# The Philadelphia Experiment 2006

## Dr. Ron Milione Announces the Dream-Team Event of the Year

By Tim Ventura & Dr. Ron Milione, April 3rd, 2006

*In 1994, Dr. James Corum succeeded in making a block of iron invisible to radar, thereby demonstrating the feasibility of the Philadelphia Experiment. Twelve years later, BAE radar-specialist Dr. Ron Milione is not only planning a larger-scale replication of the Corum experiment, but that he's going to add a bit of magic through a dream-team collaboration with the legendary John Hutchison.*

**AAG:** Let's start out with the big announcement, first: you've been working with John Hutchison to plan a highly-public replication of the Philadelphia Experiment in August, 2006. Can you give a bit of insight into what you're planning?

**Milione:** Thanks, Tim – it goes without saying that John Hutchison and I are both very excited about the experiment we're planning for this summer. We're planning to "recreate" the so-called "Philadelphia Experiment". Before I begin; I would like to summarize to the audience what "The Philadelphia Experiment" allegedly was. Supposedly, in the fall of 1943 a U.S. Navy destroyer was made invisible and teleported from Philadelphia, Pennsylvania, to Norfolk, Virginia, in an incident that later came to be known as the Philadelphia Experiment.

To provide you with a bit of background info, the "Philadelphia Experiment" was allegedly conducted by the Navy during WWII for the purposes of learning how to "absorb" radar so as not to allow reflections from enemy radar pulses impinging on a ship target to be returned. The reported effects of this experiment were so dramatic and startling that it is supposed that this is why the Navy consistently denies that any such experiments ever took place. Supposedly, not only were radar waves absorbed, but the ship became "invisible" at ordinary light wavelengths.
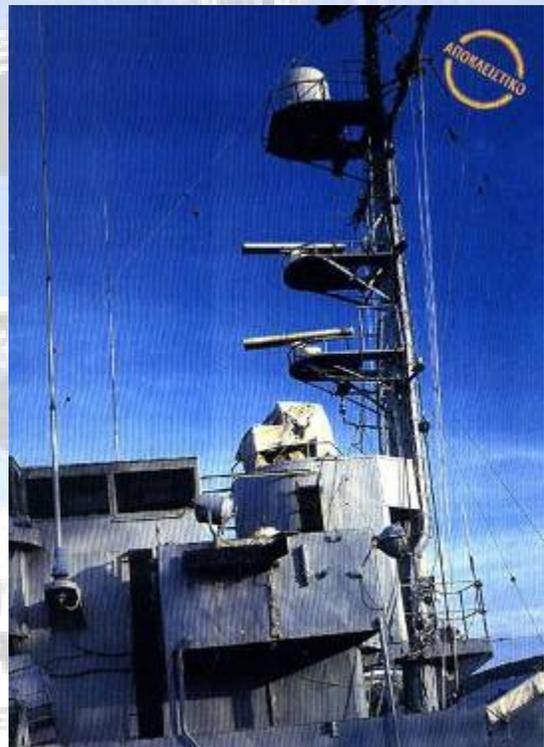


**DE 173 Eldridge:** The former Destroyer Escort is now part of a Greek shipping corp.



Ron Milione

Not only that, according to the accounts of "Carlos Allende" in the "Allende Letters" written to UFO researcher Morris K. Jessup in the early 1950's, the ship was "teleported" to another location approximately 150 miles away, then reappeared at the original location a few minutes later. Subsequently, it was found that the crew suffered strange and severe deleterious effects, including a propensity to vanish into thin air! It's even been said that when the ship re-appeared, some of the crew members were bodily embedded into the hull of the ship.

Among many other things, Allende claimed that a greenish fog or mist appeared around the vessel during the experiment. Then a "hole" in the water appeared outlining where the hull would have been were it visible.

In 1994, the Corum brothers, K.L. Corum, J.F. Corum, Phd. , and J.F.X. Daum, Phd wrote an account of their theoretical and experimental processes relevant to this subject entitled "Tesla's Egg of Columbus, Radar Stealth, the Torsion Tensor, and the 'Philadelphia Experiment' "



**James Corum:** Reverse-Engineered the Experiment

Their experiment, depicted below, seems to indicate that at least Radar wave absorption is possible with fairly a simple electromagnetic configuration, and that a displacement effect occured with salt water subjected to similar field was also observed.

