(Reprinted from the September, 1927 issue of Science and Invention)

Implosion Group

Phase Conjugate Pump Wave-Piezo Crystal

Propulsion Project:

Historic source: Crystal Drive (Kowsky-Frost/Gallimore)

This project relates to an experiment that was originally done in 1927, in a Poland lab. It involved the piezo/electromagnetic overloading of a quartz crystal, and the subsequent increase of volume and changes on a molecular and quantum level. The original experiment indicated that the lift to weight ratio was approximately 800:1, with a 90 watts per pound, or 198.45 watts per kg, power expenditure. Subsequent analysis of the data indicated that the power expenditure was related to input frequency, with the two being inversely proportional to one another.

The original experiment was performed using 2000 watts at 770 KHz, essentially an AM radio transmitter beamed into the crystal. The crystal was first conditioned by placing it in a chamber with an asymmetric pump wave that expanded and reformed the crystal lattice, evidently forming a new one at a higher quantum state. The crystal lost its transparency, going from clear to opaque white while increasing it's size to 20 times its former length on each side, with a volumetric increase of a factor of 4000:1. It was after this volumetric increase that the crystal was subjected to pumping by electromagnetic means to generate the lift.

A research associate, who will remain unnamed for security reasons, recreated this first stage of the experiment to expand the crystal, and noted that it radiated a field that felt tangible for a radius of 2 meters around the device. It had the aspects of an electrostatic field, but did not show up on a surface electrometer or a remote EMF field meter. According to him, there was a weight discrepancy between inside and outside the field, possibly due to an unknown electrogravitic effect.

Equipment Needed:

Low frequency function generator—max frequency of 20 MHz, linear amplifier 2000-3000 watt capacity with variable output, complex function generator—20 MHz maximum maximum. Surface grinder, polishing equipment for crystals, power supplies for frequency generator and amplifier, balance scales for measuring weight of conditioned crystals, precision scales for thrust and field-effect measurement, 3D printer or CNC, computer for modeling and driving CNC/printer.

Facilities Needed:

Secure location including limited access, 500 square feet/46 square meter minimum. 3-4 benches for equipment, T-1 communications for file transfers, 10KW electrical service for crystal charging and equipment.

Implications & Applications:

In a subsequent project proposal submitted to the DOD (Department of Defense) by Jerry Gallimore, he mentions the use of the material to produce coherent gravity waves, and nicknames it the "Graser", for "gravitational laser". This is equivalent to the "tractor beam" in the Star Trek series. A graser mounted to an aircraft can grab material off of the surface of the ground and pull it into the aircraft without winches or ropes. One in geosynchronous orbit can pull masses up off the surface without the need of propellants, enabling the development of space for civilian business and tourism, and eventually colonization.

Costs:

Phase 1: Duplication of the original experiment will be minimal, with approximately $10,000 US worth of equipment and materials.

Phase 2: This is the development phase. Drive systems will be evaluated, possibilities of gravitational communications that may be faster than light, and energy systems as well. Approximately $500,000 US will be needed to begin evaluation purposes, toward the establishment of an R&D company for doing this. The lab will have a strategic partnership with the companies that will implement the technologies. Laboratories tend to consume money. The production companies will use their partnership as a tax write-off.

Phase 3: Establishment of the production companies, funneling part of their profits into the Laboratory. At this stage we will know exactly what the technology can and cannot do. Complete plans for implementation are sent to the companies. Retrofit packages will be provided for transportation, including air, ground, sea – surface and sub-surface, and aerospace single stage to orbit using the tractor application. The initial company would require 5-10 million dollars, after which a billion dollar industry will be created. This phase will be self-sustaining.

Conclusion

The Implosion Group has acquired the notes of Jerry Gallimore, who repeated this experiment in 1980, and is ready to repeat the work of this brilliant theoretician and crystallographer. We have determined that this is a legitimate technology, vetted with 3 sources. It will be the basis for the technology of the 21st Century, and beyond. It is at the same stage as the transistor in the 1950's, ripe for development.

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Part II
The Kowsky-Frost
Experiment

The next few pages will document the search for what I consider the real-deal as far as antigravity is concerned. It begins in a laboratory in Poland in 1927, then the story is picked up by a magazine called Science and Invention in September of that year. Then decades later, it was repeated by Jerry Gallimore, and published in the PACE Newsletter.

As far as I know no one has repeated the experiment since that time. I merely corrected Jerry's math, and sought funding to repeat the experiment under controlled conditions which would make it easily engineerable. It's been nearly 20 years since the data appeared in the Antigravity Handbook. The original copy of the 1927 article was obtained through an inter-library request from the Crystal Lake Library in Crystal Lake, Illinois in 1984. Since my move to Georgia, it had been lost, and I thought it would be relatively easy to obtain it once again through one of the university libraries which were nearby. I was very wrong in this assumption. Since publication of the article in the AGH, the article has disappeared from the archives of many libraries. I searched the library in Clemson University, the University of Georgia, and the Bancroft Library in California to no avail. As an interesting note, the contact at the Bancroft Library thought it odd that there was a copy of the August issue, and October of Science and Invention for 1927, but September seemed to be missing. I have come to the conclusion that there is a concerted effort to conceal this experiment, and that this effort lends credibility to the reality of its existence.

So where did I find it? Hilda Schaffranke, Rolf's widow found it among the source materials he had been collecting for publication before his stroke. Thanks, Hilda. Ken MacNeil sent copies to major universities to try to undo the damage that has been done. Thanks, Ken.

And why did the powers-that-be go through all the trouble to suppress the entire issue, instead of just one article which offended their interest? Well...

Take a look at the next page, and the cover of the issue in question, and you will see why.

(Reprinted from the September, 1927 issue of Science and Invention)

Gravity Nullified

Quartz Crystals Charged by High Frequency Currents Lose Their Weight

Although some remarkable achievements have been made with short-wave low power transmitters, radio experts and amateurs have recently decided that short-wave transmission had reached its ultimate and that no vital improvement would be made in this line. A short time ago, however, two young European experimenters working with ultra short-waves, have made a discovery that promises to be of primary importance to the scientific world.

The discovery was made about six weeks ago in a newly established central laboratory of the Nessartsaddin-Werke in Darredein, Poland, by Dr. Kowsky and Engineer Frost. While experimenting with the constants of very short waves, carried on by means of quartz resonators, a piece of quartz which was used, suddenly showed a clearly altered appearance. It was easily seen that in the center of the crystal, especially when a constant temperature not exceeding ten degrees C. (50 degrees Fahrenheit) was maintained, milky cloudiness appeared which gradually developed to complete opacity. The experiments of Dr. Meissner, of the Telefunken Co., along similar lines, according to which quartz crystals, subjected to high frequency currents clearly showed air currents which led to the construction of a little motor based on this principle. A week of eager experimenting finally led Dr. Kowsky and Engineer Frost to the explanation of the phenomenon, and further experiments showed the unexpected possibilities for technical users of the discovery.

Some statements must precede the explanation. It is shown at least in part, that quartz and other crystals of similar atomic nature, have the property when exposed to potential excitation in a definite direction, of stretching and contracting; and if one uses rapidly changing potentials, the crystals will change the electric waves into mechanical oscillations. This *piezo electric* effect, shown in Rochelle salt crystals by which they may be made into sound-producing devices such as loud speakers, or reversely into microphones, also shows the results in this direction. This effect was clearly explained in August, 1925 *Radio News* and December, 1919 *Electrical Experimenter*. These oscillations are extremely small, but have nevertheless their technical use in a quartz crystal wave-meter and in maintaining a constant wavelength in radio transmitters. By a special arrangement of the excitation of the crystal in various directions, it may be made to stretch or increase in length and will not return to its original size. It seems as if a dispersal of electrons from a molecule resulted, which, as it is reversible, changes the entire structure of the crystal, so that it cannot be restored to its former condition.

The stretching out, as we may term this strange property of the crystal, explains the impairment of its transparency. At the same time a change takes place in its specific gravity. Testing it on the balance showed that after connecting the crystal to the high tension current, the arm of the balance on which the crystal with the electrical connections rests, rose into the air. The illustration, Fig. 3, shows this experiment.

This pointed the way for further investigation and the determination of how far the reduction of the specific gravity could be carried out. By the use of greater power, finally to the extent of several kilowatts and longer exposure to the action, it was found eventually that from a little crystal, 5 by 2 by 1.5 millimeters, a non-transparent white body measuring about ten centimeters on the side resulted, or increased about 20 times in length on any side (see Fig. 4.) The transformed crystal was so light that it carried the whole apparatus with itself upwards, along with the weight of twenty-five kilograms (55 lbs.) suspended from it and floating free in the air. On exact measurement and calculation, which on account of the excellent apparatus in the Darredein laboratory could be readily carried out, it was found that the specific gravity was reduced to a greater amount than the change in volume would indicate. Its weight had become practically negative.

There can be no doubt that a beginning has been made toward overcoming gravitation. It is to be noted, however, that the law of conservation of energy is absolutely unchanged. The energy employed in treating the crystal, appears as the counter effect of gravitation. Thus the riddle of gravitation is not fully solved as yet, and the progress of experiments will be followed further. It is, however, the first time that experimentation with gravitation, which hitherto has been beyond the pale of all such research, has become possible, and it seems as if there were a way discovered at last to explain the inter-relations of gravity with electric and magnetic forces, which connection, long sought for, has never been demonstrated. This report appears in a reliable German journal, "Radio Umschau."

Don't fail to see our next issue regarding this marvelous invention.

Fig. 1. The gravitation nullifier is shown in this illustration. The quartz crystal may be seen supporting a 55-pound weight. Dr. Kowsky is shown in a top coat because of the temperature at which the experiments were performed.

Fig. 2. The schematic diagram of the experiment is shown in this illustration. The high frequency oscillator has been omitted for clearness.

Fig. 3. This shows how the quartz crystal lost weight when subjected to the high frequency current. The original crystal was balanced on the scale.

Fig. 4. This illustration shows the relative sizes of the crystal before and after the experiment. It is approximately twenty times its original length on any side.

Some Notes on The Article
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Please note that the crystal increased its size "twenty times its original length on any side". The density decrease would be the cube of that, or 8000. That's quite a decrease. According to the Funk & Wagnall's Standard Reference Encyclopedia, quartz has a specific gravity of 2.65. That means that the specific gravity went from 2.65 to 3.3125×10^{-4}. Another thing that was not mentioned in the article was the mass of the crystal. Since most quartz has a specific gravity of 2.65, and the volume is known (5x2x1.5 millimeters, or 15 cubic millimeters) a calculation for that can be made. There are 1000 cubic millimeters in a cubic centimeter, or 10x10x10 millimeters. So, we divide 15 cubic millimeters by 1000, or .015 cubic centimeters. One cubic centimeter of quartz will weigh 2.65 grams. So therefore, .015 cubic centimeters will weigh .03975 grams.

Now, we need to know the lift factor. In the article, we see that "the transformed crystal was so light that it carried the whole apparatus with itself upwards, along with the weight of twenty-five kilograms (55 lbs.) suspended from it and floating free in the air." I previously determined the mass of the crystal to be .03975 grams. Assuming that the 25 kilograms did not include the mass of the crystal, the total weight then is 25,000.03975 grams. The lift factor is 25,000.03975 divided by .03975 or 628931.81761. That's a fairly large number. This factor is applicable in both English and Metric systems. So, how much propulsive power does a 1 pound crystal have? It would amount to over 314 TONS. There seems to be a discrepancy between the above article and the later repeat of this experiment by Jerry Gallimore. Jerry's experiment seemed to indicate that there was only a lift factor of 800. Why is there so much of a discrepancy? It might have something to do with the quality of the quartz, or the method of "conditioning" the quartz during the expansion process. Or, possibly an unknown factor which could be discovered when the experiment is repeated.

Next, we need to calculate the power density, in watts per cubic centimeter. The volume of the crystal is .015 cubic centimeters. Putting one watt into this volume would result in a power density of 66.66 watts per cubic centimeter. But, in the article we see that, "by the use of greater power, finally to the extent of several kilowatts and longer exposure to the action, it was found eventually that from a little crystal, 5 by 2 by 1.5 millimeters, a non-transparent white body measuring about ten centimeters on the side resulted..." Several kilowatts indeed. So, what would the power density of THAT be? Well, that would be approximately 7000 watts divided by an initial volume of .015 cubic centimeters, or 466,666.67 watts per cubic centimeter. But, let's assume that the power density applied is constant, and varies during the expansion to accommodate a variable volume. Let us also assume that the 7000 watts is applied AFTER the 8000:1 expansion, and work the process backwards. 7000 watts applied to 8000 x .015, or 120 cubic centimeters comes to a power density of 58.33 watts per cubic centimeter. If we

assume that this density is constant, then the beginning amount will be .87495 watts applied to the crystal. This will be slowly ramped up as the volume increased to 7000 watts.

