THE SAFIRE PROJECT

ELECTRIC UNIVERSE UK

INTERNATIONAL CONFERENCE & SYMPOSIUM

7th-11th July 2018 SOMERSET, UK

SCIENCE & COLLABORATION

WITH

MONTGOMERY CHILDS

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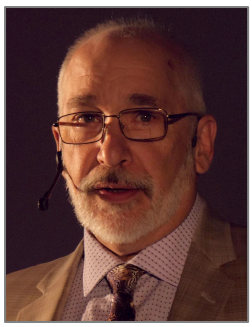


Montgomery Childs

Collaboration and Science

8th July 2018

THE CIGAR

Good morning. Now, some of you see that I smoke cigars, I'm going to get back to the cigar. And we're going to talk about being sensitive to what nature is really doing.

You also know that I sail. And that's our sailing boat *(image, right*). This is our racer. It was designed by Steve Killing who designed America's Cup. It's not wooden, it's actually just a veneer; but it's a special design.

We won the cup in Canada, lot of flags; it's got a lot of mast. But to learn how to sail and race at that level takes a lot of skill and takes a lot of teamwork. You need four or five people who have to be very coordinated.

So, we got a coach and his name is Mike Wolfs and he's an Olympic silver medalist. And so, if you want to learn how to do something, you want to get the best people to teach you if you can; somebody that's got a track record.

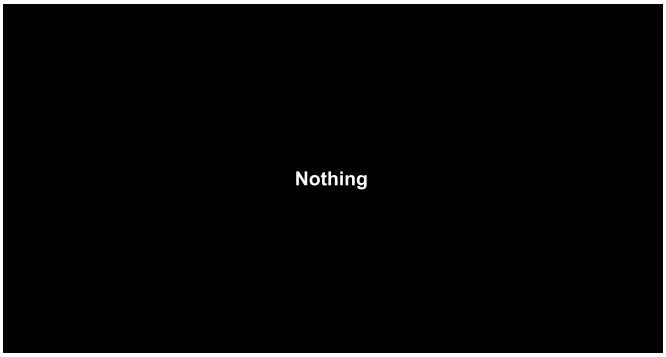
So, he's teaching us for two years and there was one time out on a Saturday afternoon, the whole team practicing and there's no wind, no apparent wind, and he says, "Monty, it's easy to sail when you got a nice breeze, but when it's like this, this is where the championships are won, and so I'm going to show you something." Then he asks, "Anybody here smoke?" Well, four of us put our hands up, okay. We light a cigar. We held a cigar up. He said I want you to show you this. Our sails were just hanging straight down.

So, we waited for a second and we watched the smoke just drift off to the port side. He says okay everybody off to the port side. Now sailing, normally you're going to go on the windward side to counter the forces, but what happened was we get on the leeward side, and the boat heels over just slightly, the sails just slightly started to back, and then they start to fill with the wind, and then we start to move forward, 0.1 knot, 0.25 knots, 0.5 knot, and so, interestingly, in 2004 we won the championship. The day of the race, the first race, there was just a very light breeze, enough to get through the start and then it just died.

So, we light up a cigar, everybody got over one side of the boat. There're 30 boats in these races and these races are 40 miles long. So, we race across Georgian Bay; if you have an idea how big Georgian Bay is, it's about 300 miles long and it's about 80-100 miles across. So, these are big races, not around the mark, okay. And so for the first hour, that's how we sail and we left the rest of the fleet behind over two miles. We're not talking seconds or anything like that. And so that's actually how we raced. And we took the cup that year, because we learned to tune in to evidence and see what it's telling us, which is really what we're doing with SAFIRE, okay?

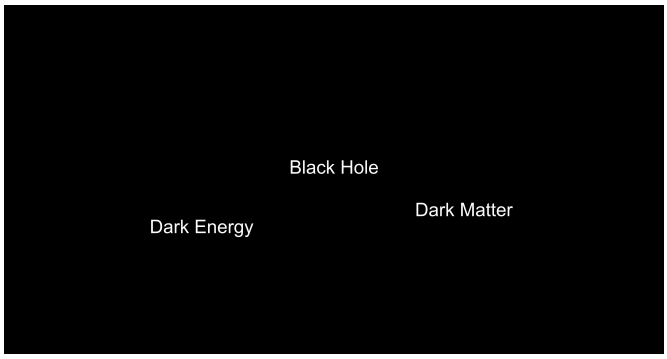
CONSENSUS OR FACT

So, what I want to discuss is the difference between *consensus* or *fact*. Now it's a generally accepted fact that the universe came into existence out of *nothing*. This is contemporary. So, we have 'nothing'. A guy like myself when asked, well, "How does it come out of nothing?"



But it's also a generally accepted fact, as a consequence of the Big Bang, gravity is the genesis of all that we see. And this is all that we see. So, a lot there. And that's supposed to be due to gravity, and it's supposed to be due to the Big Bang, and thus all this came out of nothing, randomly of course. So, it's a generally accepted fact that the core of stars became nuclear as a function of gravity.

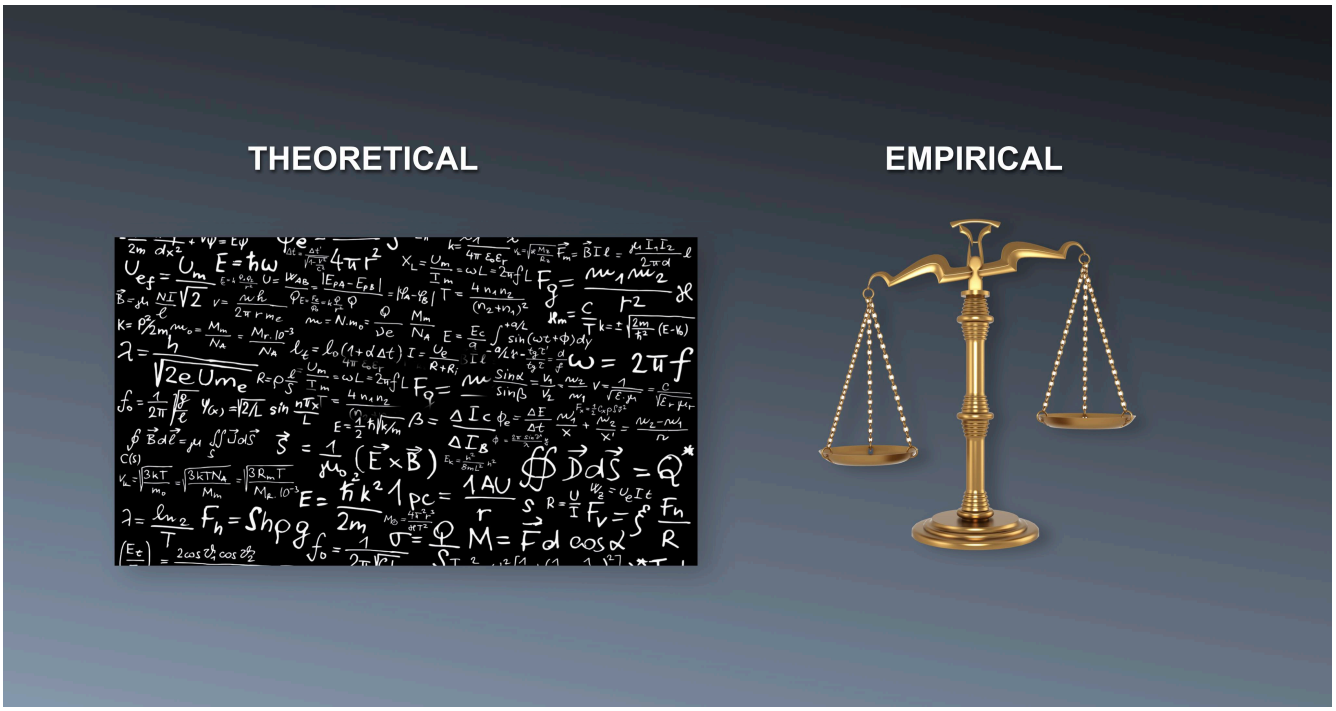
It's a generally accepted fact that Black Hole's, Dark Matter, Dark Energy and other Dark things are responsible for making the universe work as it does. So, we have Black Hole, which is really nothing and never been measured. We have Dark Energy, which is another variable in a mathematical equation, and we have Dark Matter, which is also another variable in an equation to try to make sense of this universe that we see that came out of nothing.



