



New Energy News

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JOIN THE INSTITUTE FOR NEW ENERGY AND CHANGE THE WORLD

By Hal Fox

Thanks to the help of the members of the Institute for New Energy, our numbers are growing and our influence is helping to change the world. Part of the credit is being given to *New Energy News* but the bulk of the credit must go to the members who **do something** with the information that you help **gather and disseminate**.

Our membership growth has quadrupled in the past year. We are now holding the second International Symposium on New Energy. We are receiving compliments from various parts of the world for the way in which we are gathering and disseminating information about workable new energy systems.

In this pre-conference issue of *New Energy News* you will hear from old friends and meet some new friends. I have just returned from a visit to Minsk (capital city of the Republic of Belarus, a former part of the USSR). We now have established complete computer-to-computer communications so that our publication can be transmitted to and published in

Belarus for a Russian-speaking group. As soon as permission is obtained from the government, *New Energy News* will be translated, published, and sold in CIS (Community of Independent States - formerly USSR) countries.

We have made contact with one of the persistent Russian researchers into new energy. His name is Alexander V. Frolov. His latest paper is being published in this issue. We have also made contact with three scientists who have now proven work that is many years old but has not been accepted in the scientific community. That work involves the measurement of a new form of radiation (not optical, not magnetic, not electrical). We are checking with patent experts to ensure that any patentable part of their work is protected for the benefit of these Russian scientists, before we publish detailed information. With your help we are changing the world by disseminating new information. If you are not a member, join us today.

WELCOME TO THE INTERNATIONAL SYMPOSIUM ON NEW ENERGY

The Application of Potential Energy for Creation of Power

By Alexander V. Frolov

P.O. Box 37, St. Petersburg, 193024 Russia

Professional physicist's dislike for questions about applications of potential energy for power creation is understandable since they have a strong orientation to the Law of Conservation of Energy.

This paper, without formulas, demonstrates that there are no prohibitions to free energy in Nature. The availability of the potential field is a sufficient condition for creation of fuelless power systems. When such a system is in operation then certain effects show up that are connected with the Law of

Conservation of Energy. It is necessary now to formulate this Law in a general way.

The problem of without-support motion [levitation ?] may be solved by means of asymmetrical potential interaction, which is also proposed.

1. The Total Work of a Potential Field
There are "incontestable" formulations: the work of potential field along closed trajectory is equal to zero. Indeed, from Figure 1 we can see that part of the

work is positive (acceleration) and another part is negative (deceleration). In physics textbooks the task of application of potential for making only positive work is not treated. This reluctance can be explained by unwillingness of textbooks authors to discuss more interesting question of energy transformations when the inner structure of space-time is changed. [Modern physics does not usually treat space-time modifications in the manner alluded to by Frolov, Ed.]

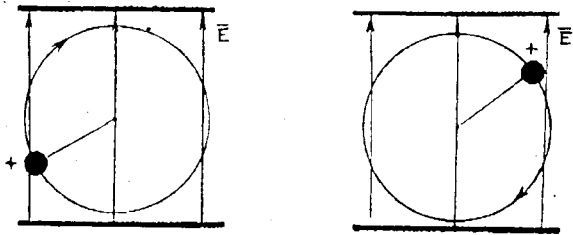


Fig. 1

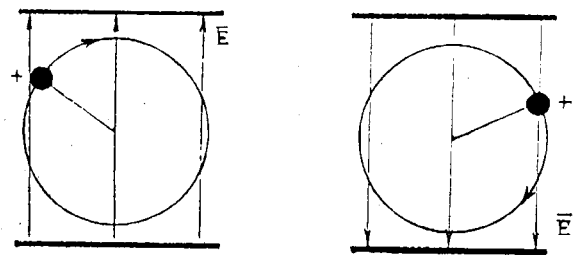


Fig. 2.1

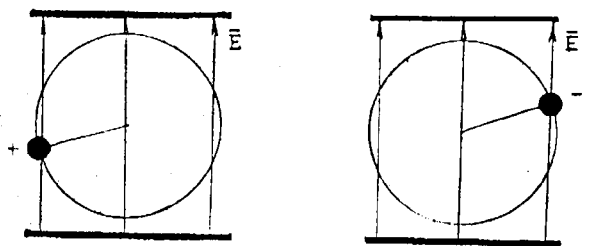


Fig. 2.2

Figure 2 shows the same charged mass M rotating in potential electric field. The difference is in mode of interaction. The polarity of the interaction is changed when positive work is changed to negative. Figure 2.1 shows that the direction of the field is changed and Fig. 2.2 shows that the sign of the charge is changed.

There are simple examples of the application of potential field for creation of only positive work in a

load. Fig. 3 depicts a scheme that is similar to water mill wheel. Now let's return to Fig. 1. Have you heard of the miller who submerged the mill wheel in the water flow of the river and then "scientifically" proved that it is impossible to use water flow for creation of power? Unfortunately, our school teachers use similar arguments!

So, part of the trajectory or part of the periodical cycle that is part of negative work (deceleration) can be excluded by means of spatial superposition, pulsed mode operation, change of polarity of interaction, or by means of suitable screening (see Fig. 4). Fig. 5 shows that some changes in arrangement of electrodes in a vacuum tube allows one to increase energy of emission of the flow of electrons.

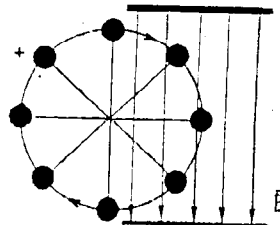


Fig. 3

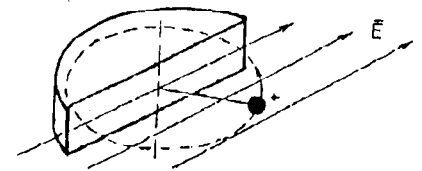


Fig. 4

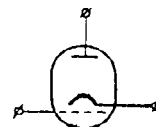


Fig. 5

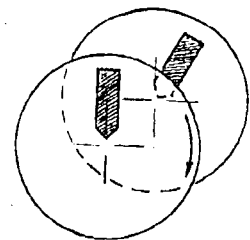


Fig. 6.1

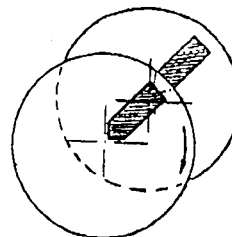


Fig. 6.2

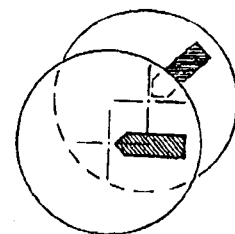


Fig. 6.3

These schemes require certain development for industry application, of course. Note that Coulomb's interaction is inversely proportional to square of

distance so it is necessary to try to decrease this distance. Fig. 6 shows a version of a free energy device similar to a well-known electric machine [appears similar to the basic description of the Adams magnetic motor. Ed.] Let's consider the interaction of two segments which have opposite charges, for example. In case of constant sign of interaction the process corresponds to the conclusions of the above miller [who immersed his mill wheel]: Fig. 6.1 shows that attraction between segments create propulsion force and rotor moves with some acceleration, then Fig. 6.2 is at the point of balance and Fig. 6.3 shows that the rotor is decelerated since segments remain in attraction. The total work of potential field is equal to zero. But why? It is not an indispensable condition of Nature. It is enough to change the sign of interaction between segments after balance point from attraction to repulsion to create the mode of acceleration again! [As Adams proposes for his magnetic motor.]

Let's omit technological details and description of contacts, collector brushes, condenser, transformers and so on. [The reader must realize that the proof of the concept and whether it will function lies in the omitted technical details. Ed.]

Above we considered examples of scalar electric potential application. It is possible to use any potential for it, for example vector potential of magnetic field and also the gravitational potential.

It is not new that a potential field can create **work**. Any textbook shows examples of negative-positive cycle of such **work** and proves that total work of successive acceleration and deceleration is equal to zero. But since it is successive performance of two processes it is conceptually possible to change parameters of one process to create cycle as sum of two or several parts of positive work. The solution lies in point-momentum of balance. [That is to say that one must properly change the parameters from one process to another at the proper "balance point" in a work cycle. Ed.]

2. The Asymmetrical Potential Interaction.

Let's consider the application of potential field for creation of propulsion force and without-support motion [levitation? Ed.] Fig. 7 is a scheme using ordinary flat electric condenser. Two flat plates are in attraction (different charges) or in repulsion (same charges). Total force equals zero and the material system of the condenser remains stationary. All we

need to find a solution is to note that the force line of potential field always is perpendicular to the charged surface. Fig. 8 shows the same condenser but one plate is perpendicularly turned to another plate. The vertical plate is divided into several elements to decrease the distance of Coulomb's interaction between plates. Total force that influence any vertical element is the sum of opposite forces and it is equal to zero. But total force that is applied to another (horizontal) plate is sum of co-directional elementary forces and it is not equal to zero. The system can be caused to move by means of asymmetrical potential interaction.

