



# New Energy News

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## SPACE ENERGY BLOWS NASA'S FUSE

Look who bumped into what... in the ionosphere!

Space Shuttle 'Columbia' Encounters Excess Energy?  
By Dr. Harold Aspden

One might wonder when those of us engaged in the 'free energy' pursuit will reach the end of our tethers. Sadly, the space shuttle 'Columbia,' which was on a mission to tap into the energy of the ionosphere, has (with near perilous consequences for the seven-man crew) already done that with the loss of a \$442 million satellite. **This experimental satellite was tethered to the space shuttle by a 12.8 mile long cable which was blown apart by an unpredictable excess of energy.**

A U.K. newspaper report dated 27th February 1996 stated: "Video footage beamed down later to Mission Control at the Johnson Space Center in Houston, Texas, showed the end of the tether - made from copper, nylon and Teflon - looking charred and melted. It was said to resemble 'curly french fries.' There was a 'large electrical discharge along the tether.'

So, what went wrong? Well, as we readers of *New Energy News* can well imagine, **the NASA experiment was a large scale version of the Correa discharge tube** or the Chernetskii self-generating discharge device or the Spence device, all of which reveal excess power. The only difference was that the 'evacuated tube' was replaced by the rarified plasma state of the ionosphere, where there are as many positive ions as electrons.

*The space shuttle Columbia was, in fact, the cathode and the now-lost satellite was the anode. The cable was the power supply circuit and the intervening ionized space provided the discharge path.*

The excess energy anomaly was that of a cold-cathode discharge where inexplicably large forces act preferentially upon the heavy positive ions and drive them into the cathode. **We know from such experiments that the cathode reaction forces developed by impact of positive ions can be thousands of times greater than theory predicts.**

It would seem that this possibility, which owes its origin to a fundamental breach of physical law, was not factored into the design of the experiment. The protons in the upper ionosphere regions of the atmosphere which provided the closure current would be driven with enormous force into the tether connection point (the cathode) on Columbia. It is no wonder that the cable fused and the mission failed and that, I submit, is **all because the extremely high anomalous cold-cathode reaction forces know from decades of research have never been properly understood by the scientific community.**

What we can therefore now point to is the failure of a major space mission aimed at generating power in space because far more power was produced than was bargained for! It had not been understood that the aether which fills that **space is ready and willing to shed excess energy once we contrive to develop circuitual current flow that is not that of an all-electron circuit.**

I add a footnote quotation from the 1989 Novosti Press Agency (USSR) release on the Chernetskii project: "In a bid to explain the experimental data, the researchers actually tried to prove the impossible and one of their proofs turned out to be violent. The one megawatt substation at the Moscow Aviation Institute, where Chernetskii and Galkin were staging an experiment with a powerful plasma unit, burned out. When the

discharge currents reached criticality, superstrong current was **born** in the generator and went back into the network, playing havoc with the safety devices calculated for short circuit events."

The United States of America should not be sending men into space on missions aimed at power generation by tapping into plasma fields until enough research on the anomalous cold-cathode plasma discharge problem has been done in the Earth-based laboratory environment to understand fully this mystery energy source. At this time, Dr. Paulo Correa in Canada has the means for demonstrating the generation of excess energy using cold-cathode discharge tubes of special construction in which the cathode is able to take off the power electrically in a controlled manner. The time has come for the Establishment scientists to wake up to the possibility that we can draw upon energy in the space medium but we should be looking at those protons and not just at those electrons!

[Editor's Note: See Correa's U.S. Patents numbers 5,416,391 and 5,449,989. Latest information from NASA sources relates that all electronics (included shielded electronic housing designed for up to 10,000 volts) was fried. It is strongly suggested that the satellite be recovered and examined in detail.]

## Fusion Briefings

### WSJ REEXAMINES COLD FUSION DUE TO PPC

Courtesy of Harry Dart

Jerry E. Bishop, (staff writer), "A Bottle Rekindles Scientific Debate About the Possibility of Cold Fusion," *The Wall Street Journal*, Monday, Jan. 29, 1996.

#### SUMMARY

Jerry Bishop reports that the electrolytic bottle filled with tap water and microscopic palladium-coated beads produces several hundred times as much power output in the form of heat as was input to start the reaction. The bottle is called the Patterson Power Cell™, named after its inventor James A. Patterson.

Bishop writes that the Patterson Power Cell (PPC) is catching the interest of some engineers, chemists, and

a few major companies such as Motorola. He also compares the bottle to the Utah cold fusion device produced by Martin Fleischmann and Stanley Pons at the University of Utah in 1989, "As with the Utah apparatus,... the bottle produces an excess of power as it electrolyzes, or breaks down, water molecules into hydrogen and oxygen atoms.

But, unlike the controversial and unpredictable Utah experiments, the Patterson Cell can be turned on and off seemingly at will."

Because the PPC consistently works, scientists will have the opportunity to manipulate the device to see if a nuclear reaction is involved in its processes. The electrodes in the Utah device were rods of palladium surrounded by coils of platinum wire. These rods were hung in "heavy" water in which the hydrogen is an ionic form called deuterium. The Patterson cell, however, is filled with microscopic plastic beads coated with a thin layer of palladium between two layers of nickel. It is also filled with ordinary water made of "light" [normal] hydrogen atoms.

In both devices, electrolysis releases hydrogen atoms which are soaked up by the palladium and/or nickel. Inside the metal an energy-releasing event is claimed to take place. Cold-fusionists would claim that the nuclear reaction taking place is the fusion of hydrogen atoms, a nuclear reaction that usually occurs at 50 million degrees.

The apparatus stands about four inches high and one inch in diameter and holds about three tablespoons of the tiny beads. Demonstrations of the device by Mr. Reding in Anaheim, CA lasted from 30 minutes to two hours. And those who observed the demonstrations say that, after subtracting the electricity needed to run pumps and fans, about 0.1 to 1.5 watts of power went into the cell itself, while the heat output was 450 to 1,300 watts.

Summary by Dee Winter

*What lies behind us and what lies before us  
are tiny matters compared to what lies  
within us.*

*--Ralph Waldo Emerson*

# Space Energy

## SPACE ENERGY RESEARCH BY ZAHA

David Lindsay ("The Patent Files," *NYP*ress), "A Spiritual Retreat from an Epic Life," *NYP*ress newspaper, 13-19 Dec. 1995, p 10.

### SUMMARY

Abe Zaha is a world class inventor, having to his credit inventions from a special firefighting airplane (now in the Smithsonian) and an early wire recorder, to industrial processes, such as one for coating CRT screens with almost molecular size phosphorus particles of a consistent size, and another process for "selective soldering" used on circuit boards. Zaha was recognized by a place in the Hall of Fame of Science and Engineering. Such previous prestige makes his current entry into the free energy field very interesting. At the moment, he is concentrating his creative energies on a "power project," and on the creation of the Zaha Institute, a nonprofit organization funding educational endowments.

Zaha's "project" is under wraps, at least for the time being, but claims that an excess of 100% [power] efficiency is real. He says, "We take the laws of nature and use them continuously, and make them portable." Possible fringe benefits include more efficient extraction of hydrogen from water, water purification, and the production of compressed air.

[Just before press time, we heard that Zaha had died. Ed.]

## MICRO-INDUCTIVE ARRAY AS A NOVEL ENERGY CONVERSION SYSTEM Part 2

Nicholas A. Reiter and Dr. Samuel P. Faile  
10 January 1996

*Continued from New Energy News, February 1996, pp 13-16.*

### III. SYSTEM CHARACTERISTICS & PARAMETERS (cont.)

#### E. Electrical and Physical Considerations.

At a very early point in our investigations, a strong relationship [of measurements] to earth ground, or to a load reference point was noted. For the most part, a good ground connection to the load side of the diode pair is essential for producing Voc's over 1 volt. Most of the experimental work done at the Gibsonburg garage site has used a ground wire connected to a 1 meter copper rod driven into the earth. Electrical house grounds and water pipe grounds have also been used satisfactorily. On one occasion, grounding to a water pipe connected to a deep well gave extremely good results; 7.278 V & 1.73  $\mu$ A from a 2X CAD40 (Coax) unit on 21 Oct. 95.

In an ungrounded condition, array output depends very strongly on placement and position of the load or meter relative to the array. A ground, or even an artificial ground plane made from metal foil strengthens and stabilizes the array output. In this respect, our arrays act like classical antennae.

Early observations indicated that some smaller arrays, such as the single conductor 2X CAD 40, produced a greater DC output when placed inside of an iron pipe or when wrapped in aluminum foil. (See the photo in Fig. 4.) Grounding the foil or pipe would often boost the output further, however on these occasions it was also observed that output varied with the position of an array, as partially inserted into the shielded region.

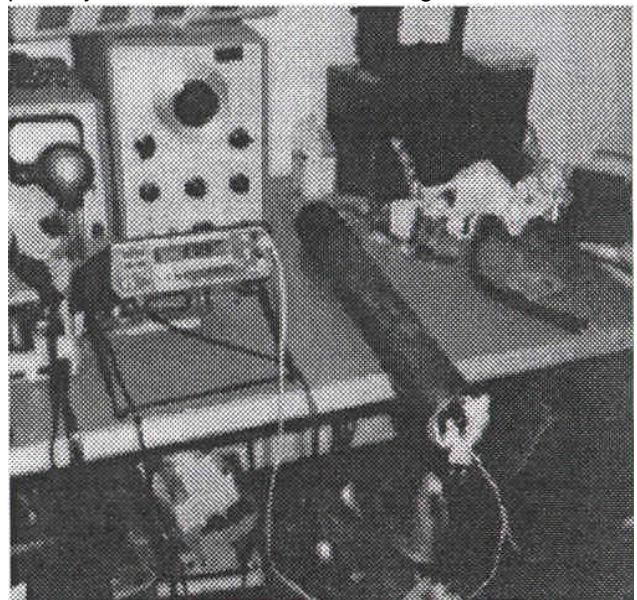


Fig. 4 2X CAD. 40 in iron pipe

Recently, this effect has been extrapolated, with promising results. On 26 Nov. 95, a medium sized

array, the 85 ft. CAD VIRTUAL 20, was placed at the 3 meter height across garage rafters. A long sheet of Al foil was placed alternately over, and then under the array. We saw:

No foil - 1.937 V  
 Foil laid over array - 2.145 V  
 Foil placed under array - 1.877 V  
 (1N4001 diodes 1.33  $\mu$ F cap.)

This effect has also been noted with the 224 ft. CAD VIRTUAL 20. A large sheet of aluminized mylar was rolled out over the array; DC output rose about 20%.

We see, then, that placing a metal shield between an array and it's ground plane seems to attenuate the conversion effect. Placing said shield OVER an array yields an enhanced output.

Recently, at Dr. Faile's work area at the Sharonville, Ohio location, enhanced output has been noted from an array positioned near a large "pile" of other unpowered micro-inductive arrays in storage.

As previously mentioned, a strong relationship between array altitude and output exists. When connected to an earth grounded load, output is seen to increase with altitude above ground. When connected to a floating load, altitude of the array relative to the load seems to be the strong factor. We have also seen that when an array is placed in a vertical plane (perpendicular to earth ground) the output is determined by the altitude of the lowest point of the un-rectified array. Thus, a 2-meter long array hung vertically with it's highest point at an altitude of 4 meters will provide no more output than the same array suspended horizontally at a 2 meter height.

On 24 Nov. 95, an altitude experiment was conducted outdoors, using a wooden step ladder to achieve different altitudes for a test array; the 12x12x12 CAD BOX, 1N4001 diodes and a 0.33  $\mu$ F cap were used, with a Fluke 79 meter. Meter input was earth grounded to a steel rod driven into the ground beside the ladder. Voc outputs were measured at the following heights:

1 meter - 0.017 V  
 2 meters - 0.115 V  
 3 meters - 1.035 V

Another experiment conducted on 2 Dec. 95, with the 85 ft. CAD VIRTUAL 20 in a horizontal plane, seemed to indicate that the greatest output occurred with the

long axis of the array pointing magnetic N-S. Further exploration of this factor needs to be performed.