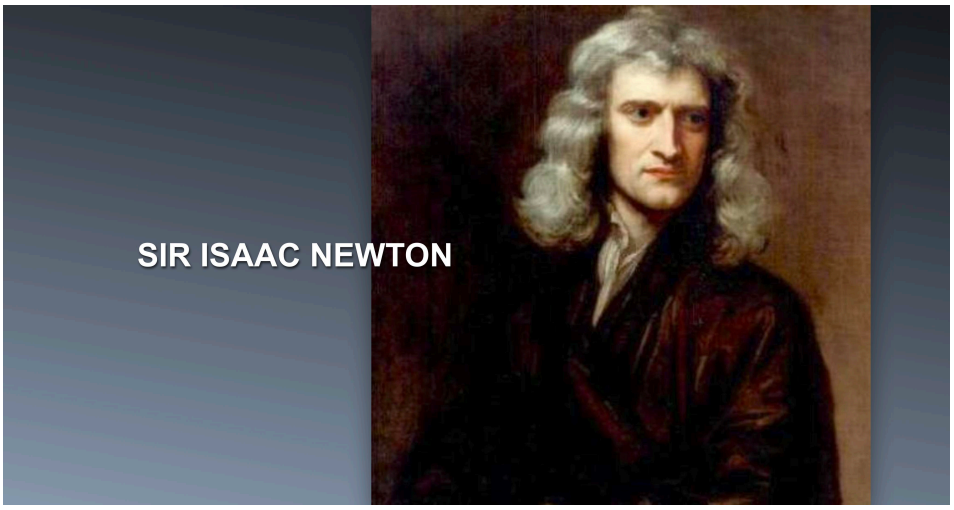
And of course, other dark things.

But it was also a generally accepted fact that you could not sail faster than the wind for thousands of years – until recently. There's also a generally accepted fact that heavier than air aircraft could not fly, until the last maybe 110 years or so.

TWO WORLDS



So, we have two worlds. We have the *theoretical* and we have the *empirical*. I am an empirical experimentalist. But like Newton, we don't deny the theoretical; we accept it as being necessary to develop ideas about what is going on in the world around us.

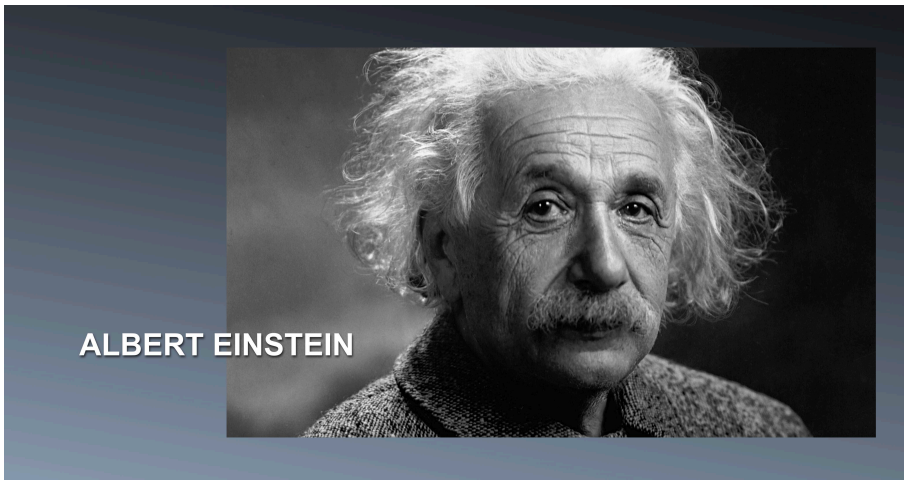


ISAAC NEWTON: *"I feign no hypotheses and I contrive no hypotheses. I have not as yet been able to discover the reason for these properties of gravity from phenomena, and I do not feign hypotheses. For whatever is not deduced from the phenomena must be called a hypothesis; and hypotheses, whether metaphysical or physical, or based on occult qualities or mechanical, have no place in experimental philosophy."*

Which is in today's day and age, you might say is the scientific method.

So, these two worlds have been at war from the beginning of time. You have the theoretical, which is in modern terms called philosophical methodology and you have empirical experimental philosophy – the way you go about doing experiments. **Philosophical methodology** relies mainly on *a priori* justification (*a-priory* – relating to or denoting reasoning or knowledge that proceeds from theoretical deduction rather than from observation or experience), sometimes called '*armchair'* philosophy, while **Experimental Philosophy** makes use of empirical and experimental data.

So, you may say gravity exists, and you may say that the evidence indicates that gravity exists universally; but you may not claim that gravity is the primary driver of the universe. To make this claim means that gravity is the genesis of electricity and light, and that electricity and light are responses to gravitational forces. But there's no scientific data that gravity alone is the genesis of electricity and light.



I want to get on to Albert Einstein, because a lot of people criticize him. But what he had said is that: *"All knowledge of reality starts from experience and ends in it. Propositions arrived at by purely logical means are completely empty as regards to reality."* That's Einstein.

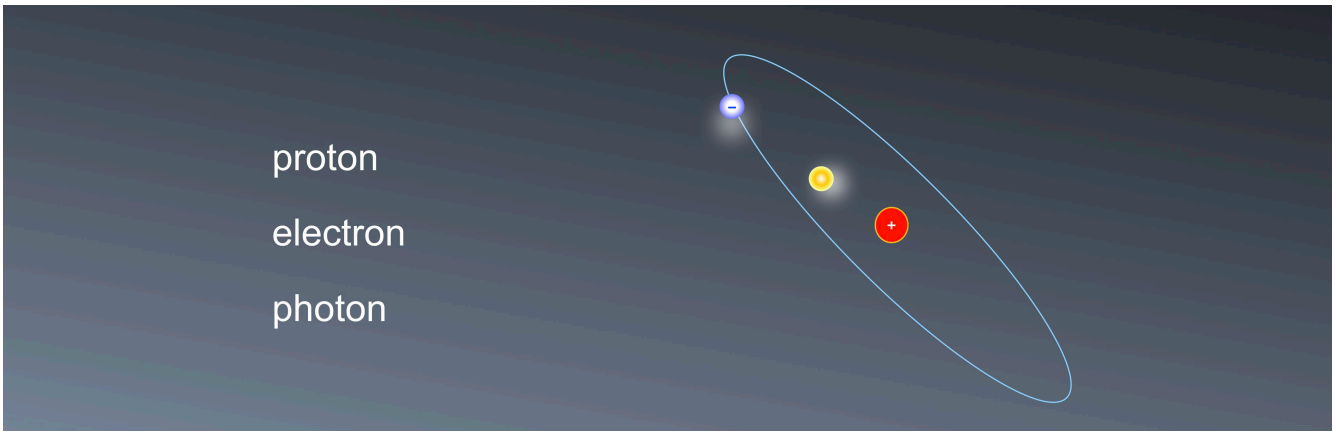
Einstein: *"Because Galileo saw this, and particularly because he drummed it into the scientific world, he is the father of modern physics – indeed of modern science all together."*

In another lecture in Oxford he also said: *"If you want to find out anything from theoretical physicists about methods they use, I advise you to stick closely to one principle: don't listen to their words, fix your attention on their deeds. To him who is a discoverer in this field, the products of his imagination appear so necessary and natural that he regards them, and would like to have them regarded by others, not as creations of thought, but as given realities."*

This is Einstein and he gets a lot of criticism. But he did hold another view and he questioned his own theories.

You need to know that Black Holes, Dark Matter and Dark energy have never been measured. They are mathematical variables and mathematical equations that have been deduced. This may be acceptable as philosophical methodology, but it is not the scientific method and cannot be promoted as scientific fact. These claims have nothing to do with empirical science and are completely empty as regards to reality. It doesn't mean they don't exist. It just means these things do not qualify to be promoted as scientific fact until they can be measured and quantified as contributing factors to the natural process.

