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THE HANFORD SITE AND OTHER OFFENSES

By Hal Fox, Editor-in-Chief, *New Energy News*

The book by Michael D'Antonio [1] is shocking. Although copyrighted in 1993, the book only recently came to our attention. **Did you know that some of the specific radioactive contaminants spewed out of the Hanford Site over a period of years (especially in the earlier years of the fifty-year operation at Hanford) is more than double the amount of radioactive contamination endured by the Children of Chernobyl?** The greatest offense is that the combination of Department of Energy officials and the DOE contractors lied about the danger to those living downwind of the Hanford Site. Whether the DOE officials were properly informed or whether the blame should be placed on the contractors is a case that may be brought before the judicial system.

Several sections in D'Antonio's book are about Casey Ruud and his efforts to solve some of the safety problems at Hanford. One of the reactors (now closed down) was of the same general type as the Chernobyl reactor that produced such devastation in large portions of Belarus and the Ukraine. Casey Ruud finally testified before a Congressional committee about the safety problems. Eventually, all plutonium production at the Hanford Site was closed down and Casey Ruud was fired.

Casey Ruud is also featured in a recent article in *USA Today* [2] and on national television concerning the cleanup at Hanford. Casey now works for the Washington state Department of Ecology with the responsibility to ensure that the DOE-funded clean up of the Hanford Site is properly accomplished. His task covers the clean up of billions of gallons of low-level waste dumped into the Hanford soil and over 60 million gallons of high-level radioactive tank wastes in over 170 tanks (over 60 of which are leaking or have leaked).

Secretary of Energy, Fredrico Piña, has recently declassified several thousand pages of documents that detail some of the problems that have occurred in the emission of radioactive particulates at the Hanford Site. As the media digests these reports, you can expect to

hear some stories about the previous offenses of the government against its own citizens.

Fortunately for this country, there are men of high integrity (such as Casey Ruud) who are willing to jeopardize their own economic welfare to help protect fellow citizens against the secret offenses of some government officials and some government contractors. We are pleased to report that Mr. Ruud has received documentation about some of the Low-Energy Nuclear Reaction technologies and discoveries. Casey Ruud is not a closed-minded official and suggests that these technologies should be further investigated to see if there can be better solutions for handling radioactive waste than geological storage for 10,000 years. Casey Ruud has been sent copies of this publication. He will be kept informed of the continuing progress of new-energy developments, especially as pertain to the amelioration of radioactive wastes.

REFERENCES

[1] Michael D'Antonio, Atomic Harvest. Hanford and the Lethal Toll of America's Nuclear Arsenal, c1993, Crown Publishers, Inc. New York, 304 pg., indexed, illus.

[2] John Ritter, "Nuclear plant's neighbors lose patience with cleanup," *USA Today*, Thurs., Dec 18, 1997, page 4A.

[3] Nuclear Wastes: Technologies for Separations and Transmutation, Committee on Separations Technology and Transmutation Systems, Board on Radioactive Waste Management, Commission on Geosciences, Environment, and Resources, National Research Council, published by National Academy Press, Washington, D.C. ©1996 by the National Academy of Sciences.

[4] DOE/EM-0290, Executive Summary. The 1996 Baseline Environmental Management Report, June 1996. Publication details an estimated \$227 billion for environmental cleanup.

[5] DOE/EM-0255, Radioactive Tank Waste Remediation Focus Area, Technology Summary, June 1995. Discussion of the tank waste problems, especially at Hanford Site.

[6] Vol. III. "Material and Waste Data", draft publication by The League of Women Voters Education Fund. This document provides information on radioactive wastes at several of the DOE sites. To be published in 1998.

Fusion Briefings

REPORT ON ASTI WORKSHOP

Bart Simon and Peter Glück

"The Asti Cold Fusion Workshop -- a Pilot for ICCF-7" ?

The "Asti Workshop on Anomalies in Hydrogen/Deuterium Loaded Metals," actually the third Italian Workshop on Cold Fusion was organized by ENECO Ltd., chief organizer William Collis, one of most enthusiastic promoters of new energy research in Italy. Everybody has agreed that Bill has done a great job.

Place: Hotel Conte Riccardi at Rocca d'Arazzo, some 7 kilometers from Asti, the capital of Asti province -- a very beautiful area of a wonderful country.

Time: Nov 27, Thursday-Nov 30, Sunday 1997.

Participants: some 60 cold fusioners, experimentalists and theorists from Italy, US, Japan, France, England, Germany, Canada, Romania. Many of the international leaders of the field were present.

Organization: excellent conditions for the lectures (16) and the posters (5), and what is even more important, the best opportunities created for professional scientific discussions, for networking and for collaboration.

Sponsors, besides ENECO, included:

- Fondazione Cassa di Risparmio di Asti;
- 21 mo Secolo Scienza e Tecnologia;
- L'ACN- L'Accessorio Nucleare srl;
- Associazione per lo Sviluppo Scientifico e Tecnologico di Asti;
- Orim srl;
- The Cincinnati Group from USA;
- Infinite Energy Magazine

General impression and problems.

The "cold fusion" war continues, on many battlefields. In Japan, the official "New Hydrogen Energy" will be stopped in April next year. The reason? "Appalling Management," in Martin Fleischmann's words. Excellent science (as demonstrated in the Asami et al., and the

Kamimura et al. papers) combined with such management is a recipe for a disaster. 'Metrologomania' (focusing on measurement and not on the effect), investing many times more little grey cells in the means than in the aims: a cult for calorimetry displacing and replacing the efforts aiming a really strong and reliable excess heat effect. We are at a point where the lack of a theory hurts. A great gap between experimental practice and the most bright theories. One of the world's greatest theorists, Jean-Pierre Vigièr, asking for a perfect, self-sustained demo, and for a public acceptance of the reality of cold fusion. With the existing theories: "We all are walking in the fog," as somebody remarked. More or less true. Existing theories which try to reconcile the experimental facts with classical physics cannot help, we need new thinking for the new reality. A brand new paradigm, back to the very basics, Their fault is in not consulting with the successful workers (as Prof. Yoshiaki Arata in Japan); not accepting reality: the classical bulk Pd/D₂O system is not able to scale-up.

Some ways are good, some not; we had enough time to see the difference. "Errare humanum est, perseverare diabolicum," has to be applied.

CF is progressing through some leading, creative groups. One of these, the Cincinnati Group, was present at Asti, and showed us some very valuable and interesting things. We regretted the absence of the president of Trenergy who intended to speak about plasma-injected transmutation.

A strongly polarized field ---good perspectives for LENR/LENT as concluded from the paper of George Miley and the results of the Cincinnati Group contrasted to Mike McKubre's unforgettable lecture about the tremendous difficulties inherent to the classical Pd/D₂O cell, and contrasted to the NHE papers. Somewhere in the middle, we learned that the Italian Piantelli et al., system is not dead at all; it is claimed to be nuclear; Piantelli is working separately from his colleagues; scale-up is more difficult than was thought. Good, but not excellent results are coming from France but this is only a new start.

Perhaps I was right stating the truism that the greatest peril and obstacle for CF is irreproducibility and that a solution for the future needs clever management and strategy. ICCF-7 is coming soon, and if the organizers will learn from the ASTI experience, the number of errors and blunders in the field will decrease.

First Day: 27 November 1997, Thursday.

William Collis: Introduction:

Our host described the history, leading principles and ideas, the "raison d'etre" of these workshops, a general image of cold fusion, some open scientific and some settled (and well settled) organization problems. He is

promoting the foundation of an European CF community/organization; he suggested the nice name of HEIDI, that is Hydrogen Energy Innovation and Development Institute (we all like very much Johanna Spyri's novel about the Swiss girl called Heidi). This foundation is conceived as a multi-national, industry-sponsored organization. Good idea, I hope it will become a reality.

Naoto Asami: "On the Material Behaviour of Highly Deuterated Palladium". A comprehensive study, performed in the frame of the now moribund NHE national Japanese plan. The optimum methods for obtaining a high D/Pd ratio in cathodes are presented and the metallurgy, structure, texture, phase composition of the hydride are thoroughly studied. A great part of these data can be found in two papers published in the Journal of Alloys and Compounds, 253-254, 1997, pp 185 and 657. Unfortunately, even the highest D/Pd ratios couldn't generate strong, repeatable, reliable excess heat.

George Miley: "Transmutation Studies Using Thin Film Electrolysis." The lecture started with the announcement that the American Nuclear Meeting planned for 1998 will have a special session dedicated to the low energy nuclear reactions. In my opinion, this lecture was the highlight of the workshop. We learned about the decisive advantages of the thin-film systems, about the open problems, the complex analytical problems starting with adequate sampling, about all the possible impurities, isotopic shifts, theory based on the swimming electron layer concept. The task of making material and energy balances are immensely difficult for the moment. A must read paper.

Due to the absence of reports, the audience could not learn about the recent technological progress made by CETI, the company which created the first technologically viable thin film systems; however it seems that the prospects are good.

Francesco Celani: "The Effect of Gamma/Beta Phase Interface on (H/D) Overloading." Francesco Celani and his team won the Truffle Prize of the workshop for their global achievements and creative contribution to the CF field. He pioneered the use of high frequency pulsed current and of very long Pd wires for Pd loading. Great expertise in electromigration. Despite his innovative methods and very advanced calorimetry, the system still "offers" surprises. It was a front-line report, and we wait eagerly for a continuation.

Felice Iazzi: "Techniques for Loading and Controlling the Deuterium/Palladium Atomic Ratio." A study aiming to find neutrons, with clever combination of gas loading and electrochemical loading methods. They use gold plating and electro-migration to achieve high loading ratios and to avoid unloading.

Hiroshi Kamimura: "Excess Heat Measurement by Fuel Cell Type Electrolysis." An other study performed in the frame of the NHE program, with bulk cathodes. The results are entangled in the very subtleties of the high art of calorimetry, 7-18% excess found with one kind of measurement, not confirmed with an other kind. (isothermal vs. flow calorimeters) Anyway, marginal results are not useful in long range; we need more than some 300% excess, for a self-sustaining demo and for practical applications.

Stefano Veronesi: "Study of the Ni-H system at 600-800 deg K." This is about the Piantelli-Focardi-Habel system, work is continuing. This study has demonstrated that the source of excess heat is nuclear reactions (gamma radiation is found). I asked if the nuclear signals are in concordance with the heat measured and got an affirmative answer. Their calorimetry was questioned by Jacques Dufour. Sergio Focardi, the co-author of the first paper regarding this system explained me that there are problems with the scale-up of the heat excess effect. On other hand, Piantelli is working now independently; we learned that the FIAT company will continue to fund his studies.

