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## VACUUM ENERGY VORTICES

By Moray B. King

Abrupt motion or helical motion of atomic nuclei can cause a coherent, multibody vacuum polarization in the zero-point energy (ZPE). Supporting evidence arises from inventions and experiments that produce anomalous energy from events such as abrupt electrical discharges, plasma ion-acoustic oscillations, sonoluminescence and fractoemission. Excess energy is produced when ions process through a force-free vortex. Counter-rotating plasmas might create pair production of macroscopic ZPE displacement current vortices. Examples include the Swiss ML Converter and Sweet's "Vacuum Triode Amplifier" where twisting lattice grains within a barium ferrite ceramic apparently induce fractoemission.

### INTRODUCTION

Modern physics views the vacuum of empty space not as a void but as a plenum of randomly fluctuating electromagnetic fields known as the zero-point energy (ZPE). These vacuum fluctuations persists at zero degrees Kelvin, and many physicists have shown they possess an enormous energy density (Hathaway, 1991). For example Wheeler (1962) derives a density of  $10^{94}$  grams/cm<sup>3</sup> for individual fluctuations on the scale of a Planck length ( $10^{-33}$  cm). The energy is not readily noticed at the classical level since the fluctuations are ubiquitous, and a standard radiation detector requires an energy difference to make a measurement. Nonetheless there is a point of view well represented in the physics literature that shows the ZPE is the basis of the material world. Boyer (1975) shows how the blackbody radiation spectrum as well as other quantum events is attributed to the ZPE. Senitsky (1973) has suggested that an elementary particle's very existence is intertwined with the ZPE. Puthoff (1987) has shown the hydrogen atom's stability is due to a ZPE interaction which prevents the electron from collapsing into the nucleus. Puthoff (1989) has also shown how gravity can be derived from the action of the ZPE, and recently Haisch, Rueda and Puthoff (1994) have shown that the ZPE could be the basis of inertia as well. There have also been proposed ZPE models for the photon (Scully, 1972, Honig, 1986)

and the electron (Jennison, 1978). **The zero-point energy might well be the primary underpinning of all physics.**

**Can the zero-point energy be tapped as an energy source?** At first this idea seems to be a blatant violation of conservation of energy. But if the ZPE is physically real, then there is energy available and its conservation would not be the issue. The real issue centers on the second law of thermodynamics, the law of entropy, for how could a system based on chaotic energy fluctuations evolve into coherence? Prigogine (1977) won the Nobel prize in chemistry for showing how a system can evolve from chaos into order. The system must exhibit three characteristics: 1) It must be nonlinear, 2) far from equilibrium and 3) have an energy flux through it. The published theories of the ZPE fulfill these conditions (King, 1989, 1993). Recently Cole and Puthoff (1993) published a proof showing that, in principle, the ZPE can be tapped as an energy source without violating thermodynamics. Forward (1984) has devised a simple battery based on the Casimir force (Milonni, 1988) where a ZPE radiation pressure squeezes charged plates together. Also, Boyer (1976) has mathematically shown that a system consisting of a nonlinear dipole can absorb energy from particular modes of the ZPE spectrum. As chaos theory and system theory are applied to the ZPE, new models of matter, fields and spacetime arise (e.g. LaViolette, 1985, Winterberg, 1990). Combining the theories of system self-organization (e.g. Suzuki et al., 1984.) with the theories of the zero-point energy open the possibility for a new energy source.

### ION MOTION

How can an engineer design a system that will tap the zero-point energy? Quantum electrodynamics (QED) shows how the various elementary particles interact with the ZPE via vacuum polarization (Scheck, 1983, Reinhardt, 1980). Electrons, especially when in conductors, exhibit a random vacuum polarization where the electron cloud is essentially in thermodynamic

equilibrium with the ZPE fluctuations. Thus normal antennas, conductors and electron circuits would not experience any net ZPE interaction. On the other hand the atomic nuclei exhibit an orderly vacuum polarization with polarization lines converging steeply onto the particle. The abrupt motion of nuclei or ions would be expected to induce a cohering effect on the ZPE, and this has been observed in accelerator experiments involving heavy ion collisions (Celenza et al., 1986). **The ZPE coherence would be greater if a large number of nuclei (or ions) undergo synchronous or abrupt motion.** This behavior occurs in plasmas during ion-acoustic resonance, and it has manifested energetic anomalies such as high frequency voltage spikes (Lalinin et al., 1970), run away electrons (Kiwamoto, 1979) and anomalous heating (Sethian et al., 1978). These anomalies might be evidence for a macroscopic ZPE coherence.

There are inventions and experiments producing excessive energy that have nuclei or ion motion at their basis. In the 1930's T.H. Moray (1978) produced a 50 kilowatt, free running, energy machine that relied on ion oscillations in its plasma tubes. Brown (1989) may have replicated the essence of Moray's discovery with his resonant nuclear battery. **Brown uses a weak radioactive source to maintain a plasma which couples to a resonant circuit tuned at the plasma's ion-acoustic frequency.** Also, the "cold fusion" experiments (Storms, 1991) invoke coherent nuclei motion. In the hydride lattice the deuterons (or protons) settle into shallow potential wells where they are free to oscillate or diffuse. When the lattice is saturated, all the sites are occupied inhibiting the diffusion and allowing the nuclei to undergo synchronous oscillations. A ZPE coherence might be the primary source of anomalous energy in the cold fusion experiments (Jandel, 1990) since not only are there insufficient fusion by-products (neutrons, tritium, helium, etc.) but excess heat is produced repeatably in a class of light water experiments (Mills, 1991, Mallove et al., 1992). Moreover, Dufour (1993) has created a simple experiment involving just sparking in hydrogen with a stainless steel electrode, and it produces excess heat with 100 percent repeatability. Pappas (1991) likewise claims excess energy from sparking. Recently Mizuno et al. (1993) have investigated proton conductors and claim their experiment outputs 70,000 times more heat than accounted for by the input power. The zero-point energy just might be the source of the anomalous energy in experiments where nuclei motion is involved.

### PLASMA VORTICES

Vortical motion of plasma nuclei appears to produce even bigger effects. Chemetski (Samokhin, 1990, Michrowski, 1993) has observed anomalously excessive energy

production in his plasma experiments and associates the greatest output with cycloidal motion of the plasma particles. Similarly Spense (1988) has based his energy invention on the plasma spiral. Reed (1992, 1994) has overviewed vortex theories in the physics literature and has concluded a particular form known as the "force free vortex" is a likely candidate for maximizing a ZPE interaction. The force free vortex originally arose in hydrodynamics.

Bostick (1966) has observed the formation of the plasma vortices in his experiments and notes that they tend to arise in symmetric pairs exhibiting opposite helicity. The plasma vortex helix can also close onto itself creating a vortex ring plasmoid. Bostick (1957) has also created these vortices in his experiments and describes a "quantum condition" or integer ratio of the toroidal radius to the poloidal radius. Plasmoids also tend to be produced in pairs of opposite helicity and might well be an archetype illustration of electron-positron pair production arising from the QED vacuum. Ball lightning (Singer, 1971) has been modeled as a vortex ring plasmoid (Johnson, 1965, Jennison, 1990), and its anomalous persistence might be indicative of a coherent ZPE interaction (Egely, 1986, King, 1989). A vortex geometry for plasma ion motion might contribute significantly in cohering the zero-point energy.

Perhaps the most unusual energy anomalies associated with vortex experiments were claimed by Schauberger (Alexandersson et al., 1990). He empirically designed a particular tapered vortex based on his observations of turbulent water flow in nature. Schauberger pumped water through a pipe that was twisted into a precisely tapered helix whose cross section was also shaped to induce the water to naturally undergo a second order precessional spin as it flowed through the pipe toward the vortex tip. Normally it is difficult to force matter to undergo precession, yet when it does, there have been anomalies reported. For example DePalma (1973) has claimed to measure a weight change in an experiment where two counter-rotating flywheels were forced to process, and Laithwaite demonstrated that a heavy flywheel could be lifted with little effort if it were allowed to process along a particular helical path (Davidson, 1989). Schauberger also created a precise helical path to induce water precession, and when pumped at high velocities the vortical flow exhibited a centripetal, imploding characteristic that avoided contact with the pipe walls. During such a flow he claims to have measured a negative resistance (i.e. an energy gain) and observed a peculiar bluish glow around the apparatus. Schauberger also noted that water at 4 degrees Celsius would be the most energetic. Did Schauberger discover how to induce a zero-point energy coherence with something simple as water flow?

There is another energy anomaly associated with water that has similarities to Schauburger's observations. When water is excited by ultrasonics it emits a bluish glow called sonoluminescence (Walton and Reynolds, 1984). Barber and Putterman (1991) have experimentally shown that the photon emissions are too rapid to be from electron atomic transitions and that the phenomenon represents an energy amplification on the order of a 100 billion. Also water at 3 degrees Celsius yields greater emissions than water at room temperature (Hiller et al., 1992). Nobel laureate Schwinger (1993) has proposed a zero-point energy interaction to explain the anomaly.

#### NUCLEI MOTION IN SOLID STATE

A zero-point energy coherence might also be triggered in highly stressed, polarized dielectrics. T.T. Brown (Sigma, 1977) discovered that a charged capacitor exhibited a unidirectional thrust in the direction of the positive plate. The greater the permittivity of the dielectric, the greater the thrust. **The largest surge would occur at the moment of dielectric breakdown.** Brown attempted to prove that the source of thrust was due to an electrogravitic interaction with experiments in vacuum and under oil in order to eliminate ion propulsion. During dielectric breakdown the lattice nuclei abruptly move in response to a sudden, disruptive shock wave from the plasma discharge surging through the material. The abrupt event might produce a large enough ZPE coherence to manifest a gravitational effect.

