

# Radiant Energy - Unraveling Tesla's Greatest Secret

By Ken Adachi <Editor@educate-yourself.org>  
<http://educate-yourself.org/radiantenergystory.html>  
6-26-1

[The story you are about to read is derived from a carefully researched paper presented by Dr. Peter Lindemann before a private audience in Irvine, California on September 12, 2000. The lecture was titled "The Free Energy Secrets of Cold Electricity" . It detailed the story of Radiant Energy and its successful application by Edwin Gray in an over unity motor design which Gray debuted in 1973. The real detective work ( & credit) in uncovering Tesla's discovery of Radiant energy came from author Gerry Vassilatatos in his recent book, "Secrets of Cold War Technology" without which Lindemann could not have solved the enigma of Gray's Radiant circuit design. This lecture delivered the goods. The secret of Tesla's Radiant Energy has finally been revealed in manifold detail and only awaits the industry of those who care to study and understand it. Part1 presents a general overview of Tesla's discovery and the political, intrigues that led to its subsequent suppression. Part 2 will detail the nuts and bolts of how Tesla produced Radiant Energy with block diagrams, schematics, and drawings from Tesla's original patents to illustrate all of the necessary elements and parameters required. Additional details on Gray's modern adaptation of Tesla's Radiant circuitry and a brief look at Eric Dollard, the only man to successfully recreate Tesla's Colorado Springs Magnifying transmitter and reproduce the pure steaming white rays of Radiant energy in 1986 exactly as described by Tesla in his Colorado journals. Ken Adachi]



Of all the great inventions and discoveries of Nikola Tesla, nothing stood out with greater potential benefit to the whole of humanity than his discovery of Radiant Energy in 1889. The series of observations that led to the discovery of Radiant energy initially grew out of experiments that Tesla had conducted in an attempt to duplicate the results that Heinrich Hertz had claimed to achieve in affirming the existence of electromagnetic waves, the discovery of which Hertz announced in 1887. While replicating Hertz's experiments, Tesla experimented with violently abrupt DC electrical discharges and discovered a new force in the process. Only after conducting exhaustive experimental trials for the next three years, did Tesla announce this stupendous discovery in a paper published in December, 1892, entitled "The Dissipation of Electricity". Incredibly, most academicians of the day completely missed the mark in understanding the true significance of his paper. Noted scientists such as Sir Oliver Lodge, mistakenly thought that Tesla was referring to high frequency AC electricity in the operation of the Tesla Transformer, a huge blunder that remains to this day in the misnaming and misinterpretation of the Tesla Coil. The

transformer that Tesla referred to in the 1892 paper did not operate on magnetic/electric field induction created by alternating currents. It operated in an entirely new domain of physics based on abrupt discharges of electrostatic potentials and the subsequent release of kinetic Radiant Energy from the omnipresent ether. Tesla was now operating under entirely new rules which he referred to as "dynamic" electro-static forces and had, by now, completely abandoned any further interest in the AC waveform. The genesis of the Lodge misunderstanding, however, began a few years earlier with the publication of certain mathematical formulas by a brilliant Scotsman named James Clerk Maxwell.

Maxwell's Equations Using mathematical models, James Clerk Maxwell had earlier suggested that two different types of electrical disturbances could possibly exist in Nature. One type was a longitudinal electric wave which required alternating concentrations of densified and rarefied pulsations of electrostatic fields that moved along a single vector (today, we refer to these as standing waves or scalar waves). Maxwell ultimately rejected this idea because he was convinced that this type of wave propagation was impossible to achieve, but his assumption was erroneous and would later portend formidable consequences for Tesla and the world at large.

Maxwell's second wave postulation was that of a transverse electromagnetic wave that exhibited a rapid alternation of electric fields along a fixed axis that radiated away from its point of origin at the speed of light and was detectable at great distances. Maxwell had more faith in the existence of this type of wave and encouraged experimenters to look in this direction. It was the discovery of this type of wave that Hertz had laid claim to, but Tesla was meticulous and fastidious in replicating Hertz's experimental parameters and he could not obtain the results claimed by Hertz.

Tesla discovered a fundamental flaw in Hertz's experiment: Hertz had failed to take into account the presence of air in his experiments. Hertz had mistakenly identified electrostatic inductions or electrified shockwaves as true electromagnetic waves. Tesla was saddened to bring this news to the distinguished academician, but felt scientific honesty was paramount if progress was to be achieved. Tesla visited Hertz in Germany and personally demonstrated the experimental error to him. Hertz agreed with Tesla and had planned to withdraw his claim, but reputations, political agendas, national pride, and above all, powerful financial interests, intervened in that decision and set the stage for a major rift in the 'accepted' theories that soon became transformed into the fundamental "laws" of the electric sciences that have held sway in industry and the halls of academia to the present day.

Tesla's introduction to the phenomena of Radiant Energy began with early observations by linesmen working for Thomas Edison, Tesla's former employer

DC Anomalies Before Tesla's invention of the Polyphase AC generator became the

industry standard and overtook Thomas Edison's use of DC generators, the DC electrical system was the only system available to deliver electricity to America's homes and factories. Due to the resistance offered by long transmission lines, Edison had to produce very high DC voltages from his generators in order to deliver enough voltage and current to its final destination. He also had to provide additional 'pumping' stations along the way to boost the sagging voltage which dwindled from line losses. A curious anomaly occurred in the very first instant of throwing the power switch at the generating station: Purple/blue colored spikes radiated in all directions along the axis of the power lines for just a moment. In addition, a stinging, ray-like shocking sensation was felt by those who stood near the transmission lines. In some cases, when very large DC voltages surged from the generators, the "stinging" sensation was so great that occasionally a blue spike jumped from the line and grounded itself through a workman, killing him in the process.

Tesla realized almost immediately that electrons were not responsible for such a phenomena because The blue spike phenomena ceased as soon as the current started flowing in the lines. Something else was happening just before the electrons had a chance to move along the wire. At the time, no one seemed to be very interested in discovering why these dramatic elevations in static electrical potential were taking place, but rather, engineering design efforts were focused on eliminating and quenching this strange anomaly which was considered by everyone to be a nuisance-except Tesla. Tesla viewed it as a powerful, yet unknown form of energy which needed to be understood and harnessed if possible. The phenomena only exhibited itself in the first moment of switch closure, before the electrons could begin moving. There seemed to be a "bunching" or "choking" effect at play, but only briefly. Once the electrons began their movement within the wire, all would return to normal. What was this strange energy that was trying to liberate itself so forcefully at the moment of switch closure? .

Tesla, Genius Out of Time In the later quarter of the 19th century, Tesla was alone in his opposition to the fundamental views of the nature of electrical forces as described by three of the biggest names in electric science: James Clerk Maxwell, Herman Von Helmholtz, and Heinrich Hertz. Tesla possessed a broader vision of the cosmos because his keen sense of awareness and especially his natural intuitive insights gave him a deeper understanding of the role that the ether (or aether) played in the manifestations of all electrical phenomena while his contemporaries focused their attention exclusively on the electromagnetic component (assuming that no other component could be involved). This lack of etheric insight by his contemporaries (with the exception of Sir William Crookes) and the heated controversy that the mere mention of the ether had engendered was to cause Tesla ridicule and sarcasm from men of inferior intellect for decades. The ether controversy largely dissipated in the academic arena after the publication of Eienstein's Theory of Relativity (1905) and the Michaelson-Morley Experiment which essentially declared that the ether 'theory' was

dead, but Tesla's insights and deductions concerning the role of the ether were correct all along.

The ether existed then and it exists now, despite the lock step denials by mainstream science, past or present. Rudolf Steiner, another man of genius, affirmed that the ether was composed of four fractions which he described as 1) the Light Ether, 2) the Warmth Ether, 3) the Chemical Ether, and 4) the Life Ether, a combination of the first three. Tesla's New York and Colorado experiments confirmed for him that Radiant energy was bound up within the elusive ether, but could be made manifest by the creation of an abrupt disruption in the equilibrium of the ether fractions using one way, high magnitude pulses of short duration. This was the key that unlocked Radiant Energy.

"See the excitement coming!" These were the words that Tesla used at the end of his pivotal 1892 December lecture, "The Dissipation of Electricity". He was brimming over with buoyancy and optimism for the future. In the 1890's, Tesla conducted a large number of experiments which confirmed his theory and refined his understanding of the special conditions required for Radiant energy to express itself. He later expanded his New York work with the large scale experimental trials conducted at Colorado Springs, Colorado in 1899. Tesla, the humanitarian, wanted more than anything to share this enormous discovery with his fellow man. Tesla spoke of practical applications of radiant energy that were so wide reaching that they could have created a profound and immense leap into the future for all of mankind in practically every sector of daily life:

Unlimited electricity could be made available anywhere and at any time, by merely pushing a rod into the ground and turning on the electrical appliance. Homes, farms, offices, factories, villages, libraries, museums, street lights, etc., could have all their lighting needs met by merely hanging ordinary light bulbs or fluorescent tubes anywhere desired- without the need for wiring -and produce brilliant white light 24 hours a day. Motor energy for any imagined use such as industrial applications, transportation, tractors, trucks, trains, boats, automobiles, air ships or planes could be powered freely-anywhere on the planet from a single Magnifying Transmitter. This new form of energy even had the ability to elevate human consciousness to levels of vastly improved comprehension and mental clarity. Undreamed of therapeutic applications to improve human health and to eliminate disease conditions could have been achieved fully 100 years ago had Tesla been allowed to complete his commercial development of Radiant Energy. But powerful barons of industry, chiefly in the person of John Pierpont Morgan, colluded to deny him the financial backing he needed and in doing so, effectively denied mankind one of Nature's most abundant and inexhaustible gifts of free energy.

The Magnifying Transmitter The closest Tesla came to a world wide industrial

application of his Radiant Energy dream was the construction of his huge Magnifying Transmitter at Shoreham, Long Island, a site which he named Wardencllyffe. Following his return to New York City from Colorado Springs in 1899, Tesla was jubilant and full of enthusiasm to implement his plan for the commercial application of Radiant energy. He turned to JP Morgan for a substantial portion of the funding to finance the huge project at Wardencllyffe. Morgan was chiefly concerned with turning a profit from overseas radio transmissions since Marconi was fast locking up the market and Morgan, ever the aggressor, wanted a share of the market. When Tesla told him that the transmitter could transmit "intelligence" to the world, Morgan assumed that he meant ordinary radio communications, but Tesla was not referring to ordinary radio transmissions. He was talking about something much bigger, but avoided revealing all to Morgan during this early phase of the Wardencllyffe project. Some considerable time later, Tesla eventually felt compelled to tell Morgan the larger possibilities offered by the Magnifying Transmitter when he needed more funding to complete the project. Tesla thought that Morgan would be overwhelmed by his expanded explanation of the true capacities of the transmitter and would be anxious to complete the work, but Tesla's assumption had backfired and Morgan refused to lay out any more money for the transmitter. Sadly, the enormous benefits that could have been made available to society by Tesla's Magnifying Transmitter project, died then and there.

Morgan & Westinghouse Morgan had already orchestrated circumstances in Tesla's life in order to force Tesla to be dependent on him for financial backing. During an earlier period, when Tesla himself had millions from his Polyphase AC generator royalty payments and other earnings, Morgan wanted to woo Tesla with a deal that effectively gave Morgan majority control over his patent rights and projects, but Tesla turned him down, telling Morgan that he had enough money of his own to fund his projects. While returning to his hotel from that very meeting with Morgan, however, Tesla was told that his laboratory had been burned to the ground. It represented a tremendous loss to Tesla and it shook him deeply. Everyone, of course, felt convinced that Morgan was behind the arson. In order to save face, Morgan was embarrassed by Tesla into putting up the money to pay for the rebuilding of a new lab as an act of "philanthropy". From that time forward, however, other financial backers were not to be found. Morgan was powerful enough to black list Tesla among the Eastern Establishment elites that previously had hobnobbed and feted with Tesla as if he was one of their own. Black listing and ostracization by officialdom and financiers lifted somewhat after Morgan's death, but generally continued to haunt Tesla for the rest of his life.

Before the turn of the century, Tesla also willingly gave up millions, perhaps billions, in royalty earnings to George Westinghouse in an unprecedented act of friendship. Westinghouse had believed in the superiority of Tesla's AC system and provided the money to build Tesla's big AC generators at Niagra Falls, NY. Tesla was paid

millions up front for his patents, but was also due to receive royalty earnings for every kilowatt of power produced. When Westinghouse ran into financial difficulties at a later date, Tesla tore up his royalty contract in order to save Westinghouse from financial ruin. Had he not done that, Tesla would have had enough money from royalties to keep him ensconced in great wealth for the rest of his life.

The story is frequently told that when Morgan found out from Tesla that the true purpose of the Wardenclyffe transmitter was to provide free electricity to the world, he abruptly pulled the funding. That's not completely accurate. The economic conditions were recessionary at the time and the stock market had taken a considerable dip that year. Morgan wasn't interested in risking any more capital in perilous times on a project he couldn't fully fathom and wasn't completely convinced of. Tesla held land ownership of the Wardenclyffe site and tower, but no further work was done after 1910. In 1914, Tesla was deeply in debt and signed over the deed of Wardenclyffe Station to pay off years of back rent due to the owners of the New Yorker Hotel where he was living (he occupied two penthouse suites in the hotel). In 1917, the hotel owners had the tower demolished and its parts sold for salvage. Despite the loss of Wardenclyffe, Tesla continued to refine his understanding of Radiant Energy and miniaturize the equipment needed to produce it. He eventually was able to reduce the equipment down to the size of a suit case. \_\_\_\_

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Next time, Part 2: The nuts and bolts of producing Radiant Energy and Gray's Radiant design circuitry.

Australian and European readers interested in obtaining the video tape of Dr. Lindemann's 2 hour and 50 minute lecture, "The Free Energy Secrets of Cold Electricity" can send \$29.95 (US\$) for VHS or \$33.95 for PAL plus \$11 air shipping. A 150 page companion book of the same title which includes the complete narrative, enlarged views of the slides, diagrams, schematics, photographs and patents demonstrated during the lecture, along with complete copies of the Gray and Tesla patents and additional materials not included in the lecture is also available for \$29.95 plus \$11 air shipment. Book and video together, add \$15 air shipping. Make US checks or money orders payable to:

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# PowerPedia:Eric Dollard

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## Introduction



Eric Dollard is the only man known to be able to **accurately reproduce** many of Tesla's experiments with Radiant Energy and wireless transmission of power. This is because he understands that conventional electrical theory only includes *half of the story*.

The typical Hertzian, electromagnetic field of Transverse Waves is the *gross by-product* of a much more powerful, but hidden, energy envelope which is manifested as **Longitudinal Standing Waves** in a scalar nodal matrix, not propagated in the up and down, ocean wave fashion of Transverse Waves.

## Tesla Magnifying Transmitter

The Tesla Magnifying Transmitter is a converter which *converts electromagnetic energy into what is called magneto-dielectric energy*

## Magneto-dielectric Energy link to Orgone Energy

Eric: If you take a low pressure gas (in a bulb) and place it in **two superimposed dielectric fields** then you get spiral formations such as Reich wrote about in his book COSMIC SUPERIMPOSITION. These formations appear as spheres, galaxies and other cosmic forms.

## Documentaries on GoogleVideo

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NOTE: [[Borderlands](#)] have agreed to allow these to be online for the advancement of free energy technology.

- the only successful demonstration of Tesla's Longitudinal Dielectricity ever made available to the public

### 1. [Tesla's Longitudinal Electricity](#) 60 minutes

A laboratory demonstration video with Eric P. Dollard & Peter Lindemann  
If you've ever wondered if there is more to a Tesla coil than just making big sparks then watch this video. Borderland presents a series of experiments providing you with factual data on the reality of Tesla's theories. You will see experiments on: The One-Wire Electrical Transmission System; The Wireless Power Transmission System; Transmission of Direct Current Through Space; and, a novel form of electric light which attracts material objects but repels a human hand! Also presented is a longitudinal broadcast from Borderland Labs to a nearby beach, using the ocean as an antenna. These experiments can

be reproduced by **any** competent researcher, there are no secrets here! Today's conceptions of a Tesla Coil provide the researcher with little practical material. Eric Dollard reintroduces the "pancake" Tesla Coils in a series of experiments taken directly from Tesla's work. No modern interpretations needed, we went to the source — and it worked! *Construction details are given.* If you want to do some exciting, exploratory work into Tesla's theories then this video will certainly give you a good start.

1. [Transverse & Longitudinal Electric Waves](#) **50 minutes**

Eric demonstrates the reality of longitudinal waves and their application to the **natural transmission of electricity**. Analog computers (networks of coils and capacitors) are presented opening up an entire new field of electrical researches into the wave forms discovered and used by Tesla in his wireless power transmissions. You will experience the physical functions of the various waves via direct measurement inside the computer network. The **Longitudinal Magneto-Dielectric** wave is shown to have a propagating velocity greater than the speed of light! *The transverse electromagnetic wave, (in present use) is shown to be a retarded, unnatural form of energy transmission.* A Multi-Pactor Orgone Detector is demonstrated indicating a relationship between dielectricity and orgone. A competent researcher can duplicate the experiments on this video from the information given. Amaze your science teacher!

## Coverage

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1. 1987: Functional Thinking: An Interview with Eric Dollard by Tom Brown. (Journal of Borderland Research Mar-Apr 1987).

Ties together Nikola Tesla, Viktor Schauburger and Wilhelm Reich. Magneto-dielectric energy. Organic form discharges of this mono-polar electricity / single phase electricity.

## Four Quadrant Theory of Electricity

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### Eric Dollard

(from Functional Thinking)

E: If we take Tesla's three phase electricity, or rotating magnetic field, we find that it is based on the archetypal form known as the Solar cross or by various other names.

T: Mandalas, medicine wheels?

E: ...these are four quadrant types of forms, a balanced cross as opposed to an unbalanced cross.

T: This is where you get the Four quadrant Theory of Electricity?

E: Electricity has to be viewed from a four quadrant type of situation. The right angle plays an extremely fundamental role in electricity. It is generally a right angle phenomenon.

(from Tesla's Longitudinal Electricity video):

Tesla experimented with **impulse current and oscillating current**.

our electricity is **direct current and alternating current**.

The Four Quadrant Theory of Electricity is

**IMPULSE CURRENT, OSCILLATING CURRENT, DIRECT CURRENT, ALTERNATING CURRENT.**

alternating current + direct current are **transverse electromagnetic**

impulse and oscillating current are **longitudinal di-electric**

## **William Baumgartner**

1. IWONE2001 Proceedings (no proceeding submitted by William Baumgartner on subject) Energy from Space through the Quadropole System of Nature

## **Walter Russell**

## **Websites**

1. [- Eric Dollard and Tesla on Borderlands](#) - Introduction to DIELECTRICITY AND CAPACITANCE

A collection of research and research materials for advanced research in understanding the true nature of Tesla's discoveries.

1. [- Tesla - Eric Dollard](#), page created by panacea-BOCAF
2. [Radiant Energy - unraveling Tesla's greatest secret](#)

## **Publications**

## **Books**

1. Eric P. Dollard - Theory of Wireless Power - 69 pages (#B0082)

This paper contains many essential formulae and supporting data necessary to understand the Transmission of Electrical Energy Without Wires. Discusses and diagrams the Marconi Wireless station based at Bolinas, California, circa 1919. Unlike many erroneous modern theories of how Tesla achieved his goal, this paper is based on real work with a Tesla Magnifying Transmitter. Illustrated with charts & diagrams.

1. Eric P. Dollard - *Introduction to Dielectric & Magnetic Discharges in Electrical Windings* (1982) - 38 pages (#B0020)

Eric Dollard's work on the relationship of the dielectric and electromagnetic aspects of electricity is the most important breakthrough in modern day electrical research providing real avenues of research into Tesla's secrets. Contains *ELECTRICAL OSCILLATIONS IN ANTENNAE & INDUCTION COILS* by John Miller, 1919, one of the few articles containing equations useful to the design of Tesla Coils.

1. Eric P. Dollard - *Condensed Intro to Tesla Transformers* - 70 pages (#B0018)

An abstract of the theory and construction techniques of Tesla Transformers written by one of the most brilliant modern day researchers into High Frequency Electricity as pioneered by Tesla and Steinmetz. Contains the article CAPACITY by Fritz Lowenstein, assistant to Tesla in his research.

1. Eric P. Dollard - *Symbolic Representation of the Generalized Electric Wave* - 86 pages (#B0080)

Extension of the theory of versor operators and imaginary numbers to represent complex oscillating waves such as those encountered in the researches of Nikola Tesla and everywhere in Nature. Theory of Free Electricity produced by rotating apparatus such as variable reluctance devices. Waves flowing backwards in time are explored.

