



New Energy News

Monthly Newsletter of the Institute for New Energy

VOLUME 2, NUMBER 11

ISSN 1075-0045

APRIL 1995

EXCESS ENERGY IN ELECTRETS

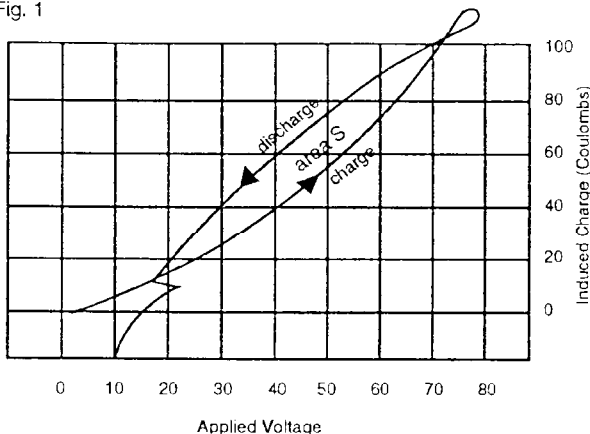
Courtesy of Alexander Frolov. Translated by Igor Gorychev

N.E. Zasl (Moscow), Selected with go. from *Journal of Russian Physical Phys.*

TRANSLATOR'S SUMMARY

1. The Coulomb-Voltage curve of the charge-discharge hysteresis loop (see Figure 1) divides the areas of energy availability from the capacitor in the form of mechanical energy (above the curve) and in the form of electrical energy.

Fig. 1



2. Electrical energy when entering a charging capacitor is spent (one portion) for work made with the dielectric ($V dQ$) and then converted into heat (dQ), and the portion that is spent for work made with a charge ($Q du$). In the discharge phase both of these portions fuse again in the form of electrical energy. In linear capacitors those energies are the same.

3. In non-linear capacitors in a charge phase the Coulomb-Voltage curve is concave, areas of $Q(\text{charge}) > E(\text{charge})$. In a discharge phase the coulomb-voltage curve is convex and the area of the $E(\text{discharge})$ increases at the expense of the area $Q(\text{discharge})$. Because of the full discharge the heat $Q(\text{charge})$ should be absorbed, $Q(\text{discharge}) > Q(\text{charge})$. Then the deficient heat [$E(\text{charge})$ minus $D(\text{discharge})$] is taken

from the dielectric which cools the dielectric (in comparison with initial temperature, before the beginning of the cycle). The analogous process takes place in non-linear inductances.

4. The outcome of the charge-discharge cycle is the transformation of the environmental heat into electrical energy accompanied with cooling of the dielectric.

5. Three different methods of experimentation with variconds (non-linear capacitors, made by using an electret as the dielectric) were used to prove that the energy of discharge can exceed the energy of charge as much as 20 to 40 percent.

6. The factors of efficiency of converting thermal energy into electrical energy in non-linear capacitors is determined by the relationship between the elliptical loop area S (in the $Q-V$ curve) and the area beneath the curve of the charge phase. [Obviously, one would strive to obtain a dielectric material that made a highly non-linear capacitor so that the elliptical area S is a maximum.]

7. The analytical expression for the value of the thermal energy converted into electrical energy during a cycle of charge-discharge can be represented by the following formula for a unit volume of dielectric:

$$\Delta A = -\frac{1}{2} \epsilon_0 b E^3$$

where $b = \frac{\partial^2 \epsilon}{\partial E^2} (\neq 0)$, for non-linear dielectric.

Note by Dr. Goryachev: It is worth noting that at $R = 100$ ohms, $C =$ about 3 microfarads, $RC =$ about 3×10^{-4} seconds, which means that the process should occur during 1 millisecond; therefore, the frequency of the charge-discharge cycles should be approximately 1000 Hz.

Note by Hal Fox: I find it fascinating that an explanation for this excess energy effect can be found through somewhat standard physics. I would have thought that this type of device, during its rapid charge and discharge cycles, would be tapping space energy. Certainly, this effect should be deeply studied. It is suggested by Zaev that a series of capacitors can provide substantial energy output. If Zaev's explanation is correct, then one should house the capacitors in some space that you want cooled. By Zaev's theory, the electricity is produced at the expense of the cooling of the capacitor. Therefore, heat exchangers on the capacitor would be in order.

Zaev's work suggests that this same effect should be able to be accomplished with non-linear inductances. Certainly some of the magnetic materials (ferrites, for example) should be quite nonlinear. This may suggest the possibility of linking non-linear capacitors to non-linear inductors to augment this effect.

[I have been trying for several months to track down the writing of Zaev and have finally succeeded with the help of Frolov and Gorychev. Note that Zaev's explanations do not rule out tapping space energy. This paper is an important contribution to free energy. --Editor]

ZAEV & FUTURE ENERGETICS

The Close Prospective of Future Energetics

Courtesy of Alexander Frolov

Translated by Igor Gorychev

According to the Second Law of Thermodynamics, thermal energy can flow only from a hotter material to a colder material. The questions are: Is this concept unassailable? Is our interpretation of the Second Law correct?

Maxwell long ago considered the possibility of a limitation of the Second Law. He described a method of separation of gas by the use of "Maxwell's demon," which would allow fast or hot molecules to exit into another chamber through a demon-controlled port and not allow the slow or cold molecules entrance. This Maxwell's Demon keeps exciting the imagination of physicists. Even the father of Information Theory, Norbert Weiner, considered the concept allowable. It was Maxwell himself who proved that because of gravitation there should be a temperature gradient in a column of gas (the "paradox of Maxwell").

Independently of Maxwell, the Russian scientist Tsiolkovski predicted a temperature gradient in his brochure, "Longitude of the Sun Irradiation," published in 1877. Then Tsiolkovski developed this idea in his work, "The Second Law of Thermodynamics," in 1914. It was he who made the most important conclusion - the

Engineer V.F. Parfenov, from Kuibyshev, Russia, went even further. In 1971 he made this statement: "Matter in force fields develops a temperature gradient." These fields include the field of centrifugal force. From this point of view, the old-time effect of Rank (separation of rotating gas for cold and hot components) does not appear so unexpected. [We know this device as the Hilsch Tube.]

In the famous declaration of Clausius, in 1865, he postulated that heat cannot pass from a cold body to a hot body by itself. If the effect is found, then that result must be paid for elsewhere. But the Second Law does not specify who is the payer.

Several generations of scientists, with L. Boltzman in the lead, determined that the Second Law is based on statistics. The implementation of the statistical approach is based (according to American physicist Kiffel) on the assumption that "a closed system can exist with equal probability in any allowed quantum state." This assumption is really a fundamental concept.

It is appropriate to note that the features of particles which are **interactive** with fields are mass, charge, dipole (electrical or magnetic) moments, and speed. These features make it possible to self-sort particles in a self-organized system. The fields would make Nature pay the bill for the Second Law. In the last century a strange behavior of some luminifers was noted -- they irradiated light with a lower wavelength as compared with the wave length of the initial excitation light.

This phenomenon found a practical application in 1961 when the Japanese scientist S. Yatsava proposed to use luminescent compounds of gadolinium for optical cooling. Multiple measurements demonstrated that the luminifer actually was cooled by irradiating more light energy than the energy received. It was determined that the efficiency of such a process can reach a maximum of 160% and the temperature of the crystal can fall by 26.6 degrees C, assuming the power of irradiation equals 1 watt per sq. cm.

It appears that a violation of the Second Law took place. However, the system that was absorbing and irradiating cannot be considered a closed system, therefore the Second Law cannot be applied.

There are other ways in which a field may participate in energy exchange. The clever Chinese Yu Sin Chan was not aware of Clausius and his Second Law. That is why Chan designed the bowing-bird toy which can continuously transform thermal energy of the environment into work. The secret is simple: the system is open and gravitation, environmental heat, and humidity of the air are actively participating in the action of the bowing bird.

Moscow engineer E.G. Sparin, following Maxwell and Tsiolovski, proposed a new device. He used two thermally-insulated tubes 100 meters high and installed vertically. One tube is filled with hydrogen, the other with radon. The temperature of the upper ends of the tubes will differ by 11 degrees C. Taking advantage of this difference in temperature, one can generate energy. Another method of use ("concentration" according to F. Engels) of dissipated energy can be based on the ability of some non-linear capacitors to change their capacity.

We may conclude that the Second Law of Thermodynamics can be considered a valid universal Law of Nature as long as we deal with closed systems. From a practical sense, the earth's uses of the Second Law of Thermodynamics, without detailed analysis of the conditions involved, should be excluded. [For example, any large hydroelectric dam with generators violates the Second Law depending on how you define the boundaries of the system.]