Another energetic anomaly that occurs in solids is fractoemission. When a crystal is cracked, it can sometimes manifest a persistent plasmoid-like form that is akin to earthquake lights (ball lightning formation from ground fissures). Preparata (1991) has noted fractoemission can yield highly accelerated electrons as well as light emissions which can sometimes persist for hours after the original fracturing event. At the crack boundary nuclei motion could trigger a coherence in the ZPE which becomes the energy source for maintaining the plasmoid. **Similarly, Shoulders (1991) has discovered a micron size, charged plasmoid which can persist indefinitely on a dielectric surface that he calls "electrum validum" (EV).** He creates the EV with a high voltage pulsed discharge from a mercury tip electrode and guides it via electric fields along micron size grooves etched in a dielectric material. When the EV hits a conductor it yields a discharge whose energy is greater than the original pulse used in its creation. Puthoff (1990) suggests that the energy is from the ZPE.

#### LATTICE TWISTING

Another method that might cohere the ZPE is to induce a ratcheting, semi-vortical motion of nuclei by abruptly twisting a crystalline lattice. Lattice twisting can occur in

ferromagnetic materials when subject to alternating magnetic fields. As the magnetic domains shift, they can launch acoustical spinor waves (Cieplak, 1980). An abrupt lattice twist can occur if the magnetic material is driven to hysteresis saturation, and then pulsed oppositely. The saturation state classically stresses the lattice, and the reverse pulse triggers the lattice to snap back. **Aspden (1990) has identified hysteresis saturation as a significant state for generating energetic anomalies with magnetic materials.** The nuclei motion from the lattice twist can launch the vacuum energy vortex which manifests as an excess magnetic pulse....

Sweet (1991) also appears to utilize lattice twisting in the conditioned barium ferrite magnets of his solid state energy invention known as the "vacuum triode amplifier" (VTA). Normally barium ferrite is used for permanent magnets, and its domains do not readily shift. Instead, Sweet cracks and loosens the lattice itself with the conditioning process. The barium ferrite block (6x4x1 inches) should be sintered by the manufacturer such that the ceramic is not overly hard. The conditioning is similar to how manufacturers make permanent magnets: An a.c. current is impressed on a coil surrounding the material to erase any residual magnetization. Then a large pulse from a capacitor bank (a typical manufacturer uses 100 microfarads at 15KV) is fired through the coil to align the domains into a permanent magnet. Sweet's conditioning coil surrounds the (6x4) perimeter of the barium ferrite block and consists of 600 turns of No. 28 wire. He drives it at 60 Hz with a few amps and then switches a large pulse from a 6500 microfarad capacitor at 450 volts (values reported by Watson, 1994) through the coil, timed at the peak of the 60 Hz sine wave. Unless the ceramic is loosely sintered, it is unlikely one firing will crack the lattice. The barium ferrite block should then be turned over (or the coil polarity reversed) and the process repeated such that the domains are driven to the opposite polarity from the next capacitor pulse. The conditioning process should be repeated over and over, altering the polarity each time. The process is analogous to cold working a strip of metal by bending it back and forth until it breaks. The lattice will form micro cracks and loosen such that the magnetic domains appear to readily oscillate when excited by a weak a.c. magnetic field. **It is really not the magnetic domains that are shifting; it would be more accurate to describe the cracked portions as acoustical domains since it is the lattice grains that are shifting.** Thus in a straight forward manner Sweet has created a twistable solid state lattice that exhibits an acoustical resonance at the conditioning frequency (60 Hz).

**Within the micro cracks of the conditioned barium ferrite apparently occurs the phenomenon that coheres the ZPE.** Perhaps the shifting lattice's grains

induce fractoemission in the boundaries between them. At the crack boundaries nuclei motion could be triggering a coherence in the ZPE which maintains the fractoemission.

### SUMMARY

The observed anomalies associated with ion motion in plasmas, liquids or solids along with the zero-point energy theories manifest a common theme that may be summarized into four principles:

- 1) The abrupt, synchronous motion of nuclei or ions cohere the ZPE.
- 2) Vortex motion of the ions produce even a greater effect, and there might be an optimal vortex shape around which a ZPE coherence would naturally form.
- 3) Higher order rotations, i.e. precession, further augment the ZPE interaction.
- 4) A large macroscopic ZPE coherence would involve pairs of counter-rotating vortical forms since this conserves angular momentum.

[Note: This article has been shortened. For a copy of complete article, see Proceedings of 1994 International Symposium on New Energy, pp 257-269.

### REFERENCES

- Adams, R. (Jan 1993), "The Adams Pulsed Electric Motor Generator," *Nexus*, pp 31-36.
- Aspden, H.(1990), "Switched Reluctance Motor with Full Accommodation," U.S. Patent No. 4,975,608; ... (1993), "The World's Energy Future," *Proc Int. Sym. on New Energy*, pp 1-19.
- Alexandersson, O. (1990), Living Water: Viktor Schauburger and the Secrets of Natural Energy, Gateway Books, Bath, UK. Also Frokjaer-Jensen, B. (1981), "The Scandinavian Research Organization and the Implosion Theory (Viktor Schauburger)," Proc. First International Symposium on Nonconventional Energy Technology, Toronto, pp 78-96.
- Barber, B.P. and S.J. Putterman (1991), "Observation of Synchronous Picosecond Sonoluminescence," *Nature* 353, pp 318-320; ... (1992), "Light Scattering Measurements of the Repetitive Supersonic Implosion of a Sonoluminescing Bubble," *Phys. Rev. Lett.* 69, pp 3839-42.
- Bearden, T. and T. Herold, E. Mueller (1985), "Gravity Field Generator Manufactured by John Bedini," Tesla Book Co., Greenville TX.
- Bearden, T. (1986), Fer-De-Lance: A Briefing on Soviet Scalar Electromagnetic Weapons, Tesla Book Co., Millbrae, CA., pp 107-108.
- Bostick, W.H. (1957), "Experimental Study of Plasmoids," *Phys. Rev.* 106(3), p 404.
- Bostick, W.H. (1966), "Pair Production of Plasma Vortices," *Phys. Fluids* 9, pp 2078-80.
- Boyer, T.H. (1975), "Random Electrodynamics: The Theory of Classical Electrodynamics with Classical Electromagnetic Zero-point Radiation." *Phys. Rev. D* 11 (4), pp 790-808; ... (1969), "Derivation of Blackbody Radiation Spectrum without Quantum Assumptions," *Phys. Rev.* 182 (5), pp 1374-83.
- Boyer, T.H. (1976), "Equilibrium of Random Classical Electromagnetic Radiation in the Presence of a Nonrelativistic Nonlinear Electric Dipole Oscillator," *Phys. Rev. D* 13(10), pp 2832-45.
- Brown, P.M.(1989), "Apparatus for Direct Conversion of Radioactive Decay Energy to Electrical Energy," U.S. Patent No. 4,835,433; ... (1987), "The Moray Device and the Hubbard Coil were Nuclear Batteries," *Magnets* 2(3) pp 6-12; ... (1990), "The Resonant Nuclear Battery." International Tesla Symposium, Colorado Springs.
- Burridge, G. (1979), "The Smith Coil," *Psychic Observer* 35(5), pp 410-416.
- Celenza, L.S. and V.K. Mishra, C.M. Shakin, K.F. Liu (1986), "Exotic States in QED," *Phys. Rev. Lett.* 57(1), p 55; Caldi, D.G. and A. Chodos (1987), "Narrow  $e+e-$  Peaks in Heavy-ion Collisions and a Possible New Phase of QED," *Phys. Rev. D* 36(9), p 2876; Jack Ng, Y. and Y. Kikuchi (1987), "Narrow  $e+e-$  Peaks in Heavy-ion Collisions as Possible Evidence of a Confining Phase of QED," *Phys. Rev. D* 36(9), p 2880; Celenza, L.S. and C.R. Ji, C.M. Shakin (1987), "Nontopological Solutions in Strongly Coupled QED," *Phys. Rev. D* 36(7), pp 2144-48.
- Cieplak, M. and L.A. Tarski (1980), "Magnetic Solutions and Elastic Kink-like Excitations in Compressible Heisenberg Chain," *J. Phys. C: Solid State Physics* 13, pp L 777-780.
- Cole, D.C. and H.E. Puthoff (1993), "Extracting Energy and Heat from the Vacuum." *Phys Rev.E* 48(2), pp 1562-65.
- Davidson, J. (1989), The Secret of the Creative Vacuum, C.W. Daniel Co. Ltd., Essex, UK, pp 258-262.
- DePalma, B.E. and C.E. Edwards (1973), "The Force Machine Experiments," privately published.
- Dollard, E. (1988), "Van Tassel's Caduceus Coils," private communication. Van Tassel experimented with numerous caduceus coils that often contained quartz cores. His notes stated that the cross-over angle for the two opposing windings should be 22.5 degrees.
- Dufour, J. (1993), "Cold Fusion by Sparking in Hydrogen Isotopes," *Fusion Technology* 24, pp 205-228.
- Egely, G. (1986), "Energy Transfer Problems of Bail Lightning," Central Research Institute for Physics, Budapest, Hungary.
- Forward, R.L (1984), "Extracting Electrical Energy from the Vacuum by Cohesion of Charged Foliated Conductors," *Phys, Rev. B.* 30(4), pp 1700-2.
- Haisch, B. and A. Rueda, H.E. Puthoff (1994), "Inertia as a Zero-point Field Lorentz Force," *Phys Rev. A* 49(2), pp 678-694.
- Hathaway, G. (1991), "Zero-Point Energy: A New Prime Mover? Engineering Requirements for Energy Production & Propulsion from Vacuum Fluctuations," Proc. 26th IECEC, vol. 4, pp 376-381.