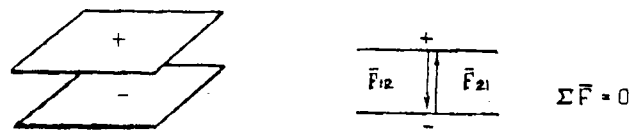


Fig. 7

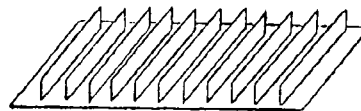


Fig. 8.1

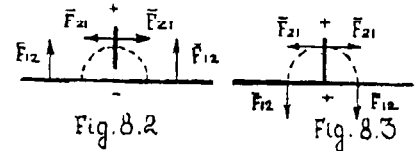


Fig. 8.2

Fig. 8.3

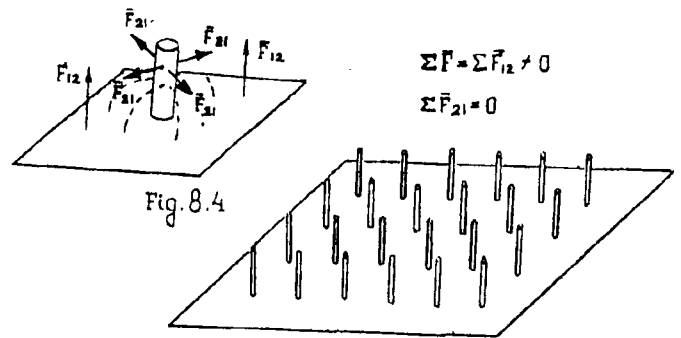


Fig. 8.4

$$\Sigma F = \Sigma F_{12} \neq 0$$

$$\Sigma F_{21} = 0$$

Fig. 8.5

Note that perpendicular elements can have a cylindrical shape. The propulsion force can be regulated by means of changing the angle between plates of an asymmetrical condenser or by means of changing the potential.

The well-known experiments with "inertoidal" moving systems can be considered as a particular

case of asymmetrical (vector) potential technology. When eccentric mass is moving along epicycloidal or cardioidal [heart-shaped?] trajectory, the trajectory creates a propulsion force that is the result of the gradient of acceleration. This process has been described by using a vector potential concept. Since asymmetrical scalar potential interactions do not require additional power after its creation, the scalar technology is more interesting for spacecraft applications than inertioidal systems.

3. The Effects of Space-Time Disbalance

Now we have a common sense question: Where do we extract power from if we use potential energy to create work? I must note that the existence of force effects of potential fields must raise the same question. For example, why can a permanent magnet (the vector potential) hold a massive piece of metal when it makes work against the gravity force and the magnet doesn't require power? [This is a good question. The standard answer is: Work is defined as force time distance. If the mass being held by the magnet does not move then no work is performed. That answer does not appeal to one's experience. The magnet supporting a weight seems to be a different physical effect than a rope supporting the same weight. Ed.]

The Whittaker's conception of potential as a bidirectional flow of energy is discussed by T.E. Bearden [1]. The generalization of Newton's Third Law in this conception leads to a requirement for a complementary pair for the process of electromagnetic radiation. Since the process means the change of information (of structure of space) in time this pair anti-process takes place in reverse-time. Certainly, anti-process is developed from own past time to future but from our point of view it is changed from future to past time. Considering the strength of the generalized Third Law of Newton, the inner structure of electric potential field is created by two oncoming flows of energy: the photons are spreading from the charge-source of the potential field and the anti-photons are [also spreading?] to create the effect: Since "something" cannot spring from "nothing" what and where is something "reduced" [changed?] if in local region of our space-time the free energy process occurs and some power is provided to the load? Let's make a generalization of this question. By reading T.E. Bearden we find that "potential" and "energy" is the same. Then considering "energy" as "ordering and disordering" of the spatial structure we conclude that energy is the description of any process. Considering that a

"process" is a change of information or spatial structure in time from the point of view of the observer explains the effects that are connected with changes of natural potential field energy balance.

Therefore, the potential field can be considered as a bidirectional process/anti-process. Usually energoinformation [energy information] that is radiated by the source of the potential field (the direct process in time) is somewhat different from energoinformation that is received (the anti-process in reverse-time). This difference causes the rate of time for this mass object [to change] and the existence of this mass as [becomes the] source of the potential field. This difference is equal to trapped energy of mass-form that can be transformed as radiation energy in case of mass decay.

If the potential field is used only for the creation of positive work in conformance with the Law of Conservation [of Energy] the power process in space-time must be balanced by corresponding power anti-process in space of reverse-time and this effect shows itself as a local change of spatial curvature and rate of flow of time.

If it is necessary for technology [design of practical applications] it is possible to calculate the amount of power that must be dispersed as heat to obtain the mode of total compensation of natural spatial planet curvature and rate of time in local area of space-time.

So it is impossible to create "something" from "nothing" but if the creation of some power process is balanced by corresponding anti-process you don't create "something" in a free energy system from the point of view of Eternity. After Whittaker's representation of the electron as a function of two scalar potentials the old philosophical idea of the unreality of material existence has the possibility of experimental verification. The departure from static description of mass to a dynamic description of the material world allows one to develop an improved conception of reality. [Essentially a concept of matter being, in a fundamental sense, energy.] Since the mass (and matter) is a process that is balanced by reverse-process there are no difficulties of principle to develop such technologies as transmutation of chemical elements [2], materialization and dematerialization, teleportation and so on.

The application of potential energy for the creation of power does not violate the Law of Conservation of Energy that remain true in a more general view: The complete energy of a four-dimensional system is the sum of the energy of space-time processes and the energy of space-reverse-time processes, and it is constant and equal [sums] to zero.

References

1. T.E. Bearden, Gravitobiology, 1991, published by Tesla Book Co.

2. The Russian scientist C. Louis Kervan is also cited but the complete citation was not readable in the faxed manuscript.

Editor's Note: While visiting in Minsk, I talked to Frolov in St. Petersburg and he faxed the above article to me in Minsk. We thought that *NEN* readers would appreciate reading about Frolov's view of the energy world. The weakness in this summary of his energy viewpoint is the lack of specific experimental evidence. We will be in further communication with Frolov and ask him to provide *NEN* with some specific experiments that he, or his Russian friends, have performed that support his presentation. In the above document, I have restated many of his sentences to improve the clarity of the idea being expressed. In some cases, I may have not presented his ideas as clearly as he can present them in his native Russian language. My apologies to the author if I have distorted any of his meanings. Hal Fox, Editor

Editorial

SCIENTIFIC AMERICAN REPORTS ON INERTIA AND QUANTUM DYNAMICS CHALLENGES.

In the May, 1994 issue of *Scientific American* (vol 270, no 5), two energy-related articles appear. In the first article, page 30-31, Corey S. Powell writes about "Unbearable Lightness". This article reports positively on the new paper by Haisch, Rueda, and Puthoff (which *New Energy News* reported on in its February, 1994 issue). In the last paragraph, the author states, "That phenomena [interaction of electromagnetic radiation and mass of the electron]

raises the highly speculative prospect that the proper electromagnetic field could eliminate the inertia of an object, thereby permitting levitation. Controlling inertia may be possible ..." *Scientific American* has not read about the reports of the experiments by Don Kelly in which just such a phenomena is being measured and documented (the "gravity-drop experiments". (See *NEN*, Sept. 93, vol 1, no 5, pp 10-11, and Jan. 94, vol 1, no 9, p 16.)

In the cover story for this May, 1994 issue of *Scientific American*, David Z. Albert writes about "Bohm's Alternative to Quantum Mechanics." [page 58ff.] Just as *New Energy News* has reported, all is not stable in the QED (Quantum Electro Dynamics) world. There is a principle in science in which it has often been shown that of two or more competing theories, the simplest theory that explains the facts is usually the more nearly correct theory. The author presents strong evidence (usually evidence not brought to the attention of college students) that some of the sacred beliefs of QED are being challenged. The most fundamental postulates of Quantum Dynamics are being questioned. [See also in this issue of *NEN* a paper by a University of Utah undergraduate student who focuses our attention on variations in the speed of light, page 11.]

