New Energy News

Monthly Newsletter of the Institute for New Energy

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A TALE OF TWO CONFERENCES: ST. PETERSBURG AND MINSK

First, the Russian Academy of Sciences, the Research Institute of Radio and Electronics, and the Institute of History of Science and Technology of Russia sponsored the **International Conference on Space, Time, and Gravitation.** The conference was held May 23-28, 1994 in St. Petersburg, Russia.

Second, the Belarusian State University was the host for an **International Conference on Cold Fusion and New Energy Sources**. This conference was held in Minsk, Republic of Belarus, on May 24-26, 1994 and was co-chaired by Russian, Belarusian, Romanian, and U.S. representatives. Hal Fox, editor of *New Energy News*, was one of the co-chairpersons.

As reported on elsewhere in this issue, Alexander Frolov provides us with several reports on the presentations made at the St. Petersburg conference. Several of the papers presented concerned space energy and tapping the energy of space. The Minsk conference was mostly on cold fusion theory and experiments, however, a few papers treated other aspects of the production and control of energy. A complete list of abstracts of papers presented at the conference appear in the April, May, and June issues of *Fusion Facts.* A summary of the conference appears in this issue of *New Energy News.*

WHEN WILL WE HAVE WORKABLE NEW ENERGY DEVICES?

At these and other conferences, the question most often asked concerns the timing of the first real applications of cold fusion or other enhanced energy devices. If someone knows the answer, they are not telling. However, we will examine some of the new energy developments and make some estimates.

In the new science of cold fusion the following developments are considered important:

1. There is no longer any reasonable doubt that excess heat is being produced in a variety of "table-top" reactors (as contrasted to huge Tokamak-type reactors.)

2. There are definite measures of the so-called nuclear ashes, specifically neutrons and tritium have been produced and measured by many experimental groups in a variety of countries. Helium has been detected by several groups.

3. New methods by which excess heat and/or nuclear reactions are produced are continuing to be reported. The list now includes heavy- and light-water electrochemical cells, molten-salt electrochemical cells, gas-plasma devices, capillary "cold" fusion, anomalous results from electrical discharges in both gaseous and liquid-based devices, gaseous devices with controlled electro-magnetic fields, in some types of superconductors, and in proton conductors.

4. Considerable progress has been made in developing a cold-fusion theory based on fundamental principles of physics (see especially a recent paper by Robert W. Bass.)

5. Transmutation is an experimental fact. [Note that nearly all nuclear reactions involve the production of one or more elements that were not initially present. This nuclear effect is transmutation. Strangely, there is localized strong objection to the concept of transmutation and such reports are criticized as being alchemy.]

6. In some experiments, high rates of thermal energy of the order of 1-3 kilowatts per cubic centimeter of cathode material have been reported.

7. Applications for controlled cold nuclear fusion are being found. [Note, for example, the welding of unusual materials by nuclear reactions.]

In view of all these experimental discoveries, it is suggested that commercialization is in process and will now rapidly grow. Some of the difficulties or barriers to early commercialization of cold fusion are the following:

1. Heavy-water cold fusion reactors, usually with palladium alloys as cathodes, still suffer from considerable variation from batch to batch of the palladium alloy. This problem is probably the primary source of difficulty with cold fusion reactors and must be resolved before commercialization is achieved.

2. Light-water cold fusion reactors appear difficult to take from laboratory to commercial sizes. Specifically, excess heat results of ten times the input power are often achieved in small laboratory reactors. In larger units, it appears difficult to reliably produce three times the output/input power ratio.

3. The molten-salts reactors work in highly corrosive environments and there are materials problems that have to be resolved. Replication has been difficult.

4. Various types of gas-plasma reactors are also erratic in operation.

5. Other types of sparking and arcing devices have relatively low outputs of excess power.

In summary, however, these problems are typical of new technologies. We all remember the early problems with transistors when the yield of usable product would vary from 10% to 90% with no apparent changes of production techniques. As progress was made, it was found that some contaminants in parts per billion could make dramatic differences in transistor yield. The transistor problems were resolved, so too, will be the replication problems in cold fusion. I have predicted, for five years, that we will have commerical applications for cold fusion within two years. Soon, I will be correct.

HIGHLIGHTS OF THE MINSK COLD FUSION CONFERENCE

Where authors were able to meet the publication deadlines, their papers were translated (if necessary), edited, and printed in two volumes of the proceedings of the conference. The Russian version was produced in Minsk under the general direction of Dr. Ben Filimonov. The English version was published by Fusion Information Center (FIC) in Salt Lake City, Utah. These publications were made available to authors and to attendees at the conference prior to the start of the conference. This procedure, adopted by the organizing committee, allowed the conference attendees to enjoy the conference presentations by having access to the details of the papers.

Highlights of the conference included the following:

After preliminary welcoming speeches, Hal Fox presented a review of the various types of cold fusion and new energy devices that are currently being investigated and which appear to have potential for commercialization.

The best theory paper in the proceedings was the paper by Dr. Robert Bass (a member of the FIC Technical Advisory Board). This paper was developed from basic physical principles and required no invention of special types of particles to explain the observed experimental phenomena of cold fusion. The theory covers both heavy-water and light-water phenomena. [Robert W. Bass, "Is the Coulomb Fusion-'Barrier' a Resonantly-Transparent Mirror? Refutation of the Conventional Cold-Fusion 'QM-Impossibility PROOF'," Cold Fusion Source Book, Proceedings of the International Symposium on Cold Fusion and Advanced Energy Sources, Minsk, Belarus, May 24-26, 1994.]

A Hungarian report appears to have solved the problem of treatment of the palladium cathode materials so that reproducible results can be obtained and excess heat generated and produced at will. [More information will be provided as soon as a copy of the translation of the paper is received.]

Peter Glück from Romania presented compelling information about the source of cold fusion being mainly the surface catalysis of nuclear reactions. The new science of cold fusion has been condemned for not having an adequate theory while at the same time the seventy-year-old (and more) technology of chemical catalysis still does not have a completely adequate theory. [Peter Gluck, "Cold Fusion - A Logical Network Approach", Cold Fusion Source Book, Proceedings of the International Symposium on Cold Fusion and Advanced Energy Sources, Minsk, Belarus, May 24-26, 1994.]

A group from the Ukraine has surfaced, after over 25 years of research, with information on new types of nuclear reactions. In this Ukrainian work, the reactor cells appear to strip a neutron from the nucleus of many elements and transmute the element "one down" in the periodic table. It has been the grudging acceptance of cold fusion that has caused this group to

publically announce their work. They had previously been denied permission to publish because their work was contrary to accepted scientific doctrine.

Another Ukrainian group has made a practical application of nuclear reaction within certain types of metals. They are able to weld two different types of metals together by controlled excess heat from supposed nuclear reactions. Many of the combinations of metals have previously not been subject to current metal-welding technology. Very impressive work. [Yu. A. Kornienko, Z.P. Tomza, V.I. Vysotskii, "The Cold Nuclear Fusion and the Gamma Decay Control are the Two Yields of the Controlled Rheological Process Application," Cold Fusion Source Book, Proceedings of the International Symposium on Cold Fusion and Advanced Energy Sources, Minsk, Belarus, May 24-26, 1994.]