- Hiller, R. and S. Putterman, B. Barber (1992), *Phys. Rev. Lett.*, 69, pp 1182-84.
- Honig, W.M. (1986), The Quantum and Beyond, Philosophical Library, NY; ... (1974), "A Minimum Photon Rest Mass using Planck's Constant and Discontinuous Electromagnetic Waves," *Found. Phys.* 4(3), pp 367-380.
- Huntley, H.E. (1970), The Divine Proportion, Dover Publications, NY.
- Jandel, M. (1990), "Cold Fusion in a Confining Phase of Quantum Electrodynamics," *Fusion Tech.* 17, pp 493-499.
- Jennison, R.C. (1978), "Relativistic Phase-Locked Cavities as Particle Models," *J. Phys., A Math Gen.* VII(8), pp 1525-33; ... (1989), "A New Classical Relativistic Model of the Electron," *Phys. Lett, A* 141(8/9), pp 377-382.
- Jennison, R.C. (1990), "Relativistic Phase-Locked Cavity Model of Ball Lightning," Electronics Laboratory, University of Kent, U.K.
- Johnson, P.O. (1965), "Ball Lightning and Self Containing Electromagnetic Fields," *Am. J. Phys.* p 119.
- Kalinin, Yu G. et al. (1970), "Observation of Plasma Noise During Turbulent Heating," *Sov. Phys. Dokl.* 14-(11) p 1074; Iguchi, H. (1978), "Initial State of Turbulent Heating of Plasmas," *J. Phys. Soc. Jpn.* 45(4), p 1364; Hirose, A. (1974), "Fluctuation Measurements in a Toroidal Turbulent Heating Device," *Phys. Can.* 29(24), p 14.
- King, M.B. (1984), "Macroscopic Vacuum Polarization," Proc. Tesla Centennial Symposium, International Tesla Society, Colorado Springs, pp 99-107. Also (1989), pp 57-75.
- King, M.B. (1989), Tapping the Zero-Point Energy, Paraclete Publishing, Provo, UT; ... (1991), "Tapping the Zero-Point Energy as an Energy Source," Proc. 26th IECEC, vol. 4, pp 364-369; .. (1993), "Fundamentals of a Zero-Point Energy Technology," Proc. Int. Sym. on New Energy, pp 201-217.
- Kiwamoto, Y. and H. Kuwahara, H. Tanaca (1979), "Anomalous Resistivity of a Turbulent Plasma in a Strong Electric Field," *J. Plasma Phys.*, 21 (3), p 475.
- La Violette, P.A. (1985), "An Introduction to Subquantum Kinetics..." *Intl. J. Gen. Sys.*, 11, pp 281-345; ... (1991), "Subquantum Kinetics: Exploring the Crack in the First Law," Proc. 26th IECEC, vol 4, pp 352-357.
- Mallove, E.F. (1992), "Protocols for Conducting Light Water Excess Energy Experiments," *Fusion Facts* 3(8), p 15; Noninski, V.C. (1992), "Excess Heat during the Electrolysis of a Light Water Solution of  $K_2CO_3$  with a Nickel Cathode," *Fusion Tech.*, 21, pp 163-167.
- Matthey, P.H. (1985), "The Swiss ML Converter - A Masterpiece of Craftmanship and Electronic Engineering," in H.A. Nieper (ed.), Revolution in Technology, Medicine and Society, MIT, Verlag, Odenburg.
- Michrowski, A. (1993), "Vacuum Energy Developments," Proc. Int. Sym. on New Energy, pp 407-417.
- Mills, R.L. and S.P. Kneizys (1991), "Excess Heat Production by the Electrolysis of an Aqueous Potassium Carbonate Electrolyte and the Implications for Cold Fusion," *Fusion Tech.*, 20, pp 65-81.
- Milonni, P.W. and R.J. Cook, M.E. Goggin (1988), "Radiation Pressure from the Vacuum: Physical Interpretation of the Casimir force," *Phys. Rev. A*, 38(3), pp 1621-23.
- Moray, T.H. and J.E. Moray (1978), The Sea of Energy, Cosray Research Institute, Salt Lake City.
- Mizuno, T. and M. Enyo, T. Akimoto, K. Azumi (1993), "Anomalous Heat Evolution from  $SrCeO_3$  - Type Proton Conductors during Absorption/Desorption of Deuterium in Alternate Electric Field," 4th Int. Conf. on Cold Fusion. Abstract in *Fusion Facts*, Dec. 1993, p 30.
- Pappas, P.T. (1991), "Energy Creation in Electrical Sparks and Discharges: Theory and Direct Experimental Evidence," Proc. 26th IECEC, vol. 4, pp 416-423.
- Preparata, G. (1991), "A New Look at Solid-State Fractures, Particle Emission and Cold Nuclear Fusion," *Il Nuovo Cimento* 104 A(8), p 1259; ... (1990), "Quantum Field Theory of Superradiance," in Cherubini, R., P. Dal Piaz, B. Minetti (editors), Problems of Fundamental Modern Physics, World Scientific, Singapore.
- Prigogine, I. and G. Nicolis (1977), Self Organization in Nonequilibrium Systems, Wiley, NY; Prigogine, I. and I. Stengers (1984), Order Out of Chaos, Bantam Books, NY.
- Puthoff, H.E. (1987), "Ground State of Hydrogen as a Zero-point Fluctuation Determined State," *Phys. Rev. D*, 35(10), pp 3266-69.
- Puthoff, H.E. (1989), "Gravity as a Zero-point Fluctuation Force," *Phys. Rev., A*, 39(5), pp 2333-42.
- Puthoff, H.E. (1990), "The Energetic Vacuum: Implications for Energy Research," *Spec. Sci. Tech.*, 13(4), pp 247-257.
- Rausher, E.A. (1968), "Electron Interactions and Quantum Plasma Physics," *J. Plasma Phys.*, 2(4), p 517.
- Reed, D. (1992), "Toward a Structural Model for the Fundamental Electrodynamics of Nature," *Extraordinary Science*, IV(2), pp 22-33; ... (1993), "Evidence for the Screw Electromagnetic Field in Macro and Microscopic Reality," Proc. Int. Sym. on New Energy, pp 497-510; ... (1994), "Beltrami Topology as Archetypal Vortex," Proc. Int. Sym. on New Energy, pp 485-608.
- Reinhardt, J. and B. Muller, W. Greiner (1980), "Quantum Electrodynamics of Strong Fields in Heavy Ion Collisions," *Prog. Part. and Nucl. Phys.*, 4, p 503.
- Samokhin, A. (1990), "Vacuum Energy - a Breakthrough?" *Spec. Sci. Tech.*, 13(4), p 273.
- Scheck, F. (1983), Leptons, Hadrons and Nuclei, North Holland Physics Publ., NY, pp 213-223.
- Schwinger, J. (1993), "Casimir Light: The Source," Proc. Natl. Acad. Sci, USA 90, pp 2105-6.
- Scully, M.O. and M. Sargent (March 1972), "The Concept of the Photon," *Physics Today*, p 38.
- Senitzky, I.R. (1973), "Radiation Reaction and Vacuum Field Effects in Heisenberg-Picture Quantum Electrodynamics," *Phys. Rev. Lett.*, 31(15), p 955.
- Sethian, I.D. and D.A. Hammer, C.B. Whaston (1978), "Anomalous Electron-Ion Energy Transfer in a Relativistic-Electron-Beam Heated

Plasma," *Phys. Rev. Lett.*, 40(7), p 451; Robertson, S. and A. Fisher, C.W. Roberson (1980), "Electron Beam Heating of a Mirror Confined Plasma," *Phys. Fluids*, 32(2), p 318; Tanaka, M. and Y. Kawai (1979), "Electron Heating by Ion Acoustic Turbulence in Plasmas," *J. Phys. Soc. Jpn.*, 47(1), p 294.

Shoulders, K.R. (1991), "Energy Conversion Using High Charge Density," U.S. Patent No. 5,018,180.

Sigma, R. (1977), *Ether Technology*, Tesla Book Co., Millbrae CA.

Singer, S. (1971), *The Nature of Ball Lightning*, Plenum Press, NY; Silberg, P.A. (1962), "Ball Lightning and Plasmoids," *J. Geophys. Res.*, 67(12), p 4941.

Spence G.M. (1988), "Energy Conversion System," U.S. Patent No. 4,772,816.

Storms, E. (1991), "Review of Experimental Observations about the Cold Fusion Effect," *Fusion Tech.*, 20, pp 433-477.

Suzuki, M. (1984), "Fluctuation and Formation of Macroscopic Order in Nonequilibrium Systems," *Prog. Theor. Phys. Suppl.*, 79, pp 125-140; Hasegawa, A. (1985), "Self Organization Processes in Continuous Media," *Adv. Phys.*, 34(1), pp 1-41; Firrao, S. (1984), "Physical Foundations of Self-Organizing Systems Theory," *Cybernetica*, 17(2), pp 107-124; Haken, H. (1971), *Synergetics*, Springer Verlag, NY.

Sweet, F. and T.E. Bearden (1991), "Utilizing Scalar Electromagnetics to Tap Vacuum Energy," *Proc. 26th IECEC*, vol. 4, pp 370-375; ... (1988), "Nothing is Something: The Theory and Operation of a Phase-Conjugate Vacuum Triode;" ... (1989), private communication.

Walton, A.J. and G.T. Reynolds (1984), "Sonoluminescence," *Adv. Phys.*, 33(6), pp 595-600.

Watson, M. (1993), private communication. Many investigators have attempted using a capacitance of 6500 microfarads at 450 volts without success. A greater energy pulse or a greater a.c. current may be necessary to fracture the ceramic. If the lattice grains cannot be loosened via magnetic stimulation, then other metallurgic means should be explored as a preconditioning process. The values given are sufficient to align the magnetic domains in barium ferrite, and can be applied once the ceramic has pockets of loose, freely moving grains. Perhaps firing a large electrical discharge directly through the ceramic (during the 60 Hz magnetic stimulation) will disrupt the lattice sufficiently to create movable grains.

Wheeler, J.A. (1962), *Geometrodynamics*, Academic Press, NY.

Winterberg, F. (1990), "Maxwell's Equations and Einstein-Gravity in the Planck Aether Model of a Unified Field Theory," *Z. Naturforsch.*, 45 a, pp 1102-16; ... (1991), "Substratum Interpretation of the Quark-Lepton Symmetries in the Planck Aether Model of a Unified Field Theory," *Z. Naturforsch.*, 46 a, pp 551-559.