1. Eric P. Dollard - *Symbolic Representation of Alternating Electric Waves* - 53 pages (#B0079)

Introduction to the **FOUR QUADRANT THEORY** of Alternating Current which allows engineering of Tesla's inventions. Provides a more complete understanding of the use of versor operators (degrees of rotation), necessary to the understanding of the rotating magnetic field. The process of the production of electrical energy using the neglected QUADRANTS OF GROWTH is brought about via the use of these operators.

1. Eric Dollard - *Free-Energy Research - a collection of contributions to The Journal of Borderland Research* - 28 pages (#B0460)

This new book contains contributions Eric has made to the Journal of Borderland Research. It contains the key to unlock the Etheric aspects to Tesla technology. Includes: Functional Thinking- an Interview with Eric Dollard, The Transmission of Electricity, Understanding the Rotating Magnetic Field, Introduction to Dielectricity & Capacitance.

contains mentions of Wilhelm Reich, Viktor Schauberger, Nikola Tesla and Eric's thoughts on magneto-dielectric energy (which manifests in golden mean ratio form, resembling organic living forms) available from

<http://www.borderlands.com/>

## Documentaries

Tesla's Longitudinal Electricity - A laboratory demonstration video with Eric P. Dollard & Peter Lindemann - 60 minutes (#V0005)

Transverse & Longitudinal Electric Waves - A laboratory demonstration with Eric P. Dollard - 50 minutes (#V0004) available from <http://www.borderlands.com/>

## Longitudinal Energy in other videos

### Dr. Konstantin Meyl

Power Engineering Scalar Field Theory - Faraday vs. Maxwell and Demonstration of Longitudinal Wave Transmission (Konstantin Meyl) (2003)

This is Prof. Dr.-Ing. Konstantin Meyl's mindblowing video lecture Power Engineering Scalar Field Theory - Faraday vs. Maxwell and Demonstration of Longitudinal Wave Transmission (2003) which explains how one can **modify the basic equations of electromagnetic field** to include *longitudinal waves* which results in a **true revolution in electromagnetics**.

This short but highly informative presentation is probably the only one in existence for english-speaking audience to correctly **expand the classical electromagnetic field theory to include longitudinal/Tesla waves**. The impact of such an expansion is immense and requires a *complete change* in thinking and a revision of the *very foundations of physics* in general. Do scalar waves exist or not? In Meyl's extended field theory they come about naturally eliminating the need for any "exotic"

theories such as as superstrings, dark matter, revising even the theory of relativity. Meyl explains how **Faraday's experiments** were actually describing **a much broader electromagnetics** than was later *derived* by Maxwell and *curtailed* to an even more *primitive state* by others so that **today's engineers are literally handicapped** when using it.

The **missing experimental pieces** eventually **came from the work of Tesla** and a ***small version of his wireless transmission of energy is demonstrated here, carrying electrical energy without losses to the other side of the table with an "impossible" 1.5-times the speed of light.***

During this amazing lecture Meyl takes you through **the forgotten ideas of Nikola Tesla** and explains how they **are the missing pieces which prevented scientists to reach the goal of a comprehensible unified field theory.**

Along the course he also discusses many new applications which can now be not only better understood but also built and used in our every day life.

Presented at the First **Nikola Tesla Energy Science Conference & Exposition**

**2003** in Washington DC before *astonished audience who just couldn't believe what they were seeing.* 110 min. long. A must see for everyone.

## Colorado Spring Notes

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"On page 14 of this document you will find the basis for the Eric Dollard experiments-jw"

## See also

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[PowerPedia:Radiant Energy](#)

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## PowerPedia:Radiant Energy

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**Radiant energy** is the energy of electromagnetic waves. Radiant energy exists in a range of wavelengths that extends from Extremely Low Frequency (ELF) to gamma rays. The term is most commonly used in the fields of radiometry, solar energy, heating and lighting, but is also used less frequently in other fields (such as telecommunications). The quantity of radiant energy may be calculated by integrating radiant flux (or power) with respect to time and, like all forms of energy, its SI unit is the joule. In applications involving transmission of power from one location to another, "radiant energy" is sometimes used to refer to the electromagnetic waves themselves, rather than their energy (a property of the waves).

Radiant energy is one of the energy sources that can be used to power an open system. Such an open system can be man-made (such as a solar energy collector), or natural, such as the Earth's atmosphere. In geophysics, transparent greenhouse gases trap the sun's radiant energy (at certain wavelengths), allowing it to penetrate deep into the atmosphere or all the way to the Earth's surface, where they are re-emitted as longer wavelength radiation (chiefly infrared radiation). Radiant energy is produced in the sun as a result of nuclear fusion.

Radiant energy, as well as convective and conductive energy, is used for heating homes. It can be generated electrically by infrared lamps, or can be absorbed from sunlight and used to heat water. Since radiant energy is really just electromagnetic radiation under another name, it is the basis of a wide range of communication technologies using radiofrequency and microwave radiation.

One of the earliest wireless telephones to be based on radiant energy was invented by Nikola Tesla. The device used transmitters and receivers whose resonances were tuned to the same frequency, allowing communication between them. In 1916, he recounted (see Anderson's book, below) an experiment he had done in 1896. He recalled that "Whenever I received the effects of a transmitter, one of the simplest ways [to detect the wireless

transmissions] was to apply a magnetic field to currents generated in a conductor, and when I did so, the low frequency gave audible notes."

The United States Patent Offices has a classification of radiant energy for patent applications (Class 250, a residual class for methods and apparatus involving radiant energy). This class provides for all methods and apparatus for using, generating, controlling or detecting radiant energy, combinations including such methods or apparatus, subcombinations of same and accessories therefore not classifiable elsewhere by the patent office.

## Terminology

Quantity - Symbol - SI - unit - Abbr. - Notes

1. Radiant energy Q joule J energy
2. Radiant flux  $\Phi$  watt W radiant energy per unit time, also called radiant power
3. Radiant intensity I watt per steradian  $W \cdot sr^{-1}$  power per unit solid angle
4. Radiance L watt per steradian per square metre  $W \cdot sr^{-1} \cdot m^{-2}$  power per unit solid angle per unit projected source area. Sometimes confusingly called "intensity".
5. Irradiance E watt per square metre  $W \cdot m^{-2}$  power incident on a surface. Sometimes confusingly called "intensity".
6. Radiant emittance / Radiant exitance M watt per square metre  $W \cdot m^{-2}$  power emitted from a surface. Sometimes confusingly called "intensity".
7. Spectral radiance  $L_\lambda$  or  $L_\nu$  watt per steradian per metre<sup>3</sup> or watt per steradian per square metre per Hertz  $W \cdot sr^{-1} \cdot m^{-3}$  or  $W \cdot sr^{-1} \cdot m^{-2} \cdot Hz^{-1}$  commonly measured in  $W \cdot sr^{-1} \cdot m^{-2} \cdot nm^{-1}$
8. Spectral irradiance  $E_\lambda$  or  $E_\nu$  watt per metre<sup>3</sup> or watt per square metre per hertz  $W \cdot m^{-3}$  or  $W \cdot m^{-2} \cdot Hz^{-1}$  commonly measured in  $W \cdot m^{-2} \cdot nm^{-1}$

### Radio spectrum

ELF	SLF	ULF	VLF	LF	MF	HF	VHF	UHF	SHF	EHF
3 Hz	30 Hz	300 Hz	3 kHz	30 kHz	300 kHz	3 MHz	30 MHz	300 MHz	3 GHz	30 GHz
30 Hz	300 Hz	3 kHz	30 kHz	300 kHz	3 MHz	30 MHz	300 MHz	3 GHz	30 GHz	300 GHz

1. extremely low frequency ELF
2. super low frequency SLF



3. ultra low frequency ULF
4. very low frequency VLF
5. low frequency LF
6. mediumwave MF
7. high frequency HF
8. very high frequency VHF
9. ultra high frequency UHF
10. Microwave SHF
11. extremely high frequency EHF

## Resources and external articles

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### **Nikola Tesla**

1. "Radiant Energy -- [Wireless Transformer of High Power Lines?](#)". Pure energy systems.
2. Oliver Nicholson, "[Tesla's Fuelless Generator; Nikola Tesla's later energy generation designs](#)".
3. Bruce Perreault, "[Nikola Tesla's Radiant Energy System](#)".
4. Bruce Perreault, "[New Generation of Radiant Energy Devices](#)".
5. Radiant Energy: [Unraveling Tesla's Greatest Secret](#), Part 1. Educate-Yourself, The Freedom of Knowledge, The Power of Thought.
6. "[Tesla's Radiant Energy Patents](#)". Twelve Star Publishing : Sourceworks.
7. Emmett Butler, "[Radiant Energy Aerial Capture \(REAC\) & Transformation Device](#)". 10/07/04.
8. Gerry Vassilatos, "[RADIANT ELECTRICITY \( From Page 32: Secrets of Cold War Technology \)](#)".

### **T. Henry Moray**

1. Thomas Henry Moray, "[The Sea of Energy](#)". Rex Research. [From the original The Sea of Energy in Which the Earth Floats]
2. Thomas Bearden, "[Moray Radiant energy Device](#)".

### **Regulations**

1. "[Radiant energy](#)". FS-1037C.

### Patents

1. [U.S. Patent 685957](#) (G.patent; [PDF](#)) - *Apparatus for the utilization of radiant energy* - N. Tesla
2. [U.S. Patent 685958](#) (G.patent; [PDF](#)) - *Method of utilizing of radiant energy* - N. Tesla
3. [U.S. Patent 3971938](#) (G.patent; [PDF](#)) - *Method of generating electricity from radiant energy called variable polarizability capacity generator* - L. R. O'Hare

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  3. Dr. Lindemann, "*The Radiant News*". - back-issues for sale

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## See also

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1. [OS:Keppean Scalar Motor](#)  
BEST
1. [Directory:Best Exotic Clean Energy Technologies](#)

2. [Top free energy stories of 2010 and beyond](#)

## ENERGY TYPES

1. [Directory:Galactic Sea of Energy](#)
1. [Directory:Aether](#) | [PowerPedia:Aether](#)
2. [Directory:Atmospheric Electrostatic Energy](#)
3. [Directory:Dark Energy](#)
4. [Directory:Radiant Energy](#) | **PowerPedia:Radiant Energy**
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2. [Directory:Grand Unified Theories](#) | [Directory:Aether Physics Model](#)
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4. [Directory:Fractal Antennas as an Energy Source](#)

## DEVICE TYPES

1. [Directory:Electromagnetic \(overunity\)](#)
  1. [News:Electromagnetic \(latest\)](#) | [2009](#) | [2006-2008](#)
  2. [Directory:Magnet Motors](#) | [News:Magnet Motors](#)
  3. [Directory:Linear Magnet Accelerators](#)
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  10. [Directory:Gravity Motors](#)
  11. [Directory:Pendulums](#)
- [PowerPedia main index](#)
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## Radiant Energy

(Term of *radiometry*)

The energy transported by electromagnetic radiation. When this radiation hits an object in its path, then it may get absorbed partly or completely and transformed into some other form. For example, this is the case with the microwave radiation (electromagnetic radiation near ca. 5 GHz) when it is absorbed by the water in your food, and transformed into thermal energy (heat).

The special case we are interested in is of course the energy transported by electromagnetic radiation within the spectral band visible to the human eye. We usually measure the output of a light source in radiant energy weighted by the spectral response curve of the human eye per time unit, its *luminous flux*.

Standard unit for radiant energy is **Joule (j)**.

**References:** [radiometry](#)  
[luminous flux](#)

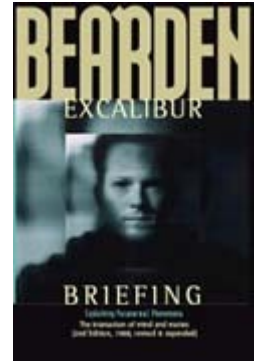
English	German
radiant energy	<a href="#">Die Strahlungsenergie</a>

# radiant energy

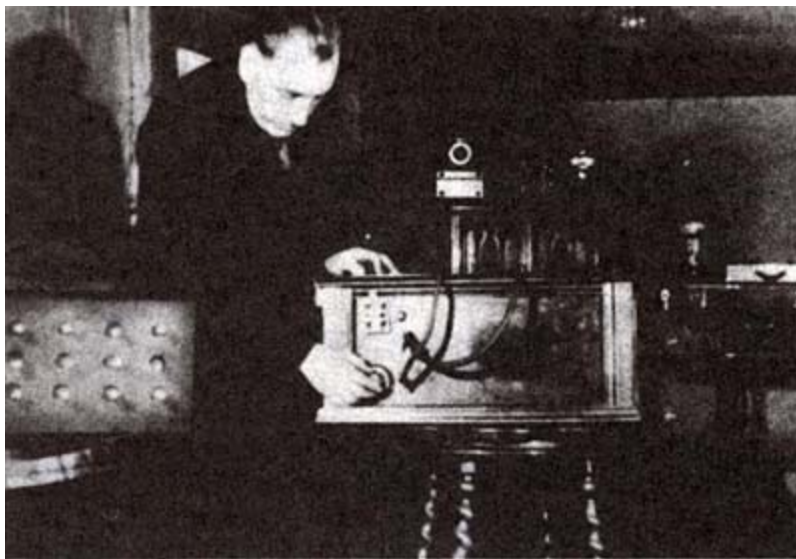
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**radiant energy:** Energy in the form of electromagnetic waves. *Note 1:* Radiant energy may be calculated by integrating [radiant power](#) with respect to [time](#). *Note 2:* Radiant energy is usually expressed in joules. (188)

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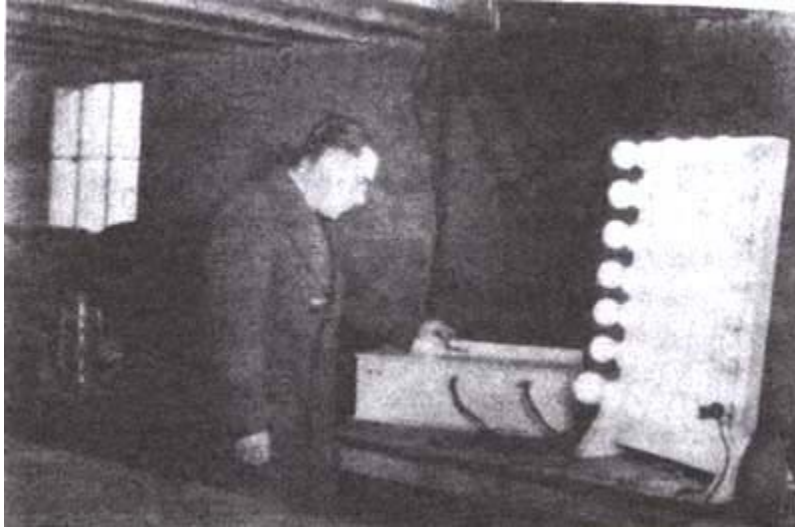
**T. Henry Moray makes some final adjustments in tuning his radiant energy device to tap zero-point vacuum energy**

**THE MORAY RADIANT ENERGY DEVICE**

In the early 1900's, Dr. T. Henry Moray of Salt Lake City produced his first device to tap energy from the metafrequency oscillations of empty space itself. Eventually Moray was able to produce a free energy device weighing sixty pounds and producing 50,000 watts of electricity for several hours. Ironically, although he demonstrated his device repeatedly to scientists and engineers, Moray was unable to obtain funding to develop the device further into a useable power station that would furnish electrical power on a mass scale.

As a boy, Moray had been deeply inspired by the greatest electrical genius of all time, Nikola Tesla. His imagination was especially fired by Tesla's claims to have knowledge of an energy source greater than ordinary electricity, and by Tesla's emphasis on frequencies as the stuff of the universe. When Moray finished high school in Salt Lake City, he went abroad to study, and took resident examinations for his doctorate in electrical engineering from the University of Uppsala, Sweden, during the period 1912-14. Returning home, his diploma and credentials were interrupted by World War I, and the University mailed him these items in 1918 after the war.

Shortly thereafter, Moray produced his first elementary device that delivered measurable electrical power, and he continued to work diligently on energy devices when he had time. In the 1920's and 1930's he steadily improved his devices, particularly his detector tube, the only real secret of the device according to Moray himself. In his book, *The Sea of Energy in Which the Earth Floats*, Moray presents documented evidence that he invented the first transistor-type valve in 1925, far ahead of the of officially recognized discovery of the transistor. In his free energy detector tube Moray apparently used, inside the tube itself, a variation of this transistor idea—a small rounded pellet of a mixture of triboluminescent zinc, a semiconductor material, and a radioactive or fissile material His patent application (for which a patent has never been granted) was filed on July 13, 1931, long before the advent of the Bell Laboratories' transistor.



**Here the Moray radiant energy device is providing free power to 35 100-watt lamps and a 1200-watt iron.**

In test after test Moray demonstrated his radiant energy device to electrical engineering professors, congressmen, dignitaries, and a host of other visitors to his laboratory. Once he even took the device several miles out in the country, away from all power lines, to prove that he was not simply tuning in to energy being clandestinely radiated from some other part of his laboratory. Several times he allowed independent investigators to completely disassemble his device and reassemble it, then reactivate it themselves. In all tests, he was successful in demonstrating that the device could produce energy output without any appreciable energy input. According to exhaustive documentation, no one was ever able to prove that the device was fraudulent or that Moray had not accomplished exactly what he claimed. On the other hand, the records are full of signed statements from physicists, electrical engineers, and scientists who came to the Moray laboratory as doubting Thomases and left with the complete conviction that Moray had indeed succeeded in tapping a universal source of energy that could produce free electrical power.

But in the face of all of this, the U.S. Patent Office refused to grant Moray a patent, first, because his device used a cold cathode in the tubes (the patent examiner asserted it was common knowledge that

a heated cathode v as necessary to obtain electrons) and, second, because he failed to identify the source of the energy. All sorts of irrelevant patents and devices were also presented as being infringed upon or duplicated by Moray's work. Each of these objections was patiently answered and nullified by Moray; nonetheless, the patent has still not been issued to this day, although the Morays still keep the patent application current.

One of Moray's efforts to develop the machine involved an association with the Rural Electrification Agency for a short time before World War II. At that time, the R.E.A. was apparently infiltrated by Communist sympathizers and high level officials of a decidedly pinkish tinge. These officials continually urged Moray to turn over all details of his device to the Soviet Union, and even arranged the visit of high-level Soviet scientists to the Moray laboratory to see the device in operation. On the initiative of the Communist-infiltrated R.E.A., one person—let us call him "Z"—spent about two months in Moray's laboratory, and succeeded in worming his way into Moray's full confidence. Moray eventually disclosed most of the details of the construction of his special valve to "Z"—the only person in whom Moray ever completely confided.

There is strong reason to believe that "Z" was a Soviet agent, and that this is where the Soviets first obtained the impetus to develop the hyperspace amplifiers later used in their psychotronic weapons.

However, Moray became quite alarmed at the continued attempts of his R.E.A. contacts to get the device into the hands of the Russians. He eventually concluded that he had become involved with a governmental group filled with radicals and reactionaries. Moray became concerned that fifth column activity was actually directed against him in an attempt to steal his device. Quotes from the *Salt Lake Tribune* of December 2, 1941, attributed to Representative Thomas D. Winter, imply that Moray's suspicions of the R.E.A. were well founded, since Representative Winter called for a full-scale investigation of the R.E.A. on the grounds of Communist infiltration. Indeed, Moray was wounded by gunshot in his own

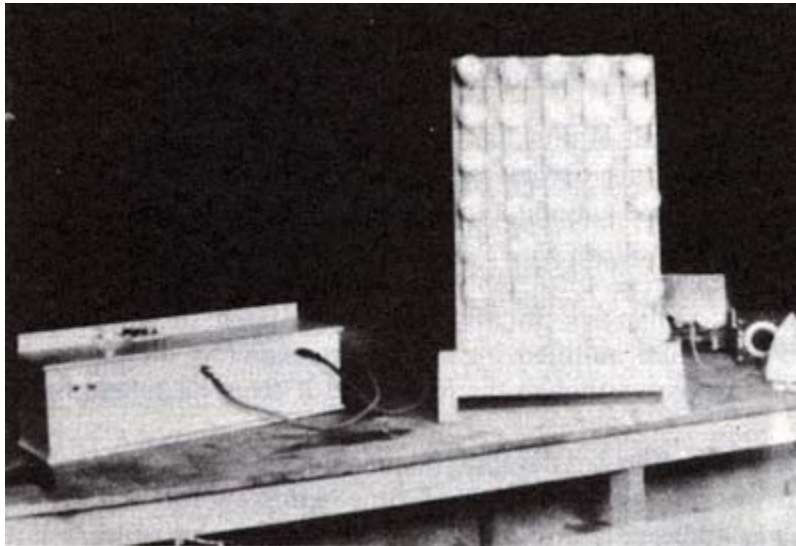


laboratory on March 2, 1940, which seems to suggest that his fears and suspicions were based on fact. Moray severed his association with the R.E.A. in February 1941.