After the dinner, a round table discussion was organized aiming to prepare the press conference of the following day. The discussions were dominated by the temperamental theorist, Giuliano Preparata who pleaded energetically for straight attacks against the scientific establishment. The more moderate and diplomatic approaches (e.g by Collis, Vigier, Biberian and myself) the last based on a presentation of the technological prospects of the field, as those of CETI, CINCY, E-QUEST, ARATA, BLACKLIGHT POWER etc. couldn't convince the 'radicals. The possibility to persuade the Establishment by using a perfect theoretical demonstration was questioned by many, including Vigier himself.

The second day: Friday, November 28.

A press conference was organized at the Cassa di Risparmio di Asti, actually a great bank which is cleverly sponsoring innovative research. We listened to speeches of the organizers and the local authorities, Professors Preparata and Stremmenos expressed their opinion regarding the scientific Establishment. However, everything went well, Francesco Celani got the prize, a great genuine truffle and a Cincinnati Cell, other speeches by a beautiful lady (name withheld) representing the Cincinnati Group, by the prize-winner, photographs, no questions from the press.

Next point in the program was a splendid luncheon banquet at the elegant Hotel Reale. Then a visit to the Contratto Wine Cellars in a small town called Canelli. Back to the hotel Villa Riccardi; the guest of honor, Martin Fleischmann, had just arrived.

The third day: Saturday, November 29.

Jacques Dufour: "Effect of Hydrex on a Photoelectric Cell." Dufour's excess heat studies (rather complex and not directly scalable) have concluded that there are no nuclear ashes and hydrogen collapse mechanism is at work leading to Hydrex (Deutex) atoms. In the Asti lecture a very sophisticated but convincing study was presented: the hydrex state is formed due to strong magnetic fields, and excess heat effects were demonstrated by using a photoelectric cell. Dufour plans to present a transmutation effect of hydrex at ICCF-7. His experimental data are in concordance with Vigier's theory.

Bill Collis: "Cold Fusion or Cold Fission?" Collis has developed advanced computer programs for identifying and selecting the nuclear reactions which can take place in cold fusion systems. He suggested that any theory/explanation needs to account for the following observations: very few gammas, few X-rays, He, transmutations of heavy elements, similar levels of excess heat in H and D based systems, tritium and neutrons in H systems, no 14.1 MeV neutrons. Deuterium does not fuel the reaction, technical grade materials work better than pure ones (Mike McKubre especially makes this point). Perhaps the major contentious point here is the idea that H and D are not the fuel in CF reactions. Collis went on to discuss the kinds of nuclear reactions researchers should be looking for and the possibility of basing new experiments on theoretical predictions.

Peter Glück: "The Reproducibility Problem in Cold Fusion Systems." Using a standard managerial technique (SWOT analysis - Strengths - Weaknesses - Opportunities - Threats) and an original classification of the experimental CF systems, Glück opposed the classical bulk Pd cathode/D₂O setup with the so called "evolutive energy" systems based on catalysis and/or cavitation. In his opinion, only the later can lead to viable and reproducible commercial energy generating (CETI, BLACKLIGHT POWER, E-QUEST, ARATA, HYDRODYNAMICS, YUSMAR) and/or LENT (CINCINNATI GROUP, CETI) devices. He predicted that classical theories will continue to fail in explaining the new phenomena, a radical paradigm shift will be necessary. Management is the key to the future development of the field.

Giuliano Mengoli: "The Nickel-K₂CO₃ System: an Electrochemical and Calorimetric Investigation." Obviously, Fleischmann's choice; an excellent electrochemical study with innovative calorimetry. It's value and beauty is in the details and these can be understood only by reading the paper *in extenso*.

Jean-Paul Biberian: "Cold Fusion Results Obtained in Grenoble, France." Biberian announced the major good news of the conference. **The French government is**

now officially supporting CF research at Grenoble (talk about a reversal of fortune). The Grenoble group looks to be in good shape for at least the next three years. The program includes replication of the Fleischmann-Pons system, experiments with the CETI cell and work with solid electrolyte devices. Definitely positive results had been obtained, however Biberian was not contented with the level of the excess heat effects and is not absolutely convinced about the reality of the LENR results. A very good team and program, anyway, just starting large scale research.

Jean-Pierre Vigier: "Possible Theoretical Consequences of "Cold Fusion" Experiments." Vigier's theory of new Bohr orbits is a great achievement per se, irrespective of its correlation to cold fusion. According to it, the source of excess heat is the collapse of the hydrogen atom in tight orbits, a concept in the front-line of the theory (Vigier is developing quantum mechanics while Mills is radical and heretical, the future will show who was right). The results of Dufour and that of Szpak are proving Vigier's theory, and in Belgrade a team of scientists is working in the same direction. New details about Vigier's theory will be found in publication in *Physics Letters A*.

Antonio Spallone: who works with Celani, reported on some of the Frascati experiments, more studies of Pd loading, more studies of excess heat production using flow calorimetry. Again the importance of dealing with electromigration in achieving high loading was discussed and a warning not to try and load the cathodes too quickly. This is the common theme--in pursuit of excess heat it is wise to design a protocol which can maintain high loading at high voltage. One of the main reasons for irreproducibility of excess heat is the problem of sudden, uncontrollable deloading in the course of an experiment.

Francesco Premuda: "A Unified Theory of Cold Fusion and Superconductivity." Premuda has presented his theory based on the possible formation of special zones in plasma localized in the defect places of the lattice. The ideas have been presented in a very highly mathematical manner. This paper has to be studied *in extenso*. An important aspect is the that of the dimensional, structural and functional characteristics of that peculiar places in the lattice; an adequate description/model has to be found. Premuda's theory is stimulating this endeavor.

Michael McKubre: "Materials Issues of Loading Deuterium into Palladium and the Association with Excess Heat Production." A most impressive work, with really tragical elements in it due to the terrifying complexity and difficulty of the subject, perfectly shown by McKubre. Irreproducibility seems to be inherent to this system and ultrafine details can transform a working cathode in a dead one. They are no two cathodes with the same loading-deloding behavior. McKubre

reported about almost 8 years of research at SRI with pretty disappointing results, but scientifically clearly positive. My (PG) reaction was radical; "Crush your cathodes, Mike!"

Vittorio Violante: "Lattice Ion trap -- Classical and Quantum Description." A theoretical study demonstrating that nuclear reactions in the lattice are possible due to the combined effects of trap force, electrostatic interaction, and non-linearity. Both the classical representation and the quantum mechanical one show an interaction effect between deuterons in the lattice. A theoretical "new wave" work, with many Italian supporters.

Posters

Fulvio Frisone: "Study on the Probability of Interaction Between the Plasmons of Metal and Deuterons." A theoretical work; the author has studied the influence of impurity concentration on the phenomenon of fusing of deuterons, catalyzed by the "efficacious" interaction with the plasmons of the metal. The numeric calculation, conducted on different metals considering the degree of impurities present in the reticulum, shows that the probability of fusion is amplified by the impurities. This result is confirmed qualitatively by the trend of the potential gap that describes the interaction inside the metal (and by many experimental data).

Lino Daddi: "On the Detection of Cold Fusion Neutrons by Radioactivation." An experimental study and tutorial, describing the principle and practical application of the radioactivation method, specific for the detection of neutrons.

A very important example of application of the method to the Siena experiment is presented, where gold activation was used (to be published in *Il Nuovo Cimento*). The method can be used for both the cases of continuous or burst-like neutron emissions.

F.Celani, A.Spallone, P.Tripodi, P.Marini, G.Selvaggi, "A Preliminary D/Pd Loading Study: Anomalous Phase Transition Effect."
I.N.F.N.- Frascati National Lab.

C. Cammarota, W. Collis, A. Rizzo, C. Stremmenos: "Calorimetric Measurements on Nickel Samples Charged with Hydrogen," (in Italian). An experimental study, demonstrating exothermal reactions in the system (81 Mcal/mol Ni in 35 days), local melting (!), and formation of craters on the surface of the sample. New elements appear in these craters (study continuing). [Typical of charge cluster formation and explosion. – Ed.]

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ROBERTO MONTI REPORTS

In *New Energy News*, vol 5, no 7, Nov. 1997, I read about the difficulties that scientists have to be believed about Thorium transmutation.

As a matter of fact radioactive measurements are "indirect" measurements of Thorium "before" and "after" the reactions. A total mass balance is much better. Therefore, to fight "skepticism" and "refusal," I am sending you the results of two "independent" tests, concerning Thorium and Uranium, made in Italy, and the abstract of my communication to ICCF-7.

Best Regards From
Roberto A. Monti'

R.A. Monti (Istituto TESRE-CNR, Italy, Burns Developments, Canada), "Nuclear Transmutation Processes of Lead, Silver, Thorium, and Uranium."

AUTHOR'S ABSTRACT

The possibility to cause nuclear transmutation of stable isotopes by means of ordinary chemical reactions [1] suggested the possibility to cause nuclear transmutation of unstable isotopes [2].

A first series of experimental tests was made from 1993 to 1995 with positive results [3].

In 1996, an industrial reactor was built in Canada and sent to Italy for a new series of independent tests at ENEA (Italian National Laboratories), In these tests the production of Silver from Lead was used as a driver of the nuclear transmutation of Thorium and Uranium [4].

After the positive results of these independent tests (1997) a second series will be performed at the ENEA Laboratories, starting October 1997. Detailed quantitative results of all these experiments and a description of the industrial reactor will be reported at ICCF-7.

References

- [1] G.H. Lin and J.O'M. Bockris, *J. New Energy*, vol 1, no 3, 1996, p 100.
- [2] R.A. Monti, *J. New Energy*, vol 1, no 1, 1995, p 119.
- [3] R.A. Monti, *J. New Energy*, vol 1, no 3, 1996, p 131.
- [4] L.E.T. Project, ENEA Reports, no 2, no 3.

TABLE 1

Element	TOTAL IN		OUT	TOTAL OUT	
	Firing mix (g)	Slag (g)	Cupel (g)	Water (g)	Sum (g)
Sb	0.94	0.35	0.13	0.03	0.51
Pb	314.36	53.66	199.05	12.03	264.74
Bi	0.40	0.05	0.05	0.00	0.11
Rh	0.63	0.01	0.01	0.01	0.03
Al	0.18	0.06	0.05	0.00	0.11
Ru	0.37	0.01	0.00	0.01	0.02
Au	0.14	0.00	0.00	0.00	0.00
Tl	0.22	0.02	0.08	0.00	0.10
Mg	0.26	0.14	0.00	0.02	0.16
Th	2.26	0.24	0.00	0.04	0.27
Cu	2.06	1.18	0.83	0.04	2.05
Ag	89.61	12.60	167.60	0.00	180.20
Pd	0.20	0.01	0.00	0.00	0.01
Ni	0.49	0.03	0.03	0.07	0.13
Sc	0.00	0.00	0.00	0.00	0.00

NOTE: The lead was reduced by 50g; the silver increased by 91g; and the thorium reduced by almost 2g (an 88% reduction).