Next, we need to calculate the efficiency. To pull up against Earth's gravity field is equivalent to accelerating the mass 32 feet per second per second. This 55 pound weight has 1760 foot-pounds impressed upon it to keep it above the lab bench. The conversion factor for foot pounds per second to watts is 1.356. This would amount to 1760 foot pounds multiplied by 1.356, or 2386.56 watts. Therefore, the efficiency would be the output, 2386.56 watts divided by 7000 watts in, or 34.093% efficiency. That's quite an impressive efficiency, compared to rockets or jet engines. This would amount to 127.27 watts per pound. How much would it take for a mass of 10,000 pounds? It comes to approximately 1.27 megawatts, or 25.45 amps at 50,000 volts. That's doable. Especially if Paul Brown's resonant nuclear cell is used.

When I ran the results through an Excel spreadsheet of the Gallimore experiment, I noticed that the efficiency seemed to "break unity" at low frequencies. One model seemed to suggest 400 Hz and lower would yield anomalous results. Very anomalous, with efficiencies ranging from 200-1000%. Is this what Tom Bearden was explaining in "The Lost Unified Field Theory of James Clerk Maxwell"? Quite possibly so. There could be 4-wave mixing going on, and the medium is EXTREMELY nonlinear and stressed. Maybe when the experiment is repeated we can determine this.

Conclusion

Is this a hoax? I don't think so. I know there was a later article that appeared in the October issue of Science and Invention that claimed this, but since Jerry Gallimore claimed that he obtained positive results using similar procedures, I tend to think that the hoax claim is in itself a hoax. It seems that something got out, that wasn't supposed to GET out. If Gallimore's experiment is genuine, then who knows how far this technology could have been developed since its inception in 1927? If it took a decade to develop chemical rockets to get to the moon, then two decades would not be unreasonable. And what happened in 1947? The first "UFO flaps"! My, what a coincidence.

There was a mention by Jerry Gallimore that the dielectric constant of the material "went through the roof". He estimated that it went to 10 million or above. So the Biefield-Brown effect could also be responsible for this phenomenon as well. Is this the gravitational analog of a transistor? Possibly. In the Biefield-Brown effect, the question was raised when I did the chapter for the Antigravity Handbook whether or not the field was completely contained within the dielectric or whether it was "leaky". I assumed that it was completely self-contained, and that there was no way to get it to propagate outside the dielectric. But, you know what happens with assumptions. What if there is a way to get a field flow to go around the ship? Well, then it's conceivable to get something that looks like a "warp drive." Or it's possible to produce an artificial wormhole and get a "stargate." Who knows how far they could have gone with this technology!

Finally, if this experiment which obviously has politically incorrect overtones, is repeated, perhaps the commercial exploitation of space can finally be realized. I believe that the results of this experiment is the key to man's future in space, perhaps whether man has a future in space at all.

Anti-Gravity Properties
of Crystalline Lattices

In the summer of 1927, two scientists, **Kowsky** and **Frost**, in Poland noted specific anti-gravity properties of crystals. They were pursuing some discoveries in piezo-electricity made by **Meissner** of Telefunken, whereby it was found that crystals could lose their transparency and change their specific gravity at the same time.

By the oscillations of radio transmitters of several kilowatts, at protracted exposure, Kowsky and Frost managed to include an eight hundred percent volume increase to a clear crystal. The small, lightened crystal carried the apparatus which oscillated it as well as a weight of twenty five kilograms suspended from it, floating free at a height of about two meters above the floor of a laboratory.

Shortly after this discovery, reports and photographs of the tests were published in the German journal, Radio Umschau and in Science and Invention (September, 1927 issue).

Those published reports permit a definition of the phenomena in today's terminology.

An optical grade quartz crystal 5x2x1.5 mm of defined crystal lattice was piezoelectrically overloaded with a resulting opaqueness, a growth in volume and a structural change along with specific gravity change. The crystal was reported to increase dimensions along one side of two thousand percent (volume increase of 800%). Its weight of approximately one ounce was reduced by an unknown amount during the increase in volume. When electrically excited to lift itself, the crystal was capable also of lifting an additional eight hundred and eighty ounces. This lift occurred when the crystal was subjected to vertical oscillation via direct electrode contacts, and transverse oscillation via non-attached electrodes broadcasting radiation with the crystal interposed between them.

Radio Frequency Emissions and Magnetostriction of Mass

Magnetostrictive masses emit heat and undergo dimensional changes on a temporary basis when exposed to a varying magnetic field. The molecular alignment of the mass with the field of current induces mechanical pressures that cause a distortion or dimensional change. Normally such physical changes have been assumed to be temporary or of unimportant plasticity. Certain non-magnetic substances like dielectric crystals also react to an imposed magnetic field with molecular re-alignment.

The re-alignment causes a crystal distortion in one direction, and with alternating current fields, oscillation occurs. Such is the piezo-electric phenomenon. The angle of turn of the molecule on its axis is proportional to the "strength" of the induced magnetic field until a limit of saturation is reached: "weber angle" , or maximum distortion potential of the dielectric.

If additional power is applied to create a still stronger magnetic field, molecules that happen to exceed weber angles are wrenched away to migrate along the field path, to form bonds at new positions of equilibrium. The displaced and re-positioned molecules are termed "deflexions", or displaced ions (**Maxwell**, **Jeans**, 1916).

The magnetic susceptibility of a substance varies inversely as the temperature (Curies Law). This experiment potentially justifies a "K", or a susceptibility enhancement by the 'freeze storage' of all new re-positioning ions, and consequent stability in new positions. Ion bonds form slowly in a dielectric heated by intense magnetic field changes, known as 'inductance heating'. Cooling of the dielectric by air currents around the dielectric which draws off heat allows the dielectric to escape destruction by melting, brittle fracture, or other heat-caused affects.

The migration of displaced ions is to a surface area of the dielectric, where the heat sink phenomena allows a re-bonding temperature.

Known research in electric action versus dielectrics leads to other supporting information about the physical phenomenon.

- **Helmholtz**: The value of "K" changes in a dielectric when it is subjected to distortion. (K equals the dielectric constant of that mass..)
- **Maxwell**:   With displacement, the density of the medium (crystal structure) is changed so that its molecular structure is changed; as is its "K".
- The K of quartz depends on the direction of the imposed magnetic field "relative" to the crystal axis. A vertical K of quartz is 4.55, and horizontal K is 4.49 where K is a reaction to the earth's field.
- Magnetic conduction in a dielectric is altered as if the properties of the medium were altered during conduction by a change of the dielectric constant of the mass itself.

So far the phenomenon appears not to be rejected by known physical actions. About the phenomenon itself, a brief theoretical model may be postulated.

This may be a stress model of mass where changes of internal stress induce 'deformation of mass'. Thus the model suggests a 'two-part' investigation; (1) the stress model, (2) the later physical phenomena produced as a product of distortion, and the physical performance relative to change.

The Stress Model

The electric force between charged particles is independent of the masses of energies of the particles, and depends only on their charge; whereas, the gravitational force is proportional to the masses themselves. Since in special relativity mass and energy are related by $E=mc^2$, the 'strength' of the gravitational field increases as the energies of the virtual particles increase.

An artificially induced increased 'stress' in mass increases the energy of both virtual particles and gravity.

In an electron flow such as common electricity along a conductor, the 'pressure' of the flow affects the mass of the conductor by several methods:

1. Free electrons are displaced by induced energy.

2. Torque from electrical action is applied to the mass.

3. Stresses are induced within the mass.

4. Compression is induced within the mass.

5. Structure bonds are affected by such imposed stresses.

6. Ion orbital structure is relative to the induced energy; greater energy produces energy absorption with smaller orbits, higher velocities, (packing fraction).

Electric/Dielectric Combinations

The electrostatic attraction of one object to another depends on charge, shape, and surface area; but the magnetic attraction to a fragment of dielectric is a molecular phenomenon 'independent of shape', but not surface area. A non-magnetic body will be components of/or magnetic particles when a magnetic field is imposed; i.e. an attraction. Finally, a magnetic field will exist in a dielectric after/ when an induced field changes, or is no longer imposed. So it may be assumed that an intense magnetic field is the one force which is capable of externally affecting the dielectric molecular axis change.

Further Investigations

Alternating currents produce heat, and a magnetic field, in a dielectric to a depth proportional to the square root of the oscillation period; and to the applied strength. A magnetic particle, or ion, is capable of re-positioning, where 'all' mass particles are also susceptible. Unlike metals, a dielectric 'acts' as if it conducts one hundred percent of any imposed field. This is the single most important difference.

The molecular phenomenon may occur 'only' in a dielectric mass, and not in a metal. The magnetic conduction proportional to field depth with a strength sufficient to dislodge ions eliminates metals (exception: Bismuth) due to skin affect. The dielectric conduction of one hundred percent of imposed fields "throughout" the mass allows the 'total' mass to be involved, eliminating skin affect. So, it will affect all crystalline lattice structures (therefore metals affected), however the optimum solution for maximum affect of this phenomenon may reside within the electrical characteristics of dielectrics.

Magnetic Induction Currents

Magnetic induction postulated as a solenoidal induction throughout the field in the interior of the mass (all points equal) can occur in a dielectric, but not in a metal. Magnetostriction of dielectrics: there is an expansion of mass proportional to the induced strains (internal) to release pressure. This is a known, accepted phenomenon. There are 'diamagnetic' currents induced in the same crystal (opposite to magnetic) about which little is known, but which has been photographed at Gallimore Labs. Such currents are always found in 'stressed masses'.

Crystal Expansion Confirmed

Crystal expansion was examined from actual replication of the Kowsky and Frost experiment.

The crystal will have intense internal strains, generally 'only' in the direction of applied fields producing expansion, and diamagnetic currents of unknown effects or phenomena. (Many phenomena were detected).

The revised theory of phenomenon is stated as: The molecular motion and reaction of mass to intense magnetic fields may change the structure of the (dielectric) mass if the imposed field strength exceeds the force needed to rotate fixed molecules past Webers angle, where the result would

be a dislocation of the molecule from the mass structure. Given this field strength, it is almost certain that the re-positioning of molecules will change the normal lattice structure, and will be accompanied by permanent expansion of the dielectric along the vector of the imposed field.

Such diamagnetic currents as exist will be intense, and could produce a host of phenomena. The proposed 'Anti-gravity" phenomena. The proposed 'Anti-gravity' phenomena fall within an 'acceptable' but not proven phenomena at the present time.

It is noted that from the **Chicago College on Gravity Research** that a 60 Hz. alternating current imposed on a solenoid when placed under an aluminum plate, will cause the plate to heat, as well as 'lift' upwards as much as eleven inches. Such a lifting effect cannot come from magnetic actions, but may come from molecular actions, and the little known diamagnetic currents.

Since magnetic fields in alternating currents become stronger as the frequency increases, higher frequencies are found more efficient in producing the 'stress fields' producing lift phenomena.

Of interest is that one dielectric has been shown to 'fall' more slowly under 'natural' conditions than any mass should fall. It is unknown whether aluminum silicate reacts to existent low intensity magnetic fields, or whether it has an excessive diamagnetic current capability occurring naturally.

Water Absorption/Emission

The expanded crystal has been found to be both effervescent and deliquescent. This is unusual in a single mass; to absorb and release water like a sponge where the material (silicon dioxide) is neither an absorber or emitter prior to change of the mass structure, a degeneration of the structure is seen after one water cycle, and is apparently not repeatable.

The Kowsky and Frost experiment was reported to have a visual sighting of air currents flowing around the crystal when under electrical excitation. It is a fact that the air currents so described are a reality, but are not known to exist by crystallographers, unless they have considerable experience in electrical testing. Likewise, electrical testers and engineers are not likely to have witnessed this. It is here noted that air currents have been found around excited (oscillating) crystals, but only when a frequency band of one hundred kilocycles to four hundred eighty kilocycles is utilized. This is a further verification of actual research being in the frequency range specified, and of a true research sighting being transmitted.

Electricity Produced

An expanded lattice crystal has been found to produce a remarkable phenomenon: when an 'imbalance' occurs by stress changes in a 'stress balanced' crystal, electricity is produced.

A crystal 'grown' in an unbalanced state will 'convert one hundred percent of all radiation reaching it to electricity'.