We have observed a tendency for weather conditions and an unknown diurnal cycle to affect output. While not fully quantified, it appears that array outputs tend to be GREATER during WET weather, rain, snow, or fog. Outputs also seem to repeat over a 24 hour cycle. The peak for this cycle typically occurs around 0500 to 0600 local time, with lowest output values occurring around 1600 to 1800. Could this diurnal effect relate in some way to ionospheric conditions and phenomena? Further experimentation at other geographical locations must be performed to confirm this effect. [Readers are invited to make measurements and report them to this newsletter.] Both weather and diurnal variations in output typically do not exceed about 20%.

One other observed effect provides a clue to the operation of the array system. We speculated early on that our array output might be the result of PN junction noise being amplified and re-enforced by the electrical parameters of the array conductor. It was reasoned that if this was the case, warming the output diodes to about 80°C might increase the rectified Voc, by virtue of increasing thermal noise at the device junctions. We observed the opposite. As the diodes were heated, the output Voc dropped drastically. In the region between 40°C and -20°C, array output seems to be fairly independent of ambient temperature.

#### IV. FOUND AND PROPOSED APPLICATIONS

The levels of electrical power produced by micro-inductive arrays to date are admittedly minuscule. We are dealing with trickle currents, despite interestingly high open circuit voltage potentials. At present, our better arrays have demonstrated enough power to charge small value capacitors over time periods of seconds for the purpose of flashing LED lamps. We have constructed several small LED flash demo units which are operated by manual pushbuttons. We are also currently trying to design FET based relaxation oscillators which would provide compressed higher current bursts from the continuous  $\mu$ A trickle of the arrays. [Readers, any suggestions for such circuits? Ed.]

One recent observation has given us evidence that better conversion circuitry is indeed a viable pursuit. It was discovered that even the 10 meg-ohm input Kiethley 175 is acting as a considerable load on the array. By placing a normally open switch at the meter

input, we were able to observe PEAK voltage potentials applied to the filter capacitor. 30 seconds of open circuit condition on the 224 ft. CAD VIRTUAL 20 allowed the capacitor charge to rise to over 26 V dc!

Even without considerable improvement, practical applications might also include trickle battery charging or long term charging of high value capacitors for low duty cycle applications. Since some photovoltaic solar cells are heterojunction PN devices, micro-inductive arrays placed in series between cells might conceivably produce a slight but helpful power gain.

Of course, the best option is to continue research on this effect. It is our view that theoretical modelling would allow us to improve system output by a few orders of magnitude. Considering the physical size needed for arrays, large scale applications seem to be about four orders of magnitude away.

## V. THEORETICAL AND NON-ELECTRICAL CONSIDERATIONS

The electrical activities of micro-inductive arrays are relatively straight forward and, we expect, can be properly characterized. However, other array connected phenomena have been observed which are more difficult to define and quantify. These phenomena should be recognized and duplicated by other researchers. We have, to date, logged the following observations:

A. While examining and setting up certain passive arrays, strong sensations of nausea and light-headedness have been noted. Dr. Faile, myself, and several other volunteers have noted these sensations independently.

B. While running excitation experiments on large arrays, extreme headaches were experienced, again seemingly correlated to certain array geometries.

C. In the presence of several large arrays, a quasi-thermal effect has been noted. By this we mean a strong sensation of heat felt by an observer, but not yet verified by instruments.

D. **In a completely darkened room, some of the largest arrays, in a loaded state, seem to induce a visual sensation of faint phosphorescence.** The effect is that of a dim, steely, blue-gray haziness around the insulation of the arrays. It is unknown at this point if this is a faint near-UV emitting corona, or a "phosphene" related optical stimulation. [Those who

can see magnetic fields would describe them using similar phrases. There really are people who can see magnetic fields. Ed.]

It is certainly not normal practice to include such unverified and admittedly esoteric phenomena in a paper on electronic devices! However we, as a team, have observed these effects **repeatedly**, and our scientific training compels us to report them. However, we have elected to await input from other researchers. **In our view, these psychotronic effects are worthy of consideration, and may provide helpful clues to the operation of the array system.** [Readers, here is another way you can help. Not all persons are equally sensitive to these psychotronic effects. Let us hear from those readers who have similar observations to report. Ed.]

Our investigations into micro-inductive array systems have been experimentally driven. We have, however, allowed ourselves to consider several broad hypotheses of array operation, as follows:

1. Micro-inductive array systems are receiving and rectifying broad band high frequency E components of man-made EM.
2. Micro-inductive arrays pick up and convert the longitudinal EM waves theorized by many scientists, including Tesla [1].
3. Micro-inductive arrays may be receiving and rectifying the broad spectrum motional E field energy of the Earth, as theorized by W.J. Hooper [2]. Recently, a paper was brought to our attention which claims that the earliest systems of Moray consisted of long high altitude wires strung up on poles? [That is true. I was a teenager in Moray's neighborhood and have personally seen these wires on tall telephone poles with lead-in wires going into the north side basement window of Moray's -- home. Ed.] We find this to be a hopeful and exciting possibility.
4. We believe that the possibility exists that some "cold fusion" principles might be involved in the system operation, and also of actual "space" energy conversion.

## VI. CONCLUSION

This summary of our experiments is being donated freely to the public domain. **We are firmly committed to the principle that scientific knowledge, even that which may someday be proven wrong or incomplete, must be offered up freely and completely for review, comment, and duplication by other scientists or experimenters.** It is our hope that many will



take up the ideas and designs presented herein, and will carry them to new levels. For a world troubled by fossil-fuel-caused environmental damage, no New Energy concept is beneath exploration.

In closing, we would like to thank our families, friends, associates, and correspondents for their support. Hopefully, some small fruit of our efforts will pay them back for their kindness.

## REFERENCES

[1] N. Tesla, Colorado Springs Notes 1899-1900, Published 1978, Nikola Tesla Museum, Beograd, Yugoslavia.

[2] W. J. Hooper, New Horizons in Electric, Magnetic, and Gravitational Field Theory, Published 1974, Electrodynamic Gravity, Inc. Akron, Ohio.

[3] Rodney Sego, "The Moray Energy Device - Its Workings," privately distributed paper, 1981 Provo, Utah.

[Editor's Note: Because many of these experiments were done with coils deliberately constructed to have non-inductive characteristics, it is not expected that ordinary inductive pickup of standard Hertzian EM waves is the source of the small amounts of power measured. We challenge our readers to replicate and extend this work. Remember that geographic location may have a substantial effect. We would like to hear from you about your experimental observations in various parts of the world. **Also, it is believed that the true voltage can only be made by a type of potentiometer (or balanced bridge circuit). We would be pleased to have our readers respond to this suggestion. --Ed.]**

## RECENT RESEARCH DEVELOPMENTS

Dr. Sam Faile, 21 Feb. 1996

Autonomous effects have been obtained where a ground connection is replaced by an antenna laid out towards the west or where, for a layered coil, no antenna was used at all. An experiment was done with two modified fairly narrow Cad. Virtual coils: a "short coil," the 1 Conductor 3"x 66" Cross (+) Cad. Virtual 36, and a "long coil," the Conductor 2½"x 260" Cross (+) Cad. Virtual 162, at Nancy's Hallmark loft at an altitude of 10 feet, far away from other coils and appliances, on January 30, 1996, around noon with partially cloudy, dry conditions, in the twenties °F, at

Sharonville, Ohio. These modified coils have two extra insulated wires spliced to the non-terminal end that are knitted into the structure ending with no connection at the terminal end.

Eighteen gauge insulated wire (single conductor) was run down to the first floor wall ground outlet for the grounded condition. This wire was also used as an antenna laid out at the 10 foot altitude in the westerly direction from the LED-Diodes-Capacitor circuit which was attached to the two legs or leads of the coil that ran in the northerly direction. The wire used for both the antenna and the ground was 18 feet long.

Experiments were done discharging the capacitor at intervals to see the shortest time for a faint LED flash. No voltmeters were around or other battery or line voltage equipment that could interfere with results.

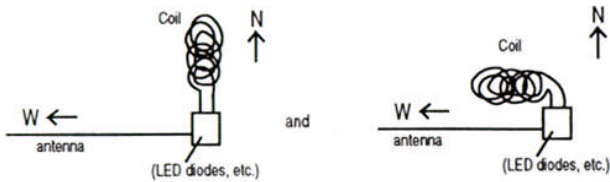
Summarize the results: a small table is shown for the "short coil" made out of 120 feet of 16 gauge wire and the "long coil" made out of 480 foot of 16

LED F lashes at Nancy's Hallmark (manual switch used)	Short coil -3" x 66"	Long coil -2 ½" x 260"
Time to Obtain Faint LED Flash using ground wire Connection	1 sec	5 sec
Time to Obtain Faint LED Flash using Antenna - Autonomous	30 sec	3 sec

gauge wire.

What this implies is that the longer more enfolded (more turns) coils start to operate better in the autonomous mode where there is no hookup. The autonomous mode may allow for a greater buildup of charge with less leakage to the ground as indicated by the very bright LED flash that can leave spots in front of the eyes like a flash bulb when the switch to the long coil is operated at intervals of one minute or more. Later on, Sam Faile tried a coil even smaller than the "short coil" but used an antenna 26 feet long and managed to get a good flash ever minute using a coil built out of only about 28 feet of wire. Thus, to get a fairly responsive LED flasher in the autonomous mode, one may want to use a long antenna while decreasing the need for a very long coil.

Other experiments involved facing the antenna in other directions. In Ohio at least, it appears the best results are:



Recently with more powerful coils being built, visual disruptions have been noted and cardiac interactions suspected. A new tip that may help counter biological effects involves pressing the bare wire ends of an unpowered inductive coil of 50 feet of telephone extension cord against the scalp to encourage inductive reactance eddy current losses of high frequency currents. A Reich suggestion involves taking a bath with Epson salts dissolved in it.

### SUMMARY OF RECENT EXPERIMENTAL RESULTS:

Nick Reiter, 23 Feb. 1996

Since January, we have continued to explore new types of micro-inductive arrays, and have performed more analysis on earlier designs. Most of these explorations have been qualitative, and we still have yet to derive an acceptable theoretical model for array operation. Dr. Faile has continued primarily with optimizing geometry, spatial relationships, and grounding arrangements. I have concentrated mainly on materials, electronic considerations, and novel array forms. I hereby submit a quick summary of the more noteworthy findings from my work of the past two months. Dr. Faile has contributed a summary of his activity also.

#### 1. Liquid Arrays:

Since early experiments showed slight differences in array output with respect to different wire alloys, I felt that it would be interesting to build an array out of tubing and fill it with an aqueous electrolyte. This has turned out to be a rather rewarding venture. On 27 Jan. 1996, I constructed a simple one turn track array out of 1/4" ID opaque rubber fuel line. End caps / terminals were provided by stainless steel bolts pressed into those ends. The folded length of the array was a little less than 2 meters. The tube of the array was filled with about 200 ml of 1 molar  $\text{NiCl}_2$  in deionized water. DC resistance through the electrolyte was read at 10.2 K ohms.

When placed on garage rafters at a height of about 3 meters, the array produced an open circuit potential of 2.995 V. Placing a layer of aluminum foil over the array raised the output to 3.783 V with a  $J_{sc}$  of 0.14  $\mu\text{A}$ . This output easily rivals that of the large, space consuming 224' CAD VIRTUAL 20, with metalized mylar shield. More recently, further comparison tests have been run with other aqueous electrolytes.  $\text{NiCl}_2$ ,  $\text{NaCl}$ ,  $\text{BaCl}_2$ , tap water, and dilute HCl have been tested in a little stand-alone 48" TRACK (24" folded length). Best results to date have been achieved with a solution consisting of 40 parts deionized water to one part concentrated HCl. **Over 250 mV was obtained from this small system, merely sitting ungrounded on a tabletop.**

It is clear that substantial increases in output per unit length have been achieved by going to an electrolyte conductor. It is essential, however, that nonreactive components be utilized, to prevent galvanic potentials from skewing test results. Work on this is ongoing.