TABLE 2

Element	TOTAL IN		OUT	TOTAL OUT	
	Firing mix (g)	Slag (g)	Cupel (g)	Water (g)	Sum (g)
Sb	0.94	0.28	0.12	0.03	0.43
Pb	314.83	32.12	165.79	6.04	203.95
Bi	0.41	0.03	0.05	<0.01	0.08
Rh	0.63	<0.01	0.01	0.03	0.04
Al	0.19	0.03	0.04	<0.01	0.07
Ru	0.37	<0.01	<0.01	0.02	0.02
Au	0.15	<0.01	0.11	<0.01	0.11
Tl	0.23	0.01	0.03	<0.01	0.04
Mg	0.26	0.09	<0.01	<0.01	0.09
Th	0.25	0.17	<0.01	<0.01	0.17
Cu	2.07	0.83	0.78	0.03	1.64
Ag	89.84	1.42	173.46	<0.01	174.88
Pd	0.20	<0.01	<0.01	<0.01	<0.01
Ni	0.49	0.02	0.03	0.20	0.25
Sc	<0.01	<0.01	<0.01	<0.01	<0.01
U	4.20	2.81	0.03	0.12	2.96

NOTE: The lead was reduced by 111g; the silver increased by 85g; and the uranium reduced by 1.2g (a 30% reduction).

Dr Monti will present complete details of his experimental methods and his reactor at the International Conference on Cold Fusion (ICCF-7) to be held in Vancouver on April 19-24, 1998.

FUSION TECHNOLOGY ABSTRACTS

December 1997, vol 32, no 4.

REACTIONS WITH IODIDE-TITANIUM FILMS

Fermin Cuevas, Jose Francisco Fernandez, Carlos Sanchez (Univ. Autónoma de Madrid, Dept. de Fisica de Materiales, Madrid, Spain), "A Search for Nuclear Reactions in Deuterated Fresh Iodide-Titanium Films,"

Fusion Technol., vol 32, no 4, Dec. 1997, pp 644-654, 30 refs, 9 figs, 4 tables.

AUTHORS' ABSTRACT

The possible occurrence of nuclear reactions in solids (NRS) is tested in a well-characterized iodide-titanium film after a high deuterium loading. This film proves to have a higher purity than common titanium samples used in NRS experiments. The titanium deuteration is accomplished in the same chamber where the film is grown to avoid any superficial contamination of the sample. A complete set of NRS experiments is performed, checking as triggering mechanisms of the NRS phenomena the imposition of different electric fields and the crossing of the $\delta - \epsilon$ and $\beta - \delta$ boundary phases of the Ti-D system. Neutron measurements are monitored while doing these experiments, and no clear evidence of the nuclear fusion reaction $D + D \rightarrow {}^3\text{He} + n$ is detected; the detection limit for this reaction is $\Lambda = 3 \times 10^{-21}$ fusions per pair of deuterons per second. However, some anomalous neutron signals are monitored by one of the detectors, which makes further investigation desirable.

TOROIDAL PLASMA COMPRESSED

Carlos A. Ordonez (Univ. North Texas, Dept. Phys., Denton, Texas), Robert E. Peterkin, Jr. (Phillips Lab., High Energy Sources Div., Kirtland Air Force Base, New Mexico), "Compression of a Toroidal Plasma to Thermonuclear Ignition," *Fusion Technology*, vol 32, no 4, Dec. 1997, pp 655-659, 22 refs, 1 table.

AUTHORS' ABSTRACT

In the worldwide controlled thermonuclear fusion research effort, ignition of a magnetically confined plasma is yet to be achieved. Consequently, it is not known whether a plasma's approach to ignition is associated with a change (degradation or enhancement) of the confinement of plasma energy. Knowledge of this, however, can have a significant impact on the design criteria (and thus cost) of the planned International Thermonuclear Experimental Reactor (ITER). Fast adiabatic compression for producing short-timescale ignited toroidal plasmas is proposed as a means to gain this knowledge using existing resources.

CONCLUSION

The concept described here consists of compressing a magnetically confined toroidal plasma to ignition, $\rho \geq 1$. This is believed possible with existing resources because the total energy of the compact toroid at ignition can be < 1 MJ if a neo-Alcator energy confinement timescale occurs at the time ignition takes place. The time period over which the condition $\rho \geq 1$ can be maintained may be shorter than the value of the energy

confinement timescale at the time ignition takes place, however. As a result, the plasma may remain ignited for an amount of time too short for commercial energy production applications. Nevertheless, compressed toroidal plasmas could provide a means to determine the effects of approaching and achieving ignition on the magnetic confinement of plasma energy.

[The authors should review the papers on Charge Cluster Technology – Nature's Micro-Miniature Tokamaks. – Ed.]

Miscellaneous

LENT: TUNGSTEN INTO SILVER, IRON, BARIUM, TIN, CHROMIUM, ETC.

Simple Macroscopic Alchemy Demonstration Silver Increased by a Factor of 164 Times!

by Robert W. Bass, Ph.D.

This demonstration of *elemental Low Energy Nuclear Transmutation (LENT)* was performed by **Stan Gleeson** of the Cincinnati Group (**CG**) on October 21, 1997. There are **11** items of required Materials & Equipment, and **13** steps in the Protocol of the process.

Eleven Items of Required Materials & Equipment

1. One piece of Aluminum [Al] 9 inches ["] square & 1" thick, used as a Heat Sink to prevent excessive boil-off during electrolysis.
2. Two Zirconium [Zr] Electrodes, each 10" long by 1" wide by 0.093" thick. The Zr stock used should be of highest purity available. According to a catalog, the major impurities are Hafnium and Titanium [Ti]; the Titanium is present at 3000 parts per billion [ppb] or 3 parts per million [ppm]. The fact that before-&-after processed solutions showed Ti present at only 0.001 ppm & 0.002 ppm, respectively, is taken to be hard **evidence** that during processing only a negligible amount of impurities leached from the electrodes. Moreover, the catalog-specified purity of the Zr stock was independently verified by a nationally recognized commercial quantitative-analysis service provider (Data Chem, Inc.) to have been perfectly correct. The surface of the electrodes will be covered initially with pickling. The electrodes must be prepared to have scarred, pickling-free surfaces 1" down from the top and 3" up from bottom, by grinding on both sides with a hardened steel rasp (file), and subsequent rinsing in pure water.

3. One (at least) 520-Watt [W] Alternating Current [AC] Power Supply capable of Voltage Regulation and able to supply (at least) up to 1.3 Amperes [A] at 400 Volts [V].
4. At least 700 milliliters [ml] of pure (distilled) Water, plus sufficient additional pure water to rinse thoroughly all beakers, parts, and tools, to minimize contamination [assumed done].
5. One 600 ml glass Beaker, 4.5" tall and of 3.5" diameter.
6. Attachable Conducting Leads from the Power Supply to each Electrode.
7. One gram of pure (reagent grade) Sodium Metasilicate [SMS], namely Na_2SiO_3 .
8. One-half gram of pure (reagent grade) Tungsten [W] Tri-Oxide, namely WO_3 .
9. Standard Stirring & Siphoning tools & extra beakers for preparing & mixing.
10. Means for external Heating of 400 ml solution to 75 degrees Centigrade.
11. One piece of clean polycarbonate Separator 5" long by 1" wide by 1/2" thick.

Thirteen-step Protocol

1. Prepare a Mother Solution as follows:
 - 1.1 Begin with 400 ml of pure Water.
 - 1.2 Add SMS to Water, stir until dissolved.
 - 1.3 Add Tungsten Tri-Oxide and heat solution to 75 degrees C while stirring.
 - 1.4 Let solution settle for one hour.
2. Draw off 10 ml of Mother Solution from the top of the settled solution, and pour into the 600 ml Beaker half-filled with 300 ml of pure Water, making a 310 ml volume in the Beaker.
3. Insert Electrodes into solution and stir gently.
4. Lay polycarbonate Separator diametrically across mouth of beaker.
5. Place Electrodes on edge, facing each other & spaced apart 1" by Separator, such that in a side-view projection only one electrode's silhouette can be seen, measuring 10" long by 1" wide, with bottom end near bottom right-hand corner of Beaker's profile, and with top end's edge resting on upper left-hand corner of beaker's profile, and with horizontal overhang of the top part of the Electrode 1.5" beyond the beaker's lip. The purpose of the projection of the Electrodes beyond the Beaker's lip is to ensure that no contamination falls into the Beaker during the attachment of the Conducting Leads

from the Power Supply to the Electrodes. With electrodes in place the solution will rise to about the 350 ml level of the Beaker. The wetted side-view projection of the part of an electrode immersed in the solution would consist of a horizontal line intersected by two parallel lines 1" apart, the upper being of length 2.25" and the lower being of 2.75" length.

6. Attach Conducting Leads from the Power Supply to the Electrodes.
7. Place Beaker upon Heat Sink.
8. Measuring time in minutes, adjust AC current Voltage, measured in V, while observing current flow, measured in milliAmperes [mA], according to the following schedule, during which the mixture will begin to boil, and the amount of liquid lost as steam is noted as Loss in ml:

Schedule

Time [min]	Voltage [V]	Current [mA]	Loss [ml]
0	400	980	
1	403	1200	
2	402	1280	
5	402	1300	[Boiling]
10	406	700	
15	407	605	
20	407	575	50
25	407	560	100
30	405	530	125

9. Turn off power and disconnect Electrodes.
10. Keeping bottom ends of Electrodes below the surface, scrape each Electrode's end clean by scraping against each other. All four 1"-wide faces must be scraped.
11. Remove Electrodes.
12. Note liquid's level at 175 ml, i.e. total loss of 135 ml of Water to Steam.
13. Add 135 ml of pure Water to bring fluid volume back to original 310 ml.

Results of Quantitative Analysis

The before-processed Mother Solution and the after-processed solution were analyzed by **Robert Liversage** of DataChem using a freshly-calibrated ICP.

The symbol **U** will denote the *unprocessed* solution, and the symbol **P** will denote the *processed* solution. The increase in measured quantity of Tungsten [W] is because more of the W got dissolved as a result of the

heat generated during the electrolysis. The quantitative analysis of **U** and **P** will be recorded in ppm, and the increase-or-decrease **difference D** = 100. ($[(P/U) - 1]$ will be in **percentage [%]**). Table 1 is complete, and Table 2 is a condensed summary. (Elements whose **D** was less than 1,000% in magnitude have been omitted from Table 2 for clarity.)