They also comment that if the Navy had known about these effects at the time, (it appears they must have) it would have been "irresponsible" of them NOT to at least investigate with small scale experiments. Therefore, their consistent denials that such experiments ever took place do not seem believable.

John Hutchison & I think that not only can the Philadelphia Experiment be tracked to statements which Tesla published during World War I, but that the physics of the experiment can actually be traced back Tesla's investigation of the rotating magnetic field. Furthermore, to us to there appears be legitimate link between Testla's rotating fields and the Torsion tensor which appears in Dr. Einstein's 1927-1929 Unified Field Theory publications.

You know, before we describe the upcoming experiment in detail, I'd like to provide you with some background information on Tesla Coil theory:

In a Tesla-Coil, line voltage is stepped up by the high-voltage transformer to a magnitude sufficient to charge the capacitor and force the spark gap to break down. This action is repeated at the 60 hertz line frequency. Efficient energy transfer is enhanced by choosing a capacitor whose impedance is equal to that of the secondary winding.

Essentially, the capacitor and Tesla coil primary form one pair of tank circuits: when the spark gap arcs, the momentary short circuit created dumps the capacitor's charge into the coil's primary. The resulting L-C circuit rings as the charge oscillates back and forth between the capacitor and the coil. The oscillations decrease in amplitude as the charge is dissipated by resistance. The ringing generates what is referred to as a "damped wave". The next half-cycle of 60-hz recharges the capacitor, starting the process of a new train of hi-frequency waves, spaced at 60-hz intervals, which are the product.

Resonance must be achieved to effect ringing: this demands the capacitor and primary have the same reactance, $X(L) = X(C)$. The circuit resistance (capacitor, coil and intermediate wiring)



**John Hutchison:** The Canadian inventor who discovered the H-Effect.

limits the overall efficiency of the tank circuit. Efficiency is rated in terms of "quality factor", represented as 'Q':

$$Q = W(L)/R = X(C)/R$$

Increasing resistance reduces Q, thereby reducing efficiency. The effect is minimized by winding the primary with a few turns of heavy conductor, well-spaced, over a large radius form - the larger the better. The capacitor size and construction also bear upon Q: the physical size and area should be minimized. This, however, works

against large capacitance values and dictates the coil be wound with more turns. The goal, then, is to achieve a workable range of component specifications rather than to strive for overly close tolerances. Coils often are wound with tapped primaries to facilitate fine tuning.

The secondary coil is situated both electrically and physically within the primary. The secondary and its discharge electrode, generally a sphere or toroid, make up the second tuned circuit. The winding supplies inductance; the capacitor is created by the electrode and the (earth) ground-plane. Air is the dielectric. Most Tesla coils employ secondary of 1/4-wavelength at their operating frequencies. This establishes a configuration with maximum current at zero voltage with minimum current at the electrode. This situation proves to be beneficial, in that it enhances coupling with the high current primary, avoids arching between the primary and secondary and generates the desired high voltage at



**Tesla Coil:** A resonant Tesla-Coil may provide the link to the Philadelphia Expt.

the top end. The "outing" coil is a 1/2-wave variation on the Tesla coil. It possesses the essential Tesla coil operational characteristics, but it employs a horizontally placed secondary with discharge electrodes at both ends and a primary at the center. The outing primary sometimes is merely a pair of taps on the secondary (an autotransformer). The 1/2- wave arrangement affords a coil with maximum discharge at each end and a virtual ground at the midpoint of the winding(s).

I do not think it is too extravagant to claim that the method of the tensor calculus is the only possible means of studying the conditions of the world which are at the basis of physical phenomenon. During the course of our upcoming experiment this summer, the investigation of the Philadelphia Experiment we will examine the hypothesis that quantum mechanical spin, such as found in ferromagnetic materials, may affect the structure of space-time.

**AAG:** I'd like to ask a bit more about the timing: August is still a long ways off, and I'm wondering what prompted you to tentatively pick the 2nd week of August to attempt this replication?

**Milione:** The reason for the mid-August time frame is to give John and myself plenty of lead time for a few major milestones. One of those milestones is the construction of a model iron ship which will require approximately two months of work to complete. It's obviously a scale-model, measuring only 6-feet (1/50th) in length compared to the original 308' of the DE 173 Eldridge in length. In John's case, he needs time to get the right equipment ready -- especially the power supplies, degaussing coils, RADAR systems, PPI Sweep & PPI Scope systems etc.

