A reader just sent me to a new video at YouTube by Wal Thornhill, as part of the Thunderbolts or Electrical Universe (EU) model. Although I agree with Thornhill and the Thunderbolts on larger issues, especially the deficiencies of the standard model and the need to bring a second field into celestial mechanics, I find Thornhill's analysis deficient at many points. Thornhill says that only the Electrical Universe model can explain newer data, and that just isn't true. My charge models explain all data much more thoroughly and rigorously than EU models. The EU physicists still haven't penetrated the difference between the charge field and the E/M field, so although they are near to the correct analysis, they are still missing the bullseye, forcing them cram new data into their models when it doesn't really fit. So although it is true that EU explanations are much much better than mainstream explanations, they still aren't correct.

The main problem with the EU model is that it explains everything in terms of the E/M field, ignoring or taking for granted the underlying charge field. Theirs is an electrical universe, while mine is a charge universe. Some will see the difference as one of semantics, but it isn't. As I have made crystal clear in a series of recent papers where I unify Maxwell's equations, the charge field must be separated from the E/M field in order to understand and explain unification, dark matter, and all these problems the Thunderbolts are working on. Without that understanding, the EU analysis of the celestial field must remain flawed and incomplete. Electrical and magnetic interactions are taking place between celestial bodies, as they claim, and even the mainstream recognizes that. But none of these interactions and none of the E/M or plasma fields can be explained without the underlying charge field. And when it comes to explaining winds, hot and cold poles, and other phenomena, my fields explain the data much more cleanly and clearly than EU models.

Let us start by looking at the increasing winds of Venus. In the past six years alone (2006-2012), it has been found that the winds on Venus have increased by about 33%, climbing from 186 miles per hour to about 250 miles per hour. The mainstream has no good explanation for this. But even Thornhill's
explanation is noticeably deficient. In the new video, Thornhill quotes Alfven in showing that according to current theory, electrical effects in plasma require a circuit. He says correctly that the mainstream never uses such circuits to explain anything. This implies that the EU explanation is an electrical circuit between the Sun and a planet. However, the EU has never shown proof of such an electrical circuit between Venus and the Sun, other than the electrical and magnetic effects we see. In short, they say that because we see E/M effects, there must be a circuit. However, if we look at the flow of ions between the Sun and planets, we don't see the circuit. The Solar Wind flows out, but does not also flow back, creating a circuit. We have never discovered any electron flow—or any other ion flow—from Venus to the Sun, and to prove an E/M circuit, that is what we would have to show.

Now, I have proposed that we do have a circuit, but it is a charge circuit. I have proposed that charge, i.e. photons, is flowing back to the Sun, creating a sort of charge circuit. In many papers I use this to set the local field and to explain tilt, eccentricity, Bode's law, and many other phenomena. However, even in this case, it is not the circuit that explains the data in various experiments. In other words, we could explain many charge phenomena without a circuit at all. To get influences, we just need moving charge, not circuits. In our Solar System, we do have charge moving both ways, so as a matter of fact we see circuits. But as a matter of theory, it is possible to propose charge influences without any circuits at all. Circuits are an outcome of particular bi-polar charge fields in our environs, but circuits are not a necessary cause of charge influences. We can propose without contradiction that some places in the universe may have charge influences without circuits.

The reason we see circuits in the near environs is that we have a split charge field here. We have a field that is rich in both photons and antiphotons. I have shown that photons outnumber antiphotons by 2 to 1 on the Earth, but we have both. This not only explains the polar differences we see on all bodies, quantum and celestial, it shows why we have circuits. The photon field creates the first half of the circuit, and the antiphoton field completes the circuit. But it is theoretically possible to propose and diagram a field that has only one or the other. In that case, we would have real influences between bodies, but no circuit. In fact, at the atomic level, in certain manufactured fields, we can already create charge channels that are almost completely non-polar (in this sense). In this case, the charge moving through the nucleus is photonic only, with these photonic streams being so powerful they drive off or swamp the opposite antiphotonic stream. The circuit is weak or non-existent in that case, and its potential explains none of the data. We have strong fields with no circuit at all.

That explains why we see evidence of a circuit in a lot of Solar System data, but don't see electrons moving toward the Sun. We don't see electrons or other ions moving toward the Sun because even though we have charge moving in, that in-moving charge doesn't carry ions with it. Ions move with the summed field, and the summed field of the Sun is always out. We have photons moving in—and I have shown how those photons help us explain other difficult data—but since more photons are moving out, the larger ions will be pushed out by the larger numbers. So charge moves both ways, but the ions and Solar wind only move out. This is a nicety the Thunderbolts cannot explain, and they cannot explain it because they are following E and M, but not charge. To hit the bullseye, you need charge, and you need both photons and antiphotons.