Lift Factor

the following equation is only generalized, and its veracity should be questioned. It may be a guideline of potential results. The resulting values are indicative within limits of what can be expected experimentally.

$$\frac{\text{Force applied in watts x mass in Kg x Expansion \%}}{\text{Frequency}/7770} = \frac{\text{Kg lift}}{100}$$

Example: $2000 \text{ watts x} \frac{(5\text{kg x } 300\%)}{777 \text{ kc}/7770} = 2000\frac{(150)}{100} = \frac{3000}{100} = 30 \text{ kg lift}$

Mass Structure and Potential Collapse

All mass is susceptible to change. Dielectrics by having an organized molecular structure are subject to massive change through force applied. It is considered a phenomenon where lattice structure is expanded, and re-formed to a new related structure by energy; and that the structure is now a "storage medium" of great energies by strain locked in structure.

The stability of the medium, or rather the changed medium, is now questioned, as well as its life span. A sudden sharp blow or even chemical activity may "detonate" or collapse the new structure with great release of energy. This potential is seen at the present time to be both real and hazardous. Should the crystal mass be capable of sudden collapse, it could take one of two forms; sudden disintegration to a powder state, or detonation with a massive release of energy, perhaps similar to atomic conversion of mass to energy.

Self Contained Lifting Device

The subject mass utilized in this research has been quartz dielectrics. Quartz, unlike many substances, does not shear easily; but has a conchoidal fracture. Providing it did shear, then he lattice structure could be pried open at selected locations, and slabs of the expanded variety utilized in different applications. Because of the energy storage phenomena, it is assumed it cannot be 'sawed' as the shock potential is high, yet proportional to the degree of the crystalline lattice expansion.

The crystal itself will resemble plastic foam in weight and rigidity. Perhaps it could be sliced by a laser or electron beam.

Very little power is required to oscillate the substance for high lift. This and the weight needed to supply that power allows a fully contained device to be a reality. Power applied as frequency would have six basic contacts regardless of design, size, or aerodynamic shape; i.e. left side, right side, front, rear, top and bottom.

With solenoid controls, the full range of flight could be obtained; forward, right, up, down, reverse. The control would be by reversing polarities of a given area of surface section to provide the desired result. Each lift/control section would be electrically isolated in a smooth surface design by interposing non-expanded dielectric strips between sections. Such skin or the dielectric isolators could provide shape, rigidity, and supporting design.

Such dielectrics as ceramics display temperature resistance, and could be included as "skin." However, since speed is fully controllable, there should be no need for heat buildup; simply reduce speed.

Reverse Phenomenon

In trying to validate mass structure change as proposed, the 'reverse' method of gravitational

emission (i.e. "absorption") was used.

If a mass may "produce" radiation under coercion, then it may also be susceptible to that same radiation when exposed thus providing a "reverse phenomenon."

The lattice structure of a dielectric has been proposed as a storage medium of immense energies, when the energy applied produced a 'deflexion' change (deflected ions) or structural stresses of great magnitude. A first discovery was that by utilizing a 'new' means of electrical excitement, a "commercial" process of Deflexion crystals was realized. In further research, the 'reverse' phenomenon indicates that 'all' dielectrics having 'any' stress components may be susceptible to gravity radiation.

Discovered in 1974, the reverse phenomenon allowed for an on-time gravity monitor where a dielectric with a known stress component was seen to change proportional to the acting gravitational intensities. Later, in 1978 a new detector was discovered, the difference being that a 'general' state of stress was utilized here as opposed to a known 'finite' stress.

(J. G. Gallimore)

A Few Notes on the Article
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This article appeared in the February, 1981 issue of the Planetary Association for Clean Energy newsletter. It contains quite a bit of valuable information. It also has questionable information, which we shall review.

The reference articles that are referred to in Radio Umschau and Science and Invention was followed up in the October, 1927 issue of Science and Invention. This article is titled "Nullified Gravity-A Hoax" and completely disproves both the article in Radio Umschau and the one in the September, 1927 issue of Science and Invention.

The question arises: Why disprove all this early data if it is valid? And if it is not valid, why has J. G. Gallimore compiled all that data just to make an elaborate hoax look convincing? Obviously the answer must wait until further correlation from other researchers on this field has been published.

For now it would seem to be prudent to examine the work at hand. One questionable point is the equation. If it is examined closely, some simple errors in multiplication will be noted. Two corrected versions of this equation will be shown. Equation 1 is the original as seen in the article. Equation 2 is a corrected version based on the assumption that Equation 1 is wrong and the product would also be incorrect. Equation 3 assumes that the product is correct (it may have been the actual results of laboratory testing) and the equation is wrong. Equation 4 is a simplified version of the original based upon equation 3. Here are the equations:

Equation 1:

$$\frac{\text{Force applied in watts x mass in Kg x Expansion \%}}{\text{Frequency}/7770} = \frac{\text{Kg lift}}{100}$$

Example: $2000 \text{ watts x } \frac{(5\text{kg x } 300\%)}{777 \text{ kc}/7770} = 2000 \text{ x} \frac{(150)}{100} = \frac{3000}{100} = 30 \text{ kg lift}$

Equation 2:

$$\frac{\text{Force applied in watts x mass in Kg x Expansion \%}}{\text{Frequency/7770}} = \frac{\text{Kg lift}}{100}$$

Example: 2000 watts x $\frac{(5\text{kg x }300\%)}{777 \text{ kc}/7770}$ = 2000 x$\frac{(15)}{100}$ = $\frac{300}{100}$ = 3 kg lift

Equation 3:

$$\frac{\text{Force applied in watts x mass in Kg x Expansion \%}}{\text{Frequency/7770}} = \frac{\text{Kg lift}}{10}$$

Example: 2000 watts x $\frac{(5\text{kg x }300\%)}{777 \text{ kc}/7770}$ = 2000 x$\frac{(15)}{100}$ = $\frac{300}{10}$ = 30 kg lift

Equation 4:

$$\frac{\text{Force applied in watts x mass in Kg x Expansion \%}}{\text{Frequency/777}} = \text{Kg lift}$$

Example: 2000 watts x $\frac{(5\text{kg x }300\%)}{777 \text{ kc}/777}$ = 2000 x$\frac{(15)}{1000}$ = 30 kg lift

Another point of contention concerns this paragraph:

"Since magnetic fields in alternating currents become stronger as the frequency increases, higher frequencies are found more efficient in producing the 'stress fields' producing lift phenomena."

Upon examination of the equation, the reverse would be true. A higher frequency would produce a higher divisor, and thus a lower efficiency. If this paragraph is right, then the equation is dead wrong (or vice-versa). If he equation is right, then efficiency would surpass 100% at low frequencies and result in more mechanical power output than can be accounted for in consideration of power input in watts.

In closing, it would seem that further corroboration of the research data is needed to clear up these points, possibly involving a second experiment to duplicate any observed anti-gravity effects.

W.P. Donavan

The Kowsky-Frost Device Was a Free-Energy System!

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When I initially reviewed the article for The Antigravity Handbook titled, "Gravity Nullified", I didn't do an in-depth analysis. I thought it was interesting source material, but for some reason I didn't really get into the article and pick it apart. Perhaps it was because my attention became diverted by the allegation in the October, 1927 issue of Science and Invention that the previous article which appeared in September was a hoax.

When I recently DID do a review of the article, I noticed that the efficiency was rather high, approaching 34%. It seemed that the application of this technology was doable, after all, this efficiency was higher than jet and rocket propulsion. The figures seemed to hang together, unlike something you would expect from a hoax. So I wondered how the later experiment by Jerry Gallimore (published in the PACE Newsletter) would stack up, and I plugged the formula into an excel spreadsheet. I expected the system to break unity at a rather low frequency, probably at approximately 400 Hz. But at the frequency Jerry was using, the efficiency works out to 143%. That frequency was 777 KHz. So whether he knew it or not, he had a free energy device. What was the efficiency at 400 Hz.? It turns out to be 278,153%. The lift capacity in kg works out to be 29.1375 with a power input of just one watt. I can remember in a video that Tom Bearden did titled, "The Lost Unified Field Theory of James Clerk Maxwell", he mentioned that it would be possible to levitate a battleship with a flashlight battery. I always wondered what the phase conjugate material was in this case. After all, it would need to be a media which is highly stressed, nonlinear, and would possess a high dielectric constant. When I interviewed Jerry Gallimore in Los Cruces back in the 80's before he passed away, he mentioned that the dielectric constant of the material "went through the roof." He estimated that the constant was in the neighborhood of ten million. That's a very wealthy neighborhood. So it could have been phase conjugate material.

It could also be Biefield-Brown material. Back in 1984, when I did the Biefield-Brown formula, I noticed that a sort of breakeven point is reached at a dielectric constant of 8000-9000. At the time, I considered that the sintered barium titanates would be the way to go if one wanted to get a device to "lift-off" of the lab bench. I also knew that there were materials that went above that, but they were highly nonlinear in respect to their operating temperature, and their "window" was fairly narrow, about 10 degrees C. Anything above or below this temperature results in a severe drop in the K. What was not generally known, was that Townsend Brown experimented with a pulsating high voltage field, as well as pulsating low-frequency magnetic fields at right angles to the applied electric field potential. What does this do? Well, it turns the space between the plates into a waveguide. And the action of the pulsating fields at right angles to each other is equivalent to the application to a low-frequency electromagnetic wave. Was Brown aware of the Kowsky-Frost Experiment? It really depends on his magazine subscriptions. If he subscribed to Science and Invention in that time frame, or if he had access to back issues in the 50's when he resumed some of his experimentation, then he may have known about it.

Is there a connection between the Kowsky-Frost and Brown's experiments? I would say yes. When I originally did the Biefield-Brown formula, I "invented" a Biefield-Brown constant as a fudge factor to make the formula work. It represents a missing variable. What is that variable? I'm betting that it's the input frequency, or perhaps TWO synergistic variables, perhaps representing an input of electromagnetic

energy at right angles to the electric field. The original formula is still applicable to a DC field at high voltages, but the new formula would combine the characteristics of both effects. A hybrid formula would optimize this, and may lead toward a new propulsion concept. In the original article, "Gravity Nullified", they mentioned that only quartz and Rochelle salt crystals were considered. Are there others? Yes, there would be. What would the requirements be? Well, it would need to be a dielectric, and transparent to rf energy. Metallic crystals are out. Crystals which are semiconductors may or may not work, depending on whether or not they remain semiconducting AFTER the expansion process is completed. After these criteria are met, there are thousands of materials which are good candidates for investigation. They would not be limited to quartz and Rochelle salt. When Edison began his search for a suitable filament material, some of the most bizarre suggestions seemed to work the best. It may be so once again. As an example, why limit the investigation to inorganic crystals? Organic compounds may prove to be much more viable. Once a real civilian research program is started, there will no doubt be quite a few surprises.

I will now include my commentary which originally appeared after the "Gravity Nullified" article which I re-released lately, as well as a spreadsheet analysis of the Kowsky-Frost Experiment.

Here's the reprint:

Some Notes on The Article
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Please note that the crystal increased its size "twenty times its original length on any side". The density decrease would be the cube of that, or 8000. That's quite a decrease. According to the Funk & Wagnall's Standard Reference Encyclopedia, quartz has a specific gravity of 2.65. That means that the specific gravity went from 2.65 to 3.3125×10^{-4}. Another thing that was not mentioned in the article was the mass of the crystal. Since most quartz has a specific gravity of 2.65, and the volume is known (5x2x1.5 millimeters, or 15 cubic millimeters) a calculation for that can be made. There are 1000 cubic millimeters in a cubic centimeter, or 10x10x10 millimeters. So, we divide 15 cubic millimeters by 1000, or .015 cubic centimeters. One cubic centimeter of quartz will weigh 2.65 grams. So therefore, .015 cubic centimeters will weigh .03975 grams.

Now, we need to know the lift factor. In the article, we see that "the transformed crystal was so light that it carried the whole apparatus with itself upwards, along with the weight of twenty-five kilograms (55 lbs.) suspended from it and floating free in the air." I previously determined the mass of the crystal to be .03975 grams. Assuming that the 25 kilograms did not include the mass of the crystal, the total weight then is 25,000.03975 grams. The lift factor is 25,000.03975 divided by .03975 or 628931.81761. That's a fairly large number. This factor is applicable in both English and Metric systems. So, how much propulsive power does a 1 pound crystal have? It would amount to over 314 TONS. There seems to be a discrepancy between the above article and the later repeat of this experiment by Jerry Gallimore. Jerry's experiment seemed to indicate that there was only a lift factor of 800. Why is there so much of a discrepancy? It might have something to do with the quality of the quartz, or the method of "conditioning" the quartz during the expansion process. Or, possibly an unknown factor which could be discovered when the experiment is repeated.