However, his basic unit had been destroyed by a hammerslinging witness in 1939; it is not clear whether or not this was the work of "Z" or of someone else. According to his son, John Moray, the man who broke his unit, as well as other interested groups, wanted complete disclosure of the materials and construction — nothing more or less. John Moray, who operates the Research Institute in Salt Lake City, has been trying to continue his father's work since the basic unit was destroyed. Dr. Moray himself died in May 1974.

According to John Moray, highly energetic cosmic rays from space are tapped by the machine, which is in subharmonic resonance with this high-frequency energy level, and it converts this energy level into a usable form of electricity. However, John Moray's use of the term "cosmic ray" is not necessarily the same as that of modern physics, but in fact is the same as the present concept of "zero-point" energy of vacuum. T. Henry Moray envisioned all space filled with tremendously high frequency vibrations carrying vast and incalculable amounts of pure raw energy. He envisioned the dynamic Universe as a turbulent source of great energy, just as the ocean waves carry energy throughout the earth. This was also the vision of Tesla, and after him of Clifford and Einstein, who turned the attention of general relativity to the problem of the nature of the vacuum itself. Clifford and Einstein founded a branch of physics that has come to be known as quantum geometrodynamics, the study of energetic change that occurs in little pieces, including the concept that very small lengths of space, or pure vacuum, themselves oscillate at great frequency and with great energy. In Moray's day relativity was still a strange and unproven branch of physics, suspected and rejected by most of the physicists of the day, and quantum physics was still in the process of being worked out. There was no theory whatsoever predicting that empty space itself not only contained prodigious quantities of energy, but in fact *was* prodigious quantities of energy. But slowly, over the decades, the

picture has changed, and the modern followers of quantum geometrodynamics assert the truth of Tesla's original vision. Today we know that one cubic centimeter of pure vacuum contains enough energy to condense into  $10^{80} - 10^{120}$  grams of matter! Thus the major part of Moray's thesis—that vacuum itself contains unlimited energy—is vindicated today. In this sense empty space is like a gigantic, restless ocean, and Moray's free energy "tapping" device is no more mysterious than the water wheel. In other words, his thesis that the energy is there to be tapped is correct; it only awaits a practical method to tap it in order to solve the energy problems of mankind forever.



**Once tuned in, the power continues and is free for the taking.**

Moray thus is vindicated as a man ahead of his time, who simply built a device before any theory existed to explain its operation. Moray met with constant opposition, and his life and that of his family was anything but pleasant. Certain pressure groups constantly tried to force him into selling for almost nothing, or to disclose the secrets of his valve's construction. He was often attacked and he was sometimes shot at on the city streets. In fact, his life was threatened so often that he was forced to install bulletproof glass in his automobile. His laboratory was broken into, some of his components and papers were stolen, and his dogs were

continually being killed. Moray was shot in his own laboratory, and he himself always carried a gun. Because he was harassed ceaselessly, over the years he became understandably suspicious and close-mouthed about his work. He sometimes greeted visitors at his desk with a loaded pistol lying on the desk within easy reach, and occasionally confirmed that he would not hesitate to shoot if he were attacked or threatened. One of his: greatest fears was that big interests would take up his invention and simply shelve it to keep it from benefiting the public. When large companies made him offers, he always demanded written guarantees that the device would be put into production and sold to everyone, once it was developed.

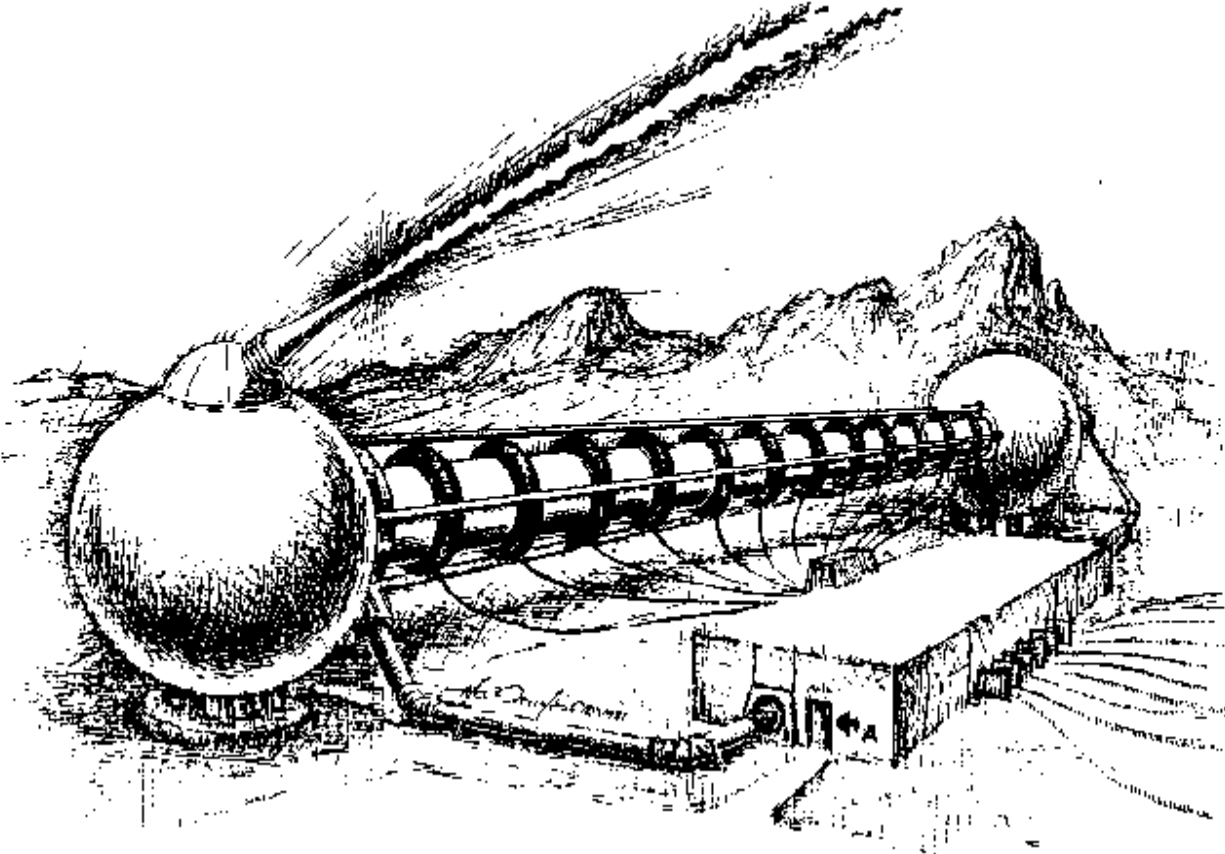
Moray also realized the potential of his devise as a weapon. He was fully aware that the only difference between a controlled energy device and an explosion is the rate of release of the energy.

According to John Moray, his father received an offer to go to Japan in 1938 because he had built a deathray which operated off the device. According to John, a representative of the Japanese government came to the laboratory and offered a position to Moray, but he refused. Allegedly Moray had managed to rig the device so that it projected a ray of energy in a beam, and could kill mice instantly at over fifty feet. When radiated by the beam, the mice were carbonized immediately. They appeared frozen, but nothing was left except their shells, and they simply fell apart when touched.

In one experiment Moray ran his device for 157 hours without any connection to external power sources, and produced over fifty kilowatts of power during the test. He also found that an additional fifty kilowatts could be added by simply providing another tap further back in the circuit. When he shut the device off from this test, he had proven once and for all that the device was generating electrical energy from free and natural sources without batteries or external power. During this test nothing in the machine heated up; instead, all parts of the circuit ran absolutely cold. This alone is totally unexplainable by ordinary electromagnetic theory, and it strongly implies the truth of Moray's assertion that the device

simply collects the energy in each of its stages in a subharmonically resonant manner, in synchronization with the extremely high frequency cosmic oscillations. In other words, since the parts of the machine ran cold, it is clear that the energy was being simultaneously collected at each stage rather than being processed through the individual stages in serial order, since serial processing in the conventional electrical sense would lead to resistance heating of the circuit elements.

Moray's device used twenty-nine stages of his special detector valves, which were difficult to produce, costing about five hundred dollars each. Only about one in four proved suitable for operation. He also had difficulty in obtaining sufficiently pure materials to make his special mixture for the pellet that enabled tube operation in a one-way gating fashion. Moray explained that his device was based on the discovery of a mixture that would act as a one-way gate for the high frequency oscillations of space, so that the energy could go through the material more readily in one direction than another. Thus it was like a one-way gate valve to an ocean wave; the energy "water" could flow in in each valve, but was prevented from flowing back out. The assemblage of multiple stages thus provided a series of collectors which contained enough energy to be useful. Theoretically there was no limit to the number of collectors that could be added, and so there appeared to be no limit to the energy that such a device could produce.



### **Scalar Potential Interferometer**

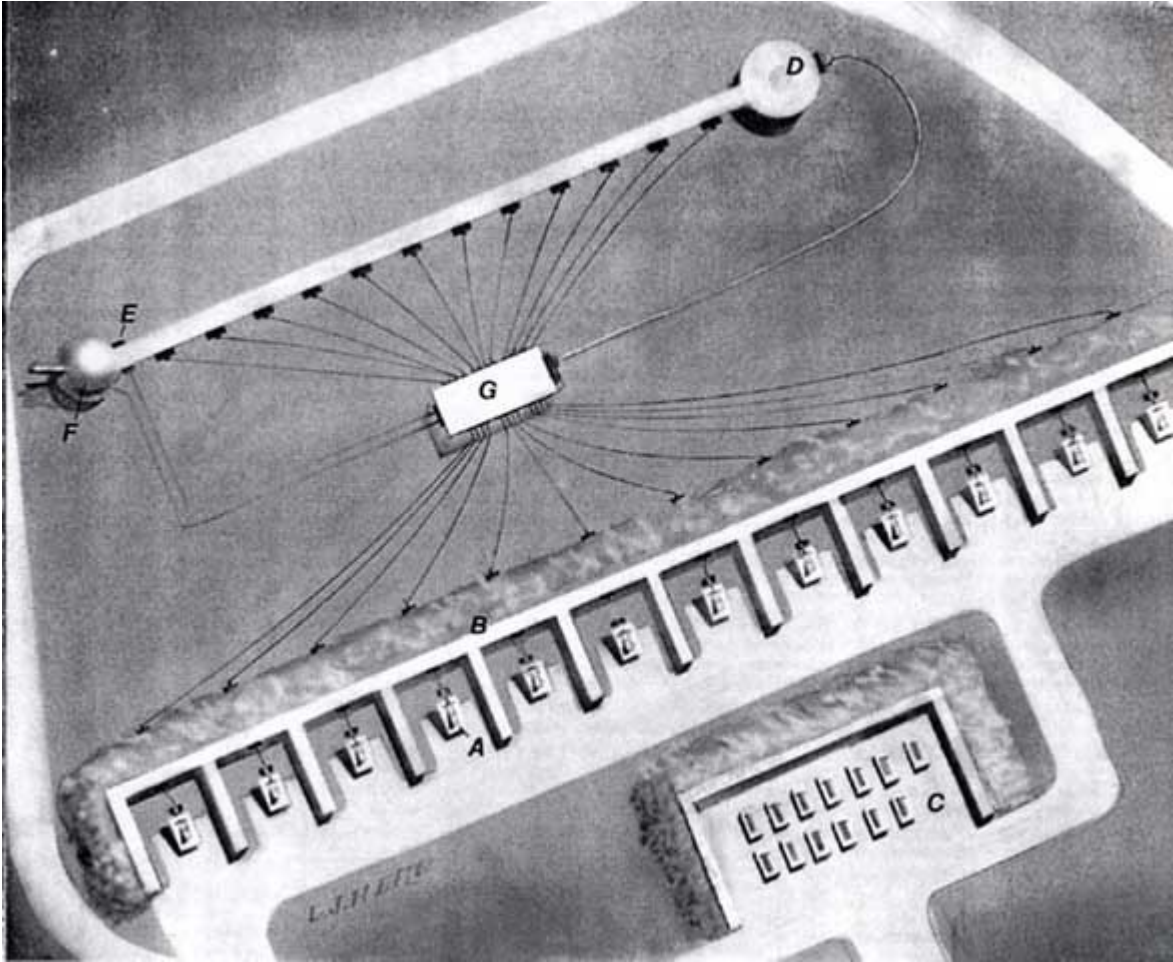
Figure 6. Multimode Tesla Weapon

In the 1930's Tesla announced other bizarre and terrible weapons: a death ray, a weapon to destroy hundreds or even thousands of aircraft at hundreds of miles range, and his ultimate weapon to end all war -- the Tesla shield, which nothing could penetrate.

However, by this time no one any longer paid any real attention to the forgotten great genius. Tesla died in 1943 without ever revealing the secret of these great weapons and inventions.

Unfortunately, today in 1981 the Soviet Union has long since discovered and weaponized the Tesla scalar wave effects. Here we only have time to detail the most powerful of these frightening Tesla weapons -- which Brezhnev undoubtedly was referring to in 1975 when the Soviet side at the SALT talks suddenly suggested limiting the development of new weapons "more frightening than

the mind of man had imagined." One of these weapons is the Tesla howitzer recently completed at the Saryshagan missile range and presently considered to be either a high-energy laser or a particle beam weapon, (See *Aviation Week & Space Technology*, July 28, 1980, p. 48 for an artist's conception.)



**Aviation Week & Space Technology July 28, 1980**

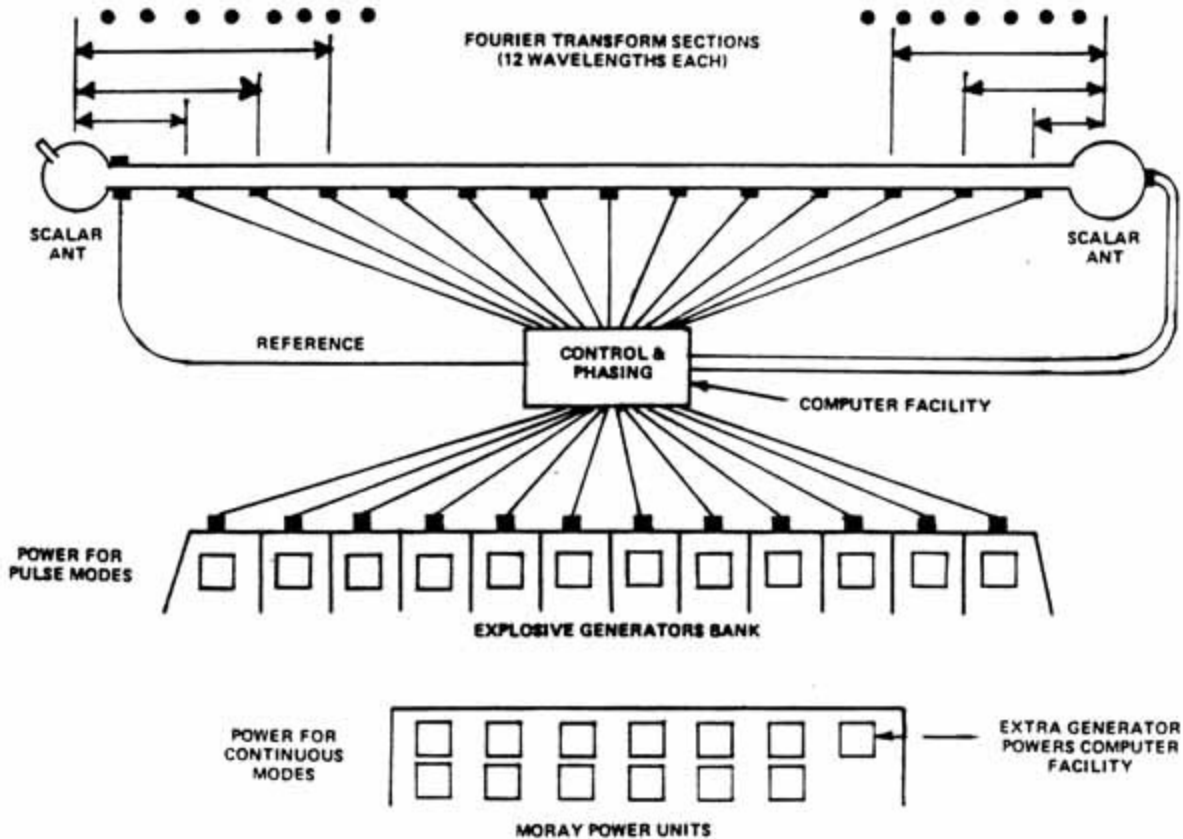


Figure 7. Tesla Weapons at Saryshagan

The Saryshagan howitzer actually is a huge Tesla scalar interferometer with four modes of operation. One continuous mode is the Tesla shield, which places a thin, impenetrable hemispherical shell of energy over a large defended area. The 3-dimensional shell is created by interfering two Fourier-expansion, 3-dimensional scalar hemispherical patterns in space so they pair-couple into a dome-like shell of intense, ordinary electromagnetic energy. The air molecules and atoms in the shell are totally ionized and thus highly excited, giving off intense, glowing light. Anything physical which hits the shell receives an enormous discharge of electrical energy and is instantly vaporized -- it goes pfft! like a bug hitting one of the electrical bug killers now so much in vogue.

If several of these hemispherical shells are concentrically stacked, even the gamma radiation and EMP from a high altitude nuclear explosion above the stack cannot penetrate all the shells due to

repetitive absorption and reradiation, and scattering in the layered plasmas.

In the continuous shield mode, the Tesla interferometer is fed by a bank of Moray free energy generators, so that enormous energy is available in the shield. A diagram of the Saryshagan-type Tesla howitzer is shown in figure 7. Hal Crawford's fine drawing of the interferometer end of the Tesla howitzer is shown in figure 6. Hal's exceptional rendition of the Tesla shield produced by the howitzer is shown in figure 8.