A Minsk scientist has developed a new type of temperature measuring device by adapting thermionic emission (electrons boiled off from a heated surface). In so doing, he has shown that the Coloumb barrier is porous. The Coloumb barrier is the average electrical repulsion between particles of the same charge that is often shown to be able to prevent nuclear reactions from occurring in or on a metal lattice. In gas plasma physics, it is the Coloumb barrier that necessitates the development of huge, expensive, and so far, inefficient methods to produce fusion of hydrogen isotopes. That the Coloumb barrier is "porous" is (in the author's opinion) a much more understandable concept than the solid-state physics idea of "tunneling". The porosity may be a space-time function in which the vigorous interaction of charged particles in a metal lattice embedded in the intense energy of space allows for local (in time and space) cancellation of charges. We will hear more about this concept in a paper by A.V. Bulyga entitled "Simulation of Self-Organization and Energy Conversion Processes in Heavily Nonequilibrium Inorganic Systems."

Other reports included additional experimental work on the "glow discharge" device by Drs. Karabut and Savvatimova; proton conductors by Dr. Samgin; an excellent review report on the work funded by the Electrical Power Research Institute at SRI, International by Dr. Michael McKubre; an excellent addition to the understanding of the new Italian nickel/hydrogen device by Dr. Robert Bush; the development of multi-layered cathodes having very high heat-generating capacity per cubic centimeter of cathode material written by Drs. Miley and Batyrbekov; and many other fine papers.

In general, this conference was a success and will, I hope, become a periodic event to gather the scientists together, especially from the AIS (Affiliated Independent States) countries. Invited and selected conference papers, including most of those published in the "pre-proceedings" of the conference will be translated, edited by Hal Fox, and published in a re-issue of the **COLD FUSION SOURCE BOOK** by FIC.

Fusion Briefings

MINSK CONFERENCE PAPERS
--A Partial List--

Hal Fox: Cold Nuclear Fusion, Space Energy Devices and Commercialization.

V.A. Filimonov and V.A. Lishnevskii: Cold Fusion and Superfast Low-temperature Chemical Processes in Solids: Common Basis for Understanding.

Robert W. Bass: Is the Coulomb Fusion-'Barrier' a Resonantly-transparent Mirror? Refutation of the Conventional Cold-fusion 'QM-impossibility' "Proof".

Robert T. Bush: An Interpretation of the Piantelli Effect Based upon the LANT Hypothesis and ECFM Model for Cold Fusion.

Peter Glück: Cold Fusion - A Logical Network Approach.

Lev G. Sapogin: I. Deuterium Interaction in Unitary Quantum Theory.

Lev G. Sapogin: II. On the Mechanism of Cold Nuclear Fusion.

J. O'M. Bockris and R. Sundaresan: Electrochemistry, Tritium and Transmutation.

Robert T. Eagleton: Experimental Details for Light Water Cold Fusion Research at Cal. Poly. - Pomona

Xing Zhong Li: Searching for Truth with High Expectations -- 5-year Studies on Cold Fusion in China.

R. A. Oriani: A Brief Survey of Useful Information about Hydrogen in Metals.

Edmund Storms: Methods Required for the Production of Excess Energy Using the Electrolysis of Palladium in D_2O Based Electrolyte.

Mitchell R. Swartz: Generalized Isotopic Fuel Loading Equations.

V. P. Afanaseyev et al.: On the Possibility of D-D Fusion Stimulation by a High-current Arc Discharge in Gas-filled Metal.

G. H. Miley and E. G. Batyrbekov: Energy Amplifier with Multilayer Thin Film Electrodes.

B. F. Bush and M. H. Miles: Practical Aspects of Heat and Helium Measurements in Deuterated Palladium.

R. T. Bush: Evidence for an Electrolytically Induced Shift in the Abundance Ratio of SR-88 to SR-86.

Francesco Celani et al.: D/PD Loading Ratio up to 1.2:1 by High Power μs Pulsed Electrolysis in PD Plates.

J. Dash, G. Noble and D. Diman: Changes in Surface Topography and Microcomposition of a Palladium Cathode Caused by Electrolysis in Acidified Light Water.

J. Dufour, J. Foos and J. P. Millot: Cold Fusion by Sparking in Hydrogen Isotopes.

A. M. Durachenko and E. Ya. Malinochka: Element-phase Transitions with the Cold Nuclear Synthesis (CNS) Type Reactions in Metallic Alloys of Class-forming Systems.

P. I. Golubnichiy et al.: The Investigation of the Mechanism of Energy Accumulation in Long-living Lightning Objects, Found after a Powerful Impulse Energy Release in Water.

Ren Bao Lu: The X-ray Emission from Elements of First Period and Cold Fusion.

Tadayoshi Ohmori and Michio Enyo: Detection of Iron Atoms on Gold Electrodes Used for Electrolysis of Neutral and Alkaline H_2O and D_2O Solutions.

Bruno Stella et al.: Upgrade of the Fermi Apparatus with Detection and Identification of Protons in the 3 MEV Energy Region.

I. P. Bulat: Semiconductor Thermal-mechanical Energy Converter.

A. V. Bulyga and A. G. Shashkov: The Description of Self-oscillation Processes of Energy Transfer-conversion as a Linear Approximation.

Kenji Fukushima and Tadahiro Yamamoto: The Upper Bound of Hot-spot Temperatures Induced by Supersonic Field.

James L. Griggs: Calorimetric Study of Excess Heat Production within the Hydrosonic Pump System Using Light Water.

Thomas V. Prevenslik: Sonoluminiscence, Cold Fusion, and Blue Water Lasers.

Yi Fang Chang and Chuan Zan Yu: The Physical-chemical and Nuclear Multistage Reaction Mechanism and the Multistage Ignition Condition on Cold Fusion.

See page 14 for a list of St. Petersburg Conference papers presented.

Space Energy

THE CALCULATIONS OF CHANGES OF SPATIAL CURVATURE FOR FREE ENERGY SYSTEMS

by A.V. Frolov

Thanks to Prof. M.T. Daniels, we have a simple answer to the question: What is changing when a free energy system works and creates the power from "nothing?"

According to Daniels, the density of the gravitation field energy near the surface of our planet is equal to 5.74×10^{10} (T/m^3).

Assume that any free energy system uses this form of energy by means of transformation of natural curved space-time in uncurved flat space-time in the limit. What is the real situation? If the system creates 100 Kw of power in load, this system decreases the natural gravitation field energy density in that area of space-time around itself. This decrease is a function of $1/r^2$, where r is the distance from central point of free energy transformation. The value of this change for 100 Kw power is equal to 0.001% of natural gravitation field energy value for r = 1 m and for linear function. In real case of $1/r^2$ function this change is less at the same point.