#### 2. Enhancement by layering:

We have found that the output of a simple array may be greatly enhanced by enclosing the device in a structure of alternating discreet layers of metal and dielectric. This effect was confirmed for the first time on 28 Jan. 96. A miniature test TRACK made from 1 meter of 16 gauge copper wire bent back on itself produced 13.9 mV with 1N914 diodes in an ungrounded tabletop condition. Placing a strip of aluminum foil over the array raised the output to 20.2 mV. A strip of wax paper then placed over the foil raised the output further to 35.2 mV. Adding another course of foil and wax paper brought the output up to 38.8 mV. Oddly, interposing the wax paper between the array wire and the foil (reversing the layering order) caused the output to drop to 17.1 mV. [Read Exodus 25:9-16. --Ed.]

More recently, a compact layered array in the form of a single ring has given promising results. Three six-foot lengths of plastic coated "Greenfield" conduit (flexible steel conduit with a plastic outer jacket), of different outer diameters were slipped inside each other and bent to form a horseshoe or torus about 2 feet across. Inside the innermost conduit was slipped a 3/8" outer diameter piece of copper tubing. Electrical terminations to diodes were made at the ends of this. Using 1N914 diodes, we observe an output of about 850 mV when attached to a grounded meter. (Three meter altitude.) However, when ungrounded, the system produces an admirable 1.4 V and a short circuit

current of 0.35  $\mu\text{A}$ . To date, this is the only array geometry which seems to produce higher potentials when NOT attached to an earth ground or reference. (At least, that I have seen. Dr. Faile has found some evidence of similar action with several small arrays in his collection.)

### 3. Geiger Counter experiments:

On two occasions in February, a Geiger counter was set up near a large active cluster of arrays in my garage. At both of these times, occasional (about once every one or two minutes) short bursts of counts above ambient were noted when the counter head was pointed toward the center of the array set. The increases were not great. Background ambient at 900 volts varied between 20 and 40 CPM on both days. The occasional bursts were on the order of 60 to 80 CPM. We must be very cautious in interpreting this, due to the small magnitude of rise over ambient. Considerable replication must be performed before we could attempt to theorize about this effect.

The origin of this experiment was the notion that the possible sporadic biological and optical effects noted with some arrays might be due to an unusual form of energy of extremely high frequency. If it exists, could this energy affect a Geiger-Mueller tube? (The instrument used for this analysis was a Baird Atomic 916 laboratory Geiger counter.)

Nick Reiter has given his address for those who wish to discuss these experiments, or have comments they wish to send to him directly: 541 West Stone St., Gibsonburg, OH 43431.

## Rotating Space-Energy Devices

### OVER-UNITY MAG-MOTORS (FOREVER POWER?)

By Avard F. Fairbanks

#### WELCOME TO THE AGE FOR CLEAN POWER OF INFINITE USE

The concept that any form of perpetual motion (atoms excluded) could be achieved is contrary to my engineering and scientific training. I couldn't believe the facts either, at first.

Before World War II, scarcely anyone would believe that iron ships displacing thousands of tons could be demagnetized, but it was done thousands of times to counteract magnetic mines and torpedoes. Also, the idea of converting mass to energy via  $E = mc^2$  was still a dream. However, ships were saved, atom bombs developed, and the war was won.

Such techniques of "**degaussing**" may be the historic predecessors to tapping the near unlimited energy of the universe -- the energy that keeps all matter from collapsing (by making each atom and its electrons a perpetual motion machine). This concept is from the theoretical physicists who say that space energy exists in abundance. [See H.E. Puthoff, "Source of Vacuum Electromagnetic Zero-Point Energy," *Physical Rev. A*, vol 40, no 9, 1989, pp 4857-4862.] This energy is everywhere in existence, inside & out of us, preventing our sensing or measuring it by any common means. This energy source is called zero-point energy, space or cosmic energy, vacuum field energy (having both dielectric & magnetic properties), and by other names, even free energy. However, this energy source is no freer than wind, waves, solar and falling water, all of which need costly and appropriate collectors and converters to produce useful energy. All these names are cumbersome, need explanations, arouse objections, and are not sufficiently unique, descriptive, or all encompassing. We need a term tied to something we know for sure.

Physicist Casimir received a Nobel Prize for his proof of the existence of space energy. Therefore, we propose calling it: **Casimir's ubic Cosmic energy (CubiC)** pronounced Sea-ubiK (*ubic* is Latin for everywhere). So cubic represents the space and **CubiC** the energy therein, where nature fills the mythical undrainable bucket, from the "Sea of Energy."

We would also like to call these degaussing operated motors **Magnetic Energy Collector Convertors (MECC)**, motors, where the CC may also refer to **CubiC** energy.

These motors, by Adams, Aspden, Kawai, and Takahashi, plus several of our own design, all employ the same basic principle: The pull of a permanent magnet pole, on poles of soft (transformer) iron, which is easily demagnetized or degaussed. As the poles come into opposition the control circuits change the magnet polarity so it pulls on the next pole. Apparently this degaussing of soft iron takes surprisingly less power than delivered by the pulling of the permanent magnet, which has such high magnetic retentivity it



remains unaffected by the degaussing force. Also, a hi-speed rotation of the magnetic field is important, as is the recovering of collapsing magnetic field energy.

The Adams motor was among the first and simplest. It consisted of four poles, single phase, non-starting and, lately, equipped with Yasunori Takahashi's supermagnets. The Takahashi supermotor uses four supermagnets with alternative poles for the rotor. This configuration is much like a synchronous motor. The motor uses eight stator poles (therefore 2-phase operation) with a synchronous solid-state pulse generator control circuit. A separate set of output windings on the stator can be used to keep the battery charged that powers the pulse (degaussing) control circuits. Both rotor and stator have unique shaped pole pieces that aid its operation. The two-phase design makes it self-starting. The design looks simple, easy to understand, and reportedly performs admirably on a motor scooter.

The Kawai motor is less conventional, poled in one direction axially like a homopolar or a single coil, multi-crown, poled clock motor. As shown in patent drawings and brief description sent to *NEN* from England by Dr. Aspden (a guru in this magnetic motor field). The Kawai motor has 2 ring-disk magnets, fabricated with face poles like speaker magnets. The magnets are axially aligned, with poles in the same direction, so N is at one shaft end, and S is at the other with some space between. Several magnets could be stacked, for closing magnetic path and increasing power. At each end is a 3-spoked pole piece that rotates within a 12 pole stator, so it looks like 2 motors on the same shaft. The rotor poles are double the angle of stator poles and split, so leaving 2 unopposed stator poles in between. The stator poles at each end are coupled by soft iron cores and degaussing coils, so there is a closed magnetic path, except when degaussing. From analyzing the operation step by step, it appears to be 4-phase with the degaussing pulses initiated by optical sensors, thereby the motor is self starting with good torque. These motors, with the basic difference of alternating poles and non-alternating poles, appear similar to our multi-pole designs of a few years ago for low speed, hi-torque motors proposed for electric autos, but they do not have all our features. Our goal is to incorporate additional features into these new super motors for maximum effect.

[Editor's Note: This brief explanation should make **MECC** motors more understandable. A.F. Fairbanks has a BS and MS in Physics from the U. of Mich. with

graduate studies at Cal Tech, UCLA, USC, U. of Pa., and Industry (OSRD NAA, TRW, Westinghouse). He has over 60 years work on motors from toy trains to scanning, modulating, synchronizing, rf-generating motors for RADAR, IR homing, Inertial-Navigation, fire-control, etc. He also worked with engineers who had been degaussing ships under then Capt. Rickover. Although, at first unbelieving, Fairbanks now is a supporter of the new class of super motors. Avarad Fairbanks is one of the founders of Fusion Information Center.]

## Miscellaneous

### CALIFORNIA - BACKYARD EXPERIMENTER

Courtesy of the author

John R. Hayes, "Transmutation of Mercury into Gold and Platinum," 7 page manuscript prepared for *Untapped Technology in Review*.

#### EDITOR'S REVIEW

Hayes has predicted that hypothetical particles (named hayons after his last name) are produced when crossed 1 mm electromagnetic waves are used. Further, Hayes supposes that these hayons are energetic enough to fission cold helium atoms. The hayon, being heavier than a neutron or a proton, is the active fission-producing agent.

In the reported experiment, Hayes used a small drop of mercury positioned at the intersection of the 1mm waves. The mercury was cooled by using a spray from a container of liquid helium. After two to three minutes of treatment by liquid helium, the mercury is deemed cold enough and subjected to the crossed radiation. The results were changes in the temperature both falling and rising. The explanation in the paper is that the mercury was changed first to gold and then to platinum. There are six isotopes of mercury that occur naturally in over 5% of the mercury. There are 21 isotopes of gold but only one which is stable (Au-197). There are four isotopes of platinum that are found in nature with more than 5% of natural abundance. If stable isotopes are to be obtained with the removal of

a proton then the possible route could be from Hg-198 to Au-197 and then to Pt-196, all of which are stable.

During the experiment Hayes and associates tried to measure the hydrogen released (from protons removed) by trying to ignite the hydrogen and observing a flame. We suggest that if there was sufficient hydrogen to measure in this manner, the heat of fission would be expected to have vaporized the mercury. They reported that the mercury seems to have changed with some contaminants observed. The lack of any type of assay leaves the experimental results questionable.

We commend the experimenters for their efforts. The report cites a number of problems of trying to perform complex experiments with a low-budget approach. With some refinement and with some skilled help, the experimenters may, indeed, find they have some successes. John Hayes has volunteered to answer any letters. Our readers may contact Hayes at 1305 E. Chapman Avenue, Orange, CA 92666.

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## PERIODIC TABLE OF BETA-STABLE NUCLIDES

R.A. Brightsen (Clustron Sciences Corp., Reston, VA), "Correspondence of the Periodic Table of Beta-Stable Nuclides with the Classical Periodic Table of Elements," will be published with complete chart in *Infinite Energy*, and *J. New Energy*, vol 1, no 1, 1996, pp 75-78.

### AUTHOR'S INTRODUCTION

The author has developed a new model of nuclear structure which is completely systematic, periodic and symmetric. This model is based on the three **building blocks** for beta-stable nuclei: a neutron-proton cluster (**NP**), a neutron-proton-neutron (**NPN**) and a proton-neutron-proton cluster (**PNP**). The author has been frequently asked questions by colleagues about how this new nuclear model relates to the Periodic Table of Elements, discovered by the Russian Mendeleev in 1869, and universally recognized by scientists throughout the world. This paper deals with that relationship, and demonstrates that there is a one-to-one relationship between the two models.

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## NEW ENERGY'S EFFECTS

Josef Gruber (Univ. Hagen, Germany), "New Energy Technologies (NET): Effects on Individuals, the Economy and the Environment," invited paper at the Symposium "New Energy" of the Scandinavian Assoc. of Vacuum Field Energy, Stockholm, Sept. 1994, second ed.

### AUTHOR'S ABSTRACT

There are new theories in mainstream physics which state that there exists a source of energy not known earlier (called zero-point-energy ZPE, space energy, vacuum field energy (VFE) or free energy) and that this source of energy may be tapped. Dr. Harold E. Puthoff, a theoretical and experimental physicist in Austin, Texas, USA, and his colleagues have succeeded in publishing new theories in peer-reviewed physics journals. They have also replicated laboratory experiments in which this **new** source of energy is being tapped. See also the work of Andrija Puharich (1918 - 1995) which seems to have been inspired greatly by Nikola Tesla (1856 - 1943).