Next, we need to calculate the power density, in watts per cubic centimeter. The volume of the crystal is .015 cubic centimeters. Putting one watt into this volume would result in a power density of 66.66

watts per cubic centimeter. But, in the article we see that, "by the use of greater power, finally to the extent of several kilowatts and longer exposure to the action, it was found eventually that from a little crystal, 5 by 2 by 1.5 millimeters, a non-transparent white body measuring about ten centimeters on the side resulted..." Several kilowatts indeed. So, what would the power density of THAT be? Well, that would be approximately 7000 watts divided by an initial volume of .015 cubic centimeters, or 466,666.67 watts per cubic centimeter. But, let's assume that the power density applied is constant, and varies during the expansion to accommodate a variable volume. Let us also assume that the 7000 watts is applied AFTER the 8000:1 expansion, and work the process backwards. 7000 watts applied to 8000 x .015, or 120 cubic centimeters comes to a power density of 58.33 watts per cubic centimeter. If we assume that this density is constant, then the beginning amount will be .87495 watts applied to the crystal. This will be slowly ramped up as the volume increased to 7000 watts.

Next, we need to calculate the efficiency. To pull up against Earth's gravity field is equivalent to accelerating the mass 32 feet per second per second. This 55 pound weight has 1760 foot-pounds impressed upon it to keep it above the lab bench. The conversion factor for foot pounds per second to watts is 1.356. This would amount to 1760 foot pounds multiplied by 1.356, or 2386.56 watts. Therefore, the efficiency would be the output, 2386.56 watts divided by 7000 watts in, or 34.093% efficiency. That's quite an impressive efficiency, compared to rockets or jet engines. This would amount to 127.27 watts per pound. How much would it take for a mass of 10,000 pounds? It comes to approximately 1.27 megawatts, or 25.45 amps at 50,000 volts. That's doable. Especially if Paul Brown's resonant nuclear cell is used.

When I ran the results through an Excel spreadsheet of the Gallimore experiment, I noticed that the efficiency seemed to "break unity" at low frequencies. One model seemed to suggest 400 Hz and lower would yield anomalous results. Very anomalous, with efficiencies ranging way above 1000%. Is this what Tom Bearden was explaining in "The Lost Unified Field Theory of James Clerk Maxwell"? Quite possibly so. There could be 4-wave mixing going on, and the medium is EXTREMELY nonlinear and stressed. Maybe when the experiment is repeated we can determine this.

Conclusion

Is this a hoax? I don't think so. I know there was a later article that appeared in the October issue of Science and Invention that claimed this, but since Jerry Gallimore claimed that he obtained positive results using similar procedures, I tend to think that the hoax claim is in itself a hoax. It seems that something got out, that wasn't supposed to GET out. If Gallimore's experiment is genuine, then who knows how far this technology could have been developed since its inception in 1927? If it took a decade to develop chemical rockets to get to the moon, then two decades would not be unreasonable. And what happened in 1947? The first "UFO flaps"! My, what a coincidence.

There was a mention by Jerry Gallimore that the dielectric constant of the material "went through the roof". He estimated that it went to 10 million or above. So the Biefield-Brown effect could also be responsible for this phenomenon as well. Is this the gravitational analog of a transistor? Possibly. In the Biefield-Brown effect, the question was raised when I did the chapter for the Antigravity Handbook whether or not the field was completely contained within the dielectric or whether it was "leaky". I assumed that it was completely self-contained, and that there was no way to get it to propagate outside the dielectric. But, you know what happens with assumptions. What if there is a way to get a field flow to go around the ship? Well, then it's conceivable to get something that looks like a "warp drive." Or

it's possible to produce an artificial wormhole and get a "stargate." Who knows how far they could have gone with this technology!

Finally, if this experiment which obviously has politically incorrect overtones, is repeated, perhaps the commercial exploitation of space can finally be realized. I believe that the results of this experiment is the key to man's future in space, perhaps whether man has a future in space at all.

Here is the spreadsheet:

Watts	Mass (kg.)	Expansion %	Frequency	Kg Lift	Efficiency%	Unity Ratio
2000	5	300	1900000	12.2684211	58.5586459	0.58558646
2000	5	300	1800000	12.95	61.811904	0.61811904
2000	5	300	1700000	13.7117647	65.4478984	0.65447898
2000	5	300	1600000	14.56875	69.538392	0.69538392
2000	5	300	1500000	15.54	74.1742848	0.74174285
2000	5	300	1400000	16.65	79.472448	0.79472448
2000	5	300	1300000	17.9307692	85.5857132	0.85585713
2000	5	300	1200000	19.425	92.717856	0.92717856
2000	5	300	1100000	21.1909091	101.146752	1.01146752
2000	5	300	777000	30	143.1936	1.431936
2000	5	300	50000	466.2	2225.22854	22.2522854
2000	5	300	40000	582.75	2781.53568	27.8153568
2000	5	300	30000	777	3708.71424	37.0871424
2000	5	300	20000	1165.5	5563.07136	55.6307136
2000	5	300	10000	2331	11126.1427	111.261427
2000	5	300	9000	2590	12362.3808	123.623808
2000	5	300	8000	2913.75	13907.6784	139.076784
2000	5	300	7000	3330	15894.4896	158.944896
2000	5	300	6000	3885	18543.5712	185.435712
2000	5	300	5000	4662	22252.2854	222.522854
2000	5	300	4000	5827.5	27815.3568	278.153568
2000	5	300	3000	7770	37087.1424	370.871424
2000	5	300	2000	11655	55630.7136	556.307136
2000	5	300	1000	23310	111261.427	1112.61427
2000	5	300	900	25900	123623.808	1236.23808
2000	5	300	800	29137.5	139076.784	1390.76784
2000	5	300	700	33300	158944.896	1589.44896
2000	5	300	600	38850	185435.712	1854.35712
2000	5	300	500	46620	222522.854	2225.22854
2000	5	300	400	58275	278153.568	2781.53568
2000	5	300	300	77700	370871.424	3708.71424
2000	5	300	200	116550	556307.136	5563.07136
2000	5	300	100	233100	1112614.27	11126.1427
2000	5	300	90	259000	1236238.08	12362.3808
2000	5	300	80	291375	1390767.84	13907.6784
2000	5	300	70	333000	1589448.96	15894.4896

2000	5	300	60	388500	1854357.12	18543.5712
2000	5	300	50	466200	2225228.54	22252.2854
2000	5	300	40	582750	2781535.68	27815.3568
2000	5	300	30	777000	3708714.24	37087.1424
2000	5	300	20	1165500	5563071.36	55630.7136
2000	5	300	10	2331000	11126142.7	111261.427
2000	5	300	9	2590000	12362380.8	123623.808

Conclusion-again

Are these figures for real? I assure you they are. I can't stress enough that there is a real phenomenon going on here, which is just waiting to be developed. The successful repetition of the experiment by Jerry Gallimore blows the claims of the original experiment being a hoax right out of the water. In a later paper, I will be getting the original source material from Radio Umschau if it is still available. I have contacts which can translate German, and can be trusted. Why did Science and Invention claim that it was a hoax? I think they were persuaded to do so, and not because of the antigravity aspects. There is a pernicious pursuit by those in power to keep this society on a short leash in regard to its energy resources. It's all about control. If this technology were allowed to develop back in 1927, then we would have colonized the solar system by now, and possibly the nearby star systems. But who would the penny-ante despots order around? Our political leadership has turned Earth into a prison planet.

Isn't it time to break out?
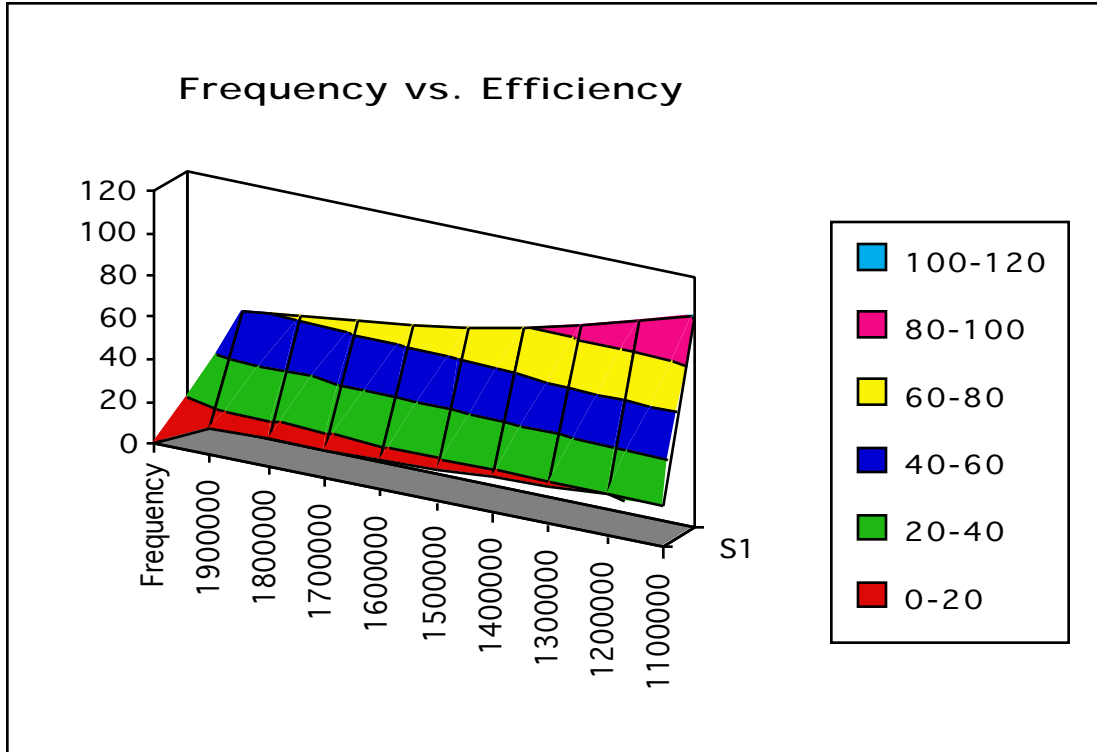
Nullified Gravity-A Hoax

In our issue of September, on page 398, we ran an article entitled "Gravity Nullified,' with a subtitle "Quartz Crystals Charged with High Frequency Currents Lose Their Weight." At the end of the article we also ran a line, *"Don't Fail to See Our Next Issue Regarding This Marvelous Invention."*

Those who were wise evidently must have had their suspicions aroused by the bottom line, and the wiser ones, if they inspected the main photograph carefully, no doubt at once saw the hoax.

The article, which came to us from Germany, appeared originally in a German periodical as an April joke, but it was so excellent that we thought that we could take a little liberty with our own readers. The question remains as to how many of our readers were fooled.

If you look closely at the main illustration, which we reproduce herewith, you will observe that the article labeled "1" is nothing more nor less than a microphone with a resistance. "2" is a pair of head receivers, and "3" is an old time German telephone transmitter with a mouthpiece which, in this case, serves the practical jokester as a handle. Naturally the critical inspector of the picture must have wondered what two microphones and a pair of head receivers had to do with the Gravity Nullifier. Also the supporting wire does not even touch the ring on the weight. Anyhow, we ask our readers' indulgence for the little hoax, for which we hope to be pardoned because the article surrounding it seemed quite authoritative and contained really a lot of good science tending to hide the hoax.

As a matter of fact, most of the statements are true, with the exception, of course, of those statements referring to the expanded crystal and to the loss of weight caused by the supposed high frequency currents.

There are so many wonderful things happening in science every day that he who would label anything as impossible may have to take his words back the next day. The real fact remains that gravity will be nullified sooner or later, and most likely by some such means as shown in the hoax in the September issue. That electricity and gravitation are closely allied no one doubts, and we would therefore not be surprised if even some of our more scientifically inclined readers, who did not pay close attention to some of the details, took the article as authentic.

Scientific hoaxes are no novelty. One of the most famous, which was not exposed as quickly as this one, appeared in no less than the New York *Sun*. At that time, in August, 1835, a certain professor was supposed to have submitted his report on a fantastic moon people to the *Edinburgh Journal of Science*, to which manuscript the New York *Sun* obtained the first rights, and the article ran consecutively over a period of time. These moon articles, written in a more or less scientific vein, aroused tremendous excitement, and the Moon Hoax was actually believed by thousands upon thousands of people at that time. Needless to say, the *Sun* afterwards exposed its hoax, but even though the newspaper did so, the hoax was still believed by thousands of individuals for years.