It is now evident that nothing actually prohibits extraction of energy from the environment, concentrated by means of known (or still to be invented) systems which will use gradient force fields or nonlinear features of matter. It is already recognized that nonlinear physics is a new physics but still "terra incognita" for the time being. Nature has long been observing our attempts to solve the energy problem. Nature knows that sooner or later mankind will find a method to take advantage of the available oceans of energy.

Reference:

N.E. Zhev (Moscow), Selected writings from *Journal of Russian Physical Ideas*. This article is, to some extent, a summary of Zhev's articles and inventions.

Information Request

ANTIGRAVITY AND OVERUNITY REFERENCES REQUESTED

Patrick Bailey, President INE

I am requesting that the INE network assist me in putting together a database of all known antigravity theoretical references, experiments, and devices that have demonstrated an antigravity (or counterbary) effect. I am also compiling a similar database for working experiments

and devices that produce an over-unity (energy conversion) effects. I have agreed to present two lectures on these subjects in June. I am particularly interested in those items not usually found in the main stream information that we usually see. Please contact me ASAP at P.O. Box 201, Los Altos, CA 94023-0201.

NEW

ANNOUNCING A NEW *NEW* FEATURE: THE NEW ENERGY COMMERCIAL COLUMN

Enhanced energy devices produce more energy (of some type) than input into the device. To many scientists, this is not possible because, "That is a violation of the Law of Conservation of Energy!" That statement is true **only if there is no source for the energy obtained. Because there is an energetic ether, enhanced energy devices are merely energy transformers.** There is no violation of the Law of Conservation of Energy.

The good news is that there are now a few enhanced energy devices that are developed, commercialized, and being manufactured and marketed. As is generally true in the advancement of science, we do not, as yet, fully understand how these devices work. The theory of their operation has not caught up with established fact. One of the first devices to be commercialized bases their excess heat on some form of cavitation of water.

Cavitation was first studied in conjunction with ship's propellers, where it was discovered that severe erosion of the propeller was due to the energy of cavitation bubbles. Cavitation of any liquid occurs when the fluid pressure is caused to drop below the pressure at which the liquid would boil. Therefore, water cavitation bubbles can be thought of as small bubbles of steam or water vapor. After the cavitation bubbles form, there is a relatively rapid return of the vapor to the liquid phase as the bubble decreases in size.

In sonoluminescence, the cavitation bubble is formed by the use of an acoustic device. As the bubble reduces in size it can give out a blue light. The energy ratio of blue light to sound wave energy is about one trillion to one. Cavitation can severely erode metals. Now it has been found that under proper conditions, the cavitation bubbles are a source of heat **in excess of the energy used to create the cavitation bubbles.**

The explanations are several. The late Nobel prize winner Julian Schwinger suggests that the sonoluminescence bubbles, as they decrease to a small size, are rapidly compressed by the Casimir forces and this explosive collapse produces the blue light. This explanation was extended by this author to explain the extra heat produced by the Hydrosonic Pump™. Professor Lev Sapogin, a science advisor for the vortex cavitation device invented and manufactured in Moldavia, states that the hydrogen atom is a wave packet. Under exceptional environmental conditions, this wave packet can become so distorted that the wave packet disappears and energy is produced. This energy, explains Sapogin, is the source of the excess heat in the vortex cavitation devices. A third explanation comes from a Russian scientist, Zaev. He states that there are types of devices that allow for the separation of thermal energy in matter in certain kinds of fields (gravity, electric, magnetic, etc.) The result is that the heat is separated and delivered at some portion of the device while another portion of the device cools. The ultimate source of the thermal energy, according to Zaev, is the environment. This type of energy production is not contrary to the Second Law of Thermodynamics because that law applies only to a closed system. Any device that can extract energy from the environment is not, by definition, a closed system. [see lead article]

At the present time, we have three different companies who are manufacturing and marketing enhanced energy devices or systems. Another company is prepared to provide rights to a selection of intellectual property (patents issued or pending) to a variety of cold fusion and enhanced energy technologies.

The NEW ENERGY COMMERCIAL COLUMN will print a monthly list of the names and contacts of commercial, profit-making or not-for-profit companies involved in the manufacturing and marketing of new energy systems and devices. To be listed in this column a company must be providing a product based on an enhanced energy device that has been shown to produce more power out than used as input power. Independent verification of the enhanced-energy effect is expected. A donation of \$100 per year from each company is requested to help pay for this service. Chemical combustion systems are not eligible for listing, however toys or demonstration devices based on enhanced energy technologies do qualify. These first companies are expected to be joined soon by several other companies whose technologies are based on magnetic motors/generators or on new developments in cold nuclear fusion. Here is our first listing of companies and products with contact names and/or phone numbers:

Commercial Column

COMPANY

PRODUCT

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.

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.

American Cold Fusion Engineering & Supply Information and troubleshooting for the fusion research and development industry. We are announcing the formation of a new group called *American Cold Fusion Engineering and Supply*. There are three of us who have boldly taken the first steps on this new venture, Chuck, Warren and Rick. The president, Warren Cooley, can be reached at 916-736-0104.

Although we are brand new, we can solve your cold fusion problems. We have a great deal of knowledge about contacts, information, hardware, literature, and supplies for the cold fusion field. We can even schedule on-site visits to personally consult about unique situations.

Our group has a machine shop and we plan to run a simple experiment in the next month to impact fully deuterated projectile made of one of the three cold fusion metals into a thick steel plate at an extremely high velocity. We also have plans to set off an experimental miniature cold fusion rocket motor where the solid propellant is made of lithium deuterium powder, metal filings and conventional solid rocket propellant.

There experiments rely on the theory of "Warm Fusion" and "the Principle of Mass Intrusion." We are taking all precautions concerning dangers -- including mass-energy release. If we are successful, we will issue a press release.

American Cold Fusion Engineering & Supply
P.O. Box 191394
Sacramento, CA 95819-1394
(916)736-0104
Fax - call first

As a preview of coming additions to this list, we expect that there will soon be a qualifying magnetic motor (from two different sources).

In addition, *NEN* will provide a quarterly list of commercial information sources. These sources will include a phone or fax number or address where you can obtain further information. We expect this list to grow with the commercialization of enhanced energy devices.

COMMERCIAL INFORMATION SOURCES

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 for later in 1995.

New Energy News monthly newsletter, edited by Hal Fox, Salt Lake City, UT 801/583-6232

Cold Fusion Times, quarterly newsletter published by Dr. Mitchell Swartz, P.O. Box 81135, Wellesley Hills MA 02181.

Infinite Energy, planned new monthly newsletter edited by Dr. Eugene Mallove, P.O. Box 2816, Concord, NH 03302-2816. Also author of Fire from Ice.

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

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

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

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

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

The great tragedies of science (to some) are the slaying of beautiful hypotheses by ugly facts.

T.H. Huxley

Fusion Briefings

WELCOME TO ICCF-5 AND THE THIRD WAVE

By Hal Fox

Alvin Toffler [1] saw today's energy problems and solutions about fifteen years ago and wrote about them in his book The Third Wave. The **First Wave** was the use of human power, animal power, limited water power, and wind power for grinding grains. Beginning in the late 1800s the **Second Wave** was the developing use non-renewable fossil fuels. Still in the **Second Wave**, we have depleted our oil reserves and polluted our planet. The **Third Wave** of energy is perceived as a solution by Toffler but, of course, without the details of how the new energy systems would be accomplished.

Six years ago this March, Pons and Fleischmann were called by the University of Utah to announce their discovery of cold nuclear fusion. In my optimistic way, I started telling others that within about two years we would see some commercial applications of this amazing discovery. However, I am sticking to my forecast, **I still forecast that within two years we will witness the commercialization of cold nuclear fusion.** This fifth international conference on cold fusion will, undoubtedly, bring additional reports demonstrating both problems and successes with the Pons-Fleischmann discovery and with the several other methods that have been found to produce and control nuclear reactions and/or produce thermal energy with relatively simple devices or systems.

The Third Wave of the development and distribution of energy is close at hand. As Toffler [1] has expressed: "...though the forces of the Second Wave may seem powerful and their Third Wave critics feeble, it would be foolish to bet too many chips on the past. Indeed, **the issue is not whether the Second Wave energy base will be overthrown, superseded by a new one, but how soon.**" We can now provide Toffler with one of the answers to the **Third Wave** energy base: cold nuclear fusion.