What do these articles imply? Certain fundamental (and incorrect) beliefs of modern science are being successfully challenged. The end result will be an improvement in our understanding of the world in which we live. This improvement will result in better understanding of the physical world, better inventions, and improved methods of making, distributing, and using energy. You, our readers, are a part of that history-making group. **Thanks for being one of the modern energy pioneers.**

Fusion Briefings

COLD FUSION HEATS UP THE MAY ISSUE OF TECHNOLOGY REVIEW

In a 10-page article by Dr. Edmund Storms, the visibility of Cold Fusion as well as its credibility just took a big leap. *Technology Review*, edited and published by the MIT Association of Alumni, is a cross-sampling of research, technology and business

in many fields of science, aimed at making the lay person knowledgeable about the overall progress of technology. In this issue, *Technology Review* provides a neutral ground from which readers may learn about the facts of cold fusion development from an established scientist (who worked at the government-funded Los Alamos National Laboratory) instead of accusations and suppositions from people who generally have not pursued any cold fusion research themselves.

Dr. Storms gives an overview of the research citing both the positive results as well as the negative ones. He discusses the finicky nature of the parameters that have been proven to result in excess heat and nuclear products, and why some of the early experimenters failed to achieve positive results (because of the lack of knowledge of these parameters). It has taken nearly 5 years to refine the processes leading up to successful cold fusion experiments, there are more variables than the first scientists realized. And now that many of these parameters are known, the success in replication of the cold fusion phenomena has risen sharply.

Dr. Storms says, "If the validity of the effect rested only on results reported during the first year after the initial claims by Pons and Fleischmann, this strange diversion from routine science would have joined "n-rays," polywater and other excesses of the imagination. But enough reputable researchers have now published findings, produced from a broad enough range of experimental approaches, that it has become difficult to doubt that something is going on outside the explanations offered by conventional physics."

"What is happening might be fusion; it might not be. But to dismiss the claims as the result of experimental error or fraud is no longer appropriate. Regardless of admitted conflict with accepted theory, these results strongly support the conclusion that a new class of phenomena, which I call chemically-assisted nuclear reactions, has been discovered. Given the enormous scientific and economic importance of this work if it turns out to be valid, it is prudent to examine the data with an open mind."

Dr. Storms then goes on to enumerate the evidence for cold fusion being a definite nuclear reaction, by exhibiting the presence of nuclear products in many widespread research locations. In each case (tritium, excess heat, helium) he gives examples from widely recognized facilities who have measured these

nuclear "ash" products. He debunks the assertion that fraud could be at the root of the claims of cold fusion, simply by referring to the same results: many and worldwide and repeatable.

In summation, Dr. Storms admits that we are still a ways from having a complete theory to describe cold fusion. There are several dozen models that have been published, trying for the most part to explain the overcoming of the Coulomb barrier, i.e. overcome the natural repulsion of charged particles for each other, in a cold fusion-type experiment. But none of the proposed models takes into account all the possible experimental observations that have been made. And a workable theory of the complete phenomenon is necessary in order to apply it to new energy uses.

But before a concrete theory can be put together, more research needs to be done, papers written and peer-reviewed, and results analyzed and digested. But the scientific community powers-that-be are hindering the development of the theory, by preventing the funding, patenting and publishing of the research that is needed. To quote Storms, "Early investigations of all new phenomena tend to be incomplete, prone to error, and difficult to reproduce. Further scientific investigations require money; the more complex the phenomenon, the more money is required. But dollars tend to flow toward research with a clear chance of success. Thus many potentially important ideas never receive enough funding to enable scientists to understand them."

Since "big business" and the government in the U.S. have listened to the skeptics, very little funding has been provided. But a few organizations are farsighted enough to be listening to the worldwide research and to begin backing U.S. research. The Electric Power Research Institute (funded by many electric utility companies) and ENECO (a company in Salt Lake City) are funding cold fusion research at several facilities.

The peer-review system has, for the most part, fallen prey to prejudice when dealing with cold fusion. Without considering the positive reports from worldwide research institutes, the editors and chosen peer-reviewers of certain important journals insist that all cold fusion is a bogus science, and therefore will not publish anything concerning it. And with circular reasoning, the journals will not accept papers until more papers are published in such journals and report positive evidence for cold fusion.

Superconductors were first observed in 1911, but only recently have been widely researched. Lasers, predicted before 1920 by Einstein, are now commercially viable and widely used. Cold fusion has been harder to replicate, in the beginning, than either of these other technologies, but potentially may be even further reaching in its uses than both of them. "It is up to scientists of all disciplines to perform the experiments and devise the theories that will transform cold fusion from a laboratory scale phenomenon into something of lasting value."

Summary by Dineh Torres

ITALY - HEAT IN NICKEL SYSTEMS

S. Focardi (Dip. di Fisica, Univ. di Bologna, INFN, Sezione di Bologna), R. Habel (Istituto di Fisica, Fac. di Medicina Univ. di Cagliari, INFN, Sezione di Cagliari), and F. Piantelli (Dip. di Fisica, Univ. di Siena, IMO Siena and INFN, Sezione di Siena), "Anomalous Heat Production in Ni-H Systems," // *Nuovo Cimento*, vol 107A, no 1, January 1994, pp 163-167, 1 ref, 5 figs.

EDITOR'S DESCRIPTION

A 5 mm x 90 mm nickel rod (control is stainless steel) is placed in a vacuum vessel and surrounded (without contact) by a Pt heating element. The chamber is evacuated and filled with hydrogen gas. At elevated temperatures, the nickel rod reportedly produces excess thermal power.

AUTHORS' DISCUSSION AND CONCLUSIONS

Up to now we are not able to formulate any consistent model which comprehends the phenomenon. Nevertheless, we can state a few standpoints on the basis of the measurements performed.

i) The system can be reliably controlled.

ii) The system has been maintained at a mean "power imbalance" of 44 W for a period of twenty-four days (corresponding to about 90 megajoules), after it has been stopped. This amount of energy is beyond that produced in any known chemical reaction involving H₂ and Ni, being at least three orders of magnitude larger.

iii) It appears that the power required to maintain the unloaded Ni sample at a fixed temperature can be up to twice the one required for

the loaded Ni. This power "imbalance" can be considered the "gain" of the system.

iv) No penetrating radiation (neutrons, gamma-rays) was detected above the background level during the process.

These four points are all we can state so far on the basis of the work done. Work is now in progress to verify as a possible candidate for the heat generation, the reaction (p,D), where D is that naturally contained in hydrogen.

INVITED COMMENT ON THE ITALIAN EXPERIMENTS

The layout of the experiment does not describe any kind of calorimetry system. Apparently, the authors recorded the sample temperature and then interpreted the shift in the temperature of the hydrided sample rod when heated by a definite input power heater as being generated inside the sample.

This interpretation may be accurate, however it is suggested that a more thorough calorimetric study be made. One can suggest several various reasons for the hydrided nickel sample to gain higher temperature when being heated with a separate heater. Some of them are as follows:

Change in heat conduction and hence in heat dissipation ability of the hydrided material in comparison with the initial sample material or dummy rod.

Change in heat radiating capability of the sample after having been loaded with hydrogen.

Change in the dimensions of the sample after having been saturated with hydrogen which can cause the surface of the sample to be closer to the heater thus providing higher heating of the sample at the same input power consumed by the heater.

Some other reasons may apply.

From reading the paper, it is not known if the authors took into consideration any of these above mentioned factors. In order to verify their results, the authors should add a high-grade calorimetry system.

Igor Goryachev, ENECO, Inc.

[We look forward to further reports on these interesting experiments. -Ed.]

Space Energy

FINLAND'S NEW ENERGY

"Finland Seeks New Energy Sources Around the Globe," *Electric Spacecraft Journal*, issue 11, 7 Apr. 1994, p 32.

J. Antero Aaltonen, M.Sc., of Orbital Technology in Oulu, Finland was sent to the U.S. to find out what we were doing about alternative energy. Aaltonen, a businessman, was originally interested when he read about the research of Nikola Tesla. He has studied in depth about new energy concepts based on Tesla and zero-point energy, which were published in various conference proceedings and IEEE reviews. He then passed the information on to both private and government-owned venture capital representatives.

In the past few years industrial and government entities in Finland have become more interested in alternative energy concepts. Last year the construction of a fifth nuclear power plant was rejected, and R&D program for new energy sources was begun by the Ministry of Trading and Industry. The state-owned Finnish Independence Foundation requested that Aaltonen produce a technical feasibility study and gather reports on current alternative energy research in the U.S. He visited Electric Spacecraft, Inc., and also Oliver Nicholson in Utah and Gary Johnson in Kansas, both active Tesla researchers.

"Cooperation between countries will hopefully speed the search for alternative energy sources." The need for global interchange of information and ideas is vital. The Finnish National Fund for Research and Development, sponsor of Aaltonen's trip, avidly supports these international networks for cooperation and technology transfer.

"I defy the tyranny of the precedent."