TABLE 1

Element	P [ppm]	U [ppm]	D [%]
Ag	0.0001	0.0164	16,300%
Al	0.009	0.016	78%
B	0.005	0.035	666%
Ba	0.007	0.250	3,471%
Ca	0.188	0.299	59%
Cr	0.001	0.025	2,400%
Cu	0.002	0.010	400%
Fe	0.017	0.827	4,765%
K	0.020	0.101	405%
Mg	0.057	0.088	54%
Mn	0.001	0.011	1,000%
Ni	0.0005	0.0156	3,020%
Pb	0.005	0.003	-67%
Pt	0.007	0.003	-133%
S	0.078	0.135	73%
Si	3.19	3.11	-3%
Sn	0.0007	0.020	2,757%
Ti	0.001	0.002	100%
V	0.0011	0.0001	-1,000%
W	1.27	3.04	139%
Zn	0.008	0.018	125%
Zr	0.014	02.08	14,757%

TABLE 2

Element	P [ppm]	U [ppm]	D [%]
Ag	0.0001	0.0164	16,300%
Ba	0.007	0.250	3,471%
Cr	0.001	0.025	2,400%
Fe	0.017	0.827	4,765%
Mn	0.001	0.011	1,000%
Ni	0.0005	0.0156	3,020%
Sn	0.0007	0.020	2,757%
V	0.0011	0.0001	-1,000%
Zr	0.014	02.08	14,757%

Conclusions

Those who do not believe in the possibility of **LENT** will have to claim that somehow the processed solution got contaminated. But if so, where did the contamination come from? Both the catalog specification of the **Zr** electrodes and the CG's independent verification of this specification by an independently performed quantitative Mass Spectroscopy analysis show that there is not enough of the elements which were dramatically

increased in quantity to account for any putative "contamination" by leaching.

As a variation on the preceding experiment, instead of use of a Heat Sink, the beaker was placed inside of a coolant apparatus containing a bath of ethylene glycol and dry ice, and maintained at near 0 degrees C. Before that, *twice as much* of the Mother Solution [namely 20 ml] had been used in Step 2, and the resultant solution had been *microwave-heated* to dissolve more of the Tungsten; this worked, in that the new before-&-after processed **W** measurements were 13.3 ppm and 22.8 ppm, respectively, showing that **10.5 times more W had been dissolved successfully** in this experiment than in the prior one. (The remainder was dispersed throughout the solution in the form of a colloidal gel, which further dissolved during the electrolysis, thereby accounting for the increase in measured **W** from 13.3 to 22.8 ppm.) Consequently, if contamination were the cause of the measured appearance of Ag, etc. then there should have been **up to 10 times more** alleged "contamination" appearing, but (as explained below) this did not happen!

Furthermore, in this second case, much more total energy was put into the electrolysis, in that the Voltage went up to 456 V and the Current never went below 0.9 A and after 2 minutes was at 1.4 A, and after 30 minutes was at 1.1 A. However, the increases in elements formerly not present were far less dramatic. In this "cooled" case, the **Zr** impurity increased only by 3,840% and the only differences **D** over 450% in magnitude were a *decrease* in Zinc [**Zn**] by -1,264% and *increases* in Aluminum [**Al**] by 1,229% and in Silver [**Ag**] by 8,100%. However, there is not enough Silver in the **Zr** electrodes to account for such a vast increase in Silver. Accordingly, both experiments can be viewed as **Transmutation of Tungsten into "Silver, etc."** with the *non-cooled experiment* providing **twice as much** transmutation [namely **164 times** versus **81 times** as much Silver as originally present] as did the cooled experiment, which is **consistent** with the fact that in the cooled experiment all transmutations were radically diminished.

The cooled experiment not only serves as a control on possible contamination, but actually provides new, **additional evidence** to rule out any level of contamination sufficient to explain the dramatic appearance of Silver not originally present (because, for example, in the cooled experiment the level of **Ti** contamination in the before and after processed solution remained absolutely the same [**D** = 0%], while the Silver increased by a factor of 81). If the Silver were contamination from the Electrodes, then why did not the vastly predominant contaminant **Ti** increase by any quantitatively measurable amount?

The only remaining logical possibility is that Low Energy Nuclear Transmutations (**LENT**) have indeed taken place.

FUTURE ENERGY FOR CONSUMERS FIRST?

John Markoff, "MERCED, The Silicon Manifesto", *UPSIDE*, Dec 1997, pg 96ff.

EDITOR'S COMMENTS

For the first time in the computing world, the newest devices are not going to the commercial computer applications but are being delivered immediately for consumer applications. For example, IBM broke the billion-bit-per-square-inch barrier in disk drive technology and the first applications went directly to portable computers **not to the mainframe business**. Another example is from Intel: The first 0.25 micron (interconnecting conductor widths) integrated circuit "chips" went directly to portable computers. Is this what will happen with new-energy devices? We believe so. The first devices and systems may go to commercial power companies. Sooner or later, the newest and best new-energy devices and systems will go directly into homes, offices, greenhouses, etc. Just as there has been a monstrous move in the computer industry from mainframes to desktops (distributed data processing), so too, will there be distributed power generation. "Get on with the development and get off the grid," will be the new energy manifesto.

NEW TRENDS IN ENERGY

Trenergy adding international licensees.

Trenergy, Inc., a Utah public corporation, is negotiating with various high-tech groups for exclusive geographic rights to the Trenergy products. Anticipating the early development of thermal energy products, Trenergy management has developed a line of "Season Extenders" for the home garden and plant nursery markets. The objective is to establish a marketing presence in the greenhouse and garden industry that will later be used to introduce new-energy heating systems. In addition, Trenergy expects to manufacture and market devices and kits for educational purposes in magnetics and electrostatics (electrets). The total product line, including exclusive geographic rights to the plasma-injected transmutation patents pending, is being licensed. Active negotiations are currently underway for geographic exclusive rights in ten countries. [Interested qualified groups may contact Hal Fox by fax at 801/583-2963 or by email <halfox@slkc.uswest.net>]

Scientists are like atomic nuclei. They are more easily split than fused.

-- Charles Osgood

PRESS RELEASE

Date: 29. Nov. 1997
From: Wolfram Bahmann
NEWS from Germany

New DVS-Board

The German Association for Vacuum Field Energy (DVS in its German meaning), founded in 1981, supports research and use of the new energy concepts known commonly as vacuum field energy or zero-point-energy; e.g., charge cluster technology and its various technological approaches, cold fusion, sonoluminescence, etc.

An important aim of the DVS is to arrange demonstrations of devices using VFE and in doing so initiate a broad public discussion on that topic. VFE conversion based devices and methods for energy conversion and material transmutation can lead to a sustainable economy and lifestyle - a vision of great consensus facing the actual energy and environmental crisis.

During its member assembly Nov. 22, 1997, a new DVS board has been elected. It now consists of: President: Prof. Dr. Dr. Josef Gruber, University of Hagen; 1st vice president: Dr.-Ing. Gerd Harms, University of Hannover; 2nd vice president and secretary: Dipl.-Met. Wolfram Bahmann, Mechernich

The other board members are: Dipl.-Ing. Horst Borowski, Hamm, Dipl.-Ing. Klaus van Doellen, Oldenburg, Dipl.-Ing. Hans-Werner Depcik, Duesseldorf, Dr. med. Hans Nieper, Hannover.

Based on the proposal of the new board the member assembly decided that the annual membership fee will now include a subscription of the NET-Journal published monthly in Switzerland by Jupiter-Verlag, the only German language magazine dealing mainly with vacuum field energy.

Our new website is due to go online in 1998. This will facilitate more efficient international contacts and exchange of information.

Additional information concerning the DVS is available from: DVS-Sekretariat,
Feyermuehler Str. 12
53894 Mechernich,

Fax +49/(0)2443-8221,
E-mail: wbahmann@compuserve.com
(both connections are preliminary)
or to the president Prof. Dr. J. Gruber,
Fax +49/(0)2334-43781.

ANTIGRAVITY NEWS

Courtesy of the Editor

ANTIGRAVITY NEWS and SPACE DRIVE TECHNOLOGY is a new bimonthly newsletter published by J.E.Cox Enterprise, P.O. Box 655, Marietta, GA 30061-655 (Phone 770-218-9693). Volume 1, number 1, July-August 1997 provides the reader with a review and update on the latest developments in anti-gravity. Some anomalous results have been obtained from more than one source. This newsletter has been inspired by the work of Podkletnov and has its purpose to share with the readers the latest reports on anti-gravity. A second purpose of the newsletter is to review anti-gravity research. A third purpose is to report on various achievements of inventors who are not mainstream scientists.

Volume 1, number 2, Sept-Oct. 1997, provides a list of several patents on gravity reduction.

Volume 1, number 3, Nov-Dec. 1997 has 60 pages of old gravity abstracts, patents, and one experimental replication of superconductor-gravity effect. A look at Searl's levitating disk work is also included. An interesting letter from Podkletnov to Martin Holwereda is also reprinted.

James E. Cox is a graduate of California State Polytechnic University with a B.S. degree in Physics. He has had extensive experience working with aerospace firms in a variety of engineering specialties including communications and propulsion. This first issue of AGN provides a good review of the work that has been reported on anti-gravity. At \$36 per year for U.S. and \$48 per year foreign, it is expected that this newsletter will be a leading publication in the strange and developing world of anti-gravity.

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(770) 218-9693
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WIN ENERGY 1997 REPORT**Introduction**

I learned more about the WIN Energy zero-point energy collection method in 1997 than I did in the previous 24 years. It has been a very good year in terms of the information gained. The purpose of this year-end report is to review the highlights of the year and tell a little about what remains to be done before the project is transferred.

Stabilization

I had a contract for the sale of the method and failed the certification test. The contract has since been canceled.

There has been a problem with E-dam stabilization for years and I requested certification, thinking the problem had been solved. The E-dams changed and no energy gain was demonstrated. It has been the most difficult problem to solve. In 1997 I have developed a much better understanding of how the E-dam, my energy collector, has been changing and I have more ideas about how to correct this difficulty.

Switching

It has become clear that I need to be working with high resistance E-dams and I have now abandoned the low resistance route to energy collection. This does not mean that they cannot be made to work, but this will require additional equipment. I have been able to bring them up to 11,000 ohms and I would like to be in the 50,000 to 100,000 ohm range.

It has been recently discovered that modification of the tank circuit is critical to E-dam switching. The E-dams have to be able to switch from resistor to conductor and back again every cycle. If I had used the improved circuit for the certification, it could have worked. Conversely, without the new circuit even the new E-dams do not appear to be switching.