Those of us who have attended all five conferences have witnessed the following:

1. The continued successful replication of the Pons-Fleischmann discovery and the ferreting out of its mysteries.

2. The fading of the vociferous critics who, at the first conference, were eager to deny every report of successful experimental data.
3. The improvement in measurements, in theory, in experimental protocols, and in understanding.
4. The discoveries that cold nuclear fusion is rich in new phenomena and the experimental demonstrations that several other means of producing and controlling nuclear reactions were possible and feasible.
5. Remarkable new discoveries in hydrogen-condensed matter interactions.
6. An ever-growing and expanding number of scientists, laboratories, and countries involved in the study of cold nuclear fusion and other enhanced energy devices.

We still understand the problems facing the **Second Wave** energy base: rising fuel costs; high capital costs; heavy inputs of capital to produce marginal increase in output; pollution control problems; the nuclear risks of nuclear reactors and hot fusion systems; the rising thirst for abundant, clean energy; the higher prices for energy-affiliated resources; and the rising demands of the world's population for cleaner energy. "The moving finger writes and having writ, moves on." The **Third Wave** energy base is being formulated by the attendees at the ICCF-5 and their associates.

The world's media will little note nor long remember the details of this conference. The productive results of this, and similar conferences, is destined to change the world. The pages on which these words are reproduced will descend to dust, however, the ideas upon which these conferences are based will change this world. A few of us may become footnotes in future publications, but the technology that we are developing will soar. Not just on this earth, but on other planets, and around other stars, the technologies of this conference will be developed and carried on. First on earth and later spreading with man through space itself, your work will travel. **No important changes for the betterment of man have come without conflict and struggle. You, the presenters at the ICCF-5, long may you win! The world owes you their praises. The detractors owe you their apologies.**

REFERENCES:

Alvin Toffler, The Third Wave, Bantam Books, c1980, 537 pages, indexed, 534 references.

My thanks to Reed Huish, President of **The Energy Group** of Chandler, AZ for introducing me to Alvin Toffler's book. Huish and his company are dedicated to

reducing energy costs for management and business and are among the growing number of corporations who are commercializing **The Third Wave**.

COLD FISSION THEORY AND COLD FUSION RESULTS

Patrick Bailey, President INE

Several interesting theoretical concepts have been organized by a person named David Hudson to explain the effects observed in both "cold fusion" and "superconductivity." While the objectives of Mr. Hudson's lectures do not primarily focus on our normal INE energy conversion areas of interest, many of his ideas and references may be very applicable to our research areas.

Mr. Hudson has filed several patents for the discovery of ORMES: Orbitally Rearranged Mono-atomic Elements, in which certain elements are found to exist in nature in a different form that we usually associate them with. I attended his recent two-day lecture during March 4-5 in Longmont, CO, and I have compiled copies of almost all of his references and audio tapes.

The bottom line is that eight particular metallic elements in the Ru-44 to Ag-47 and Os-76 to Au-79 groups (and possibly others, such as Copper, Cu-29) may not always have the stable nuclear structure that we usually think of, but rather may have a deformed, or elongated, nuclear state that, with the proper chemical bondings, may be easily torn apart - or fissioned - into smaller nuclei with not very much energy input. The basic theory is discussed very well in *Scientific American* in March 1990 (pp 58-63, 65-67) and October 1991 (p 26). There are many additional references from *Physical Review C* et al.

From this point of view, it could be possible that when the atoms of certain elements are placed within a lattice where their own element-to-element (metallic) bonds are broken, then that atom's nucleus becomes deformed into a dumbbell-shape, and may easily be fissioned by a small amount of external energy input. Could this be the explanation of so-called "cold fusion" using Platinum electrodes, or of "superconductivity" using Copper in Yttrium-Barium-Copper-Oxide lattices? Also, when elements combine to form "microclusters," then the cluster exhibits its own physical properties like a newly formed lego-block, as described in *Scientific American*, December 1989, (pp 110-115).

These are exciting concepts to consider, and the implications of these ideas may extend into other important areas, much farther than just for use for energy conversion.

CAVITATION INDUCED MICRO FUSION

Courtesy of Russ George

Roger Stringham & Russ George (E-Quest Sciences), "Cavitation Induced Micro-Fusion, Solid State Production of Heat, ^3He , and ^4He ," preprint furnished by E-Quest Sciences, Palo Alto, CA, 3 pages, 3 photos, 17 refs.

AUTHORS' INTRODUCTION

Some surprising results of experiments using ultrasound-induced transient cavitation on metal targets in a heavy water system are reported. The evidence leads to the unavoidable conclusion that controlled nuclear fusion reactions have been achieved. These reactions are identified by the selective production of ^3He and ^4He via cavitation-induced solid state nuclear processes at near room temperature. The method has been in development at E-Quest since discovery experiments by Roger Stringham in 1989. Recent experiments were performed at Los Alamos National Laboratories during October, 1993, and again in April, 1994.

EDITOR'S SUMMARY

The photographs of these works show a palladium target (having 0.1 mm thickness) with a melted hole of significant size. A second photo shows the "vent-like" holes where hot metal has been ejected from within the material. A third photo shows sputtered beads that are about 1 micron in diameter. Note that all of these effects are produced under flowing heavy water that is about 60 to 80 degrees C.

The Table in the paper is dramatic. There is a comparison between three cells, blank run, run less than 20 hours, and run longer than 20 hours. The amount of helium-4 ranges for the three are: 0.48 ppm; 2.5 ppm; and 550.0 ppm. That is a dramatic indication that there are nuclear events being controlled in the E-Quest cells.

The cell is constructed so that cavitation bubbles are formed on or near the surface of a thin palladium sheet immersed in heavy water. It is now certain that the collapsing cavitation bubbles produce sufficient energy to disassociate chemical bonds and to strip electrons from atoms. Under properly controlled conditions, the bubble collapse is connected with a jet of energy that can damage the palladium lattice and/or cause nuclear events to occur.

The experiments that produce helium and excess heat (from 10 to over 100 watts) are reported to be highly reproducible. When the experiments are run with light water and ultrasound there is not the same excess heat produced nor helium found. The authors state that the

amount of helium produced is within an order of magnitude of the amount needed to explain the amount of excess heat produced (assuming that the helium is produced from a nuclear reaction of deuterium plus deuterium).

As is the case with many new scientific developments, the theorists have not caught up with the experimenters. No one is presently claiming to be able to explain all of the new phenomena -- the new ways by which nuclear reactions can be produced and controlled in relatively simple experiments.

PREVIOUS RUSSIAN COLD FUSION INVENTION

Courtesy of Alexander Frolov and Igor Goryachev

N.E. Zaev (Moscow), "The Fusion is Coming but Where is Kurchatov?" *Izobretatel / Razionalizator* (a Russian magazine for inventors), no 1, 1995, pp 8-9, translation by Frolov & Goryachev.

"Dear Editor, Please look at this information. Perhaps it is the forgery, but the magazine is well known and serious." -- A.R. Frolov

TRANSLATION OF ARTICLE

The inventor Ivan Stepanovitch Filimonenko is now 71 years old. In 1960, influential people (Igor Kurchatov, Sergey Koroliov and Georgiy Jukov) strived to have Filimonenko's work included in the Soviet Union's state program for scientific-technical progress. The decision of the Council of Ministers and Communist Party Central Committee number 715/296 of July 23, 1960, ordered the development of several important principles of Filimonenko's technology: (a) Production of energy, (b) Production of motive force without expelling mass, and (c) Human protection from nuclear radiation.

In 1962 Filimonenko registered Russian patent number 717239/38, dated July 27, 1962 and titled, "The Process and System for Thermo-emission."

The main idea of Filimonenko's process was the electrolysis of heavy water. The absorption of deuterium takes place in a hard cathode (palladium) and it is the place for fusion reactions. This fusion is not "cold" but is "warm" fusion because it takes place at about 1000 degrees C. There are no neutron emissions for this device. Filimonenko discovered a new effect: When the system is in operation a strange emission from the system changes the time period of half-life decay and suppresses induced radioactivity.

Frolov's Note: A small amount of electric power produces a high thermal power for this device to provide an over-unity system. Instead of an energy dispersion process, it is an energy concentration process. This is possible only when the curvature of space-time is changed. The local space-time changes produce a gravity effect and influence radioactivity. It is clear that any deviation of space-time curvature from normal may influence any nearby biosystems. Therefore, the medical aspects of [this type of over-unity] energy is a most serious problem. All of Filimonenko's work was stopped in 1968. The inventor was sent to prison for six years for actions against the standard nuclear program. In 1989 and 1990 in the Moscow "Lutch" plant, there were two Filimonenko reactors made. They used tubes of 0.7 meters in length and 0.041 meters in diameter. The palladium part had a mass of 9 grams. The power output was 12.5 kilowatts for one reactor. Igor Kurchatov died in 1960 at the age of 58.