- Clara Barton

Electricity

A Report on the T. Townsend Brown Conference: "FOCUS ON UNCONVENTIONAL ENERGIES: A Symposium on Electrical Propulsion and the Technology of Electro-Gravity"

April 15-16, 1994

Philadelphia Community College, PA

by Patrick Bailey

This conference was held in tribute to Thomas Townsend Brown and I feel that it was a great success. About 15 speakers and 80 attendees provided a brief overview of Zero Point Energy theories, free energy devices, electrostatics theory, and antigravity experiments and documentation. Attendees came from as far away as California and Washington.

We all should thank and continue to support Gus von Grossman and Harriet Wealth, who created and made the conference possible; and Nancy Kolenda of Temple University, and Thomas Katen and Jim Oswald of Philadelphia Community College for managing and supporting this important event.

The conference program advertised the following topics: "A Review of Advanced Energy Devices: Evidence, Promises, and Dangers" by Patrick Bailey (VP, INE); "Thomas Townsend Brown's Electro-Gravities Research in the 1950's" by Tom Valone (Integrity Institute); "The Role of Electro-Static" by Charles Yost (*Electric Spacecraft Journal*); "Thomas Townsend Brown's Research: A Challenge to Modern Science" by Elizabeth Rauscher (Technic Research Laboratories); "Electro-Gravitic Theory: Explaining the Operating Principle of Brown's Electric Disks" by Paul LaViolette (The Starburst Foundation); a Panel Discussion on Biofield-Brown and Beyond; "Vortices in the Zero Point Energy" by Moray King; "Design of a Compact Marx Generator Triggered by a Blumlein Capacitor" by George Hathaway; "Thomas Townsend Brown's Final GravitoElectric Research" by Josh Reynolds (New Wave Partners); "Townsend Brown Effects Reviewed" by Ron Kovac; "Pushing the Boundaries: Electro-Hydro Dynamic Potentials ..." by Henry Monteith; and "Gravity Drop Tests" by Don Kelly (SEA).

As a researcher in the zero point energy and free energy fields for the past 10 years, I was struck by how much important information regarding T.T. Brown I didn't know about. I had of course heard of Brown's flying tethered disk experiments, and the larger ones which were classified by the military, but I did not know about his 1934 patent and his existing research notes which hint at the ability to tap into a free energy type of force field. Obviously, more serious research needs to be done by the INE network to digest and understand all of Brown's theories, information, and experimental data. Here is a listing of T.T. Brown's patents:

T. Townsend Brown Patents:
 1,974,483 (Sep. 25. 1934) "Electrostatic Motor"
 2,949,550 (Aug. 16. 1960) "Electrokinetic Apparatus"
 3,018,394 (Jan. 23. 1962) "Electrokinetic Transducer"
 3,022,430 (Feb. 20. 1962) "Electrokinetic Generator"
 3,187,206 (Jun. 1, 1965) "Electrokinetic Apparatus"

Any of these and other patents may be ordered for \$3.00 each from: The Commissioner of Patents and Trademarks. Box 9. Washington DC 20231; or obtained at higher price from Regional Patent Information locations, such as The Patent Information Clearinghouse, 1500 Partridge Avenue, Building 7, Sunnyvale, CA 94087, (408) 730-7290, FAX (408) 735-8762. [Or may be gotten for copying costs at almost any library which is designated a "Government Depository." There are 75 such libraries in the U.S.]

It is very interesting to note that Townsend Brown was the pioneer in this field, and was not able to obtain very much support for his work until the 1950's. During that time, there was much discussion of gravity and antigravity within the aerospace industry and in the magazine "Aviation Week." Then the Gravity Research Group (GRG) published a detailed summary report of their review of research into "Electrostatic Motion, Dynamic Counterbary, and Barycentric Control" (i.e. Antigravity). This report is the last public report that any researchers have been able to find for us that deals with the physical effects of electrostatics, electrodynamics, and gravity control. (It is also worth noting that this report was found in the Wright Patterson Air Force Base Library "TL 565 A9" and was not listed in the library catalog). So, after the mid-1950's to the present, no other information regarding the technology of electrodynamics and its effect on

gravity has been able to be found in any of the UN-classified U.S. literature. I wonder where it went?

As a result of the conference, projects have been started to obtain all of Brown's patents and make them available as a packet of information, complete with any other available information regarding his work. We have also requested that his notebooks be copied and made available to serious researchers. The results of these new projects will be reported to all of the attendees from the conference and in a future issue of NEN.

One good source of summary information in these areas is Tom Valone's new book: "Electrogravitics Systems." It contains information from the GRG "Electrogravitics Systems Report (Feb. 1956)." "The Gravity Situation" report by Gravity Rand Ltd. (Dec. 1956). "Negative Mass as a Gravitational Source of Energy in the Quasi-Sellar Radio Sources" 1964 1st prize-winning report by Banesh Hoffman, "The U.S. Antigravity Squadron" paper by Paul LaViolette (1993), and summary information from the above T.T. Brown patents. This book is available for \$15.00 (postage included) as: "Electrogravitics Systems. Reports on a New Propulsion," Integrity Research Institute. 1377 K Street NW, Suite 204. Washington. DC 20005, 202-452-7674.

Looking back at the conference, most of the lectures were concerned with summarizing the known information from Brown's patents and well documented experiments. Very little information was given regarding his private experiments and the vast amount of theoretical ideas and experimental data that he probably has documented in his research notebooks. It was repeatedly suggested that a responsible committee or networking group needs to be set up to be able to go over all of the details in Brown's existing documents to distill what important information may be there. Josh Reynolds, Tom Valone, and myself volunteered to chair this committee and get this investigation going. Since Brown's experiments with disks appeared to be able to defy gravity (somewhat like John Searl's disks), there was some discussion at the conference regarding flying saucers, UFOs, the Philadelphia experiment, and the Montak Project. While these areas were held as fringe areas at this conference, they could have information that may relate back to Brown's discoveries.

In my summary during the panel discussion, I presented my views that: (1) We do not know what T. T. Brown really did, and we need to organize and

distribute his patents and materials to a committee (or a company) to find out; (2) Individuals will not be allowed to accomplish much within U.S. -instead we need teamwork, networking, corporations, and an international corporation to distribute results; (3) Commercial applications of any advanced technology were not possible 3 years ago, and should easily be possible now; (4) Existing graduate school textbook theory is not applicable to describe the physical effects seen by Biofield, Brown, William Hooper, and Hans Coler (and others) - we need more data and new mathematical models for dynamic EM interactions; and (5) Strong dis-information will continue to persist, especially the use of simplistic thinking - such as that which comes from the use of Heavyside's simplification of "Maxwells Equations" into 3-D vector form, and the assumptions of the so-called "General Theory of Relativity."

Individually, we will see the problems and become inspired. Networking together, we will obtain the answers and implement the applications.

BEARDEN CIRCUIT

Rollo Silver, "Analysis of an Electrical Switching Circuit," to be presented at International Symposium on New Energy, May 13-15, 1994, 9 mms pages, 6 figs.

AUTHOR'S ABSTRACT

Ideas put forward by T.E. Bearden have generated a deal of interest in a simple electrical switching circuit in which a battery is switched so as to charge a collector for a short time, after which the collector is switched from battery to a load, for a time during which the energy collected is transferred to a load. If the collector is made correctly, Bearden predicts that if the collector is fabricated correctly, the energy it collects and transfers to the load will be in excess of the energy extracted from the battery: the over-unity gain that we all seek.

In this paper we consider a simple switching circuit in which the collector is an inductance have some series resistance. We analyze the circuit using the known solutions of the ordinary differential equations governing its behavior, taking into account only ordinary current flow, leaving out considerations of free energy, zero-point energy, displacement currents, etc.

In this way, we have provided a "classical" background of behavior for the circuit, against which

any deviations can be seen as significant and interesting.

WIMSHURST ELECTROSTATIC GENERATOR

Charles A. Yost, "The Sectorless Wimshurst Electrostatic Generator," *Electric Spacecraft Journal*, issue 11, 7 Apr. 1994, pp 15-18, 8 refs, 6 figs.

AUTHOR'S ABSTRACT

Charles A. Yost and Richard A. Ford have developed a 12-inch diameter sectorless Wimshurst generator capable of creating 12 inch sparks. With appropriate rigging, the generator becomes an inexpensive source of very steady, high-voltage current, with many uses for educators and experimenters.

HOMOPOLAR INDUCTOR ALTERNATOR

K.E. Schenk (Dept. of Elec. Eng., Univ. of Ottawa, Canada), E.F. Fuchs (Dept. of Elec. Eng., Univ. of Colorado, Boulder, CO), and F.C. Trutt (U.S. Army Adv. Mat. Concepts Agency, Alexandria, VA), "The Homopolar Inductor Alternator," Paper 71 TP 522-PWR, recommended and approved by the Rotating Machine Committee of the IEEE Power Engineering Society for presentation at the IEEE Summer Meeting and International Symp. on High Power Testing, July 18-23, 1971. Reference from *Electrifying Times*, vol X, no 1, Spring 1994, appendix 5.