Yields

My most recent certification engineer, Jerry, changed my total circuit to make the measurements more simple. I like the new circuit better and hope that I can stay with it. One result has been that I have begun to measure tank circuit yields of less than one. Energy is neither created nor destroyed. It can be changed in form but it cannot be lost. My lowest yield measurement was 58.5 percent. Most have been in the 75 percent range. Only one was as high as 143 percent. Less than 100 percent is impossible. What goes in has to come out. I measure energy loss in the tank circuit which consists of E-dam collectors and lamp loads. I have no means of measuring the energy escaping the tank circuit and moving into the front load. The research goal is to confine the energy collected to the tank circuit.

Energy is collected from the vacuum in the WIN method through electron acceleration. More energy is collected by use of a higher rate of acceleration. An electrical charge, a "bundle" of electrons, is accelerated by release of the charge using a solid state switch. Solid state switches are called MOSFET's and IGBT's and are rated by their current carrying capacity and voltage capability. The number of electrons in a pulse and the time of the pulse sets the mean current value for power calculations. The research goal is to maximize peak-to-peak currents.

In the past I have been able to make a rough determination of peak-to-peak currents through failure of the switch. I could live with the method until the values

exceeded 60 amperes. My next step up was to change to 200 ampere switches at a cost of \$100 each. I use two in series. That is where I am at the end of 1997.

I have been able to measure alternating currents using a shunt on one side of the tank capacitor with a multi meter and have been working in the 0.8 to 1.8 ampere range. This gives me a pulse of 2.26×10^{19} electrons at 5,000 cycles per second, Hertz. Using my revised tank circuit, I recently read 20 amperes on my meter - which I know is too high. This happened to me about five years ago and I announced to the world that I had solved the collection of energy from the vacuum. It turned out that a multi meter will only measure a peak height of up to 3:1. Anything above that and the meter goes crazy.

Stand Alone

The Holy Grail of every new energy research person is to build a system which will stand alone and operate without any outside power supply. There are different ways of working towards this goal. The direction my research has taken is towards recycling the charge of electrons. More electrons are passing through the tank circuit than the total circuit. In 1997 I have achieved a ratio of 3:1. A means was found to see and measure the direction of charge flow which I find exciting. Both digital and analog multi-meters are placed across the lamp loads. The digital meter measures the voltage in one direction - from the negative to the positive poles of the power supply. The analogue meter indicates the voltage in the opposite direction - from the positive to the negative poles. The analog meter is sluggish enough to indicate the electron charge moving to the negative pole.

This increase in "wrong way" electrons loosens the tank circuit. You can sense it beginning to "sing."

Have a nice holiday season,
Win Lambertson
December 10, 1997

NEWS RELEASE

RENEWABLE ENERGY DEVELOPMENT INSTITUTE

Financing Makes Solar Homes Affordable

How about this... you've found your dream home, secluded, nice area, everything you've always wanted. One problem, it's off the grid and powered by a generator and a solar system. Who's going to finance this with a reasonable interest rate? Can you even get conventional financing?

These are examples of the difficulties typically encountered by Off-Grid loan seeders.

Renewable Energy Development Inst., with a grant from the utility and solar energy industries, is hard at work development the OFF-GRID HOME MORTGAGE LOANS (OHM Loans) project. They are seeking to clarify these lending issues through a two pronged approach. First by contacting lenders currently offering financing for homes with private power and compiling a list of these lenders for publication on the Internet as well as on disk and in print. Secondly by working with the federal loan programs such as FANNIE MAE to inform lenders of the acceptability of private power which meet certain market criteria. The REDI working together with the Solar Energy Industries Assoc., the Utility Photovoltaic Group and the Switzer Environmental Fund of San Francisco Foundation is surveying lenders, solar businesses and private power homeowners to compile as complete a list as possible of these existing lenders.

If you or anyone you know has financed an off-grid home you can enter the lender into a nationwide database by contacting REDI at the toll-free numbers below and leaving the name of the lender, location and contact information. By doing so you will make it easier for the next off-grid homeowner to find financing. Who know, it may even be you!

REDI
C/O Keith Rutledge
383 South Main St. #234
Willits, CA 95490
Phone/Fax 1-888-646-7334
E-mail: redi@saber.net
Phone/Fax 1-888-646-7334

UNOBJECTIVE REPORTING

Wingate A. Lambertson, Ph.D.

Introduction

Zero-point energy conversion was recently presented on television as part of a one hour program on "Beyond Science." This was shown on November 19, 1997 on P.B.S. and hosted by Alan Alda. This was one of six different new energy applications including:

1. Dowsing - rod and pendulum methods.
2. Alien space men.
3. Graphology - handwriting analysis.
4. Palm reading.
5. Therapeutic touch.

This is the most recent of three TV programs which have attempted to make objective, unbiased reports on new energy. These have been presented in the United States in 1997. I was appalled at the manner in which the Scientific American was used to present an extremely unfavorable view of the potential of zero-point energy. I was glad that they did not decide to present my method because of its negative emphasis.

Institute for Advanced Studies

The Institute for Advanced Studies in Austin was selected to make the case for zero-point energy. They have been evaluating the Moldavian Device which is supposed to collect energy through bubble collapse in a water tank. They reported on the program that no energy gain was found. Mr. Scott Little explained their work and showed that they are now going into the study using an ultrasonic driver system. He then took Alan Alda to his mother's home to show him her clock which has the expansion and contraction of a metal drum as its power source. The point Mr. Little made is that one has to be extremely careful in evaluating energy collection methods.

Dr. Hal Puthoff told about the amount of zero-point energy in a cup of water and made the point that zero-point energy will be the dominant energy source in the 21st Century.

Protagonist

All three programs have used an outstanding scientist to present their side of the story. All have been university professors and they usually say that "more studies are needed." None will say that this is an extremely important discovery and that a crash program is needed.

The Scientific American Frontiers program selected Dr. Steven Weinberg, Nobel Laureate, from the University of Texas as its zero-point energy protagonist. Dr. Weinberg pointed out that the laws of nature are impersonal and stated that a volume the size of the earth has less zero-point energy than a gallon of gasoline. This one comment could be enough to destroy all funding prospects for the next decade. Dr. Puthoff gives an extremely large energy content and Dr. Weinberg an extremely small one. Dr. Puthoff was not given an opportunity to respond or did not choose to do so.

Mr. Little leaned over backwards to show that they are being extremely careful in their measurements at the Institute for Advanced Studies. They believe that an extraordinarily large amount of energy is available in the form of zero-point energy and they are setting out to prove it. The professor and Nobel Laureate says that the amount of energy is so small that it is a waste to try and capture it. If you were the president of a large energy company and asked to support a zero-point energy collection method, what would you do? Would you go with the professor and originator of a theory linking electromagnetism and the electroweak force or would you go with the man who has studied and published extensively on zero-point energy over the past 20 years? If you go with the former you will do so at your own peril.

Publicity Strategy

The new energy field needs positive publicity in order to develop a constituency. Three examples shown on television in 1997 indicate that publicity is used against the field rather than to help it develop. There has to be at least one university professor in the United States who is knowledgeable about zero-point energy and is willing to say that zero-point energy is available, that it is being collected today by at least two methods and that this nation urgently needs to start developing it.

Inventors have control over the people who may see and write about their invention. We need to be able to select our protagonist and to permit only those who are well qualified to pontificate on our work. It will be necessary for the inventor to approve the protagonist in advance.

LETTERS to the Editor & Others

LETTER FROM HAROLD ASPDEN to Patrick Bailey

I read your E-Mail message dated December 2 inviting news having bearing on antigravity. Hence this message which I am copying to Hal Fox and James Cox.

I have seen in this morning's U.K. newspaper: THE TIMES (Thursday, December 4, 1997, page 25) the obituary of Professor Eric Laithwaite, who died on November 27, aged 76.

Having followed his research with interest and visited him a while ago to discuss his findings and witness his demonstration of the loss of weight of a 50 lb. flywheel that he lifted effortlessly I thought I should draw your attention to some comments that were included in his obituary.

The obituary reminds us that, as a recipient of many crank letters when he was Professor of Electrical Engineering at the Imperial college in London, there was: One which caught his eye: in it an amateur inventor described a wheeled device which apparently contravened Newton's Third Law of Motion - it moved without any power to the wheels or any thrust. Intrigued, Laithwaite invited the inventor, Alex Jones, to Imperial College. The device Jones brought was a simple gyroscope and it moved forward on Laithwaite's bench with ease. "Alex showed me something I could not explain, so I just had to investigate it. It was sheer curiosity"

The obituary goes on to explain then how Laithwaite's efforts to show the weight loss of the gyroscopic devices he built were met with 'utter hostility'. He retired from Imperial College in 1981 pretty much in disgrace. But he never lost his fascination for gyroscopes. "None of my critics could ever explain to me how a 50 lb spinning wheel loses weight," he said. He teamed up with Bill Dawson, a fellow electrical engineer and businessman and spent the last years of his life experimenting with a variety of complex gyroscopic rigs, finally proving to his satisfaction that they could produce "mass transfer" - a brand of new thrustless propulsion system. In 1993 he applied for a patent on a gyroscopic space-drive. In September 1996, however, two NASA scientists arrived at his Sussex University laboratory, and his life went full circle. They were looking for a new way of getting spacecraft into earth orbit, and headed straight for the world expert. "I showed them all the magic of magnetic levitation," said Laithwaite happily, "and they gave me a contract." He was working on Magflifter when he collapsed.

The obituary published in THE TIMES is quite lengthy. Its opening paragraph adds a little more detail to the latter project: At the age of 76, at a time when many emeritus professors have long since hung up their gowns, Eric Laithwaite was happily working, like a schoolboy with a Meccano set, on the biggest project of his life - a huge working model of a futuristic rocket launcher. America's National Aeronautics and Space Administration had commissioned him to develop a concept worthy of Ian Fleming's Dr. No - a five-mile long track to be tunneled up the inside of a 10,000 ft. mountain, hurtling a space capsule through the summit into Earth orbit. The power was not to come from conventional rockets but from the love of Laithwaite's lift-linear motors.

Readers of this message who are interested in anomalous levitation phenomena will feel added sadness to hear that this great pioneer, Eric Laithwaite, has passed away. No doubt NASA will pursue that project regardless of this loss. For my part as a remote observer, I am reminded of my own brief meetings with Alex Jones and with Eric Laithwaite and am more than curious about that comment about "mass transfer". I recall that Laithwaite told me of research funding received from Prince Charles and used to build a machine involving gyroscopic devices set in two adjacent compartments. These were to be screened from one another in a physical sense, but arranged to allow the transfer through the physical screen of something associated with the spin of one gyroscopic device that could be detected by its effect on the other device. Here, my mind was on the possibility of the aether developing its own spin and being shed as a kind of 'thunderball' which could be moved through the wall separating those two compartments. If that machine, when eventually built and tested, did in fact exhibit such a phenomenon, then one can but be curious and wish to

know more. As to that loss of weight by the 50 lb flywheel I also recall the time when Professor Salter of Edinburgh University, an expert of gyroscopes, was offered funding by British Aerospace to stage demonstrations testing devices that purport to lose weight, but the event, though planned, was cancelled. Laithwaite, I heard, had refused to go to Scotland to prove something that could be demonstrated so easily in his own university base in the South of England. All one needed to see was Laithwaite standing on a large weighing machine and doing his flywheel lift while one read the weight recorded. It was only years later that a television documentary on Laithwaite's gyroscopic activity, which included participation by the Alex Jones, was screened here in U.K. and it did include that weighing machine demonstration which proved the weight loss.