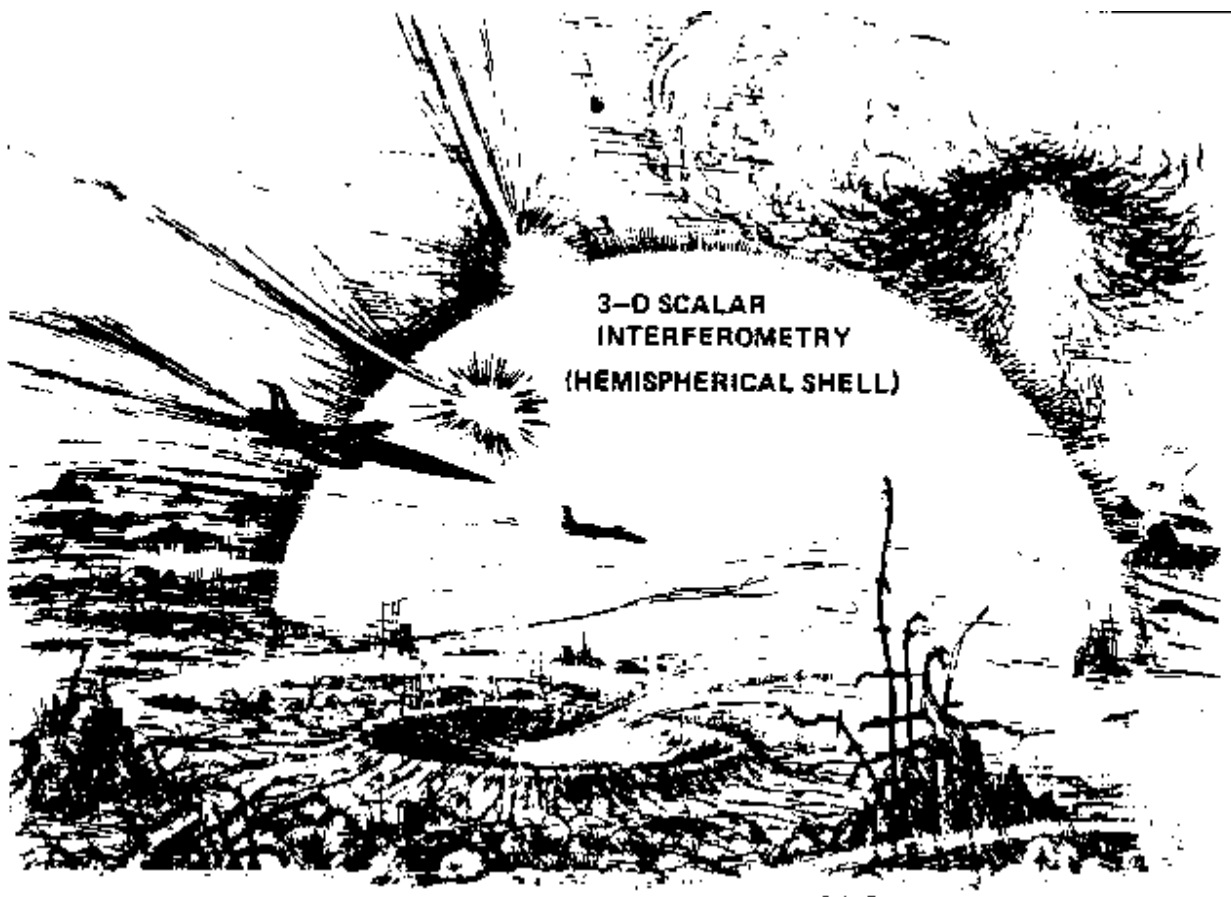


Figure 8. The Tesla Shield



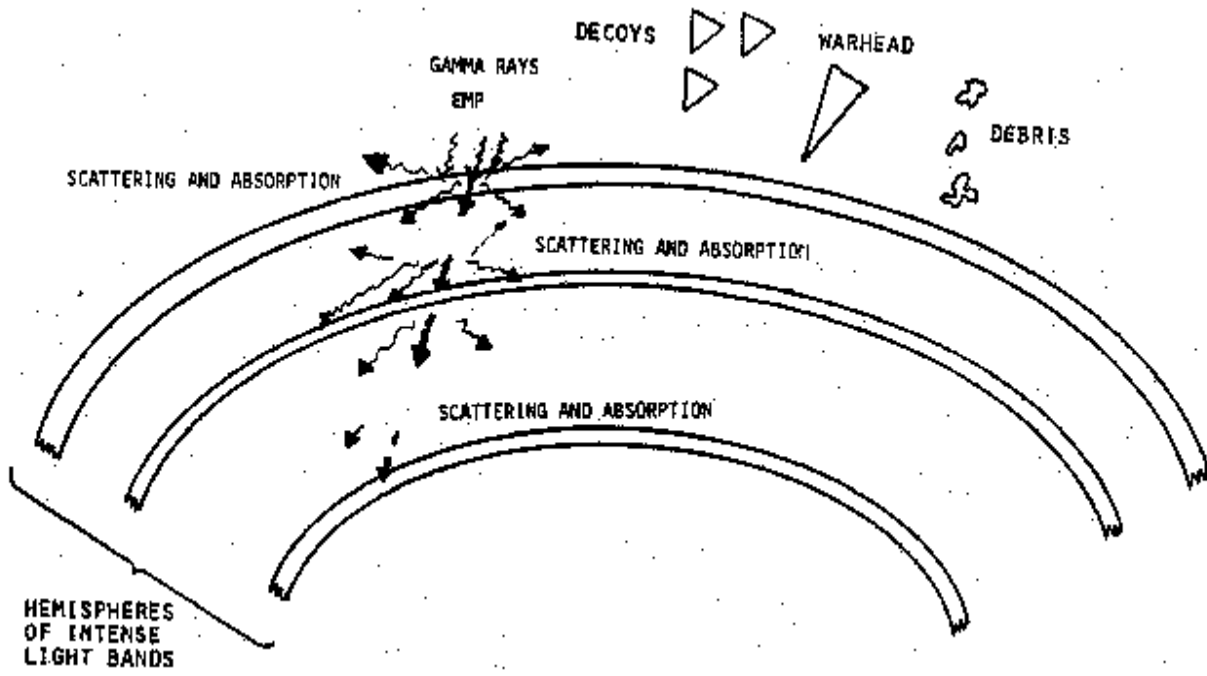
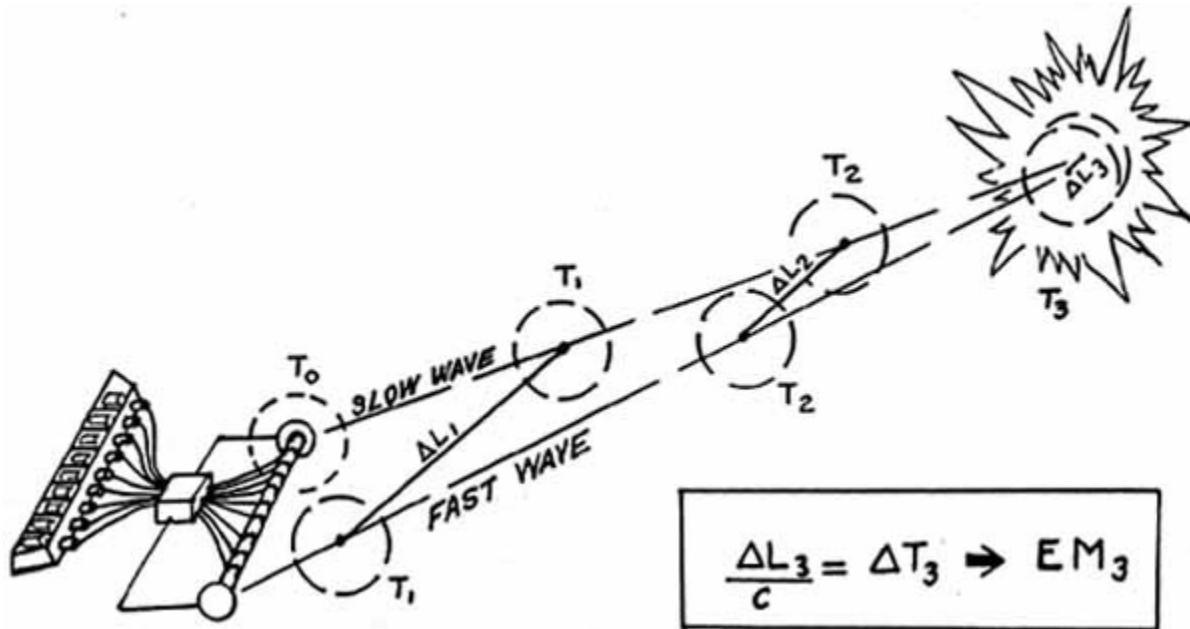


Figure 9. Tesla Terminal Area Defense System

In the pulse mode, a single intense 3-dimensional scalar phi-field pulse form is fired, using two truncated Fourier transforms, each involving several frequencies, to provide the proper 3-dimensional shape (Figure 10). This is why two scalar antennas separated by a baseline are required. After a time delay calculated for the particular target, a second and faster pulse form of the same shape is fired from the interferometer antennas. The second pulse overtakes the first, catching it over the target zone and pair-coupling with it to instantly form a violent EMP of ordinary vector (Hertzian) electromagnetic energy. There is thus no vector transmission loss between the howitzer and the burst. Further, the coupling time is extremely short, and the energy will appear sharply in an "electromagnetic pulse (EMP)" strikingly similar to the 2-pulsed EMP of a nuclear weapon.

This type weapon is what actually caused the mysterious flashes off the southwest coast of Africa, picked up in 1979 and 1980 by Vela satellites. The second flash, e.g., was in the infrared only, with no visible spectrum. Nuclear flashes do not do that, and neither does

superlightning, meteorite strikes, meteors, etc. In addition, one of the scientists at the Arecibo Ionospheric Observatory observed a gravitational wave disturbance -- signature of the truncated Fourier pattern and the time-squeezing effect of the Tesla potential wave -- traveling toward the vicinity of the explosion.



**TESLA HOWITZER  
(SCALAR INTERFEROMETER)**

Figure 10. "Nuclear" Flashes off the Coast of Africa



**Lithuania - 10 Sep 1976 - British European Airways Flight #831  
between Moscow and London**

**CIA Report Released under FOIA**

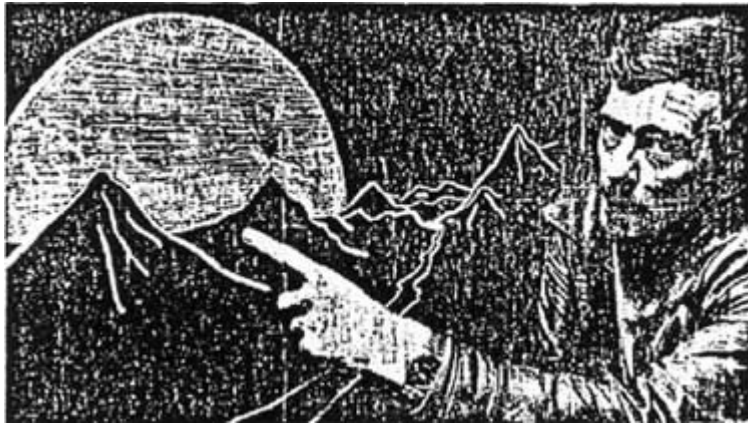
Figure 11. Continuous Tesla Fireball

The pulse mode may be fed from either Moray generators or -- if the Moray generators have suffered their anomalous "all fail" malfunction -- ordinary explosive generators. Thus the Tesla howitzer can always function in the pulse mode, but it will be limited in power if the Moray generators fail.

In the continuous mode, two continuous scalar waves are emitted -- one faster than the other -- and they pair-couple into vector energy at the region where they approach an in-phase condition. In this mode, the energy in the distant "ball" or geometric region would

appear continuously and be sustained -- and this is Tesla's secret of wireless transmission of energy at a distance without any losses. It is also the secret of a "continuous fireball" weapon capable of destroying hundreds of aircraft or missiles at a distance. An example of a Soviet test of this mode of operation is shown in figure 11.

## **Witness to a super weapon?**



**Nick Downie describes the strange lurid glow that flared silently over the  
Hindu Kush**

**THE SUNDAY TIMES, 17 AUGUST 1980**

(Multiple incidents in Sept., 1979)



**TEHERAN, IRAN**

**17 JUNE 1966**

**SEEN FROM NEAR  
MEHRABAD  
AIRPORT**

**OBSERVED 4-5  
MINUTES**

**SEEN BY 2  
AIRCRAFT**

**CIA REPORT RELEASED UNDER FOIA**

Figure 12. Tesla EMP Globe

The volume of the Tesla fireball can be vastly expanded to yield a globe which will not vaporize physical vehicles but will deliver an EMP to them to dud their electronics. A test of this mode is shown in figure 12. (See also Gwynne Roberts, "Witness to a Super Weapon?", the London Sunday Times, 17 August 1980 for several other tests of this mode at Saryshagan, seen from Afghanistan by British TV cameraman and former War Correspondent Nick Downie.)

If the Moray generators fail anomalously, then a continuous mode limited in power and range could conceivably be sustained by powering the interferometer from more conventional power-sources such as advanced magnetohydrodynamic generators.

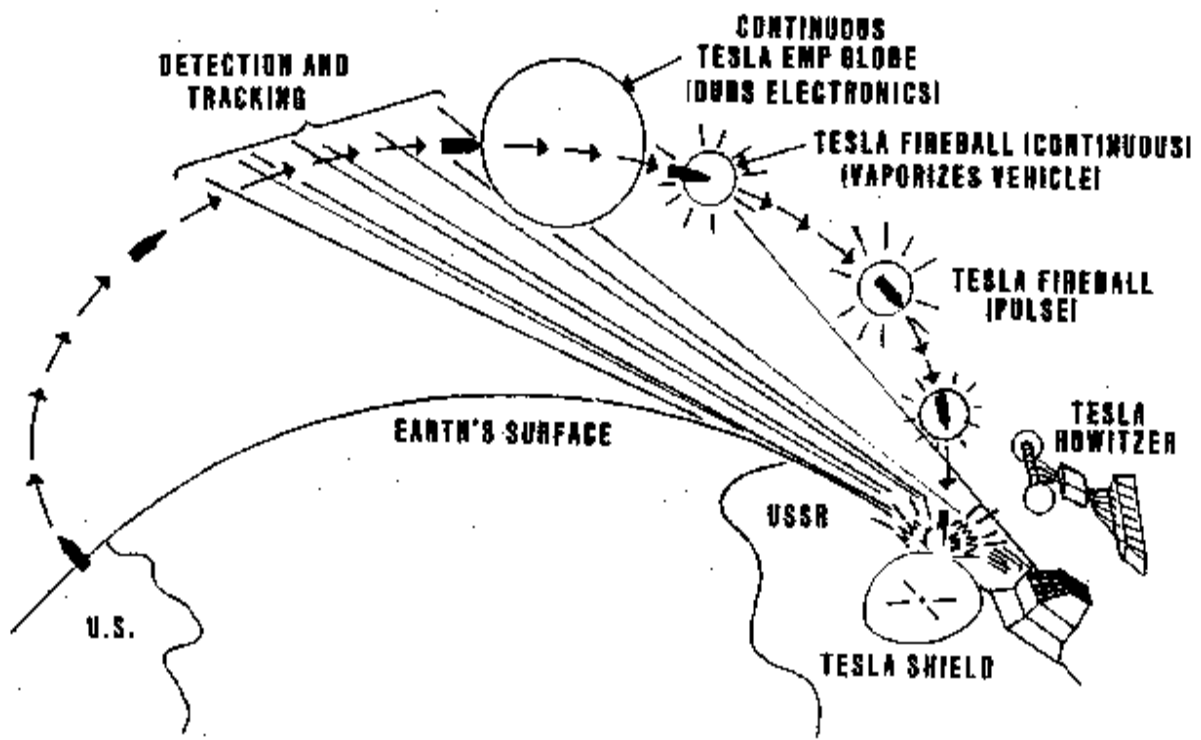


Figure 13. Tesla ABM Defenses

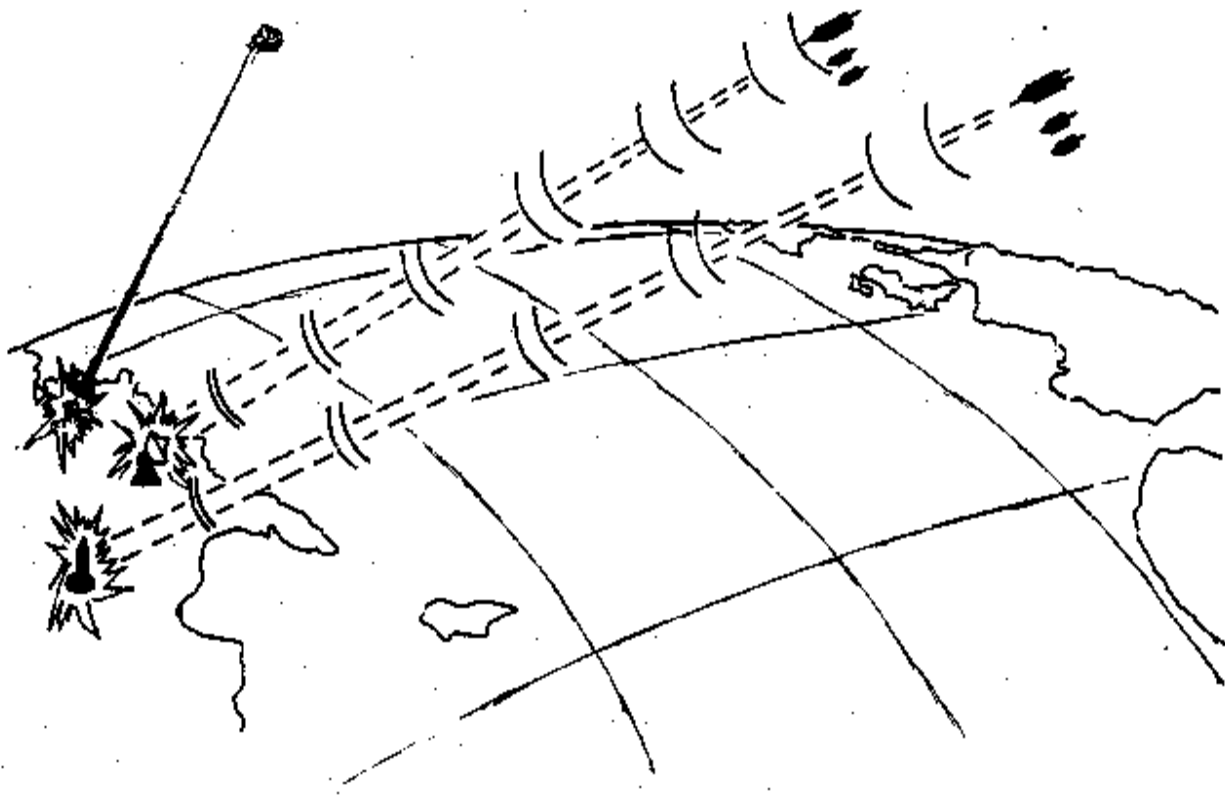


Figure 14. Moray/Tesla Technology: Star Wars Now

Typical strategic ABM uses of Tesla weapons are shown in figure 13. In addition, of course, smaller Tesla howitzer systems for anti-tactical ballistic missile defense of tactical troops and installations could be constituted of more conventional field missile systems using paired or triplet radars, of conventional external appearance, in a scalar interferometer mode.

With Moray generators as power sources and multiply deployed reentry vehicles with scalar antennas and transmitters, ICBM reentry systems now can become long range "blasters" of the target areas, from thousands of kilometers distance (figure 14). Literally, "Star Wars" is liberated by the Tesla technology. And in air attack, jammers and ECM aircraft now become "Tesla blasters." With the Tesla technology, emitters become primary fighting components of stunning power.

The potential peaceful implications of Tesla waves are also

enormous. By utilizing the "time squeeze" effect, one can get antigravity, materialization and dematerialization, transmutation, and mindboggling medical benefits. One can also get subluminal and superluminal communication, see through the earth and through the ocean, etc. The new view of phi-field also provides a unified field theory, higher orders of reality, and a new super-relativity, but detailing these possibilities must wait for another book.

With two cerebral brain halves, the human being also has a Tesla scalar interferometer between his ears. And since the brain and nervous system processes avalanche discharges, it can produce (and detect) scalar Tesla waves to at least a limited degree. Thus a human can sometimes produce anomalous spatiotemporal effects at a distance and through time. This provides an exact mechanism for psychokinesis, levitation, psychic healing, telepathy, precognition, postcognition, remote viewing, etc. It also provides a reason why an individual can detect a "stick" on a radionics or Hieronymus machine (which processes scalar waves), when ordinary detectors detect nothing. Unfortunately there is not room to develop the implications of this human Tesla interferometry in detail, for that must wait for yet another book, presently in its initial stages, that Hal Crawford and I are writing.

Table 5. Orders of Reality

- **PHOTONS ARE**
  - > **PAIR-COUPLED SCALARS**
  - > **VELOCITY-LIMITED TO C**
  - > **CARRIERS OF T**
- **PHOTON INTERACTION**
  - > **IS UBIQUITOUS**
  - > **PRODUCES  $\hbar = C$**
  - > **YIELDS 1st ORDER REALITY**
- **SCALAR O WAVES**
  - > **NOT VELOCITY-LIMITED**
  - > **YIELD HIGHER ORDER REALITIES**



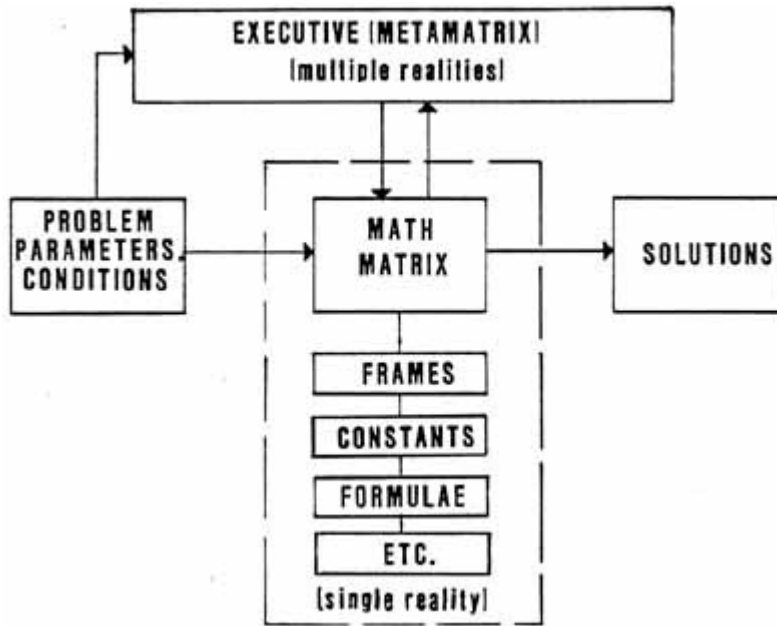


Figure 15. Implications of Tesla Potential

At the July 1981 U.S. Psychotronics Association's Annual Conference in Dayton, Ohio, I presented the first rough paper on the Tesla secret and scalar interferometry. A videotape of the presentation was made and will shortly be available. I am also scheduled to make a special presentation at the Alternate Energy Conference in Toronto, Canada in latter October, 1981. A professional, videotaped two-hour presentation on this subject is also being prepared. Wide distribution of the material through the international underground physics and technology network has already been made. This time, God willing, Tesla's secret will not be suppressed for another 80 years!