**Theories are ways of thinking  
which determine the choice  
of experiment. -Mary Migley**

## Editorial

### WHAT HAVE WE LEARNED?

By Hal Fox

After two international symposia on new energy and four international cold fusion conferences, what have we learned? The negative part of the answer is the following:

- There are no easily replicated, commercial, cold fusion devices.
- There are no replicated, successful demonstrations of tapping the energy of space.
- There is no energy-producing device that will power itself that has been demonstrated and replicated.
- Neither cold nuclear fusion nor space energy are widely accepted in academic institutions.

The positive part of the answer is the following:

- There are over 1500 papers reporting on cold fusion, new energy experiments, and theory that have been collected and reviewed.
- At least one cold fusion theory, founded on fundamental physical principles has been published.
- We are communicating. There are two newsletters (*Fusion Facts & Cold Fusion Times*) and the monthly magazine "*Cold Fusion*" being published about cold nuclear fusion. In addition, this newsletter and many other similar publications are addressing the issue of tapping space energy. There is also at least one effective and active computer bulletin board dealing with these topics [1].
- Cold nuclear fusion and space energy are being seriously studied in laboratories in over 30 countries of the world.
- Communication of experimental and theoretical findings are being shared among several national and international groups.
- Serious academic papers are being written, presented, and published that challenge some of the traditional concepts of empty space, the speed of light, the atomic model, quantum mechanics, relativity, electrical charge, magnetism & gravity (three actions at a distance), and inertia.

- There is a decrease in active opposition to both cold nuclear fusion and tapping space energy and an increase in serious journal papers devoted to new energy theories, discoveries, and experiments.
- There is a growing international network of experimenters who are informally sharing theories, experimental data, and ideas.
- There is an organization (**Institute for New Energy**) that has been formed, is organized, and is devoted to the development of new energy systems.
- There are a number of both new and existing companies that are seriously investing in both cold fusion and space energy research and development.

### WHAT ELSE SHOULD WE DO?

We are now organized and we are communicating, but we can do something else. We need to expand our contacts and include more scientists, inventors, and experimenters in our groups. We need to share data. If experiments are successful or fail, describe what has been learned. After 400 failures in finding how to make a light bulb, Edison was asked, "What have you learned?". Edison replied, "I know 400 things that don't work." We also need to share good theoretical work. A good theory or a good model will help guide the next experiments. We need to communicate better. If we share our experimental efforts, then we can save a lot of time, money, and effort. For example, Don Kelly has publicly demonstrated that a certain combination of magnets and coils (when properly energized) affect gravity. This experiment needs to be replicated, demonstrated to academic leaders, and become part of our educational heritage.

We need to expand our communication network. For example, the KeeleyNet is an excellent example of the use of modern technology to share information, exchange ideas, coordinate experimental efforts, and discuss new ideas [1]. We need to spread the word about other information sources, such as this newsletter. We need to have discussion groups. There is a great synergism in getting together and "idea surfing" on each others' concepts. This is true whether it is discussions of abstract mathematics or "what if we...." type of discussions. We need to be better informed. Publications such as *Deutsche Physik* [2], books such as "Newton versus Einstein" [3] and Harold Aspden's latest publications [4] are valuable. We need to share more information with each other [5]. We need to pool our resources [6]. We need to organize into working groups or clubs where we can share resources, build devices, make measurements, and become prepared for the new energy world. We need to set up simple demonstrations, particularly of

those experiments that appear to violate the current accepted scientific dogma. Then we need to share those experiments with science clubs, science teachers, and college students and professors. Then tell *NEN* about it.

### SHARE WHAT WORKS

*New Energy News* would like to publish a monthly feature on some simple experiment that you and your friends can replicate. The experiments should be challenging to explain or even contradict standard accepted academic concepts. We are greatly hampered in our progress whenever we are taught principles contrary to experimental facts. For many such concepts see Graneaus' book [3] and also Marinov's publications [2]. [See below]

[1] The KeeleyNet BBS is (214) 324-3501 and is free. Mailing address: Vanguard Sciences, P.O. Box 1031, Mesquite, TX 75150.

[2] *Deutsche Physik* is published by East-West Publishing, Morellenfeldgasse 16, 8010 Graz, AUSTRIA, Telephone (0316) 37 70 93. The editor is Stefan Marinov, who is the author of *Divine Electromagnetism* published by the same publisher.

[3] Peter and Neil Graneau, *Newton versus Einstein, How Matter Interacts with Matter*, c1993, Carlton Press, Inc., New York, N.Y. ISBN 0-8062-4514-X, \$14.95. Also available from the author at 205 Holden Wood Road, Concord, MA 01742.

[4] Harold Aspden, *Physics Without Einstein*, a new book to be published by the author. Aspden is also publishing *Energy Science Reports*, (No. 1 was "Power from Magnetism"), contact Sabberton Publications, P.O. Box 35, Southampton, SO16 7RB ENGLAND. Fax Int+44-703-769-830.

[5] We urge you to write "Letters to the Editor", P.O. Box 58639, Salt Lake City, UT 84158 and share information with our readers.

[6] Recently, Lonnie Anderson signed over a 40% interest in one of his inventions to the Institute for New Energy to help cover costs of serving members and building a reserve for funding new energy research.

# Wanted....

### WANTED: EXPERIMENTS

*New Energy News* solicits experiments from its readers that can be performed without too much laboratory equipment. Experiments that demonstrate gaps in our scientific knowledge, such as showing that electric current can produce longitudinal forces. Simple experiments that demonstrate that the speed of light is different in different directions of earth's motion (such as done by Marinov and his rotating disks). Experiments that demonstrate any type of gravity effect,

production of scalar waves, special coils that produce unusual effects, methods of measuring scalar waves (**greatly needed**), methods of producing over-unity (even if small) power generation, and just simple experiments to better understand the scientific world we live in.

Each submission of an experiment, if accepted, will become a part of a planned book of experiments ranging from simple to complex. The author **must have performed the experiments and must provide actual data**. Please send pictures and complete dimensions of all relevant portions of the experiment. Royalties from sale of the planned book will be split among the authors or donated to the Institute for New Energy if the author so elects.

Address to NEN - EXPERIMENTS, P.O. Box 58639, Salt Lake City, UT 84158 or Fax to 801/583-2963.

## Fusion Briefings

### SOCIETY FOR SCIENTIFIC EXPLORATION

Peter Graneau (Center for Electromagnetics Research, Northeastern University, Boston, MA), "Cold Fusion at the SSE Meeting in Austin," June 9-11, 1994.

The Society for Scientific Exploration (SSE) held the 13th Annual Meeting at Austin, Texas. The first day of the meeting was devoted to zero-point-energy and cold fusion subjects. H. Puthoff spoke about the possibility of "mining" vacuum electromagnetic energy for useful purposes. B. Haisch outlined his ideas for how zero-point-energy could be the cause of the force of inertia. The audience of over one hundred participants, mainly from universities and research organizations, showed considerable interest in the quantum mechanical contention of the storage of vast amounts of energy in otherwise empty space. Puthoff outlined his explanation of the stabilization of the Bohr atom by balancing radiation from orbiting electrons with incoming zero-point-energy. He also suggested that the Casimir effect had the best chance of converting the radiation energy into mechanical work.

The first speaker on cold fusion was R.T. Bush who asked the question: "Is cold fusion merely a scientific curiosity or is it the millennial energy project?" He came down strongly on the side of the latter and argued there was no doubt about the heavy-water excess heat production. "It was more than likely of nuclear origin", stated Professor Bush. In the center of his presentation stood the Bush-Eagleton experiments of cold fusion with light-water and some associated element transmutations. Bush quite freely maintained that this type of experiment opened the door to a modern epoch of alchemy. His conclusion was that if heavy-water cold fusion is correct, it will be the discovery of the century. Should light water cold fusion be correct, it may become the discovery of the millennium.

In a spirited presentation, spiked with cartoons, G. Mallove addressed 'Cold Fusion: Heat (and Light) after Death'. He explained that this title has two meanings. In the first place it referred to the world-wide resurrection of cold fusion research after Maddox, the editor of *Nature*, had certified it to be dead several years ago. The second meaning was that cold fusion cells had been observed to produce heat after the current through them was turned off. Apart from the palladium-heavy-water systems, there were reports of successful experiments with ceramic proton conductors, strong heavy water turbulence, and ultrasonic excitation.

Mallove remarked that the treatment of the MIT theoretician Hagelstein was a sad reflection on academic freedom, and then told the story of how a well-known MIT physics textbook writer, Herman Feshbach, once reprimanded Mallove with: "**I've been a nuclear physicist for fifty years. I know what is possible and what is not!**" Leon Lederman, Nobel physicist and author of the 'God Particle', was even less tolerant and suggested Pons and Fleischmann deserved a public spanking. Gene Mallove, the editor of the new magazine 'Cold Fusion', could foresee a time that might become known as the 'Heavy Watergate'.

J. Bockris said, by comparison with the previous speakers, his talk would be dry science and limited mainly to experimental findings at Texas A&M University. What he called 'ultra low nuclear changes in metals' had been observed from the 1940s onward but, as he pointed out, had received very little attention. Amongst the phenomena were the synthesis of tritium from deuterium at room temperature, possible changes in metals of higher atomic weight including precious metals, and the nuclear conversion of carbon to iron.



Now about fifty laboratories, including Texas A&M, had found tritium as unmistakable evidence of nuclear activity in cold fusion. In addition to this, small quantities of helium-four had been detected in four or five laboratories.

Bockris' own group had led the way in finding and documenting nuclear transmutations in small but verifiable amounts which included the famous chain lead-mercury-gold. Most puzzling were biological transmutations which certainly had to be described as ultra-low nuclear activity.

