TIME #15: MIGHT YOUR SEA OF CHANGE BE A SEA OF CHARGE?

BLOG TAKE AWAY: Everything created has a purpose we just have to find those purposes. Oceanic microstructures act a lot like plasma from the sun. We think about the ocean as a fluid but a fluid is not a plasma. So what is a plasma?

Plasma is a highly electrically conductive state of matter with freely moving particles with electrical charge consisting of electrons, protons and atoms stripped of their electrons. These atoms are known as ions. Contrary to commonly held beliefs, plasma's do not act like a neutral gas. Plasma's are usually described in space. But they exist on earth. Plasma cutters are used to cut thick metals in fabrication. Plasma's behave and look different from other forms of matter, ***it tends to be cellular and clumps together to create filaments*** in space called Birkeland currents.

A Birkeland current is a set of plasma currents that flow along geomagnetic field lines connecting the Earth's magnetosphere to the Earth's high latitude ionosphere. In the Earth's magnetosphere, the currents are driven by the solar wind and interplanetary magnetic field and by bulk motions of plasma through the magnetosphere. These plasma flows are driven by convection indirectly driven by the interplanetary environment. The strength of the Birkeland currents change with the solar activity in the magnetosphere. It follows that currents in cells change with the solar activity on our surfaces. It has also been shown that the mitochondria in our cells are responsive to the sun's presence or absence. This relationship makes it very likely that living things with mitochondria are sensitive to changes in plasma's on the sun and on Earth too. Our mitochondria seem to be able to sense these changes with altering their respiratory proteins to these plasma displays.

DO BIRKELAND FILAMENTS HAVE A COROLLARY IN A CELL?

In space, Birkeland filaments act to concentrate all sorts of matter within their magnetically pinched volumes. When two Birkeland filaments form they can torque around each other because of their electric and magnetic fields. These fields act to change the morphology of the atoms of matter at the core of plasma by flattening the ellipse. They do this because at the site of the pinch the scale of interactions change. They eventually evolving into trailing arms as electric currents, axial to the arms, flows into the core of the galaxy. At that point the two Birkeland filaments merge with the core. So the core of a galaxy derives from whatever intergalactic plasma was trapped between the two (or more) Birkeland filaments and the arms of the spiral derive mostly from the pinched Birkeland filaments themselves.

The rotating Birkeland filaments impart the initial rotational or angular momentum to the galaxy-sized plasma structure. As the charged plasma structure rotates, there arises a concomitant magnetic field with a typical “dynamo” signature. Current continues to run through the galaxy along the equatorial plane as part of a larger intergalactic circuit. This current as it passes through the magnetic field mentioned above drives further rotational energy as the galaxy responds as a homopolar motor. This is what drives the “anomalous” rotational velocities observed in the outer parts of galaxies. Further magnetic fields arise in the galaxy as a result of the intergalactic currents running in along the equatorial plane. The currents running radially along the equatorial plane create local magnetic fields that squeeze the plasma into Birkeland filaments. This brings definition to the spiral arms. Further filamentation and higher current densities power star formation in the spiral arms.

Might Birkeland filaments describe how the double helix of nucleic acids work in a cell but at a much smaller scale? The nucleic acids connect to the mitochondria in cells using the

cell’s tensegrity system as their scaffold. This scaffold sits inside cell water. This water is a battery that charge separates when light interacts with it instantaneously because of the photoelectric effect built in physics.

In fact, the Birkeland current connects the sun to the environment around Earth. That area is called the ionosphere and is considered a plasma too. Within this plasma is where UV light is allowed to penetrate the ionosphere to reach the surface. Science has found it has the ability to transmit energy from the sun to the Earth and things living on its surface. I believe this is why plasma’s naturally form in cells in helices inside of our nucleus. These filamentary structures inside the nucleus of cells carry light, electricity, and magnetic flux sheathed in multiple layers of electromagnetic plasmoid’s. Plasma’s can occur in three modes, dark, glow, and arc mode. In dark mode it can not be visualized except through radio telescopes that detect it all over space. In glow mode the density of the electricity lights up plasma to form the galaxies and other visible objects in the universe. In arc mode the forces can create the electrical scarring that we see on rocky bodies or on metals that plasma hits. Think of a lightening strike. It has been estimated that 99% of the Universe is composed of Plasma in its different modes Dark, Glow and Arc. A respected organization with well over 100 years old called the IEEE recognizes Plasma Cosmology as a legitimate branch of science. Plasma is spoken about in physics a lot. It is rarely extended to biologic sciences. Might this be an error? I think so.