Editor's Note: I have personally been at the Lutch plant in Podolsk near Moscow and talked to the laboratory director. No mention has been made of any other type of cold nuclear fusion except for the work of Kucherov, Karabut, and Savvatimova which was funded by the company now called ENECO. No reports of this cold fusion work have surfaced in the several cold fusion conferences held in Russia or elsewhere. This publication in "Inventor and Innovators" is the first we have heard of Filimonenko's work.

As we went to press I contacted my Russian "Lutch" sources. Here is the story. The reactors were tried and did not work as predicted. Also, Filimonenko believes that somehow Fleischmann got his cold fusion idea from Filimonenko's work. Pons & Fleischmann's work began about the mid 1980's. If Fleischmann was that clever at penetrating Russian science, we nominate him to head up the CIA. --Hal Fox, Ed.

COLD FUSION RESEARCH UPDATE

Edmund Storms, "A Brief Cold Fusion Update," *Cold Fusion Times*, vol 3, no 1, p 2.

SELECTED QUOTES

"The demand for long-term control cells reflects results from the early cold fusion experiments, which produced heat or nuclear products in occasional bursts. More recent work has achieved steady output. Once a cell turns on, it typically stays on for many days. Skeptics who accept the data on excess heat nevertheless assert that it originates not from any nuclear process but from some hitherto unknown chemical reaction. But no

evidence from any study has been reported to support various speculated chemical sources.

"An important requirement for producing heat, for example, now appears to be palladium largely free of microscopic cracks. Deuterium apparently escapes from any cracks too fast for a critical concentration to build up. Michael McKubre and co-workers at SRI International, as well as researchers at several other laboratories, have shown that the larger the ratio of deuterium to palladium in the electrode, the greater the heat.

"Many experimenters have failed to produce anomalous effects because they have not applied enough current to their cells. Several experiments have shown that the nature and timing of the electrical input to a cell significantly affects the chances of its success. Heat is more likely to be produced when the electrical current is repeatedly "ramped" from a high to lower level or briefly pulsed to high values."

ELECTROLYTE CALORIMETRY

Dr. Dennis Cravens (Vernon Comm. Col., Mem. ENECO Sci. Advisory Bd.), "Flowing Electrolyte Calorimetry," a demonstration, to be presented at ICCF-5, Monaco, April 9-13, 1995.

AUTHOR'S ABSTRACT

Circulation of the electrolyte through a cold fusion cell allows high current densities and high energy fluxes within a cell with few complications. When the specific heat and flow rate of the electrolyte are known, the thermal output of such cells can be calculated similar to flow calorimetry techniques. Benefits of such systems include:

- 1) operating at high power densities,
- 2) using high current densities at the cathode,
- 3) sampling of electrolyte after loading,
- 4) adjustments to electrolyte composition during a run,
- 5) increasing conductivities of electrolyte after loading,
- 6) operating the cell in a vacuum environment for increased calorimetric accuracy, and
- 7) calibrating advantages of flow calorimetry.

The cell is based on the "Patterson cell design" and uses palladium and/or nickel coated beads to create a large surface area cathode.

DR. JOHNSON SPOTLIGHTED

Gayle Verner, "Power Profile of the Month: Prof. Keith Johnson," *Cold Fusion Times*, vol 3, no 1, p 3.

SUMMARY

After teaching MIT courses on condensed matter and quantum chemistry for the past 25 years, the Pons-Fleischmann announcement in 1989 hardly came as a shock to Prof. Johnson. The shock was the subsequent furor and criticism against it. This harsh controversy kicked his creative instinct into gear, and he wrote a movie script on the subject called "Excess Heat." The movie is now in production.

But a movie is not Johnson's only input into the cold fusion arena. Last year he presented papers on his theory of cold fusion at both the Minsk Conference and at ICCF-4. Due to the very small amount of nuclear byproducts in cold fusion, Johnson theorized that "the excess heat that they were observing was not nuclear but was connected with internal chemical bonding effects, the same sorts of effects that explained the superconductivity at lower temperatures." His theory depends upon the physical structure of the palladium loaded with the hydrogen.

Space Energy

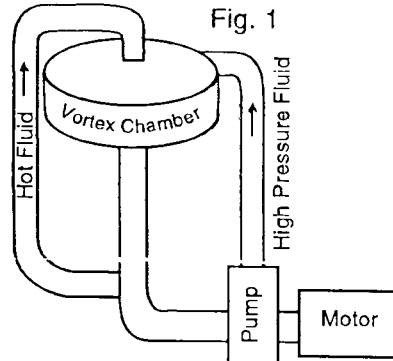
150% EFFICIENT CAVITATION IN BELARUS

Courtesy of Alexander Kuchinski, Minsk

VORTEX CAVITATING DEVICE CLAIMS 150% EFFICIENCY

A water-circulating device reportedly develops excess thermal heat when the water cavitates. The water circulation flows from a water pump through a nozzle into the periphery of a vortex chamber. The output of the vortex chamber is from the bottom center where the flow returns to the water pump. It is well known that in fluid flow the $P_1 V_1 = P_2 V_2$ equations represent the pressure and velocity relationship of fluid flow. Both the nozzle and the vortex chamber increase the velocity of the flow with an accompanying decrease in pressure. Under proper flow and water temperature conditions, the pressure become

low enough to allow the warm water to burst into bubbles of water vapor (cavitation).



As shown in the figure, there is a secondary circulation. Because the wall pressure is higher than the pressure at the center of the vortex chamber, there is a secondary flow from the down pipe back to the

center of the vortex chamber. This secondary flow can provide for the circulation of hot water to heat exchangers external to the vortex system.

Theory of operation: This device provides excess heat in the same manner as provided by the Griggs' Hydrosonic Pump (which was described at the ICCF-4 conference in Hawaii) "A Brief Introduction to the Hydrosonic Pump and the Associated 'Excess Energy' Phenomenon," *Proceedings - ICCF-4*, vol 4, p 43-1 to 43-23). There are at least three theories as to the source of the excess heat. The first theory, attributed to the late Julian Schwinger, is that the decreasing cavitation bubble reaches a point where the Casimir forces cause the bubble to rapidly implode during which process, zero point energy is captured and turned into heat. The second theory by Lev Sapogin (the scientific advisor to the Moldavian inventor of the vortex flow heater) suggests that a hydrogen wave packet, under certain environmental conditions, becomes distorted and can undergo a transition from a wave packet to energy. A third explanation by N.E. Zaev of Moscow states that thermal separation can occur in various materials under some environmental conditions. This allows some parts of the material to gain energy from the environment which may show up as excess thermal energy.

Commercialization: We understand that this device is in production in both Moldavia and in Belarus. We further understand that a unit will be shown to the attendees at the ICCF-5 conference in Monaco. We welcome the commercialization of any type of enhanced energy systems. Scientists will still have to grapple with the theory of operation of these cavitation devices.

VACUUM DISCOVERIES

Robert Matthews (science correspondent for *Sunday Telegraph*), "Nothing Like Vacuum," *New Scientist*, 25 Feb. 1995, pp 30-33.

SUMMARY

One of the hottest topics in physics today, the vacuum is discussed from many angles in this article. Using Einstein's special relativity as a base, Matthews speaks of the "Empty space that is not really empty at all, but a seething sea of activity that pervades the entire universe."

Rejecting the "aether" idea of last century, the author does tell of the "fluid" vacuum "that must conform to the dictates of special relativity. The vacuum is not forced to be mere quantum fluctuations around an average state of true nothingness. It can be a permanent, nonzero source of energy in the universe." As a possible source of nearly limitless energy, the "vacuum" is under research assault from all directions.

The current thinking that general relativity may not be quite all we had thought it was is discussed. The active, energetic "vacuum" may answer many long standing questions, from explaining the discrepancies in the calculated age of the Universe, to the problem of where is 80% of its theorized mass, to the mystery of the cause of inertia.

Matthews mentions the theory of Haisch, Puthoff and Rueda, published last year, that addresses both the energetic vacuum and the inertia that they believe is a result of space energy interaction. Their work has been built partially on the theories of Russian physicist Andrei Sakharov. The possibility of this theoretical work leading to the discovery of ways to alter the vacuum state and therefore theoretically alter inertia is a monumental extrapolation. Haisch has pointed out, "History is full of impossibilities turned into technologies, from flying aircraft to splitting atoms."

Meanwhile, the research goes on. Later this year, Haisch, Rueda and Daniel Cole will publish research in *The Astrophysical Journal* that suggests that the vacuum plays a key role in creating structure in the universe, by forming concentrations of matter which lead to mass formation. This is the eternal question of where it all came from that has mystified cosmologists for ages. If the vacuum is the missing ingredient, this discovery would be quite an achievement for the physicists.