So, the changes of natural spatial curvature in the area near the free energy machine is calculated by a similar method. It is necessary to use Daniels' density, factor of distance r at the point of calculation and the power of device.

RELATIVITY IN ERROR?

Neil E. Munch (Gaithersburg, MD), "Is There a Mathematical Error in Einstein's 1905 Derivation of Special Relativity (SRT)?" presented at the III International Conference "Problems of Space, Time, and Gravitation," 23-28 May 1994, St. Petersburg, Russia, 4 mms pages, 5 refs, 5 figs, 1 table.

AUTHOR'S ABSTRACT

In the world of special relativity, magnitudes depend on context. Lengths and times that we see on our own frame of reference may have different values when seen by a passing observer. An equation, which depends on equality of two lengths, may be correct in our eyes but incorrect to the passing observer if he sees those lengths as unequal. That is the nature of the error discussed here. It has lain hidden for years by imprecise definitions and shifting assumptions.

For proper interpretation, my studies worked back and forth at each step of the derivation to assure agreement between assumptions and end equations. It was sided by numerical analyses on a home PC computer. My notation is expanded to clarify which of over 300 views of time or distance is used.

EXPERIMENTS WITH FREE ENERGY

By Don Watson (Oceano, CA)

INTRODUCTION

Energy Machines have finally become a reality. From N-Machines, to Sparky Sweet's VTA, to Adam's Pulsed Electric Generator/Motor, and many others, inventions are starting to emerge into today's world.

Although "Free Energy" devices seem to touch upon the term "Perpetual Motion," these units are actually extracting energy from the aether. Modern physics tells us that anything that resembles "Perpetual Motion" defies modern physics and is not possible. What they don't realize is, that everything around us, atoms, the universe, even the entire cosmos is in a state of perpetual motion!

The intention of this paper is to present a ground for further experimentation by utilizing methods rather than introducing theories or general presentations. There are no mathematical formulas here, and no theories to ponder, only the experimentation that has resulted in success in producing "over-unity."

Our attempt here is to show that this technology is real, and it will eventually replace the fossil fuels and current electric generation that we use today.

BaFe Magnets as used in Free Energy Generation

Barium ferrite magnet material has several characteristics that are essential to use in energy machines. The very high resistivity assures that no eddy currents and their resulting fields will be present when the magnet is subjected to external magnetic field influences.

Demagnetizing a BaFe magnet using conventional methods have resulted in failure. Using an AC current source has only resulted in either nothing or a complete pole flip. Using a DC current at varying intensities resulted in producing magnetic bubbles, pole flippage or both. Demagnetizing a BaFe magnet is successfully done with heat by reaching the curie point.

The method here is not to demagnetize, but to place a semi-magnetic state that will allow us to generate a magnetic bubble into a magnet. These are further discussed below.

Magnetic Bubbles

One possible mechanism that may help explain how the free energy generation occurs in this machine involves magnetic bubbles. These circular domains are polarity reversed regions that can be shifted when a magnetic field is directed at a right angle to the plane of the magnet surface. The bubbles will move toward an area where it sees minimum energy. This minimum energy area is shifted by the varying right angle field and could result in a varying field as sensed by the output coil, which then generates the energy. The field at a right angle to the magnet surface is generated by the machine input coil. This coil is mounted inside the output coil.

Generating Magnetic Bubbles and Experimenting with Free Energy

When a barium ferrite magnet is subjected to alternating magnetic fields of decreasing intensity of sufficient strength that should demagnetize it, what is observed is that instead of a total loss of field, magnetic bubbles are formed. At this point of partial magnetization, the barium ferrite magnet can further have its magnetic polarity modified. Flat plate magnets as used in industry are typically magnetized to have the north pole across one entire face, and the south

pole across the entire opposite face. It is possible to partially demagnetize these magnets and reverse the magnetic polarity around the periphery. This procedure will leave the center partially magnetized and the opposite polarity on the periphery also only slightly magnetized. This is accomplished by placing the magnet in a large flat coil around its periphery that is pulsed from a capacitor bank that is turned on by the use of an SCR (silicon-controlled rectifier) in series between the capacitor bank and coil. By varying the voltage on the capacitor bank it is possible to obtain exactly the desired amount of area around the periphery that is polarity reversed. The width of the area required is determined by what amount works best in the operating machine. The magnet is now in a quasi-stable magnetic balance condition that can be caused to toggle between two opposite points either side of this "zero" point by use of a transverse magnetic field whose axis is parallel to the long magnet dimension. The second portion of the machine conditioning is done with the output coil installed between the two magnets. A 60 HZ signal at approximately one amp is passed through the output coil. At the voltage peak of the 60 HZ waveform a multi-hundred-amp pulse is again passed through the conditioning coil. Taking careful consideration of the pattern present upon the top magnet face, be sure to align the N-S transition line to the output coil below. This part is a little tricky, since it takes some time to get the patterns right and each unit is a little different. Some experimentation will be necessary to find the right charge from the conditioning coils with each set of magnets.

The preferred version of this device uses two magnets face to face aligned north south-north south and spaced apart approximately by the width of the magnets. The coil that develops the output power is located between the two magnets with its axis perpendicular to the magnet faces. The center of the output coil edge is centered on the north-south transition line on the face of each magnet. The output coil is wound with bifilar wire and the two bifilar wires are connected in reversed parallel. The output or drive coil is located inside the output coil with its axis parallel to the long dimension of the magnet. Excitation of the drive coil with a 60 HZ sine wave will now result in a 60 HZ sine wave power output from the output coil. The power output coil is capable of lighting more that one hundred watts of light bulbs.

VTA (or Vacuum Triode Amplifier)

Another energy machine utilizing the magnet bubble method was developed by Floyd Sweet and named by Tom Bearden as the "VTA" (or Vacuum Triode Amplifier). The VTA version of this machine used two input coils, located outside the output coils and facing each other at 90 degrees on each end of the output coils. This machine is using the bubble method to cause the magnetic flux to pass through the output coils at 45 degree intervals. Another was the single magnet VTA that reversed the input/output coils in reference to his earlier VTA as mentioned above.

Magnetic Viewing Paper

Magnet companies sell a green plastic material that contains particles that appear lighter in the area of magnetic pole reversal. The green plastic is laid flat against the magnet surface to observe the pole reversal area. Areas that are solid North or South are of a dark green while the transitional point between the two is very light green in color. This paper is very useful when you are working with pole reversal or bubble experiments. If you are serious about your magnetic experiments, then this is a must to get. Magnetic viewing paper is available from most magnet companies in sizes 2" X 2" up to 12" X 12" sheets.