ABSTRACT

For a more accurate load analysis of the Homopolar Inductor Alternator (HIA), a magnetic vector potential analysis must be used which considers the nonlinearities of the iron and the actual current density fields. A nonlinear quasi-Poissonian partial differential equation, subject to the appropriate boundary conditions, is defined to solve for the vector potential in the middle cross section of the alternator. The partial differential equation and boundary conditions are transformed into a set of partial differential equations which are solved numerically by a successive line-overrelaxation method. The magnetic inductions, flux distribution and volt-ampere characteristic are obtained for a 95 KVA, 208/115V, 3400 Hz experimental alternator.

(It is rumored that this machine is already used in some of our military ships.)

Gravity

GRAVITATIONAL EQUATIONS

Oleg D. Jefimenko, "Gravitational Field of a Point Mass Moving with Uniform Linear or Circular Velocity," *Electric Spacecraft Journal*, issue 11, 7 Apr. 1994, pp 30-32, 8 refs.; summary of paper originally printed in *Galilean Electrodynamics*, vol 5, no 2, Mar-Apr 1994, pp 25-33.

In 1893 Oliver Heaviside published a remarkable equation for the gravitational force associated with a moving mass [Heaviside, "A Gravitational and Electromagnetic Analogy," *The Electrician*, vol 31, 1893, pp 281-282, 359.] The equation was not derived, but deduced by analogy from a similar equation for the field of a moving point charge which he had published in the same magazine just 5 years before [ibid., vol 22, 1888, pp 147-8]. Jefimenko's paper is a confirmation of Heaviside's work, which was apparently completely ignored by the scientific community, no effort was ever made to confirm or disprove it.

Jefimenko says, "In this paper I prove the correctness of Heaviside's equation and obtain a similar equation for the gravitational field of an orbiting body. The derivations that I present are based on the recently published retarded-integral equation for the gravitational field of a time-dependent mass distribution...[Jefimenko, "Causality, Electromagnetic Induction and Gravitation," *Electret Scientific*, Star City, 1992, p 87] The derivations are self contained and are completely independent of any analogy between electric and gravitational fields (although they can be easily adapted for a novel derivation of electric fields of moving point charges)..."

[For a copy of the issue containing the complete article by Jefimenko, write to: *Galilean Electrodynamics*, P.O. Box 545, Storrs, CT 06268-0545. To contact the *Electric Spacecraft Journal*, write to 73 Sunlight Drive, Leicester, NC 28748.]

Miscellaneous

IS THE SPEED OF LIGHT RELATIVE AFTER ALL?

by W. Vincent Coon, Salt Lake City, Utah

Despite the fact that Newton's laws of motion are perfectly at home in a Galilei relativistic universe, 19th Century physicists were enamored with the idea of an absolute reference frame, the stationary luminiferous aether. The failure of the Michelson-Morley experiment to detect the earth's motion with respect to the supposed medium brought a crisis in physics. In the contest of explanations, the Special Theory of Relativity (1905) gained popularity, though Michelson himself remained unconvinced.

Where once the physics community advocated an absolute rest (an unequivocally stationary reference frame), they now advocate an absolute and constant velocity, the speed of light in a vacuum. There is a growing number of physicists, however, who suspect that orthodoxy has again swung to an erroneous extreme.

"The Velocity of Light in Moving Systems" [1] by Charles M. Hill, assembles experimental data available in professional literature which clearly demonstrates the anisotropy (dependence on direction) of the speed of light. Now retired, Hill worked for a decade or more in Hewlett-Packard's division of time and frequency standards. His knowledge of the intricacies involved in detecting light speed anisotropy is exceptional. His paper is primarily a report of empirical findings. The paper does not seek to explain, but to describe the velocity behavior of electromagnetic (EM) waves in free-space. The findings do not confirm Victorian aether theory, but neither do they support the second postulate of special relativity which states that the speed of light in a vacuum is the same in all inertial reference frames.

The Sagnac (1913) and Michelson-Gale (1925) experiments are recounted by Hill. Unfortunately, the results of these interferometer experiments, though well established, are seldom mentioned in undergraduate physics courses because the accepted explanation requires Einstein's general theory of relativity. The simplest explanation, the one offered

by the original experimenters, is that the velocity of light is subject to an addition of velocities. General Relativity Theory (GRT) requires far more esoteric mathematics to account for the same results. Furthermore, General Relativity requires that the paths taken by the light beams form a loop.

Hill presents recent findings which create a serious problem for the GRT explanation. In 1976 Yoshikazu Saburi published a report on intercontinental comparisons of time standards. Microwave beams were relayed between Japan and the United States by way of a geostationary satellite. Signals were sent almost simultaneously along the same path, but in opposite directions. Saburi's objective was not to challenge the light speed invariance principle, but to find techniques for synchronizing widely separated atomic clocks. The Saburi experiment nevertheless revealed much about the behavior of EM wave speed in consequence of the earth's rotation. In order to account for consistent differences in travel times, Saburi was compelled to conclude, as was Michelson, that relative to a geostationary frame, **eastbound EM waves travel slower than EM waves heading west.** GRT is silenced because the signal path is not a loop.

Hill concludes, "the available data are good enough to steer our thinking in the right direction, but are not yet precise enough to solve all the puzzles surrounding the velocity of light." But, if the right direction is away from light speed invariances, what can account for the seeming success of Special Relativity? The late Petr Beckmann (editor of Galilean Electrodynamics), gave an answer. Lorentz-like effects are due not to motion with respect to an observer, but to motion with respect to a local field. The speed of light is not a universal constant, but is a function of gravitational potential. The gravitational field of the earth acts as if it were an entrained medium, thus accounting for the results of the Michelson-Morely experiment. The earth, however, rotates within its own field, hence explaining the Michelson-Gale, and Saburi findings.

Reference

[1] Charles M. Hill, "The Velocity of Light in Moving Systems," Physics Essays, an International Journal Dedicated to Fundamental Questions in Physics, vol. 3, pp. 429-435 (1990). Published by University of Toronto Press for Advanced Laser and Fusion Technology, Inc.

ON A PLASMA WAVE

I. Peterson, "Riding a Plasma Wave toward High Energies," *Science News*, vol 145, no 16, 16 Apr 1994, p 246.

Since the Superconducting Super Collider was cancelled in the congressional money races last fall, its proponents are searching for other ways to keep their research going and corner grants for it. One possibility for accelerating electrons and other particles on a less expensive scale is by using strong electric fields generated by waves traveling through plasmas of charged particles at nearly light speeds.

Originated 15 years ago, the idea of plasma-wave particle accelerators had not been used due to tough technical problems and because they didn't do the job well enough. But recently electrical engineer Chan Joshi and his team at UCLA have demonstrated that they could not only boost the energy of electrons by injecting them into plasma waves, but could make the plasma wave trap the electrons, allowing them to gain even more energy as they travel the wave. By focusing a pair of carbon dioxide laser beams, of slightly different frequencies, into a chamber of hydrogen, the overlapping beams create a rapidly propagating plasma wave at a frequency equal to the difference of the two laser frequencies. Injected electrons speed along the waves and researchers have found that they could increase the energy of the electrons from 2 million to 30 million electron volts over a distance of about 1 cm.

An article in April 7 *Nature* calls it "the largest coherent man-made accelerating field yet produced," quoting Robert Bingham of England's Rutherford Appleton Laboratory. Meanwhile, Joshi and his team are aiming for higher electron energies. Other groups are continuing research on different techniques for plasma wave acceleration.

Summary by Dineh Torres

SCALAR WAVE DETECTOR

From KeelyNet, Joel McClain has sent this interesting file.

NEONDET.ASC

The schematic, NEONDET.GIF, is a derivative of a microwave detector described in the February, 1980, *Ham Radio* magazine. As originally created, the circuit's purpose is to detect microwave RF standing

waves, but with minor modification, it can also be used as an effective scalar wave detector.

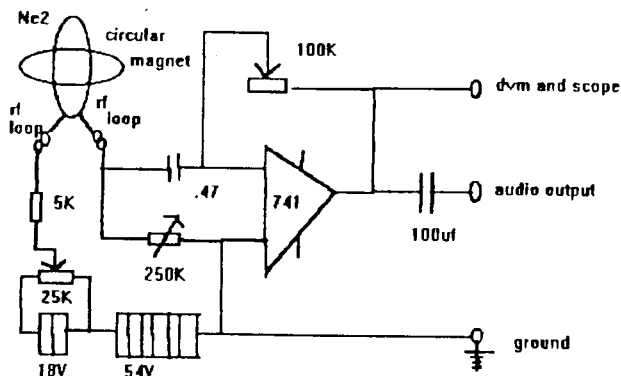
The schematic shows a round magnet epoxied to the NE-2 lamp, to help isolate it from EM signals. Additionally, the circuit should be enclosed in a metal box, or "Faraday Cage," with shielded I/O connectors.

