, which now becomes a feeder of material to them as they begin the journey around the galaxy constantly collecting and redistributing material as they go.



Fig 8

## **SAILING AROUND OUR STAR**

Fig 9 is my favourite illustration of our home; the reason is it clearly shows the relationship between magnetism and the human races engineering endeavours from aeroplanes to sail boats. We have used the density changes created by manipulating magnetic waves to propel and power our civilization for millennia. Here the solar wind can be seen to flow around the “magnetic wing” of our planet, thus the wing is changing the density of the solar wind as the plasma is being manipulated by the waves of our field. When looking from the polar regions the wing is shaped slightly flatter because of the reconnection delay as the earth rotates from night to day, this gives the wing more of a traditional aerofoil shape to it as the day to night side of earth bulges (not shown in Fig10) due to the delay in the waves breaking as they enter the tail of the wing. The magnetic flux tubes that make up the central axis of the waves are seen to change in size as the angle of interaction with the plasma in the solar wind changes though out the day as the earth rotates. These waves are modulated by the sun and moon and cause tidal and atmospheric waves to circulate the planet which we see as sea level rising and falling 4 times a day via the 4 waves per hemisphere as in fig 12 and 13

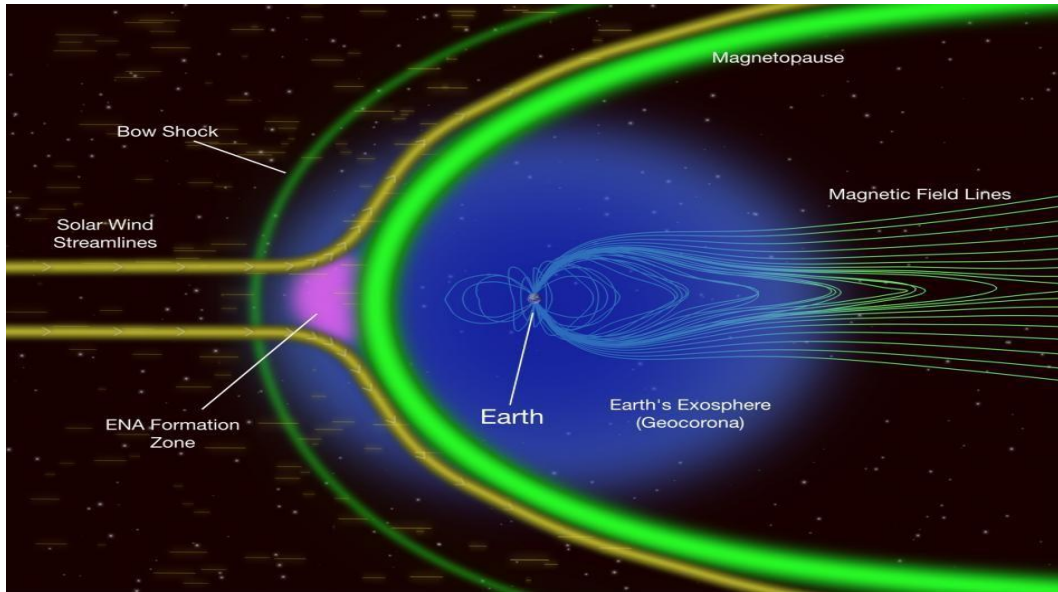


Fig 9

### INNER ATMOSPHERIC WAVES

Let us now visualize the effects of magnetic wave movement in the atmosphere of our planet, as can be seen in the illustration below courtesy of NASA (Fig 10). The solar energetic particle chain is a great illustration for showing how the energetic particle moves (use your left hand with thumb tucked into your palm to show the direction is correct) into the atmosphere. Also shown is the current travelling in the opposite direction due to the helical auger like effect. The atoms in the atmosphere rotate in a similar manner when the electromagnetic waves from the sun corkscrew themselves up and produce a current as they rise.