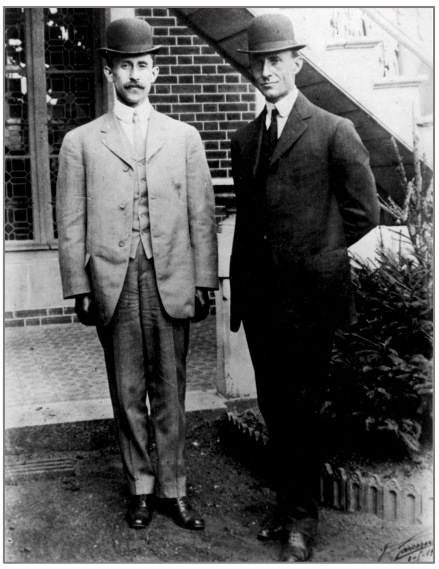
THE HUMBLE HYDROGEN ATOM



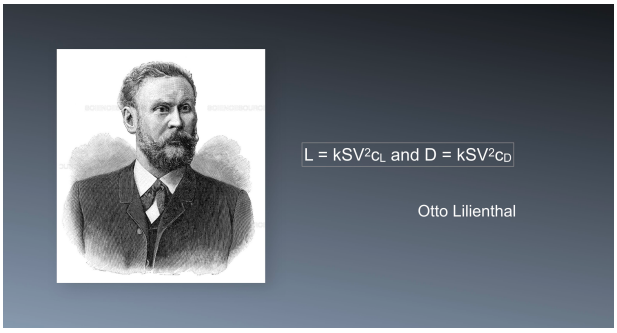
We do theoretical physics, computational fluid dynamics, and it's a tool, but it doesn't quantify what is going on in SAFIRE. Take the humble hydrogen atom. We have a proton. We have an electron. The electron has a negative charge. We don't know why. We suspect the proton has a positive charge. We don't know what that's about. We don't know why it is that positive and negative are attracted, but we know that they are. And if we stretch the electron out from its orbit and it wants to come back in, it releases the photon. And some would say that a photon is a particle.

I asked a physicist one day, I said to him: if we excite a hydrogen atom, and we can do it indefinitely, and he says, yeah, we can do it indefinitely; and it's a particle I said, yeah, and it creates a photon, I say, creates a photon, he said, that's really interesting. So, does that mean that the hydrogen atom has an unlimited supply of photons? Now this guy has got 83 papers published, peer reviewed, he was the editor of the IEEE, really good guy, but in that question, there was that three-second silence that felt like an eternity because he knew where it was going. I said, does this mean that it has a limited supply of photons, or does it create them? And even then, there was a silence because what we're saying is that when we excite the hydrogen atom, we're creating a particle out of nothing. Being an experimentalist, I'm cool, I don't have to have the answer. So, we just left it at that. So, the question came to my mind – if it's creating a particle out of nothing does that mean that when we create light that we're actually adding mass to the universe? It's okay if you don't know. It's not okay if you think you know and really don't. Knowing something is a result of conducting scientific method investigating natural processes. So, we collect data and we do it all the time. We make decisions based on information that we have coming in today.

WRIGHT BROTHERS

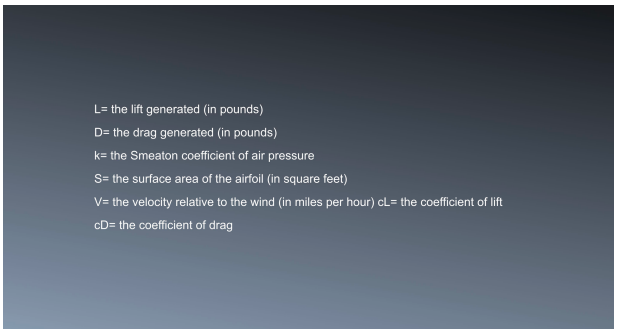


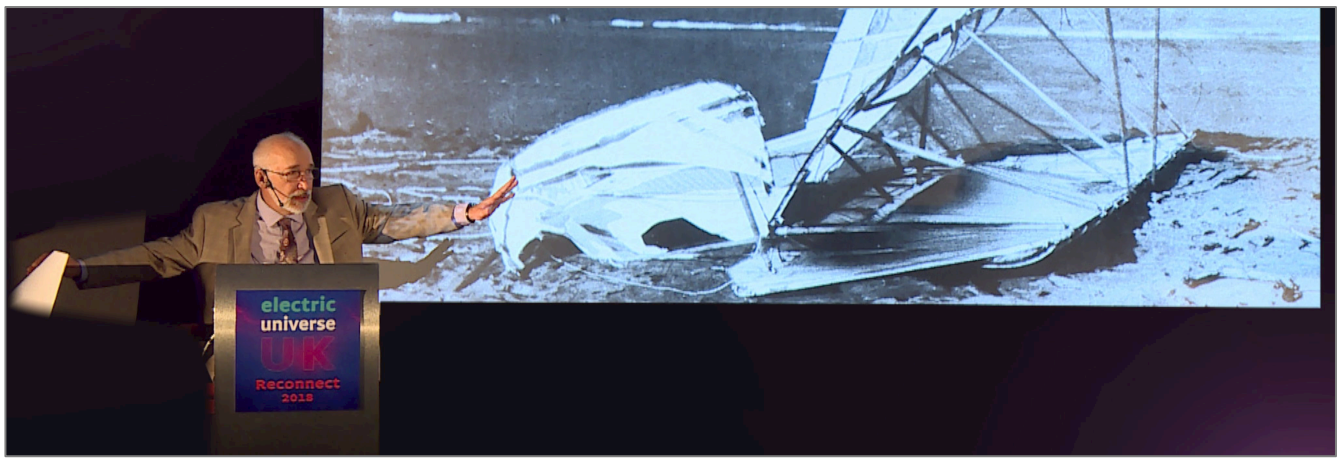
It is a generally accepted fact that heavier than air aircraft could not fly. And we have the Wright brothers and we know all about them, or do we? The Wright brothers – not physicists, not mechanical engineers – were inspired with what they believed could be. But instead of promoting theoretical postulations, they got to work testing a lot of testing, a lot of testing.



Long before they were ready for Kitty Hawk and long before they built Flyer Two and the Silver Dart, they had a lot of problems – Lilienthal, I think is the name, had developed a formula for flight.

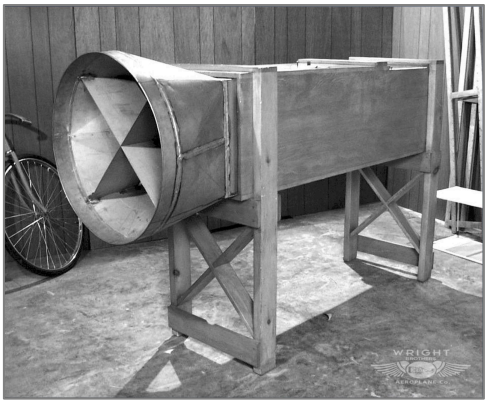
So, they had at the time what they believed, from a theoretical perspective, quantified what it took to do flight – to control the flight. The Wright brothers used these equations and discovered early on, after they crashed and got bruises, that it didn't work so well. So, they got busy.





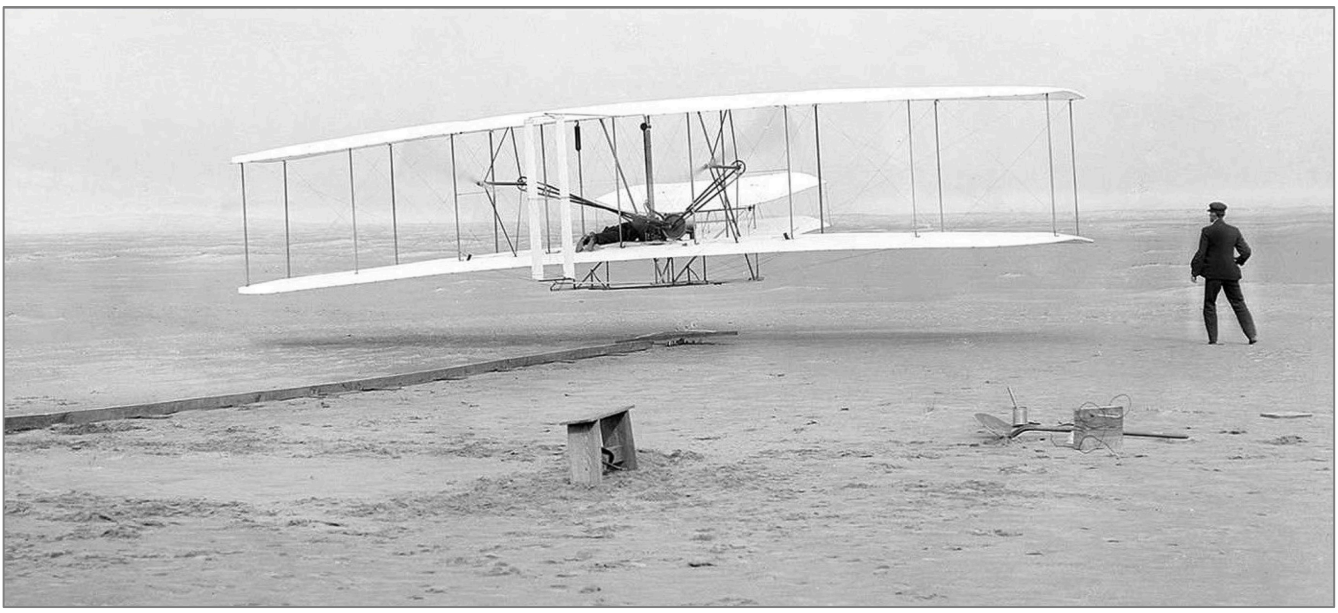
They were out in the fields of Dayton, Ohio, watching eagles and other birds fly and they were studying how they fly. And one of the testimonies is when they are watching the eagle fly, they're watching the – what I call the fingertips of the feathers, but watching them just move the end feathers a little back as they glide through the ether or the air, well, they would call it ether.