Such interest as I have in these matters is merged with my own pursuits that I am recording on my own Web pages on Internet at <<http://www.energyscience.co.uk>> and so I regret that I cannot add more to this note about Professor Laithwaite. Perhaps others will already have notified you of his death, but being here in U.K. it seemed appropriate for me to send you this message.

Harold Aspden

E-Mail: haspden@iee.org

LETTER FROM JIM PARDAU

This week there were two serendipitous developments of substantial relevance to the critical need for establishing an **objective federal government** process for the assessment of viable **non-storage** alternatives to the long-term management of high-level nuclear wastes and the development of **non-fossil** fuel energy sources.

The Hanford Can of Toxic Worms

The first development was National Public Radio's (NPR) November 26, 1997 Morning Edition report, which expanded on the *Sacramento Bee* story on the same day, that in the words of the reporter, "high-level nuclear waste stored at the Hartford Nuclear Weapons Facility has leaked into the ground water and is headed toward the Columbia River. The DOE released the information in draft reports (of its Pacific Northwest National Laboratory). **The revelation could lend new urgency to the government's multi-billion dollar cleanup program.**"

The report quoted Hanford Facility Manager John Wagoner that "the DOE has already begun removing waste from the leaking tanks and it plans eventually to concentrate the contaminants and **encase them in glass and stainless steel**. We're talking about **multi-billion dollar** facilities that have to be built. They would start up between **2002** and **2005** in the first part

of the next decade. This is a long-term project. The schedule we have with our regulators is to have all the waste out of the tanks and treated by the year **2028** (emphasis added!)."

The NPR report noted further that "in the meantime, much of the radioactive waste remains in old tanks that could rupture. Many experts say that the DOE's top priority should be to empty those tanks. Yet the government has instead scaled back that effort to save money.

In response to that plan, the NPR report quotes Casey Ruud, a former DOE scientist and nuclear safety specialist, who now works on the Hanford problem for the Washington State Department of Ecology, that **"in light of the new study, that's a ludicrous decision. It costs \$3 million per tank to get the liquids out of there, and they're trying to shut that down for a year or more until they can find a way to do it more cost-effectively. The damage of one of those tanks leaking is in the hundreds of millions of dollars. They need to pump out those wastes in an expedited fashion. They should be working 24 hours a day pumping those liquids out of the tanks."**

The NPR report concluded that "DOE officials say they will monitor the remaining tanks and if any are found to leak, the contents will be pumped out immediately."

"But critics say they don't trust the DOE to protect public health. A government investigation into an explosion at Hanford earlier this year found DOE workers and contractors had ignored safety procedures, violated State laws and lied about it afterward."

Casey is also quoted in the *Bee/New York Times* story, that **"the (Hanford) waste is the worst stuff in the world."**

If the Hanford outrage, coupled with the national high-level nuclear fuel rod problem, aren't enough to cry out for meaningful federal action to protect the public health and environment, I don't know what is.

I'm counting on you, and the many others in our collective networks who are committed to serving the total public interest, to help me make a difference in resolving what I hope you agree could be the biggest challenge of our public and private lives. If you'll help open the doors to the decision-makers, I'll work around the clock to get the job done. If we don't do it, no one else will.

Prototype Fusion Power Generator

The second major, extremely timely and pertinent development this week - of which I was not aware - was reported in the *Bee's* stinging editorial yesterday:

"Gathering Dust: Government uninterested in novel fusion approach."

The editorial refers to a proposal by UC Irvine Emeritus Professor Norman Rostoker's prototype fusion power generator that "is smaller than a modern submarine, yet that would supply enough power for a community of 50,000 people"...which (of course) **"has generated no government interest."**

The editorial notes that **"a (fusion) breakthrough would change the world, ending a dependence on fossil fuels and beginning a limitless supply of essentially pollution-free electricity without the production of Earth-warming green-house gases or radioactive wastes as byproducts."**

While Trenergy's Plasma Injected Transmutation technological breakthrough is not fusion, it has the same potential as Professor Rostoker's prototype for development as a cost-effective, environmentally-sound replacement for fossil fuel.

As the *Bee* editorial concluded: **"It is up to the government to step forward. While President Clinton talks about taking global warming seriously, his own scientists are stifling a fusion idea that may be better than theirs. The repression of new approaches to fusion will keep the field in science's backwaters, which is not where it belongs."**

Best Regards, Jim Pardeu

In a recent article from the *Washington Post*

"U.S. global warming plan criticized Europeans call Clinton proposal 'disappointing,' 'insufficient'."

BERLIN - "Major U.S. allies in Europe and Asia criticized President Clinton's long-awaited plan to curb global warming Thursday as weak and ineffectual, claiming it does not measure up to U.S. responsibilities to protect the environment as the world's leading polluter and lone superpower."

"It is simply not good enough," said Peter Jorgensen, spokesman for the 15-nation European Unions's executive commission in Brussels, Belgium. "There must be something better coming from the White house if the United States wants to face up to its global responsibilities."

LETTER FROM HAL PUTHOFF

To the Editor of *Scientific American*

I wish the following to be considered for publication in an upcoming issue of *Scientific American*. My remarks address coverage of the zero-point energy topic in the November 19 *Scientific American Frontiers* PBS program with Alan Alda, and in the companion article in the December issue, in both of which our laboratory was featured.

"It was gratifying to see *Scientific American* again [1] address the topic of zero-point energy (ZPE), both in the *Scientific American Frontiers* PBS program hosted by Alan Alda (broadcast November 19th), and in the companion piece by Philip Yam in the December issue, "Exploiting Zero-Point Energy." Since our laboratory (the Institute for Advanced Studies at Austin) was featured in both treatments, we wish to offer the following comments based on our participation.

In our opinion the PBS segment, entitled *New Energy Age*, was quite successful in placing before the viewers an objective picture of research into the possibility that the ubiquitous ZPE could be tapped as an energy source. The program captured the willingness of scientists like ourselves to investigate this possibility, while at the same time showing the skepticism with which we approach any given claim, demonstrated on the program by our laboratory evaluation of one of many devices that did not live up to its claims. Also quite gratifying has been the lively follow-up activity on the *Scientific American Frontiers* web site in which we answer viewers' questions. (<http://www.pbs.org/saf/>)

In contrast, the article in the December '97 issue of *Sci. Am.* appears to us to present a decidedly skewed perspective regarding current ZPE research. Although the technical issues are presented accurately, the context in which they are embedded would lead a reader unfamiliar with the field to conclude that much of ZPE research is driven by speculative fringe ideas rather than by mainstream research issues. For example, there is passing reference to a NASA propulsion workshop in which ZPE research was one of the major topics of discussion. In this mention we do not see highlighted the contributions of Chiao, Tipler or a dozen other leading scientists whose work is often presented in the pages of *Scientific American*. Instead, we are treated only to one participant's complaint that during a breakout session "there was a guy talking about astral projection," clearly an attempt to paint a tawdry picture of the NASA meeting.

On the subject of whether the ZPE can be extracted for use beyond chemical energy levels, or manipulated to affect inertia at a delectable level, there is no mention that these are topics under serious discussion in *Physical Review* and other mainstream physics journals. Instead we are told only that there are some who consider investigation of such topics "pseudoscience

that could leech funds from legitimate research." Overlooked is any counterpoint mention that the Institute for Advanced Studies at Austin featured in the article has, through its investigations, saved investor groups literally millions of dollars that might otherwise have been invested in unworkable devices promoted by enthusiastic but misguided inventors; or that a detailed Air Force study has outlined a comprehensive program to study the implications of ZPE research for possible inertial mass modification.

Again, we have quotes from a Los Alamos researcher that express the skeptical side of the issue concerning the possibility of ZPE extraction, but are not told that, with his support and encouragement, two of his colleagues at Los Alamos have designed and are now constructing a quite innovative and complex ZPE energy conversion device based on the Casimir effect, to be used as an investigative tool to explore just this possibility.

Finally, as to the energy possibilities, the article ends with the cliché "if it sounds too good to be true, it probably is." Of course, healthy skepticism about the promise of ZPE conversion, as about the promise of, say, hot fusion, is fully justified. This is especially the case in an area such as ZPE research that is at the frontiers of both our physics understanding and engineering capability. However, given global energy concerns, disregard of any possible energy solution is a luxury that we can ill afford, and that would be irresponsible for the scientific community to embrace. Fortunately, the self-corrective merits of good science can be counted on to separate the wheat from the chaff, and to optimize the outcomes for potential application. In our opinion, it is this reliance on the scientific method, not polemics, that should guide our efforts.

[1] T. Boyer, "The Classical Vacuum," *Scientific American* (August 1985)

H.E. Puthoff, Ph.D, Director
Institute for Advanced Studies at Austin
Austin, Texas

LETTER FROM BILL RAMSAY

COSMIC CONNECTION
Unit production update.

As of this date it continues to look like these first units will be in the hands of those ordering them no later than April 1, 1998. In the meantime there are a lot of details to be attended to by myself and the manufacturer, Lee Lester of Midland Technologies. This is always the case when starting something new,

I will be permanently moved to Grand Junction, Colorado no later than the first of the year. I will be carrying ALL

my technical equipment with me (station wagon and small trailer) so that I can set up to do whatever assembly, testing, adjusting, mods, etc. may be required. While on the road I'll be in daily contact with Lee. This project is my FIRST priority!

In my previous letter I stated this was a "go/no-go" project depending on whether or not there were enough orders (15 required at \$700 each) to pay for the design, engineering and production coats for this limited first run. And that December 1st was the cut-off date. There have been enough orders. Meaning this is a DEFINITE GO! It will be done!

Since Hal is helping with this project and will be handling the payments to the manufacturer, it seems logical he should also be receiving the orders and payments. For those who have already ordered units, and those who haven't yet but would like to now, submit your order and \$700 payment to:

Hal Fox
P.O. Box 58639
Salt Lake City, UT 84158 801-583-6232
FAX: 801-583-2963
(Make checks or money orders payable to "Fusion Information Center" and note on them "Cosmic Connection order.")

When you submit your payments please include contact and shipping information. Also any comments or questions you might have. Please submit this ASAP so we will know how many units will be required to be made first.