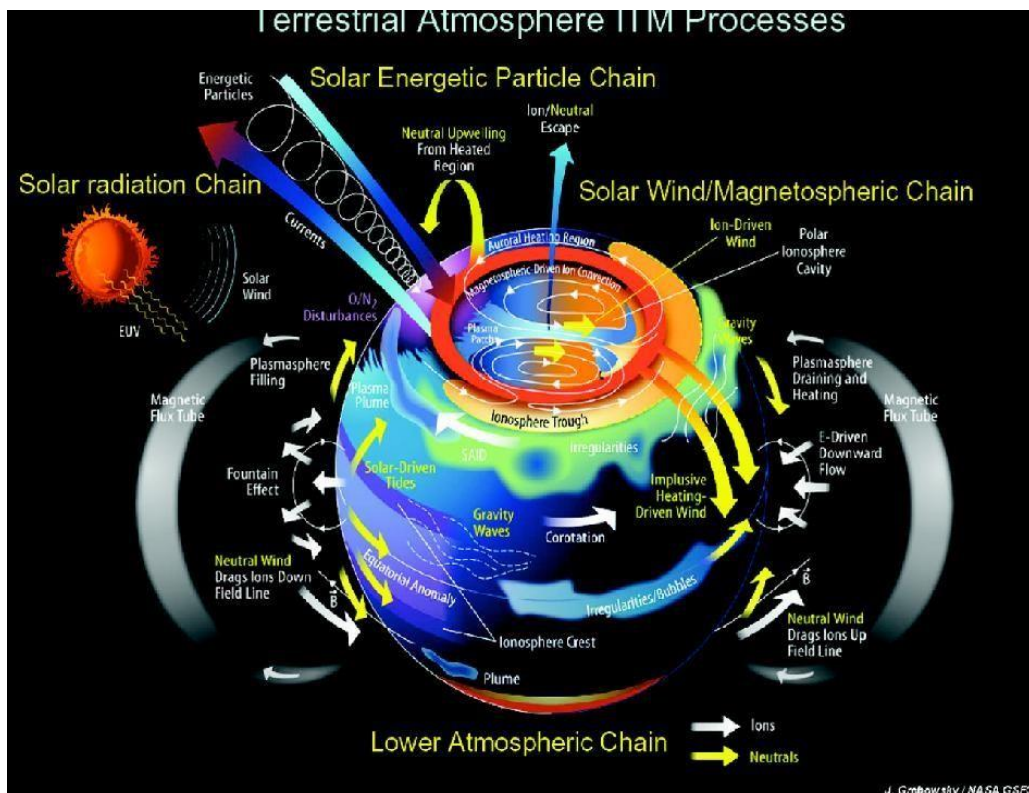


Fig 10

Our understanding of the human construct “heat” (better described as the kinetic energy of the atoms rotation) has been confused by the saying “heat rises because it expands”. A more accurate description would be to say that the “medium expands because it rises” due to the electromagnetic wave travelling through the medium in its helical motion.

In the next image (Fig 11) also courtesy of NASA, we can clearly see the many different helical wave patterns of the plasma interaction of the Hadley, Ferrel and Polar cells along with the Sinus wave pattern in the 2 jet streams.

When our planet takes a solar wind, density increase from a flare or CME wave, the resulting compression of the bow shock wave initially compresses all waves below it. Ionization of the air mass from increased electromagnetic sources fill the atmosphere with increased ion density, that then feed systems closer to the surface and the resulting pressure changes occur from increased ion wave density. These ion density increases can turn a low-pressure system into a hurricane or cyclone if the solar storm feeds the same system day after day, a full moon also contributes from reflection of light waves from the sun and from its own electromagnetic waves as the moon is a producer of high frequency waves that ionise our atmosphere. Pressure gradients have also been noticed in polar regions when earth experiences an increase in the KP index as can be seen in these papers about [polar pressure change](#) and more recently from Israel [in this paper as well](#).