Matthews concludes with, "The solution to the cosmologist's nightmare, the explanation of inertia and the cure for the world's energy crisis? The vacuum is in

danger of becoming everyone's answer to everything. But it seems a safe bet that the vacuum theorists are likely to come up with some big surprises over the coming years."

Summary by D. Torres

VIOLATING NEWTON'S THIRD LAW

Courtesy of the Author

Stefan Marinov (Austria), "Experimental Violation of Newton's Third Law," *Deutsche Physic*, vol 4, no. 14, April-June 1995, pp 5-28, 15 references.

AUTHOR'S ABSTRACT

Numerous experiments have shown that Grassmann's formula for the force of the interaction of two current elements (which allegedly is accepted as the right one by official physics) is wrong. Wrong also are the formulas of Ampere, Whittaker and Neumann. Only Marinov's formula, introduced recently by me, resists against all known experiments. Marinov's formula preserves Newton's third law, but not entirely, as the forces with which two current elements interact are equal and oppositely directed but may not lie on the line connecting the elements. I report on an experiment carried out by me, the "rotating Ampere bridge with interrupted current," which violates the angular momentum conservation law. Although giving right predictions to all known experiments, I know by the help of an original experiment that even Marinov's formula is not perfect. I am, however, firmly convinced that a better formula can never be found.

EDITOR'S COMMENTS

Marinov delights in finding experiments that prove various laws of science to be wrong. In this paper he discusses several such experiments relating to formulas for the interaction of electrical current elements. He quotes from Hering in 1923 saying the following when his article was twice denied publication:

In one case, publication was at first refused on the grounds that if the experimental evidence was correct, which was easily demonstrated, it was so serious a matter to change one of the older laws, that it ought to be kept secret? In another case, the refusal [to publish] was because it was "so subversive of long established principles," the age of the law being considered more important than its correctness.

Marinov concludes his paper with: "Nevertheless, one can only wonder that Marinov's formula was discovered after almost two centuries of electromagnetism. And this formula showed that besides the already known Lorentz vector magnetic intensity, there are three other intensities: the Marinov vector magnetic intensity, the Whittaker scalar magnetic intensity and the Marinov scalar magnetic intensity, all of which remained for two centuries

unnoticed. And there is the miracle that the scalar magnetic intensities give possibilities for constructing perpetually working machines. If mankind had discovered Marinov's formula in the XIX-th century, the history of the XX-th century could be completely different and the world had not to come to the border of an energetic and ecologic precipice on which it stands now."

Solid-State Space Energy Generators

DISCUSSION OF MRA

Courtesy of Samuel P. Faile

Norman Wootan, "MRA Tech Bulletin," on KeelyNet, Public Mail.

Well, just for grins I built a "super MRA" which is in the form of a right cylindrical magnet section with large flanges top and bottom made of plexiglass so I could wind a very long wire primary and secondary coil so as to be able to play some turns ratio games without having to take the unit apart and rewind each time I needed to change ratios. I did this by winding 18,000 feet of wire on the magnetic core with taps brought about every 1000 feet of winding. This way you can play some interesting games not only with impedance matching but also with wire lengths in the windings for resonant tuning as we do in Tesla Coils.

Anyone interested in building the MRA and fine tuning it to peak out the performance should consider this approach, for it provided me some rather impressive data. Now there is no doubt about over-unity for I have been able to back off to practically nothing the input power to the unit and maintain a healthy output. I am seeing the input potential from my source amplifier being tripled from an idle available source voltage of 48VAC going up to 160VAC with the MRA tuned to max gain. You can place a grain of wheat bulb in the primary of the circuit and it will not even light at all while driving a 120V 3Watt standard bulb across the bridge rectifier. It is real interesting what happens when you approach the near perfect impedance and resonant match in the windings. This is something that we wanted to do in time. That is the point all should consider, all this takes valuable time and it will be done by not only Joel and I but by others out there who are serious researchers, such as Hans Becker and others.

... This TMI geometry is tricky to make it run in a continuous circular track. I'm almost there, will try a few new tricks on it to try getting it to continue. I wound up with 1400 of the magnets so will share with Joel since he is on a real tight budget. The MRA is looking better all the time for I am continuing with the improvements and different designs. The big cylindrical magnet design really kicks out the juice for now, I am working up at the 400V level on the output, and running 22 Watt fluorescent lamps with a tiny grain of wheat lamp in series with the input that won't even begin to light or even glow. Just wish someone had a foolproof method of accurately measuring the input current. Well, it will all come out in the wash when it runs "stand alone."

... I have been rather quiet on the subject of the MRA test that was conducted, for I have let Joel handle the responses since he is more diplomatic than I. Well, I have a few comments for all who are interested to really ponder. First let us consider the true nature of the piezoelectric element in the MRA. This is probably the most "non linear" device that man or nature has ever constructed. Everyone knows just how NON linear they are, especially when I can hit the piezo with a simple pulse of 57V and get a return of over 1000V as a response for this little device. Now let us look at the peculiar little MRA coil. First, we start with a totally "saturated" magnetic core with a primary coil and a secondary coil wound directly onto the magnet. We are "ringing" the crystalline lattice structure of the BaFeSi material that composes the magnet, therefore this component is also "totally non-linear."

What do you get when you couple two "totally non-linear" devices together into a series resonant circuit where we are driving one element 3 octaves above the other and producing 9 harmonics and purposely detuning the circuit to cause one of the harmonics to beat against the incoming current from the signal source to cause the MRA to achieve over-unity?? Well, if you haven't figured it out yet, you have a circuit that does things that are "Not in any text book printed." Joel and I have spent countless hours looking at results of simple experiments conducted with the MRA that simply defy all EM theory or logic.This circuit is over-unity and we are still proceeding with the driver circuit to make it obvious to all who wish to see and believe.

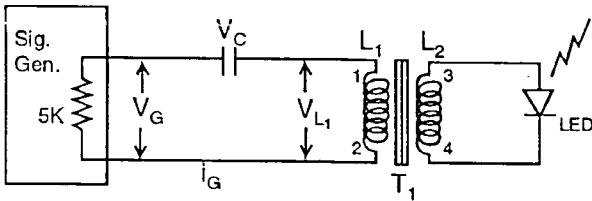
COSMOLOGY NOTE

by Greg Hodowanec, G.H. Labs, Newark, NJ

Dear Colleagues: This may be of interest to you.

I. Further speculations on my interpretation of McClain & Wooten's MRA-type circuit as was given in my C-note of 1/30/95.

A. Schematic of the circuit:



- C = 680 pF (S.M.)
- L₁ = 5 mH
- LED: rated at 1.85 v 10 ma
- L₂ ≅ 1 mH
- T₁ = special transformer

B. Some additional tests:

The circuit, as shown above, has a broad resonance over the range of about 70-120 KHz. The peak resonance appears to be just under 90 KHz, which agrees well with the series resonance for the elements used. Tests were made at 80, 90, and 100 KHz. The apparent powers were measured with an RMS reading digital meter, but the LED light output power was also referenced to the equivalent light power as developed by a DC source. Thus, there could be some error here. However, it was assumed that the peak voltage to the LED would be roughly equalized by the half-wave rectification of the LED and thus the pulse light power would be roughly equivalent to the light power as seen DC-wise. Also, as seen in Table II, there was rough agreement with measured powers across coil L₂ as determined by the open-circuit voltages and the short-circuit currents. There seems to be fall-off in the transformed power at higher frequencies, but this may be due to a reduction in circuit Q's with frequency. Preliminary test data is given in Table I below:

f_n	V_G	i_G	P_{in}	P_{out}	P_{gain}
80KHz	3.8v	1.0ma	3.8mW	18mW	x 4.7
90 "	4.6v	.9ma	4.1mW	18mW	x 4.4
100"	4.3v	.7ma	3.0mW	17mW	x 5.7

The reactive power developed in coil L₁ is transformed to real power in the circuit of coil L₂, where it lights up the LED. However, I have determined in previous tests that the magnetic flux returning from space (after being energized there by the driving current, i_G), can be at least in the order of three times i_G, especially when a ferrite core is used in the transformer.* This "extra" current is

believed to have been "extracted" from space energy, possibly the earth's g-field. That this much higher reactive energy is really present is seen in the higher powers being developed in L₂ (and thus in the LED) as compared to the apparent input drive powers. If the LED circuit is now opened up, this available power will return to the source resistance (5K ohms) and result in excessive power there -- which is actually observed!

*[To clarify this section: The returning magnetic flux is increased by about a factor of 3 times. This increased flux in coil L₁ results in the increase in current in coil L₁. This, coupled with the higher voltage across this coil, results in the high reactive powers in coil L₁.]