With these arrangements in place things should go smoothly even if Murphy's Law comes into play! (So far it hasn't!) Recent experiences with a prototype unit at the International Forum on New Science, a gathering of clairvoyants in Grand Junction and at the Whole Life Expo in Atlanta continue to confirm for me and others that this technique MUST get into the world and that the time is right!

At the Expo in Atlanta I'd rigged a small keyboard to the prototype and an inspired, intuitive musician, Cynthia Rose Young, played about 20 minutes of her "angelic" music and then set the switches on this unit (you'll have these on your units) to produce a steady multi-octave chord which included most of the notes she had played. Within minutes and even though she had ceased playing, many of the "runs" she'd played were easily distinguishable, persisted for some time afterwards! It seems "the universe" liked it, resonated to, and joined in this "musical dance." Neat! Confirmation!

Thank you for your past and continued support and encouragement. Appreciated greatly! As a result, things are moving forward!

With love,
Bill Ramsay

LETTER FROM HANS REX

Dear Hal,

Here is my comment.
The aether is without time and space since it was before matter. The aether can be seen as an 'ocean of light'. Not light in the physical sense, since the 'physical light' needs a 'stone' (electron) to be thrown in the still ocean, but a 'potential' for light. The 'molecules' of the ocean are photons.

We 'observe' the ripples or waves on the surface of the still water after the event of a stone being thrown into the water - but normally we are not aware of the fact that waves are molecules moving up and down (this may explain the 'double slit' experiment).

Many observations in fluid mechanics apply to the 'ocean of light' as well. Since neither time nor space exist in the 'eternal' aether (or ocean of light) all events can be known always and at the 'now' time. We have proven this fact in the past through distant diagnosis and treatment with electronic equipment and the measurement of photon flows in acupuncture point (see Dr. F.A. Popp, leading German physicist). Furthermore our theories are supported through experiments conducted at the QE II Research Laboratory (Dr. B.Reid, Sydney, Australia).

On the basis of the theory we developed FED's (Field Effect Devices) which use zero point energy (aether). Dr. H. Puthoff describes (unknowingly) such a device in his article 'Everything for nothing'.

The device has been tested by a number of Universities and Institutes in various countries. (Supersonics Institute, Sydney - QE II Research Lab, Sydney - University of Madras, Indian Institute of Sciences, the most famous vehicle proving ground, Millbrook, UK - the Indian Military Vehicle Proving Ground, Ahmednagar, India - and so on. ALWAYS with interesting and positive results).

If you think we can contribute in a more 'solid' way, please let me know.

Kind regards,
Hans Rex harmonology@fastlink.com.au

[Tell us more about your FEDs. -Ed.]

LETTER FROM JAY A. SCHLAIKJER

Shocked to hear about Chris Tinsley and Bruce DePalma. Two imaginative folks left us -- what a loss.

Keep up the good work! Hope you can attract some real, meaningful capital shortly. Can you imagine -- all the billions the U.S. Government is paying for nuclear storage! **You** know that \$50,000,000 properly applied could solve the remediation problems.

Best Wishes
Jay

LETTER FROM VICTOR V. AN

The elementary particles can be accelerated to superluminal velocities. But I am physicist-theorist and I can not do such experiment. Therefore I suggest to carry out the superluminal acceleration for investigators, which have necessary accelerators facilities. I send you my appeal to physicists-experimenters. Can you publish it in the *New Energy News*?

Sincerely yours

Prof. Joseph J. Smulsky,
Institute of Earth's Cryosphere,
E-mail: ROOT@IKZ.TYUMEN.SU

APPEAL TO PHYSICISTS and EXPERIMENTALISTS

Dear Friends!

I should like to call your attention to the possibility of accelerating elementary particles to superluminal velocities.

There are no objective reasons why such velocities could not be attained. The generally accepted view that particles cannot move at superluminal velocities because such velocities are not allowed by the special relativity theory (SRT) is incorrect. The reason why it is incorrect is as follows.

Electromagnetic interactions between bodies depend not only on distances between the bodies but also on relative velocities of the bodies. The SRT seeks to reduce interactions between moving bodies to interactions between the bodies at rest and vice versa. Relativistic transformations (Lorentz transformations) make this reduction possible.

However, if the interactions between moving bodies are described in the first place as functions of relative velocities of the bodies, then the relativistic transformations of space, time, and mass are not needed.

Moreover, the creators of the SRT, being preoccupied with the world aether, became victims of a mistaken

belief that, instead of building a theory of interactions between bodies, they were creating a world in which material bodies experience changes in accordance with relativistic relations. And since relativistic transformation equations become imaginary at superluminal velocities, such velocities became forbidden in the SRT.

And yet, a relativistic description of interactions is not the only possible one, other descriptions are possible. Elementary descriptions based on classical physics have been published by G. I. Sukhorukov and co-authors (Russia), T.G. Barnes and co-authors, C.W. Lucas, Jr. (USA), and many others. Oleg D. Jefimenko, Professor of Physics at West Virginia University (USA) in his book "Electromagnetic Retardation and Theory of Relativity," (Electret Scientific, Star City, 1997) has presented a method of retarded fields, whose origin can be traced to Oliver Heaviside, which is capable to replace completely the SRT.

In the course of my investigations [1, 2], I have developed a force-based method of describing interactions between bodies as functions of distance and velocity only.

Motions with superluminal velocities exist in nature: streams of matter and fragments of galaxies in the distant cosmic space move with velocities many times greater than the velocity of light; cosmic particles enter the Earth atmosphere at superluminal velocities. I propose to obtain superluminal motions here on Earth.

I invite organizations and individual scientists to participate in this endeavor. Many organizations have everything that is essential in order to accelerate particles to superluminal velocities in accordance with the method proposed in my articles [2, 3]. If necessary, the method can be modified and adapted to the available conditions.

I also propose to make use of the methods that I have developed for designing accelerators and nuclear transmutations. My methods are more accurate and precise than those based on the SRT.

Why do we need to create superluminal motions?

1. For developing new engines for interstellar explorations.
2. For developing a powerful weapon for anti-asteroid protection.
3. For creating new technologies.
4. For establishing new goals and perspectives for mankind.

References

1. Smulsky, J. J. 1994, "The Electromagnetic and Gravitational Actions (The Non-Relativistic Tractates)," (Science Publisher, Novosibirsk), 250 pp. (in Russian).
2. Smulsky, J. J. 1994, "The New Approach and Superluminal Particle Production," *Physics Essays*, vol 7, no. 2, pp. 153-166.
3. Smulsky, J. J. 1997, "Producing Superluminal Particles," *Apeiron*, vol. 4, no. 2-3, pp. 92- 93. August 29, 1997

Yours sincerely,
 Joseph. J. Smulsky
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 Chief scientist, IEC SO RAN
 Address: Prof. Joseph J. Smulsky
 Institute of Earth Cryosphere,
 P.O.Box 1230 625000 Tyumen RUSSIA
 Fax: (345-2) 25-11-53 Tel.: 27-35-18
 E-mail: ROOT@IKZ.TYUMEN.SU

LETTER FROM FRANK ZNIDARSIC

ZNIDARSIC TELLS ALL (Nov 22, 1997)

I have decided to go public with my work and my claims this time. I am doing this for two reasons. (1) I now have a patent on file (filed Oct 19, 1997) for the process, and (2) The results to date have been less than expected. I could use some feedback.

Background: Cold fusion electrodes are room temperature super-conductors. Ref. *Physical review Letters*, vol 35, # 2, 14 July 1975. Refer to the work of work of Celani in Italy. Refer Patent No 4043809 by Ruvalds

The process of cold fusion produces energy due to the vibration of a superconductor. Ref. the work of CETI and the preheater they use to start the process. The thermal energy of the preheater vibrates the beads in the IR spectrum at @ 1×10^{13} MHz.

The process requires super-conductive structures of a certain size. CETI's beads run in the IR spectrum and the films are about 1,000 angstroms thick. Chubb has just announced that fine grain structure in palladium produces energy.

The larger the super-conductive structure the lower the frequency of operation. I have found this relationship. Frequency of operaton MHz = $37 / (\text{length of superconductor in inches})$.

I believe that NASA's Marshall's work on the "Downshifting of the Frequencies Theory" is related to these low frequency vibrational modes.

My patented process involves vibrating a ceramic disk of super-conductive material in the radio frequency range. The RF energy is extracted and converted directly into electrical energy. The process absorbs vars and produces watts.

Tests were done with a resonant coil set adjacent to a super-conductive disk. This resonant circuit was excited with a spark gap system similar to a spark gap transmitter. The tuneable range of its operation was from 1.5MHz to 50 Mhz. (changing taps and capacitors)

The disk and coil were placed in a Dewar. A circulating current of a few amps was induced in the disk. This circulating current was induced by passing one pole of an electromagnet through a hole in the center of the disk. This was done a number of times. The electromagnet was switched on upon insertion and off during withdraw. After the circulating current was established in the superconductor, the interaction of the circulating current and the external current in the RF circuit induced mechanical vibrations in the super-conductive disk.

The EM field was monitored with a Oscilloscope near the super-conductive disk as the RF energy was applied. In two instances an anomaly was observed just above the noise level at 11 Mhz with a 3.5 inch disk. This anomaly showed up as a change in the decay constant of the ringing RF coil. We cannot now repeat this. The latest tests showed no anomalous energy.

Is anyone else trying this? Anything in print about cold fusion, superconductivity, or vibration. If you run into any material related to these things please forward it to me. Is there any theory or any calculations on the subject. Has anyone else done or is doing this? Am I the first to file?

Frank Znidarsic
fznidarsic@aol.com

There's no such thing as intelligence, a capacity for learning, or a general ability to imitate role models.

The mind is more like a Swiss army knife: a large set of gadgets – language being one of them.

– S. Pinker

Meetings

ICCF-7

INTERNATIONAL COLD FUSION FORUM
Vancouver, B.C., Canada
April 19-24, 1998

An International Conference on Cold Fusion (ICCF) is held every 18 months to present laboratory results and to exchange ideas for the advancement of scientific knowledge in this promising new field. With the maturation of the field, ICCF-7 seeks to attract a more diverse audience including additional scientists, research institutes, students, national funding agencies, commercial interests, journalists, and spouses. It is the objective of ICCF-7 to provide a productive international forum for communication and education.

Calendar:

January 1998: Deadline for final abstracts to be published in ICCF-7 Program Manual and Website.

April 1998: Conference. All presenters must hand in their final papers during the conference for timely inclusion in the publication ICCF-7 Proceedings.

A different topic is planned for each day at ICCF-7. An invited presentation with summary review or global implications for the entire field will begin each day's topic, followed by five oral presentations on the topic. Afternoons will be entirely devoted to enhanced poster sessions, which include a 3-5 minute oral preview and summary. A "Top Ten" poster presenters will be selected by the attendees, and each will conduct an expanded 15 minute presentation to the full audience on Thursday afternoon. Three evening workshops will also be held.