The mitochondrial matrix is filled with H^+ ions stripped of its electrons. It defines what a plasma really is. Might the matrix be a dark mode plasma? In space when hydrogen clouds are struck by UV light a clearing occurs. This has been visualized in many nebula in space. Early in the universe before stars were common there was a lot of hydrogen gas present. As starlight began to create UV light the clouds

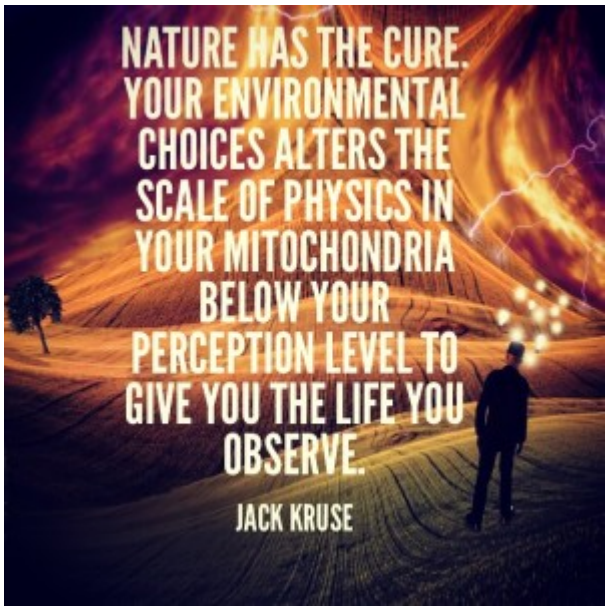
dissipated and collapsed to form other stars. This made the universe more transparent as it became the glowing form of plasma buried in ultraviolet light released from newly created stars.

A plasma is more like a gas. It isn't "flowing" anywhere; the entire Universe is filled with plasma. The entire "vacuum" of space is electrically charged and rich with plasma. It gets pushed around by stellar winds, and sometimes it clumps together in a dense enough formation to become a nebula or a star – depending mainly on the local electromagnetic forces at play in the local environment.

My speculation is that I truly do not believe there is any nuclear fusion in a star because of what I have learned about the photoelectric effect and what I said in the December 2015 webinar. My theory was laid out recently for my members in the April 2016 webinar.

I believe this is why it's colder and darker inside the Sun, as opposed to the surface temperatures. These anomalies need to be resolved. I believe we will find out the same thing is true about mitochondria eventually too. All fusion reactions are believed to occur in the sun, takes place near the photosphere. It is here, where massive electrical arcs come into contact with free ionized hydrogen particles. These hydrogen ions are high energy particles. I have a sense that the same thing happens in mitochondria, but with low energy H^+ ions. ***Physicists tells us that the small quantum world does not act like the large macroscopic world. Why cannot the same dichotomy exist within energy as it does in matter.*** Remember that Einstein taught us all that all matter is fundamentally energy, correct? Mass and light are forms of energy that take the shape, form and size based upon the electrical environment they sense. This means what happens in high energy collisions may not be what occurs in low energy collisions when the scale changes. The high energy world occurs at large astronomical

scales but the low energy world occurs at very small scales.



This symmetry has a fundamental basis when we consider the sizes of matter in the quantum world. Massive 30 million volts electrical charges in the inner mitochondrial membrane come into contact with low energy protons that are spit out of the mouth of cytochromes into fixed iron sulfur targets. That's the only type of reaction going on, in my opinion, in the Sun or a mitochondria. I believe it is wholly an electrical phenomenon, called a plasmoid reaction. This brings up an interesting point; can an electric charge or discharge change the amount of mass in a cell in someway we cannot yet measure?

MY SPECULATION OF HOW A MITOCHONDRIA AND STAR ARE SIMILAR

Stars are electrically charged masses formed within galactic plasmas. They are not heated by nuclear fusion within their core, but rather by a flow of plasma, similar to how a fluorescent light operates. These lights, like the sun is fueled by a giant cathode ray. In the sun the frequency of light varies greatly, but in our mitochondria I have a sense the electrical charge is tied to power buried into frequencies of the most powerful visible part of the UV spectrum. (260-400nm). All frequencies are really the same thing in

various states of motion. This also means color/frequency varies by scale and motion. This variance by motion is important in plasma's because they move faster than other states of matter.

Plasma are groups of atoms that have had their electrons stripped from them. Plasma has been called the "fourth state" of matter, after solids, liquids and gases. Today, physics has now found a 5th state of water. Clearly their are other states or plasma's. I think the exclusion zone (EZ) and the H^+ inside of the mitochondria matrix are other types of plasmoids that have specific abilities. Pollack has made a good case for EZ being involved with light in a plasmoid reaction in his experiments. H^+, acts like a metal, and has already been proven by both chemists and physicists to be another form of plasmid. I view all plasma's as potential quantum dots. This means they can have energy and information added to them to make them programmable in some way. What makes them unique is the environment that they are created within.