An estimate of the reactive powers (and some measured values) delivered to the LED load is given below:

f_n	i_G	V_{L1}	i_{L1}	Est. Powers	Meas. Powers
80KHz	1.0ma	9.3v	3. ma	28mW	33mW
90 "	.9ma	8.0v	2.7ma	22mW	25mW
100"	.7ma	6.5v	2.1ma	14mW	14mW

As can be seen here, the two measurements "track" fairly well, although the measured values were a bit higher than the "brightness" values. However, the brightness appeared to be more constant. It was also noticed that at times, the LED (near resonance) appeared to be "modulated" by a low frequency, as if there was a "beat" frequency present. The measured V_{L1} and i_G varied a bit in repeats of this test, possibly from intermittency since clip leads were used (no soldering). Also, the elements may have been position sensitive, since the elements were moved around in these tests.

II. Conclusions

A. While the present tests are still quite crude, it does appear to indicate that there are real power gains here, with the extra energy possibly coming from the rhysmoid (aether) as was surmised in many of my past C-notes and articles.

B. While the small silver mica capacitor and transformer used here (as well as the low-level sine wave generator) may have limited the power outputs, there is no reason not to expect a scaling up in powers with this technique.

III. Comments

This is a very promising "free energy" technique and should be followed up -- especially by those of you who have received the sample transformer used here. I have also tried coils wound on ferrite bars (salvaged from an old AM radio) and have had similar results. My approach

here is somewhat different from McClain and Wootan, mainly because I am not too familiar with Keely's theories, but I also feel that Rhysmonic theory is at work here, too. I am limited in both time, funds, and facilities here, thus I am looking forward to your results and comments.

IS ENERGY DEFINED?

Courtesy of Samuel P. Faile

Joel McClain, "Energy is Aether," from KeelyNet Public Mail.

A while back, I asked "what is energy?" Seems too simple, but it's a "still water" question. And, still water is probably the best way to answer the question. I've seen how energy can be nullified by the use of double *m* geometry, essentially changing a crashing wave of water (or any other energetic potential) into neutral force.

If we knew what was being cancelled, we could define energy. I think that the definition is in the geometry. For example, we are trying to extract free energy from the aether using ZPE devices. However, the Primary source of 3-D energy is in the endless particle spin of atoms. The particle spin results from the geometry of the atom, specifically in the circular overlapping fields of influence. These overlaps are called the vesica pices. Spirals occur when the circular waves cross, and these vortical flows maintain the spin of particles.

MRA QUESTIONS

Courtesy of Samuel P. Faile

Taken from KeelyNet, asked by Peter Reitz, of Dresden Tech. Univ., Germany.

1. Must the magnetic material consist of barium-ferrite, or could it be AlNiCo, SmCo5 (Cobalt-Samarium), NbFeB (Neodym)?
2. Must I use a special position of the piezo to the magnet (is it meaningless, let's say, if the piezo is above the magnet, or should this be connected to the magnet, or at a greater distance)?
3. Has the form of the magnet a meaning concerning the function of the MRA (flat disk / disk with bore-hole / rectangular form...)?
4. Is the frequency on the secondary side the same as on the primary? (Like an ordinary transformer? I ask this, because the piezo resonates 3 octaves higher than the magnet. If the frequency is the same, the magnet wouldn't resonate at its own frequency?!)

I have an idea how to adjust the resonance/frequency of the piezo. Look for a piezo, which has resonance/frequency a bit under the frequency that you need. Then simply raze a bit with fine abrasive, until the frequency is OK. (The piezo gets lighter → its resonance/frequency increases.)

Electric Vehicles

QUANTUM LEAP FOR ELECTRIC VEHICLES

Bruce Meland, "Over-unity: the Quantum Leap for EVs," *Electrifying Times*, vol 2, no 3, Winter '94-'95, p 1, 13-17.

SUMMARY

Classical physics, though most technologies we use today are based on it, is incomplete, flawed, or just not broad enough. Researchers have long been discovering anomalies that "classical" physics does not explain, or even recognize in some cases. Now is the time when new laws will be discovered, and old laws will be revised as we learn more about the inner workings of the universe.

The beginning of the emergence of this new age of physics was in the 1920s with quantum mechanics. Such scientists as Bohr, Schrodinger, Sommerfeld, Heisenberg, and Pauli looked beyond the establishment-dictated sciences and opened a new door to reality in the physical world. So have open-minded scientists ever since, addressing the anomalies and tracking them down to become the new breakthroughs. Some of the over-unity researchers are listed in this article, to acquaint people with "new science."

The researchers discussed are: John Searl of England, with the Searl Effect Generator which deals with both over-unity energy and levitation; Robert Cook, Sr. of Los Alamos, with the C.I.P. drive, a reactionless drive unit which converts angular momentum into translational force; Troy Reed of Reed Technology in Tulsa, Oklahoma, researching a magnetic motor resonant system; Ron Brandt of Oregon, working with a permanent magnet motor and complimentary resonant circuit; John Bedini's work on a resonant energy motor; Scot McKie of Seattle, researching the PodMod system, a resonant circuit generator with two storage "tanks"; Jerry Labine

experimenting with a Tesla turbine and Tesla Coil innovator; Sonne Ward of Idaho, who has invented a motor generator device used to power a hybrid car, coupled with a one-cylinder engine using Ward's "Accurate Injection" system; Robert Adams of New Zealand, inventor of the Pulsed Electric Motor Generator (PEMG); and Joel McClain and Norm Wooten of Texas, who have developed a Magnetic Resonance Amplifier now under research.

ON-BOARD BATTERY CHARGER

Courtesy of Sameul P. Faile

"New Teledyne 6kW On-Board Battery Charger," *Electrifying Times*, Spring 1995, p 17.

With thirty years of power conversion experience, the Equipment Product Line of Teledyne Electronic Technologies has developed this on-board electric vehicle charger. Model TBC-600 operates on 186 to 264 VAC 50/60 Hz single phase 3 A input. The output power is 0 to 480 VDC at 20 A maximum. It includes power factor correction to better than .99. The whole charger measures 13"x 10"x 7", which includes a self-cooling fan. Teledyne will work with the manufacturer to develop custom interfaces for specific battery technologies. The varied requirements accomodated include constant voltage, temperature compensation, constant current and time limits.

For more information call Ken Blumenthal at 415-962-6858 or Fax 415-967-4353.

UKRAINIAN NEW BATTERY TECHNOLOGY

Courtesy of Samuel P. Faile

"Ukrainian Battery," *Electrifying Times*, Spring/Mid-summer, 1995, p 17.

SUMMARY

From the I.N. Frantsevich Institute for Problems of Materials Science, Kiev, Ukraine, comes an entirely new battery technology. Commercializing the battery for them is Emtech Ltd., of Mississauga, Ontario. 11 patents have been applied for.

The new battery, when used to power an electrical vehicle (EV) will provide more power in less space and weight, and recharge faster than conventional batteries. A battery set weighing approximately 200 lbs. will provide up to possibly 400 miles range, recharge in 15 to 30 minutes, and maintain full voltage up to 94% discharge. The Ukrainian battery claims to operate well in the -40 to +60°C temperature range. In contrast, a conventional lead-acid battery can propel a small electric car about 100

miles, weigh about 1000 lbs. and take several hours to recharge. In addition to these advantages, the Ukrainian battery is made of nothing but environmentally friendly, plentiful and inexpensive materials.

The charge is stored in crystalline layers of a sheet-like material similar in appearance to mica. Because of quantum mechanic effects, the electrical characteristics of each crystalline layer is that of a capacitor, and thin as one molecule. Capacitance is inversely proportional to thickness of the separation between layers, so the Ukrainian battery functions like a giant capacitor. The batteries can last many hundreds of rapid charge/discharge cycles, with no heat or waste products. They seem ideal for the EV utilizing a magnetic motor.

Miscellaneous

WHAT EVER HAPPENED TO?

Patrick Bailey, President INE

What ever happened to those experiments that we thought were exciting and then - nothing! Hey! What happened? We need to network and get the status of such neat work reported! Just a few examples of experiments I liked that come to mind: The antigravity experiments of Sandy Kidd (rotating masses) in Scotland? Making the William Hyde patent device work?. Bill Fogal's solid state device? Win Lambertson's WIN device? The recharging scooter (rotating magnets) from Japan? Stan Myers' (fuel from water) speeding ticket? Tewari's "One-Watt Solution?" Cobb's energy saving concept? Perhaps we need volunteers to contact these and other researchers (even if they want their names withheld, that's OK) and write-up a small "status" paragraph like this to explain what is going on, what effects are being observed, and what is hoped for in the near future. I know of several projects that are not being reported on because the investigators do not want any publicity - and more importantly - do not want to be found, yet. Great! Have a trusted go-between summarize the project and send it to me or to Hal Fox at the NEN address. We are all interested in what is going on, as long as it is true and reported with integrity! We are interested in supporting research - not suppressing it, or causing it to be suppressed!