The power source consists of eight 9V batteries. Battery life is very nearly the same as shelf life, because the lamp is operated in "starvation" mode, drawing approximately 0.1 ma.

The 25K and 250K potentiometers are adjusted first to fire the NE-2, at approximately 60-70 volts, then adjusted until only the tip of the cathode electrode glows. The 100K pot is adjusted for optimum output gain.

Notes:

1. The 741 can be replaced with a 1458 cascade amplifier for better results.
2. The RF loops in the NE-2 leads are mandatory to reduce interference as well as lamp current noise.
3. Component values are not critical, and can be changed as required for the type of output device.
4. Removing the magnet and Faraday Cage, and adding a capacitively coupled loop antenna will permit use as a microwave EM detector.



See file NEONDET.ASC for circuit description.

(If you have any comments or other information relating to such topics as this paper covers, please upload to KeelyNet or sent to the Vanguard Sciences office, P.O. Box 1031, Mesquite, TX 75150. KeelyNet BBS is (214) 324-3501.) [And send it to *NEW* also.] [KeelyNet information on page 20.](#)

THERMODYNAMICS

A New Beginning for Thermodynamics
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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 Kirchhoff, 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 Sciences 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.

Herbrand writes^[2] that Prof. Pollermann of the Julich Atomic Research Institute in Germany, who is an "expert" preexaminer of patents in the energy sector, has given a negative opinion on 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 ether, 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 a 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 Meyers^[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 attributes of indestructibility and mutability."

This statement should set us thinking. Meyer in fact asserts that energy, in addition to being indestructible, is also able to change form. This implies that we cannot necessarily think in terms of unidirectional mutability, a concept which thermodynamics has 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 has 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, a 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 fire, and especially since the invention of the steam engine and the consequent industrial revolution. Our continued and exclusive use of this 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 decrease in atmospheric oxygen from 30% to 21% 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 derandomize 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 using the centripetal or vortex motion:

chaos → build-up → decay → chaos

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 designated 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 outward 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 antigravity 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 Schauburger regarding the functions of vortex motion, Schaffer^[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: 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."

Heat → Vortex → Motion → Friction → Heat

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 Schaffer, to put forth a new and radically different thermodynamic circular process:

Centrifugal motion (expansive, explosive)
Radiation
Heat increase
Centripetal motion (contractive, implosive)
Gravitation
Heat decrease

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 perpetuum mobile?

WHAT IS A PERPETUUM MOBILE?

I think we have to reconsider our strict negation of the possibility of any perpetuum mobile, which ultimately is based on nothing other than the ideas of the honorable members of the French Academy of Sciences of 1775.

In fact, any machine which is constructed according to the principles of nature, using the cycle as described here, will have the characteristics of what used to be called a perpetuum mobile.

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 Schauburger 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 Schauburger'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 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.

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MAGNETIC BATTERIES

Bert Werjefelt (Polytech (USA) Corp., Kaneohe, HI), "Magnetic Batteries," *Extraordinary Science*, May/June 1993; reviewed by Bruce Meland in *Electrifying Times* vol 10, no 1, spring 1994, pp 4-6.

AUTHOR'S ABSTRACT

The circumstances under which electricity can be derived directly from magnetic materials/magnetic fields are discussed and reviewed in the context of the standard formulations of the conservation law. The possibility of extracting energy in the aforementioned manner is in conflict with this law. However, it is not in conflict with a recognized exception to this law: the third corollary of the second law of thermodynamics. This is demonstrated and thereby confirms the possibility of the development of magnetic batteries, magnetically powered electric generators/turbines. An elementary description of the process is provided and explained in detail. It is disclosed that the magnetic batteries can maintain "permanent electric circuits" at normal temperatures and therefore function as macroscopic high temperature superconductors. It is believed that it can be deduced from the disclosures that the time interval from this discovery to the time of applied technology and hardware for everyday use can be very short (on the order of a few years). Because of the simple straight-forward nature of the discovery it can easily be placed into development and production with already available knowledge and technology in a mature field of science and engineering.

SUMMARY

In an interview with *Electrifying Times* newsletter, Werjefelt pointed out that his discovery is in direct contradiction to the current formulation of the laws of conservation of mass energy. However, he says, it is not in contradiction to a little known but scientifically fully accepted exception to the basic conservation laws. This exception, "Negative Absolute Temperature," was formulated by some of the best known (Nobel prize winners) scientists

involved in research on lasers, masers, microwave technology and atomic clocks.

The exception is a consequence of the actions of the magnetic movement of two distinct spin systems in the atomic structure of the crystals of lithium fluoride. Werjefelt says that the magnetic energy inherent to the material (crystal) becomes activated by coupling two distinct magnetic spin systems in the atomic structure and can thereby emit vast amounts of energy, far in excess of the input energy to the system (crystal). The nature, magnetic interactions, and physical geometries of this spin system were not understood before Werjefelt's discovery.

Werjefelt has been quick to point out that what he has done is merely to define and explain the energy systems that conform to the exceptions to the conservation laws, which have been observed in the atomic and nuclear domains for years. He goes on to give an explanation of the basic principles of the discovery. The implications of this enhanced energy discovery are huge. It potentially represents a nearly eight-fold power increase over input, at optimum measurement. Development will show just how much of that will translate into usable electric production.

For more information, contact Werjefelt at Poly Tech (USA) Corp., P.O. Box 5011, Kaneohe, HI 96744, 808-235-0849. *Patent Pending.

PATENTS

PATENT NEWS AROUND THE WORLD

A letter from Harold Aspden

Stephen Roen (*Fusion Facts*, February 1994) tells us that no U.S. Patent has yet been issued on any cold fusion application.

He quotes a recent U.S. Patent Office Board of Appeals decision that was based "on evidence that the experiments of other "careful researchers" in the field were unable to demonstrate neither excess heat nor traditional by-products of fusion reactions." The Board also noted that erroneous results could be

achieved by failing to observe "strict experimental controls."

My experience in applying for "cold fusion" patents in the British Patent Office has not run into such a formidable barrage of reaction. On February 23rd, I was notified that my second such application was granted and will be published on April 20th as GB Patent No. 2,251,775. It has been assigned to Utah-based ENECO.

My study of the copious rejection material cited against the corresponding U.S. patent applications showed how much the U.S. patent examiners are relying on the null research findings of those "careful researchers." What was cited was not prior art or experiments based on what I had described and claimed. It was simply an account of failed attempts by laboratories who were so careful about measuring every calorie of heat that might be produced in the living cold fusion cell that they encased it so tightly in its test bed that it was choked to death. When a calorimeter report did show a faint breath of life, a slight temperature difference, that was seen as spurious and arrested by taking even more care to be sure the inside of the calorimeter was at a uniform temperature.

Now, the day before the grant day of my second cold fusion patent in U.K., namely February 22nd, was the issue date of my U.S. Patent No. 5,288,336, which is about thermoelectric energy conversion. That invention encountered no problem in the U.S. Patent Office. It concerns electrical actions developed in metal subjected to a temperature difference. I can assure everyone that if we were to subject the patented device to "careful" testing in a perfect calorimeter which keeps temperature uniform, then it would certainly not function. Indeed, our demonstration device on which the patent is based shows that it only responds when there is a priming flow of heat through the metal. That flow of heat, given that we used nickel in our device, was carried by electric charge through the microscopic powerful magnetic fields intrinsic to nickel, like a flow of ions in a hot plasma transported through the magnetic fields in the technology of magneto-hydrodynamic power generation. This combination works wonders in converting heat into electric field action, but the "establishment" is more familiar with the hot plasma applications than with the ambient cold activity inside a metal.

The "establishment" likes a hot environment and if our future energy world has to be "cold," they like to

clothe it in a blanket (calorimeter) to keep it cold -- or, rather, prevent it from getting warm!

So, why is this relevant to "cold fusion"? Well, I see from *New Energy News* (March 1994) that on the day my cold fusion patent was granted in U.K., February 23rd, the Editor received a fax from Dr. Bruno Stella in Italy, announcing an astonishing cold fusion result using a nickel bar and a heater while subjected to electromagnetic stimulation.

I will say no more on this, as I have a third U.K. patent application in process and this cold fusion field is likely to become really competitive once the U.S. Patent Office lowers its barriers.

As a final comment, I draw attention to my letter to the Editor of the U.K. magazine *Electronics World & Wireless World*, published under the title "Out in the Cold" (December 1993, p 996.). After explaining how Harwell scientists and others had merely choked off the action they sought to measure by setting out to do calorimeter tests rigorously and properly with well-monitored calorimeter apparatus, deliberately minimizing temperature differentials to assure the temperature was measured with precision, I added: "The recipe for sustained success involves injecting heat initially to get the cold fusion reactor started. The trigger depends upon a thermoelectric phenomenon, the Nernst effect."