My own contribution to the conference dealt with capillary fusion. I pointed out that non-thermal fusion was discovered in deuterium pinch tubes at Berkeley in the early 1950s as part of the U.S. Atomic Energy 'Project Sherwood' on controlled fusion. Proof of the non-thermal nature of the reactions came from the axial emission of neutrons, instead of the isotropic emission which should have resulted from thermonuclear reactions. **The U.S. and other governments have, in fact, been funding this kind of cold fusion research for forty years under the headings of plasma focus and solid deuterium fiber fusion.** Capillary fusion, as discovered in Germany, was of the same non-thermal nature, with the magnetic confinement replaced by mechanical confinement. Capillary fusion experiments are being re-started in Canada.

#### COULD VACUUM EXCITATIONS START A CHAIN REACTION?

By Samuel F. Faile

It is speculated that under cold fusion conditions something related to zero-point energy involving a distortion or disproportionation would produce neutral transient particles with some sort of pair relationship of negative and positive energies. These particles would be related to the vacuum fluctuations and disrupt atomic equilibrium allowing electron capture by nuclei in atomic clusters. The particles would be transient and rapid moving. The high speed at faster than the speed of light in the medium would produce an EM 'shock wave,' the telltale Cerenkov baby blue colored emissions. Upon decay the neutral particles instead of emitting charged particles would produce more vacuum fluctuations. An increase in the number of these neutral particles would result as atomic clusters fused leading to a chain reaction.

The implication of such a mechanism is that energetic self-sustaining cold fusion reactions would produce a

lot of blue light like seen near a reactor core. Also the transient nature of the particles with an absence of charged decay products would be less harmful to the environment.

#### FREE-ENERGY INTERPRETATION OF THE PONS-FLEISCHMANN EFFECT

By A.V. Frolov

*"I don't see another way out of this state... if somebody doesn't take the risk to begin the synthesis of facts and theories, although our knowledge in some areas is not complete and it is received at second hand, and although we are exposed to the danger of appearing ignoramuses." E. Schrödinger (d. 1961)*

##### 1. Matter and Time Energy Exchange

The discovery of cold nuclear fusion by Pons-Fleischmann's 1989 experiment is developing mainly in the conventional fusion direction. This fallacy is similar to the old erroneous view of the nature of star power. Russian astronomer N. Kozyrev proved that there are no conditions for thermonuclear fusion process in the matter of stars, and the star doesn't lose any mass when it emits heat. According to Kozyrev, the star is **"a machine that produces energy from the flow of time,"** or in other words, it is a transformer of free energy from time-view (chronal) to electromagnetic waves (heat). The thermonuclear products are only secondary effects of this process. N. Kozyrev calculated a "special condition" for star matter.

On the other hand, Dr. Puthoff shows that matter exists thanks to energy exchange with vacuum electromagnetic field zero-point fluctuations (ZPF). Note the analogy between Kozyrev's and Puthoff's ideas to make a conclusion for Pons-Fleischmann's experiment: the fact of nuclear fusion in this kind of cold fusion experiments is not the primary reason of over-unity effect.

In general form, here is the explanation for the cathode and anode immersed in heavy water. The cathode is a metal that can absorb hydrogen ions (protons) from water when a potential source is connected to the electrodes. The density of this type of "proton plasma" inside the cathode is equal to  $10^{28}$  per  $m^3$  that is more than the  $10^{20}$  per  $m^3$  density in hot-fusion Tokamak system. For this reason, most of the investigators adopt the idea of Pons-Fleischmann's experiment producing cold nuclear fusion. But this fusion is not the cause of over-unity heat emission.

The immediate solution between the cold fusion idea and free energy idea is the transmutation concept. Randell Mills, Pennsylvania, U.S.A., reported that it is possible to observe the transmutation of  $Ka-39$  plus proton to  $Ca-40$  or  $Na-23$  to  $Mg-24$ . The same approach is described by C.L. Kervran. But transmutation is only an example of the utilization of "transition energy" that is emitted when matter changes form.

According to Dr. Puthoff, "the ground state of the hydrogen atom is defined by a dynamic equilibrium in which collapse of the state is prevented by the presence of ZPF of electromagnetic field... the stability of matter itself is largely mediated by ZPF phenomena..." Now we have the next: two atoms create new atom (fusion), atom can change form (transmutation), hydrogen atom also can take part in fusion or transmutation, **but this simplest atom can directly take energy from ZPF when the danger of the collapse of the state exists.**

In a normal situation the heat emission of the ground state hydrogen atom is minimal since the atom is a very economical, highly effective system. Note that any matter (electron, proton, atom) uses free energy source ZPF of vacuum in the process of existence, but it is normally a quiet type of energy exchange. The heat emission or "temperature" of matter is directly connected with the tempo of flow of time.

The solution seems to be a paradox: we must disturb the atom out of optimal resonance stable state. In other words, we must increase the entropy in the atom. According to Kozyrev, "the flow of time will try to counteract the entropy" in some limits, but if we use too strong motive for disturbance, the atom will change state.

2. T.E. Bearden's Concept for Hydrolysis Scheme

The main element in Pons-Fleischmann's scheme is a cathode that can absorb the protons. Fig. 1 shows an ordinary hydrolysis version. Note that current is necessary for water dissociation to hydrogen and oxygen and we must use power from primary source for it.

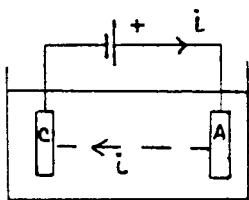


Fig. 1

In P-F version, the scheme has an interesting difference. The electric field between the cathode and anode provides work to separate charged particles. But when the proton is formed at the cathode. Since the

electric field inside of the metal cathode is equal to zero, there is no longer any current. Fig. 2 shows that the primary source is only a potential source but not a power source. This situation continues until the cathode is saturated, and then we can observe ordinary current as in Fig. 1.

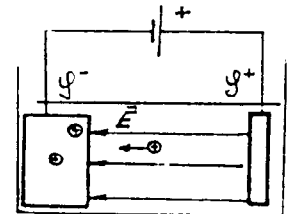


Fig. 2

By analogy with Bearden's concept that is described in "The Final Secret of Free Energy," it is possible to create pulsed mode. Fig. 3 shows the scheme of a device that uses switch S. In this state of switch, the primary source is disconnected and load R is connected to electrodes. The electric current flows from electrode C to electrode A that means electrons move from A area to electrode C through load R, since protons cannot move in wire.

When this "restoration period" is finished, it is necessary to switch S and connect electrodes to primary source. The momentum of new switching is defined by period of cathode saturation.

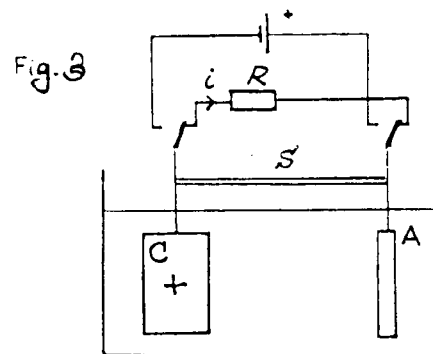


Fig. 3

PLAY THE JOKER

Jim Bennett, "The Joker in the Deck: The Return of Cold Fusion?" *Strategic Investment*, April 20, 1994, p 6.

SUMMARY

Since dismissing cold fusion years ago when it appeared irreproducible, this writer did as many others had and turned his attention elsewhere. While in Denver for a NASA conference in April, he was taken to visit Nova Resources Group, Inc., a private group recently started to produce cold fusion research devices. Then he heard about ICCF-4 and the past

five years of cold fusion research. He began to pay attention.

The future of stand-alone cheap, clean power systems seems to loom on the horizon, as a threat to the large utility holdings. The writer reflects on the economic impact of the reality of cold fusion commercialized, and the "gold-rush" in the investment world to keep up with the perceived high-tech revolution that will accompany the commercialization.

In closing Bennett says, "We will be keeping an eye on this field, reporting future developments, and making recommendations as seem appropriate. Science and technology are games with wild cards -- every so often one turns up which unpredictably changes the whole game. The transistor was one such phenomenon; previous mainstream science had not expected it at all. Do I believe cold fusion is real? Right now I'm agnostic. It is still too early to tell whether this will ultimately produce the revolution it portends. But one thing is clear: The cold fusion joker is back."

## Space Energy

### ERRATA

*One little letter slipped through our proofing and changed the meaning of a whole sentence. The word defines should read defies, as noted below in a paragraph from "Experiments with Free Energy," by Don Watson on page 5 of our June 1994 issue.*

Modern physics tells us that anything that resembles "Perpetual Motion" defies modern physics and is not possible.

### EXPERIMENTAL REFUTATION OF THE STR

Courtesy of Vincent Coon

From a letter by Petr Beckmann, as publisher, in *Galilean Electrodynamics*, vol 4, no 5, 1993.

...Einstein, in Sec. 7 of his historic 1905 paper, and his followers ever since (with unsubstantial variations), have explained aberration by assuming a star at rest in one inertial frame and the Earth at rest in another. The

line joining Earth and Star makes an angle  $\alpha$  with the *relative velocity*  $v$  between the two systems. Treating the relativistic Doppler effect and aberration in one swoop, Einstein gets the (almost) usual formula for aberration, which for small angles equals  $\epsilon = \beta \sin \alpha$ , where  $\beta = v/c$ , formally identical with the old classical expression where  $v$  meant velocity of the Eather with respect to the ether rather than Einstein's relative velocity between Star and Earth.

This small difference could not be directly probed, for there is nothing to compare aberration directly to. So what was done since the 17th and 18th centuries was to compare the passage of a star *with constant velocity* through the local meridian at a 6 months' interval, when the Earth's orbital velocity had changed sign, so that subtraction of the two results for  $\epsilon$  would give  $2(v_{orb}/c) \sin \alpha$ . This was in agreement with experiment.