And perhaps it is not yet too late. The material has cost me (now) some 16 years of agonizing labor and nearly \$100,000 of my own personal funds. No orthodox university, scientific group, foundation, or governmental agency would support such an effort, either financially or otherwise. Indeed, most ordinary journals will not even accept material on such matters. Nonetheless, the area is of overwhelming importance and I truly believe Tesla's lost secret will shortly affect the lives of every human being on earth.

Perhaps with the free and open release of Tesla's secret, the

scientific and governmental bureaucracies will be shocked awake from their slumber, and we can develop defenses before Armageddon occurs. Perhaps there is hope after all -- for even Brezhnev, in his strange July, 1975 proposal to the SALT talks, seemed to reveal a perception that a turning point in war and weaponry may have been reached, and that human imagination is incapable of dealing with the ability to totally engineer reality itself. Having tested the weapons, the Soviets must be aware that the ill-provoked oscillation of timeflow affects the minds and thoughts -- and the very lifestreams and even the collective species unconsciousnesses -- of all lifeforms on earth. They must know that these weapons are two-edged swords, and that the backlash from their use can be far more terrible to the user than was the original effect to his victim.

If we can avoid the Apocalypse, the fantastic secret of Nikola Tesla can be employed to cure and elevate man, not kill him. Tesla's discovery can eventually remove every conceivable external human limitation. If we humans ourselves can elevate our consciousness to properly utilize the Tesla electromagnetics, then Nikola Tesla -- who gave us the electrical twentieth century in the first place -- may yet give us a fantastic new future more shining and glorious than all the great scientists and sages have imagined.

***Radiant Energy Aerial Capture (REAC)  
& Transformation Device  
posted 10/07/04 - courtesy Emmett Butler***

**Warning: The use of longer wire or coax in excess of 500 feet or higher than head height can produce lethal results!!!!  
This file is for information and entertainment.  
If you choose to experiment with this design or with high voltage,  
you do so entirely at your own risk!**

---

**On giving credit to where it is due, various different people and their experiments, from;**

**Bill Beaty's Weird Science,**  
**JLNaudins Lab,**  
**to a South African researcher on aerial balloon experiments,**  
**John Bedini,**  
**Tom Bearden**

and culminating in this, Wiley Almond through CUAE4YW, Mitch and others...

---

This is a very simple device that could be found by scavenging parts and buying a few others and is quite cheap and effective. How this works as I see it in my simplistic version and John Bedini's more technical version;

1. The long wire acts as an antennae and a capacitor and as it builds up charge, it discharges a spark that jumps the gap, is then stepped down by the coil, and then pulsed to the battery through the use of the capacitor. This is my simple view of the device.
2. John Bedinis' more technical version, as per his October 8th post to the KeelyNet Interact discussion list;

The long wire captures radiant energy, as the charge builds up and jumps the gap, spark (longitudinal waves) it is then stepped down in the coil, (for those who do not know it the coil in your car was invented by Tesla and is a small Tesla coil,) it is then charging the battery where it is transformed via a square or PWM wave at low frequency and is the reactive power that charges your battery. It works and as far as I am concerned is all that matters.

**On Using Coax Cable:**

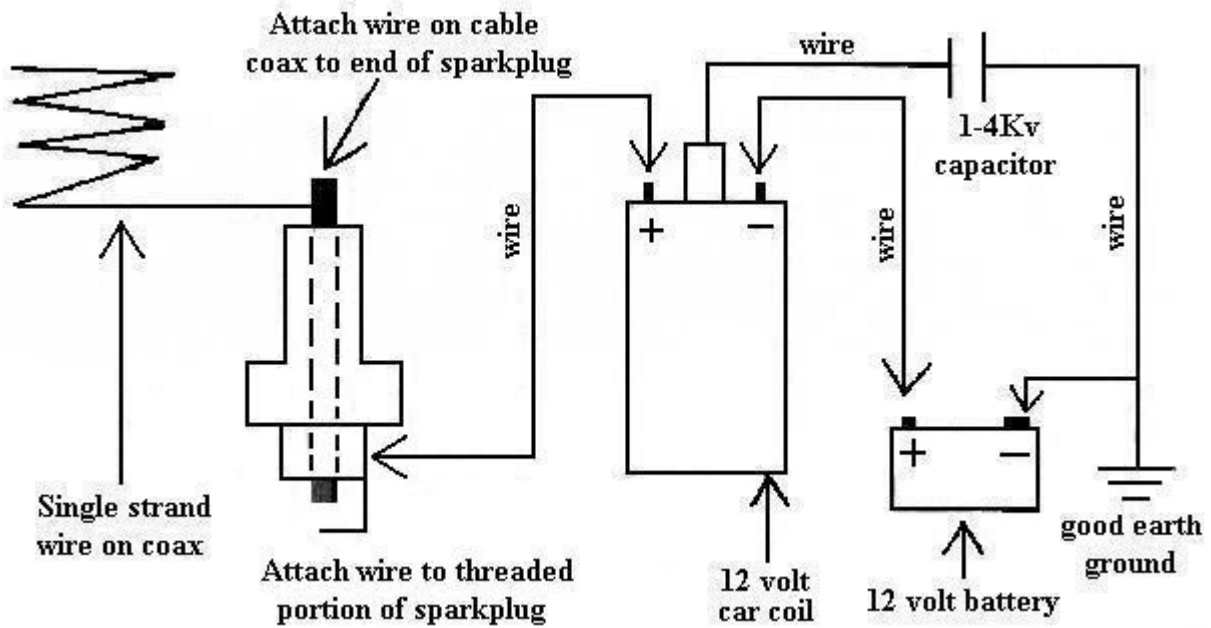
The end of the coax is taped off and the end that is attached to the spark plug the wires are twisted together. According to John Bedini, as he explained to me when you cut one end off and twist the other two ends together, what you have is a high dielectric absorber antennae, the positively charged particles from the atmosphere get trapped in between the skin and the inner wire making a condenser of sorts.

As he explained it there are two things going on:

The rate of charge in the wire that is oscillating in nature at one frequency and the discharge frequency in sharp DC transient pulse to the battery that is at its own rate. If you look at the pulse rate it would almost look like a triangle wave flattened off and would follow the gravitational wave frequency of about 8KHZ.

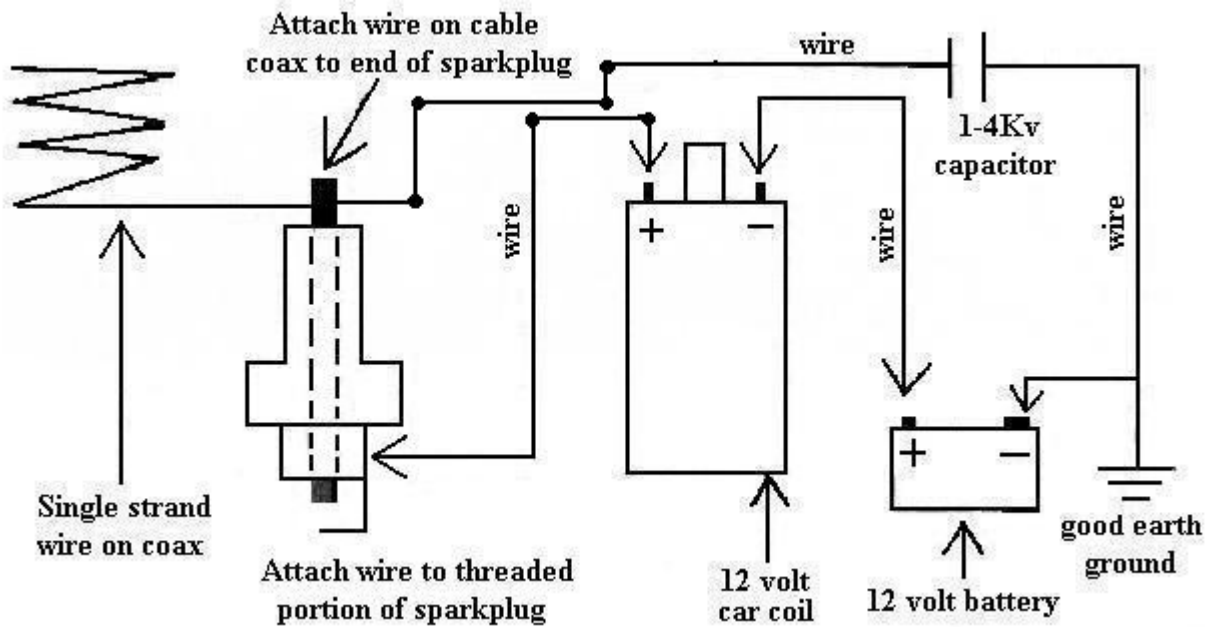
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### Original Circuit

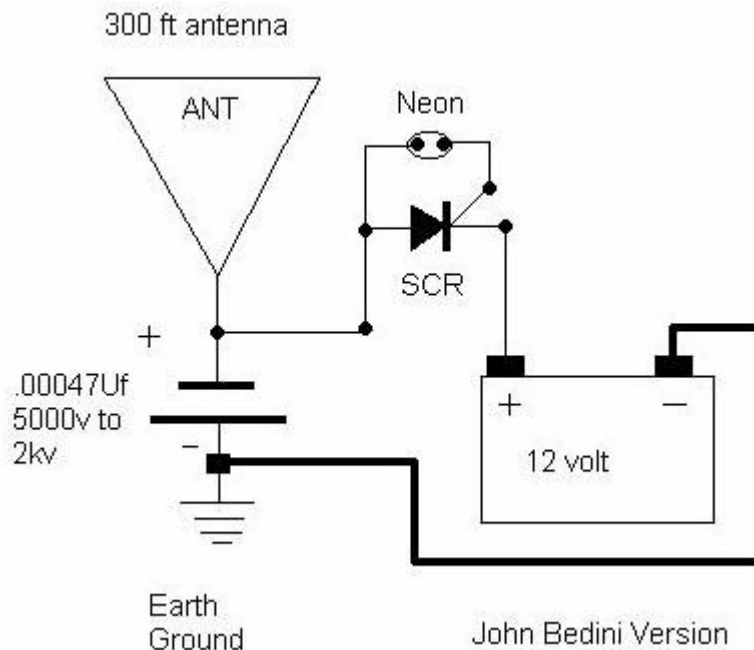


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### Bedini Correction



## Bedini Airpower Circuit



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### Setup:

1. Using either regular insulated wire or coax, waterproof the end, the wire or coax may be laid out in any fashion as long as it is insulated from any potential ground and to itself.
2. Attach the wire (coax twist the ends together first) and attach it to the end of the spark plug.
3. Attach a wire to the threaded portion of the spark plug (the end that goes in to your motor) and attach it to the positive (+) of your 12 volt car coil.
4. Attach a wire to the negative (-) of the 12 volt car coil and attach it to the (+) positive terminal of a 12 volt battery, I prefer deep cycle batteries, but for basic experimentation purposes I don't think it will matter.
5. Attach a wire from the taller center of your car coil to a 1-4Kv capacitor (a few picofarad will do) and then a wire from the other leg of the capacitor to a good earth ground and to the negative (-) terminal of the battery.

**(\*\*\* NOTE: I use the coil plug wire with just the coil connector, under the rubber boot with wire soldered to it for a good snug fit.) Have fun and enjoy!!!!!!**

### ***Electrets for Power Q&A - 02/07/01***

***The following information is not currently endorsed by KeelyNet because we have no direct physical evidence of the claims, though of course are highly intrigued.***

***This document contains unverified claims and is being posted at the request of Paul Clint.***

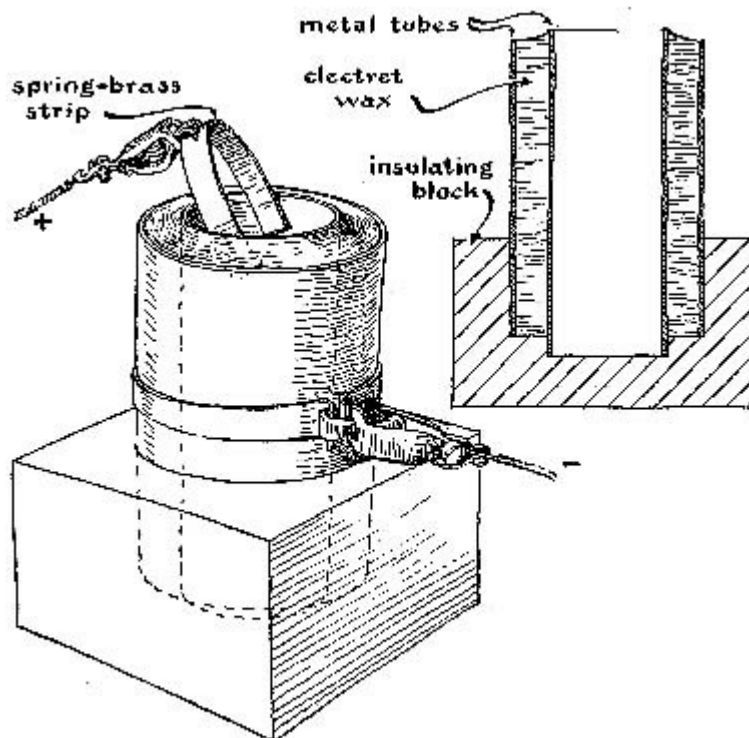
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**QUESTION: What is an Electret?**

**ANSWER: A solid electrically insulating, or dielectric, material that has acquired a long-lasting electrostatic polarization. Electrets are produced by heating certain dielectric materials to a high temperature and then letting them cool while immersed in a strong electric field. An electret is an analog of a permanent magnet. The Columbia Encyclopedia, Sixth Edition states;**

**"If you take one electret and one magnet you will get a surprise. When not in motion, these two differing objects will have no effect on one another. It is only when you move them that anything happens ... and ... it is not the familiar attraction-repulsion. When a pole of the magnet is in relative motion to a "pole" of the electret they push each other at 90 degrees to the direction of motion. The effect is entirely odd and immediately unfamiliar (unless you are a physics student)."**

## **How to Make an Electret**



**QUESTION: Can the Electret effect be used to generate power directly?**

**ANSWER: The general consensus of the experts is no, but there are some new techniques that raise doubts about their certainty. One new technique is to mix ferrite granules into the dielectric when it is formed. A magnetic field applied at a right angle to the resulting electret's field has a dramatic effect in maximizing and recharging the electret effect.**

**There is very little doubt, however, that the electret is much more effective in generating power indirectly by using its field to move and trap existing electro-static charges. A prime example of this are reports from amateur radio operators of the static charges collected by coaxial cables.**

**A great many of the numerous claimed free-energy machines are obviously employing the electret effect to collect electro-static charge..**

**QUESTION: In what materials can the strongest manifestation of the electret effect be produced?**

**ANSWER: In general the higher a material's insulating properties are, the better an electret it will form. Thus, teflon is near the top of the list, with glass, plastics and ceramics.**

**Another important factor in plastic materials is the strength of the polymer bonds. This factor also relates to the fact that the thinner the material is, the more intense the electret's field because the stress on the polymer's bond is transmitted through less intermediate material. But this is limited by the dielectric constant as well because if the electret's field generates a voltage high enough to break down the dielectric resistance, the device arcs across its own field and self destructs.**

**QUESTION: Where can I learn more about electrets?**

**ANSWER: Here are some references.**

**See "Electrostatics - And its Applications" by A.D. Moore (1973) is a very well researched book on electrets (p122 - 130) and electrostatic machines; "Handbook of Electrostatic Processes" by Jen-Shih Chang (1995) pp509 on electrets.**

**The first person to make an electret was Mototaro Eguchi, see his "On the Permanent Electret" paper in "Philosophical Magazine" Vol 49 (1925) pp178.**

**"How to Make an Electret" by C.L. Strong in "Scientific American" Vol 203 (Nov 1960) p202 - 210 is a practical description of how to make an electret using carnauba wax.**

**QUESTION: How can a small cable extract so much energy from the kinetic energy of the wind?**

**ANSWER: Your dilemma is easily resolved. The energy collected from the cable generator is not derived from the kinetic energy of the wind.**

**As you may or may not be aware, the earth's atmosphere is a gigantic capacitor. At its upper level, air molecules are constantly being ionized and then as the air circulates, the charge is eventually carried to the ground which has a negative charge with respect to the upper atmosphere.**



**Another source of atmospheric charge is condensing water vapor. As water evaporates, it gathers electrons the molecules in the liquid state are sharing, and leaves behind a positive charge. When it condenses in the atmosphere, it gives back the electrons creating a negative charge. This is why the cable generator's output increases in stormy weather. Ham radio operators will certainly confirm that a coaxial cable strung out as an antenna will pick up static charge, especially in wet, stormy weather.**

**So the power is derived from the atmospheric charge rather than kinetic energy. This is clearly demonstrated from the fact that the power generated is directly proportional to the square of the speed of the wind rather than the cube of the speed.**

**QUESTION: Still the wire hardly intersects any of the wind. Even if the power isn't from the winds kinetic energy, how can a little wire collect so much?**

**ANSWER: The cross section of the wind from which power is collector is much larger than you might think. Remember that the electret effect creates an electric field which attracts charged air molecules like a magnet attracts iron. The cross section of this field can be as great as 2 feet, so a 100 foot cable could intersect as much wind as a 16 foot diameter air foil.**

**There are occasions static charge is generated though two objects are not in contacted. If a charged object moves against other object, static charge of the other object will be increased or decreased. This is called as a field induced charging. The moving charged thundercloud charges neighboring clouds because of field induced charging.**

**QUESTION: Have you measured the cable generators power output?**

**ANSWER: Measurement of the output of the cable generator is not a simple process. The form out the output varies over several orders of magnitude for voltage, current and frequency and is thus well beyond the capability of all simple measuring devices.**

**As a consequence of this fact, I have devised a couple of indirect methods. In the first of these, I connected the a spark plug between the generator and ground so that whenever the generator voltage builds up to the arc-over value, a pulse of current is generated that can be counted.**

**Upon further investigation, this method can be termed no more than a rough estimate because the shape and duration of the pulse still varies over a substantial range. Analysis of the pulses will eventually allow us to use an average and thus devise a formula that will give a close approximation of the power output.**

**The second method is simple and if done properly, very accurate. We simply place a resistive heating element between the generator and ground and then into a bucket of water. The output is measured by the change in temperature of the water.**

Neither of these methods takes into account the losses of the charging circuit, battery, or inverter.

**QUESTION:** Does the electret effect wear out or dissipate over time?

**ANSWER:** The question as to whether the electret effect wears out is not a simple one to answer. I am clearly using it in a way that is different. The fact of the matter is that, in general, the electret effect is unwanted, and engineers are normally working to prevent or eliminate it. The fact that they have to work very hard to do so is an indication that it is pretty stable. Thus, the best answer I can give is that it doesn't wear out in the short term (years).

I have learned that when the electret effect was first observed, it was produced in a relatively soft wax and if left undischarged for a long period of time, dissipated. In order to preserve an electret device in these soft mediums, they wrapped them in foil which would have continually discharged them.

This would at first seem to be contrary to what one would expect, as the continual discharge would be, in effect, dissipating the energy the electret produced. But if you look at it from the perspective of the effect that the electric field has on the material of the device itself, it is easily understood. The electric field would produce a counter force against the molecular distortion that was producing it which would tend to undo the distortion.

This means that an electret placed in a circuit which used its field at a low level would be very, very stable.

**QUESTION:** How can I determine if the cable wind generator will produce more power for its cost than I would have to pay the utility company?

**ANSWER:** Again, this can only be done over a long time period because it is dependant on wind, location, humidity and possibly other lesser undetermined factors.

**QUESTION:** How can I be sure that the power to a load is energy from the cable generator rather than the battery or some hidden source?

**ANSWER:** This is impossible because there is no difference between them. I can take a simple circuit that charges 2 capacitors in parallel from a dead battery and then connect the capacitors in series and discharges them back into the battery. Although no new energy is put into the battery some of the batteries potential chemical energy in the battery is converted and the battery will appear to be fully charged. The charging pulses from our controller (or the spark gap-coil) is closer to the double capacitor circuit than it is to a normal battery charger (DC).

**QUESTION:** How can the high voltage static current produced by the cable generator be altered to a useable form.

**ANSWER:** The only practical method I have found to date is to charge a battery. There are, however, a number of people who have received patents on high voltage electrostatic motors.

Some generators with similarities to the Testatika machine are the "Electrostatic Energy Field Power Generating System" invented by William W. Hyde (US Patent 4897592 of Jan 30 1990) is a rotor/stator variable capacitance machine capable of producing 300 KV.

Other such generators are; "Parametric Electric Machine" invented by Ferdinand Cap (US Patent 4622510 of Nov 11 1986) which has a series resonant (LCR) circuit structured into it so that it oscillates - and indeed operates AT RESONANCE to ensure a high output;

"Electrostatic Generator" invented by Dan B. Le May (et al) (US Patent 3094653 of Jun 18 1963) is a very ingenious system of variable capacitance;

the "Electrostatic Machine" by Noel Felici (US Patent 2522106 of Sep 12 1950) is a good standard which utilizes a valve rectifier; and the "Electrostatic Generator" by William S. Spencer (US Patent 1415779 of May 9 1922) is an early rotor/stator generator which transferred its electric impulses through a transformer to produce a higher current output.