The moral is that we should not believe everything that we see, but do a little original thinking ourselves, because we may never know, otherwise, what are facts and what are not.

As a matter of interest to the editors, would like to hear from you as to your impression of the hoax article, and whether you believed it or not. This will give the editors a good basis for a compilation of interesting facts.

A Few Notes on the Article

In this short commentary we will examine the apparent inconsistencies in the preceding articles and the scientific evidence supporting the first article reported in a recently published experiment by J.G. Gallimore which follows this commentary.

It makes one wonder why such a magazine as Science and Invention would put their credibility on the line by publishing such a hoax. It is possible that they intended the sensational article to boost their sales much as the "fantastic moon people" article did for the New York Sun (this series of articles boosted the paper's circulation to the highest of any paper in the world at the time). However, one must wonder, in light of current knowledge of harmonic math and the incredible properties of crystals, whether or not the real hoax is not Science and Inventions retraction. Also, J.G. Gallimore claims to have successfully reproduced this experiment as reported in the Planetary Association for Clean Energy newsletter, volume 2, Numbers 4 & 5, February 1981 (this article follows).

Can this be called a hoax because the equipment bears a resemblance to certain mundane articles? It is commonplace for engineers to build projects from any scrap materials that they could use to prove the viability of their project. In light of this, could those items be microphones, a German telephone transmitter, a head receiver, etc.? Quite possibly those items may have been the raw materials that they used for the experiment, and the "scrap" material that they used no longer functions the way it did originally. Is it true that high frequency currents may produce anti-gravity effects? Referring to the article "Nullified Gravity—A Hoax": "As a matter of fact, most of the statements are true, with the exception, of course, of those statements referring to the expanded crystal and to the loss of weight caused by the supposed high frequency currents." If the October, 1927 article is indeed a hoax, then this may be similar to the Orwellian "Newspeak", and the very thing that they deny so vehemently is actually the truth. Actually, for the publication to take this stand would be an insult to the work of Nikola Tesla who experimented with the anti-gravitic effects of high frequency currents of high potentials and found them to "contain great promise" (see Bib.).

A number of inconsistencies have been revealed in the article "Nullified Gravity—A Hoax" through the evolution of our technology since its appearance in September, 1927. One inconsistency involves the digital reprocessing of the photograph that is in the article "Gravity Nullified". Digitizing the photo reveals that the ring actually does seem to touch the supporting wire.

Another interesting point is the admonition:

"There are so many wonderful things happening in science every day that he who would label anything as impossible may have to take his words back the next day. The real fact remains that gravity will be nullified sooner or later, and most likely by some such means as shown in the hoax in the September issue. That electricity and gravitation are closely allied no one doubts..."

And why choose a frequency within the range that they selected to conduct the experiments? That "magic" frequency just happens to be within the same range used by other anti-gravity and "free energy" researchers. Which leads one to suspect that they knew exactly what they were doing when they performed the experiment. And why would a hoax have so much apparently valid experimental data? Usually scientific hoaxes have intrinsic inconsistencies concerning the experimental parameters that are used, and it is those very inconsistencies that reveal the hoax. This contrasts to the body of the article "Gravity Nullified".

Also, in the article "Gravity Nullified," in the second paragraph, first line, "The discovery was made about six weeks ago in a newly established central laboratory..." This statement was made in the September issue, which would have put the article's appearance sometime in July. This would have been a bit late for an April fool's joke, as is stated: "The article, which came to us from Germany,

appeared originally in a German periodical as an April joke...", in the article above. It seems curious that a greater amount of inconsistency appears in the text debunking the original article than in the original article itself.

In conclusion, the only way the world will ever know what is really going on is to repeat the experiment as outlined in the original article, to see if the observed Anti-Gravity effects actually exist.

W.P. Donavan

2004 Postscript:

Since this article was written, I have obtained the original Radio Umschau article. It indeed was written in April, 1927. There are no indications that it is a hoax at this point, and a full translation has been made. There are additional photographs that were not included in the Science and Invention. Is it indeed a hoax? Ultimately, the jury is out until the experiment can be repeated, but so far I would say no. The full text of the translation courtesy of Steven Terecevicz will be supplied later in this work.

"There was a young lady named Bright
Whose speed was faster than light;
She set out one day
In a relative way,
And returned the previous night."
--Arthur Buller, Limerick in Punch, 19 Dec. 1923

"Genius...has been defined as a supreme capacity for taking
trouble...It might be more fitly described as a supreme capacity for
getting its possessors into trouble of all kinds and keeping them
therein so long as the genius remains."
--Samuel Butler, Genius, i.

EXTENSIONS BEYOND GRAVITY
ANTIGRAVITY

Antigravity: What can be said about it except it's the future dream. We want it yesterday but do not expect it for another fifty years. If someone says it is here today, the reaction is disbelief!

Atomic energy was first noticed as a squiggly line on a video screen for twenty-two years before the first atomic bomb; yet it was accepted as a real phenomena of nature.

Antigravity is not so accepted. All "show me's" want a full-fledged high winging passenger carrying flying saucer as a "starting" demonstration. Antigravity then has an emotional impact proportional to it's potential uses.

Skyhooks to floating chimney painters, floating derricks to piano lifters, aircraft to auto, all starting points for applications. But, nature always has a "but" in there somewhere; all this is possible but... ! Even more - including new physics, chemistry, electronics and even direct application in medicine.

Postulate 186.   The principle of equivalence: (established) Inertial mass, that is, the resistance of objects to being moved by an outside force, is exactly equivalent to gravitational mass. That is, the gravitational force a given mass will exert.

Postulate 187.   General relativity treats gravity as a phenomena fundamentally different from the forces of nature such as electromagnetism. In general relativity, gravity results from distortions in the fabric of space itself; it is not really a force at all!

The maximum energy of distortion theory:

This theory relates the distortional energy of a point under a general state of stress to that of the tensile specimen at yielding. A hydrostatic state of stress occurs when all three principle stresses are equal and no distortion occurs. Any deviation from this state will cause distortion. A general state of stress can be thought of as a pure hydrostatic state plus a distortion state.

Hydrostatic stress in a mass can be measured by the strain stresses it introduces. The hydrostatic stress on mass is the result of a gravitational wave between two mass bodies which is a "space" curvature and not a true wave. It being more like a negative pressure wave; a strain of space! The corresponding physical phenomena is then a hydrostatic stress in masses affected.

A positive hydrostatic stress field has lines of force or waves that attract mass as a phenomena. But, the opposite also exists as a negative hydrostatic stress field and masses are repulsed.

GRAVITY RESEARCH TODAY

What is the present status of gravitational research? As you know, there are less than thirty patents existing on gravity. The monitor devices thus invented -patented - are in general of magnetometers which measure 'magnetic fields, not gravity. Only six to seven patents are of true gravitational monitors by intent. Of these, none have been verified as working!

Although Weber claims to have measured a gravitational wave, it was not verified. The other gravitational physicists around the world have been hard on him since several have tried to verify his discovery, and failed.

So, where is gravity today? The best answer is to include here an introduction to a paper (mine) which hopefully is in proper context here. This introduction was given at the 1981 Gravity Conference at Hannover, Germany. It was later deleted from the published transcript because, as they said, "too blunt and military potential too evident."

Here, then is a blunt status report!

INTRODUCTION

Gentlemen, it is not in my character to speak softly; or to provide a paper without giving away some new research toy for others to play with, in representing PACE, U.S. PSYCHOTRONICS, and GALLIMORE LABS; it is realized that content of the papers represent self only, and incur no responsibility by the supporting organizations. I wish to thank them for giving their support and a free hand in reporting my research.

This paper is an end result of research carried out by Gallimore Labs. It is the summation of eight years of laboratory monitoring of transducers to provide a practical framework of Gravity applications. The orientation of this research has been for electronic engineers so they could understand Gravitational radiation, and thus apply new transducers to current technology.

The existing situation is that we have the combined Einstein and Russian schools of theoretical Cosmos approach where extended math analysis is utilized to provide a Gravitational foundation of phenomena. This is selectively an area where only mathematicians can probe comfortably. We have the Quasars and black holes for the physicists to play with, again on a theoretical level; but nothing for the engineer to apply to the everyday world. We lack not application, but transducers.

The multi-level Swiss laser transducer to detect Gravity anomalies, or the Weber drums at Hughes Aircraft do nothing for the engineer who wants a cheap device which he can use in inventing new applications.

The National Aeronautical and Space Administration (NASA) dreams of Gravitational Astronomy, but lacks the Gravity-to-electromagnetic detection and conversion process to implement it. Their engineers and one hundred million dollars appropriated by the Congress of the United States in 1977 stand ready to attempt the Gravitational astronomy installation whenever Gravity technology becomes practical.

Let's look at some more applications waiting for control of non-electromagnetic radiation (gravity) or the transducers to detect.

Assuming that an inexpensive Gravity to E.M. conversion transducer is being discovered today; then tomorrow we will have Gravitational on-time analog monitors for examination of ore beds and ore location, earthquake prediction by a preceding gravitational shift, and biological examination of

life itself by frequencies of gravity. Planet monitoring and space itself become later applications.

When an emitter and a detector of G-radiation can be joined in a science, then we will have spectroscopes of unimaginable ability, useful for diagnosing and even curing diseases by direct gravitational effects on biological cells. Biological warfare then also takes on a new and deadly meaning where distance between any two bodies becomes totally unrestrictive to application.

With the discovery of gravity control comes the impossible to miss discovery of hydrostatic anti-gravity. Indeed this discovery has already been made. Practical Gravity and anti-Gravity technologies exist today. There is even a Gravity bomb possible, an artificial creation of a black hole which results from purposeful creation of "structure" instability of mass. Such a bomb going off would not even be heard by a person standing beside it, but would create a microscopic black hole that would suddenly grow as it consumed the Earth. It could be the ultimate fate of man, and the ultimate horror by destroying all life and even all traces of our planet.

The discovery of anti-gravity provides us with a possible realization of the flying craft, but few see that there is also free unlimited energy available for industrial nations. The 'excitation' of mass requires so little energy that a craft could be powered by a normal car battery, and visit any four planets before a replacement battery or charge was needed.

Let me speak frankly; all such technologies as described herein are known today. All the foregoing devices are a reality in some primitive or developed context. Such discoveries have been made at Gallimore Labs, and are in common usage daily. Even a laser equivalent, the 'Graser', which emits a coherent circular beam of three centimeters width. A Gravity/Space/Time beam which passes through the Earth unimpeded, and may be modulated easily.

Please note that while such discoveries are in existence, all patent applications to date have been rejected by the United States except one, which was given a patent, and later taken away.

Gallimore Engineering has no doubts that some, all, or more technology as discovered in its non-government lab are known to the United States and other governments, and are therefore classified top secret potentials which have not been released for the common good.

Such restrictions on a commercial industrial research lab as not allowing patent of discoveries has reduced said lab to a perpetual poverty level, and insured an ineffective status for further research.

From the research stated, this paper presents two views of Gravity technology, a theoretical exploration of Space/Time obviously in very general terms , but with some new concepts to excite theorists, and a practical new approach for engineers and crystallographers.

The discovery of Gravity and its control preceded the research which suddenly found that anti-gravity had somehow been discovered in 1927 by a Polish and German team of scientists working for the Telefunken company.

The theoretical understanding of Gravity itself came as a result of laboratory experimentation where published popular theories were found lacking in some aspects, all that is except Einstein physics. The foundations proposed by Einstein were found to be inhibited beyond a certain point. Whether this

was accidental or purposeful is unknown. Part one of this paper simplifies Space/Time physics and reaches beyond the Einstein matrix.

The best physicist in the world is an unknown school teacher in Michigan by the name of Rocky McCollum. His theoretical approach and knowledge has influenced the formation of the stress physics proposed. His work has passed as far beyond Einstein as Einstein passed beyond his contemporaries. The reference here as 'best' is defined by phenomena understanding and control, not popularity or awards.

My work has been best known in crystallography. The accepted theory of crystal growth and control derived from my research, but on being nominated in 1963 for the Nobel prize, contained no reference to me, but was instead proposed by a lab which provided the proof of the Gallimore theory of crystal growth, and their own men as the discovering scientists.

Of important here is the combining of separate sciences: The stress physics of McCollum, the crystallography of Gallimore, and the uncommon electronic theory of Sir James Jeans who in 1919 published an electromagnetic analysis which has never received an award, but contains the history of each principle which is not found in higher learning institutions. Jeans accurately defines Gravity and anti-Gravity by other names. A wealth of phenomena has been uncovered, as have the math relationships to conventional electronics.