I should pause to make a distinction. When I say we see no evidence of the circuit they are talking about, I mean we see no evidence of it in the Solar equatorial plane, where the planets exist. We don't see evidence of the necessary E/M circuit between the planet and the Sun. We do see ions moving in toward the poles of the Sun, but since those ions aren't coming from the planets, they can't be completing any Sun-planet circuit. The bulk of the charge coming into the Sun is coming from outside the Solar System, mainly in various channels from the galactic core, so it is coming in perpendicular to
the Solar equatorial plane. The ions it is carrying have therefore also come in from outside our system, so those ions aren't completing a planetary circuit, you see.

Interestingly, some in the EU seem to recognize this model-killing problem. At the 2013 EU conference in Albuquerque, Bob Johnson delivered a paper showing the negative data of electron drift toward the Sun. He said,

The measured data seem to indicate that both the protons and the electrons in the solar wind receive additional energy as they get further from the Sun. They're always getting faster. So the protons are behaving as expected, but not the electrons. And we'll look at one or two examples from the literature to show this. Here's the data for electron temperature from Phillips et al. (1995). The bottom black line shows the expected adiabatic expansion temperature in the mainstream model. The other colored lines show the electron temperatures as actually measured by various different missions relative to a nominal value at 1 AU (just to show the shape of the curve). And all of the other lines show that the electron temperature is decreasing more slowly with distance than expected. So something appears to be heating the electrons as they get further from the Sun. And that's the wrong way around for an anode Sun model.

That is the same thing I said years ago, in response to the EU model. The EU guys propose these circuits with no proof of them and reams of proof against them, so it is hard to understand why anyone thinks the models are good. The models are only good compared to mainstream models, which don't mention charge or E/M at all. But if you study them closely, the models are extremely tenuous and contradictory. They rest on basic circuitry that we know doesn't exist.

Johnson also tells us this:

The important point is that there is no corresponding strahl population on the left of the diagram, which is the part moving towards the Sun, as you can see from the velocity at the bottom is zero in the middle. So these are moving away. There are no strahl electrons moving toward the Sun over there. And that seems to be clear evidence that there are more electrons moving away from the Sun faster than the protons, because the baseline for these measurements is the protons. So taken together these various strands of evidence seem to argue against an anode Sun model.

Johnson is at an EU conference, so he is couching this in conciliatory terms, but the data he is pointing out is of course fatal to the whole EU model. There is no “seems” about it. Again, there are no strahl electrons moving toward the Sun over there. Could the data be any clearer? Johnson later pretends this destroys the Juergens model but not the Alfven model, but this is only wishful thinking. Since Alfven's model is based on a circuit in the heliosphere, killing the anode must kill the entire circuit. I have shown that the Sun or heliosphere cannot be a closed circuit since the entire Solar System field is driven from outside, by charge coming into the Solar poles from the galactic core. The speed of the Solar wind is then a function of this incoming galactic charge, and ultimately nothing else. The Sun is therefore both anode and cathode—in a way—only because he is really just a sort of neuron. He is but a link in a far greater circuit, and the charge he recycles into the planetary system then goes back to the galactic core. But to understand the mechanics here, we have to follow photons, not electrons or any other ions. We have to follow charge, not E/M. We have to follow much larger circuits than the ones proposed in EU, and recognize that local fields don't have to behave as circuits. We don't require electrons flowing in because photons are already flowing in. Any “backflush” effects like we see in my Bode's law or tilt papers can be given to photons, not ions.

Don't misunderstand me: I have always liked Alfven and fully supported his long fight against
mainstream celestial mechanics. But the simple fact is my unified field has allowed me to advance well beyond his naïve and false E/M circuitry. Some in the EU have already recognized this and come over to my side, but the leaders have not liked being trumped and they have ignored me just as thoroughly as their comrades in the mainstream. Up to now I have given them a pass, wanting to keep a few allies. But Thornhill's quip about the EU having the only explanation of data from Venus irked me, and it is time I made clear how weak the EU model really is. As a mechanical model, it doesn't have a tithe of the explanatory power my model has, and this paper alone will prove that. The EU model is not only incomplete, it is flat wrong in several fundamental places.