**AAG:** When most people hear "Philadelphia Experiment Replication", they begin to get a bit nervous -- if they live in Vancouver BC I'd imagine they'd be feeling quite a bit more nervous, since that's the location where you're planning on conducting the test. The experiment that you're planning isn't a full-blown replication of the fabled 1943 experiment, right? What is this experiment going to consist of, and how will you know if it's a success?

**Milione:** You're right about the smaller scale of the experiment. Our experiment will be a greatly scaled-down version of the original experiment for a number of reasons. The main reason is due to public safety. We don't want to endanger any public personnel because the

experiment will happen outside, and we cannot afford to have a mishap with the potential for property and personal damage.

The experiment will consist of an actual small ship (modeled after USS Eldridge) which will consist of small degaussing coils in the model and a power source to start. We are going to have ferromagnetic substances in the model in which immersed an external magnetic field will become strongly magnetized in the direction of the impressed field, and which exhibit retentively and hysteresis. In this method we are in agreement that the ferromagnetic materials mu which has a non-linear function of the applied magnetic field strength (H) with discontinuity which exhibits an incident wave that enters without reflection, such as RADAR ABSORBTION! The velocity of the wave is reduced, and large attenuation can occur in a short distance.

We will determine that the model ship surface impedance of the ferromagnetic slab that will be immersed in a constant magnetic field oriented parallel its surface that somehow will bring about a reduction in the reflection of microwave energy from a steel body.

**AAG:** People might not realize that some of the inspiration for this replication effort originated with a 1994 publication entitled, "Tesla's Egg of Columbus, Radar Stealth, the Torsion Tensor, and the Philadelphia Experiment", by Dr. James Corum, and printed by the Tesla "Arcs 'n Sparks" group. Can you give us a bit of background into what kind of experiment Corum was proposing?



**Power-Supply:** A closeup for a high-output power-supply to drive a resonant coil system.

**Milione:** In the "Tesla's Egg" paper you're referencing, Corum points out a number of statements made by Dr. Tesla which indicate that he was using resonator fields and transmission line modes. As a PhD Electrical Engineer, Dr. James F. Corum looked at the Philadelphia experiment through the critical eyes of a scientist. In the late 1970's, he recruited a team of scientists, for fun, to see if there was any scientific basis for the description of events that occurred during the Philadelphia experiment as expressed in the book, "The Philadelphia Experiment," by Berlitz and Moore. Much to everybody's astonishment, there was.

In 1994 at the Tesla Symposium at Colorado Springs, he, along with his brother K.L. Corum Ph.D. and J.F.X Daum, PhD., presented their findings in a paper titled "Tesla's Egg of Columbus, Radar Stealth, The Torsion Tensor, and the Philadelphia Experiment." They were, in a laboratory, able to replicate radar invisibility with their "egg of Columbus" apparatus. Their initial conclusion was as follows:

"The analysis would appear to lend credence to the hypothesis that something more than mythology is involved, and it renders plausible the conclusion that sufficient motivation exists to actually conduct a 'Philadelphia Experiment' to examine radar stealth on ships with electric drives. Independent of whether our assumed values are practical or not, the analysis, which

uses no phenomenology that wasn't known subsequent to 1938, would probably have brought World War II Naval investigators to the point of radar stealth experimentation. In fact, it would have been derelict behavior for the Defense Science Research Board not to have conducted such experiments if it were aware of the Phenomenology (as it must have been) in 1943. Such an approach to stealth, however, is impractical and certainly would be of little interest, as such, to the military today."His paper is, as he says, to serve as a "basis for discussion" for "critical, not skeptical" scientific thinking about the possibilities of scientific explanation for the events surrounding the Philadelphia Experiment. He asks other scientists to review his team's work and provide critical feedback.



**Tesla Coil:** Milione's own Tesla-Coil, to be operated along with Hutchison's equipment.

1. When he speaks of tuning his apparatus until Hertzian radiations have been eliminated, he is referring to using ELF vibrations: "...the Hertzian effect has gradually been reduced through the lowering of frequency."

2. "...the energy received does not diminish with the square of the distance, as it should, since the Hertzian radiation propagates in a hemisphere."

3. He apparently detected resonator or standing wave modes: " ... my discovery of the wonderful law governing the movement of electricity through the globe... the projection of the wavelengths (measured along the surface) on the earth's diameter or axis of symmetry... are all equal."

4. "We are living on a conducting globe surrounded by a thin layer of insulating air, above which is a rarefied and conducting atmosphere... The Hertz waves represent energy which is radiated and unrecoverable. The current energy, on the other hand, is preserved and can be recovered, theoretically at least, in its entirety."