In the first main section of my lecture, **I inform about several new energy supply devices (generators, motors, energy converters) which draw energy from a previously unknown source.** They require no traditional fuel. Most of these NET-devices have been thoroughly checked by independent experts, have been (as least partly) patented and are now subject to developmental research. These NET-devices operate permanently (24 hours per day, all year) and everywhere. Some devices may adjust their energy output instantaneously to the energy demand. Therefore, no energy storage is required and relatively small NET-devices suffice. In some NET-devices, magnetism (from permanent magnets) plays the crucial role. In others, water plays the role of a fuel: In a new type of hydrolysis, it is split into hydrogen and oxygen. In the procedures employed in NET-devices, often-referred-to concepts are: Casimir effect, sonoluminescence, condensed charge technology.

In the second main section, I take a first glimpse of the effects of using NET-devices on a large scale. By means of simple scenarios for the transportation sector and for the heat / electricity sector, we investigate effects on individual households and firms, on the economy at the national and international level, and on the environment. The main effect of NET will be a sustainable development, at least with respect to energy.

Very briefly discussed are also a few very innovative devices which produce no "over-unity-effect," for example the RADIGEN-generator of Günter Pöschl/UTI for producing water-diesel-fuel mixtures for diesel engines; the MICON-machine for recycling waste in a vacuum hydrogen-plasma (of the same inventor); Yull Brown's gas and Sonne Ward's implosion machine for greatly reducing radioactivity. Some of these devices are already commercialized and are important on their own. Others may gain their full importance, when combined with NET-devices with over-unity-effect.

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### HOOPER'S GRAVITY-EM COUPLING CONCEPT

Marc G. Millis, Gary Scott Williamson (N.A.S.A., Lewis Research Cntr., Ohio), "Experimental Results of Hooper's Gravity-electromagnetic Coupling Concept." Prepared for the 31st Joint Propulsion Conference and Exhibit, co-sponsored by AIAA, ASMI, SAE, and ASEE, San Diego, California, July 10-12, 1995. NASA Technical Memorandum 106963, AIAA-95-2601, 10 pages, 12 refs, 11 figs, 2 tables.

#### AUTHORS' ABSTRACT

Experiments were conducted to test assertions from Patent 3,610,971, by W.J. Hooper that self-canceling electromagnetic coils can reduce the weight of objects placed underneath. No weight changes were observed within the detectability of the instrumentation. More careful examination of the patent and other reports from Hooper led to the conclusion that Hooper may have misinterpreted thermal effects as his "Motional Field" effects. There is a possibility that the claimed effects are below the detection thresholds of the instrumentation used for these tests.

Spaceflight would be revolutionized if it were possible to propel a vehicle by manipulating gravity rather than by using rockets. **If a means existed to induce propulsive forces using the coupling between gravity, electromagnetism and spacetime, rocket propellant would no longer be required.** By eliminating propellant, spacecraft could become significantly smaller and travel greater distances, unlimited by propellant supply.

A patent was issued to W.J. Hooper in 1971 for devices which are claimed to produce various anomalous effects. One of the claimed effects is that the weight of a "nonferrous" object would decrease when placed under a self-canceling electromagnetic coil.

#### AUTHORS' CONCLUSION

**No weight changes or alterations of the gravitational field of the Earth were observed with any of the coils tested at any current level.** No effect was observed even with the coils encased in ice. Further investigation of Hooper's other writings suggests that Hooper's observations may have been a misinterpretation of thermal effects. Although there is a possibility that the modest detection threshold of the instrumentation used for these tests would overlook a genuine, but minuscule effect, such an effect would be too small to be of practical value for a propulsion mechanism. **Any further research on this possibility is left to interested readers.**

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### SCALAR AND VECTOR FORCES

By Hal Fox, Editor

There is considerable discussion about scalar and vector forces. The purpose of this discussion is to try to clarify what is meant by a scalar, a vector, and a field. We will start with some definitions as used in the engineering and scientific areas:

**Scalar: a physical quantity completely described by its magnitude.** Examples of scalar quantities are mass, volume, density, speed (but not velocity because velocity implies a direction), time, mass, and energy.

**Vector: a physical quantity that has both magnitude and direction.** Examples are velocity (properly used, velocity describes speed plus direction), force (properly used, force must indicate the direction of the force in addition to its magnitude).

**Field:** a field has a more complex definition. A precise definition of **a field in mathematics is the following: "a commutative ring in which every non-zero element has an inverse; that is, if element  $a$  is not equal to zero, there is an element  $1/a$  (or  $a^{-1}$ ) with  $a \times a^{-1} = 1$ .** Almost none of us, when we talk about a magnetic field, an electric field, or a gravitational field, think in the terms of the definition of a field. In general we think of a field as being everywhere existent and changing its magnitude in proportion to the distance from that body or device that is producing the field. Normally, the magnitude of these fields decrease with the square of the distance from the source.

Let's start with gravity. **In the traditional Newtonian concept, gravity is the attractive force exerted by two masses.** The term force means it is a vector with both magnitude and direction. The direction by Newtonian definition lies on the line connecting the two masses. The magnitude varies as the square of the distance between the two masses. Newton did not define the fundamental cause of gravity nor did he insist that the earth and moon throw fishhooks. (The problem of "action at a distance" is another subject and is treated in the author's forthcoming book, Space Energy Impact in the 21st Century.)

We have a notion about the force of gravity acting between the centers of two masses. Our notions about the field of gravity in the vicinity of a large mass may be more complicated. We live and have our being on and near the surface of a large mass. We are constantly being tugged and pulled (or pushed) by the force existing in a gravity field. **We have the notion of being pulled by gravity toward the earth and seldom think that we are also pulling the earth toward ourselves.**

We observe the ocean and its waves. We do not see them, but we are taught about radio waves and spend much of our time enjoying (or ignoring) the mass of audio and video information disseminated by such electromagnetic waves. We get the concept of a possible gravity wave when we consider a large mass that is being accelerated toward and away from us. Think of a large massive piston being driven by a large engine so that the piston moves alternately toward and away from us. If we had a sensitive enough gravity meter, we would be able to measure the changes in the gravity field adjacent to this oscillating piston. In this case, we would talk about the oscillating force of gravity. We can and do write equations for such a wave. But, what is a scalar phenomenon in either gravity or electromagnetic fields?



Gregory Hodowanec has spent years in measuring various types of scalar phenomena. In his discussion, "Some Remarks on Tesla's *Earth Resonance*," he provides the information which we now summarize.

Tesla built some detecting apparatus that was capable of measuring the results of distant (and near-by) thunderstorms. He observed that subsequent to a strong lightning discharge there appeared a detectable

change that would repeat about every thirty minutes. Tesla concluded that these changes indicated the existence of some type of a stationary wave. "Stationary" and "wave" seem to be contradictory. However, assume you are standing knee deep in the ocean and observing the ocean waves. You will observe that the height of the top of the water varies from your ankles to your hips. You can measure the magnitude of the wave from this location by measuring the change in the wave top as the water moves up and down your torso. **It is in this sense that Tesla concluded that there was a measurable change, at the location of his instrument, showing the presence of some type of a "stationary wave."**

Hodowanec suggests that what Tesla measured was a changing scalar field. Note that the term field implies both magnitude and direction. You would describe a wave as having magnitude (six-foot high waves) and direction (moving from out of the north). **However, if you stand in one place and observe only the height of the wave, you are measuring the changes in the wave's magnitude at a specific location -- thus a scalar wave.**

Hodowanec states, "In essence, what has been discovered is that if a periodic disturbance in the scalar potential field is made, this disturbance will repeat with the same period at the disturbing location until the energy is dissipated or disturbed in some otherwise fashion."

What would one measure at a single point in a bathtub half full of water if you got a strong wave action going in the tub? You would measure a periodic change that would gradually decrease as the wave action slowly diminished.

What Hodowanec has done is twofold. First, he has developed an instrument that is capable of measuring this phenomena. Second, he has observed a lot of data and correlated this data with changes in the earth-moon positions and even believes he can detect the presence of astronomical disturbances as the earth sweeps his instrument through the skies.

Over the years, Hodowanec has been very free with his discoveries and his accompanying theories or explanations. **All of his writings have been made public so that anyone could have access to and use his discoveries.**

**What Hodowanec has found is that his instruments, a simple form of a gravity meter, appear to be responsive to scalar waves.** In using his instruments he is sure that he can detect the passage of celestial bodies, sun, moon, and even planets. As the earth moves his house and lab through space, the instrumentation is pointed toward various parts of the heavens. In one series of measurements, he decided that he was seeing the effects of a black hole far out in space.

Of more interest to local scalar waves, Hodowanec showed that a local gravity disturbance (such as could be produced by a swinging pendulum) could be measured and that this scalar effect would recur and gradually diminish. **For those of you who may be interested in scalar waves, we recommend that you build and experiment with Hodowanec's instrumentation.** See the following references to Hodowanec's various publications.

#### REFERENCES

Gregory Hodowanec, "Some Remarks on Tesla's 'Earth Resonances'", *Int'l. Tesla Soc*, Vol 3, No. 4, July-Aug 1987.  
 "Simple Gravimeter Detects Gravity 'Shadow' Signals", *Int'l. Tesla Soc.*, Vol 2, No. 2, April, 1986.  
 "Scalar Fields and Their Interactions, Part 3: Topics in Electromagnetism," *Int'l. Tesla Soc.*, Jan/Feb/Mar/Apr 1988, pg 13; also "Part 4: Topics in Electrogravitation", same issue, pg 16.  
 "Gravitational Impulses", [Radio Electronics Experimenter's Handbook](#), pg 114 ff.

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#### UNEXPECTED QUARK DEVELOPMENT

Malcolm W. Brown, (Staff Writer), "Quark May Not Be the Tiniest, After All," *The New York Times*, 8 Feb. 1996, p A15.

#### SUMMARY

Scientists at Fermilab reported that the quark may be made of smaller components of matter. If further experiments confirm theories about the quark's structure, major revisions would be needed in the theory of the standard model. Scientists spent over a year working on the data to ensure accuracy of their work, and now feel confident that something unexpected has happened. **Physicists cautioned, however, that "any claim about the presence or absence of new physics is not defensible."**

Because the data is inconsistent with currently accepted theory, revisions in the theory may be needed.

The report of Fermilab does not cite a single discovery, but rather culminates a four-year program of experiments and analyses of data. The data has been submitted to two journals for review and publication--*Physical Review Letters* and *Science*.

The laboratory's accelerator spins counter-rotating bunches of protons and antiprotons to combined energies of 1.8 trillion electron volts. In high-energy proton-antiproton beam collisions, detectors frequently see high-energy jets flying away from the points of collision at right angles or near right angles from the direction of the colliding beams. Reportedly, there are 120 percent more high-energy transverse jets than theory predicts. These results may mean that the surplus jets are being produced by collisions involving internal components of quarks as well as the whole quark itself. Another explanation could be that the collisions create an undiscovered particle similar to those that carry the "weak" nuclear force.

Summary by Dee Winter

Important: Current science doesn't have all of the answers. New discoveries challenge our theory of matter (and energy). If in this case, why not in low-energy nuclear reactions?

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#### A NEW BEGINNING FOR THERMODYNAMICS

By Josef Hasslberger (Italy)

The reactions and questions received on my articles "Vortex - The Natural Movement" and "Understanding Water Power" show that there is much interest in the subject of thermodynamics.

In fact, the "laws of thermodynamics" have long been the subject of heated debate, especially between the promoters and the detractors of another field - that of "perpetual motion."