Let me now proceed to part one of the submitted paper, and I hope it justifies the bluntness of this introduction.

J. G. Gallimore
Nov. 1, 1980

Gallimore Research Laboratory (Confidential)

RE: In-house research; such research to date on gravity, space, or time phenomena have produced the potential of one hundred thirty seven patents; but compression of related patents as coverage under one roof will reduce total patents to slightly over eighty.

Gravity achievements specified: Starting Dec., 1975, microsecond to microsecond measurements of gravity intensity transfers have been made, and this defined as 'on-time' monitors, with one patent pending thereof. Such control at present extends to 'emission' devices where artificial generation of gravity at earth relative intensities exceed earth normal by two thousand percent. As yet, no limitations have been found on future technology potential intensities. Such 'input' and 'output' control of gravity radiation have produced the following technology:

a.   Modulation of gravity (even through mass) and subsequent detection.
b.   1/D attenuation of signals vs. distance.
c.   Solid-state emitters and detectors of gravity/space/time.
d.   Coherent emission of gravity radiation.
e.   Microwave-type control of collected radiations.
f.   Control of some anomalies of space/time, little exploration due to lack of equip.

g.   Control-gravity effects on mass structure, insufficient equip. to explore properly.
h.   Gravitational astronomy unit constructed, worked, now destroyed for parts.
i.   Bio-physical effects of gravity catalogued.
j.   Nuclear mass reactions from condensed g-radiation noted, defined, dangerous work!

Specifically, the research of J. G. Gallimore has aided gravity research by adding physical control and manipulation components, such discoveries being unfunded and unknown, are just now coming to be evident by patent applications for commercial usage of gravity radiations.

*"Books, we are told, propose to **instruct** or to **amuse**. Indeed!... The true antithesis to knowledge, in this case, is not **pleasure**, but **power**. All that is literature seeks to communicate power; all that is not literature, to communicate knowledge."*
--Thomas De Quincey, Letters to a Young Man, Letter iii. De Quincey adds that he is indebted for this distinction to 'many years' conversation with Mr. Wordsworth.

"Common sense is the most widely shared commodity in the world, for every man is convinced that he is well supplied with it."
--René Descartes, Le Discours de la Methodé

"To believe in your own thought, to believe that what is true for you is true for all men,---that is genius."
--Ralph Waldo Emerson, Self-Reliance

And for those who ask if gravity control and free energy will remain a secret:

"Three may keep a secret, if two of them are dead."
--Benjamin Franklin, July 1735

PATENT APPLICATION
of
JERRY GLENN GALLIMORE
(Case 2)

DEFLEXION CRYSTAL

This invention relates to a commercial process of altering the structure of a piezoelectric, anisotropic, organized dielectric without altering the chemical composition of the dielectric. More particularly, this invention relates to a structural expansion of the crystalline structure of a dielectric crystal which results in the alteration of the electrical characteristics of the dielectric, and produces internal and surface superconductive properties on the dielectric.

The process of changing a dielectric structure includes the addition of electrical energy to a dielectric crystal, the absorption of the energy by the crystal, the accumulation of shear stress upon the bonds of the crystal caused by the energy, and the reaction of the crystal to the stress. By inducing stress with unequal parts of a sine square wave, an increasing accumulative stress is obtained from one cycle to the next, causing the crystalline structure of the dielectric to break down along weak bonds and rebond in a manner wherein the rebonded internal crystalline structure is stronger than the original lattice structure.

A crystal which is created according to this process is found reactive to any induced field. A crystal which is reactive to purely cyclical or steady fields will tend to repel stress-inducing fields such as electrical and magnetic fields. By repelling magnetic fields, the reformed crystal will be able to achieve superconductive properties along the lines of force within and on the surface of the dielectric. A crystal reformed according to the present process may be made 30 to 100% superconductive, depending on and directly proportional to the amount of structural expansion obtained.

The reformed crystal has applications as a base or substrate for integrated circuits, or for a base or substrate underlying an integrated circuit. The electrical properties produced by the structural changes within the reformed crystal serve to reduce the capacitance and inductance losses of the dielectric. Capacitance and inductance losses tend to limit the reliability of devices such as integrated circuits, and therefore, by limiting these losses, the reformed crystal dielectric will increase the speed and reliability of devices such as integrated circuits.

According to the present invention, the lattice structure of a piezoelectric, anisotropic dielectric crystal is expanded by inducing into the crystal accumulative shear stress. During the expansion process, the crystal must be kept cool to permit the dissipation of heat from the crystal. The stress must be removed from the crystal prior to structural breakdown, or structural collapse will occur.

The invention may best be understood by referring to the following description and accompanying drawings which illustrate the invention. In the drawings:

Figs. 1-3 are a sequential schematic illustration of a crystalline arrangement being broken down to an amorphous mass by applying uncontrolled energy to the arrangement;

Fig. 4 is a schematic illustration of a crystal arrangement wherein the crystal structure and its bonds are depicted;

Figs. 5-7 are sequential, schematic views of the growth and reformation of a dielectric crystal wherein controlled force is applied according to the present invention;

Fig. 8 is a schematic representation of a circuit designed to achieve the controlled forces required by the present invention; and

Fig. 9 is a schematic representation of the path a crystal aggregation will follow when released from an unreformed crystal arrangement according to the present process.

The deflexion process is an electrical alternating current means of changing piezoelectric dielectrics with organized lattice structures, such as quartz and barium titanate, by expanding the lattice structure of the crystal. A single deflexion occurs when a molecule is forcibly disengaged from its location and then aligns with the internal pressures within the dielectric mass to take up a new position or bond. A number of weak crystalline and molecular bonds are easily moved, but soon greater amounts of power are needed to break the more stable bonds, and hence free the molecules and aggregations in the crystalline mass. In the preferred process, the natural frequency of the crystal is used for maximum effect.

The exertion of accumulative stress energy upon the crystal results in a new lattice structure slowly emerging. Continued forced deflexion repositions the molecules and crystal aggregations. Each new bond formed by this force constitutes stored energy. Electrical fields of alternating current which are induced into a dielectric produce tremendous stress and internal pressures within the crystal structure. This stress causes mechanical deformation and expansion to occur, with the displaced aggregations and molecules taking up new bonds. Further applied induced energy breaks more weak bonds in the basic structure, which results in additional expansion of the crystal lattice. New bonds are formed which result in a new, reformed structure for the crystal lattice. The molecules and aggregations which are the building blocks of the dielectric align with existing internal pressures and against further applied induced energy, which results in increased pressure within the crystal. A point is reached at which the polarization components of the dielectric are opposed to further induced energy. At this point, maximum deflexion occurs. At the point of maximum deflexion, the dielectric has reached maximum expansion, and no further changes can be made. In the reformed crystal, normal spatial properties are not exhibited. Anomalies in the electrical characteristics of the crystal results in surface superconductive phenomena.

A crystal will not necessarily reform when subjected to any stress. It is important to differentiate between compressional stress, equivalent reversing stress, and accumulative stress. Compressional stress results from energy being induced in the dielectric which either balances the stress within the crystal, or is insufficient to measurably affect the crystal. If too much compressional stress is induced into the crystal, the crystal will undergo structural collapse. Equivalent reversing stress results from cyclic alternating or pulsating electrically timed waves being introduced into the mass of the crystal, with the mass of the crystal being pushed one direction during one half cycle of the current, and in the opposite direction during the remaining half cycle. These two reactions normally neutralize each other. Accumulative shear stress results if the cyclic, alternating, or pulsating half cycles are of unequal magnitudes. The instant invention contemplates the application of shear stress by utilizing alternating polarities of unequal magnitudes. The stress induced in the crystal structure from one half cycle is therefore different than the stress induced from the remaining half cycle. This results

the first half cycle, the induced energy serves to push the crystal structure further than the unequal second half cycle can push the crystal structure in the opposite direction. This results in only partial dissipation of the induced energy exerted upon the crystal in the first half Cycle. The remaining energy accumulates from one cycle to the next, and is stored by the crystal. Gradually, this stored energy results in deformation of the mass because of the stress accumulated on structural positions within the crystal. The weak bonds tend to be broken first. When bonds are broken, the ions which are displaced release heat and reposition themselves along structural lines of major strength. The induced stress tends to break the weaker bonds first and then tends to attack the stronger sub-structural bonds. The mass continues to be deformed and heat continues to be released until either the crystalline structure collapses, or the stress is removed by the cessation of the exertion of electrical force upon the structure. The deformation will also cease when the energy needs for further expansion are greater than the energy being exerted upon the crystal. The crystal experiences an inversely logarithmic rate of growth over time, with increasing energy being needed to expand the crystal further as the crystal increases.

If the signal is removed prior to structural collapse, the mass continues to hold the structure caused by the stress-induced deformation, and does not revert back to its initial form.

Referring now to Fig. 1, an arrangement 10 of major crystal aggregations 12 is schematically represented wherein the major crystal aggregations 12 are held together through major structural bonds 14. The arrangement 10, although represented as a two-dimensional mass, should be understood to be a three-dimensional entity with the major crystal aggregations 12 being held by bonds (not shown) to other crystal aggregations (not shown) which are above and below the plane of the drawing. It should also be understood that the major crystal aggregations 12 represent a collection of more than one molecule of the particular dielectric, and that the views presented are not to be taken as views on a molecular level, but on a macromolecular level. Fig. 2 is a sequential diagrammatic view of the arrangement 10 of Fig. 1 wherein, according to existing technology, heat and electrical force are being applied to the arrangement 10, and thereby causing the major structural bonds 14 which unite the major crystal aggregations 12 to break. The result of this applied force is illustrated in Fig. 3 wherein the major structural bonds 14 are broken and the previous arrangement 10 is converted into an amorphous mass 16, which lacks any ordered arrangement.

Referring now to Fig. 4, an arrangement 18 of major crystal aggregations 12 contains sub- arrangements 20, 22, 24. Each sub-arrangement 20, 22, 24 contains six major crystal aggregations 12, with some major crystal aggregations being shared by more than one sub-arrangement. In sub-arrangement 20, only the major structural bonds 26 are shown. The major structural bonds 26 represent the attraction between adjacent major crystal aggregations 12. Sub-arrangement 22 shows both of the major structural bonds 26 and the sub-structural bonds 28. The sub-structural bonds 28 represent the attraction between non-adjacent major crystal aggregations 12. Sub-arrangement 24 shows the major structural bonds 26, the sub-structural bonds 28, and the sub-sub-structural bonds 30. The sub-sub-structural bonds 30 represent the attraction between minor crystal aggregations 32 and either major crystal aggregations 12 or other minor crystal aggregations 32. According to the present invention, when electrical force is applied to crystal arrangement 18, the sub-sub-structural bonds 30 will be the first to be broken, with the matter thereby released being the first to rebond. Upon the application of more energy, the sub-structural bonds 28 will later be broken, and finally the major structural bonds 26 will be broken.

Referring now to Figs. 5-7, a sequential view of the growth and reformation of dielectric crystal arrangement 34 is shown. Referring now to Fig. 5, an unreformed arrangement 34 contains sub-

arrangements 36, 38, 40, 42. Each sub-arrangement 36, 38, 40, 42 contains major crystal aggregations 12 which are bonded to adjacent major crystal aggregations 12 by major structural bonds 26, which are bonded to non-adjacent major crystal aggregations 12 by sub-structural bonds 28, and which are bonded to minor crystal aggregations 32 by sub-sub-structural bonds 30. According to the present invention, electric and thermal energy flows through the dielectric crystal arrangement 34 during only one-half of an alternating cycle. This has the effect of causing the energy to flow in one direction which, for purposes herein, is arbitrarily defined as from left to right.

Referring now to Fig. 6, the application of energy causes the sub-sub-structural bonds 30 to break first, which frees the minor crystal aggregations 32 to migrate along the crystal and rebond down current of sub-arrangements 36, 38, 40, 42 to form new sub-arrangements 44, 46. The newly formed sub-arrangements 44, 46 are formed with the crystals forming along major structural bonds 26 to provide the new sub-arrangements 44, 46 with a structure formed primarily of major crystal aggregations 12 held together by relatively strong major structural bonds 26.

Referring now to Fig. 7, as more energy is applied to the arrangement 34, the sub-structural bonds 28 are broken, causing the ions and crystals held by the sub-structural bonds 28 to flow along the direction of current flow to form new sub-arrangements 48, 50. Like new sub-arrangements 44, 46, new sub-arrangements 48, 50 are formed along lines of major structural bonds 26 and are comprised of major crystal aggregations 12 held together by major structural bonds 26.