But what if the velocity of the star changed during half a terrestrial year from  $v_1$  to  $v_2$ ? This is the case for some double stars, with short periods, i.e., so close together that only modern giant telescopes can resolve them. Then the subtraction yields an additional term  $\sin \alpha (v_1 - v_2)/c$ , a term from 20 to 10,000 times the error of observation. But it is absent from all records. With modern methods of scanning the sky, it would appear even if it were not looked for. In some cases the  $v_1$  and  $v_2$  are nailed down triply: spectroscopically, optically, and by celestial mechanics. The Lorentz transformation, even if it were self-consistent (which many doubt), predicts a value that is not confirmed experimentally.

The Einsteinians will at first stonewall, then come with all kind of political and philosophical "explanations." Keep them to the point: Did Einstein misapply the Theory of Relativity in Sec. 7 of his 1905 paper? If so, is the relativistic Doppler effect also wrong?

**Einstein's Theory of Relativity is dead. The formidable task of this journal (*Galilean Electrodynamics*) over the next decades will be to bury it.**

### GOOD NEWS - BAD NEWS

H.E. Puthoff (Inst. Adv. Studies at Austin, Texas), "Alternative Energy Sources: Good News/Bad News and 'the 1-Watt Challenge'," presented at ISNE, Denver, May 12-15, 1994, 7 mms pages, 6 refs.

### AUTHOR'S ABSTRACT

In researching innovative energy sources, we are faced with a good news/bad news situation. On the good news side, new arenas of research activity are being opened up and pursued vigorously. These range from relatively mainstream approaches to develop solar energy, to highly innovative approaches to extract energy from vacuum fluctuations. On the bad news side, despite varying degrees of claimed success, there are as yet no stand-alone devices in this class (with the exception of solar devices) that unambiguously demonstrate the generation of net excess energy to the satisfaction of the consensual research community. It is suggested here that the credibility of these efforts requires meeting what we call "The 1-Watt Challenge," the demonstration of a device that can continuously generate, on a stand-alone, self-powered basis, a minimum of at least 1 watt excess average output power.

#### Conclusion "The 1-Watt Challenge"

We would recommend that the surest route to credibility for alternative energy research lies in meeting what we call "The 1-Watt Challenge." This is the demonstration of a device that, on a stand-alone, self-powered basis, can continuously generate a minimum of at least 1 watt excess output power. Specifically, consider that one has a device that required ten watts of input power from an external source, say, a battery, but with this input was capable of generating, say, twenty-one watts of output power in the form of heat (a little over 2:1 power gain). We would argue that if one could operate alternatively by diverting twenty of those output watts through a 50%-efficient thermoelectric converter to provide the ten-watt input power, the reduction of the output from twenty-one watts to one watt would be worth the sacrifice in output power to remove the ambiguity of the measurement argument, and the reliance on a separate energy source. Clearly, since to our knowledge such operation has not yet been demonstrated to consensual satisfaction, this is a tough requirement to meet, despite the perhaps disappointingly-small-sounding, 1-watt requirement. Nonetheless, in the absence of our research community collectively "holding its feet to the fire" to meet such a challenge (and this includes our own research effort as well), we would submit that the credibility of the alternative energy research field is subject to erosion by false hopes and unsubstantiated claims. Alternatively, the satisfaction of such a requirement would provide a solid foundation for discussion and presentation of the reality of the energy developments we wish to bring to fruition. And this is a challenge I think can be met.

#### FREE ENERGY CONVERSION

Courtesy of Don Kelly

P. Chowdhuri, T.W. Linton and J.A. Phillips (Los Alamos Nat. Lab., New Mexico), "A Rotating Flux Compressor for Energy Conversion," work in progress released by L.A.N.L., also pub. in *Space Energy Journal*, vol 5, no 2, June 94, pp 661-664.

*The importance of this paper is essentially the fact that it is 'free-energy' research that comes from a government lab. To quote Don Kelly, also a free-energy researcher, "It now looks as if the various government agencies, i.e. DOE, DOD, DOC, etc., can no longer have it both ways. They cannot deny the reality of 'free-energy' [and other new sources of energy], proceed to prove its reality in a lab, and then expect us [researchers] all to sit still as if it's not happening."*

#### AUTHORS' ABSTRACT

The rotating flux compressor (RFC) converts rotational kinetic energy into an electrical output pulse which would have higher energy than the electrical energy initially stored in the compressor. An RFC has been designed in which wedge-shaped rotor blades pass through the air gaps between successive turns of a solenoid, the stator. Magnetic flux is generated by pulsing the stator solenoids when the inductance is a maximum, i.e., when the flux fills the stator-solenoid volume. Connecting the solenoid across a load conserves the flux which is compressed within the small volume surrounding the stator periphery when the rotor blades cut into the free space between the stator plates, creating a minimum-inductance condition. The unique features of this design are: (1) no electrical connections (brushes) to the rotor; (2) no conventional windings; and (3) no maintenance. The device has been tested up to 5,000 rpm rotor speed. [Editor's note: The authors do not claim over-unity operation but their data show a current increase of 7 times.]

#### KOVAC'S DEMONSTRATIONS

Ronald J. Kovac, "Motion of Plasma as a Source of New Energy and Matter Transformation, Empirical Results," presented at 1994 International Symposium on New Energy, Denver, CO.

#### AUTHOR'S INTRODUCTION

1828, Karl Gauss postulates a simple geometry which explains gravity, electricity, magnetism, sub atomic

structure from which the Sommerfeld fine structure constant can be derived. The model goes on to explain numerous scientific anomalies.

1930-1950, Walter Russell intuitive insights independently yield geometry identical to that of Karl F. Gauss (1855).

1994, Experimental support for the above: The purpose of this presentation is to give credible support to the notion that gravity, magnetism, and electricity are each only a consequence of space moving in special interrelated geometric formations.

#### EDITOR'S COMMENTS

Ronald Kovac brought his portable demonstration laboratory to the conference so that some of his experimental replications of Walter Russell's work (and others) could be demonstrated. By clever experimental design, Kovac is able to produce the Tractrix and Catenary forms with a plasma within specially designed vacuum tubes. If Kovac (and Walter Russell) are correct then special experimental effects should take place in conjunction with these special geometric configurations. In his paper, Kovac reports on how he generated the geometry of a pseudosphere and states, "After many test runs, there occurred, at the outside of the positive electrode, a build up of clear plastic-like material." This is such an unexpected event that Kovac further states, "The location of this new material ... is so inaccessible and its appearance is so strange the author elects to leave this initial observational result intact for later inspection." Kovac reports, at the end of his paper that he had successfully created an orange plasma toroid inside of the blue pseudosphere inside his specially built tube. Then he ends with the following comment: "If glass, rarified air, and electricity can cause cold fusion then only geometry of space is involved." Replication and further study of Kovac's work is highly recommended. [Kovac can be reached at 1165 Hancock, Boulder, Colorado, 80303. His phone is 303-449-3993]

Science is built with facts, as a house is with stones; but a collection of facts is no more science than a heap of stones is a house.  
-J.H. Poincare

## Solid-State Space-Energy Generators

### GENERAL OBSERVATIONS ON 'FREE ENERGY' MAGNETISM

By Harold Aspden

In the aftermath of the May 1994 International Symposium on New Energy held in Denver many of us will now be taking stock of where we stand. I wish to share a few thoughts with others who attended and convey some of my own tentative conclusions, some based on experimental efforts since I returned to U.K.

Firstly, I point out that I am retired and all I can do experimentally is to tinker around in the modest home 'laboratory' set-up that I have put together. It was in 1988, when I did have access to research facilities in my semi-retirement phase at Southampton University in England, that I attended a conference organized by PACE in Canada and declared that I could see a source of 'free energy' emerging from developments of reluctance motor technology. I was, however, at that time really only seeding an idea for others to develop as my main interest concerned fundamental physics and what I term 'aether science', though my patent professional background tempted me to file patent applications in this field.

Secondly, I had at all times up to the 1993 Denver meeting where INE was rounded, held the opinion that **'free energy' technology, so far as it relied on ferromagnetism, would need to develop without using permanent magnets.** I saw the latter as complicating the design in that they are not only non-linear in their behavior but they are not amenable to control and obstruct change by asserting adverse as well as helpful reluctance effects when incorporated in magnetic core systems. Even though magnets can set up a bias polarizing field, without wasting power to feed high magnetizing currents, in a large electrical machine of the future we can foresee the  $I^2R$  loss needed for magnetization as being less important and one has also on the horizon the ever-increasing prospect of room temperature superconductivity.

Thirdly, as some of your readers know, I explained at the 1993 Denver meeting how **experiment proved quite clearly that an air gap in a magnetic core could acquire more energy than was supplied to a magnetizing coil, pointing the way to 'free energy' in a magnetic reluctance machine.** Later I published

my first Energy Science Report giving my own experimental data on this and it was gratifying at the 1994 Denver meeting to hear from several who had begun to pursue that and confirmed those findings.

It was the initiative of *NEXUS* magazine in telling the story of the Adams motor that captured our attention at the Denver 1993 meeting. This was a pulsed magnetic reluctance motor with a difference. It had permanent magnets forming one set of poles interacting with poles that were pulse-polarized to oppose the magnets as the rotor and stator poles separated from their in-register position. In itself this is not novel. Indeed, I later found a Japanese toy on the market that is an assembly kit for building such a machine and, out of curiosity, built and tested that toy machine to determine its efficiency. It was low because much of the input power was being fed into the windings as  $I^2R$  loss, there being nothing other than winding resistance to limit the battery d.c. flow as the poles moved well away from their in-register position. However, the Adams machine had one other feature that was different. It had open-ended cores and this I saw as meaning that the demagnetizing effects of the free poles would help during periods, when the main drive was effective, in apportioning reluctance energy in the main pole gaps. The latter is what supplies the mechanical power output. I saw this as meaning that the magnet would feed much of the gap energy without the magnetizing (or rather demagnetizing) windings making much of a contribution other than blocking the mutual attraction between the stator and rotor poles as they separate and thereby avoiding the magnetic braking action.

So, towards year-end 1993 I was very hopeful that we would see the Adams motor technology lead us into a 'free energy' world and, though I still believe permanent magnets are best avoided in the large machines of the future, I had become more willing to experiment with devices powered by permanent magnets.