Most of the matter in the universe is in the form of plasma. A plasma is formed if some of the negatively charged electrons are separated from their host atoms in a gas, leaving the atoms with a positive charge. H^+ is a hydrogen atom stripped of its electron in the matrix. The negatively charged electrons, and the positively charged atoms (known as positive ions) are then free to move separately under the influence of an applied voltage or magnetic field. Their net movement constitutes an electrical current. Current and flow are synonyms because of how they are linked to Coulomb's law. A plasma in motion = electric current. So, one of the more important properties of a plasma is that it can conduct electrical current. Anything that generates an electric current also must generate a magnetic field. It does so by forming current filaments that follow magnetic field lines. Filamentary patterns are ubiquitous in the cosmos and inside our cells. Filamentary

patterns are found in nucleic acids and collagen and those filaments are linked to the distances between mitochondria inside of cells as I described in great detail in Ubiquitination 5.

Our sun is enveloped in a plasma stream, which flows connecting stars, planets, solar systems and galaxies. I think our cells are organized in the same way floating in a sea of EZ with a spider web of collagen helices throughout that structure. Vast flows of charged particles have been discovered spanning hundreds-of-thousands of light years across interstellar space. Might biology soon find the same is true in us? I think so. Have they already? They actually have. What did I tell you about the electric charge in mitochondria way back 5 years ago in the mitochondrial series? I told you it had the power of 30 million volts in a blog called "What Powers Life and Death". 30 million volts is the power in a bolt of lightening. Lightening is a form of plasma. 30 million volts approximates the power inside a star. Interesting coincidence or natural fractal design at work?

Oceanic microstructures are a lot like plasma. We think about the ocean as a fluid but a fluid is not a plasma. So is the ocean a surface plasma for our ecosystem in cells? I think so.

Where does the plasma flow in our cells then???? Consider the "sea within your cells". That sea is structured, first by electrons added to the Tensegrity system, and then to proteins and lipids in our cells. That sea of structured water (EZ) then grown larger when it is hit by infrared light or heat. The battery buried in this sea grows stronger and larger when it is impacted further by UV light that appears later in the day post sunrise. That sea is cell water that forms an exclusion zone (EZ). What is water inside our cells fundamentally with this new perspective?

Seawater is not very exciting when you look at it on the beach, is it? It is, presumably, just water with salt and other minerals hitting our feet. To most of the denizens of Earth's oceans, the sea is something quite different. It really is a web of gel that suspends the things that exist in it. Isn't this the same scenario that the nucleus and mitochondria face inside a cell?

According to an article from New Scientist magazine, published in November 2000, Farooq Azam, a microbial oceanographer at Scripps Institution of Oceanography said:

"This gel structure (in the seas) is something that oceanography has traditionally not considered. It's not in the textbooks or in the classical explanations. The gel's existence fundamentally changes our ideas of the microcosmos in which sea organisms live."

It has long been known that, at the smallest scale, seawater is a mesh of interconnected long-chain polysaccharide molecules that can hold smaller molecules, and even organisms, in a kind of suspension; These polysaccharides are hydrophilic and loaded with electrons. Pollack's work has showed us that this type of protein is capable of forming an EZ to charge separate water into a positive an negative charge. This suspension of hydrophilic molecules is very gel-like restricting their motions and aligning them in complex arrays. The Scripps Institute research found that these molecules provide a structure that makes seawater a matrix of isolated regions at the milliliter scale. Bacteria and plankton use that structure as unique ecologies in the same way that a forest provides niches for different kinds of life.

Most sugars are polar molecules: meaning, they are also electrically charged. DNA's backbone is made up of sugars. That symmetry is interesting huh, considering what I said above about how things in nature are organized? In the sea, the valence bonds inside them between oxygen and hydrogen

atoms give the oxygen a slight negative charge and the hydrogen a slight positive charge. In turn, polarized water molecules attract the negative and positive areas on the sugars, which makes them dissolve in water, where non-polar molecules will not. Consider oil, for instance, as the most common example, in salad dressing.

As the New Scientist article states, some common phenomena are examples of the ocean's gelatin-like substance. The northern Adriatic Sea turns to jelly every few years during algal blooms. However, the microscopic forces involved with the occurrence are not readily understood, nor is the way that the gel forms, in general. Gerald Pollack has written another book on gels and their creation, and no with surprise to my readers, this ability is tied to the creation of an exclusion zone in water. This links algal blooms to sunlight. This EZ only needs a hydrophilic substance adjacent to it to create a charge separation in water by sunlight. Once this occurs, light can be captured in water and the EZ grows massively. This is how a plasma is created from light within water to form initially.