Referring now to Fig. 9, a schematic representation is shown of the path a crystal aggregation will follow when the crystal aggregation breaks away from an unreformed crystal arrangement. A crystal aggregation 62, when released from an unreformed crystal arrangement (not shown), will tend to migrate to the down current end 63 of the crystal 64, thereby causing the crystalline growth in the down current end 63 of the crystal 64.

It can be appreciated that during the formation of a reformed crystal by the introduction of electrical and thermal energy into the crystal, heat will be likely to build up within the crystal. According to the present invention, the heat will be dissipated due to the heat sink phenomena caused by the irregular microsurface of the crystal. The surface of the crystal before, during, and after reformation is irregular. This allows the surface of the crystal to dissipate heat, which consequently allows the crystal to rebond in new sub-arrangements 44, 46, 48, 50, as shown in Figs. 6 and 7. Without the dissipation of heat, the temperature of the crystal might be too high to allow rebonding.

There are several ways of achieving the aforementioned results of crystal growth along major structural lines. One method involves the timing of cyclic signals which are varied in different half cycles. Another method involves the use of repeated high-power DC pulses. A third method involves the use of a pulsed DC offset current, and a fourth method involves frequency-induced energy into the dielectric with either the timing or the intensity being unequal from one half cycle to the next half cycle. A fifth method involves the distortion of one half cycle (e.g., sine half cycle plus square half cycle, etc.) wherein two or more signals are applied.

One method successfully utilized by the applicant is the fourth method stated above, i.e., frequency-induced energy introduced into a dielectric with either the timing or the intensity unequal from one half cycle to the next. The induction of a 200 kilocycle frequency energy, used at 2,000 watts for thirteen hours, has provided in excess of 100% volume expansion in a crystal of barium titanate. In

this experiment, the dielectric was kept at approximately 45°F, which allowed the dielectric to cool, and thus prevented excessive heat buildup which would result in a melt-down of the crystal. It is believed that if the temperature were kept to between 0 and 20°F, the heat release of the dielectric would be further enhanced. Referring now to Fig. 8, another method which is believed to result in well-controlled crystal growth is to employ a capacitor discharge circuit 54 for a high-frequency, high-voltage spike to rip away ions. According to this method, a high-power silicon controlled rectifier 56 and capacitor 58, 60 (of approximately 4,000 watts) is designed so that one of the two capacitors discharges each half cycle, but the commutation signal discharge 62 caused by the circuit 54 is unequal in duration or intensity to the charging signal discharge 64 caused by the circuit 54.

The dielectric used according to this invention for crystal expansion must be a piezoelectric, anisotropic dielectric having an organized lattice structure. Quartz or barium titanate are examples of such piezoelectric and anisotropic dielectrics wherein the initial masses are susceptible to change by forced deflexion bonding. Amorphous glasses are examples of materials which will not respond to reformation by deflexion bonding.

A dielectric crystal which is expanded according to the instant invention has different properties than a dielectric crystal which is not expanded. The dielectric constant in an expanded crystal is changed from its normal dielectric value to a value defined by:

$$K(_{reformed}) \quad (\overline{\text{ expansion}}) \, (\overline{K}_{(unreformed)})$$

where K(reformed) is the dielectric constant of a crystal reformed or expanded according to the present process, $\overline{\text{expansion}}$ is the square root of the expansion of the crystal as a result of the deflextion process and $K_{(unreformed)}$ is the dielectric constant of a crystal before reforming or expanding by the process. The resistivity of the dielectric markedly increases proportionally by the same formula. These formulae are defined at room temperature (approximately 76°F) as permanent physical characteristics of superconductive surface phenomena. All induced electrical fields flow over the surface and also over metallic coatings which are deposited on the surface, without impairment or resistance. A metallurgically deposited dielectric stratum partially incorporates the new structure of a reformed dielectric with a corresponding increase of resistance value at the surface and a reduced value of surface resistance away from the surface. The net result is a surficial super-tunnel effect of minimum capacitance to existing electrical fields. A deflexion crystal is therefore an expanded structure of mass which is metrically reactive via spatial distortions. Also upon expansion, the optical transmission of a dielectric decreases, for example, from clear to opaque. Additionally, there is believed to be refractive index change, or frequency response absorption, of electrical signals which is proportional to the dielectric constant. It is also believed that if the reformed dielectric is kept at temperatures greater than 50°F, there will be a gradual stress reduction over ten to twelve years, which results from stress relief within the crystal.

The stress incorporated into the deflection crystal during the deflection process approaches the very limits of stress which a mass can sustain. The lattice structure of the crystal is used to permanently lock in the perpetual stress produced in the process. This results in a mass which will avoid absorption of any stress inducing energy radiation. Therefore, a deflextion crystal has the valuable peripheral property of reversing electrical characteristics of dielectrics. A reformed dielectric exhibits the following differences from an unreformed dielectric.

(1) During the deflexion process, there is an abrupt change in polarization. In a reformed dielectric, there is one pole which is in the center of the mass;

(2) A reformed dielectric exhibits a marked difference in conductivity through an avalanche breakdown of the crystal structure;

(3) There is an abrupt change in permittivities, creating a stress field reactive to higher dimensional electromagnetic radiation, and to all metric fields (gravity, space, time);

(4) There is a coherence of the surface electron-tunnelling effect (local metric distortion);

(5) There is an abrupt change of the dielectric's "K" value.

In summary, the deflexion crystal is supersensitive to all energy fields and radiation, and is reactive in the polarization components contained within the mass. That is, there is an electrical change. Thus, the deflection crystal becomes the first real time monitor of gravitational flux, space curvature, and time stress anomalies. It is likewise sensitive to all electromagnetic fields with the polarization components of change being monitorable.

What is claimed is:

1.   A process for expanding the volume of a piezoelectric, anisotropic dielectric crystal comprising the steps of inducing into said crystal, cyclic electrical fields wherein the half cycles of field are of unequal intensity while cooling the crystal to permit dissipation of heat, and ceasing the induction in said crystal of said fields prior to structural collapse.

2.   The invention of claim 1 wherein the unequal intensities are achieved by applying at least two signals.

3.   The invention of claim 1 wherein the unequal intensities are achieved by making the magnitudes unequal during alternate half cycles.

4.   A process for expanding the lattice structure of a piezoelectric, anisotropic dielectric crystal comprising the steps of inducing across said crystal a pulsed direct current voltage while cooling the crystal to permit dissipation of heat, and ceasing the induction of said current into said crystal prior to structural collapse.

5.   A process for creating a superconductive piezoelectric dielectric crystal comprising the steps of breaking down the sub-structural and sub-sub-structural bonds which bind together the crystal, freeing the crystalline particles bound together by the sub-structural and sub-sub-structural bonds, and rebonding the freed crystals along the lines of major structural bonds.

6.   The process of claim 5 wherein the crystalline particles are aggregations of molecules.

7.   A process for altering the structure of a dielectric element without altering the

chemical composition of said dielectric comprising the steps of breaking down the structural bonds of the crystal lattice structure of said dielectric, and forming a new crystal lattice structure for the dielectric wherein the bonds are made along lines of maximum strength.

8.   The process of claim 7 wherein dielectric is a piezoelectric anisotropic dielectric having an organized lattice structure.

9.   The process of claim 8 wherein the dielectric is comprised of barium titanate.

10.   The process of claim 7 wherein the dielectric is comprised of quartz.

11.   An internally and surficially superconductive piezoelectric, anisotropic dielectric crystal comprised of crystalline particles bound together preponderantly along major structural lines, said dielectric being formed by the process of inducing into said crystal cyclic electrical fields wherein the half cycles of said fields are of unequal intensity, while cooling the crystal to permit dissipation of heat, and ceasing the induction of said fields into said crystal prior to structural collapse.

12.   A process for expanding the lattice structure of a piezoelectric, anisotropic dielectric crystal comprising the steps of inducing into said crystal accumulative stress while cooling the crystal to permit dissipation of heat, and ceasing the induction into said crystal of said stress prior to structural collapse.

ABSTRACT

A process for altering the structure of a dielectric element without altering the chemical composition of the dielectric includes the steps of breaking down the structural bonds of the crystal lattice structure of a piezoelectric, anisotropic dielectric and forming a new crystal lattice structure for the dielectric wherein the bonds are formed along lines of maximum strength. The bond breaking and forming are caused by introducing into the crystal a cyclic, alternating, or pulsating wave with half cycles of unequal intensities. The inequality in the waves half cycle intensities causes unequal elastic reactions within the dielectric crystal. The energy which accumulates within the crystal as a result of the unequal intensities causes the crystal to expand.

DECLARATION, POWER OF ATTORNEY, AND PETITION
(Gallimore Case 2)

I, Jerry Glenn Gallimore, do solemnly declare: that I am a citizen of the United States, residing at 5627 E. Julian, Apt. 16, Indianapolis, Indiana; that I verily believe I am the original, first, and sole inventor of the invention entitled DEFLEXION CRYSTAL described and claimed in the foregoing specification; that I do not know and do not believe that said invention was ever known or used in the United States before my invention thereof, or patented or described in any printed publication in any country before my invention thereof, or more than one year prior to this application, or in public use or on sale in the United States more than one year prior to this application; that said invention has not been patented or made the subject of an inventor's certificate issued before the date of this application in any country foreign to the United States on an application filed by me or my legal representatives or assigns more than twelve months prior to this application; that I acknowledge my duty to disclose

information of which I am aware which is material to the examination of this application; and that no application for patent or inventor's certificate on said invention has been filed by me or my legal representatives or assigns in any country foreign to the United States.

And I hereby appoint Thomas P. Jenkins, William R. Coffey, Jerry E. Hyland, David H. Badger, Richard D. Conard, James A. Coles, and Andrew James Richardson (Attorney Registration NOS. 13556, 24023, 20904, 22597, 27321, 28291, and 26983) my attorneys, with full power of substitution and revocation, to prosecute this application, and to transact all business in the Patent and Trademark Office connected therewith; and 1 specify that communications regarding the application be directed to:

JENKINS, COFFEY, HYLAND, BADGER & CONARD
One Indiana Square, Suite 3110
Indianapolis, Indiana 46204
Telephone: (317) 635-3519

Wherefore, I pray that Letters Patent be granted to me for said invention, and I hereby sign the foregoing specification, declaration, power of attorney, and this petition.

And I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Declared at_____

this_____day of_____,1981.

Inventor: Post Office Address:

_____   5627 E. Julian, Apt. 16
Jerry Glenn Gallimore   Indianapolis, Indiana 46219

"All theory, dear friend, is grey, but the golden tree of actual life springs ever green."
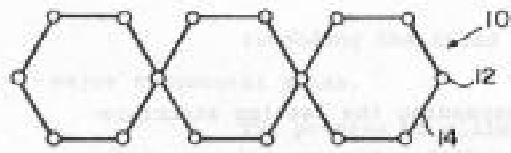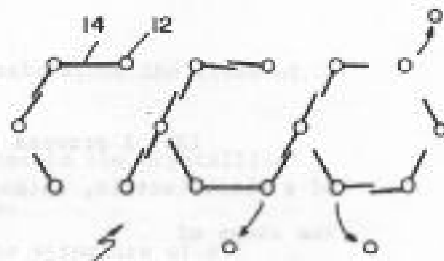--Juhann Wolfgang von Goethe, Studierzimmer
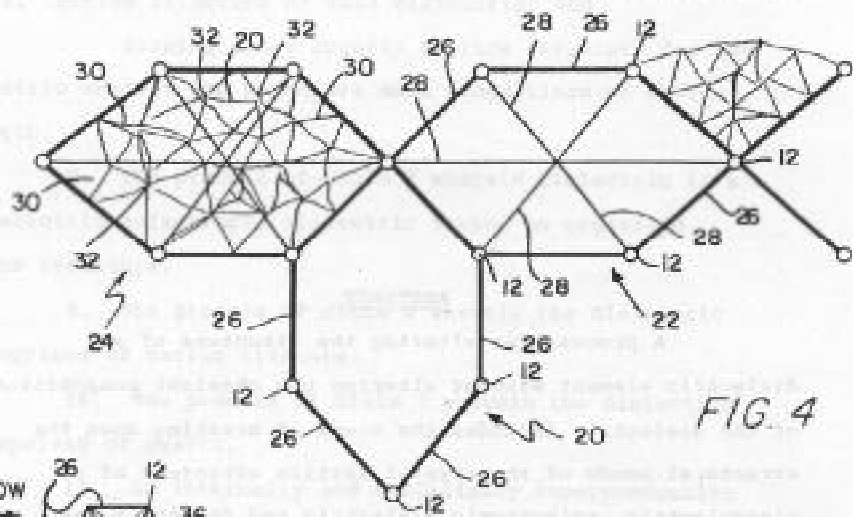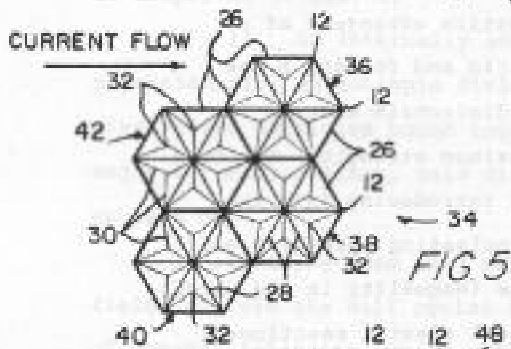
FIG. 1