Magnetic Redirection

One of the first F/E devices that I worked with is the Watson Device Phase 1, since this is the first part of a two stage unit. The Phase 1 mainly consists of cylindrical magnets with soft iron used as magnetic flux director. Shaped like a tall "U" laid upon its side, the magnetic flux is directed toward the open end poles. In between the two parallel poles, there is a redirected metal unit that connects a coil between both present poles. This coil is used to redirect the flux to a path that is closer in resistance, to the path of the magnetic field. In essence, this caused the ends of the pole pieces to lose their magnetic influence or strength. At this point, there is a central magnet that is present at the poles, whereby allowing the magnetic flux to pass freely when the coil is not energized. On the other side of the central magnet, there is a duplicate "U" shaped unit operating in the opposite. This is to reverse the flux through the central magnet to create a "flip-flop" effect. Given the proper gap between the central magnet and the outside poles, the effect of "free energy" will be possible. The gap at the coil side of the "U" shaped unit is the determining factor for redirection of the flux without the back-EMF completely destroying the effect desired. This "Phase 1" of a two

phase unit has been developed by myself. The second phase of this dual unit is not presented in this paper.

Antigravity Effects

The effects of antigravity have been noted and are in current research at this time. There has been some weight loss but not enough to even speak about until the previous subjects of over-unity have been researched further.

THE TRANSMUTATION OF CHEMICAL ELEMENTS AND STOKES' PRINCIPLE

by A.V. Frolov

It is known that nonlinear materials produce harmonics as shown in Fig. 1.

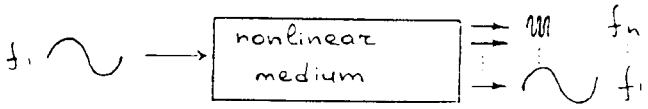

Figure 1.

In this decompostion process we observe the "time-wise energy translation", by T.E. Bearden's note. The power of the input fundamental signal is transformed in power of output harmonics. It is ordinary for us to view the direction of time from the past to the future. For chemical elements it is the decay process direction. In 1849 Stokes proposed the principle of time reversibility. Fig. 2 shows this reverse-time process of production of the fundamental frequency signal f_1 when harmonics pass in nonlinear medium.

In a direct-time process of decomposition we have the total power of harmonics in output signal equal to input power. If in reverse-time, a situation is created [were the] sum of harmonics signal and output power of monochromatic wave is equal to total power input. For chemical elements it is a fusion situation.

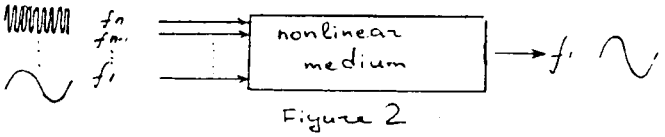

Figure 2

(ref. to "Gravitobiology," by T.E. Bearden, p 8.)

In other words, the process of decompostion of monochromatic wave into harmonics is the entropy time-forward process. The process of consolidation of harmonics in one monochromatic wave is the time-reverse syntropy process.

This syntropy process is connected with such effects as chemical elements fusion, self-organization, rejuvenation and gravitation.

Vehicles

APS ELECTRIC 500

In what they say is probably the most significant event in Electric Vehicle (EV) history, more than 30 teams of EV specialists, mechanics and students gathered in Phoenix on March 18-20 for a LIVE test of how their vehicles could stand up to running conditions.

Real Proof: including six new battery systems, new drive trains, 18-second battery exchange and more, all test driven on the track. Vehicles were working in reality, not virtually on a computer, so it was evident when something didn't work as projected. The new batteries were: Power Cell, Nickel-Iron, Optima Battery's tubular plates lead, Ovonic's nickel-metal-hydride, zinc-air, and the new Horizon super lead acid. There was also one car running with assistance from super Capacitors and one with a fuel cell.

First place was taken by Ovonic batteries in Solectria's FORCE car in the stock race (125 miles averaging 65 mph.). Second was Nickel-Iron batteries in Crowder College's FORCE (116 miles), and third was Power-Flow Zinc batteries in UC-Davis' Geo Prism (111 miles). Fourth was Ni-Cad batteries in Salt River Project's Ford Probe.

They are hoping this amazing performance test will spread interest around the country and form the basis for a real Electric Vehicle Industry.

Story from *World Electric Transportation*, vol 12, no 4, April 1994, p 1.

LABORATORY ZINC-AIR BATTERY TESTING

Previews 300 mile-per-charge Electric Vehicles
By Len Danczyk, DEMI - Dreisbach Electromotive, Inc.

A DEMI electric vehicle-sized Zinc-Air cell has just achieved 204 watt hours per kilogram output energy after several deep discharges. This high energy density translates into a very long operating range per charge in electric vehicles and may be the highest output energy observed in a rechargeable EV battery. This energy level was achieved at a discharge power comparable to an electric commuter car operating in city traffic.

The United States Advanced Battery Consortium (USABC) which is made up of Ford, GM, Chrysler, and D.O.E., has set a long term EV battery goal of 200 watt hours per kilogram.

A slightly earlier generation DEMI Zinc-Air cell recently achieved a USABC rating of 165 watt hours per kilogram in independent testing at the Department of Energy's Idaho National Engineering Labs, setting a new record for EV battery energy output at that lab.

Along with laboratory records, experimental DEMI Zinc-Air batteries have set several street and race records in the last three years. An electric Saturn sports coupe equipped with 140 cells of a slightly earlier design beat a stock gasoline powered Saturn sports coupe in a 5 lap sprint race at the Solar and Electric races in Phoenix last spring. In 1991, a DEMI Zinc-Air powered Honda sponsored by Southern California Edison and Arizona Public Service won the world's first electric stock car race by running the two hour endurance race without a single pit stop to recharge. DEMI Zinc-Air powered minivans and commuter cars have demonstrated well over 200 miles range in traffic using earlier design Zinc-Air Batteries capable of just over half the output of current laboratory prototypes. From this prior vehicle experience, DEMI scientists project that 400 miles range could be attained under optimal conditions with 250 to 300 miles per charge routinely available in daily commuting in next generation DEMI Zinc-Air powered EVs.

DEMI has been conducting electric vehicle research in Santa Barbara, California since 1981. The company is engaged solely in Zinc-Air battery research and does not currently offer batteries for sale. DEMI expects to have a long operating range Zinc-Air battery on the market at an operating cost competitive with gasoline by 1998, when the California EV mandate specifies that 2% of new cars sold in the state are to be powered by electricity.

For further information on this, contact Len Danczyk, DEMI, 212 Anacapa St., Santa Barbara CA 93101, (805) 965-0829.

LAND SPEED RECORD FOR GM

The national land-speed record of 183.075 mph for electric vehicles weighing over 1,000 kg (2,205 lbs.) was set by a GM Impact with a 27 battery array. According to U.S. Auto Club (USAC) rules, a vehicle must perform a mile-long pass in one direction, and within one hour, make another mile-long pass in the opposite direction. Between the passes, a pit stop is made to replace the battery packs and prep the car for the return run.

A nine-person team worked like seasoned veterans of the pits to hoist the car six feet in the air, disconnect, change the 27 batteries, in a T-shaped pack that was located between and behind the seats, and then reconnect them in less than 15 minutes. An extra six-battery pack on the passenger side floor was also changed using a hydraulic lift.

PLASTIC BATTERIES?

Popular Science, June 1994, p 43.