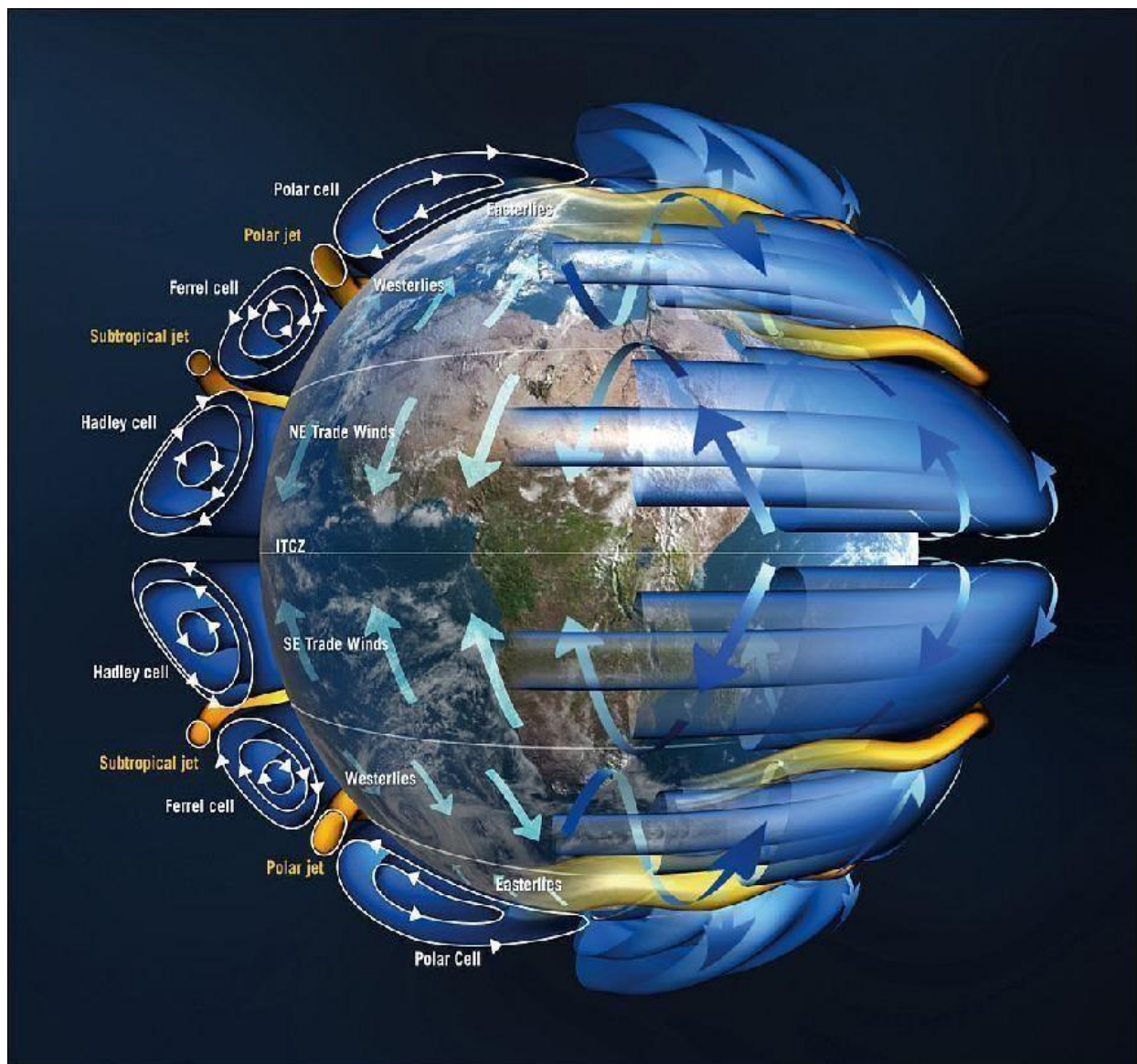


Fig 11

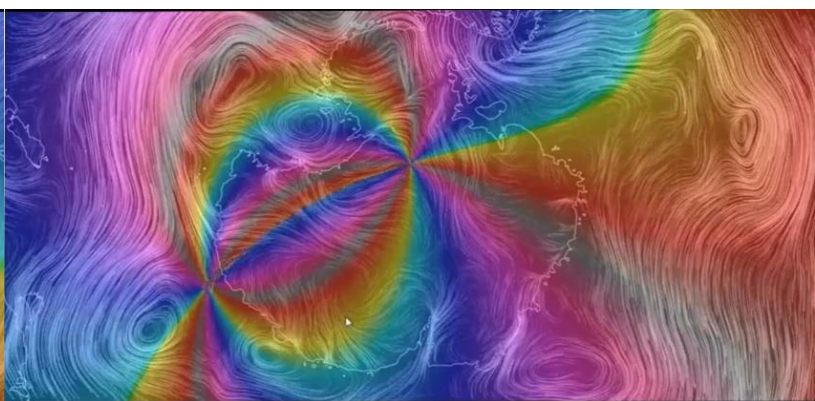
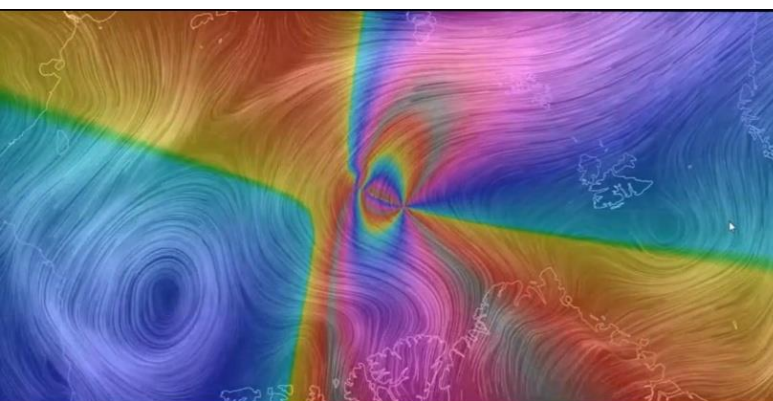