Let us return to the winds of Venus to show this. To explain the accelerating winds, Thornhill first hits the polar vortices on Venus, and the heating at the poles. He rightly says that these vortices are evidence of E/M influences from the Sun. More rigorously, they are evidence of charge influences from the Sun, but since charge drives ions, and ions drive the molecules, it is not incorrect to say that the vortices are caused by E/M. The vortices are a magnetic effect, not an electrical effect, but we will allow that Thornhill is pretty close to the mark so far. He shows a diagram that includes the magnetic lines of force, so he recognizes this is a magnetic effect. He then claims that the heating is caused by Birkeland currents. He says, "The Birkeland currents heat the atmosphere with the electrical energy deposited there." And again, he is very close to correct, but misses the finer points. For we must ask, "Deposited there how?" He begs the central question, but doesn't even attempt to answer it. He skips directly over the big question here, that being why the poles of Venus show warming while the poles of the Earth and Mercury show cooling. They are in the same ambient field, both receiving energy from the Sun, so the circuit should be the same sort of circuit. Why isn't it? He doesn't tell you it is because Venus is spinning the opposite direction to the Earth. Venus is upside down, remember? This puts her north pole south, relative to us and the Sun, and reverses all the field potentials. So although the Birkeland currents may be there, they don't necessarily explain the heating. If the currents were spiraling the other direction, they would cause cooling.

Thornhill doesn't address that question or that answer, because his model doesn't have the degrees of freedom to explain it. Since the plasma models aren't based on spin mechanics and don't include an antiphoton, they can't answer the real mechanical questions begged here. Thornhill can explain the broader lines of the field theory, but can't address the more specific variations in a logical manner. It is this inability to answer basic questions that has caused the mainstream to ignore the EU for many years, despite the fact the EU model is very roughly correct.

Again, it isn't the electrical field or even the magnetic field that explains the heating at the poles. It is the relative polarity of the incoming charge field that explains the data at a fundamental level. The heating is caused by the reversed spins. The incoming charge is spinning one direction, but Venus is spinning the other direction. Because Venus is spinning retrograde, all her ions and molecules, both in her body and atmosphere, are spinning retrograde. But the incoming charge is spinning prograde. Since this charge field is carrying the Solar Wind and all its various ions, these Solar ions are also prograde. When the incoming field of ions meets the local field of opposite spinning ions head-on, we get spin augmentation and energy increase, thereby heating. Straight mechanics.

This is exactly the same spin mechanics that explains the loss of overall magnetism on Venus, as I have shown in earlier papers. Since the ionosphere of Venus is caused by charge moving out (mostly from near the equator) rather than in, we find the opposite spin effect there. When charge exiting Venus re-encounters the ambient field, the opposing spins cancel, nullifying the magnetic field.

But now to the wind, finally. In the video, Thornhill tries to explain it as an effect like the Faraday disk
motor. Unfortunately his explanation is again woefully inadequate, since applying this analogy or effect to Venus would spin Venus as a whole, not just the wind. The entire body of Venus is in the field, not just the wind, so Thornhill's explanation fails. Although the winds of Venus are moving very fast, Venus herself is moving very slowly, and Thornhill needs to address that. He doesn't. He again just skips right over it. In fact, he curiously segues into a second section where he admits that Venus is slowing her rotation, without connecting that in any way to the previous section where the Faraday disk motor would speed up rotation of the wind. Thornhill very obviously needs a mechanism that simultaneously explains slowing of Venus while explaining a speeded-up atmosphere. The Faraday motor can't hope to do that, as I hope you can see. Instead, Thornhill ignores that connection completely and proposes a wholly different model for the slowing of Venus herself. He explains the slowing as due to a mass decrease, caused by an “extraction of charge.” Unfortunately, that is upside-down to basic math, which indicates that a loss of mass would speed up the rotation, not slow it. In a field of constant density and therefore pressure, a loss of mass would cause a loss of radius, and that loss of radius would increase the angular momentum and the spin speed. Thornhill is assuming a loss of mass with no loss of radius, which would decrease density and therefore cause slowing. But in assuming that, he is ignoring the ambient charge or E/M field he has spent so much time selling. To keep the less-massive Venus from contracting, he would have to also lower the density of his ambient E/M field surrounding her. But if he did that, then Venus would feel less field pressure and would recycle less charge. With less charge coming in the poles, Venus would release less charge at the equator. That would destroy both his Faraday motor analogy and his “extraction of charge.” It destroys the Faraday motor analogy because if we decrease the ambient field density, it is like decreasing the magnetic field around a Faraday motor. In that case, the Faraday motor slows down. He is trying to explain an accelerated wind, so it doesn't work. It destroys his extraction of charge because if we decrease the ambient field density, we have less charge in and therefore less charge out, which causes less extracted charge than before. His proposed mechanism is actually upside down to the data he is trying to explain.