Here is another method developed by Van DeGraff himself. For Van de Graaff's transformer see US patents 3,323,069 (May 30 1967) and 3,187,208 (June 1 1965). These patents were not just for a Van de Graaff high voltage generator, they were for a special system devised by Van de Graaff long after his generator had been in use to convert static electricity into current electricity.

**QUESTION:** How can you charge a battery with high voltage static current?

**ANSWER:** Thus far, I have devised two methods. The first is simple and inexpensive but only 15-20% efficient. It simply involves breaking the current into pulses with a spark gap, and then transforming the voltage down and current up with a coil and increasing the pulse duration with a capacitor in parallel with the coil.

The second method uses a micro processor to monitor current and voltage. The impedance is then adjusted to make the charging current as smooth as possible. This circuit can also easily protect a battery from overcharging.

**QUESTION:** How does humidity affect the cable generators operation?

**ANSWER:** Ham radio operators have reported that static discharges are more common and more intense in times of high humidity or atmospheric changes resulting in rain or snow. The technical literature reports that most atmospheric charge is carried by aerosol particles of dust or water that collect 100's, 1000's and sometimes even 10's of thousands of units of charge. As they collect more and more charge, these particles migrate toward the earth's surface and constitute a major component of the fair weather current.

**QUESTION:** Does the cable generator attract lightning?

**ANSWER:**

- 1. Lightning is a discharge of built up electrical charges that is initiated by an electrostatic potential sufficient to rupture the dielectric (air) between the charge differential. This is facilitated by sharp pointed objects that concentrate the electric field (lightning rods and the like).**
- 2. If the potential difference can be minimized by discharging the area below one of the plates (cold layer) and keeping the potential below the rupture point a lightning strike is significantly less likely to occur.**
- 3. The generator system, if spread over a large area, would appear as a more positively charged area as it is "bleeding" electrons off to the ground through its load system.**
- 4. thus the generator could well serve as a shield from a direct strike... BUT!**
- 5. the EMP effect of a local strike could be devastating!**

**QUESTION: Have you tested the cable generator in other configurations such as a spiral, grid, or vertical mode?**

**ANSWER: The output of the cable generator is reduced by any alteration of the cable generator from a suspension 5 to 15 feet from the ground in a straight line.**

**QUESTION: What type of cable works best? and Has anyone measured the ion density of the atmosphere?**

**ANSWER: Not just yes, but a qualified yes. The average is 3000 ions/cubic meter. The figure is subject to stupendous variations of many orders of magnitude as shown by this quote from "Atmospheric Electricity in the Planetary Boundary Layer" by William A. Hoppel, R.V. Anderson and ohn C. Willet.**

**"Most atmospheric processes are interrelated and cannot be studied in isolation, but it is possible to identify one or two dominant influences. In the case of atmospheric electricity in the Planetary Boundary Layer, however, separating the various causes and their effects can be extremely difficult. In fact, this field may be unique with respect to its sensitivity to many disparate phenomena spanning a tremendous range of scales in both space and time.**

**For example, locally produced turbulent fluctuations in space-charge density have an effect roughly comparable in magnitude to that of changes in the global thunderstorn activity on electric-field variations within the Planetary Boundary Layer."**

**QUESTION: The ion density does not appear to provide enough charge to account for the current generated by the cable. Are there other sources of energy contributing to the currant?**

**ANSWER: Both the electric field of the earth (typically 100-200 volts) and that of the cable generator produce an effect called the induction charging mechanism.**

**A physical process for particle charging involving the collision of pairs of particles in an ambient electric field. Electric charge induced on the particle surfaces by the ambient electric field is made available for transfer when the two particles come into contact. Subsequent differential particle motions under gravity is postulated to result in large scale charge separation. The specific role of induction charging in the electrification of thunderclouds has not been resolved.**

**Another effect which is unquestionably effecting the cable generator is the double layer effect described below.**

**On the surface of a substance, a layer of electric dipoles whose axes have an average orientation normal to the surface. Double layers may appear on interfaces of solid and gas, liquid and gas, liquid and liquid, etc. They arise whenever media with different electron affinities (forces of attraction, or work function) are contiguous, and if dipoles are available. A net potential difference, the electrokinetic potential exists across a double layer.**

**Still another source of atmospheric charge collected by the cable generator are Aerosol Charges. These are particles of dust or water which form dipoles and disproportionately collect one charge or the other.**

**Where ions carry only single or double units of charge, Aerosols carry 100's to 10's of thousands of units of charge. The fact humidity is such an important factor in the output of the cable generator indicates that aerosols are an important source of the energy it collects.**

**QUESTION: What else would be needed besides a cable generator to provide a good alternate electrical source for a home.**

**ANSWER: You would need a battery or bank of batteries, a charge controller and a Grid Tied Inverter.**

# **Radiant Energy: Unraveling Tesla's Greatest Secret Part 1**

By Ken Adachi <Editor@educate-yourself.org>  
<http://educate-yourself.org/fe/radiantenergystory.shtml>  
June 1, 2001

*[The story you are about to read is derived from a carefully researched paper presented by Dr. Peter Lindemann before a private audience in Irvine, California on September 12, 2000. The lecture was titled "The Free Energy Secrets of Cold Electricity". It detailed the story of Radiant Energy and its successful application by Edwin Gray in an over unity motor design which Gray debuted in 1973. The real detective work (& credit) in uncovering Tesla's discovery of Radiant energy came from author Gerry Vassilatos in his recent book, "Secrets of Cold War Technology" without which Lindemann could not have solved the enigma of Gray's Radiant circuit design. This lecture delivered the goods. The secret of Tesla's Radiant Energy has finally been revealed in manifold detail and only awaits the industry of those who care to study and understand it. Part 1 presents a general overview of Tesla's discovery and the political, intrigues that led to its subsequent suppression. Part 2 will detail the nuts and bolts of how Tesla produced Radiant Energy with block diagrams, schematics, and drawings from Tesla's original patents to illustrate all of the necessary elements and parameters required. Additional details on Gray's modern adaptation of Tesla's Radiant circuitry and a brief look at Eric Dollard, the only man to successfully recreate Tesla's Colorado Springs Magnifying transmitter and reproduce the pure steaming white rays of Radiant energy in 1986 exactly as described by Tesla in his Colorado journals. Ken Adachi]*



Of all the great inventions and discoveries of Nikola Tesla, nothing stood out with greater potential benefit to the whole of humanity than his discovery of **Radiant Energy** in 1889. The series of observations that led to the discovery of Radiant energy initially grew out of experiments that Tesla had conducted in an attempt to duplicate the results that Heinrich Hertz had claimed to achieve in affirming the existence of electromagnetic waves, the discovery of which Hertz announced in 1887. While replicating Hertz's experiments, Tesla experimented with violently abrupt DC electrical discharges and discovered a new force in the process. Only after conducting exhaustive experimental trials for the next three years, did Tesla announce this stupendous discovery in a paper published in December, 1892, entitled "The Dissipation of Electricity". Incredibly, most academicians of the day completely missed the mark in understanding the true significance of his paper. Noted scientists such as Sir Oliver Lodge, mistakenly thought that

Tesla was referring to high frequency AC electricity in the operation of the Tesla Transformer, a huge blunder that remains to this day in the misnaming and misinterpretation of the Tesla Coil. The transformer that Tesla referred to in the 1892 paper did not operate on magnetic/electric field induction created by alternating currents. It operated in an entirely new domain of physics based on abrupt discharges of electrostatic potentials and the subsequent release of kinetic Radiant Energy from the omnipresent ether. Tesla was now operating under entirely new rules which he referred to as "dynamic" electro-static forces and had, by now, completely abandoned any further interest in the AC waveform. The genesis of the Lodge misunderstanding, however, began a few years earlier with the publication of certain mathematical formulas by a brilliant Scotsman named James Clerk Maxwell.

## Maxwell's Equations

Using mathematical models, James Clerk Maxwell had earlier suggested that two different types of electrical disturbances could possibly exist in Nature. One type was a **longitudinal electric wave** which required alternating concentrations of densified and rarefied pulsations of

electrostatic fields that moved along a single vector (today, we refer to these as standing waves or scalar waves). Maxwell ultimately rejected this idea because he was convinced that this type of wave propagation was impossible to achieve, but his assumption was erroneous and would later portend formidable consequences for Tesla and the world at large.

Maxwell's second wave postulation was that of a **transverse electromagnetic wave** that exhibited a rapid alternation of electric fields along a fixed axis that radiated away from its point of origin at the speed of light and was detectable at great distances. Maxwell had more faith in the existence of this type of wave and encouraged experimenters to look in this direction. It was the discovery of this type of wave that Hertz had laid claim to, but Tesla was meticulous and fastidious in replicating Hertz's experimental parameters and he could not obtain the results claimed by Hertz.

Tesla discovered a fundamental flaw in Hertz's experiment: Hertz had failed to take into account the presence of air in his experiments. Hertz had mistakenly identified electrostatic inductions or electrified shockwaves as true electromagnetic waves. Tesla was saddened to bring this news to the distinguished academician, but felt scientific honesty was paramount if progress was to be achieved. Tesla visited Hertz in Germany and personally demonstrated the experimental error to him. Hertz agreed with Tesla and had planned to withdraw his claim, but reputations, political agendas, national pride, and above all, powerful financial interests, intervened in that decision and set the stage for a major rift in the 'accepted' theories that soon became transformed into the fundamental "laws" of the electric sciences that have held sway in industry and the halls of academia to the present day.

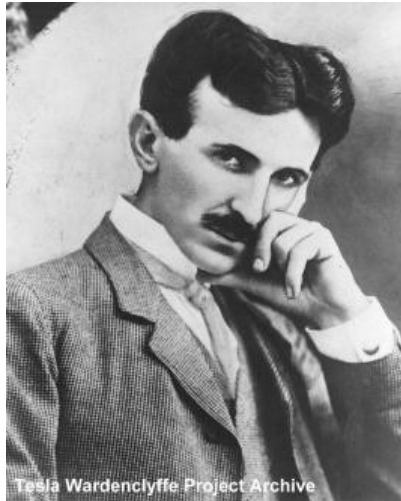
Tesla's introduction to the phenomena of Radiant Energy began with early observations by linesmen working for Thomas Edison, Tesla's former employer

### DC Anomalies

Before Tesla's invention of the Polyphase AC generator became the industry standard and overtook Thomas Edison's use of DC generators, the DC electrical system was the only system available to deliver electricity to America's homes and factories. Due to the resistance offered by long transmission lines, Edison had to produce very high DC voltages from his generators in order to deliver enough voltage and current to its final destination. He also had to provide additional 'pumping' stations along the way to boost the sagging voltage which dwindled from line losses. A curious anomaly occurred in the very first instant of throwing the power switch at the generating station: Purple/blue colored spikes radiated in all directions along the axis of the power lines for just a moment. In addition, a stinging, ray-like shocking sensation was felt by those who stood near the transmission lines. In some cases, when very large DC voltages surged from the generators, the "stinging" sensation was so great that occasionally a blue spike jumped from the line and grounded itself through a workman, killing him in the process.

Tesla realized almost immediately that electrons were not responsible for such a phenomena because The blue spike phenomena ceased as soon as the current started flowing in the lines. Something else was happening just before the electrons had a chance to move along the wire. At the time, no one seemed to be very interested in discovering why these dramatic elevations in static electrical potential were taking place, but rather, engineering design efforts were focused on eliminating and quenching this strange anomaly which was considered by everyone to be a nuisance-except Tesla. Tesla viewed it as a powerful, yet unknown form of energy which needed to be understood and harnessed if possible. The phenomena only exhibited itself in the first moment of switch closure, before the electrons could begin moving. There seemed to be a "bunching" or "choking" effect at play, but only briefly. Once the electrons began their

movement within the wire, all would return to normal. What was this strange energy that was trying to liberate itself so forcefully at the moment of switch closure? .

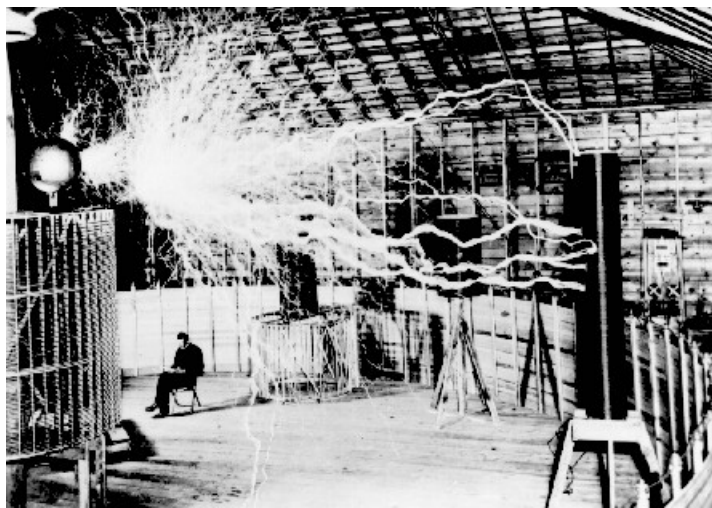


### Tesla, Genius Out of Time

In the later quarter of the 19th century, Tesla was alone in his opposition to the fundamental views of the nature of electrical forces as described by three of the biggest names in electric science: James Clerk Maxwell, Herman Von Helmholtz, and Heinrich Hertz. Tesla possessed a broader vision of the cosmos because his keen sense of awareness and especially his natural intuitive insights gave him a deeper understanding of the role that the **ether** (or **aether**) played in the manifestations of all electrical phenomena while his contemporaries focused their attention exclusively on the electromagnetic component (assuming that no other component could be involved). This lack of etheric insight by his contemporaries (with the exception of Sir William Crookes) and the heated controversy that the mere mention of the ether had engendered was to cause Tesla ridicule and sarcasm from men of inferior intellect for decades. The ether controversy largely dissipated in the academic arena after the publication of Eienstein's Theory of Relativity (1905) and the Michaelson-Morley Experiment which essentially declared that the ether 'theory' was dead, but Tesla's insights and deductions concerning the role of the ether were correct all along.

The ether existed then and it exists now, despite the lock step denials by mainstream science, past or present. Rudolf Steiner, another man of genius, affirmed that the ether was composed of four fractions which he described as 1) the Light Ether, 2) the Warmth Ether, 3) the Chemical Ether, and 4) the Life Ether, a combination of the first three. Tesla's New York and Colorado experiments confirmed for him that Radiant energy was bound up within the elusive ether, but could be made manifest by the creation of an abrupt disruption in the equilibrium of the ether fractions using one way, high magnitude pulses of short duration.

This was the key that unlocked Radiant Energy.



“See the excitement coming!”

These were the words that Tesla used at the end of his pivotal 1892 December lecture, “The Dissipation of Electricity”. He was brimming over with buoyancy and optimism for the future. In the 1890's, Tesla conducted a large number of experiments which confirmed his theory and refined his understanding of the special conditions required for Radiant energy to express itself. He later expanded his New York work with the large scale experimental trials conducted at Colorado Springs, Colorado in

1899. Tesla, the humanitarian, wanted more than anything to share this enormous discovery with his fellow man. Tesla spoke of practical applications of radiant energy that were so wide reaching that they could have created a profound and immense leap into the future for all of mankind in practically every sector of daily life:



Unlimited electricity could be made available anywhere and at any time, by merely pushing a rod into the ground and turning on the electrical appliance. Homes, farms, offices, factories, villages, libraries, museums, street lights, etc., could have all their lighting needs met by merely hanging ordinary light bulbs or fluorescent tubes anywhere desired- without the need for wiring -and produce brilliant white light 24 hours a day. Motor energy for any imagined use such as industrial applications, transportation, tractors, trucks, trains, boats, automobiles, air ships or planes could be powered freely-anywhere on the planet from a single Magnifying Transmitter. This new form of energy even had the ability to elevate human consciousness to levels of vastly improved comprehension and mental clarity. Undreamed of therapeutic applications to improve human health and to eliminate disease conditions could have been achieved fully 100 years ago had Tesla been allowed to complete his commercial development of Radiant Energy. But powerful barons of industry, chiefly in the person of John Pierpont Morgan, colluded to deny him the financial backing he needed and in doing so, effectively denied mankind one of Nature's most abundant and inexhaustible gifts of free energy.



### The Magnifying Transmitter

The closest Tesla came to a world wide industrial application of his Radiant Energy dream was the construction of his huge Magnifying Transmitter at Shoreham, Long Island, a site which he named Wardenclyffe. Following his return to New York City from Colorado Springs in 1899, Tesla was jubilant and full of enthusiasm to implement his plan for the commercial application of Radiant energy. He turned to JP Morgan for a substantial portion of the funding to finance the huge project at Wardenclyffe. Morgan was chiefly concerned with turning a profit from overseas radio transmissions since Marconi was fast locking up the market and Morgan, ever the aggressor, wanted a share of the market. When Tesla told him that the transmitter could transmit “intelligence” to the world, Morgan assumed that he meant ordinary radio

communications, but Tesla was not referring to ordinary radio transmissions. He was talking about something much bigger, but avoided revealing all to Morgan during this early phase of the Wardenclyffe project. Some considerable time later, Tesla eventually felt compelled to tell Morgan the larger possibilities offered by the Magnifying Transmitter when he needed more funding to complete the project. Tesla thought that Morgan would be overwhelmed by his expanded explanation of the true capacities of the transmitter and would be anxious to complete the work, but Tesla's assumption had backfired and Morgan refused to lay out any more money for the transmitter. Sadly, the enormous benefits that could have been made available to society by Tesla's Magnifying Transmitter project, died then and there.

### Morgan & Westinghouse

Morgan had already orchestrated circumstances in Tesla's life in order to force Tesla to be dependent on him for financial backing. During an earlier period, when Tesla himself had millions from his Polyphase AC generator royalty payments and other earnings, Morgan wanted to woo Tesla with a deal that effectively gave Morgan majority control over his patent rights and projects, but Tesla turned him down, telling Morgan that he had enough money of his own to fund his projects. While returning to his hotel from that very meeting with Morgan, however, Tesla was told that his laboratory had been burned to the ground. It represented a tremendous loss to Tesla and it shook him deeply. Everyone, of course, felt convinced that Morgan was behind the arson. In order to save face, Morgan was embarrassed by Tesla into putting up the

money to pay for the rebuilding of a new lab as an act of “philanthropy”. From that time forward, however, other financial backers were not to be found. Morgan was powerful enough to black list Tesla among the Eastern Establishment elites that previously had hobnobbed and feted with Tesla as if he was one of their own. Black listing and ostracization by officialdom and financiers lifted somewhat after Morgan’s death, but generally continued to haunt Tesla for the rest of his life.

Before the turn of the century, Tesla also willingly gave up millions, perhaps billions, in royalty earnings to George Westinghouse in an unprecedented act of friendship. Westinghouse had believed in the superiority of Tesla’s AC system and provided the money to build Tesla’s big AC generators at Niagra Falls, NY. Tesla was paid millions up front for his patents, but was also due to receive royalty earnings for every kilowatt of power produced. When Westinghouse ran into financial difficulties at a later date, Tesla tore up his royalty contract in order to save Westinghouse from financial ruin. Had he not done that, Tesla would have had enough money from royalties to keep him ensconced in great wealth for the rest of his life.

The story is frequently told that when Morgan found out from Tesla that the true purpose of the Wardencllyffe transmitter was to provide free electricity to the world, he abruptly pulled the funding. That’s not completely accurate. The economic conditions were recessionary at the time and the stock market had taken a considerable dip that year. Morgan wasn’t interested in risking any more capital in perilous times on a project he couldn’t fully fathom and wasn’t completely convinced of. Tesla held land ownership of the Wardencllyffe site and tower, but no further work was done after 1910. In 1914, Tesla was deeply in debt and signed over the deed of Wardencllyffe Station to pay off years of back rent due to the owners of the New Yorker Hotel where he was living (he occupied two penthouse suites in the hotel). In 1917, the hotel owners had the tower demolished and its parts sold for salvage. Despite the loss of Wardencllyffe, Tesla continued to refine his understanding of Radiant Energy and miniaturize the equipment needed to produce it. He eventually was able to reduce the equipment down to the size of a suit case.

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*Next time, Part 2: The nuts and bolts of producing Radiant Energy and Gray’s Radiant design circuitry.*

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***Reprinted from:***

**Exotic Research Report (V2N2, Apr/May/Jun 1998)**

## Historical Background

The quest for radiant energy is not new. In fact, the *Father of the 20th Century... Nikola Tesla* experimented quite intensively with radiant energy and even devised a device to capture *cosmic rays*. Later, Tesla's work was greatly expanded by the research and inventions of *T. Henry Moray*.