With a liquid electrolyte impregnated in plastic (50% liquid, paper-thin and dry) between two plastic electrodes, sandwiched with a positive aluminum mesh and a negative copper mesh, this new battery is about the thickness of a credit card and eminently fold- or cut-able. Beside that, it is rechargeable! It is a lithium-ion battery developed by Bellcore, of Livingston, New Jersey.

One battery produces 3.8 volts, but you can stack them for higher voltages. They can recharge in half the discharge time (half hour charge for one hour run time). For useful charge time, the plastic lithium-ion battery is the same as for the liquid lithium-ion battery (at equal weights) that Bellcore introduced in 1992. That makes it last twice as long as comparable nickel-cadmium batteries, and 40% more than nickel-metal hydride batteries. It will be especially useful anywhere normal batteries are hard to fit because it can be formed, flat or bent. Uses may include electric

vehicles, cellular phones, hand-held computers and portable electronics. What's more, it is completely safe to touch.

Magnetics

DESCRIPTION OF Φ-MACHINE AND Φ-TRANSFORMER

By A.V. Frolov

The terms "Φ-machine" and "Φ-transformer" are connected with a form of magnetic flux force lines in this type of system.

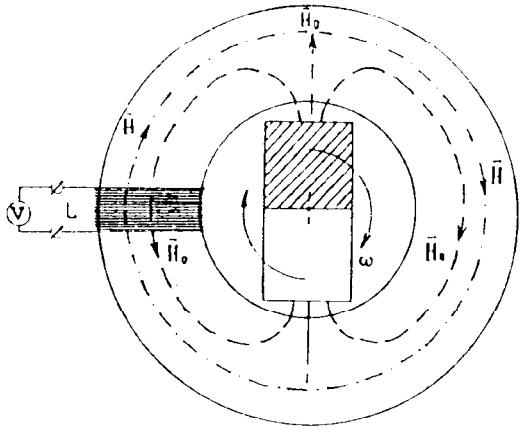

Fig. 1

Fig. 1 shows a device that uses permanent magnets as the rotor. The magnetic flux is concentrated in a ferromagnetic ring. The magnetic flux is concentrated in the ferromagnetic ring. The structure of this field H* consists of two parts. The direction of flux in one part is opposite to the direction of flux in the other part.

The coil L is an ordinary coil of wire. In strength of electromagnetic induction principle the electro-motive-force is generated in coil L when rotor is revolving and flux H* is changing. If the load is connected to coil L the secondary flux H is created.

The secondary flux tries to compensate any changes of the primary flux. Since in Φ-machine the secondary flux is created inside the ring, it works against the primary flux only half-period of the ring, and it is co-directional to the primary flux in the other half-period of the ring.

The total effect of secondary flux is equal to zero.

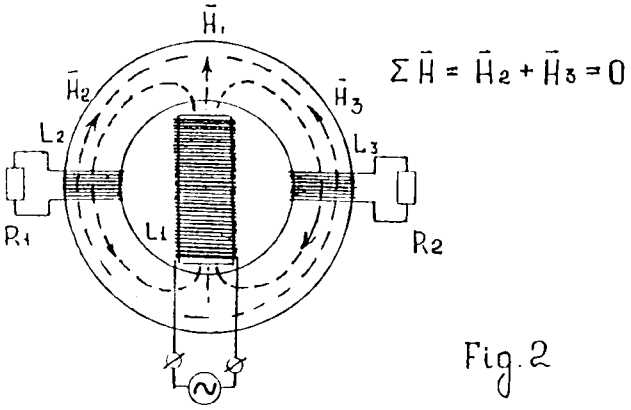

Fig. 2

Fig. 2 shows a similar version of bidirectional operation mode. The coil L1 is loaded with the AC generator. The coils L2 and L3 create two opposite magnetic fluxes H2 and H3. Total effect of creation of power in loads is equal to zero.

The number of secondary coils is not limited. The value of power in one coil is a function of velocity of the primary flux changes similar to conventional calculations. The consolidation of secondary coils to increase total output power is possible after rectification of every current since currents in different coils are not coherent.

The general principle is the creation of a bidirectional power process. It is not possible to get power in load without connection between cause and effect but it is possible to create two opposite effects for one cause. The total effect is equal to zero in this case.

Excerpt from article by Dr. Harold Aspden, "Three Experiments on Free Energy," *Space Energy Newsletter*, Dec. 1993.

According to Dr. Aspden this "experiment (his Fig. 1) gives the "free energy" answer, but, *to my surprise*, with the coil arrangement shown in [Aspden's] Fig. 2, I found that the free energy becomes available well below the knee of the B-H curve at quite normal flux densities! Even at one-fifth of magnetic saturation levels, the excess free energy potential can exceed the input power and give a twice-unity factor of performance."

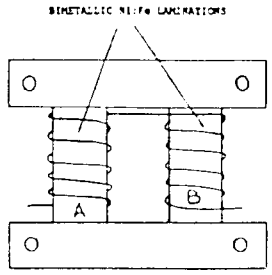

Fig. 1

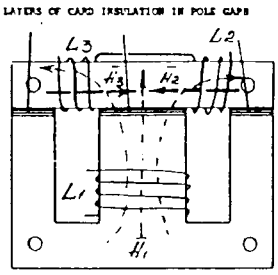

Fig. 2

$$\Sigma(\bar{H}_2 + \bar{H}_3) = 0$$

It is clear that Dr. Aspden will value the idea of the Φ-generator and ϕ-motor. His Fig. 2 shows the same situation for magnetic flux superposition that is described above in the ϕ-generator scheme.

Miscellaneous

THE LONGITUDINAL WAVE GENERATION

by A.V. Frolov

The electromagnetic longitudinal wave in vacuum is the wave of compression/decompression in the local curvature of space (or in the local rate of flow of time). It is a gravitational wave. The application of such waves for cold fusion stimulation or for antigravity are required for learning of biological aspect.

The technology is the next. According to K. Butusov, the power of an electric condenser that is transformed into longitudinal wave power when the volume of condenser is decreased is equal to: $\Delta W = \frac{W}{V}\Delta V$, where W is energy and V is volume.

The form of the electric condenser is not important in this case. The sphere is an example of condenser that creates longitudinal waves in all directions when the size of the charged sphere is changed (decreased). To create a certain direction of longitudinal waves emission is possible [as shown] in next simple system. Fig. 1 shows the cylindrical charged condenser that has variable length in one side.

Note that the power of longitudinal waves is connected with the ratio $\frac{\Delta V}{\Delta t}$ (velocity of change of volume) since the changing volumetric density of energy is the cause of this wave. Also note that when the sphere or cylinder charged condenser is compressed, it is necessary to disconnect the primary source of high voltage potential, or it is necessary to use diode in circuit of charge.