So, they looked at the form of the wing and they looked at control flight, and they got busy, and they said, okay, enough for the crashes, let's build one of the first wind tunnels. And this is actually a picture. It's out of NASA. If you go to NASA website, they've got a real beautiful section on a history of flight.



So, they tested many different shapes and forms and the speed of the wind and the lift and the camber, and they devised their own formula and quantified what they believed would be the formula to give them lift and fly.

And this formula, along with variations of it, are the base formulas for all aircraft today. Now, they've been refined, of course, and I'll get into computational fluid dynamics and sailing and other things, but the more you discover through scientific method, the more advancement you can bring, more technological advancement to humanity, but you can't allow theory to box you in.

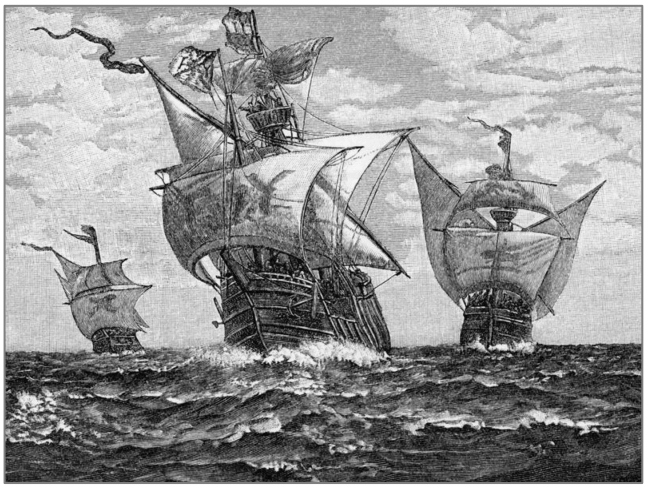


So, here's the first flight. It's amazing. And then when they were done, they took it to France. America didn't really support them. They said, okay, we can't get funding to do this; so, they took off to Europe and there's a whole story about them traveling around while their sister was giving them heck because they were starting to enjoy themselves too much. They enjoyed some of the French wine and things like that. Then, to prove their point, they started flying around the Statue of Liberty. So, we did it, and the age of flight began.

FASTER THAN THE WIND

Faster than the wind. Up until the last number of years no one believed it was possible to sail faster than wind. It was really, hang up a sheet, my goodness the wind blows and the boat is moving and then people kind of devise different ways of trying to hold the sails up.

This is an artist guess rendition of the Santa Maria, which had a speed of about four knots, okay. If you do the calculation, it took quite a while to get across from Europe to the Caribbean. But with studying science and the properties of nature, and starting to quantify through testing, you can develop some pretty cool math.

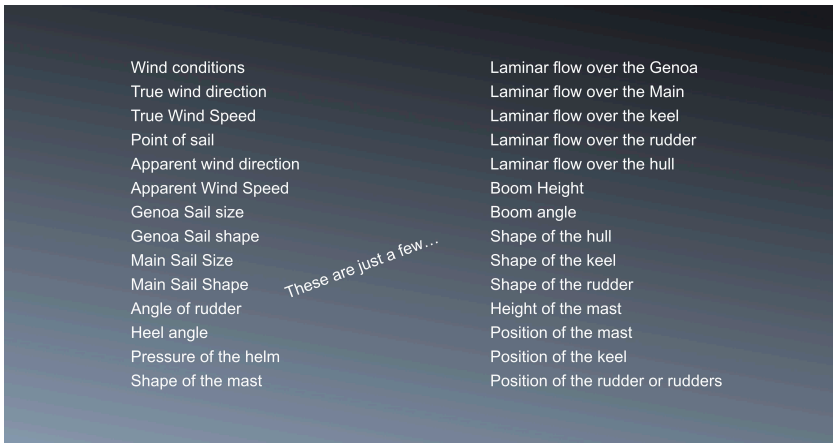


So, I'm going to play this.

(Plays a segment of a video produced by Sailing News TV, showing World Cup state-of-the-art faster-than-the-wind sailing).

Too bad Christopher or some of the other sailors back in the old days didn't know what we know today.

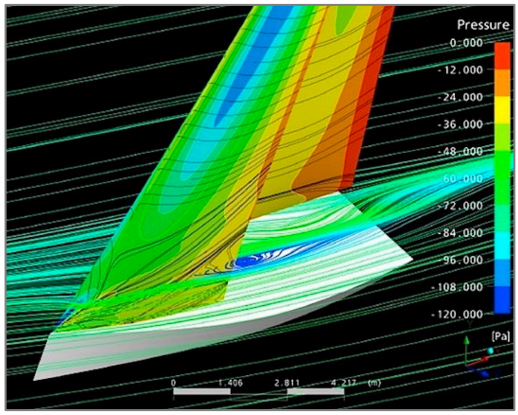
But from a scientific perspective and from an experimentalist and someone who does engineering and computational fluid dynamics and FEA and all these things, this what you would call a design of experiments nightmare, okay. And the reason why it's a nightmare because … yesterday I gave you a few of the factors involved.

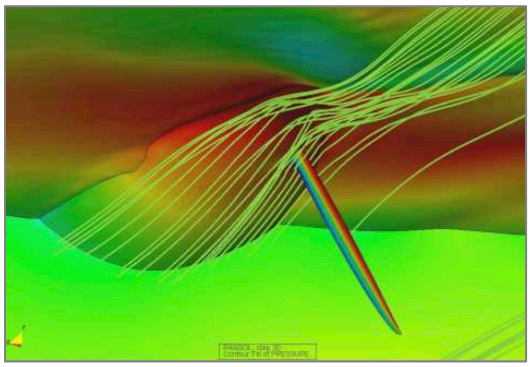


The Wright brothers identified certain factors. They discovered there were certain mathematical ways they could quantify the camber and the shape and the area of the wing. The same thing happens in sailing. The sailing is actually even more complex because you have so many interacting factors at the same time, and what you want to do is optimize the speed of the boat; you want to get as fast as you can go. What are those factors? How do you quantify them and how do you change the design? You come up with a design and well, as I say, and these are just a few *(referring to list of factors on screen),* there are a lot more. And you have to put them together into a kind of a recipe, you might say, and develop a design, a soft prototype, which is a computer model, which is what a lot of you might say theoretical physicists do today in the contemporary model. But you have to test it. You have to see whether or not it has legs, as we say.

COMPUTATIONAL FLUID DYNAMICS

Computational fluid dynamics. This is just one tool of many and these are very powerful tools. So, you look at the sailboat, you can put it into the computer model and you can actually look at the laminar flow, which is the green part as it goes past the top of the wing, because this is a vertical wing. So, you see some of the math came from the Wright brothers. So, we have laminar flow, which gives you a low-pressure system the sail that pulls you forward, then you have a second sail and you look at the actual interaction between the sails and then …





… when the boat starts to heel over that actually changes all of those factors again. Then you have to trim the boat. So, the models become quite sophisticated and we can predict in one position to another position what its effect is going to be. Ultimately those foils, they're like horizontal aircraft wings, but they're designed to go through water. They're very thin. I don't know what they make them of, likely carbon fiber, but the idea here is that the laminar flow over the water gives the keel lift.