/s/ Harold Aspden

[The following is the letter sent by Dr. Aspden to *Electronics World & Wireless World*, as mentioned above.]

The article "Clawing back respectability for cold fusion?" (*EW & WW*, October 1993) tells us how AEA Harwell's researchers were unable to duplicate the Fleischmann and Pons results, but also reports that some researchers are "gaining tantalizing glimpses of the effects first noted by Pons & Fleischmann."

Obviously, there is a reason why some fail and some occasionally succeed and eventually, with hindsight, the reason will become as clear as our understanding of why an oscillator can need an initial stimulus before it starts oscillating.

The F&P tests were seen to involve possible errors in estimating heat production due to small temperature

differences between different cathode regions in the cell. Therefore, in setting out to replicate the experiment and measure any excess heat with greater precision, the so-called experts used calorimeters to which cell temperature was assuredly uniform to within a small fraction of a degree.

The cold fusion reaction did not occur.

The physics of the 19th century tells us that a temperature gradient can develop an electric potential in a metal and so a non-uniform temperature can set up a residual charge in that metal. Such a source of negative charge could, within a cathode full of positive deuterons having the right geometry and current excitation, assist in bringing those deuterons close enough to fuse. But one needs a temperature gradient.

The cold fusion process no doubt depends upon the prior existence of a temperature gradient in the cathode before it develops heat that sustains in that cathode a temperature gradient so heat can be conducted away. This, as we well know, from analogy with electric theory, is a recipe for exponential escalation, instability, and even runaway heat generation that F&P found in one experiment. The action needs that initial temperature gradient to be triggered!

So, since Harwell and others set out to do calorimetry tests rigorously and properly with well-monitored calorimeter apparatus, deliberately minimizing temperature differentials to assure the temperature was monitored precisely, they merely choked off the action they sought to measure.

The recipe for sustained success involves injecting heat initially to get the cold fusion reactor started. The trigger depends upon a thermoelectric phenomenon, the Nernst effect.

Harold Aspden
Chilworth, Southampton

LETTERS

LETTER FROM AUSTRALIA

I have just subscribed to *NEN* and the first copy came at the same time as the complimentary copy your secretary sent with the Impact book. The magazines tied me up for hours.

I was already up to speed on Dr. Puthoff's work but it's nice to see my wild speculations aren't so wild after all. It always helps to have "fellow heretics."

... May I be allowed to point out a problem with the attempts to prove the reality of Space Power. The ultimate test of a Space Power plant is not over-unity wattage. N-machines are mechanically similar to a storage flywheel. Several people have commented to me that the output energy is simply the input energy delivered over a shorter time frame, e.g. 10 watts input over 1 minute becoming 40 watts output over 15 seconds. Only by measuring the total energy input in watt-hours or joules and the total energy output in watt-hours or joules will the skeptics be convinced. Input energy must be measured in total without deducting frictional losses from full dead stop to full dead stop, yielding a total wat-hours (watt-minutes) measurement.

Output energy should be measured for every second the power is flowing to a load. The timer should be activated by the same switch that engages the load.

If the output energy in watt hours exceeds the input energy in watt-hours, the device is proven. Some skeptics will still refuse to believe. These men are doomed to an early retirement from society like the thousands of people who refused to use cars in the first quarter of this century. Some may become Ph.D. technophobes.

...I need to ask several questions, please publish them or simply send them on to the appropriate people.

1. Is Hal Puthoff's work predicated on a Riemannian space? --No.
2. Can Dr. Aspden fill us in on the present status of Sandy Kidd's work and how does this purely

mechanical configuration like the Kidd Machine relate to the new understanding of inertia? This machine seems to use precession to turn a portion of the gravitation force on the gyro's 90 degrees where the geometry of the rotor turns the horizontal linear force into a rotary force which is then resisted by the motor. Could Dr. Aspden tell me if this analysis is correct? Is there a newsletter on this work?

3. Is Bruce dePalma aware of Sandy Kidd's work which may relate to his, dePalma's, work on gyros?

4. What is the current price of Moray King's book? --Available from Moray King, Paraclete Publishing, P.O. Box 859, Provo, UT 84603, U.S.A., for \$9.95 plus Air Mail shipping (U.S. - \$2, Europe - \$6, Japan - \$8, Australia - \$10) all in US\$.

5. Is there a electronic mail or billboard covering space energy, cold fusion, etc.? What are the addresses? --One specific one is **KellyNet**, a free bbs datum 214-324-3501, in the U.S., which carries extensive energy research news. Most of the big nets have energy research files under their science bbs listings. Do any of our readers know of more domestic sources? How about overseas or international sources?

6. Could the respective inventors publish current power to weight ratios for their inventions? It helps to have such numbers to convince people of the reality of this technology.

7. Since 5 kilowatts is only 6.6 horsepower, the car described on page VII-7 of the Cold Fusion Impact book, seems grossly under-powered even with electric storage. I would suggest fifty kilowatts is about right for a four-seat sedan. --The quote of 5 kilowatts is based on a continuous production of current but only intermittent usage (stop-and-go driving and sporadic usage such as a family car) and constant storage of energy in a battery system when not in use. The battery system provides the extra power (over 5 kilowatts) that the car requires for normal usage.

8. Is the CBC video tape shown to congress (*Fusion Facts*, August 1993, p 1) available from some source and if so how much would it cost? --This will soon be available through NEN if negotiations are successful with CBC.

/s/ Wesley Bruce
253 Burnie Court
Lyons, A.C.T. 2606
Australia

SOME COMMENTS TO FEBRUARY 1994 *NEW ENERGY NEWS*

A letter from Alexander Frolov, St. Petersburg, Russia

Ref. to Michelson-Morley experiment. I'm sure that we have not correct information, results of this experiment now are falsified. Michelson-Morley find real difference between rate of light in one direction and in opposite direction when we have $V+C$ and $V-C$, where V is velocity of rotation of earth. I saw update from *Galilean Electrodynamics* by Petr Beckman, 1991-1992. My conclusion is that space of certain mass-object is result of such process as existence of this mass. Any mass-object has own curvature of space that multiplied with more global curvature and so on.

Ref. to Casimir effect of 1948. It is possible to consider the vacuum by super-elastic medium model. Space energy push the plates together. I think that model of electrogravitational or EM longitudinal waves can be applied for this explanation also.

Ref. to Richard A. Muller. Yes, of course. Part of global ether must be moving if local mass-object create own curvature and this local ether is moving or rotating.

Ref. to Hal Puthoff. Yes, electron is tapping the free energy from space. Any mass-object does it. It is process of creation-radiation of mass-object. It is balance of gravitation-radiation. Mass is process but not static thing. All material world is global energy-informational process. Step by step or frame by frame World is changing. We can see as energy change its form: from time-form or curvature energy of fourth dimension to mass form (it is gravitational effect) and then from mass-form to radiation. It is easy to calculate that curvature of hydrogen ground state is equal to unity.

Ref. to Puthoff note about unipolar gravitational interaction. In my model of inertia it is question of vector potential. In any case of rotation such potential lead to curve-motion and acceleration. Then $F=Ma$ and we have inert force or gravitational force. The structure of vacuum can be explained only in higher topology system. We can see free space in some place or vacuum, but it is only one three-dimensional point-momentum or frame of space-time. In next momentum we'll be able to see matter-mass-process in this place. We must use dynamic description of vacuum but all that we have for it is note and term of vector potential.

Ref. to inertia as tends of mass to remain at rest. For free energy experiments most of researches use electropotential or vector potential of magnetic field. But is necessary to understand that gravitational potential can be used for it, also. We have the same tends of energy to "remain at rest" in electro-magnetic transformer. When we try to increase density of energy (density of current) in primary coil we can observe the tends against this change of space-time balance. When we try to decrease density of current we will observe "help" from vacuum. It is the same phenomenon of inertia. It can be used in free energy systems. We must work only with decreasing half-period.

All potential can be used for creation of work in load. But it is more easy to change polarity of EM interaction to change negative work of field to positive than change polarity of mass to anti-mass. But it is possible since there are ideas of reversible time and mass. It is not positron-electron. It is photon-antiphoton question.

Ref. to "inertial and gravitation masses can be similarly affected" Please, see my article.

Ref. to Pons-Fleischmann update. I have all information about it from *Nature* 1989 - 1994. I'm sure that it is free energy example but not thermonuclear fusion. The most interesting approach I saw in papers of Robert Bush, California. I stopped my own work with this idea since there are possibilities of secondary neutrons radiation when process is beginning. It is not possible work in home with this simple system. [Editor's Note: If Frolov gets his cold fusion information only from *Nature*, he is seriously underinformed about cold fusion.]