Joachim Kirchoff, who has done a thorough research on the development and the history of thermodynamics [1] has shown that these laws, and especially the basic assumption of conservation of energy, can be traced



back to **an authoritative pronouncement of the Royal Academy of Science in Paris, made in the year 1775, saying that henceforth, the Academy "will no longer accept or deal with proposals concerning perpetual motion."** Their reasoning was, that perpetual motion is impossible to achieve and that the search for it is time consuming and very expensive. According to the members of the academy, those bright minds dedicating their time and resources to this search, could be utilized much better in other, more reasonable endeavors.

So the fact that until that time, no one had succeeded in constructing a workable device of "perpetual motion," was used as the reason to forbid, de facto, any further research in that direction. The *laws* thus established and enshrined as the laws of thermodynamics, have entered the official screening process of all new inventions. **Patent offices all over the world have more or less consistently refused since then to grant recognition to anything that was, in their opinion, infringing upon these laws. [Including cold fusion in the U.S.]**

Herbrand writes [2] that Prof. Pollermann of the Jülich Atomic Research Institute in Germany, who is an "expert" pre-examiner of patents in the energy sector, has given a negative opinion of 43% of the patent applications referred to him! He reasons that **"the natural laws accepted by science must be followed"** and says that many people (in his view irrationally) **"wish to make use of the eternal forces of gravitation and magnetism."**

We can see from this how efficient our current patent system is in suppressing any real renewal in the field of physics. I have written about the subject of patents in an earlier article [3].

### Conservation of energy

There is such a thing as conservation of energy. However, our understanding of the concept is largely incomplete. By negating the idea of an aether, which I called **space background** [4], we have limited our conception of energy to that which is observable on the purely physical plane. All electric and magnetic as well as gravitational phenomena however, are not purely physical. They require for their understanding as conception of a higher-dimensional space background, which is, to use the term of Moray, a "sea of energy."

Conservation of energy in the current form of understanding is a useless concept, as it negates the existence of this giant reservoir of energy, and does not take into account the constant interchange (through the phenomena of electricity, magnetism and gravitation), of our world of physical existence with that reservoir

Generation of electrical energy through magnetism for example, is not limited to the mechanical motive power applied to a generator and the movement of electrons through a wire, but involves a complex exchange between space background and physical machinery.

In this context, it may be profitable to remember a statement that Robert Mayer [5] made in connection with the concept of conservation of energy. He said: **"Seeing gravity as the cause of the falling of things, we talk about gravitation and thereby overlook, that an essential characteristic of any 'force' (energy) is to unify within itself the attributes of indestructibility and mutability."**

This statement should set us thinking. Mayer is fact asserts that energy, in addition to being indestructible, is also able to change form. This implies that we can not necessarily think in terms of unidirectional mutability, a concept which thermodynamics has however maintained since the inception of its famous *laws*.

Now the specific form of energy which is the subject of thermodynamics is heat.

### What is heat?

As a first step in our approach to the understanding of thermodynamics, we must try to understand what is this substance that forms the basis of the theory. Heat had, at first, been imagined to be a fluid and has been given the name "caloric." Soon caloric theory, which was at the basis of our famous *laws*, gave way to the contemporary understanding that heat is an excited state of matter, transferred through direct contact or through the mediation of electromagnetic waves of the infrared band. Absence of heat, or the temperature of absolute zero, is defined as a complete absence of molecular motion.

We shall, for the time being, accept this concept and add some other thoughts:

- Heat is a property of matter. Without matter, no heat.

- The molecular motion that we call heat is a chaotic, random motion.

- An increase of heat is an increase of randomness in matter. A decrease of heat denotes progressively greater order of molecular alignment.

### Two kinds of motion

In this universe, we have two basic kinds of motion: centrifugal and centripetal.

**Centrifugal motion is outward directed.** It is an expanding, a radiating, explosive motion. It has a tendency to increase the randomness in matter and thereby cause heat.

This is the kind of motion we are accustomed to. It has been used in our technology since the discovery of the fire, and especially since the invention of the steam engine and the consequent industrial revolution. **Our continued and exclusive use of this [centrifugal] motion has given us useful but dangerous machinery, polluting internal combustion engines, radio and microwave technology that has definite negative effects on human, animal and plant life, and, last but not least, the daughter of the atomic bomb, our atomic power plant, which is little more than a steam turbine using a very dangerous source of heat, radioactive uranium.**

We do not have to look far to see the results of this technology: a substantial increase in atmospheric  $\text{CO}_2$  since the start of the industrial revolution, a crisis of raw materials and energy of gigantic proportions just around the corner, and a situation where it is almost impossible today to find some clean air to breathe or some real fresh, healthy spring water to drink.

**Centripetal motion on the other hand is inward directed.** It is a contracting, a gravitative, an implosive kind of motion. It has a tendency to align and de-randomize the particles of matter and cause a decrease in temperature. Centripetal motion is associated with the animating force we call life, which physics in its desire to be *objective* or *scientific*, has steadfastly refused to look at.

Here we have the key to resolving the riddle of thermodynamics. We can see how nature, using both these types of motion in a balanced way, can ever regenerate itself. It simply goes, over and over again, through a whole cycle of

chaos → build-up → decay → chaos,

using the centripetal or vortex motion in the build-up part of the cycle and the radiative, heat generating motion in the decay part.

### Entropy

The idea of entropy, of the constant and irreversible winding down of the universe, was introduced with the second law of thermodynamics.

This law is based on an observation of James Watt's steam machine, which was the only technological utilization of thermal energy available at the time.

Entropy is associated with radiation. It signifies an ever increasing randomness of motion, an expenditure of the "innate energy of a system." According to the current views of thermodynamics, there is no antidote to entropy. Once expended, energy is said to be lost forever in that giant heat sink, which we imagine the vast reaches of the universe to be.

One of the great minds of this century, an outsider to established science, has recognized the folly of this view and coined a term for the antidote. He calls it syntropy. In his book *Cosmography*, R. Buckminster Fuller writes [6]: **"The reader will discover that the inexorable course of the gradual running down of the energy of the universe - that is, entropy - is only part of the picture. Entropy has a complementary phase, which we designate syntropy."**

We can now assert that syntropy is real, and that it is closely associated with the second kind of motion discussed above, with the centripetal, the vortex motion.

**While radiation is an entropic phenomenon, gravitation is an expression of syntropy.**

**Gravitation**

We know much about radiation, but comparatively little is known about its "negative" twin, gravitation. I am using the term gravitation here in a much wider sense than is generally done in physics. Gravitation in this context means an electromagnetic phenomenon associated with a vortex in space background. It is a twin of radiation, only with the vector inversed. Gravitation is a pulling phenomenon, and the effect we are most familiar with is that gravitation keeps us firmly glued to this planet. **But gravitation is more than that. It can manifest itself in just as wide a range of wavelengths as does radiation.**

Gravitation in this extended sense explains, for instance, the phenomenon found in most **free energy** devices, which often show a marked cooling effect on their immediate environment. This is simply radiation in reverse, caused by an independent source of gravitation, a point of attraction, which causes energy to "inflow" towards that point, rather than expanding outwards from it, as we usually observe.

Anti-gravity thereby becomes accessible to engineering. If gravitation is nothing but an inverse radiation, a pulling phenomenon associated with a vortex, **all we need to do in order to obtain levitation or anti-gravity is to establish an independent source of gravitation and orient it in opposition to the gravitation of this planet.** Applications in space propulsion would be comparatively easy to engineer.

How do we establish an independent source of gravitation? We establish, by whatever means available, magnetic, mechanic or otherwise, a strong vortex in the background field of space. There are numerous examples of such occurrences in the tales that surround the field of free energy, that have not been understood so far and therefore were incredulously dismissed as the fantasies of a bunch of loonies.

Maybe we should look at these phenomena again and try to understand them with the new conception we now have of gravity?

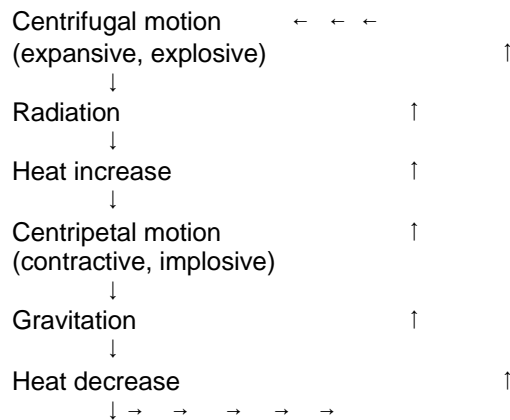
**The thermodynamic cycle**

The thermodynamic cycle, as currently understood, is a one-way street. It leads from a source of heat (fuel) via combustion to motion, but the heat must be constantly renewed through more fuel, as it is "lost" to the environment in the process.

In an article based on the research of Viktor Schaubberger, regarding the functions of vortex motion, Schäffer [7] writes in 1972:

"If the second law (of thermodynamics) does not hold true in the case of vortex motion, one could postulate the following cycle:  
Heat → Vortex → Motion → Friction → Heat  
  
Vortices therefore should be able to change heat energy into motive energy. This would necessitate an acceleration of flow and a cooling effect. Both of these can be observed in the case of vortices."

I will not attempt to provide a mathematical description for this circular process, but in the terms used in this article, I want to restate what has been proposed by Schäffer, to put forth a new and radically different thermodynamic circular process:



This is the natural thermodynamic cycle of this universe.

**Using this cycle, that is, using both the centrifugal and the centripetal part and thus establishing a stable pulsation, it will be possible to engineer new clean forms of motion-producing and energy-producing machinery, that do not depend on fuel such as petrol, coal or gas for their motion. Does that sound like a perpetual motion?**

This does not mean, that the law of conservation of energy is violated.

We have simply extended our conception of this law, to include, besides the immediately visible physical

universe, also the "sea of energy" which is the higher-dimensional space background.

*We have found a way, in other words, to tap into the very wheelwork of nature and utilize its energies more efficiently.*

At this point, I would like to thank all those inventors who have encountered these phenomena in their research and who, despite a completely inadequate scientific basis, have persisted to make their inventions reality. I would like to acknowledge that their inventions are real. Despite any refusal of patent examiners and despite the usual incredulity they have encountered everywhere.

It should also be said that this article would not have been possible without the immense work Viktor Schauberger has done in observing and describing the mechanics inherent in the vortex motion of water, and without those that have collected and published what was left of Schauberger's writings to keep the flame of this knowledge alive for future generations.

**One last word about thermodynamics: It seems that things went wrong when we were trying to imagine a closed system. That is something achievable only in theory. Because every system existing within this universe is in a constant and continuous exchange with the rest of the universe. And how this universe is made, what it consists of and how it functions, we have not even remotely begun to understand.**

#### References

- [1] Joachim Kirchhoff, "Perpetuum Mobile and Klima-Katastrophe," in *raum & zeit*, nos. 45 and 45.
- [2] Ludwig Herbrand, "Erinnerungen eines Entwicklungsingenieurs," page 10, own computer printing by Ludwig Herbrand, D-5144 Wegberg.
- [3] Josef Hasslberger, "The Inventor and Society," in *raum&zeit* (American), No. 4, October 1989.
- [4] Josef Hasslberger, "Vortex, the natural Movement," in *EXPLORE!* No. 5, Vol 3, 1992.
- [5] Quoted from a letter of Neise, Theodor Ludwig, published in *raum&zeit*, No. 63, 1993, page 98.
- [6] R. Buckminster Fuller, *Cosmography*, page 51, Macmillan Publishing Company, 1992.
- [7] Bernard Schäffer, "Die Wirbelfunktion als Energiequelle," in *Implosion*, No 43.

#### AETHERIC HYDROGEN?

Paul E. Rowe (Mashpee, MA), "Sparks from Grinding and the Aether," *Toth-Maatian Review*, as "Hydrogen From the Ether," vol 12, no 4, July, 1995, pg 5839-43.