And we experienced that with the Dawn Treader, the boat that we had. It was a specially designed keel. We heeled it over, and in light winds the boat would actually start to come out of the water. So, we decreased the drag and this is a picture, an example of the foil (a World Cup racer) and it comes over the water very fast and very high.

So, this one here in the picture, it's a world record – sailing faster than the wind.

Film of The Vestas 2 Sailing Rocket, with Paul Larsen, setting the world sailing speed record: 65.45 knots. Walvis Bay, Namibia, November 24, 2012.

Experimentalists *(categorical statement, referring to Paul Larsen in the video; the audience laughing)*. Well, he had a 23 Knot wind, which translates to about 42 kilometers. And the top speed was 127 kilometers an hour *(reaction of surprise from audience)*. That's the wind. I figured it would have taken Columbus just a little over a day and he would have been saying *(quoting from video):* "It's fast, it's very fast!" So, whether he discovered the New World or not, for him, I'm sure he would have done it again, just for the thrill.

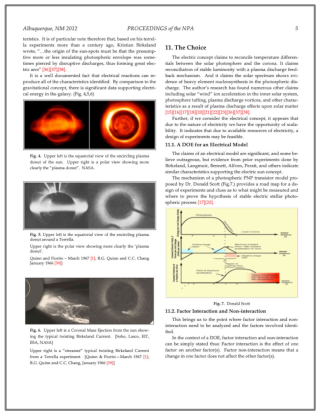
THE GATEKEEPERS

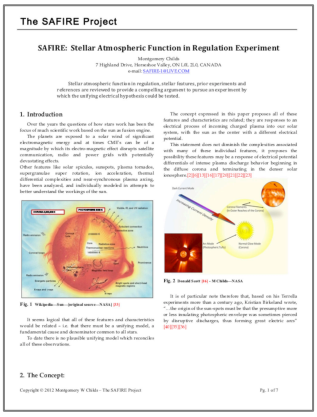
So, this is where I'm going to put a kind of stake in the ground. And I'm going to say that the experimentalist … they're the gatekeepers. They hold the keys to progress in applied sciences and technological advancement. Experimentalists can't say yes to Black Holes, but can't say no to Black Holes; any more than we can say yes or no to the EU without testing its models. So, as Newton, the Wright brothers and Einstein understood – the two worlds need to be brought together. There must be collaboration for technological advancement to be realized; you can't have one without the other. I'm a true believer that science is to serve humanity, humanity is not to serve science. Science is a very amazing tool, but it's to serve us.

SAFIRE (Stellar Atmospheric Function in Regulation Experiment)

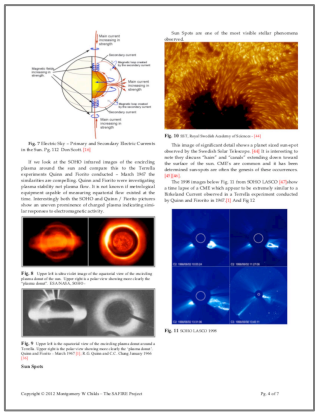

Albuquerque, NM 2012 PROCEEDINGS of the NPA 1

Analysis of Stellar Atmospheric Function
&
SAFIRE: Stellar Atmospheric Function in Regulation Experiment

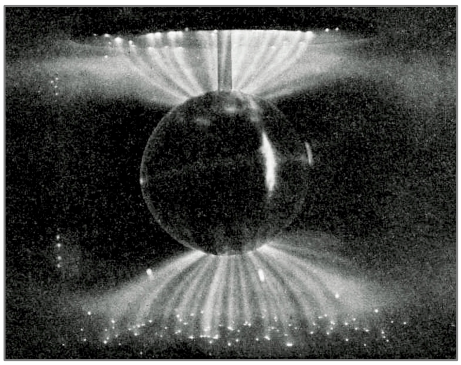

Albuquerque, NM 2012 PROCEEDINGS of the NPA 5


The SAFIRE Project

SAFIRE: Stellar Atmospheric Function in Regulation Experiment

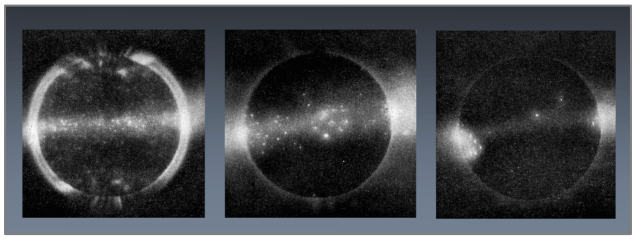


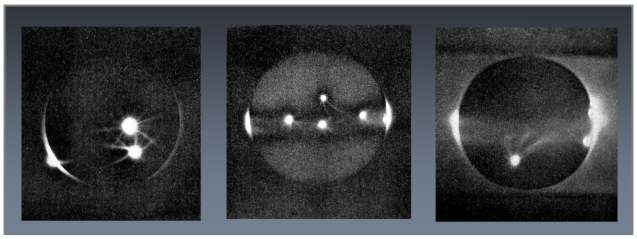
Back in 2011, I did an evaluation. When you're going to test something, or somebody makes a claim – 'you can go faster than the wind', you are thinking, well, okay; or in SAFIRE – 'the universe is electric, the sun is electric'. There're a few tools, modern tools called Design of Experiments that you can actually use to filter through the hypothesis to see whether or not it may be a testable model or not. If it's not testable, it doesn't mean it's not true, it's just we don't have the technology or the wherewithal or the way to conceive the hypothesis could be tested. So, I did an evaluation, statistical filter tests, and analysis of variance based on Hertzsprung diagram and a bunch of other things and came to the conclusion that if I broke the electric universe model down, I had two primary factors of ***charged plasma affecting matter of different electrical potential***.

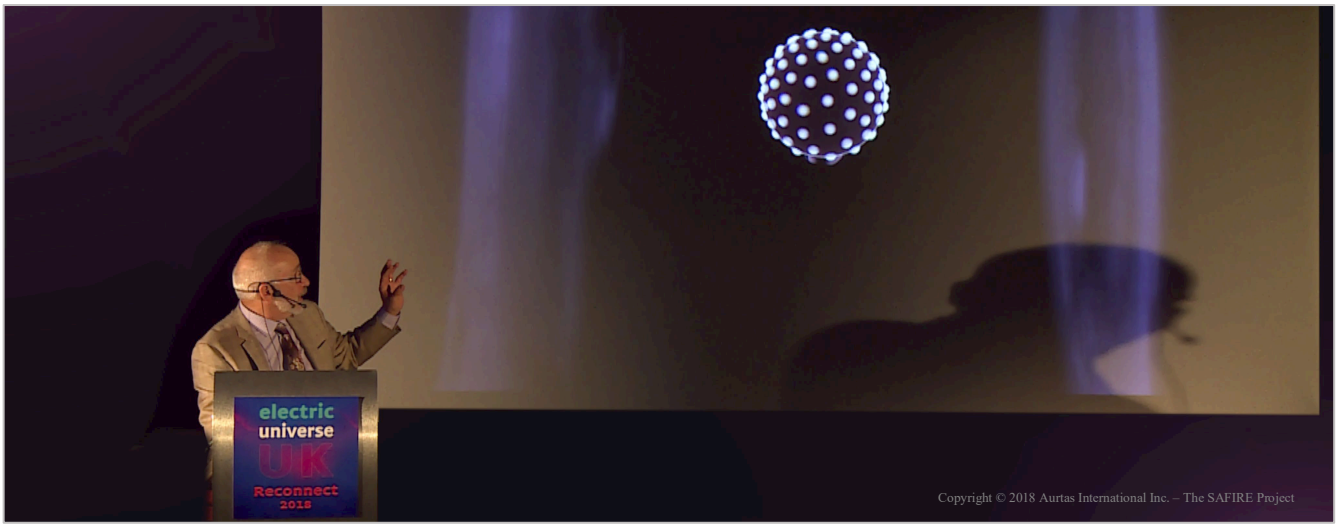


So, if you have this delta between the two, kind of like the wind and water, those are the two basic factors involved and you start from there. Then I started to develop a model, and looking at prior science like Birkeland, Quinn, Fiorito, so many others that have been doing plasma. Most of those were cathode centric you might say; the Electric Universe model is anode centric. So, there's a bit of risk in there to say, okay, how's this going to respond? We didn't know how I would respond. But obviously it's doing extremely well. But SAFIRE is more like sailing, in that we're looking into the way nature does things.