As Dr. Corum points out, "The last sentence seems to indicate that Tesla's Colorado Springs experiments could be properly interpreted as characteristic of a wave-guide probe in a cavity resonator." This was in fact what led Dr. Tesla to report a measurement which to this day is not understood and has led many to erroneously assume that he was dealing with faster than light velocities.

**AAG:** As I understand things, Corum had originally read "The Philadelphia Experiment" by William Moore and found the physics astonishely believable, which says a lot given that Corum is one of the few Electrical Engineers with any real experience involving the Einstein's Unified Field Theory proposed by Moore as the physics behind the experiment. In "Tesla's Egg", Corum claims to have already replicated this on a small-scale in 1994, and I'm wondering what your successful replication might say about the original 1940's experiment?

**Milione:** We're fully confident that we'll achieve 100% success in replicating the 1940s experiment.

**AAG:** There's a part of me that wonders about how much of the Philadelphia Experiment this validates --after all, Corum had proposed some very elaborate physics as being involved with the original Philadelphia Experiment, but his 1994 replication seems to have involved simple impedence-matching between a block of iron and the surrounding air, making the iron "invisible" to radar. Is the replication that you're undertaking going to validate the actual physics underlying the "anomaly" of the Philadelphia Experiment, or is it mostly to support the notion that 1940's-era electrical engineer would have had reason to attempt the experiment as a project for producing naval radar-invisibility?

**Milione:** Tim – We expect to prove the following that would complement Dr. Corum experiment, see the following below:

- **RCS Modification:** In order to obtain very large currents from a modest power supply we will tale our [toroidal] steel core (as a radar target simulating [a] ship's hull) and used an 8kV 10uF capacitor discharge pulse through the windings which were arranged in series. The surge current would appear to be on the order of 35 amps, which would imply a peak magnetic field strength of 17.5 kA-T/m. The transformer steel core will be illuminated broadside to the doughnut with a small pyramidal horn-mounted Raytheon CK - 109 X band klystron (100 - 250 mW @ 9.98 - 11.98 Ghz) and the radar backscatter will be observed with an HP X-Band crystal detector as shown in figure A distinct difference between magnetic bias on and and bias off target backscatter was observed.

- **Brine Displacement:** We immersed the [coil] in the bottom of a plastic tub of water and rock salt. When the coil was energized, water 'flew out of the tub' (Literally!). At low power and the apparatus placed outside and under the tub, the salt water in the tub swirls around.

- **Corum's Concluding Remark**: Clearly, with up to 4.5 Mw available, eddy currents in salt water would not only burrow out a hull - shaped hole in the water, but would probably levitate the ship somewhat!
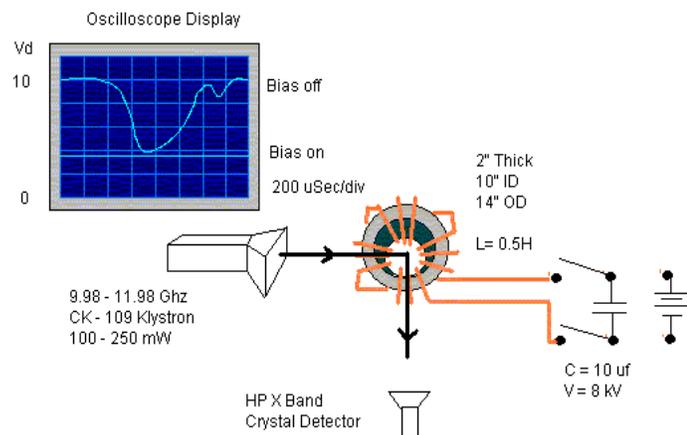


**Experimental Overview:** When the coil apparatus is pulsed, the radar signature should disappear from the scope.

**AAG:** In this case, you're going to take things a step further than Corum did -- from what you've said in the past, you're planning on putting together a scale-model destroyer made from the same materials that the Eldridge would have been composed from. Can you tell us a bit about this scale model?

**Milione:** Again, the scale model ship will be approximately 1/50th scale of the actual ship, The Destroyer-Escort DE 173 Eldridge. The following dimensions will be as follows:

- Length will be 6.16'
- Beam will be .736'
- Draft will be .236'



**Scale Model:** Milione is constructing a 1/50 scale model of the Eldridge for testing.

**AAG:** There's been speculation that one aspect of the Philadelphia Experiment that may have caused the anomalous results could have been Bismuth used in the hull-welds, which might have acted as "condensor" to enhance Unified Field Theory effects much like a transformer core focuses a magnetic field. Is your model Eldridge going to use Bismuth in any way?