#### AUTHOR'S ABSTRACT

When iron or iron alloys are shaped on a grinding wheel, sparks are produced. It is generally accepted that these sparks are due to reaction of the hot, fine metal particles with the oxygen of the air to produce metal oxides, heat and light. This paper will try to show that this is not the case. A more unconventional explanation will be proposed.

The author suggests that the reader test the following observations by shaping a piece of scrap iron or iron containing alloy on a bench grinder, in a darkened area. A piece of blank white paper should be placed under and around the base of the grinder to collect ground particles.

1. The sparks all have and retain the same yellowish white color until they are completely extinguished.
  2. Sparks which impinge on the paper very near the grinder do not cause the paper to discolor due to their heat nor do those which travel much further.
  3. Sparks, which travel parallel to the paper or higher, retain the same color glow until they suddenly self-extinguish in the air.
  4. When one places ones bare hand in the shower of sparks, one is surprised not to feel any warmth, note any discoloration of the skin or detect the odor of burning flesh.
  5. Very fine particles accumulate on the paper. The particles are similar in color to the original piece of metal and are strongly attracted to a magnet. The particles are much finer than one would expect based on the apparent width of the spark trails. When the particles are rubbed into the paper, they do not leave a red streak.
- Now let us consider what one might expect if the accepted explanation of this phenomenon were correct.

1. The grinding action breaks the piece of metal into fine particles which are quite hot due to the abrasion involved.

2. The hot particles are thrown into the air and react with the oxygen of the air to form an oxide coating on the metal surface. The chemical reaction releases considerable energy which heats the particle to such a temperature that the particle glows. At the temperature where the glow is yellow white, the surface would be completely oxidized to the non-magnetic ferric oxide which is either a red pigment (rouge) or a black solid which produces a red streak, when rubbed on white paper. Indeed, this is a test mineralogists employ to test for ferric oxide. The magnetic  $\text{Fe}_3\text{O}_4$  oxidizes to red ferric oxide when heated to yellow white heat in air.

3. Particles which impinge on the paper close to the grinding wheel are quite hot and should discolor the paper.

4. One expects to feel discomfort when his hand is placed in the stream of sparks in the vicinity of the wheel. One might also expect dots of discoloration on his skin and the distinctive odor of burning flesh.

5. Sparks which self-extinguish in air should lose temperature relatively gradually and the color of the spark should change from yellow to orange to red as the spark travels away from the wheel.

6. The particles which fall on the paper should be ferric oxide which is non-magnetic or metal particles coated with ferric oxide. The particle should produce a red streak when rubbed on the paper as pointed out above.

The great discrepancy between what is expected and what is observed suggests that the accepted explanation is incorrect.

This author has written several papers for this Journal [Toth-Maatin Review]. The most pertinent ones were summarized in 1991 [1]. The papers quote many experimenters (some quite well known) who have reported obtaining hydrogen gas in and from vacuum. The papers include descriptions of experiments in which the author produced surprisingly large quantities of hydrogen gas in and from vacuums of 0.020 to 5 torr. (in electrical discharges and, also, in the presence of glowing metals). **The article suggests that the hydrogen is produced from a matrix of protons and electrons which fills the universe (the Aether).**

The author proposes the following mechanism in an attempt to explain sparks obtained in grinding iron-containing metals:

1. The grinding operation produces fine, hot metal particles which fly through the air.

**2. A small portion of the Aether at the surface of the hot particles is converted into extremely reactive monatomic hydrogen which quickly reacts with air. The overall reaction results in the formation of water and the evolution of light from the area of the reaction.**

**3. The conversion of Aether particles into hydrogen requires energy which is removed from and, therefore, cools the metal particle.** At some point the particle becomes too cool to cause the conversion of Aether into hydrogen and the glow stops.

4. The glow is not on the metal particle surface which becomes cooler and cooler as the particle travels through the air. The glow is due to the chemical reaction taking place in the gas in close proximity to the particle. The color of the glow is characteristic of that chemical reaction and remains the same as long as the reaction is taking place.

5. The gas has a negligible heat capacity compared to the metal particle. Even though the temperature of the spark is quite high, the total energy is quite low. If one flicks his finger through the flame of a gas range and then onto the much cooler red-hot coil of an electric range, he will appreciate this effect.

Reference:

[1] P.E. Rowe, *Toth-Maatin Review*, vol 10, 1991, pp 4981-4990.

[Note that for Einstein's General Theory of Relativity the empty aether has to be characterized with a dielectric constant and permeability. Even Einstein couldn't work with an empty aether. -- Ed.]

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## TORNADOES AND TINY PLASMOID PHENOMENA

Edward Lewis (Chicago, Illinois)

It seems to me that tornadoes and ball lightning are the same kind of phenomena [1,2], and as I have described in other articles [3], discharge and electrolysis apparatus, such as those used by Ken Shoulders or Matsumoto, produce small, micrometer sized or smaller or larger ball lightning-like phenomena that may also be called plasmoids [4,5], such as those produced by Bostick and Nardi which left marks similar to those that Matsumoto and K. Shoulders have produced, and these plasmoids are a locus [6] of



excess heat and elemental transmutation and conversion and disappearance of substance, and plasmoidal particles that people may report. Tornadoes and ball lightning may be quite energetic, and radiate much light, and seem to be associated with elemental production. As Ken Shoulders told me [7] and as is apparent from Matsumoto's detailed traces, there is no evidence that ring plasmoids are vortices, and I don't know whether all plasmoids rotate or are vortices, though if there was air vorticity it probably would not show up on emulsions or plastic targets, though some of the traces Matsumoto produced do show features like that of tornadoes.



Ken Shoulders' concept of the electron vortex in a high-density charge cluster.

[Note: There is no definitive, easily-obtained proof that a high-density charge cluster is a vortex of electrons. However, the evidence appears to support the concept that Shoulders' EVs are tiny vortices of highly dynamic electrons where the electron motion

develops B & H fields sufficient to provide stability to these charge clusters. --Ed.] Generally, the similarity of phenomena is evidence of the identity of phenomena; intermediate phenomena are evidence of identity of phenomena, and the interconversion of phenomena is proof of the identity of phenomena. There are several reports of tornadoes that were bright toroidal phenomena, and many reports of air or water vortices associated with smaller spherical, toroidal, and cylindrical ball lightning-like phenomena, and some reports of intermediate phenomena -- glowing and smoking whirlwinds, or bright and hot [8] tornadoes that dried the ground and burned vegetation or scorched forests of trees. There is an instance when a very large, bright ball-lightning phenomena in a thunder cloud seems to have converted to a powerful tornado, and some reports of very large, tens of meters in diameter, ball lightning-like phenomena that have been called gorgons spouting out tornado-like phenomena, and many reports of tornadoes throwing off ball lightning phenomena from around the bottom rim, just as many tornadoes throw out smaller whirlwinds.

According to Dessens [9] who catalogued tornadoes in France, about one-half of the tornadoes that he catalogued were either "furrowed by lightning, or the bottom of the tornado 'vomits' balls of fire, or in short the tornado is luminescent at one place or another."

For an example of a very large luminescent toroidal ball lightning that was like a tornado, the Silverton, Texas "tornado" of May 15, 1957 during which 20 people died was observed by a resident of the town who reported a round light in the form of a ring that was about 40 or 50 feet above the ground and 40 or 50 feet in diameter [10]. He said that the lightning came up from the ground and corkscrewed around to join the ring and went up into the cloud.

Ken Shoulders [11] calls the plasmoids he has produced EVs, and he told me [7] that he thinks Matsumoto is producing EVs, and that the phenomena he and Nardi and Bostick [12] have produced are the same, though he uses much less electricity to make them. I related ball lightning to plasmoids [13] a few years ago, and Matsumoto [14] has accepted my idea that ball lightning phenomena that can be called plasmoids are produced in electrolysis and discharge apparatus and are responsible for the many kinds of anomalous traces he has shown in his many articles in *Fusion Technology*. [see also Fox & Matsumoto letters, *F.Tech.*, vol 24, no 3, Nov. 1993, pp 347-8.]

In a recent article [15], I described several of the major kinds of anomalous traces on nuclear emulsions that Matsumoto set near apparatus that produced "cold fusion" phenomena as plasmoid traces, and I explained what the traces were. As I've also described in other articles [16], plasmoids such as ball lightning and tornadoes may move along a surface such as the ground and leave trails, holes, or furrows. The plasmoids Ken Shoulders produced did so, and Matsumoto has shown pictures of interesting micrometer size trail marks that meander and even backtrack [17] on nuclear emulsions in his articles. Tornadoes are often reported to leave furrows in the ground a few inches or several feet deep that may sometimes be more than a mile long. In several recent manuscripts concerning ball lightning phenomena produced by discharge apparatus, Matsumoto has shown ring traces of the same size combined together in one place [18] that are due to a toroidal or cylindrical plasmoid repeatedly hopping up and down on one spot of an emulsion, just as tornadoes and ball lightning are sometimes reported to hop up and down on the ground, and this is very substantial evidence that the ring traces are due to plasmoids that are like ball lightning. Some of the trail marks he has shown in various articles are obviously due to the moving of a ring plasmoid or a cylindrical plasmoid on a surface.

Perhaps ring plasmoids may combine to form cylindrical plasmoids. Maybe some of the

plasmoid phenomena that people such as Ken Shoulders and other EV, plasmoid, and ball lightning researchers have thought were string-like, were actually tubular, composed of stacked rings, as was the tornado that a trained weather observer named R. Hall [19] was inside in 1948. He reported that "it looked as if the whole column were composed of rings or layers." In some of the photographs that Matsumoto has shown, there are string-like traces that seem to be banded as if they are traces of stacked rings. Likewise, perhaps many ring plasmoids have hollow rims, though I know of no evidence of this. Many plasmoid ring marks and traces appear to be of discreet beads arranged in a circle. It is commonly known that a tornado or whirlwind may be composed of smaller tornadoes or whirlwinds [20] that are arranged in a circle. In fact, a drawing by K. Shoulders in his patents of a 10 component EV ring looks much like a drawing of a 10 component dust devil ring in the referenced article: the dust devils are similarly spaced in a circle. Tornadoes and plasmoids may have a variable number of parts. However, I would like to see real evidence of rotation or vorticity in tiny plasmoids, and as yet I don't know whether all Ball Lightning phenomena rotate or vortex, or are associated with vorticity.

Evidence for the production of elements in ring-shaped, micrometer-sized plasmoid phenomena has been recently reported by Matsumoto [21]. He photographed a ring-shaped phenomena that was about 9.5 micrometers in diameter, and it is opaque and not apparently luminescent. **He reports that "nuclear transmutation" took place in the "ring zone."**

#### References

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- [3] E. Lewis, "A Proposal for the Performance of Four Kinds of Experiments to Test My Own Hypotheses and a Statement of a Deduction about Phenomena," manuscript article, October 19, 1992.
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- [10] B. Vonnegut and C. Moore, "Giant Electrical Storms," in L.G. Smith, ed., *Recent Advances in Atmospheric Electricity, Proceedings of the Second Conference on Atmospheric Electricity*, Portsmouth, New Hampshire, May 20-23, 1958.
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- [12] V. Nardi, W. Bostick, J. Feugeas, and W. Prior, "Internal Structure of Electron-beam Filaments," *Physical Review A*, 22, no 5, 2211 (November 1980).
- [13] W. Bostick, "Plasmoids," *Scientific American*, 197, 87, (October 1957).
- [14] T. Matsumoto, Letter July 14, 1994.
- [15] E. Lewis, "Some Important Kinds of Plasmoid Traces Produced by "Cold Fusion" Apparatus," *Fusion Facts*, vol 6, no 8, pg 16, February 1994.
- [16] E. Lewis, "Plasmoid Phenomena and Cold Fusion," submitted to *Fusion Technology*, June 1995, and *Cold Fusion Newsletter*, Nov. or Dec. 1995.
- [17] T. Matsumoto, "Searching for Tiny Black Holes During Cold Fusion," *Fusion Technology*, 22, 281, Sept. 1992.
- [18] T. Matsumoto, "Observation of Tiny Ball Lightning During Electrical Discharge in Water," submitted to *Fusion Technology*, Jan. 23, 1994.
- [19] R. Hall, "Inside a Texas Tornado," *Weatherwise*, 4, no 3, 54, June 1951.
- [20] R. Peterson, "In Pursuit of Dust Devils," *Weatherwise*, 29, no 4, 184, Aug. 1976.
- [21] T. Matsumoto, "Artificial Ball-lightning -- Photographs of Cold Fusion," manuscript dated Jan. 17, 1995 presented at the ICCF-5, April 9-13, 1995, Monte-Carlo, Monaco.