T. Henry Moray not only developed a super radiant energy receiver, but a strong case could be made that he was the original inventor of the transistor. The Moray Valve - patented in 1932 - is a semiconductive device that regulated voltage and current flows. The Moray Valve was a germanium based device whereas the transistor was silicon based (*silicon* is similar but *less* efficient than germanium for switching electrical currents).

Moray's first cousin, Fletcher, knew all about the valve since 1925 when Moray developed it. Coincidentally Fletcher worked for Bell Labs. It should be no surprise that Bell Labs was looking at semiconductive materials for switching currents.

Concurrently with the development of radiant energy receivers was attempts to artificially induce radiant energy. Much of this work was done by Lord Rutherford. In 1932 the first artificially accelerated decay transformation took place at the Cavendish Laboratory using the unstable metal.... lithium.

More recently, I published a brief article in the *Extraordinary Science* (Oct/Nov/Dec1994) in the "Mail Call" column that "Cold Fusion" was a result of a special type of hydrogen reaction due to certain catalysts. I also submitted a paper on August 16th, 1994 stating that there was a thermoelectric effect (or "Peltier effect") involved.

At the Tesla conference in April of this year I announced a totally unsuspected source of energy and how to harness it. More information will be released at this year's Exotic Research conference in Phoenix, AZ.

My conference presentations and published writings point to the fact that I have rediscovered T.H. Moray's suppressed technology. I will attempt to make clear in the coming days that an unconventional process to cause a clean nuclear reaction can be created and harnessed. I will soon show that a truly unique nuclear reaction can be converted to electrical power through alpha fusion and thermoelectric effects. These two discoveries are revolutionary to both nuclear fusion reactor and energy conversion technologies of present day science, respectively.



### Nikola Tesla's Viewpoint

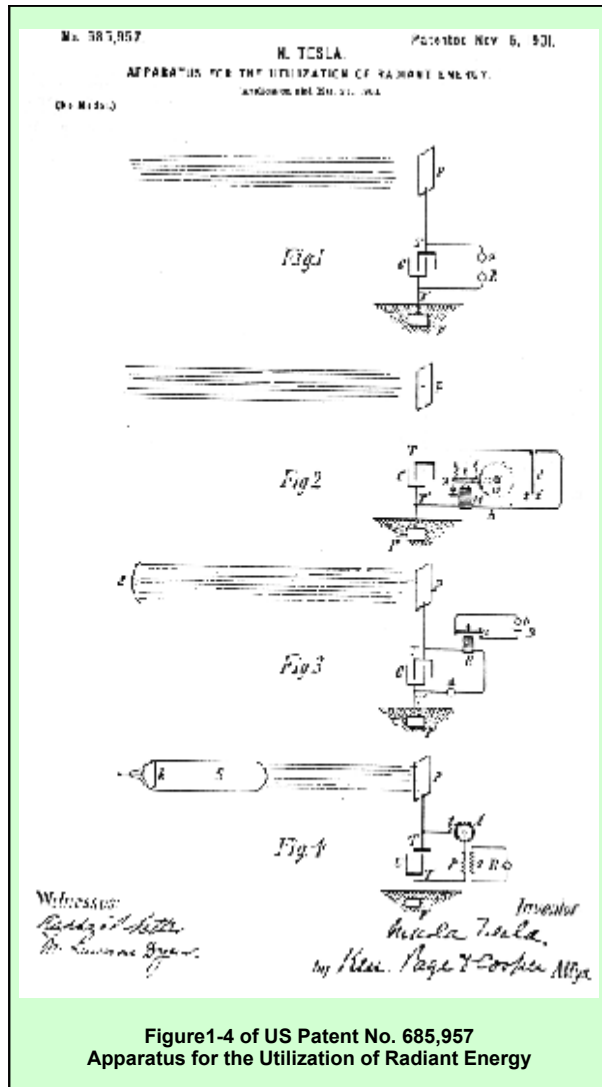
Brooklyn Eagle  
(July 10, 1932)

I have harnessed the cosmic rays and caused them to operate a motive device. Cosmic ray investigation is a subject that is very close to me. I was the first to discover these rays and I naturally feel toward them as I would toward my own flesh and blood. I have advanced a theory of the cosmic rays and at every step of my investigations I have found it completely justified.

The attractive features of the cosmic rays is their constancy. They shower down on us throughout the whole 24 hours, and if a plant is developed to use their power it will not require devices for storing energy as would be necessary with devices using wind, tide or sunlight.

All of my investigations seem to point to the conclusion that they are small particles, each carrying so small a charge that we are justified in calling them neutrons. They move with great velocity, exceeding that of light.

More than 25 years ago I began my efforts to harness the cosmic rays and I can now state that I have succeeded in operating a motive device by means of them. I will tell you in the most general way, the cosmic ray ionizes the air, setting free many charges ions and electrons. These charges are captured in a condenser which is made to discharge through the circuit of the motor. I have hopes of building my motor on a large scale, but circumstances have not been favorable to carrying out my plan.



## Nikola Tesla's Radiant Energy System

Nikola Tesla was one of the most prolific inventors in the world's history. His endeavors ranged from energy production to medical devices. In 1901 Nikola Tesla was one the first to identify "radiant energy." Tesla said that the source of this energy is our Sun. He concluded that the Sun emits small particles, each carrying so small of a charge, that they move with great velocity, exceeding that of light. Tesla further stated that these particles are the neutron particles. Tesla believed that these neutron particles were responsible for all radioactive reactions. Radiant matter is in tune with these neutron particles. Radiant matter is simply a re-transmitter of energy from one state to another.

Figure 1 of US Patent No. 685,957 is a diagram of Tesla's first radiant energy receiver. It stored static electricity obtained from the air and converted it to a usable form. Tesla's invention is a simple version of T. H. Moray's device. Moray's device used a unique rectifier (RE-valve) to efficiently capture the static electricity from the surrounding air. Moray's *oscillator tubes* utilized this high-voltage energy to generate an internal *secondary* "cold" nuclear reaction.

Stick an antenna up in the air-the higher the better-and wire it to one side of a capacitor. Connect the other side of the capacitor to a good earth ground. The potential difference between air and earth will then charge the capacitor. By connecting across the capacitor some sort of switching device so that the capacitor can be discharged at periodic intervals, you will have an oscillating electric output. Moray expanded on Tesla's idea to use high-voltage to create ionic oscillation.

Tesla was fascinated by radiant energy and its free-energy possibilities. He called the Crooke's radiometer, a device which has vanes that spin in a vacuum when exposed to radiant energy "a beautiful invention." He believed that it would become possible to harness energy directly by "connecting to the very wheel work of nature." On his 76th birthday at his yearly ritual press conference, Tesla announced a "cosmic-ray motor" when asked if it was more powerful than the Crooke's radiometer, he answered, "thousands of times more powerful."

The **New York American** (November 1st, 1933 issue) announced Tesla's invention in an article:

**Device to Harness Cosmic Energy Claimed by Tesla**

...This new power for the driving of the world's machinery will be derived from the energy which operates the universe, the cosmic energy, whose central source for the earth is the sun and which is everywhere present in unlimited quantities...

Tesla's free-energy concept was patented in 1901 as an "Apparatus for the Utilization of Radiant Energy." The patent refers to "the sun, as well as other sources of radiant energy, like cosmic rays," The fact that the device works at night is explained in terms of the night-time availability of cosmic rays. Tesla also refers to the ground as "a vast reservoir of negative electricity."

**How Tesla's Radiant Energy Receiver Worked**

From the electric potential that exists between the elevated plate (plus) and the ground (minus), energy builds up in the capacitor, and, after "a suitable time interval," the accumulated energy will "manifest itself in a powerful discharge" that can do work. The capacitor, says Tesla, should be "of considerable electrostatic capacity," and its dielectric made of "the best quality mica, for it has to withstand potentials that could rupture a weaker dielectric."

Tesla gives various options for the switching device. One is a rotary switch that resembles a Tesla circuit controller, another is an electrostatic device consisting of two very light, membranous conductors suspended in a vacuum. These sense the energy build-up in the capacitor-one charging positive, the other negative-and, at a certain charge level, are attracted, touch, and thus fire the capacitor. Tesla also mentions another switching device consisting of a minute air gap or weak dielectric film that breaks down suddenly when a certain potential is reached.

**Tesla 'Harnesses' Cosmic Energy**

**Inventor announces discovery to displace fuel in driving machinery. Calls Sun main source.**

A principle by which power for driving machinery of the world may be developed from the cosmic energy which operates the universe, has been discovered by Nikola Tesla, noted physicist and inventor of scientific devices, he announced today.

This principle, which taps a source of power described as "everywhere present in unlimited quantities" and which may be transmitted by wire or wireless from central plants to any part of the globe, will eliminate the need of coal, oil, gas or any other of the common fuels, he said. Dr. Tesla in a statement today at his hotel indicated the time was not far distant when the principle would be ready for practical commercial development. Asked whether the sudden introduction of his principle would upset the present economic system, Dr. Tesla replied, "It is badly upset already." He added that now as never before was the time ripe for the development of new resources.

While in its present form, the theory calls for the development of energy in central plants requiring vast machinery. Dr. Tesla said he might be able to work out a plan for its use by individuals. The central source of cosmic energy for the earth is the Sun, Dr. Tesla said, but "night will not interrupt the flow of new power supply."

*--from Philadelphia Public Ledger, November 2, 1933*

Tesla received two patents for this radiant energy device:

**US Patent No 685,957** - Apparatus for the Utilization of Radiant Energy

**US Patent No 685,958** - Method of Utilizing Radiant Energy

Both patents were filed on March 21, 1901 and granted November 5, 1901. In these patents he explains:

The sun, as well as other sources of radiant energy throw off minute particles of matter positively electrified, which, impinging upon the upper plate, communicate continuously an electrical charge to the same. The opposite terminal of the condenser being connected to ground, which may be considered as a vast reservoir of negative electricity, a feeble current flows continuously into the condenser and inasmuch as the particles are ...charged to a very high potential, this charging of the condenser may continue, as I have actually observed, almost indefinitely, even to the point of rupturing the dielectric.

## **The Earth's Electrostatic Charge**

Tesla's intent was to condense the energy trapped between the earth and its upper atmosphere and to transform it into an electric current. He pictured the sun as an immense ball of electricity, positively charged with a potential of some 200 billion volts. The earth, on the other hand, is charged with negative electricity. The tremendous electrical force between these two bodies constituted, at least in part, what he called cosmic energy. It varied from night to day and from season to season but it is always present.

The positive particles are stopped at the ionosphere and between it and the negative charges in the ground, a distance of 60 miles, there is a large difference of voltage - something on the order of 360,000 volts. With the gases of the atmosphere acting as an insulator between these two opposite stores of electrical charges, the region between the ground and the edge of space traps a great deal of energy. Despite the large size of the planet, it is electrically like a capacitor which keeps positive and negative charges apart by using the air as a non-conducting material as an insulator.

It has been calculated that the earth's ambient state contains  $1.6 \times 10^{11}$  joules or 4.5 megawatt-hours of electrical energy. In order to utilize this high-voltage energy you must do two things - make an energy sink and then devise a way of making the "sink" oscillate.

## Zero Point Energy?

Such a "sink" has to be at a lower energy state than the surrounding medium and, for the energy to continually flow into it, the energy must be continually pumped out of it.

Additionally, this "sink" must maintain a lower energy state while meeting the power requirements of the load attached to it. Electrical energy-watt-seconds-is a product of volts x amps x seconds. Because the period of oscillation does not change, either voltage or current has to be the variable in this system's energy equation. Bifilar wound coils are used in the system because a bifilar wound coil maximizes the voltage difference between its turns, the current is then minimized.

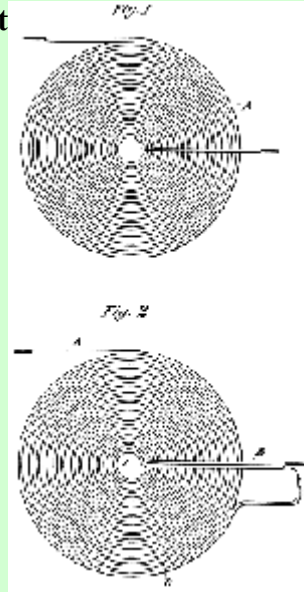
A coil in our system, then, will be set into oscillation at its resonant frequency by an external power source. During the "zero-point" portion of its cycle the coil will appear as one plate of a capacitor. As the voltage across the coil increases, the amount of charge it can siphon will increase. The energy that is taken into the coil through the small energy window (zero-point), call it what you will, appears to be the key to the success of this system.

It is at this zero-point where energy is condensed into positive and negative components of current. When energy escapes from the "sink" the magnetic field collapses and a strong magnetic quake is created in it's wake. A properly tuned system can capture and convert radiant energy in such a prescribed arrangement.

## Direct Conversion of the Atom's Energy

The radiant energy system is a self-oscillating capacitive system. Once it is set into oscillation, very little power is expended in keeping it going. Because it is an electrostatic oscillating system, only a small amount of charge moves through the system per cycle (low current). If the charge is used at a low rate, the energy stored in the system will be turned into heat at a slow rate enabling the oscillations to continue for a long period of time.

### United States Patent Number 512,340 COIL FOR



### ELECTROMAGNETS Nikola Tesla, Inventor

Figure 1 is a standard pancake coil (many Tesla coil builders are familiar with this style). Figure 2 is a **bifilar coil**, the crux of the patent is where Tesla winds a dual wire and then connects the ends in a series (an interesting experiment for coil builders).

Tesla explains that a standard coil of 1000 turns with a potential of 100 volts across it will have a difference of .1 volt between turns. A similar **bifilar coil** will have a potential of 50 volts between turns. In that the stored energy is a function of the square of the voltages, the energy in the bifilar will be  $50^2 / .1^2 = 2500 / .01 = 250,000$  times greater than the standard coil!

A properly tuned system can capture and convert radiant energy in such a prescribed arrangement.

Tesla's US Patent No. 512,340- "Coil for Electromagnets"- is a very special coil design because, unlike an ordinary coil made by turning wire on a tube form, this one uses two wires laid next to each other on a form but with the end of the first one connected to the beginning of the second one. In this patent Tesla explains that the double coil will store many times the energy of a conventional coil.

Measurements of two coils of the same size and with the same number of turns, one with a single, the other with a bifilar winding, show differences in voltage gain. These bifilar coils can be explained solely on the basis of their electrical activity. A bifilar coil is capable of holding more charge than a single wound coil. When operated at resonance, the distributed capacitance of the bifilar coil is able to overcome the counter electromotive force (emf) normal to coils - inductive reactance.

Because of the electrical activity, a bifilar coil does not work against itself in the form of a counter - emf, the potential across the coil quickly builds to a high value. The difference between the turns becomes great enough that the energy is practically all potential, at this point, the system becomes an electrostatic oscillator.

Minimal work is done in my radiant energy system due to the absence of wasted displacement currents. As small heat losses occur, oscillations are maintained by surplus charge generated by atomic catalytic reactions, energy is siphoned from the kinetic moments of these charges.

Very low energy expenditure allows power delivery to an electrical load over an extended time period without an external fuel supply. After an initial input of energy from an outside source, the radiant energy electrical generator will operate as a very efficient device.

## **First Artificial Accelerated Decay Transformation**

On April 28, 1932, at a meeting of the Royal Society, Lord Rutherford announced that two of the workers in Cavendish Laboratory, J.D. Cockcroft and E. T. S. Walton, had successfully demonstrated the release of excess radioactive energy from lithium elements and other light elements by protons entirely artificially generated by high electric potentials. The most surprising feature at the time was the relatively low voltage necessary. The generator installed had a peak voltage of about 750,000 volts, but artificial decay started at only one-sixth of this, 125,000 volts.

Indeed, later Rutherford, using deuterons (atoms of the hydrogen isotope of mass 2) instead of protons, pushed back the starting point to some 20,000 to 40,000 volts, which is well within the range of quite a small x-ray induction coil. The protons were generated in a long vertical hydrogen vacuum-tube, specially designed to withstand the high voltage, and with a window of the thinnest possible mica leaf at the end, through which they emerged to impinge on the target element being bombarded. The protons were estimated to have a velocity of one-thirtieth of that of light, and their range in air was only 1 cm. The bombarded substance was examined by the scintillations produced in zinc sulfide, through a screen thick enough to absorb the protons.

At 125,000 volts, bright scintillations, in every respect identical with those produced by the fastest normal alpha-rays of radioactive thorium, began to appear, and, as the voltage was increased, their number rapidly increased, but not their range or the brightness of the scintillations. At 400,000 volts, several hundred a minute were counted.



## **Radioactive Lithium Decay is Clean!**

The proton, however, has only one-sixtieth of the kinetic energy of the alpha-particles produced. This showed that they merely pulled the trigger, and released energy could be produced from radioactive lithium. The scintillations were proved to be due to veritable alpha-particles of some 8.76Mev, which is practically the same as those of the radioactive thorium range 8.6 cm. in air, and somewhat faster than those from radium of 7 cm.

Though the term "fission" has since come into special use to denote the new type of disintegration which radioactive uranium and radioactive thorium undergo in certain circumstances, this artificial disintegration of isotopic lithium is pure and simple.

It is said that lithium of mass number 7 reacts with a proton of mass number one, momentarily to produce the unstable beryllium isotope of mass number 8, which splits into equal parts, giving two alpha-particles or helium elements. In this "fission" to "fusion" reaction, from 7 grams of lithium and one of hydrogen to 8 grams of helium, approximately, there is a loss of 0.0181 gram, equivalent to 17.1 Mev, due to the Aston fraction of hydrogen and lithium being so much greater than that of helium. This is in good accord with each of the two elements that results from the fission reaction, each split particles receiving some 8.76 Mev.

It is also said, some of the unstable beryllium elements produced from lithium, emit, during the fission cycle, a gamma-photon of no less than 17 Mev, which at the time was an unprecedented energy for these rays, the subsequent fission into two helium elements then occurring with relatively little energy. By using deuterons instead of protons, the lithium isotope of mass 6, acts much like that of mass 7 with protons, but the energy released is even greater, namely, 22 Mev.

## **Energy Evolved from Isotopic Lithium**

It is noteworthy that about 43 Mev is released per fission to fusion reaction. This may seem small compared to the 200 Mev released in the fission of a heavy isotope like uranium-235.

However, the released energy per mass of fuel is actually greater for the lithium reaction. Weight for weight, 43 Mev energy is some ten times the given out in the complete disintegration of radioactive uranium and thorium into lead and helium, in their natural radioactive change, and is twice as great as in their artificial decay in a nuclear reactor; but radioactive thorium less than 1 per cent of its mass undergoes accelerated decay ("fission").

The bottom line here is that the disintegration of isotopic lithium by either protons or deuterons, affords, weight for weight, more energy than any other possible nuclear change. Additionally, the disintegration of radioactive uranium or radioactive thorium produces deadly radioisotopic toxic by-products that nobody seems to know where to properly dispose of them. The disintegration of isotopic lithium yields pure helium as its by-product, this gas finds further use in other areas.

Lithium is the lightest metal, in fact, the lightest of all solids. It is actually lighter than cork and will float on water or oil. Whereas a cubic foot of aluminum weighs 169 pounds, a cubic foot of lithium weighs 33 pounds. Lithium is a very unstable metal and will easily combine with gases, especially tritium. Weight for weight radioactive lithium will yield two times more energy than radioactive uranium.

## **Peltier Effect Enhancement**

When an electrical source is used to send current through two dissimilar metals, called a thermocouple, heat can be absorbed at the colder junction and given off at the hotter junction. This is called the "Peltier effect." It can be used either for cooling with the cold junction or for producing heat at the hot junction.

The heat energy given off at the hot junction is equal to the total heat absorbed by the cold junction along with all of the electric energy supplied to it. Thus, more heat energy is given off than the total electric energy supplied to the device.

In principle, many thermocouples in series, with cold junctions outside and hot junctions inside, could be used to pump heat from the lower temperatures outside to higher temperatures inside a building, theoretically the heat energy supplied could be greater than the electric energy supplied.

Unfortunately the effect is so small in most materials that too many couples are required for practical applications. Furthermore, the conduction of heat from hot to cold junctions severely limits the applicability of the Peltier effect, especially with metallic junctions. The discovery of thermoelectric semi-conductive materials has resulted in materials with sufficiently large Peltier effects for a number of practical applications. Recent research in what is now being called "cold fusion" hints to a way to produce greater levels of Peltier effects.

In the cold fusion cell the electrolyte serves as a junction between two dissimilar electrical conductors. Thus, the electrolyte becomes hotter than the electrical energy supplied. This heat is pumped from its ambient environment. This heat causes the catalytic cathode material to produce excess hydrogen. The electrolyte limits the conduction of heat from hot to cold junctions, resulting in an enhanced Peltier effect. The advantage here is the reduced thermal conductivity, for greater thermoelectric efficiency is obtained with a higher ratio of electrical to thermal conductivity.