A milliliter of seawater contains huge numbers of polysaccharide molecules that if "…untangled and lined up end to end, would stretch 5600 kilometers". One liter of sea water also has 10,000,000 viruses in it, loaded with DNA and RNA. There are also chains of DNA, proteins, and other organic substances that provide a nutrient-rich environment for the organisms that live in the ocean. *Now think back to the* ***brain gut 2 blog****. UV light and sea water make more viral particles in the ocean then there are stars in the known universe. This would have created a lot of viral particles and bacteria in a sea water gel at one time.* ***Might this be the conditions required for endosymbiosis to occur?***

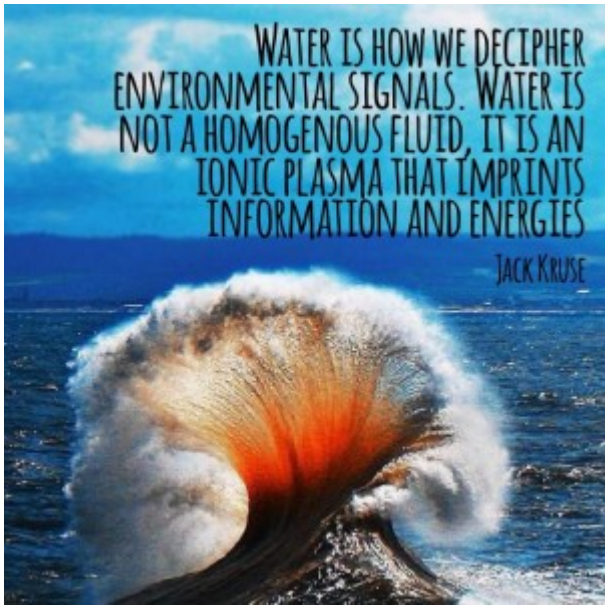
So it appears that light and water alone can create matter from other forms of matter. It does not answer how the web of gel forms, though. Pollack's work has those answers. It is

believed that the gel exists because bacterial and algal sugar excretions combine into a sticky soup, but that answer leaves many other questions.

Negatively charged polysaccharides are most likely interacting with positively charged ions like calcium, magnesium, and sodium in the seawater. This electro-chemistry aligns "exopolymer particles" into a "biological glue", binding bacteria, proteins, and sheets of phytoplankton into the strands of gel that give microstructure to ocean water. That arrangement can create defects in the surface of the gel that life might take advantage of. How? Physics has shown already by experiment that surface defects can give arise to topologic insulators. Topologic defects can then in turn, lead to the creation of magnetic monopoles. Artificial monopoles have also been shown to exist in physics experiments. Magnetic monopoles can "create time" by controlling energy flows in an atomic lattice by storing it; as such it can make huge stores of memory possible in a lattice.

Bacteria and protein molecules are also electrical entities. Some bacteria can live off electrons, alone, synthesizing everything they need from the flow of charge. They do not even need a terminal electron acceptor to run respiration. Bacteria can also eat iron, as well as drive their flagella with electric motors. The metal ions or free electrons can act as quantum dots for living things. Light and metals can interact photoelectrically. This means that almost all atoms can be thought of as quantum dots. In a quantum dot, there are both negatively charged and positively charged particles that are missing electrons. The attraction between the electron and hole creates a quantum state with a very strong light-matter interaction and a quick release of light. Collisions with light appears to program those dots by altering the electrons in atoms in some novel ways. I mentioned these "dots" in the Time 2 blog. Coupling these ideas with the research done by Gerald Pollack, Nick Lane, Martin Chaplin, Mae Wan Ho about

“exclusion zone” water could provide answers to the questions of water, electricity and the environment that supports life. How light water and magnetism organize is a fundamental question for us all. ***When we try to pick out anything by itself, we find it hitched to everything else in the Universe.***



Well we have to bring forth true history in any way we can. We must enlighten those who do not want to be disenchanted from their ignorant bliss.
Once they come out out of the cave, no matter how hard they try, they cannot return! Enlightenment is growing daily because ever day new data shows us how nature really works. The few in control, ‘per say’, are becoming terrified of truths science is exposing!

CITES:

1. https://www.newscientist.com/article/mg16822664-500-meet-me-at-the-goo/
2. The Vital Question, Nick Lane 2015.
3. www.jackkruse.com/what-powers-life-and-death/
4. The Fourth Phase of Water, Gerald Pollack 2014
5. http://onlinelibrary.wiley.com/doi/10.1111/imm.12329/abstract
6. http://www.pnas.org/content/110/9/3210.extract

7. http://neurosciencenews.com/mitochondria-circadian-clock-3866/
8. http://phys.org/news/2016-04-superfast-source-artificial-atom.html
9. http://www.gizmag.com/fourth-state-of-water/42999/
10. www.jackkruse.com/time-2-how-is-time-built/