**Milione:** This is something that we're currently working on -- I want to incorporate Bismuth because we want to use it as an electrical fuse property as well. Bismuth occurs in a native state. Bismuth is the most diamagnetic of all metals, and the thermal conductivity is lower than any metal, except mercury. It has a high electrical resistance, and has the highest Hall effect of any metal (i.e., greatest increase in electrical resistance when placed in a magnetic field). The other interesting facet of Bismuth Tim is that "Bismanol" is a permanent magnet of high coercive force, made of MnBi, by the U.S. Naval Surface Weapons Center. Bismuth expands 3.32% on solidification. This property makes bismuth alloys particularly suited to the making of sharp castings of objects subject to damage by high temperatures. With other metals such as tin, cadmium, etc., bismuth forms low-melting alloys which are extensively used for safety devices in fire detection and extinguishing systems. Bismuth is used in producing malleable irons and is finding use as a catalyst for making acrylic fibers. When bismuth is heated in air it burns with a blue flame, forming yellow fumes of the oxide. The metal is also used as a thermo-coupling material, and has found application as a carrier for 235U or 233U fuel in nuclear reactors.

**AAG:** In terms of implementation, Corum's calculations indicated that you'd need to pass around 15,000 amperes through a magnetic field-coil in order to produce the required radar-invisibility effect. In his case, the only way to achieve that was with a deep-discharge capacitor & spark-gap system to create a megawatt pulse, and the subsequent radar-invisibility effect lasted only seconds. Are you going to attempt the same thing in pulsed mode, and does the notion that the Navy might have tried this in continuous mode indicate that this gets easier to achieve with larger-scale equipment?



**The Eldridge:** A photo at sea taken during the Second World War.

**Milione:** Yes, we will try it. A whole variety of alternatives options come to mind here, Tim. We can use a polyphase system to drive multiple or segmented bias coils. We might also use Saddle coils, which provide better homogeneity of the RF in the area of interest and are used as volume coils, unlike surface coils. Paired saddle coils are also used for the x and y gradient coils. By running current in opposite directions in the two halves of the gradient coil, the magnetic field is made stronger near one and weaker near the other could be used for biasing the hull, and for stealth, under a variety of incident RF polarizations.

**AAG:** What kind of radar are you going to use for this experiment? In "Tesla's Egg", Corum had talked about using X-band radar in his test, but he'd thought that it would be even easier to spoof the older K-band radar systems of the 1940's. More importantly, how do you plan on tracking telemetry for the experiment, and can it be repeated several times to ensure accurate results?

**Milione:** The radar-systems that we're using will both be in the high-frequency X-band category. We are planning to have storage oscilloscope for capturing critical waveform frequency versus time, plus lots of video and imaging storage hardware as well. We're going to bring a lot of other measurement equipment as well, to try and capture as much data as possible, given the importance of this experiment.

**AAG:** Now in terms of other equipment, are you planning on adding anything to this experiment that hasn't been seen in the past? Any new twists on the experiment itself, or just a straight-through shot at a perfect replication?

**Milione:** For the primary experiment, we're planning to conduct just a straight-through shot, but I'm planning on a secondary block system currently under development, which I'll describe in greater detail another time...

**AAG:** Conducting this experiment at John Hutchison's residence isn't a mistake, right? I mean, the reports of the Hutchison-Effect and the Philadelphia Experiment are similar enough that many of us have reasoned they're the same underlying effect. Would you agree with this, and if so, what do you think this means?

**Milione:** Tim, we will have to wait to actually see what happens at John's place.

**AAG:** Do you plan on using any of Hutchison's equipment in the experiment, or perhaps as a follow-up experiment if the first one is successful?



**The Eldridge:** Milione is proposing a lengthy series of experiments to replicate the effect.

**Milione:** Tim, both John's present equipment and some of mine custom equipment will be used for this first shot in August of 2006.

**AAG:** Now you do a lot of TV through "Ghost Hunters", and Hutchison does a lot of TV in general -- also, since American Antigravity is going to be present for this experiment, it looks like we might have a lot of potential media-interest. Any thoughts on the kind of publicity this might get, and what that might mean for the experiment?