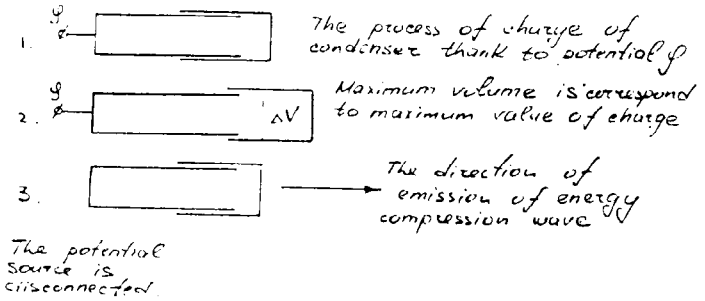

Figure 1.

STELLAR ABERRATION

Howard C. Hayden, Prof. of Phys., Univ. Conn., Storrs, CT), "Stellar Aberration," *Galilean Electrodynamics*, vol 4, no 5, Sept./Oct. 1993, pp 89-92, 20 refs, 3 figs.

AUTHOR'S ABSTRACT

Stellar aberration, discovered three centuries ago, was immediately recognized as a phenomenon due to the velocity of the Earth in its orbit around the Sun. Einstein explained aberration by using the Lorentz transformations to convert from stellar coordinates to earth coordinates *unequivocally using the relative velocity of Earth and star*, and his explanation remains essentially the same in most textbooks. We show herein, by analyzing data from binary stars, that aberration is *not* due to relative velocity of Earth with respect to star, but rather Earth's orbital velocity.

EDITOR'S COMMENTS

This is another meaningful observation that the widely-held scientific dogma concerning an ether is incorrect. It is past time that science updates some of its outmoded views. It is no discredit to Einstein to give him credit for constructing a world-view that explains many phenomena even if that construct was based on a widely-accepted but incorrect premise of the

constancy of the speed of light relative to the earth's orbital velocity.

THE OVER-UNITY ELECTROMAGNETIC TRANSFORMER AS INFORMATION SYSTEM

by A.V. Frolov

It is well-known in radio-electronics that signal modulation determines the factor of noise protection. Usually electromagnetic transformers are used [to measure] the amplitude modulation when the strength of the primary current is changing by means of variable amplitude of voltage. But it is a modulation with a factor that is equal to unity. Another view of modulation allows to get signal/noise ratio less than unity, for example, frequency modulated signal.

By induction law, it is necessary to create the change of density of energy in space. In the case of electromagnetic induction it is necessary to create the change of density of current in the primary coil wire. But this $\frac{\Delta j}{\Delta t}$ can be created by means of pulsed modulation of the signal. Note that it is necessary to consider the process of electromagnetic induction in the transformer, for example, as a process of information exchange to find optimal view of modulation. Fig. 1 shows how voltage is changing to create $\frac{\Delta j}{\Delta t}$.

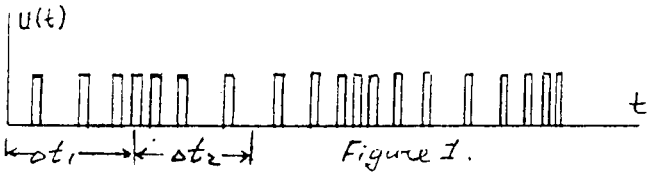

Figure 1.

For Δt_1 total $\frac{\Delta j}{\Delta t} > 0$. For Δt_2 total $\frac{\Delta j}{\Delta t} < 0$.

For any pulse exist the front $\frac{\Delta j}{\Delta t} > 0$ and abatement $\frac{\Delta j}{\Delta t} < 0$, but if the transformer is not high frequency, it is not connected with induction effect. Power in secondary coil for that sort of system is the result of sum (total) changing density of current. In this way it is possible to create an over unity system since the counter-flux of the secondary coil corresponds to "imaginary" summary flux changes and does not correspond to real front/abatement changes $\frac{\Delta j}{\Delta t}$ of pulses.

A QUESTION OF DOPPLER SHIFT

Craig Spaniol (W. Virginia St. Col., Inst., W.V.) and John F. Sutton (Goddard Space Flight Ctr., Greenbelt, MD), "Triplet Solution of the Twin Paradox," presented at the III International Conference "Problems of Space, Time, and Gravitation," 23-28 May 1994, St. Petersburg, Russia, 28 mms pages.

AUTHORS' ABSTRACT

This paper investigates relativistic effects between inertial reference frames that are moving at different velocities. The focus is on measurement of space (distance) and time (intervals) within each inertial frame as well as relative to each other. The radar Doppler effect is applied to calculate total (down and return) frequency shift and to extrapolate a relativistic Doppler shift, length contraction and time dilation formulas. A preferred or zero reference frame concept is addressed in terms of total system momentum and each moving inertial frame velocity is referred to this zero total system momentum frame. Relativistic changes in space and time measurements within each inertial frame (metric) are calculated with velocities referenced to this defined zero reference frame. Space and time measurements between individual reference frames are calculated through the zero reference frame. This permits relativistic effects to be calculated in a stepwise manner from a local zero momentum frame to a non-local one. The relativistic Doppler shift is shown to be independent of this stepping process, but the relativistic effects on space and time measurements are explicitly dependent upon this process. By applying these concepts, the twin paradox and stellar aberration can be explained.

SPACE-TIME-MATTER

Olof Sundén (Divonne, France), "Time-Space-Matter in a Pythagorean Quantized Wave Perspective," an excerpt from "Beyond Contemporary Values," presented at the III International Conference "Problems of Space, Time, and Gravitation," 23-28 May 1994, St. Petersburg, Russia, 10 pages, 3 figs, 3 tables.

AUTHOR'S INTRODUCTION

Since Aristotle, space has been considered as the scene in which matter is performing its actions, while time has been considered as an invariant parameter, accounting for the duration and sequences of actions. However, in man's very first scientific perspective,

elaborated by the Pythagoreans at the dawn of science 2,500 years ago, time and space are viewed as dynamic entities in form of inverse mutually oscillating spheres, originally caused by an orderly flow of the formless "to-apeiron" [sic]. The oscillation between the two spheres caused rarefactions and condensations, by which matter, life and even
mind separated out at the loci. This man's first scientific perspective on time, space and matter is here interpreted and denoted "I O P ". It is worth consideration, because it is able to put present physical know-how together to a quantized and consistent world view. In IOP the basic physical units are solely time and space with the space/time relation "c", the Planck constants of action "$\hbar$" of length "L_P" and of time "T_P" as the quantum parameters in combination with the nucleon wave units "λ_{IO} and A_{IO}" (the primary cosmic harmonic). In IOP all forces are united, because they are phase shifts or distortions in the time-space oscillation. IOP also hints at the decisive role of the mental perspective "the soft ware program" that we apply to our mind, when we try to put various observations together to scientific patterns and theories. Here, the orderly physical reality appears as a quantum process of reiterated time-space interactions, which like chaos ought to be described by the mathematics of reiteration and inversion not by differential equations, which cause absurdities at the quantum end-points.

LORENTZ TRANSFORMATION

Shaozhi Xu and Xiangqun Xu (Beijing Control Device Research Inst., China), "A Reexamination of the Lorentz Transformation," presented at the III International Conference "Problems of Space, Time, and Gravitation," 23-28 May 1994, St. Petersburg, Russia.