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#### ANOTHER POINT OF VIEW?

Tirade Against the Mental Menace of Mythical ZPF:  
By Deep Physics

Author's Note: ZPF is a very valuable short-cut in some important tricky calculations, but it is not real-world physics.

X-ray imaging is only possible due to differential (i.e. non-zero) scattering and absorption -- which at very high intensities and over long times, ultimately destroys tissues. To support the concept that the zero-point fluctuations (ZPF) just so happens to have such a perfect stochastic balance that life evolved in an energy field as intense (at the mid-range) as the beam of a continuously running gamma-ray laser (but with miraculously perfectly randomized phase) is a little far fetched. Any stochastic radiation field strong enough to push protons together in a nucleus would almost certainly have random "Brownian motion" fluctuations strong enough to disintegrate neutrons, among other things.

**Without knowing the absolute total energy level of the universe, and the ratios of kinetic energy of various kinds to the potential energy fields of various kinds, the "zero level" of so-called zero point energy is a misnomer** -- the product of mathematicians who treat complex but essentially cook-book mathematics as physics rather than as a provisional tool for analyzing physics.

Mass density is connected with its reaction to gravity and acceleration. Mass solidity (in atomic matter) is connected with electromagnetic repulsion. There is no reason per se to attribute such (possibly and potentially) derivative mass characteristics (or equivalent energies) directly to the universal potential field. The probably absurd high energy densities attributed to the zero point field may be calculation epiphenomena of super-luminal super-conservative super-long-range interactions with all other particles in our galaxy in particular (and all other particles in the universe in general). The net averaged effect would be enormously high frequency damping when integrated over all intermediate secondary (and higher order) interactions over increasing volumes -- which is why inertia acts so incredibly smoothly. ZPF approximates this, but since (to achieve its extreme simplification and hence calculational simplicity) it does all the averaging locally, it ends up calculating extreme fluctuations which then averaged out by whatever electron or atom it supposedly affects, rather than before hand. A series of colliding tidal waves of opposite phase that largely cancel out thousands of miles out at sea (due to mixing caused from intermediate islands) are quite different from a series of such waves continually striking the opposite sides of the good cruise ship Electron with full force while it is tied to the dock of port Atomic.

The bizarre relativistically-compatible spectrum of ZPF and the not so relativistically-compatible super-high-

frequency cutoff of the ZPF turns out to be the constraints that would be imposed anyway by a finite Euclidean universal volume with neo-classical forces. A finite Euclidean universe is like that inside of a totally black hole which from the inside appears to be a totally reflecting "mirror", conserves total energy, and leads to a more-or-less blackbody radiation spectrum. **If Petr Beckman is correct about special and general relativity being wrong, or if the universe is, in fact, Euclidean, or more likely both, then the totally hypothetical power spectrum of ZPF theory cannot be physically correct, except as a useful mathematical shortcut in some types of calculations.**

Super-luminal super-conservative interactions would not be generally useful for sending information at super-luminal rates, since in information theory terms, such interaction channels are extremely broad-band, omnidirectional, and saturated with information about absolute frame-related matter-energy potential field configurations. The upper velocity speed limit on light and potential mass-energy gains at relativistic velocities are, to some extent, probably super-luminal channel saturation side-effects. Thus the universal field may be incredibly active physically and yet be (in rough and sloppy terms) a very tenuous yet perfectly continuous and completely filled medium. **The idea that all physical interactions must ultimately be dominated by extremely-high amplitude super-high frequency electromagnetic static is best regarded as a reductio ad absurdum (i.e. reduction to the absurd) proof that there must be a fundamental error in contemporary (quantum relativistic) electromagnetic theory (which in violating Newton's third law, is already doomed to eventually be replaced).**

Apart from the heuristic simplifications of (otherwise extremely complex) calculations, it is almost certainly a big error to attribute mass-energy and radiant-energy characteristics to the aether beyond the actually observed manifestations of such energy. The aether can be super-light, super-rigid, and hence the toughest stuff in the universe -- and that is all the tougher it realistically has to be -- without being some bizarre and immeasurably super-dense or super-energetic stuff.

The aether "simply" needs to be a universal, fully-conservative, electromagnetically-chirally-polarizable potential field.

Since the total energy (including field and mass equivalence) of the universe is an eternal finite constant, the universal potential field need not itself be saturable to meet the absolute requirement of finite polarization or finite energy levels.

It is very important to not confuse the natures and roles of math and physics if you want to be scientifically realistic, especially when it comes to real-world engineering -- e.g. you can put your finger right through the "center of mass" of a doughnut. Try it -- you can really do it, often on the very first try! If someone gets mass from a doughnut, you can be sure they are not getting it from its central hole just because some official expert theorist says that it is a mathematically certified center of mass and therefore that is where the mass is coming from.

*[Editor's Note: Kenneth Shoulders and this author, a noted perennial student of real-world physics, have recently agreed that the high-density charge cluster may be of enormous importance as a new measurement window on the physical universe and these measurements may lead to important advances in the understanding of physics. It is my considered judgement, that the phenomena of high-density charge clusters will become strong evidence of the existence of an energetic aether and of the ability to tap that energy. -- Hal Fox]*

## LETTERS

### LETTER FROM J.R.R. SEARL

(summary)

RE: A Proposal for Cleaner Energy and Propulsion in the Future.

A seminar entitled "Alternative Technology" is to be held at Middlesex University, London on 10 March 1996. Searl's innovative propulsion and energy technology will be discussed. The benefits of this technology are increased efficiencies of the use of energy in domestic, industrial, transport, aviation, and space travel applications. The use of this technology brings less pollution, and greater payloads over greater distances than existing technologies.

The Searl Effect Generator is currently under development which increases the efficiency of the utilization of energy. The Inverse Gravity Propulsion System will be developed in Britain from April of this year onward. This system enables aero and space vehicles to be propelled efficiently and more cleanly than at present.

Production of this technology is expected to begin early in 1997, so that by 2001 the resulting products will be readily available and in widespread use.

Other seminars will be held on June 2, and September 1, 1996. For more information please phone or fax: Direct International Science Consortium, Inc. (DISC), London, England, tel: +44 (0) 181 200 0714, Fax: +44 (0) 181 200 5932.

P.S. There will be a model of the 170-foot spacecraft under development on display and it will be part of these meetings. Each meeting will update all present on progress. It is called Starship Explorer, and the program of R&D is called Project Wanderer. You will be hearing much more about it in the future.

DISC webpage:  
[www.servtech.com/public/jasontee/](http://www.servtech.com/public/jasontee/)

### LETTER FROM GARY VESPERMAN

Courtesy of John Grubb

Your editorial in the February 1996 *New Energy News* led me to reminiscence about my father, Morris A. Vesperman. He was the superintendent of Drummond High School, Drummond, Wisconsin (extreme north woods of Wisconsin). It was a very small school so he sometimes had to teach a class left over after scheduling the teachers.

One year he had to teach my sophomore biology class. I still have a vivid memory of the first day of class when he said that a college professor taught him that the only true way to learn science is to study nature, not books. So for the next couple of weeks, while it was still warm, we went out in the nearby woods where he helped us students find and identify various plant species. Then he passed out the textbooks.

He was the only teacher or college professor who ever taught me that most crucially important scientific research lesson.

**LETTER FROM BEN IVERSON**

(P.E., ITAM, Oregon)

The dialog between Gregory Hodowanec and Raymond Nectroux was interesting in what is implied as much as what is said. In one prosaic paragraph RN says quite a lot in *"All the words and files on any computerized nets cannot change that! Increasing the papers and files with inadequate methods and measuring devices leads to an increasing number of ingenious mystified people, seduced by wonderful things."*

I cannot say it better. One does not better understand matter by studying matter. One must study energy. Further, one does not better understand energy by studying energy. One must understand Music and sound. One does not better understand Music and sound by studying Music. One must study the mathematics which lies behind the music. It seems like a long road to take, but one can travel that road much more rapidly than anticipated, if they have the map, which is laid out here. That is what it means when one says, "The gate is narrow. The path is straight." It is also implied when one says "As above, so below."

The science of science is so deficient that an education from kindergarten through PhD is only the kindergarten of ultimate knowledge. There is so much to relearn and put it all into perspective. There is a very large field of mathematics which is wide open to original research. What I have accomplished, in Quantum Arithmetic, is only an opening. Others are picking up and shall expand it in 1996.

One can almost say that there probably will be no New Energy devices developed from the present course. However, some are more gifted, and through synergy, will be able to produce a machine. "Synergy" is what Nectroux calls "dreamful concepts." That is where our first machines will occur. Those machines have already come to us from Orffyreus, J. Keely, N. Tesla, T. Morray, and even F. Sweet, over the present and past centuries. It is almost assured that it will appear in the same way, before this century ends, through synergy. Quite possibly it will appear in 1996.

Our search is real and the machines are real but not yet realized. There is a partial realization that the energy graphs are not sinusoidal. The mathematics says they are probably elliptical curvatures which also produces square waves, triangular waves, sawtooth waves which science has not encountered.

There are so many shortcomings in conventional science that it is amazing that we have made the progress which has occurred. Conventional science has no basic foundation what-so-ever. It is all theory piled upon theory. Each theory is the result of personal interpretation of "wonderful things." Almost never does theory go back so far as Euclid in mathematics. We have become insolent in our pride. Many theories are often only an attempt to satisfy the ego and greed. These are unwanted parts within our present equation.

The Hodowanec/Nectroux dialog is an important contribution. New Energy is non-linear devices. It is metaphysical, and must be treated as such. However, never has the future seemed so bright.

**LETTER FROM JIM BUZONAS**

28 December 1995

Before me I have the book: Nineteenth Century Aether Theories, by Kenneth F. Schaffner (1972) Pergamon Press Ltd. Selected readings in physics contents of this book:

Part 1: Introduction:

The Functions of the Aether.

The Historical Background of the Nineteenth Century Aether Through Young and Fresnel.

Aberration from Bradley to Michelson and Morley.

The Elastic Solid Aether.

The Electromagnetic Aether.

Lorentz' Aether and The Electron Theory; The Electrodynamics of Moving Bodies.

For Part One references are given for pp. 118-121.

Part 2: Collected Papers.

Some books that may be of interest to you are:

Basset, A.B. (1892), A Treatise Physical Optics; Deighton, Bell & Co., Cambridge, MA.

Crew, H. (ed.) (1900), The Wave Theory of Light; American Book Co., New York.

Hesse, Mary B. (1965), Forces and Fields; Littlefield, Adams & Co., Totowa, New Jersey.

Jammer, M. (1961), Concepts of Mass in Classical & Modern Physics, Harvard Univ. Press, Cambridge, MA.

Kuhn, T.S. (1962), The Structure of Scientific Revolutions; Univ. of Chicago Press, Chicago, IL.

Lindsay, P.B. and Margenan, H. (1957), Foundations of Physics; Dover edition, New York.

Preston, T. (1965), Theory of Light, Macmillan, New York.



Sommerfeld, A. (1933), Electrodynamics: Lectures on Theoretical Physics, vol. III, translation by E.G. Ramberg, based on lectures given in 1933-34. 1964 edition by Academic Press, New York.