Thornhill's use of the Faraday motor, although flawed, is instructive if we look at it in the right way. He does admit that the current on a Faraday disk motor must be applied “in at the poles and out at the equator,” which follows my model of charge recycling by spherical or round bodies. If we recycle my bi-polar charge field in this way instead of Thornhill's current, we can understand why Venus is slowing while her wind is accelerating. Let's look at Venus' rotation first. From 2006 to 2012—the years we are studying with the wind data—we were in the up-phase of the current Solar cycle:

![Solar Cycle Variations](image)

This means the ambient field was increasing during those years. In the same way, the period of time in
the data for Venus' slowing rotation is from 1996 to 2012, which you can see is also an up-phase in the Solar cycle. We were at a minimum in 1996 and 2006 and a maximum in 2012. What this indicates is that the ambient field around Venus increased in density during both data sets. Therefore we would expect Venus to increase its charge recycling during both time periods. As you can see, this is opposite what Thornhill is proposing, since if Venus is recycling more charge, she is filled with more charge at each dt, effectively raising her mass/energy content. There is also more pressure from the outside, from the denser ambient field, so Venus can't expand and so experiences both a mass and density increase—a sort of doubled effect. According to my simple field math above, this would normally cause a body to spin faster in a charged field, but Venus is not a normal body. As we know, her body potential is opposite that of the field around her. So she does the opposite of what the Earth would do in a similar field. The reason for this is seen by returning to my explanation of Venus' magnetic field above. As you see, the spins are opposite as they meet above the equator, but moving in the same direction, so they cancel. So, not only does it cause a loss of magnetism, it causes a loss of energy. Again, you can think of it like friction. The more charge Venus is emitting into an opposing ambient field, the more spin friction she creates. In a strictly mechanical way, this causes slowing. It is like opposite cogs meeting. Interestingly, this same spin mechanics should affect the brightness of Venus, too, by the mechanism shown in my recent paper on albedo.

If the same thing happened on the Earth, the Earth would speed up, since its charge profile matches the Sun's profile and therefore the charge profile of the ambient field. The cogs wouldn't oppose in that case. And the Earth would also become more magnetic.

That is how to explain the slowing rotation of Venus using an increased charge field. But what about the wind, which is accelerating during the same up-phase in the Solar cycle? Well, the wind feels the increased charge recycling coming up from the surface of Venus, but it isn't being influenced as much by the ambient field above the atmosphere. So basically it feels the first effect but not the second. The increased charge puts more spin into the atmosphere, which accelerates the wind directly. The summed spin of the charge field translates directly into increased wind speeds. The charge photons drive both the ions and molecules in the atmosphere by direct contact. This is why the Venussian winds are highest near the equator, and especially 30S: that is where the most charge is emitted (following the Faraday motor potentials). But no friction or cog effect is present, except in the very top layer of the atmosphere where Venus' ionosphere meets “space”: the ionopause. But since the wind we are tracking at 250 miles per hour is lower than that, it doesn't encounter the meeting of reversed fields we saw above. Only the boundary wind would be slowed; all winds below that should be accelerated.

So you see, my field mechanics is able to explain the slowing of Venus and the accelerating of her winds at the same time, without ignoring or glossing over anything. Where Thornhill has provided only a general and pushed analysis, I have provided a detailed and mechanical analysis.

Now, what about Saturn? Thornhill tells us he predicted Saturn's poles would be warm, and that turned out to be true. Since Saturn does not have a retrograde spin like Venus, the polar warmth would seem to contradict my model above. But this is to again ignore the finer points of the real field. Thornhill can use this as confirmation only by doing the most cursory analysis and ignoring all details, but if we do a close study of the actual fields, we find that Saturn is not working like Venus. This gives Thornhill's prediction the status of a lucky guess. Based on his quick analysis of Venus, he should have predicted all planets to have warm poles, and they don't. If the warmth is a “depositing of charge” by a circuit, then the poles of Mercury should be warm spots. Instead, we now know the poles of Mercury have ice. My theory can explain that, but the EU model can't.
The poles on Saturn are said to be only about 70K, and they admit that is “only relatively warm.” It is warmer than the areas immediately around it, that is, and so registers as a “hot spot.” But the question we should ask is, “Are the poles warmer than the equator?” The answer is no. So overall, the poles are not hot spots, they are cold spots, as on Earth. If we build an average temperature map, the poles on Saturn are cold spots. They are warm spots only if you ignore lower latitudes.