AUTHORS' ABSTRACT

Using a new form of linear transformation comparable to and including the Lorentz transformation, it is shown that, *ceteris paribus*, there is an infinity of forms of linear transformations comparable to the Lorentz transformation. In addition, an unsuspected flaw is revealed, namely that the so-called "Lorentz-invariant form" is incompatible with the postulates of the Special Relativity Theory (SRT). This throws strong doubt on the validity of the SRT.

LETTERS

LETTER TO INE/PAT BAILEY

Dear Pat:

I'm a member of the International Association for New Science (IANS) and The Institute for New Energy (INE). I have attended the 1993 and 1994 International Symposia on New Energy and enjoyed these very informative and thought provoking seminars.

When we place ourselves on the cutting edge in an effort to accomplish significant breakthroughs we sometimes bump up against new challenges. The conferences and newsletters have brought to my attention a situation which, in my opinion, should be resolved quickly and decisively. The challenge is to develop and utilize a clear statement of what constitutes an Over-Unity Device (OUD). That is, the INE needs a specification that describes in quantitative terms the requirements a device must meet to be considered Over-Unity. The lack of a specification has already resulted in several awkward situations. For example:

* Without a specification supported by INE anyone can (and does) create their own definition and thereby "prove" their mechanism operates at Over-Unity.

* Without an OUD specification INE lacks focus. As the ancients said,"If you don't know where you're going any road will get you there." The INE should define the goal, the specification against which devices will be measured.

* Lack of focus constitutes lack of leadership. When members of INE realize that all developers are not being treated the same, i.e. are not being measured against a common standard, they may look for another forum.

I recommend that the INE adopt a specification which defines the requirements that a device must meet if it is to be certified Over-Unity. I have provided a draft specification below followed by comments. While not perfect, I believe it's a good start.

Over-Unity Device Specification

1. The device shall stand alone. The device shall not be connected to any external source of conventional energy including, but not limited to, DC/AC power supplies, batteries, fuel cells, compressed air, springs, and weights. If an external input is required to start/initialize the device, such as mechanical rotation or electric impulse, the connection time shall not exceed three (3) seconds.

2. The device shall produce a minimum of sixty (60) watts of continuous output for a minimum of four (4) hours. Output is to be measured by brake or watt meter.

3. The device shall produce output per 1. and 2. above from a minimum of two (2) locations chosen by the observer/certifier. The locations shall be a minimum of one hundred (100) feet apart with one of the locations being a minimum of one hundred (100) feet from buildings and electrical power lines.

4. The device shall be certified as having met 1., 2., and 3. above by a minimum of three (3) independent observers/organizations.

Some comments on the four requirements follow:
1. It is important that the device be a complete stand alone system. For example, if a particular AC wave form combination is required to capture Zero Point Energy (ZPE) the necessary circuitry should be designed as an integral part of the OUD.

2. This output requirement is somewhat larger than "The 1-Watt Challenge" proposed by Harold Puthoff and I'll admit that quantities of sixty watts and four hours are somewhat arbitrary. However, if quantum physicists agree that a few cubic inches of ether contain enough ZPE to evaporate the water from all oceans on Earth I think we can expect a developer to invent a device that achieves about one tenth of a horse power. Having said that, I may be the person who develops a device that achieves 59 watts and can't get it certified because it doesn't meet the specification.

3. The main purpose of two locations, one outside, is to help insure that there are no hidden ways to provide conventional input energy to the device.

4. While it is certainly appropriate for INE to be a certifier it is advantageous to have at least three independent organizations involved.

There are many significant benefits to INE and the membership in having a simple clear definition of what constitutes an OUD. I've listed some of these benefits below, not necessarily in order of importance:

* The specification helps focus the efforts of INE and its members around a well defined goal.

* The specification will encourage those hoping to make a fast buck off the gullible to spent their time elsewhere.

* Those developing OUDs will be encouraged to design their devices with the specification in mind.

* Developers will be encouraged to meet the first three requirements of the specification before contacting INE for certification.

* Newsletter readers will have a consistent scoreboard against which to measure and compare potential and actual OUDs.

* The specification will assist those individuals/groups sponsored by INE to travel throughout the U.S. and the world evaluating potential CUDs. For example:

-Prior to a potential visit the developer should be expected to state in writing which requirements his/her device meets or does not meet. Based on this, a visit may or may not be scheduled.

-Once on site the INE representative can perform his/her evaluation against the specification. This may involve requirements 1., 2., and 3. with 4. to be accomplished at a later date for example.

For any specification to be useful it must be institutionalized, that is, become an integral part of the organization. Some key actions INE can take after a specification is agreed to are:

* Publish the specification in the newsletters.

* Let it be known that all devices should be measured against the specification.

* Require all developers who want their devices to be certified to submit their own measurements against the specification in writing.

* Talk about the specification at meetings and seminars.

I want both IANS and INE to succeed and am offering these ideas with positive intent. If I can be of further assistance please contact me.

Sincerely,
Don Taylor
136 Duggin Road
Wilton, NH 03086 (603) 654-9574

EDITOR'S COMMENTS

NEN wants your comments about an OUD specification. Here are mine:

I suggest that there should be two specifications. One should be a "stand-alone OUD spec." The second should be for measuring input and output power. Here are the reasons: many devices have a different type of energy as input than is OUTPUT. For example, many cold fusion devices use high-cost electricity as input power and produce relatively low-value thermal energy as the output power.

To make a stand-alone unit one has to create electrical energy from thermal energy. Currently, such commercial thermal-electric converters have efficiencies that run from 5 to 20%. That means that such a cold fusion reactor must produce 5 to 20 times as much output power as input power.

These are standard methods by which input power can be measured and by which output power (regardless of whether electrical, mechanical, or thermal) can be measured. It is suggested that a device or system be recognized as an OUD if the output power exceeds the input power.

An OUD device should also be rated by the relative costs of power production. For example, in most parts of the U.S. electrical power costs about three times as much as thermal power (such as produced by the burning of natural gas). For this reason an electric-in/thermal-out device must have a power out/power in ratio of 3.0 to be considered as commercially practical.

Consider devices which are basically an electric input/electric output device. Candidates are N-machines, high-density charge cluster devices, and some solid-state devices.

In the case of the N-machine, the current technology is to use a mechanical input provided by an electric motor. The output is low-amperage d.c. One could use a mechanical input from water, wind, or a steam-driven motor. In this way a lower cost input could be used to produce an electric output.

The high-density charge cluster device (Ken Shoulders, U.S. Patent 5,018,180) uses short electrical pulses as input and produces pulsed electrical output. The result of considerable effort has not resolved the problems of producing a commercially-effective version of this device even though experiments have shown 30 times (or more) output power as compared to input power. The output pulse rate is low, even though the pulse power out is much higher than pulse power in. The device is a over-unity device, but not, as yet, an effective over-unity device.