Ref. to Faraday question "whether it is necessary for there to be relative motion the magnet and the conductor to establish induction." I saw a very detailed analysis of Dr. Muller, USA, that was published in *Galilean Electrodynamics*. **My conclusion is that the reason of induction is interaction of charged particles and magnetic field that is the special state of ether and is not connected to magnet.** It is possible explain why we have phenomenon of induction in Dr. Hooper systems with out magnetic field. This special state of vacuum is special state of spacetime, or the special organization. We have vector potential as change of dimensionality. It is the reason Prof. Oleg Jefimenko, University of West Virginia, shows that magnetic field is only factor of delay in cause-effect relations. Of course, we can work without this delay in free

energy over unity-mode and have power in load without fuel.

Ref. to N-machine. I have a simple example of this system. It is interesting that I used water-electrolyte as rotor instead of metal disk. Theoretically we can begin process of rotation by means of external potential applied to axis electrode and to periphery. Then we'll have free energy and self-rotation process of water vortex.

Ref. to Adams Motor. It is a mechanical system. But it is possible to use potential for rotor-stator interaction by simpler ways.

Ref. to your note on p.13 that "magnets can store excess energy in air gaps." I think that it is a question of mutual-induction of two coils. Any ferite magnet is system of two magnets: the ferite core and virtual outsider coil in air around it. As magnetic constants are different for ferite and air we have asymmetry of mutual induction coefficients L_{12} and L_{21} . By this way magnet have free energy from vacuum that is necessary for its ordering. In opposite case the heat (entropy) will disordering and demagnetized inside part of this set of two magnets. The phenomenon of induction is possible if we have oscillation of energy density. In this case it is ZP frequency.

Ref. to T. Bearden's paper, "The Final Secret of Free Energy." He sent it to me and I learned it. I'm sure of this approach but it is a way for special materials with relaxation times. The similar approach is used by N. Tesla when he transmitted electro energy along single wire. Now in Russia this direction of research is used by Avraamenko group. It is the question of dielectrical constant in metals. It is possible to create the current of polarization in metal similar to such type of current in dielectric. In a more general sense it is the question of multi-logic, multi-polarity and so on. I think that you don't see papers of V.V. Lensky, Russia, University of Irkutsk, 1986. The name in English means "The Foundations of Many-Polarity." According to Lensky, it is possible to work with negative-positive electrical interactions to create three polarity interactions or more than three-polarity. The gravity according to Lensky is uni-polar. Example of three-polarity is not plus/minus/something but it is A/B/C interaction. The current of such form can move in dielectric. Three-polarity field is biologically active. I'm interested in these ideas. It is part of the conception of gradual dimensionality of space-time.

For a person it is question of non-discrete logic. We must go away from two-points system of linear logic "yes - no" in higher topology system that have area of solutions.

Thank you for this interesting Newsletter again. You can publish something of these comments as part of letter in New Energy News.

Alexander Frolov

LETTER FROM LEE TRIPPETT

Dear Mr. Fox,

In talking with Mr. Bearden, a whole new perspective has opened up to these old conventional eyes. The capture of space energy is getting more complex and my present experience and understanding needs to be passed on. This is to save you and friends much time. As a temporary aside, I recently received two free Siliconix samples of power MOSFET's. They have one hundred times less resistance but do not work with the potentials I am now using. Even the NTE power MOSFET equivalents do not work.

In talking recently with Mr. Bearden I learned that a high percentage of germanium alloy would be the most excellent type of semiconductor to test. (This is what T.H. Moray used in his free energy device for 20 years.) There is an 8812 alloy on the market which contains 12% germanium. And physically testing the resulting action is required because there is apparently no easy way to measure or calculate 'relaxation time'.

The testing also has to be by comparison of battery energy drain in the test circuit and a simple conventional circuit. (This was my procedure in the earlier days of testing.) This is because there is no instrument on the market that can measure the 'displacement' type or 'space energy' current. Present meters can only see the results in a real load. Electronic power supplies can not be used for the Bearden portion because of their unlimited energy resources.

Both 'electron flow' current and 'space energy' current (i.e. the free 'displacement' current) can occur simultaneously and any instruments used will see only the 'electron flow' which relates to ordinary 'work'.

Tom Bearden and his associates have been working very diligently for some time to acquire

demonstrational proof of his theory. They have been using commercial capacitors for the 'collector' but find there are none on the market which have the required physical stability. (Any mechanical movement (even the little due to static electron pressure) within the plates or dielectric will produce enough electron flow or ordinary work energy to offset the 'free' portion.) Therefore, my idea of testing an anodized aluminum foil may not be appropriate. The anodize represents a semiconductor (aluminum oxide) but it is very thin (.0002"). The minimum order for this material is \$225. Very careful assembly of foil and dielectric under a press might work.

My current version of the theoretical circuit may be demonstrating the capture of space energy. The only proof would come by watching the energy drain on a battery over time. Presently my circuit can put out an average current gain of 200. It would take several days to see any significant battery energy depletion. It is possible to greatly increase the power out but then the gain is greatly reduced and any 'displacement' type current could get lost or overshadowed.

The current in the output load is a fair instrument measure because it represents the 'working' current for a real load. But the very small measured input current is not a 'fair measure' because the meter is only 'seeing' the working 'electron flow' portion of current and not the 'space energy' portion. A 9 volt carbon zinc transistor type battery seems to be required to overcome various circuit losses and at a current drain of less than 1 ma it could go on for days. And if the circuit was indeed capturing 'space energy' it might go on for weeks!

I have added extra Bearden portions of the circuit to double and triple the larger output working current. This does not effect any extra burden on the switching and inverter stages. With a large gain, this results in only a small increase of measurable input 'working type' current. Unfortunately, the multiples of output current need to be in separate load resistors.

If the 8812 alloy was used to replace the 20 gauge wire coil that now gives a gain of 200, and we saw an increase in output load current, we might assume that space energy is involved. However, this would not provide the type of demonstration required to convince skeptics because the 8812 alloy comes in the form of a flat foil. Even if the resistance was the same for the two forms of 'collector' the argument

could involve differences of mutual and self inductance. (30 feet of 8812 with the same resistance would cost \$4800.00. The 88 refers to 88% gold. It is not known yet if copper can be substituted.)

I would love to be able to try the 8812 alloy with the SG3525 chip. Even though the 88% gold can be recovered and sold, it might be wiser to wait and see if copper can be substituted and see if there are any new ideas at the May '94 New Energy Symposium. I see the possibility of this circuit being used to start and maintain a Hendershot generator.

Considering the present circumstances this will probably be the last correspondence from me on this issue for a while. Thanks for your patience and please call or write if there are any questions and best wishes!

Sincerely,

Lee Trippett
2025 Rogue River Dr.
Eagle Point, OR 97524
503-826-5175 phone with manual FAX

In another letter Lee Trippett asks:

I am wondering if you would be open to the idea of a special "Question Note" in the *New Energy News*. For example:

1. Is there a professional organization which can provide a list of those who have experience with matters relating to "relaxation time"?
2. Is there a list source for custom manufacturers of semiconductor alloys?
3. Is there a public reference which lists the "relaxation time" for various alloys?
4. Is there a list of labs or universities which have done research on matters relating to "relaxation time"?
5. Is there a public reference for circuit descriptions of super high speed switching circuits?

I am willing to act as coordinator and distributor of the information relating to the above topics.

Hope to see you at the Denver Symposium. Many thanks for your considerations. And many thanks to

you and your support team for an excellent newsletter.

Meetings

MINSK COLD FUSION CONFERENCE MAY 24-25-26, 1994

A bilingual, international conference on cold nuclear fusion and affiliated energy systems will be held in Minsk, Republic of Belarus during the last week of May, 1994. Papers accepted will be published in English and Russian editions of proceedings, the Cold Fusion Source Book, that will be provided to attendees at the start of the conference. Presentations of the papers can then concentrate on the latest developments and the answering of questions. The proceedings are expected to provide a tutorial overview of the new science of cold nuclear fusion for a multi-disciplinary audience and provide the latest experimental and theoretical findings.

Registration fee of \$250 includes all meals. 80% of the registration fee (US\$ 200) is to be sent to **Joint Stock Commercial Bank, "Priorbank" account N707955 with a note "Symposium Registration Fee"**, to bank address: **31/A Khoruzhaya Str., Minsk, 220002, Belarus immediately**. The other 20% (US\$ 50) is to be paid in cash to the organizing committee on arrival.

There is nothing more difficult, more perilous to conduct, or more uncertain in its success, than to take the lead in a new order of things. The innovator has for enemies all those who have done well under the old conditions, and lukewarm defenders in those who may do well under the new.

quote from Machiavelli's The Prince (1513)

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