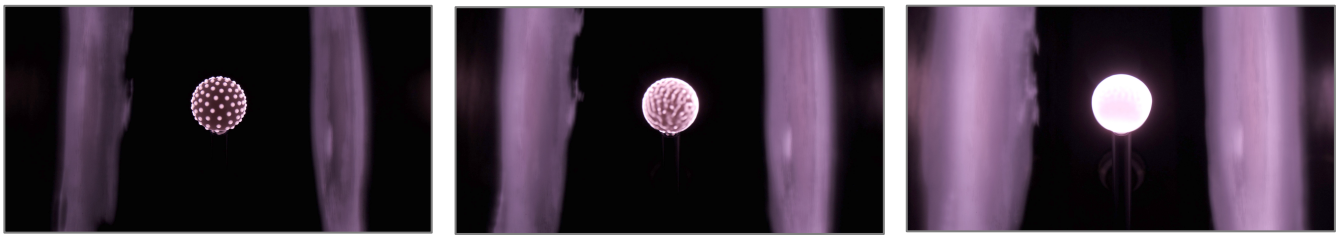
We're not trying to force it. Michael said last year, it's like breathing, it's natural, it's like we're not trying to push and smash rocks together and we're not using a large motor, you know, to power us through the water. We're trying to work with what we see the plasma wants to do. We're trying to feed the plasma, what we think, or have some ideas about, it would like to do to become organized. And then we're monitoring those parameters. And that's how the Design of Experiments is done. We get all that data back and we can control it. I would say maybe a better word would be: to *honour* it.



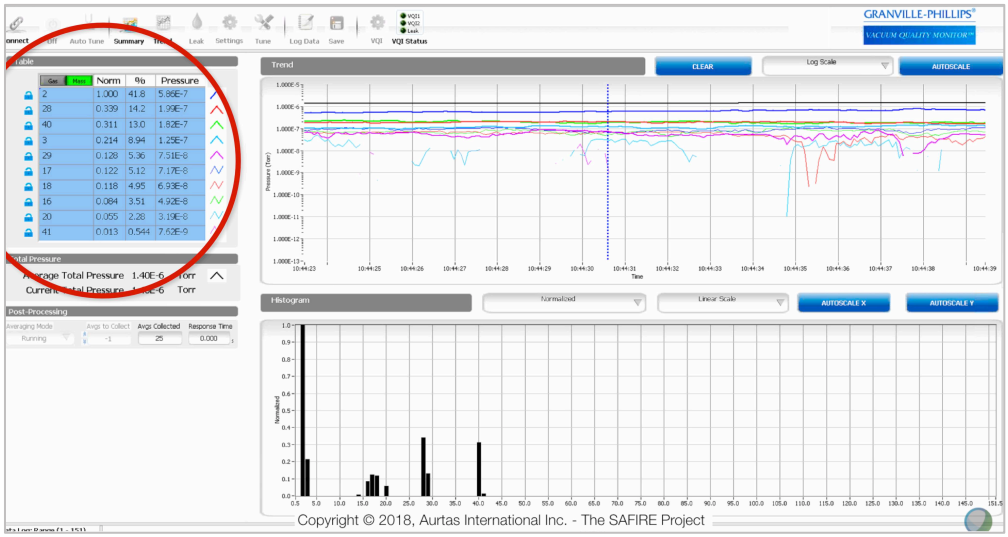




So, we're not trying to get the plasma to organize; it likes to become organized under certain conditions, whatever that means. So, Rupert, and some of the others might have some thoughts on that. So, we're not trying to do something special. It likes to form these tufts; we don't understand them, we're looking at them to become organized. Their fields are uniform and that they'd like to be separated. As Michael said, some of the energy and the densities that we have, we say now are comparable to what we see with the sun. It's pretty amazing actually.

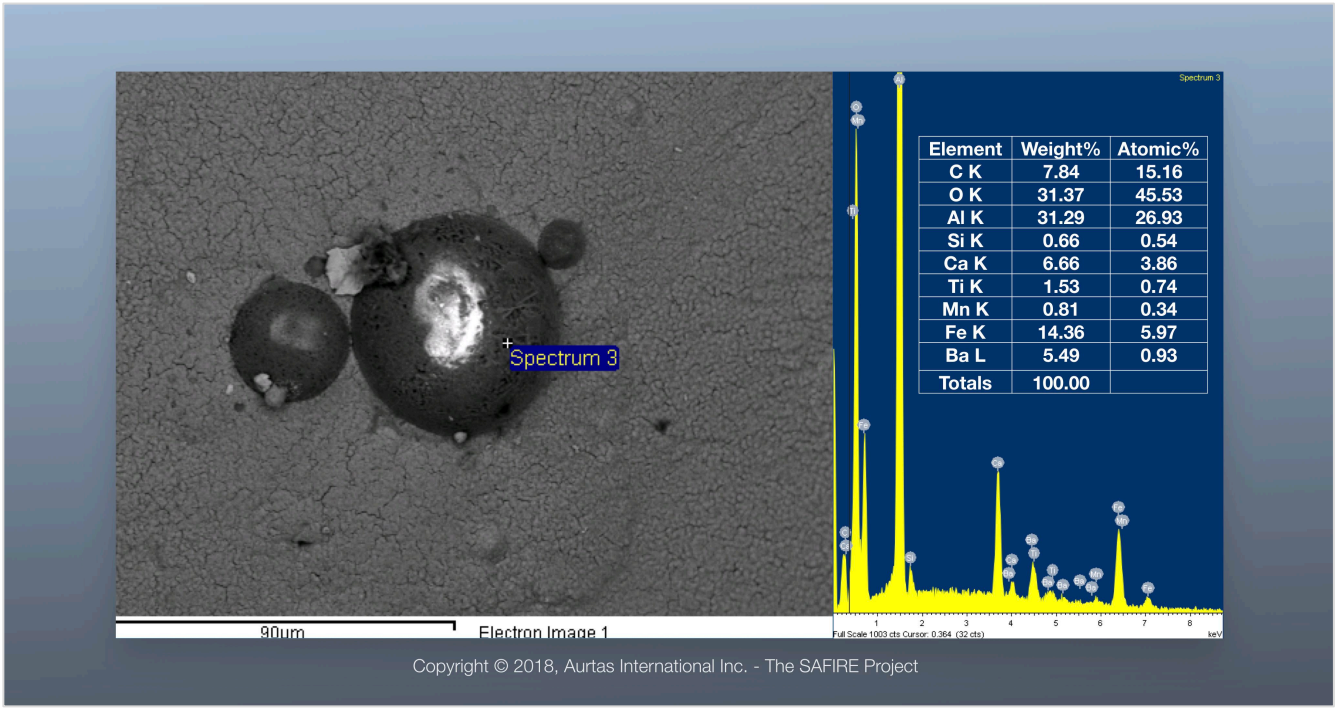


We're not trying to get unusual chemistry. Now, this is controversial, I can't really talk about too much at this time yet, how we got this, but what I can say – if some of you are familiar with mass spectroscopy or the residual gas analyzer, you'll know what you're looking at here *(image below)*.