Fig 12

Images courtesy of Tesla apples

Fig 13

## WAVE DECLINATION EFFECT

The North American magnetic wave has a central observers position that is perfectly situated to see what effects the change in declination has relevant to a weather system as it moves West to East as most do. I use this as an example because of its well-known name of “tornado alley”, while watching storms in the region I noticed that the quantity of water the air mass can hold changes as it passes across the magnetic declination of the wave. In the picture above this is shown by the colour change, which if drawn on an electrical circuit would be shown as a cross inside a circle or a dot inside a circle to determine the 3<sup>rd</sup> axis direction of the wave relevant to the outside observer’s viewpoint of the 2D drawing. Also notice that the south pole (northern hemisphere) has a tighter concentration of wave declination on the surface while the opposite north pole has 2 separate central flux points splitting the Antractic continent. This is expected to be a result of fluid expansion under the Antarctic continent, while under the Arctic that plasma lava is being sucked into the z pinch on its journey back to Antractica via the central column.

## TROPICAL STORM PRESSURE

To further expand on why tropical storms lose power once landfall has been made, it is helpfully to start at the beginning of the production of wind wave on the surface of the ocean. Just like the sail of a yacht that manipulates the wave with curvature of flow, and since the ions in the wind travel in a helical wave that is induced into the surface of the water, we start to see that these waves change the density of the water it flows over. These density changes start to create larger peaks and troughs of the sinus wave as ion speed increases. The wave starts compressing ion density on the back side of the wave, while on the front side of the wave the ion density in the air is reduced as it curves around the peak of the wave, this sucks the water up because the density of the air is decreased on the front side of the wave and increased on the back side of the wave. This allows the wave to appear to travel through the water, with the water only moving up and down. However if the water is moving (producing its own current) then this will effect the size and shape of the wave formed. (since water is 10 times denser than air, less speed = greater effect) Ask any sailor about current against wind direction and he will remember a time he would rather forget. Ocean waves typical don’t present a problem to either the weather or the sailor until the energy release happens, this occurs as the energy at the tip of the wave becomes so high that the water evaporates via turbulent flow typically around 12kts of wind speed. The transformation of liquid into gas fills the air with energetic water vapour, this adds to the wind velocity and ion density of the air mass. A noticeable occurrence at this point is the release of the electromagnetic wave which in the quantum world has been called a photon, which in reality is a secondary electromagnetic wave being produced from the energy release point. This is why the water turns white and again ask any

sailor that's been in a storm about the white of a wave breaking in the pitch black and he will have a story to tell you about it. As air mass circulates in our atmosphere we see a change in spin direction between high and low pressure systems in the same hemisphere, this change of spin direction is again a result of perspective of the direction the air mass is moving, if we were to stand behind the direction of travel we would find the air mass is spinning in the same direction with our location changing from sea level looking up for a low pressure system and ionosphere looking towards the planet for a high pressure system.

## CONCLUSION

The pole of any magnet is determined by the viewers perspective of rotation, charge is determined from the viewers perspective of the location of the particle as it rotates around its central axis. The current values for 2 dimensional waves can not be applied to the 3 dimensional world because the energy level of the particle producing the wave is constantly oscillating up and down with each rotation. The Y axis of the 2D coordinates in real life is the Z axis (distance) and the orbit of the object creating the wave must only change its value above the axis of rotation if energy is lost or gained.

Fusion is a by product of MHD and is therefore not the primary source of energy in our universe. The potential energy stored in the linear plasma flowing through the z pinch of a toroid can be more efficiently converted to kinetic energy via non linear plasma. The input energy required to produce the same pressure gradient from evaporating water will not allow for extended space travel, this will require a scaled down version of our sun that will be capable of protecting occupants from harmful radiation and provide them with energy to maintain life aboard the ship over long distances. With plenty potential energy left over for the propulsion system of the craft. Anyone care to hazard a guess at the terminal velocity of a craft with the jet of a black hole pointing backwards? I can't be the only one that wants to find out.....

I hope you have enjoyed reading this paper, it's probably version 17 and at least 2 years of constraint "work" (sailing). If you struggled to understand it I can only suggest you go sailing too, study the waves and how they release energy from their combined peaks, study the turbulent flow from the prop, follow the incremental wind increases they have a period of 10-15 mins, spend hours watching the surface spiraling wave that make up the low and high pressure systems, most importantly study the shape of the sail and the defraction of the ionic waves that flow around it and then read again. Computer models are never as good as the real thing.

Any donates to Non Linear Plasma to fund the R&D of the plasma reactor are greatly appreciated.

Sharing this information is also greatly appreciated.