I do not wish here to comment on the various adverse reports of tests on the Adams-type machine that featured in the Denver 1994 event, though I wonder about the magnets and stator core configurations used, as well as the speeds and commutation problems. I had a test rig I had built when I was at the university here in Southampton and found I could fit button magnets on the stator pole faces and spin a rotor and its poles to close and open a magnetic circuit linking a magnetizing winding. **As expected, the powerful magnets gave a high reluctance torque acting across the pole gaps but upon machine rotation those magnets did not drive any significant amount of flux through the magnetic circuit linking that winding, the latter being used as a search coil to measure induced voltage on no load.** The point of

this is that it seems the magnets, being of short stubby form and very powerful were quite willing to divert flux around a local closure path and escape other impediment in the general core circuit of the motor. This meant that the machine could not function in the expected way. The Adams machine, assuming it can perform over-unity, which seems now in doubt, may, therefore, require a very special dependence upon magnet, stator core, winding positions and pole gaps etc., with no easy design principles that can guide us at this time.

Indeed, since I returned from Denver I hear from Tom Ringstad (Dept. of Agricultural Engineering at the NLH Agricultural University of Norway, P.O. Box 5065, N-1432 As, Norway) that the second and larger Adams-type machine he has built is not yet giving over-unity performance, contrary to the showing of a smaller machine he built earlier.

Coming now to my main points, **I believe I have seen evidence of over-unity in a solid-state magnetic transformer core device in which I incorporated permanent magnets.** Indeed, I measured 77% over-unity in one test, but could not hold it for more than a few minutes, as I literally sat back and watched the input current slowly but progressively adjust to the 'unity' level with a changed core state. This meant, as was later confirmed, that the active part of the circuit where 'free energy' was being generated was slowly polarizing as the magnets supplied flux to that core in response to the a.c. activation and this lessened the 'control' influence of the primary input in commutating the flux in the core from the magnet.

I then assembled a modified transformer device repositioning the magnets in a configuration which should have backed off that polarizing effect but my primary and secondary core sections were of different relative size compared with that first test. Note that I had, from experience with several test devices found that my instruments and oscilloscope readings were all able to give me good account balance of input energy versus output, allowing for phase angles and waveforms, and the early tests all gave a 100% balance of real power input and power output including calculable loss. The reactance energy posed anomalies, just as the tests on the air gap reluctance experiments had shown, but getting that excess reluctance power out as useful energy was the problem.

It would seem that the provision of air gaps or incorporation of permanent magnets can serve a similar purpose, and the air gap method allows consistent design with no whimsical response owing to magnets promoting polarization and so, having the

Paul Jensen device in mind, many of us are now looking more to that avenue of research. **Also the research findings of Dr. W.A. Lambertson should be viewed with a special look at the role of the choke he uses in combination with the capacitor and non-linear components.** One needs to examine whether the magnetic core of the choke is feeding the reluctance energy into the transient buffer action of the capacitor from which energy is then shed by suitable switching to an output load. The Lambertson article is at pp. 283-288 and the Jensen article at pp. 537-543 in the Proceedings of the International Symposium on New Energy from our 1994 Denver meeting.

However, to comment on that modified transformer device of mine using permanent magnets, my tests on that, just completed, have surprised me and I am still trying to figure out where things have gone adrift. However, for what these views are worth, I believe that the device is losing energy. My measurements showed that I was getting only about 30% power out from 100% power input, that is real power, not volt-amps, and there is no way that the difference can be made up from  $I^2R$  loss or iron loss in the core. **Strangely enough, this is encouraging, because, whilst I always expected to tap 'free energy' by augmenting the magnetization of a magnetic core to drive the core by flux domain rotation and so harness the current spins intrinsic to the ferromagnet, I see no reason why the vacuum energy transfer process cannot go into reverse if one opposes the polarizing influence of a permanent magnet in its action on a normal iron core.** Indeed, whilst one can certainly expect to gain energy from the vacuum field in the Adams-type machine as the poles close one should equally expect to lose energy returned to that field as the poles separate and so the design problem is one of making sure that the first action wins over the second, rather than vice versa. **The two energy transfers could be unequal!**

As an aside, I may say that whilst there are those who hope to build 'antigravity' machines to fly us into space **I would half expect success on that venture to be heralded first by the discovery of a 'supergravity' machine that has no useful purpose other than serving as a kind of anchor or controllable ballast in a submersible craft.** It would be more credible, less likely to arouse hostile reaction and yet just as important scientifically. So, my message is that we should be prepared in our new energy research to encounter sometimes an anomalously low efficiency with a net mystery 'loss' as well as hoping to see 'over-unity', even though the factors at work that we seek to harness are the same in both situations. **We should look for anomaly in the energy balance and not just**

**seek mere gain;** an anomalous loss is a sign of unorthodox performance and the next step needed may merely be one requiring some fine tuning of the design.

Two other points warrant comment, the first being rather basic but easily overlooked. Firstly, it must always be remembered that a primary winding on a magnetic core develops magnetization from an inductance current that has a phase-quadrature relationship with a resistive load current on a secondary winding close-coupled to the primary. It needs something special in a design if one hopes to get the ferromagnetism in a core to augment the primary action in a way that can feed 'free energy' into such a load. In the Jensen device one needs to weigh whether the capacitor load acts not just as a phase angle compensator but as an essential energy buffer in the interaction between primary and secondary windings on separate limbs of the core.

Secondly, once one drives a core far enough to bring the 'free energy' into play, there will be third harmonics generated and second harmonics as well, if there is unidirectional polarization. These will make it difficult to estimate power input and output unless one has appropriate measuring equipment. For this reason the aim in proving over-unity has to be to close the loop so that a device is self-running. All measurements and test reports up to that point can only serve to guide the development of the right structure, unless, of course, the power gain is so high that such proof by loop closure can be swept aside. **In one device in my own research so far I am now encountering the situation where the third harmonic of the input current, with a matching effect in an output load, has become so strong that it even exceeds the amplitude of the fundamental signal.**

## Miscellaneous

### VERY OFF-ROAD VEHICLE

"Tech Update," *Popular Science*, vol 171, no 7, July 1994, p 22.

Called the Advanced Propulsion System demonstrator, using a hull from the LVT-7 series, the new vehicle runs with a 750-hp rotary engine and a 750-kW alternator. The current from a power-electronics

assembly is distributed to high-speed induction motors which actually operate the vehicle. The result is a relatively quiet 30-ton amphibious assault vehicle. In a joint Marines-Army demo program, the vehicle's weight and efficiency are comparable to traditional mechanical drive vehicles. This system makes the position of the drivetrain flexible. With the large alternator, there will be plenty of power for future electric sub-systems such as weapons or armor. The test vehicle has been built by United Defense L.P.

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### LITHIUM ION BATTERY REVISITED

"Strips of Power," Frank Vizard (Electronics Editor), *Popular Mechanics*, vol 171, no 7, July 1994, p 98. Reprising last month's tiny article on new battery technology, *Popular Mechanics* this month takes a little deeper look at lithium ion batteries being developed by Bellcore, a research division of the nation's regional phone companies.

This highly rechargeable battery is thin, flexible, plastic, and high powered. And it can stack multiple layers thick for more power capacity. The battery weight can be halved, or, keeping the same weight, the power capacity and longevity could double. The energy density of the Bellcore lithium ion battery, operating at 3.8 volts, far exceeds the ni-cad or lead-acid batteries used currently. **It has about 40% more power than the recently developed nickel-metal hydride batteries now used in laptop computers.** It also doesn't contain any toxic materials.

Developed from a need for more powerful rechargeable batteries to be used as backups for electrical components in central switching offices, the battery is a liquid-impregnated plastic. It can be shaped to make it suitable for a multitude of small electronic devices needing a compact, light, long-lived power source.

The battery is a five layer sandwich of metal mesh on the outside (copper and aluminum), plastic electrodes (respectively negative cathode containing carbon and positive anode of lithium manganese oxide), and a 50% liquid plastic center, which can be cut or punctured without adverse effects. On charging, the lithium ions move from the anode through the middle and collect on the cathode. When the battery is providing energy, the process is reversed. The strip is sealed in a metalized plastic bag to keep out moisture and contaminants.

Bellcore has plans to license the technology, which may take another year to develop to a commercial

stage, to equipment manufacturers. Since it is so easy to make, they should have little problem with it, even if they never produced batteries in the past. Then the application development will begin, and in the near future electronic devices taking advantage of the battery's weight and power will be more portable than ever.

---

### TURBO-CHARGER

"Tech Update," *Popular Mechanics*, vol 171, no 7, July 1994, p 24.

Electric Power Technology, Inc. (EPTI) previewed its new battery-charging technique last February by running an electric Chevy S-10 pickup for a record breaking 831 miles in 24 hours. The lead-acid batteries could be recharged in less than 20 minutes. The charger introduces a short discharge pulse during charging that breaks up a layer of charged particles around the battery plates, reducing the battery's resistance. In this way the battery can be charged at higher currents without overheating. This is a variation on a Russian technology. The technique doesn't promote the large lead-oxide crystals that accumulate when batteries are repeatedly recharged.

---

### ANOTHER FREE-ENERGY COVER-UP?

By Alison David, summary by Odell Hobbs

"The Dennis Lee Story," *NEXUS*, New Times Magazine, vol 2, no 20, June-July 1994, P.O. Box 174, Kempton, IL 60946-0177, USA.

"The mega-corporations are milking us dry while they 'work on' prototypes for the year 2000 and beyond. But the fact is that technologies exist now that can give us an unlimited supply of clean air, fresh water and energy for any purpose without using fossil fuels or nuclear power." Dennis Lee built prototypes for several systems to provide safe, clean, cheap energy. These systems involved several technologies: Low Temperature Phase-change Electric Generator, the Fischer Heat Engine (an engine that needs no condenser nor exhaust), the Adiabatic Bicoannular Reactor, and the Hot Box Thermal Storage Unit.