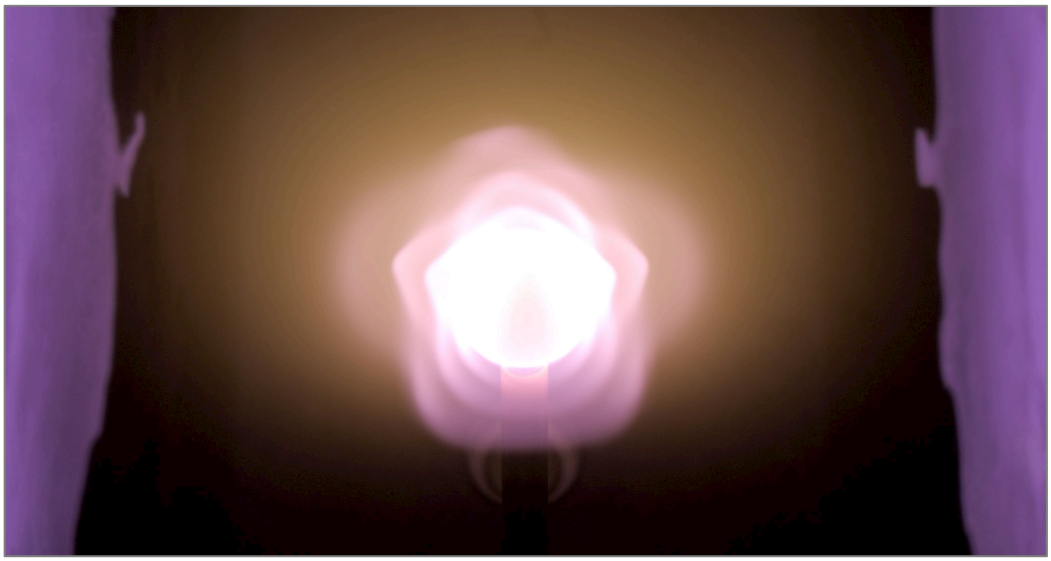
We started off with the chamber and pure hydrogen. We baked it out for a couple of days. Then what happened is we said, okay, well, the chamber is clean. It's purged. We put hydrogen in. Mass spec is saying – you have pure hydrogen in the chamber, I mean, 100%. We thought this is a great starting point. We knew that there was something that we could do. We introduced another gas and we got double layers to form. Then we just let it sit there and bake for a few hours. And it didn't change; it was just extremely stable. Then we thought, okay, we know that there's another thing that we can introduce, another gas, that will disrupt the double layers; they'll start to break down. So, we did this. But before that the mass spec is sitting out here and is reading only 100% hydrogen, even though we introduced this other chemistry. We didn't read any of that chemistry in the chamber, it only read hydrogen.

We introduced the second gas and the moment the double layers disappeared, we got this (*figure 1.*). And as you can see (circled in red) we have an atomic mass of 3, 14, 15, 16, 17, 18, 20, 40, 30. And we have some other stuff as it's moving along and it stayed there, stationary. What was interesting is that the hydrogen and two other gases that we introduced stayed at the constituent percentages that we put in there; we registered those later on. It doesn't show on the screen here, but the percentages stayed the same, but the one element that dropped from 100% down to 39% was hydrogen. And all these new elements formed. And we're not making claims. We're just saying this is what happened.



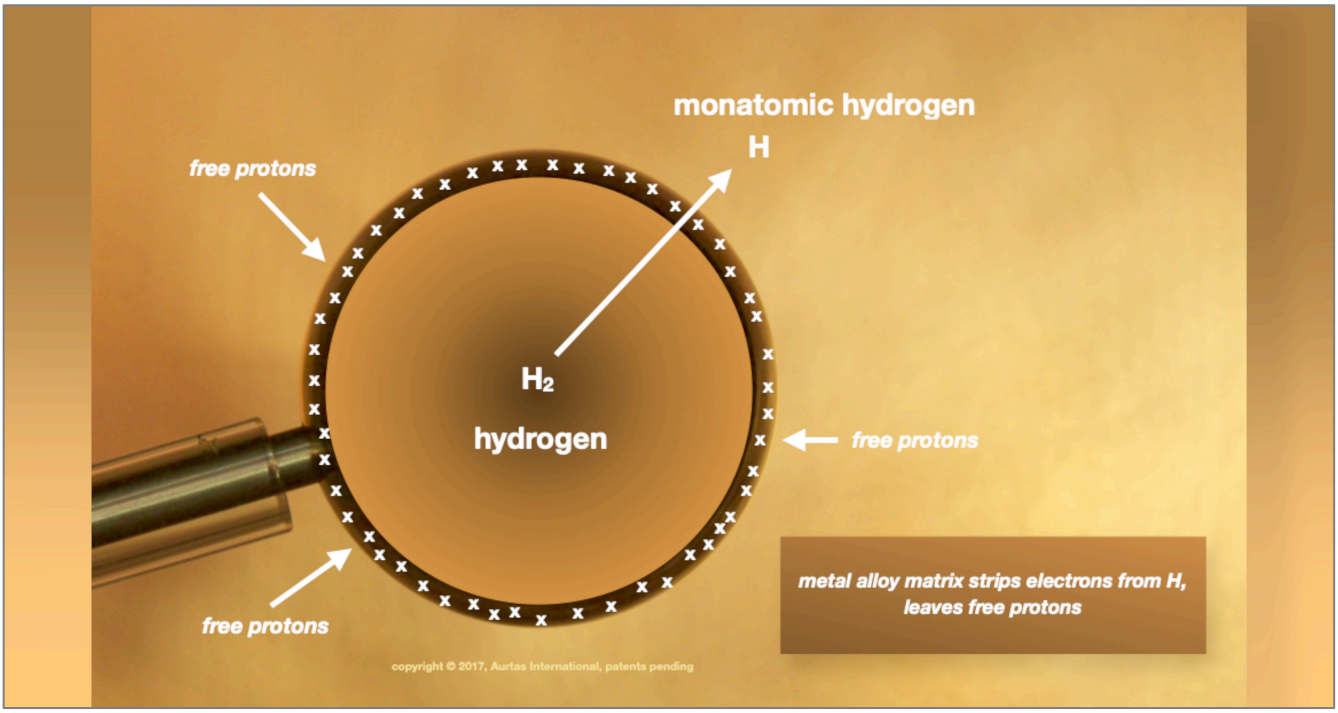
Then of course is the barium and the whole titanium thing, which we know we didn't have in the chamber, so why it is there now on the anode, or not, we don't know. And we don't know why the double layer shells organize.

I'll just show you another little shot here. We have a tough job. We get to watch this all day (audience laughs). So, the temperatures in the white area, and the densities, are something that Michael was talking about, and Lowell too, as a very intense high-energy.



(Double layers collapse to a different form.) That was interesting. We don't know what that was about, or why it collapsed like that. There are still the double layers around the anode; but all the energy actually became even more concentrated. It's one of those moments. So, we're not *trying* to trap high energy photons and electrons comparable to the sun's photosphere – but we are.

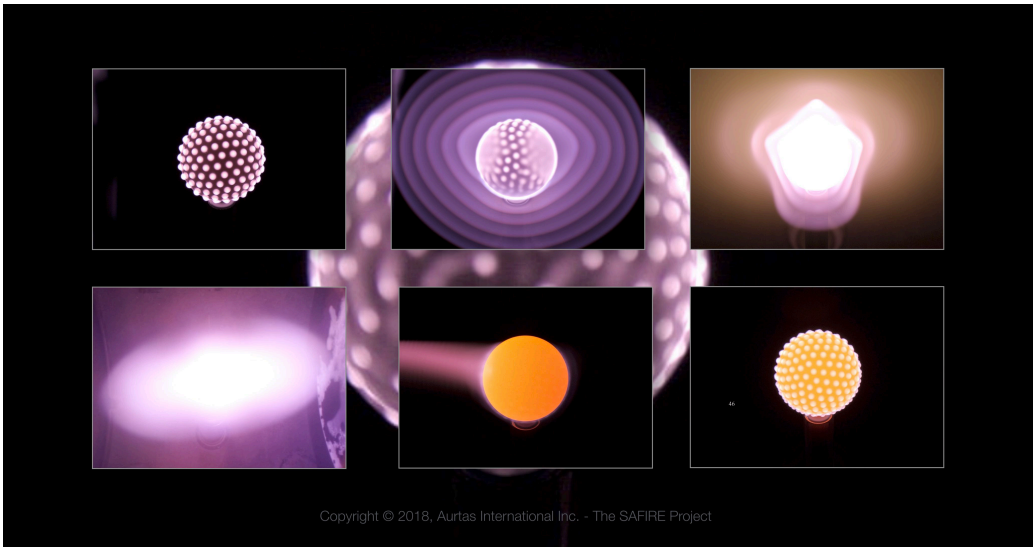
Another video again: this is a hollow anode. In this case here, I'm actually putting deuterium and hydrogen as a mix through the core of the anode. This process has been patented. What we're doing right now just so you know – if some of you are into cold fusion and have a hard time getting atomic hydrogen – SAFIRE produces copious amounts of it.