Sommerfeld, A. (1950), Mechanics of Deformable Bodies, translated by G. Kuerth, Academic Press, New York.

Larmor, J. (1900), Aether and Matter: Cambridge Univ. Press, Cambridge, MA.

Swenson, L. (1962), "The Ethereal Aether: A Descriptive History of the Michelson-Morley Aether Drift Experiments", 1880-1930, unpublished Ph.D dissertation, Claremont University.

Tricker, R.A.R. (1966), The Contributions of Faraday and Maxwell to Electrical Sciences: Pergamon, Oxford, England.

Whittaker, E.T. (1960), A History of The Theories of Aether and Electricity: 2 vols., Harper and Bros., New York.

Williams, L.P. (1965), Michael Faraday: A Biography: Basic Books, New York.

Oliver Heaviside, Electromagnetic Theory (3 vols.), Electrical Papers (2 vols.).

Oleg D. Jefimenko, Causality, Electromagnetic Induction, and Gravitation.

To the readers of *NEN*: you should establish regional New Energy libraries and get yourselves all the education you can.

Fundamentals of Photonics, Saleh and Teid, John Wiley, explains nonlinear optics, 4-wave mixing. It should make Bearden's statements on the pumped phase conjugate mirror [more understandable]. I recommend AIDS: Biological Warfare as a primer and Gravitobiology to be studied thoughtfully.

I got a surprise when I called the National Military Command Center and talked to a few bureaucrats who told me they are not interested in vacuum energy or gravity control. The senior officer's voice said, "I don't know how you got our number, but I think you need to talk to DOE. You should contact them. The military is not interested in what you have to offer."

Hal, I've got: Particle Physics & Introduction to Field Theory by T.D. Lee, Columbia Univ., 2nd edition, Nov. 1982, Harwood Academic Publishers, New York. Look at Chapter 16, "Vacuum As The Source Asymmetry." Chapter 25 looks at the possibility of vacuum engineering. You'll see what Tom Bearden has been driving at.

Quoting Schaffner's book, Nineteenth Century Aether Theories, he speaks of Joseph Larmor in Chapter V, "The Electromagnetic Aether,":

p 91: Joseph Larmor's "Aether and The Electron." Larmor is perhaps not so well known today as the previously cited writers on the electromagnetic aether. Nevertheless, it was Larmor who not only brought the mechanical-electromagnetic aether to its most developed state, but who was also the first person (1897) to incorporate the Lorentz-Fitzgerald contraction within a "general" electromagnetic explanation of Larmor's contributions in this explanation of aberration phenomena.

p 92: Larmor's specific approach was, as he himself acknowledged, identical with that of Fitzgerald's as regards the free aether. He used Fitzgerald's expressions for the potential and kinetic energy of the media which could variously be interpreted in either Maxwell's aether or MacCullagh's generalized aether. Larmor employed the same transformation as Fitzgerald to obtain a relation between the basic quantities of the "two" aethers, identifying electric displacement with aether rotation and magnetic force with aether velocity. The Principle of Least Action was also used to obtain the equations of a disturbance propagated through the aether.

## Meetings

### ICCF6

#### Sixth International Conference on Cold Fusion

will be held 13-18 October 1996  
 Hotel Apex Toya, Hokkaido, Japan  
 sponsored by  
 New Energy & Industrial Technology  
 Development Organization (NEDO)  
 Tel +81-3-35-08-8901  
 Fax +81-3-3508-8902  
 E-mail mac@iae.or.jp

The conference will consist of both oral and poster sessions covering experimental work and theory on the following topics:

- Excess Energy Phenomena in D<sub>2</sub>/Metal Systems
- Correlation Between Excess Energy and Nuclear Products

- Nuclear Physics Approaches
- Material Science Studies
- Innovative Approaches (Miscellaneous Phenomena)

**The Deadline for abstracts is May 1996.** More information will be available in the second announcement, issuing in February 1996. Registration fee of ¥40,000 (about \$400) includes a banquet and proceedings. A technical tour to the NHE lab is scheduled, along with other professional and social events.

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### CALL FOR PAPERS

International Association of Science and Technology of Development (IASTED)

#### International Conference on HIGH TECHNOLOGY IN THE POWER INDUSTRY

4-8 June 1996, Banff, Alberta, Canada

The aim of this conference is to act as a forum for the exchange of information and experience on all aspects of high technology and advances in the power field.

#### Submission of papers

The full manuscript (max. four pages) and three copies are to be received by Feb. 1, 1996, for review by the International Program Committee. Full manuscripts must be in the format specified. (Contact IASTED at (403) 288-1195 or Fax (403) 247-6851, e-mail [iasted@istd.cuug.ab.ca](mailto:iasted@istd.cuug.ab.ca) for specific paper instructions.) Include a statement in your cover letter confirming that if the paper is accepted, one of the authors will attend the conference to present it and pay the registration fee of \$400 by 1 April 1996. Notification of acceptance will be mailed by March 1, 1996.

sent as soon as possible to the address below. Consideration of abstracts cannot be assured if received after March 15, 1996. Authors will be notified as soon as possible if the paper is accepted for presentation. Copy-ready manuscripts for proceedings are due April 1, 1996.

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### NEW IDEAS IN NATURAL SCIENCES

International Conference

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Send the Name of your paper, your name and address, fax, e-mail address and abstract (10-20 lines) to the Fax number: **7-812-2478924**. Abstracts must be received by 1 Feb. 1996. Also, please send a copy of the complete paper (up to 10 pages and 2 figures) by post to: Dr. Anatoly P. Smirnov, P.O. Box 25, 195290, St. Petersburg, Russia. The papers will be printed in a book in English prior to the conference to help international discussion.

Registration fee: US\$ 250 (book and simultaneous interpretation of lectures at conference included). Hotel US\$ 63 per day. Use above Fax and address to request information or to register for conference.

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### INTERNATIONAL SYMPOSIUM ON NEW ENERGY

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**April 25-28, 1996**

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#### CALL FOR PAPERS AND ABSTRACTS:

Scholarly papers are invited on any topic related to New Energy, and should include one or more of the following: Theories, designs, inventions, and research results. Abstracts of not more than 400 words must be

## Commercial Column

The following companies (listed alphabetically) are commercializing cold fusion or other enhanced energy devices:

### COMPANY: PRODUCT

**American Cold Fusion Engineering and Supply:** Information and troubleshooting for the fusion research and development industry. Sacramento, California. The president, Warren Cooley, can be reached at 916-736-0104.

**CETI** (Clean Energy Technologies, Inc.): Developers of the Patterson Power Cell™. Dallas, Texas. Voice (214) 458-7620, FAX (214) 458-7690.

**Clustron Sciences Corp.:** New energy research consulting and information. Contact: Ron Brightsen, 703-476-8731.

**ENECO:** Portfolio of intellectual property including over thirty patents issued or pending in cold nuclear fusion and other enhanced energy devices. Salt Lake City, Utah. Contact Fred Jaeger, Voice 801/583-2000, Fax 801/583-6245.

**E-Quest Sciences:** Exploring The Micro-Fusion™ process. Seeking qualified research partners for their sonoluminescence program. Contact Russ George, FAX (415) 851-8489.

**Fusion Information Center (FIC):** Research and development of new energy systems. The world's most complete resource depository for cold fusion research information, as well as other new energy research including zero-point energy; space energy research; electronic, electromagnetic, and mechanical over unity devices and more. We are the publishers for *Fusion Facts*, *New Energy News*, and *the Journal of New Energy*. Voice 801-583-6232, Fax 801-583-2963.

**Holotec AG,** Clean Energy Technology, contact André Waser, Gen. Mgr., Bireggstrasse 14, CH-6003, Luzern, Switzerland. Phone 011 41-41 /360 4485, or Fax 011 41-41 /360 4486.

**Hydro Dynamics, Inc.:** Hydrosonic Pump, heat-producing systems using electrical input with thermal efficiencies of 110 to 125 percent. Rome, Georgia. Contact James Griggs, Voice 706/234-4111 Fax 706/234-0702.

**JET Energy Technology, Inc.:** Design and manufacture of  $\pi$ -electrode systems, calorimeters, and associated equipment and systems. Consulting regarding radiation, materials, and other scientific and engineering issues. Weston, MA. Contact Dr. Mitchell Swartz, Voice 617/237/3625. Fax 617/237/3625.

**Magnetic Power Inc.:** The Joint Venture partner with Sciex (UK) for Takahashi supermagnets and supermotors in North America. Sebastopol, CA. Contact Mark Goldes, Voice 707/829-9391, Fax 707/829-1002.

**Nova Resources Group, Inc.:** Design and manufacture ETC (Electrolytic Thermal Cell); EG (commercial power cogeneration module); and IE (integrated electrolytic system). Denver, CO. Call Chip Ransford, Phone (303) 433-5582.

**UV Enhanced Ultrasound:** Cold Fusion Principle being used for an ultrasonic water purifier. Hong Kong. FAX (852) 2338-3057.

Note: The Fusion Information Center has been acting as an information source to many of these companies. We expect to augment our international service to provide contacts, information, and business opportunities to companies considering an entry into the enhanced energy market.

### INFORMATION SOURCES

"*Cold Fusion*", monthly newsletter, edited by Wayne Green, 70 Route 202N, Petersborough, NH 03458.

*Cold Fusion Times*, quarterly newsletter published by Dr. Mitchell Swartz, P.O. Box 81135, Wellesley Hills MA 02181. Home Page: <http://world.std.com/~mica/cft.html>

*Electric Spacecraft Journal*, quarterly, edited by Charles A. Yost, 73 Sunlight Drive, Leicester, NC 28748.

*Fusion Facts* monthly newsletter: Salt Lake City, UT 801/583-6232, also publishes Cold Fusion Impact and Cold Fusion Source Book. Plans on-line database access.

*Fusion Technology*, Journal of the American Nuclear Society publishes journal articles on cold nuclear fusion. 555 N. Kensington Ave., La Grange Park, IL 60525.

*Infinite Energy*, new bi-monthly newsletter edited by Dr. Eugene Mallove (author of **Fire from Ice**), P.O. Box 2816, Concord, NH 03302-2816. Voice: 603-228-4516. Fax: 603/224/5975 E-mail [76570.2270@compuserve.com](mailto:76570.2270@compuserve.com)

**Institute for New Energy (INE)**, organization to promote and help find funding for new energy research. Home Page: [www.padrak.com/ine/](http://www.padrak.com/ine/) contains many important scientific papers and current reports on all areas of research.

E-mail: [ine@padrak.com](mailto:ine@padrak.com) Salt Lake City, Utah. Voice 801/583/6232, Fax 801/583/6232.

*New Energy News* monthly newsletter for INE, highlighting the research and development in the worldwide new energy arena. Edited by Hal Fox.

*Journal of New Energy*, quarterly, presenting papers representing the new areas of energy research, leading-edge ideas in the development of new energy technology, and the

theories behind them. Published by the Fusion Information Center, Inc., for the Institute for New Energy.

*Planetary Association for Clean Energy Newsletter*, quarterly, edited by Dr. Andrew Michrowski. 100 Bronson Ave, # 1001, Ottawa, Ontario K1R 6G8, Canada.

Now available: *Clean Energy Review*, a technical and scientific discussion prepared for the Canadian Environmental Assessment Agency's panel reviewing nuclear fuel wastes disposal. Discusses transmutation as a possible solution for nuclear waste disposal. \$5 U.S. and Canadian, \$7.50 other countries.

*Space Energy Journal*, edited by Jim Kettner & Don Kelly, P.O. Box 11422, Clearwater, FL 34616.

*21st Century Science & Technology*, P.O. Box 16285, Washington, D.C., 20041. Includes cold fusion developments.

The above list of commercial and information sources will be growing. New listings will be added as information is received. Send information to *FF*, P.O. Box 58639, Salt Lake City, UT, 84158.

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