So now we have a different question: why are the poles on Saturn warmer than nearby high latitudes? Well, it has nothing to do with Birkeland currents or the depositing of charge, and everything to do with increased rotation and through charge. Let's look at increased rotation first. The surface of Saturn has much greater angular momentum than the Earth for two reasons: 1) a radius that is 9.5 times that of the Earth and 2) a spin rate 2.3 times that of the Earth. So a point on the surface of Saturn moves 22 times further than a point on the surface of the Earth in the same time. This increased angular momentum automatically increases Saturn's charge recycling, and makes Saturn act more like a disk than the Earth. In other words, more of Saturn's emitted charge goes to the equator and less is released at higher latitudes. This is the same effect that allowed me to treat and diagram the proton as a disk in my nuclear diagrams. The proton is spinning so fast that its charge field is effectively compressed into a single plane, making it act almost like a disk in most situations. So, compared to the Earth, we would expect Saturn to have colder high latitudes and a greater charge flux from equator to pole.

But a second factor comes in, and this one trumps the first factor. I have shown that as we move out from the Sun, the charge field becomes more balanced, containing a higher percentage of antiphotons. In a recent paper on magnetic reconnection, I compiled findings from several previous papers, showing that the Solar corona has 10 to 15% anticharge, Mercury has about 20%, the Earth about 33%, and Uranus about 45%. I would estimate Saturn is closer to about 42%. Since balance would be 50%, this explains why Saturn has a weaker overall magnetic field compared to Jupiter (I did the full math and analysis in this recent paper called Saturn's Anemic Magnetic Field). The closer to balance, the more the two recycled fields interfere and cancel in the planetary interior, as a matter of spin. Photons come in the south pole and are emitted above the equator; antiphotons come in the north pole and are emitted below the equator. But since the fields cross in the interior, they can cancel spins. A spin cancellation is the same as a magnetic cancellation.
But we have to look even closer. Although the main lines of charge recycling are the ones I have diagrammed many times (above), once we have a more balanced field, we must also consider a thing I call through charge. This is charge that goes straight through the body from pole to pole, avoiding lateral recycling. Only charge that travels very near the pole can do this, and it has to enter the body on the right trajectory, too. We haven't seen this phenomenon yet in my various papers on the Earth's charge field, because it is normally a minor complication. On the Earth, it doesn't trump the other factors, so we can usually ignore it. But we have seen it recently in my analysis of the charge recycling of the Iron nucleus. Through charge is a much more important phenomenon at the nuclear level, because much more charge passes through. Because the distance from pole to pole is so much shorter, the odds of photons passing straight through is much greater. And the nucleus actually channels charge along the axis. In other words, in the nucleus, charge doesn't just move freely along the axis, it is pushed there by charge streams. This is also true in a planet, but since the channeling is much more complex, the charge is less likely to be channeled through. But even at the size of a planet, through charge can be important. At c, a photon could pass from pole to pole on Saturn in only .3 seconds, so through charge is far from negligible, even at that size. What makes it more important on Saturn than the Earth is the increased spin and the increased balance of charge. The increased spin actually opens up a slightly larger through channel (by the centrifugal effect), and the increased balance allows charge going up to augment charge going down, as a matter of spin. North through-charge augments south through-charge, increasing the spin of both, exactly in the same way and by the same mechanism as we saw with the Iron nucleus. In the same way this creates an augmented magnetic field through Iron, it does the same thing through Saturn** while simultaneously heating the poles. Although the polar heating on Venus was caused at the surface, by a local augmentation, on Saturn we see a slightly different mechanism using this through charge. Saturn is heated from within, while Venus was heated from without. So although both are caused by charge effects using spin mechanics, they aren't equivalent.