**Milione:** We hope a new series of shows occurs, especially for the advancement of individual scientific research.

**AAG:** So if this experiment works, my understanding is that you're going to see a "dip" in the radar-signature of a scale-model battleship. Do you expect to see any other results, or is this going to be primarily an equipment-based success based on the telemetry alone?

**Milione:** Tim, both RF reflections dips as well as "hopefully" transparency of the model structure in various portions of the metal.

**AAG:** What are some of the things that could go wrong with this experiment? I'd like to address these now, because as you're well aware the critics often use a simple equipment or calculation error as "proof" that a concept is unworkable. If the experiment doesn't work, any thoughts on how easily most errors might be corrected, and are you planning on bringing any equipment spares in case something fails at the last minute?

**Milione:** That's a very good question! We certainly hope that the equipment parameters don't lead us to inconclusive or negative results, but even Corum's replication only tested a small part of the claims associated with the Hutchison Effect, and let's face it: in the last 60 years the equipment's changed a lot. Entire paradigms in electronics have changed, evolved, and been discarded in favor or newer technology.

The other alternative is simply to locate OEM naval equipment from the 1940's to try and stay true to the original Philadelphia Experiment technology, but there's never been a complete description of they were using ever published. Plus, even if we worked diligently to locate genuine 1940's-era technology, the parts are still expected to have suffered from old age & neglect. We are planning on doing some dry runs first. I have various metal samples that I'm going to ship to John Hutchison within the next two weeks for various types of pre-testing calibration. The answer to your other question is to have some system backup spares-- ABSOLUTELY YES!

**AAG:** All things considered, if this experiment works, I guess that it best demonstrates that 1940's-era Electrical Engineers would have at least had the notion that they could make a ship radar invisible using degaussing coils, which is the real basis for William Moore's hypothesis in "The Philadelphia Experiment". What kind of credibility will an experimental result bring to the original legend, and do you expect it to touch off a renewed interest in the Philadelphia Experiment as a result?

**Milione:** If this experiment works as planned, we'll have effectively shown that some that these early attempts at radar-stealth were based on feasible, scalable ideas that certainly lend support to both Corum's experimental replication and the original Philadelphia Experiment.

Marshall's "experiments" demonstrated that reflected light from an object could be refracted in such a way to create a mirage. This mirage would render that object transparent or invisible, a feat based on the statements made by an anonymous scientist who was given the cover name of "Dr. Rinehart," by William Moore. Moore interviewed Rinehart who had met Allende but gave the eccentric the false name of "Franklin Reno," derived from a road sign describing the distance from Franklin and Reno Pennsylvania. Rinehart claimed to have been one of the men who worked on some of the calculations for the Philadelphia Experiment and provided detailed scientific data up to a point. Marshall determined that if this data made no sense, did not 'check out', then the whole story would lose much credibility. Using the standard scientific method, Marshall carefully read Rinehart's account and researched each scientific detail.

The core notion begin the science of the Philadelphia Experiment requires using an intense electromagnetic field to create a mirage effect of invisibility by refracting light. This light would be refracted by the conditions caused in the air by the field that would include dielectric breakdown of the air, ionization, and even a zeemanizing of the atoms. Not having the equipment to cause such conditions, Marshall calculated that if he could find a material that would refract light, he could at least prove whether or not the basis for the Philadelphia Experiment had any foundation in science. As fate would have it, he did have such material - a special plastic called 'diffraction film' - and he discovered, much to his amazement, that it worked.

**AAG:** The legend of the Philadelphia Experiment has always supported the notion that the "strange side-effects" of the Philadelphia Experiment were unintended consequences of poorly understood Unified Field Theory physics -- and while Corum suggested that these UFT-effects required megawatts to generate, the Hutchison-Effect would seem to suggest otherwise. I'm wondering if there's the potential for seeing something truly strange during this experiment, and what your thoughts on this possibility might be?

**Milione:** Now you can understand why we're all so excited! We're all going to have to wait and see what happens, especially in terms of what's going to happen once we put the Hutchison-Effect in full power mode!

**AAG:** Let's close with some follow-up information -- in between now and the scheduled August test-period, are you going to be maintaining a record of your progress in setting this experiment up online? Where can the public track the progress that you're making on this?

**Milione:** I guess that the best place for updates are our three websites – American Antigravity.Com, John Hutchison's Official Site online, and my Global Communication Networks homepage.



**The Experiment:** If it works, Milione may just sail right into the history books himself!

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