FIG. 2

FIG. 3

FIG. 4

CURRENT FLOW

FIG. 5

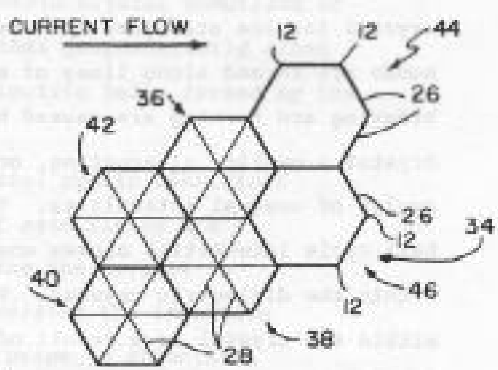CURRENT FLOW

FIG. 6

CURRENT FLOW

FIG. 7

FIG. 8

CURRENT

FIG. 9

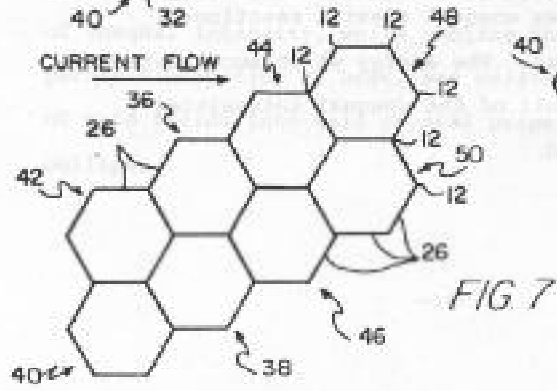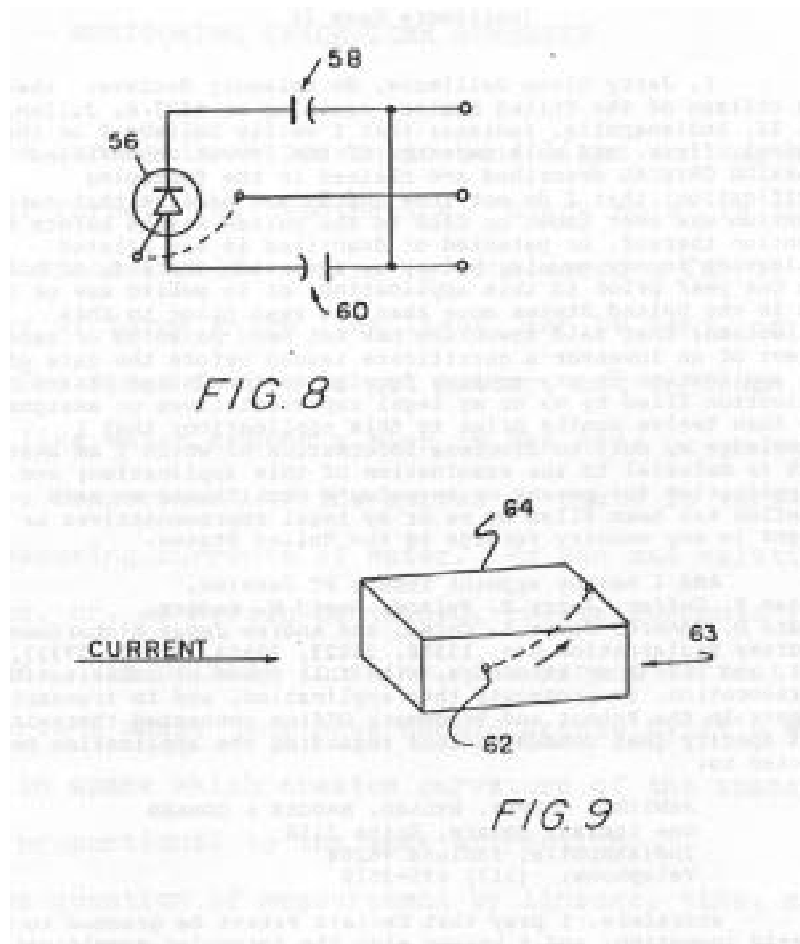
Side Note:

A tube of deflexion material will exhibit unusual space/time proper-
ties. It is possible that with an electromagnetic field placed around it,
that it may disintegrate all matter placed in, or passing through it.
(i.e. A disposal unit for toxic chemicals, etc, but not radioactive ma-
terials, will react in deadly energy manner.)

Translation of Radio Umschau article, dated April, 1927, courtesy of Steven Taracevicz:

Over Coming of Gravity
A Recent Success in Crystal Research

Already according to what is becoming known from initial data, we have the intention to report the apparently successfully completed experiments. However, in order to be oriented as exactly as possible, we have visited first the laboratory of the discoverer, Dr. Lertes, at his invitation. Today we are in a position to publish three very interesting pictures of experiments from that visit. Since the technical means for such experiments are not too costly, amateurs may undertake the experiments and decide for themselves. We are happy to provide the inventor with additional requests or questions.

If only for a short time, particularly from the technology perspective of short waves radio amateurs, each validation is ordered and useful innovations are eliminated following this path. Nonetheless, the validation of two young researchers in ultra-short waves, whose breath in scientific and technical respects has not yet today not been more closely examined. At the same time, the opinion of field experts that amateurs cannot be expected to advance science and technology, is contraindicated.

This discovery was announced six weeks ago in the newly built laboratory in Darredin, Poland by Dr. Kowsky and engineer Frost.

The applied piece of quartz used in experiments with short wave crystal oscillators with a constant temperature suddenly, clearly showed a changed appearance. It was easy to notice that the inside of the applied crystal, so long as the laboratory temperature did not exceed X Celsius, and was held constant during the experiment, milky drops appeared that became completely opaque. According to the examination of Dr. XX, whereby the subjected quartz crystal generates clear high frequency air waves, these crystals drove a small motor such as those motors mentioned in (_). Further bizarre observations were to be expected, and at first were inexplicable. Week long investigations finally yield the clue of the possible applications of the unexpected discovery.

Caption; figure 2: 25 kilogram weight lifted by a free hovering crystal. The quartz crystal has altered its structure and as a result generates a force able to hold a 25 kilogram weight.

In order to explain the occurrences, several things must first be presented. As we already know, different quartz and crystal of similar atomic structure have the qualities that a voltage applied in the direction parallel with the optical axis expands and contracts the crystal thereby converting electric energy to mechanical vibrations. These oscillations are indeed very small and already had a technical application measuring quartz crystal wavelength and holding transmitter wavelength constant. By changing the directional orientation of the applied voltage, at a certain orientation, the crystal expands but does not contract. This effect is apparently obtained by freeing electrons from their molecular conduction bands, which, at first irreversibly, changes the crystal structure, precluding return to the original structure. The opacity was explicable due to the expansion of the crystal, however a change in specific gravity must also occur. An attempt to weigh the crystal immediately after the application of the voltage raised the scale upon which the crystal sat. This is shown in illustration 3. The next logical experiment was to further change in specific gravity in order to see how much the specific gravity could be reduced. Through the continually greater application of energy (several kilowatts), a crystal measuring 5 x 2 x

1.5 centimeters became completely opaque and expanded to 10 centimeters (See figure 2). The crystal became so light that it finally lifted the entire apparatus and with it lifted a 25 kilogram free hovering weight. The exact measurement and calculation could succeed with thanks to the facilities and help of the laboratory in Daradein, showed that the specific gravity had been greatly reduced corresponding to the increase in volume. The weight had actually become negative. There are no underlying doubts anymore that the beginnings of overcoming gravity have been made. It may be noted that the accompanying energy principals remain preserved. The amount of applied energy to the crystal corresponds to the counter effect on gravity. Admittedly, the riddle of gravity has not been solved, and at this time, the same procedures are being pursued. It is the first time that such an experiment with gravity has achieved unassailable results. It appears that finally a path has been found to expose the dependency of gravity on the electro-magnetic force, which has been greatly sought after but never proved. Further scientific success with this discovery could lead to applications in air and other forms of transportation.

Conclusion to Part II: The Kowsky-Frost Experiment

We have 3 sources of verification for this experiment: Radio Umschau, Science and Invention, and Jerry Gallimore. Is this a hoax? I would say that the possibility is extremely slim at this point. It is an experiment which begs to be repeated, if only to verify the original claims. At the time of this writing, no laboratory has come forward to attempt such an experiment.

As the semantics of gravity control become blackballed, the proponents of this new technology are shuffling into retreat. At first the term "antigravity" meant certain death for publication, so the term was changed to "barycentric control", and then "reactionless drive". For a time "electromagnetic propulsion" was used, and then "electrogravity", that term being used by Townsend Brown for his work. It is time for proponents of this technology to stop their retreat, and make a full frontal assault upon the politics which holds back the technology this civilization so desperately needs. Politics has so odiously contaminated science that we are now on the verge of a new dark age if we allow it to continue. It has been said that politics is the polar opposite of integrity, and rightly so.

Here is the most recent egregious example, posted on the Space.com site:

X-Prize Rejects Gravity Control Rocket Group
By Leonard David
Senior Space Writer
posted 05:30 pm ET
15 June 2003

It was a weighty decision, not taken lightly, but X-Prize officials voted last week to bar a group attempting to harness gravity from entering the contest aimed at promoting space tourism.

The X-Prize Foundation notified Gravity Control Technologies (GCT) of Budapest, Hungary that its application to become an X Prize team had not been accepted.

GCT was founded in 1999 and is a privately held aerospace research firm delving into superconductivity and Zero-Point Energy Field physics in the hope of achieving one hundred percent propellant-less propulsion technology for flight.

The X-Prize is a $10 million prize to jumpstart the space tourism industry through competition between entrepreneurs and rocket experts around the world. The purse is to be awarded to the first team that privately finances, builds and launches a spaceship able to carry three people to 62.5 miles (100 kilometers) altitude, then returns safely to Earth, repeating the launch with the same ship within two weeks.

But in an X-Prize Foundation letter to GCT, the rationale for closing the door on the group's X-Prize status is up-front.

"In light of the novel and untried technology you propose, the Committee has a concern of the credibility of the technology. The X-Prize Foundation strongly encourages the use of all technologies for the X-Prize competition. However, over the past years, we've been besieged by a variety of groups making technological claims that weren't real," explains Ken Davidian, Director of Operations for the St. Louis, Missouri-based X Prize Foundation, in a letter to GCT.

"We will be happy to reconsider your application when provided with evidence of the feasibility of your proposed technology. We strongly encourage GCT to continue with its research and keep us posted as developments warrant our attention," the letter states.

Comment:
Why should they want proof that the technology works? After all, the prize is only awarded on completion of the task of creating a reusable space ship. The answer is politics. Most propellants are derived from petroleum products, and this threatens the petronazis. It is especially a threat when the company claims that it can run the ship on the free energy of the vacuum.

The technology (gravity control) is neither novel, nor untried. This is a lie, and a slap in the face to those such as Townsend Brown, Jerry Gallimore, John Searle, and others. It is a Neanderthal denying that the wheel works so he can sell more horses. These odious people will be indicted by history, and they will be damned by the citizens of the future for their avarice.

In their pursuit of a myopic agenda, the future of their children means nothing, and the future of the planet has no consequence. Here I am not merely speaking of those who run the X-Prize, for that is only a facet of the problem. A good analogy to this would be a hologram on a sheet of glass. One can drop the sheet of glass on the floor, and pick up a fragment and see the complete picture in it, albeit with a lower resolution. Everywhere we go we see the same problems, fragments of the same hologram. We refuse to acknowledge them as being similar, and assign different names to them. But they are nevertheless the manifestations of the same problem. Until we recognize that reality, it will continue to plague us, and we will continue to be led around by the nose by those who would keep us stumbling around in darkness.