The essence of networking is to share information, and not to limit each other or any group. So let's see more volunteer work and more involvement in bringing tomorrow's advanced technology here today!

ELECTRIC SPACECRAFT JOURNAL AN EXCELLENT ISSUE

Charles A. Yost and his staff at the *Electric Spacecraft Journal* have published the April/May/June 1995 issue. This is an excellent issue and we suggest that our readers get a copy for their own libraries. (Write or call, 73 Sunlight Drive, Leicester, NC 28748, Voice 704/683-0313, Fax 704/683-3511.)

The contents for this issue number 14 includes four articles which we briefly summarize below. Each of these articles are well worth your further reading. Our short reviews can only whet your appetite.

Richard Hull, "Water Arc Explosions," pp 7-15, 11 figs, 7 refs.

AUTHOR'S INTRODUCTION

The interest in water arc explosions stems from the fact that the electrical energy input appears to be much too small to account for the energetic mechanical energy output caused by the arc, wherein a high velocity jet of plasma-thrust water can punch holes in one-quarter inch thick plywood. The electrical input energy is hardly enough to increase the water temperature even a fraction of the amount required to produce steam; [therefore it cannot be steam-thrust] yet it will thrust a projectile at the speed of a bullet. One fascinating possibility is that the water might be electrically converted into an efficient thrusting mass to rocket propulsion. And, even more enticing, perhaps some excess energy is being produced by some form of atomic reaction. The real puzzle, at this stage, is just how much of the electrical energy is converted into mass momentum, and what are the most effective methods to test and measure the energy conversion.

Peter Graneau and his associates, who have worked for several years with water arc explosions, have graciously agreed to work with Richard Hull and his group. The basic intent of this new work was to properly instrument, with the latest developments, the water arc explosion to determine if a consistent over-unity condition could be proven. This article provides considerable experimental detail on their development efforts. At times, they are sure that they have obtained as much as 160 percent of input energy. However, replication is one of the marks of good laboratory work and this phenomena doesn't want to

replicate that easily. Richard Hull has done an excellent job in sharing his experimental work with us. **He also warns, at these energies, a slug of water can be lethal. If you desire to experiment with such water arc explosions, be sure and carefully read this article, first.**

Ronald J. Kovac, with commentary by Tim Binder, "Plasma Shaping: An Atomic Transmutation Concept," pp 16-23, 11 figs, 5 refs.

INTRODUCTION

Ron Kovac has been subjecting plasmas formed inside of glass bulbs under vacuum conditions to electric and magnetic field forces. The purpose of these experiments has been to investigate the atomic space and shape concepts of Walter Russel and his reports of transmutation. In addition, they are also investigating the possibilities of cold nuclear fusion. The transmutation experiments have been done with the collaboration of Tim Binder and Toby Grotz. Some of this information has previously appeared in *Fulcrum*, and in the *Proceedings of the Second International Symposium on New Energy*.

One of the interesting aspects of this work is its reliance on the geometry of the electrodes in the evacuated glass bulbs. Apparently these geometries play a strong role in the successes for producing the various reported results. Experimental results range from transmutation to the buildup of strange plastic-like material around the anode of some of the tubes. Kovac even obtained an excellent mass spectrometer to make measurements of the byproducts from the experiments. By comparison of the nitrogen gas and the gases after experiments were run, Kovac shows that there is a definite increase in mass four (believed to be helium) and a dramatic production of a mass 5 gas which is currently an unknown. The speculation is that they have created helium-5. Helium-5 does not occur naturally but is recognized as one of the isotopes of helium. Kovac believes that he has made significant contributions in the attempts to better understand what Russell was doing (and theorizing) around the turn of the century.

Thomas Valone, "T.T. Brown's Electrogravitics," pp 24-29, 3 figs, 14 refs.

EDITOR'S SYMMARY

In this article Valone does an excellent job in reviewing the recently declassified work done by the Gravity Research Group in London before 1956. Valone gives a history of finding the documents related to the London work and show that there was some close agreement with

the work that was done by T.T. Brown. One of the interesting findings is that a Mach 3-type vehicle should be possible if one can develop megavolts of energy and use a capacitor with a k-factor over 10,000 (a measure of the effectiveness of the dielectric). Valone cites a report in which it was disclosed that the stealth bomber used powdered uranium "which just happens to have a dielectric constant about three times that of the high-k dielectrics tested in the 1950s."

Valone discusses interesting facts about John Searl's levitating disk technology, the handling of high voltages on the surfaces of air foils (such as may be used with the stealth bomber) and other factors related to this advanced bomber. Other topics discussed by Valone are the Hutchinson Effect, where interesting anti-gravity effects are produced by using a combination of Tesla Coils and a Van de Graff generator at the same time. An electric torsion pendulum is discussed which apparently behaves strangely during a solar eclipse. [I wonder if a solar eclipse would change the normal state of space energy? Maybe we should try to replicate the Aspden Effect during an eclipse. Ed.] Valone, as usual, shows his grasp of these unusual subjects and provides us with an understandable discussion of important experimental observations.

Egon W. Bach, "Gorgons From the Volcanoes," pp 30-37, 3 photos, 1 fig.

EDITOR'S SUMMARY

The name Gorgon sounds like something that escaped from a video-game arcade. But this is the name given, in antiquity, to the glowing balls flying through the sky. Bach provides interesting information about such gorgons occurring in conjunction with volcanic activity. Bach believes that the source may be the pockets of uncommon gases which originate inside volcanoes, under conditions of great temperature and pressure. Pressures of 10,000 atmospheres and 1,000 degrees C can produce, conjectures Bach, new states of matter. Bach cites first-hand evidences for fire-balls, ball lightning, or thunder balls. Bach has spent 20 years collecting data on gorgons and similar phenomena.

These are interesting effects that involve, I assume, some interesting examples of electrostatic and/or electromagnetic forces. The complete article is recommended so that you may have a better understanding of the type of things produced by nature that we have trouble both reproducing and understanding.

Editor's Note: These articles are very interesting as examples of some "far-out" experimental and natural

phenomena. None of them are easy for the experimenter to produce, but they all give hints that Nature is not, as yet, fully understood. We again commend Charles Yost and his staff. At an annual subscription of \$24 (mailed in the U.S.) this quarterly is worth adding to your library. [See page 16]

VIDEO TAPES OF MIT IAP C.F. DAY
January 21, 1995
at Massachusetts Institute of Technology

ARE NOW AVAILABLE

Four (4) two-hour VHS video tapes are available as a set, or individually, which were only slightly edited from professionally taken video footage of the day-long IAP Cold Fusion session at MIT on January 21, 1995. The tapes include the following material;

TAPE #1

Dr. Eugene F. Mallove (Cold Fusion Technology, Concord, NH)

"Cold Fusion and New Energy Technology - An Overview"

Dr. Peter Graneau (Northeastern University Center for Electromagnetic Research)

"Anomalous Forces in Water Plasma Explosions"

TAPE #2

Buford ("Ray") Conley (MIT, graduate student, Dept. of Aero/Astro Eng.)

"Light Water Excess Heat Experiments"

Fred Jaeger (ENECO, Salt Lake City)

"Patents and Commercialization"

Professor Peter L. Hagelstein (MIT Dept. of EE&CS)

"Cold Fusion: What We Know and What We Don't Know"

TAPE #3

Professor Peter Hagelstein - (CONTINUED from TAPE #2)
"Cold Fusion: What We Know and What We Don't Know"

Professor Keith Johnson (MIT Dept. of Materials Science and Eng.)

"Progress in the Theory of Excess Heat" *and*

"Excess Heat" - The Movie, now being made by Hollywood!

James L. Griggs (Hydro Dynamics, Inc.; Rome, Georgia, USA)

"The Hydrosonic Pump: Excess Power and Other Effects"

TAPE #4

Bertil Werjefelt (PolyTech (USA), Hawaii)
"Energy from Magnetic Materials and Magnetic Fields"

Dr. Eugene F. Mallove
Concluding Remarks

The tapes include the speakers' presentations as well as question and answer sessions. There is footage of the Hydrosonic Pump under test as well as closeup footage of rotor surface melting effects. Bertil Werjefelt shows footage of experiments in his own laboratory. There are scenes of Japanese researchers from Sumitomo, Hitachi, and other companies and universities now involved in their claimed extraction of energy from magnetic materials. These efforts are now said by these researchers to be proceeding toward commercialization. Actual experiments are seen in progress.