Later he found that "free electricity" could be generated with his Super Heat Pump technology. This discovery was substantiated by three experienced scientists: a professor at MIT, and ex-Dept. of Defense scientist and inventor, and an ex-Boeing plant supervisor with 40 years of electrical engineering.



Then, "in January of 1988, without notice or warning, 13 armed, bulletproof-vested deputies raided the research facility, stripping the company of all its technology prototypes and records. ...After the raid the municipal court judge, in an unusual move, ordered the records to the case sealed... The normal bail schedule for the offence he was charged with (violation of an obscure California S.A.M.P act and fraud) was \$5,000, but Lee was held on the outrageous bail of a million dollars." "Almost a year after his arrest, scientists and engineers overcame their fears and finally came forward to testify on Lee's behalf at the Gross Prosecutorial misconduct Hearing. They testified that the technologies could indeed do what Dennis had said they could..."

His appeals and lawsuits against Ventura officials were all denied, ignored or lost. On 5th March 1993 Dennis was taken to a California prison to serve a three-year four-month sentence.

"Lee's wife and family, living in northern New Jersey, continue to carry the flame in trying to get the word out. Those interested in receiving the Public Awareness Kit can do so on a free-look basis by sending a security deposit of US\$59.95 (postdated checks are okay). You can view the materials for 14 days, and if you choose to send the materials back you will get your security deposit back uncashed. If you decide to keep the materials to help the cause, just keep the kit and your security deposit will be forfeited. To order, write to Better World Technology, P.O. Box 653, McAfee, NJ 07428, USA."

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### MÖBIUS COIL EXPERIMENTS

AI/Tel Braid- 210 Solid State Device increases sense of well-being (pleasant effects, energizing.) No external power needed. Device as received and placed on a table produces output strong enough that effects are felt in 15 minutes when 2 feet away or in about an hour if 4 feet away. Variation of effects depending on the individual. Some may not feel effects. Manufacturer assumes no liability in any area. Device meant only for the adventuresome. The internal Möbius component of the device is the four-ply cord configured into a special braid knot with over 200 turns.

The autonomous device is available from Dr. S.P. Faile, Ph.D., Cold Fusion Products, 4002 Sharon Park Lane, Apt. 13, Cincinnati, Ohio 45241. Telephone

513-563-4953. Price is US\$ 95. Earlier work by S.P. Faile on Möbius structures and various effects is in *New Energy News* ("Twisted Coil Produces Strange Effects," June 1993; "Letter from Sam Faile," Sept. 1993; "Summary of Möbius Testing," by N.A. Reiter, Nov. 1993). Write to Dr. Faile for more information.

## LETTERS

### GENERAL ENERGY CORPORATION

2202 Hogan Drive  
Indianapolis, IN 46229

Don Taylor's letter in June's *NEN* and Hal Fox's response was the most important printing *NEN* ever made. It showed clear intent of the members of INE to improve ourselves and INE, openness to improvement ideas, and strident search for truth rather than "expertness." INE has not fallen into the bitterness regarding the testing of hot versus cold fusion.

Don was 99 1/2 % right. So too Hal. They've not seen all the events, circumstances, actions and results; based on the excellence of leadership by Toby Grotz, Bob Sibley, and Pat Bailey. Testing was an intensely voiced agenda item at Estes Park and Denver in the 1994 retreat-symposium.

Let's solve the testing problem Don presents, but not to the extent we find the energy efficiency of crystal radios. A decade I've wrestled with testing-certifying energy devices; a variety of types and purposes. They all can be measured in proper (and improper) ways, but they can't all be measured the same way. I'm recommending specification for "over unity devices":

a. "Conventional" energy inputs and outputs and energy losses be measured by standard engineering practices:

- (1) By qualified third parties,
- (2) More than once per location,
- (3) More than one location.

b. "Coefficient of Performance" then be calculated for each test and test averages.

c. Test results reports include what were (and were not) measured energy inputs, outputs, and losses; how they were measured; the tester's qualifications.

I want all my devices measured to such a rigorous specification. If the tester can't be shown where "conventional" energy enters and exits, the devices aren't ready for testing. When the COP exceeds 1.0, I'll still be concerned about safety, follow-on biological effects testing, and return on investment.

Sincerely, ROY E. GRAHAM, Jr.  
cc: Toby Grotz, Robert Sibley, Pat Bailey, Don Kelly

#### LETTER FROM DR. ASPDEN

Dear Hal,

#### THE TRITON FACTOR IN COLD FUSION

In your capacity as Editor of *New Energy News*, I sent you, earlier this month, my ENERGY SCIENCE REPORT NO. 4, which I completed on 10th April. Although that Report concerns the academic interest being shown in U.K. in a 'free energy' research theme advocated by Frank F. Potter - one which resembles the Adams motor, in principle, but has a reciprocating movement - you will see from page 2 that I first heard about Potter when I was attending a conference in Cambridge in England to speak about the creation of the three hydrogen isotope nuclei: the proton, deuteron and triton.

Since my experimental research is progressing rapidly on the 'free energy' magnetic theme, I have allowed the 'Potter Debate' to take precedence by first writing that Report No. 4, but, so as not to neglect what I can offer on the 'cold fusion' front, I have now completed ENERGY SCIENCE REPORT NO. 5 entitled 'Power from Water: Cold Fusion: Part I'.

My belief is that **the physics of cold fusion will never be understood until there is acceptance that these hydrogen nuclei have a close accompaniment of loosely-bound beta-particles.** This allows an ongoing transmutation in Nature, one occurring all the time in water on Earth, determining the relative abundance of  $H^1$ ,  $H^2$  and  $H^3$ , the known parameters of which are all calculable from that theory.

In a deuterated metal, and possibly also where there are high current discharges in water, the free conduction electrons can get embroiled in that beta-particle system. Remember that beta-particles are of the electron family. This then must make it easier for those deuterons to become over-active in fusion or fission, meaning that, if we have artificially caused the abundance ratio to differ from its natural equilibrium

value, so the recovery process, which means energy and charge redeployment, must escalate.

One wonders how many 'cold fusion' experts know that by increasing the triton constituent in water in our body fluid and measuring how fast the isotope abundance ratio adjusts to normal levels one has a way of estimating the water content of our human body weight.

**Can it be that, with water playing a primary role and cell transmutation being so important to medical science, the medical field is where we should start in thinking about the physics underlying 'cold fusion'?**

There is nothing to be gained by trying to placate the well established nuclear physicist by seeking to explain 'cold fusion' from his or her 'hot' point of view, built as it is on neutron activity in plasma at elevated temperature. The revolutionary route I have followed is to examine how it is that protons and deuterons are actually created in the first place, how they hold their abundance ratio in steady equilibrium in a cold Earth environment and why it is that tritons are not stable but have a half-life of 12.2 years.

I commend this approach to those researching 'cold fusion' theoretically, because one is here not trying to explain experimental findings for which the full facts have yet to clarify. One is, instead, seeking to explain the known and indisputable facts of the water mix of hydrogen isotopes in our Earth environment. **With that explanation, if one then translates the findings into the metal host, where the protons, deuterons and tritons can sit as isolated ions in an electrical conductor, a situation indicating enhanced transmutation rates, so one can see a way forward that is immune from the dogma of those who only know the explosive side of nuclear power.**

As my Report shows, much of what I have to say on the theory of this subject predates the announcement of the F&P 'cold fusion' discovery and so cannot be argued as being a theory invented expressly to give credibility to what many physicists still choose to believe is a sinking venture.

The 'Cold Fusion: Part I Report' is a 60 pp. text which includes three original papers of record elsewhere but not generally available in all university libraries. I can supply copies (air mail delivery) followed by later personal notification when Part II becomes available, in return for a \$25 check drawn on a U.S. bank and payable to me personally or for £15, U.K. sterling

drawn on a U.K. bank, the latter payable to 'Sabberton Publications'.

Harold Aspden,  
c/o Sabberton Publications  
P.O. Box 35 Southampton  
SO16 7RB, England

### INTERNATIONAL FORUM ON NEW SCIENCE SEPTEMBER 14-18, 1994

New Science includes topics and phenomena which cannot be explained by traditional science and yet may have the potential for significant benefit to the health and conditions for humanity and the planet Earth. The purpose of the forum is to gather open-minded researchers for scholarly presentations and discussions of theories, hypotheses and research results on New Science topics; to provide a constructive setting for interested participants (both lay and professional) to learn more about new science and to provide a worldwide forum and network for its presentation and discussion. Initiating a paradigm shift in science and health care is a major goal of this conference and this association.

Scholarly papers are invited on any topic related to New Science as defined herein. These papers should include one or more of the following: theories, hypotheses, research designs, research results and analyses. Abstracts of not more than 400 words must be sent as soon as possible to the address on this pamphlet. Consideration of abstracts cannot be assured if received after August 1. Authors will be notified as soon as possible if the paper is accepted for presentation.

The Forum will be held on September 14-18, 1994, in Fort Collins, Colorado, at the Marriott Hotel. Several workshops will start on Wednesday evening. Each half-day session will begin with a keynote speaker, followed by concurrent sessions for presentation of papers. Workshops will take place in the evenings.

Registration fee of \$120 will be changed before July 1, from July 1 to September 1 is \$135, and after September 1 the fee is \$150. Daily registration fee is \$55 per person per day or \$30 per half day. Workshops will be offered Wednesday, Thursday and Friday evenings by keynote speakers and others for \$15 each. A banquet will be held on Saturday evening with a special program. The cost of the banquet is \$20 for registrants and \$25 for non-registrants.

The Forum will take place at the Marriott Hotel, at 350 Horsetooth Road. Single rooms are \$59, and doubles are \$69. Their phone number is (303) 226-5200 or 1-800-548-2635. Detailed housing information will be sent upon receipt of registration. Reservations should be made by August 31 to insure group rate.

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**Cold Fusion Times**, P.O. Box 81335  
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### COMING IN AUGUST

*We will publish the measurements on 4 devices that were demonstrated at the May Symposium on New Energy.*

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