Some will be confused with all this charge augmenting and cancelling, and it will seem to them that opposite charges augment or cancel willy-nilly, depending on what I need them to do. But the mechanics is quite simple. If opposite charges are moving in the same linear direction (parallel), they cancel. This is what happens at the equator of Venus, where the outgoing charge of Venus meets external charge that is passing by. However, if opposite charges meet head-to-head (anti-parallel)†, from opposite directions, they augment or stack. This is what happens at the poles of Venus or with through charge. On Venus, the solid matter already existing at the poles will be releasing charge up. This charge meets charge coming down from the Solar field, and we see augmentation. On Saturn, the solid matter existing at the poles is not like the solid matter on Venus: it is spinning the other way. So when it meets charge coming in from the Solar field, there is no heating. There is cooling. But Saturn has a strong through charge on both ends, and that charge is spinning opposite. When the through charge moving up meets the incoming Solar charge moving down, we again have spin augmentation and heating. Different mechanism, same general effect.

Although the Earth has through charge, it doesn't have as much as Saturn. On Saturn, the through-charge effect trumps the local effect, and we have more heating than cooling. On the Earth, the local effect trumps the through-charge effect, and we have more cooling than heating. Again, this is caused by less angular momentum on the Earth, and less anti-charge moving north to south. Saturn is about 8 percentage points from balance, while the Earth is around twice that.* So if we add the two effects, we would expect Saturn to have 22 x 2 = 44 times more through charge than the Earth, as a first estimate.

As a bonus, I will address one last thing Thornhill has used as confirmation of the EU model: the
hexagon on the north pole of Saturn.

Here is what Stephen Smith says in a Thunderbolts press release:

For many years researchers studying the issue have known that beams of electricity flowing through plasma produce a central column surrounded by concentric cylinders. The cylindrical current filaments exhibit long-range attraction and short-range repulsion braiding that result in evenly spaced vortices surrounding the column. As the filaments rotate around one another, a preferred hexagonal cross-section forms within the innermost column. Hexagonal craters can be seen etched into the surfaces of planets and moons. Weather patterns, such as hurricanes on Earth, also exhibit hexagonal “eyes” that defy conventional explanation.

So again, we see an explanation with very little content. According to the EU model, Saturn shows a hexagon because plasmas show a hexagon. But that begs the question, “Why do plasmas show hexagons?” The EU explanation is somewhat more complete than the mainstream explanation, since it links planetary structures to the E/M field, which is of course correct. But the hexagon is then only somewhat less mysterious, since we still don't know why plasmas create them.

If you have studied my nuclear diagrams, you know why the charge field creates hexagonal structures: the nucleus is hexagonal. All charge fields are hexagonal at the ground level, that is, so if we scale them up without destroying the shape, we should expect to see the hexagon. The only reason we don't see it more often is that the local or atomic field isn't scaled up evenly. Either the larger body isn't perfectly spherical (as one example), or the body isn't homogeneous (as another). What we need to maintain the hexagon is a homogeneous field in a homogeneous and symmetrical body, and that rarely happens, especially at large scales. Apparently, on the north pole of Saturn it is happening, and that is what we are seeing. Once you have a diagram of the nucleus, the hexagon isn't mysterious at all.

This is what I meant when I said my model is more complete. My theory, diagrams, and vast array of linked papers provide a much more detailed analysis of these and related problems. I don't just give you a rough analysis that works only in isolation and that explodes in the face of wider data. Since I have now corrected and re-written and unified quantum equations, classical equations, the Virial, the Lagrangian, the equations of motion, the equations of Relativity, Maxwell's equations, Laplace's equations, core theory, drift theory, perturbation theory, and just about every other fundamental equation in physics and astronomy, I can and have tied all these together into a comprehensive field theory with hundreds of cross references and cross indicators. And because I have shown the mechanical cause of unification, each new paper stands as proof of every previous paper. Since the theory is all of-a-piece, data that confirms one paper tends to confirm them all.
The EU leaders, being plasma specialists, can't say that. They may know a lot about Alfvén and plasmas, but they know much less about Einstein, Newton, Laplace, Bohr, Schrödinger, Feynman, and all the necessary corrections to them. It takes more than just defining the Solar system field as a plasma or circuit to solve these problems.

*The Earth has a 2 to 1 ratio of charge to anticharge, which is 33% anticharge, which is 17 percentage points from 50% or balance.
**Although Saturn's overall magnetic field—as emitted near the equators—should be “anemic,” Saturn's through charge should be augmented. What this means is that if we draw a line up and down from Saturn poles, we should find an augmented magnetic field in that line only.
†See my paper on diatomic Hydrogen for more on this.