Topics include: Heat & Related Products, Nuclear Processes & Products, Materials & Innovative Approaches, and Theory & Nuclear Physics.

Registration fee \$450 until January 1, 1998, when it raises to \$500. Hotel reservations are still open at all prices. For more information or to get on mailing list, contact:

ICCF-7 c/o ENECO
 391-B Chipeta Way, Salt Lake City, UT 84108 USA
 Phone (801) 583-2000 Fax (801) 583-6245
 jaeger@ENECO-USA.com

18th International Symposium on Discharges & Electrical Insulation in Vacuum

August 17-21, 1998

Eindhoven, The Netherlands

Hosted by the Eindhoven University of Technology

Scientific Program, Papers will be presented on all aspects of: Fundamentals of Discharges and Breakdown in Vacuum; Vacuum Discharge Devices and Applications; and Vacuum Insulation Technology and Applications.

Mini-Courses held parallel with conference: Diagnostics for Vacuum Devices, and Production Technology for Vacuum Insulated Devices

A **technical exhibition** will be held featuring components and systems in the area of vacuum discharge devices and vacuum insulated devices (e.g. vacuum switchgear, vacuum deposition and coating, X-ray and microwave tubes and other beam-devices, high-power devices, and equipment for analysis, monitoring and test purposes).

Hotel accommodation in downtown Eindhoven, a short distance from the University Conference Centre, is available through the EUT Conference office at reduced rates.

Information for Authors

Authors should submit a 250 word abstract by November 1, 1997. Authors of accepted abstracts will be notified in Dec. 1997. Deadline for camera-ready manuscripts is April 1, 1998. Accepted papers will be published in conference proceedings, available at the registration. A limited number of accepted papers will be selected for publication, in a modified and extended version, in Special Issues of *IEEE Transactions on Plasma Science* and *IEEE Transactions on Dielectrics and Electrical Insulation*. The working language of the symposium is English. All printed matter will appear in English.

Correspondence should be sent to:

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 Congress Office ISDEIV'98, Aud.2.26
 Eindhoven Univ. of Technology
 P.O. Box 513
 5600 MB Eindhoven, The Netherlands

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fax: (011)-31-40-245-8195

E-mail: C.L.A.Schreurs@ieb.tun.nl

Website: <http://www.ele.tue.nl/evt/isdeiv/>

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Abstract Deadline: Postmarked by Monday, 15 Dec. 1997

Prospective authors are invited to submit a brief (about 250 words, double spaced) abstract for consideration by IECEC Program Committee. The abstract, along with three copies, should include the following information: a descriptive title, one appropriate topical subject area, name/address/ telephone/e-mail/fax of the corresponding author.

Contact for author's packet:

ANS Proceedings Office, IECEC '98
555 North Kensington Ave.
La Grange Park, IL 60526

Phone: 708/579-8253; fax 708/352-6464

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PRESS RELEASE

**THE INTERNATIONAL SOCIETY
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• Website: <http://vitalenergy.com/issseem>

Commercial Column

**TREENERGY TO SELL 500,000 SHARES OF ITS
COMMON STOCK**

Dr. Mack Bowen, Chief Financial Officer for Trenergy, Inc., has announced that Trenergy, Inc. (a Utah public corporation) has filed appropriate legal documents with Securities Departments of Utah and Nevada, requesting permission to sell one share and one warrant for an additional share at the price of \$2.00. This is a public announcement of a business decision and not an offer to sell shares. The offer to sell shares can only be made by the official Offering Circular and only to residents of states in which proper legal filings have been made and approved. Qualified investors (assets of over \$1 million and annual income of over \$200,000) and foreign investors may purchase shares. Dr. Bowen also stated that as soon as the shares have been sold, Trenergy will file for listing its stock on either NASDAQ or the American Stock Exchange.

The following companies (listed alphabetically) are commercializing cold fusion or other enhanced energy devices: [Listings with your additional copy, or boxed, for small annual service fee.]

COMPANY: PRODUCT

American Pure Fusion Engineering and Supply:

Warren Cooley, 1-800-789-7109 or 503-585-6746.

Email to: Coolwar@aol.com

Clustron Sciences Corp.: Contact: Ron Brightsen, 703-476-8731.

E-Quest Sciences: Contact Russ George, FAX 415-851-8489.

ENECO: is in the business of commercializing the exciting new field of low energy induced nuclear reactions in solids via patent licensing, joint-ventures, and co-operative research. ENECO, University of Utah Research Park, 391-B Chipeta Way, Salt Lake City, Utah 84108 USA. Contact Fred Jaeger, Voice 801-583-2000, Fax 801-583-6245. Email: jaeger@ENECO-USA.com

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

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

Hydro Dynamics, Inc.: Rome, Georgia. Contact James Griggs, Voice 706-234-4111 Fax 706-234-0702.

JET Energy Technology, Inc.: Weston, MA. Contact Dr. Mitchell Swartz, Voice 617-237-3625. Fax 617-237-3625.

Labofex, Experimental and Applied Plasma Physics: Ontario, Canada. Contact Dr. Paulo N. Correa. Tel 905-660-1040
Fax 905-738-8427

Magnetic Power Inc.: Sebastopol, CA. Contact Mark Goldes, voice 707-829-9391, Fax 707-829-1002.

Nova Resources Group, Inc.: Denver, CO. Call Chip Ransford, Phone 303-433-5582.

Trenergy, Inc., has acquired rights to develop and produce a new-type of thermal power based on the controlled production of clean nuclear reactions from plasma injected transmutation. Contact through P.O. Box 58639, Salt Lake City, UT 84158-0639, Voice 801-583-6232, Fax 801-583-2963.

UV Enhanced Ultrasound: Hong Kong.
FAX 852-2338-3057.

"YUSMAR"- Scientific-Commercial Company:
President: Dr. Yuri S. Potapov, 277012 Kishinev, Moldova. Phone and Fax 011-3732-233318.

Zenergy Corp.: Founded in 1996 to facilitate the introduction of commercially viable energy alternatives. 390 South Robins Way, Chandler, AZ 85225. Contact Reed Huish, 602-814-7865, Fax 602-821-0967, e-mail: info@zenergy.com

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

INFORMATION SOURCES

Academy for New Energy (ANE) 216 Commerce Drive, Ste. 4, Fort Collins, CO 80524. Tel. 970-482-3731
ANE Newsletter, quarterly publication of ANE, edited by Robert Emmerich.

Advanced Energy Network Newsletter, quarterly. Advanced Energy Network, P.O. Box 691, Rondebosch 7700 Capetown, Rep. South Africa.

Antigravity News and Space Drive Technology, bimonthly newsletter, pub. J.E.Cox Enterprise, P.O. Box 655, Marietta, GA 30061-655 (Phone 770-218-9693). Per year \$36. U.S., \$48 foreign.

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

Cycles, a R&D newsletter, published by Dieter Soegemeier, Editor, GPO Box 269, Brisbane, QLD.4001, Australia.
Phone/Fax: +61 (0)7 3809 3257.

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

Electrifying Times, 3/year magazine. 63600 Deschutes Market Rd, Bend, OR 97701
541-388-1908, Fax 541-388-2750,
E-mail <etimes@teleport.com>
www.teleport.com/~etimes/

Elemental Energy, monthly newsletter, edited by Wayne Green, 70 Route 202N, Petersborough, NH 03458.

Fusion Facts has become a section in the *Journal of New Energy*.

Fusion Technology, Journal of the American Nuclear Society, edited by Dr. George Miley, 555 N. Kensington Ave., La Grange Park, IL 60525.

Future Technology Intelligence Report, monthly newsletter, making available technological information now omitted from establishment media. Back issues available at substantially lower cost on the InterNet at <www.tarapublishing.com> FTIR, P.O. Box 423652, San Francisco, CA 94142-3652.

Infinite Energy, bi-monthly magazine. P.O. Box 2816, Concord, NH 03302-2816. Voice: 603-228-4516. Fax: 603-224-5975
E-mail 76570.2270@compuserve.com

Institute for New Energy (INE), organization to promote and help find funding for new energy research.
Visit our **Home Page**: www.padrak.com/ine/ which contains many important scientific papers and current reports on all areas of research.
E-mail: halfox@slkc.uswest.net
or ine@padrak.com
Salt Lake City, Utah. Voice 801-583-6232, Fax 801-583-2963.
New Energy News monthly newsletter for INE, highlighting the research and development in the worldwide new energy arena. Edited by Hal Fox.

Journal of New Energy, quarterly, presenting papers representing the new areas of energy research, leading-edge ideas in the development of new energy technology, and the theories behind them. Published by the Fusion Information Center, Inc. Editor: Hal Fox. Address & phone above.

KeelyNet BBS - Jerry Decker, 214-324-3501
Internet: www.keelynet.com
E-mail: jdecker@keelynet.com

Planetary Association for Clean Energy Newsletter, quarterly, edited by Dr. Andrew Michrowski. 100 Bronson Ave, # 1001, Ottawa, Ontario K1R 6G8, Canada.
Web page: <http://energie.keng.de/~pace>

Space Energy Journal, quarterly, edited by Jim Kettner & Don Kelly, P.O. Box 1136, Clearwater, FL 34617-1136.

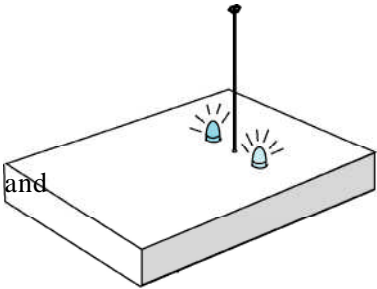
The above list of commercial and information sources will be growing. New listings will be added as information is received. Send information to *NEN*, P.O. Box 58639, Salt Lake City, UT, 84158.

Give me a fruitful error any time, full of seeds, bursting with its own corrections
– Vilfredo Pareto

THE ELFF DETECTOR

NEW! Educational! The **EL**ectrostatic **FL**uctuating **F**ield Detector.

This clever device provides light signals when either negative or positive electric fields are fluctuating. For example, move toward the ELFF Detector and the lights will glow or brighten if you are negatively charged. If you are positively charged, the lights respond as you move away from the ELFF Detector. It is amazing how many objects in our environment create electric fields. Comb your hair. Walk across the carpet. Tear off a piece of plastic tape. Dry your clothes in the dryer. Don't tell all you know about this device. Use it with your friends and children. Let them learn more about the charged world around them.



Price: \$14.95. Add \$2 for Shipping and Handling. No S&H for *NEN* members. Delivery about two weeks. A Trenergy Product.

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