We all want to see the stand-alone device demonstrated unequivocally. Meanwhile, let's also recognize that on the road to that event, we must work with and improve the over-unity devices that are being discovered, invented, improved, and demonstrated.

WHAT WENT ON IN ST. PETERSBURG

A list of papers presented in Section I of the International Conference on Space, Time and Gravitation.

E. Berdinski: Gravitation and Inertia.
J. Guala, J. Valverde: Electromagnetic Induction and the Hypothesis of Relativity: The Principle of Relativity as Applied to Motional Electromagnetic Induction.
A. Akimov: The Micro and Macro Phenomena of the Torsion Fields.
V. Fogel: Mass and Energy of Gravitational Field.
J. Pecker: Cosmological Constant Λ.
A. Shabelnikov, V. Kuzmin: Gravitational Radiation is a Universal Factor of Living and Non-living Matter Evolution in the Universe.
A. Sirnakov: On the Relation Between Electromagnetic and Gravitational Interactions.
V. Bubnyonkov: Periodic Discreetness of Structures of Matter.
K. Vyessyelov: New Linear Gravidynamics.

C. Antonopoulos: Time: The Problem Concept of the Quantum Theory.
A. Shilin: To the Dynamics of Charged Particles.
A. Shlyonov: On the Quantum Theory Foundations.
D. Roscoe: Galilean Metric Gravity.
V. Kishkintsev: An Analysis of Positive and Negative Results in the "Small Thermal Weights" Experiments.
M. Muller: How Time Dilatation Can Help to Explain the (Chemical) Hydrogen Bound Physically.
A. Chernyaev: Inertial Interaction of a Moving Body.
A. Nassikas: The Hypothesis of the Unified Field and the Principle of its Dual Interpretation.
V. Syekyerinlos: A Criterion of Singleness of a Photon in a Flow of Light.
M. Bohm: Michaelson Revisited, for New Analysis.
V. Kostyushko: Physical Nature of Interconnection Between Inertial and Gravitational Masses.
P. Pappas: Ampère Longitudinal Forces and their Relation to Energy.
L. Peshchevitski: A Generalized Inertiality Principle.
L. Seydov: On the Theory of Gravitation in Riemannian Spaces.
C. Spaniol, J. Sutton: Triplet Solution of the Twin Paradox.

G. Sukhorukov, V. Sukhorukov, R. Sukhorukov: Establishing Unified Laws for Atoms and the Universe on the Basis of Newton's Ideas of Space and Time.
A. Staroverov: Space is the Antipode of Matter.
Y. Naumenko: Ether and Matter.

W. Li: On the Galilean Relativity of the Laws of Electrodynamics.
F. Gorbatsevich: Analogies and Peculiarities of Propagation of Electromagnetic and Elastic Waves in Vacuum and Solid Body.
M. Sutcliffe: The Problem Concept of the Infinite Dimensional Hyperspace (IDH Space).
N. Munch: Is There a Mathematical Error in Einstein's 1905 Derivation of Special Relativity (RRT)?
O. Sundén: Time-Space Viewed as an Inversely Coupled Wave Field.
V. Talakvadze: Space-Time and Physical Problems.
Shaozhi Xu, Xiangqun Xu: Space-Time, Motion and Light Velocity Problems.
W. Van der Kamp: Einstein Right or Wrong?
Y. Voronov: Organism has No Boundaries.
U. Zakirov: To the Search for Physical and Geometric Meaning of the Fifth Dimensional in the Kalutsa-Einstein Theory.
O. Akimov: To the Problems of Space-Time in the Special Relativity Theory.
A. Pochtarev: A Phenomenon of the Dualism in the Entrainment of Light by a Moving Medium.
K. Komarovskly, M. Gonsior, N. Yelisseyeva, S. Victor: Relativistic Physics Without Paradoxes.
A. Teslinov: Ontology of Intellectualization of Automatic Systems: A Synthesis of Methodological Conceptions of Adaptation.
V. Roganov: Three-dimensional Space and Time as Four Particles of Gravitational Interaction.
A. Gozhi: On the Effect of Temporal Changes of Objects Observed in Space Systems.
V. Vassilyev: The Kinematics and Dynamics of Moving Bodies in the Aspect of the Information Theory.

F. Kanaryev: An Analytical Theory of Spectroscopy.
I. Marinchec: Rational Physics or Scientific Fantasy.
A. Gasanalizade: The Relationship Between the Variation of the Newtonian Constant of Gravitation and the Classical Tests of General Relativity.
V. Lebedev: Gravity Field Invariants in the Composition of the Gravity Constant.
T. Mitsopoulos: A Revision of Modern Physics Leading to its Unification.
E. Ustimenko: Unification of the Gravitation and Electricity Theories is Possible.
K. Trutnev: News in Electrodynamic Moving Bodies.
Ya. Bekker, V. Rizevnin: Soliton's Disturbance of Space.
S. Marinov: Divine Electromagnetism.
V. Dyomin: The Russian Cosmism is the Main Road of Contemporary Science.
I. Smulskiy: Nonrelativistic Description of the Interaction between Two Charges.

U. Mamyrov: A New Interpretation of Newton's Law of Gravitation.
S. Kakyrov: Problems of Cosmology and Elementary Particles.
J. Chapell: The Incipient Erosion of Intolerance in American Physics and the Formidable Task of Completing the Process.
M. Ostrikov, A. Kozic: A Generator of Gravity Waves.
V. Kazakov: An Alternative for the Michelson-Morely Experiment.
P. Prussov: Law of Gravity Characteristics of Ether.
L. Brusin, S. Brusin: On Einstein's Mistakes and Mathematical Proof of Time and Space Absolute Nature.
Y. Spakov: Contradictions in Modern Theory of Magnetic Field.

W. Severin: About the Problem of Discovering the Ether by Interferometric Methods.
L. Petrova: The Equation of the Quantum Field Theory.
I. Okunev: A Clue to the Mystery of Magnetism and Gravitation.
L. Komarov: New Paradigms.
J. Ivanov-Pykhtin: On the Ratio of Gravitational Mass of Photon to Inertial Mass.
M. Zeine: Zeine Malic's Logic.
P. Trokhimchuck: The Problem of Vacuum in the Theory of Informatic Physical Structure.
N. Chumachenko: Fundamental Principles of Theoretical Physics.
J. Gulak: Are the Paradoxes of the SRT Reality or Fiction?
G. Degtyarev, O. Tsvetkov: On Biorythm Nature.
N. Budaev, I. Budaeva: The Great Integration as One Way Around Problems of Fundamental Communication in Nature.
A. Mishin: Results of an Experiment on Ethereal Wind Registration.
V. Tersiski: Theory and Practice of Antigravity Propulsion Drives.
I. Goryachko: To the Question of Existence of Gravitation Control Principle.
G. Likhosherstnykh: Negative Energy and Negative Mass.
A. Shirinski: Results of Introducing Numerical Proportions in the Centrally-Symmetrical Matrix.
A. Arzanov: A New Theory of Gravitation.

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