What we do is we put the hydrogen into the hollow anode. We have a special material in there that the anode is made of. It dissociates the H2 to H. And because it's positively charged, we strip the electron and we actually have protons migrating from off the surface of the anode into the atmosphere of SAFIRE *(long pause)*. Just saying *(laughter from audience)*.

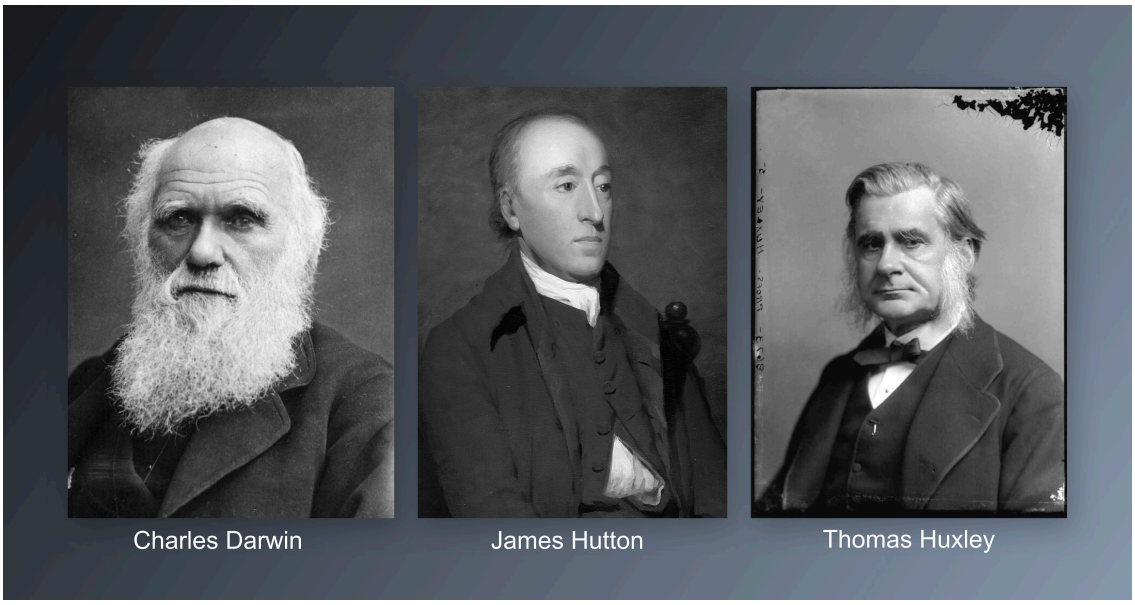
Now the genesis of this idea? Well, it goes back to 2011, when I was querying the EU to help me with my research and they persuaded me to help them with *their* research. And Wal Thornhill and I are going back and forth on Skype and he says, well, I think that what we should do, in his Australia voice, is we should have a hollow anode and we should put hydrogen in there. So, we got chit chatting back and forth about the possibilities. But we didn't realize at the time what the actual response would be. I mean, it didn't occur to either one of us that we'd be dissociating H2 to H and then stripping the electron off it.

Anyway, it was through our conversation, chit-chatting, which we do a lot of, and we smoke cigars and drink a little whiskey and sit around the campfire and ponder, 'What if?' Well, *that* is 'what if', that's the response (*image to right*). But you can't see it clearly here, because the exposure in the camera just couldn't handle the intensity; but inside here, you can see with the human eye, there are a number of double layers. These are shells. The problem with photography is that it gives you a flat picture, and it appears as if they are rings, but they're not, they're spheres or shells. You can't really look at them through the viewport, because the UV is so high, it would burn your eyeballs out.

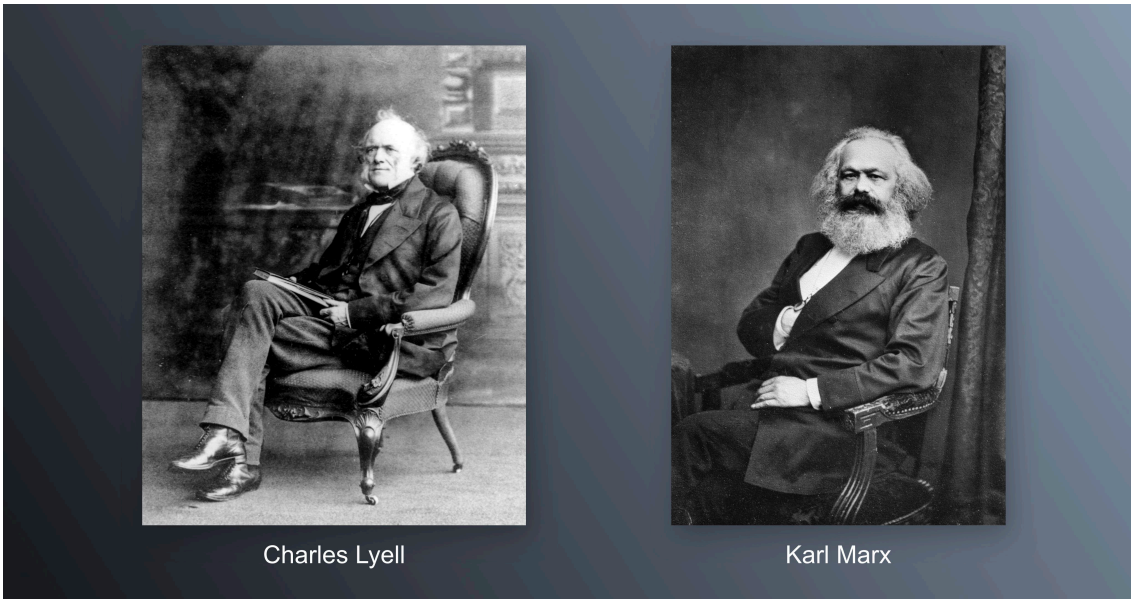


These are some pictures of the things we're doing. So, we're trying to sail. We're trying to learn how to sail. I'm trying to learn about the factors involved in sailing and do an experimental methodology. And that's what we do at Aurtas International.

We're not purposefully smashing atoms together and then trying to contain these energies using high powered electromagnets. The plasma itself creates its own containment field. The plasma wants to organize. The SAFIRE plasma engine creates an environment that facilitates this happening. We are watching the smoke from the cigar. We are just trying to replicate what we think nature may be doing.



You may know these guys, some of you may not know James Hutton, but Charles Lyell actually based a lot of his work on Hutton's work, which is uniformitarianism. And uniformitarianism is the idea that gradual changes over billions of years is the cause of all the effects that we see.



All these guys knew each other; and at the time the church in England had a lot of power. Well, they didn't have power against how to counter their model or hypothesis, okay, and it became theory, philosophical theory, but not scientific fact. So, Charles Darwin, Charles Lyell, James Hutton, Thomas Huxley, Karl Marx and other historical characters held to the view of uniformitarianism. And it is uniformitarianism that lies at the heart of much of modern science – this idea that gradual changes over long periods of time represent the primary factor of evolutionary development. It's uniformitarianism that also lies at the heart of the Big Bang Theory, which claims gravity is the primal driver of the universe.

The problem you have is that none of these things are testable. The process of evolution is lacking because of sufficient factors to test. In science, the first thing we do is we take time out of the equation. Time does not play a role in the initial evaluation. If you're cooking stew, or you're sailing, you have to have the ingredients first and then you can take a look at how long a chemical reaction takes. Now you can start looking at the time factor of the reactions or interactions, okay. That's a fact, that's how we work; we don't look at time initially.

On the other hand, there are those who hold the view that intelligence is the genesis of creation. But neither theory has anything to do with empirical science. As a matter of fact, to claim either is science, corrupts science. Science needs collaboration between the theoretical and the empirical.

So, I would encourage everyone to pull back the curtain, test it, see what reality it is, and with the feedback that we can give, and we've been able to help the EU and ES, help develop a more mature model. We don't make claims to this. We give them facts and we won't tell you what they are, to help Don and Wall develop the model, because that's their job, that's not our job. So, I'm very strongly giving credit to where credit is due, big time, honor where honor is due. So, pull back the curtain, be brave, leave the shore and make wonderful discoveries. And that's really my talk. Thanks.

James Ryder, Montgomery Childs, Michael Clarage in Safire's SAFCON