The tapes are VHS cassettes in NTSC format and range from 120 to 127 minutes each.

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NOTE: It is expected that a video tape of the Clean Energy Technologies, Inc. (Dallas, Texas) working Pons-Fleischmann-type cell based on James Patterson's U.S. patents and experiments will be available in the next several weeks. Please note your interest in receiving information about this tape.

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LETTERS**LETTER FROM DR. FROLOV**

I have to inform you about the creation of the Institute for Free Energy as a subdivision of the International Megascience Academy. We hope to establish fruitful business relations with your company.

Yours faithfully, Alexander V. Frolov
Head Representative of IMA in St. Petersburg
Director of Institute for Free Energy

[and in a later letter:]

Thank you for information about G.A. Wichita's circuit. It is possible for you to compare his work and my description of this technology that was published in *New Energy News*, June 1994, p 11.

Let's note: Mr. Wichita did not explain why he created that sort of pulses for anti-gravity or free energy experiment. He did not explain why this system has a certain effect. In strength of this reason, it's difficult to develop Mr. Wichita's work for industry.

In May 1994 I asked Mr. Hal Fox to publish my article "The Over-Unity Electromagnetic Transformer as Information System." Thanks to Mr. Fox this idea was published. The circuit diagram version is not important to check the idea, but it is important to build it in conformity with cause for clean energy. The inventors interested in

this idea can make their own conclusions if they try to join my article in *NEN* June 1994, p 11, and the idea published in my letter to the Editor, *NEN*, May 1994, p 21 (re: inertia).

I can offer again the next: the half-period of decreasing of density of energy (electric current) is connected with "help from vacuum." By Lenz, the induction current here must support the primary current. By means of pulsed signal it is possible to create the decreasing density current effect only to exclude the counter-flux for increasing density. The anti-gravity effect is the secondary effect in any free energy system taking power from space-time that leads to curvature change, I think.

I'll welcome contact with anybody who is interested in development of this system, with my help and skill. My home phone is 7-812-274-7877, ask for me and speak English if you cannot speak Russian.

LETTER FROM WIM HEIDEMAN

I have read the article "Discovery of Virtual Inertia" with much interest and have done the following experiments:

I measured the time on ordinary household motor, a juicer, needs to reach a certain level of current input. It took 7.3 seconds to reach a current of 0.83 amp. I kept the motor running for about 7 minutes. The current was then 0.76 amp. I switched the motor off, waited until it had reached zero velocity and started again. Now 0.83 amp had been reached in 1.8 seconds. Even 20 minutes later, only about 3 seconds were needed to reach 0.83 amps.

At first I was delighted and thought: "Finally I have seen an extraordinary phenomenon." But after some reflection I came to the conclusion that heat is the explanation. The electric input causes orderly movement, rotation, and disorderly micromovement: heat. The motor stores energy as heat. The second start, less energy is needed to reach the same result, defined in terms of rotational velocity, temperature and the corresponding resistance. An even more obvious example of this effect is the reduction in energy need of a not yet cooled down iron to come to its original temperature. Other electric motors showed the same effect, for instance a vacuum cleaner.

The resistance of the windings, and thus the temperature stays increased for an amazingly long time (for instance, two hours). Electric motors have a good memory for energy input.

These experiments do not disprove virtual inertia, but research in this direction has to be done with other ways

to cause rotation or with two identical motors: rotate disk with the first and look for virtual inertia with a fresh second one.

Wim Heideman
Oude Looier Str. 29
1016 V S Amsterdam, the Netherlands
tel: 020-622-7965

[Dr. Aspden is a careful experimenter. He assures us that with his devices it was not bearing temperature that caused the noted effect. --Ed.]

LETTER FROM GEORGE WISEMAN

Find below a list of the advantages to the Wiseman cycle that I refer to in my "Giant Bay" letter to Dick Liebel. [see *NEN*, Mar. 1995, p 1]

The Wiseman cycle has several inherent advantages that makes it a much more viable project than the one Giant Bay is doing, and will potentially generate far more income in a shorter amount of time. I can make all this available.

First, it allows heat energy to be converted into mechanical energy in an extremely efficient manner. It is **much more efficient** than any thermodynamic cycle in use today.

Second, the efficiency and the fundamental operation of the cycle allow for very **small** machines to produce **large** amounts of power.

Third, in some applications, the Wiseman cycle converts heat energy to mechanical energy in such a way that the cycle needs **no condenser**. This means that you can take heat from ambient sources, without a "heat sink" as required by every other thermodynamic cycle (even in the winter at night) and generate substantial amounts of **FREE** power with low cost "off the shelf" components.

Fourth, the Wiseman cycle allows us to **convert low temperature heat** energy to mechanical energy. For example, this means that we can build practical machines that can take heat from ambient sources (air, water, ground) and use it to create mechanical energy. We no longer need to burn fossil fuel to power our civilization. There is enough heat energy (constantly renewed) available to us to power our civilization well into the foreseeable future without the use of nuclear, fossil fuel or hydro power stations.

I do not foresee, advocate or recommend that we dismantle our present energy structure. There are plenty of ways that we can begin phasing the Wiseman cycle

into the present energy structure. Over a period of time the energy structure will automatically find a new position.

Fifth, in some cases the Wiseman cycle requires **no compressor**. The Wiseman cycle can be operated, in high temperature applications, exactly the same as a Rankine cycle. This application is slightly less efficient but far simpler because a condenser is easier to build and maintain than a compressor. The Wiseman cycle, when used this way, is still vastly more efficient than the Rankine cycle.

Sixth, the Wiseman cycle inherently uses the simplest prime movers to change the heat energy to mechanical energy. Very few moving parts and what few there are, are highly reliable and simple to manufacture. I am designing systems that can put out major power in a small space, yet can be built in an ordinary machine shop.

There is no question in my mind that electric arc and water will "create" over-unity heat. Both my research and that of others confirms that. ... I realize that you did not know of the Wiseman cycle. I invented it and haven't distributed the information very far yet. I am not patenting it. It is going to be public knowledge. I make my money with "spin-offs."

... In your case, if you are able to achieve a self-powered machine (I don't know your over-unity factor) then the Wiseman cycle will likely double your net output power, simply because you are using a thermodynamic cycle that is close to a perfect Carnot efficiency. If your over-unity factor is less than 400%, then the Wiseman cycle may make the difference between your project working and not working. ... You have a way of making excess heat, I have an efficient way to turn heat **from any source** into mechanical energy.

Meetings

30TH INTERSOCIETY ENERGY CONVERSION ENGINEERING CONFERENCE

"Energy Technologies for a Sustainable Future"
Buena Vista Palace Hotel, Orlando, Florida
July 31 - August 4, 1995

Topics covered: Aerospace Power, Conversion Technologies, Electrochemical Conversion, Energy

Systems, Environmental Impact, New Technologies for Energy Utilization, Policy Impacts on Energy, Renewable Energy Resource Systems; Stirling Engines and Applications. **Some cold fusion papers have been accepted in the New Technologies area.**

Deadline for advance registration: July 21, 1995. Contact the ASME office at (Phone) 800-843-2763 or (Fax) 201-882-1717.

1995 INE and INE/PACE CONFERENCES MOVED TO 1996

Both the Spring 1995 INE Conference and the October 1995 PACE/INE Conference have been moved forward into 1996. After long telephone calls and several discussions, it has become apparent that there is not yet enough working experimental models or devices to justify a one-, two-, or three-day INE conference in either the US or Germany during this calendar year. Finances are also a consideration, as the INE is requesting funds as a non-profit corporation, and has currently not yet obtained the estimated funding required to support such a conference (\$15-20K). Researchers that would like to present their material later this year in a related conference may contact the IANS at 303-482-3731.

Symposium on Natural Agriculture, Gardening & Housing "Alternatives for the Environment"

May 5, 6, 7, 1995
Fort Collins Plaza Inn
Sponsored by IANS

This Symposium will bring together pioneers of alternative agriculture and gardening whose goal is to encourage environmentally compatible techniques in agriculture that will optimize the health of the planet's inhabitants. The housing portion of the symposium will provide alternative housing ideas that are energy efficient and ecologically beneficial.

Speakers, booktable, exhibits during the days, workshops in the evenings. Luncheon banquet with special program on Sunday. For information call IANS 970-482-3731, Fax 970-482-3120. Preregistration until April 21, \$60. After that and at the door, \$75. Daily: \$25. Students: \$25 for 3 days, \$10 per day.

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