Use catalytic metals like platinum, nickel or palladium for the electrode thermoelectric materials and you get an interesting catalytic effect. Now add a suitable electrolyte and what you have built is a breakthrough device that utilizes thermodynamic principles with catalytic properties.

## **Radiant Energy Devices**

Clearly, when Tesla refers to his radiant energy device, he is not talking about an atomic reactor. He is directly converting ionized particles generated by radiant matter. It is not nuclear energy as we know it today. Radiant Energy is directly converted to electrical power! Tesla believed that the Sun generates highly charged particles and that radiant matter is a re-transmitter of energy. It is this transfer of energy that could be used for practical purposes.

Radiant Energy as herein used is that energy existing in the luminiferous of the Universe, kinetic and exercised in wave transmission and rendered sensible by conversion of its energy into a detectable frequency, the phenomenon of the transducer combined with fusion. Radiant energy devices are means of using the energy released by the fusion reactions taking place in the stellar crucibles of the universe.

I have designed an apparatus and method that will optimize reactions that are similar to what is explained in the above treatise. I designed special capture capacitors to take

advantage of the released energy of nuclear reactions. The use of radiant energy to generate electrical power is no longer out of reach!

## Inventors Beware!

It is my intent of this treatise and through my other writings to explain the many facets of "radiant energy" and how it is possible to draw power from it. I have notarized papers and articles predating similar claims made by others. The Moray lead formula is just one example. I advise all inventors who want proper public credit to do the same.

By reviewing history it is understandable why some inventions are not commercialized. It is economics, not science, that is the main factor. It will be remembered that alternating current was opposed by powerful financiers in Tesla's time.

Michael Pupin, noted in his autobiography:

...captains of industry... who were afraid that they would have to scrap some of their direct current apparatus and the plants for manufacturing it, if the alternating current system received any support. A most un-American attitude... but ignorance and false notions prevailed in the early nineties, because the captains of electrical industries paid small attention to highly trained scientists.

***Once again, we face Tesla's battle with the organized opposition! \_\_BP***

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### NIKOLA TESLA'S RADIANT ENERGY SYSTEM

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*by Bruce A. Perreault*

#### **Brooklyn Eagle July 10, 1932 Nikola Tesla states:**

I have harnessed the cosmic rays and caused them to operate a motive device. Cosmic ray investigation is a subject that is very close to me. I was the first to discover these rays and I naturally feel toward them as I would toward my own flesh and blood. I have advanced a theory of the cosmic rays and at every step of my investigations I have found it completely justified. The attractive features of the cosmic rays is their constancy. They shower down on us throughout the whole 24 hours, and if a plant is developed to use their power it will not require devices for storing energy as would be necessary with devices using wind, tide or sunlight. All of my investigations seem to point to the conclusion that they are small particles, each carrying so small a charge that we are justified in calling them *neutrons*. They move with great velocity, exceeding that of light. More than 25 years ago I began my efforts to harness the cosmic rays and I can now state that I have succeeded in operating a motive device by means of them. I will tell you in the most general way, the cosmic ray ionizes the air, setting free many charges ions and electrons. These charges are captured in a condenser which is made to discharge through the circuit of the motor. I have hopes of building my motor on a large scale, but circumstances have not been favorable to carrying out my plan.

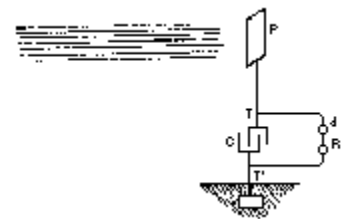
#### **New York American November 1st, 1933**

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Stick an antenna up in the air, the higher the better, and wire it to one side of a capacitor, the other going to a good earth ground, and the potential difference will then charge the capacitor. Connect across the capacitor some sort of switching device so that it can be discharged at



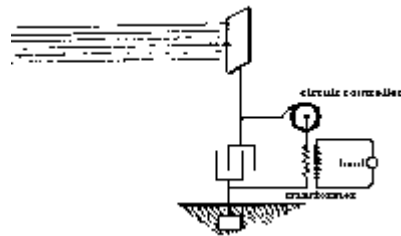
rhythmic intervals, and you have an oscillating electric output. T.H. Moray simply expanded on Tesla's idea to use high-voltage to create ionic oscillation.

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### How his radiant energy receiver worked



From the electric Potential that exists between the elevated plate (plus) and the ground (minus), energy builds up in the capacitor, and, after "a suitable time interval," the accumulated energy will "manifest itself in a powerful discharge" that can do work. The capacitor, says Tesla, should be "of considerable electrostatic capacity," and its dielectric made of "the best quality mica, for it has to withstand potentials that could rupture a weaker dielectric."

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Tesla received two patents for this radiant energy device; U.S. Patent No. 685,957 - Apparatus for the Utilization of Radiant Energy and U.S. Patent No. 685,958 - Method of Utilizing Radiant Energy. Both these patents were filed on March 21, 1901 and granted on November 5, 1901. In these patents he explains:

"The sun, as well as other sources of radiant energy throw off minute particles of matter positively electrified, which, impinging upon the upper plate, communicate continuously an electrical charge to the same. The opposite terminal of the condenser being connected to ground, which may be considered as a vast reservoir of negative electricity, a feeble current flows continuously into the condenser and inasmuch as the particles are ...charged to a very high potential, this charging of the condenser may continue, as I have actually observed, almost indefinitely, even to the point of rupturing the dielectric."

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Tesla's intent was to condense the energy trapped between the earth and its upper atmosphere and to transform it into an electric current. He pictured the sun as an immense ball of electricity, positively charged with a potential of some 200 billion volts. The earth, on the other hand, is charged with negative electricity. The tremendous electrical force between these two bodies constituted, at least in part, what he called cosmic energy. It varied from night to day and from season to season but it is always present.

The positive particles are stopped at the ionosphere and between it and the negative charges in the ground, a distance of 60 miles, there is a large difference of voltage - something on the order of 360,000 volts. With the gases of the atmosphere acting as an insulator between these two opposite stores of electrical charges, the region between the ground and the edge of space traps a great deal of energy. Despite the large size of the planet, it is electrically like a capacitor which keeps positive and negative charges apart by using the air as a non-conducting material as an insulator.

The earth has a charge of 96,500 coulombs. With a potential of 360,000 volts, the earth constitutes a capacitor of .25 farads (farads = coulombs/volts). If the formula for calculating the energy stored in a capacitor ( $E = 1/2CV^2$ ) is applied to the earth, it turns out that the ambient medium contains  $1.6 \times 10^{11}$  joules or 4.5 megawatt-hours of electrical energy. In order to utilize this high-voltage energy you must do two things -- make an energy sink and then devise a way of making the "sink" oscillate.

### "Zero-Point Energy?"

Such a "sink" has to be at a lower energy state than the surrounding medium and, for the energy to continually flow into it, the energy must be continually *pumped* out of it. Additionally, this "sink" must maintain a lower energy state while meeting the power requirements of the load attached to it. Electrical energy, watt-seconds, is a product of volts x amps x seconds. Because the period of oscillation does not change, either voltage or current has to be the variable in this system's energy equation. Bifilar wound coils are used in the system because a bifilar wound coil maximizes the voltage difference between its turns, the current is then minimized.

A coil in our system, then, will be set into oscillation at its resonant frequency by an external power source. During the "zero-point" portion of its cycle the coil will appear as one plate of a capacitor. As the voltage across the coil increases, the amount of charge it can *siphon* will increase. The energy that is taken into the coil through the small energy window (*zero-point*), call it what you will, appears to be the key to the success of this system. It is at this *zero-point* where energy is condensed into positive and negative components of current. When energy escapes from the "sink" the magnetic field collapses and a strong magnetic quake is created in its wake. A properly tuned system can *capture* and convert *radiant energy* in such a prescribed arrangement.

### Energy Directly from the Atom

The radiant energy system is a self-oscillating capacitive system. Once it is set into oscillation, very little power is expended in keeping it going. Because it is an electrostatic oscillating system, only a small amount of charge moves through the system per cycle, that is, the coulomb per seconds = amps are low. If the charge is used at a low rate, the energy stored in the system will be turned into heat at a slow rate enabling the oscillations to continue for a long period of time.

Tesla's "COIL FOR ELECTRO MAGNETS," patent #512,340 is a very special coil design because, unlike an ordinary coil made by turning wire on a tube form, this one uses two wires laid next to each other on a form but with the end of the first one connected to the beginning of the second one. In this patent Tesla explains that the double coil will store many times the energy of a conventional coil.[1] Measurements of two coils of the same size and with the same number of turns, one with a single, the other with a bifilar winding, show differences in voltage gain. These bifilar Tesla's coils can be explained solely on the basis of their electrical activity. A bifilar coil is capable of holding more charge than a single wound coil. When operated at resonance, the distributed capacitance of the bifilar coil is able to overcome the counter - electromotive force (e.m.f.) normal to coils, inductive reactance.

Because of the electrical activity, a bifilar coil does not work against itself in the form of a counter - e.m.f., the potential across the coil quickly builds to a high value. The difference between the turns becomes great enough that the energy is practically all potential, at this point, the system becomes an electrostatic oscillator.

Minimal work is done in my radiant energy system due to the absence of wasted displacement currents. As small heat losses occur, oscillations are maintained by surplus charge generated by atomic catalytic reactions, energy is *siphoned* from the kinetic moments of these charges. Very low energy expenditure allows power delivery to an electrical load over an extended time period without an external fuel supply. After an initial input of energy from an outside source, the radiant energy electrical generator will operate as a very efficient device.

By reviewing history it is understandable why some inventions are not commercialized. It is economics, not science, that is the main factor. It will be remembered that alternating current was opposed by powerful financiers in Tesla's time.

Michael Pupin, noted in his autobiography:

"...captains of industry...who were afraid that they would have to scrap some of their direct current apparatus and the plants for manufacturing it, if the alternating current system received any support. A most un-American attitude...but ignorance and false notions prevailed in the early nineties, because the captains of electrical industries paid small attention to highly trained scientists." [2]

### **Philadelphia Public Ledger November 2, 1933 Tesla 'Harnesses' Cosmic Energy**

Inventor announces discovery to displace fuel in driving machinery. Calls Sun main source. A principle by which power for driving machinery of the world may be developed from the cosmic energy which operates the universe, has been discovered by Nikola Tesla, noted physicist and inventor of scientific devices, he announced today. This principle, which taps a source of power described as "everywhere present in unlimited quantities" and which may be transmitted by wire or wireless from central plants to any part of the globe, will eliminate the need of coal, oil, gas or any other of the common fuels, he said. Dr. Tesla in a statement today at his hotel indicated the time was not far distant when the principle would be ready for practical commercial development. Asked whether the sudden introduction of his principle would upset the present economic system, Dr. Tesla replied, "It is badly upset already." He added that now as never before was the time ripe for the development of new resources. While in its present form, the theory calls for the development of energy in central plants requiring vast machinery. Dr. Tesla said he might be able to work out a plan for its use by individuals. The central source of cosmic energy for the earth is the Sun, Dr. Tesla said, but "night will not interrupt the flow of new power supply."

Clearly Tesla is not talking about an *atomic reactor*. He is directly converting *ionized particles* generated by radiant matter. It is not nuclear energy as we know it today. Radiant Energy is directly converted to electrical power! Tesla believed that the Sun generates highly charged particles and that radiant matter is a re-transmitter of energy, it is this transfer of energy that could be used for practical purposes.

### **References**

[1] Nikola Tesla, U.S. Patent #512,340, "COIL FOR ELECTRO MAGNETS," he explains that a standard coil of 1000 turns with a potential of 100 volts across it will have a difference of .1 volt between turns. A similar bifilar coil will have a potential of 50 volts between turns. In that the stored energy is a function of the square of the voltages the energy in the bifilar will be  $50^2/.12 = 2500/.01 = 250,000$  times greater than the standard coil.

[2] Michael Pupin, From Immigrant to Inventor, Charles Scribner's Sons, N.Y., pages 285-286, 1923.

## **Tesla's Fuelless Generator**

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In the 1880's, Nikola Tesla invented the alternating current system we use today. By the 1890's, he was working on a new type of electrical generator that would not "consume any fuel."

This paper documents where in his writings the description of this new generator is found, a theory of how a fuelless generator could work and a suggestion as to how Tesla's new device might have operated.

### **NIKOLA TESLA'S LATER ENERGY GENERATION DESIGNS**

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### **ABSTRACT**

Ten years after patenting a successful method for producing alternating current, Nikola Tesla claimed the invention of an electrical generator that would not "consume any fuel." Such a generator would be its own prime mover. Two of Tesla's devices representing different stages in the development of such a generator are identified.

## **INTRODUCTION**

While in college Nikola Tesla claimed it should be possible to operate an electrical motor without sparking brushes. He was told by the professor that such a motor would require perpetual motion and was therefore impossible. In the 1880's he patented the alternating current generator, motor, and transformer.

During the 1890's he intensively investigated other methods of power generation including a charged particle collector patented in 1901. When the *New York Times* in June of 1902 carried a story about an inventor who claimed an electrical generator not requiring a prime mover in the form of an external fuel supply, Tesla wrote a friend that he had already invented such a device.

Fuelless electrical generation raises the same objection of perpetual motion as did the generator in use today when it was first proposed. Research Nikola Tesla carried out during his second creative period and the resulting devices that were the basis for his assertion of fuelless electrical generation will be examined. Whether Tesla's fuelless generator was a "perpetual motion scheme" of the sort his teacher warned him against, or a creative application of recognized natural phenomena will be discussed.

## **TESLA'S STATEMENTS**

In *The Brooklyn Eagle*, Tesla announced, on July 10th, 1931, that "I have harnessed the cosmic rays and caused them to operate a motive device." Later on in the same article he said that "More than 25 years ago I began my efforts to harness the cosmic rays and I can now state that I have succeeded." In 1933, he made the same assertion in an article for the *New York American*, November 1st, under the lead in "Device to Harness Cosmic Energy Claimed by Tesla." Here he said:

This new power for the driving of the world's machinery will be derived from the energy which operates the universe, the cosmic energy, whose central source for the earth is the sun and which is everywhere present in unlimited quantities.

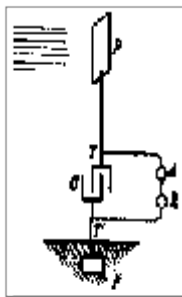
Dating back "more than 25 years ago" from 1933 would mean that the device Tesla was speaking about must have been built before 1908. More precise information is available through his correspondence in the Columbia University Library's collection. Writing on June 10th, 1902 to his friend Robert U. Johnson, editor of *Century Magazine*, Tesla included a clipping from the

previous day's *New York Herald* about a Clemente Figueras, a "woods and forest engineer" in Las Palmas, capital of the Canary Islands, who had invented a device for generating electricity without

burning fuel. What became of Figueras and his fuelless generator is not known, but this announcement in the paper prompted Tesla, in his letter to Johnson, to claim he had already developed such a device and had revealed the underlying physical laws.

### IDENTIFYING THE INVENTION

The device that, at first, seems to best fit this description is found in Tesla's patent for an "Apparatus for the Utilization of Radiant Energy," number 685,957, that was filed for on March 21, 1901 and granted on November 5, 1901. The concept behind the older technical language is a simple one. An insulated metal plate is put as high as possible into the air. Another metal plate is put into the ground. A wire is run from the metal plate to one side of a capacitor and a second wire goes from the ground plate to the other side of the capacitor. Then:



1. Particle  
Collector

The sun, as well as other sources of radiant energy, throw off minute particles of matter positively electrified, which, impinging upon [the upper] plate, communicate continuously an electrical charge to the same. The opposite terminal of the condenser being connected to ground, which may be considered as a vast reservoir of negative electricity, a feeble current flows continuously into the condenser and inasmuch as the particles are ... charged to a very high potential, this charging of the condenser may continue, as I have actually observed, almost indefinitely, even to the point of rupturing the dielectric(1).

This seems like a very straightforward design and would seem to fulfill his claim for having developed a fuelless generator powered by cosmic rays, but in 1900 Tesla wrote what he considered his most important article in which he describes a self-activating machine that would draw power from the ambient medium, a fuelless generator, that is different from his Radiant Energy Device. Entitled "The Problem of Increasing Human Energy - Through the Use of the Sun," it was published by his friend Robert Johnson in *The Century Illustrated Monthly Magazine* for June 1900 soon after Tesla returned from Colorado Springs where he had carried out an intensive series of experiments from June 1899 until January of 1900.

The exact title of the chapter where he discusses this device is worth giving in its entirety:

A DEPARTURE FROM KNOWN METHODS - POSSIBILITY OF A "SELF ACTING" ENGINE OR MACHINE, INANIMATE, YET CAPABLE, LIKE AN LIVING BEING, OF



## DERIVING ENERGY FROM THE MEDIUM - THE IDEAL WAY OF OBTAINING MOTIVE POWER

Tesla stated he first started thinking about the idea when he read a statement by Lord Kelvin who said it was impossible to build a mechanism capable of abstracting heat from the surrounding medium and to operate by that heat. As a thought experiment Tesla envisioned a very long bundle of metal rods, extending from the earth to outer space. The earth is warmer than outer space so heat would be conducted up the bars along with an electric current. Then, all that would be needed is a very long power cord to connect the two ends of the metal bars to a motor. The motor would continue running until the earth was cooled to the temperature of outer space. "This would be an inanimate engine which, to all evidence, would be cooling a portion of the medium below the temperature of the surrounding, and operating by the heat abstracted<sup>(2)</sup>," that is, it would produce energy directly from the environment without "the consumption of any material."

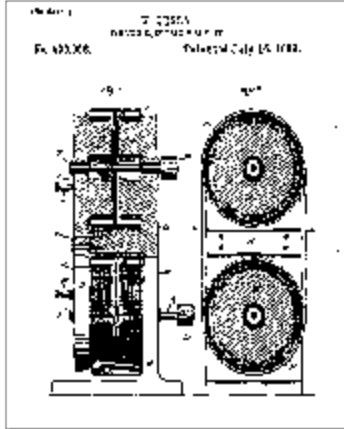
Tesla goes on in the article to describe how he worked on the development of such an energy device, and here it takes a bit of detective work to focus on which of his inventions he meant. He wrote that he first started thinking about deriving energy directly from the environment when he was in Paris during 1883, but that he was unable to do much with the idea for several years due to the commercial introduction of his alternating current generators and motors. It was not "until 1889 when I again took up the idea of the self-acting machine<sup>(3)</sup>."

### THE TURBINE

He quickly came to realize that an ordinary electrical machine, like his generator, would not be able to directly extract energy from the cosmos and turned his efforts to what he called a "turbine" design.

The best known turbine, that is, water pump, associated with Tesla is his patent for such a device, #1,061,206, which was filed for in 1909 and granted in 1913. The unique point about this water pump is that instead of using some form of paddle wheels inside a box to move the water, he discovered that more water could be moved faster by using a set of flat metal disks. The turbine is, in itself, fascinating and may yet prove to be another important overlooked invention, but what is of concern regarding the electrical design is the general shape of the turbine - metal disks turning inside a supporting box.

This same shape turns up in another patent, this one for a "Dynamo-Electric Machine." This patent was filed and granted in the same year that Tesla said he returned to work on the "self-activating" machine, in 1889. The dynamo consists of metal disks that are rotated between magnets to produce an electric current.



Compared to his alternating current generator, this "dynamo" represents something of a curious throwback to the days of Faraday's early experiments with a copper disk and a magnet. Tesla makes some improvement over the Faraday setup by using magnets that completely cover the spinning metal disks and he also adds a flange to the outside of the disks so current can be taken off more easily - all of which makes for a better generator than Faraday's. On the surface, though, it is hard to see why Tesla patented such an anachronistic machine at this point in his work.

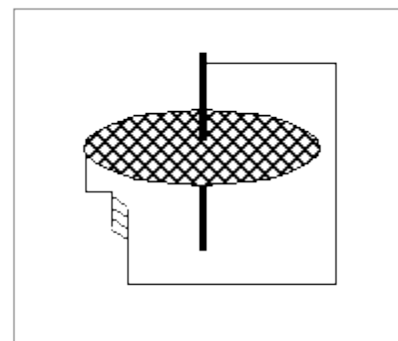
2. Dynamo Electric Machine

The next piece of the puzzle is found in an article Tesla wrote for *The Electrical Engineer* in 1891 entitled "Notes on a Unipolar Dynamo." Here Tesla presents an in-depth analysis of the Faraday disk generator, explains why it was an inefficient generator, describes his improved variations on the Faraday machine, and, at the bottom of the third page of the article, states that he has devised a generator in which "the current, once started, may then be sufficient to maintain itself and even increase in strength(4)." Then, at the close of the article, he states that "several machines ... were constructed by the writer two years ago ..." (5) Two years before the writing of that article was 1889. All the evidence points to the turbine-shaped Unipolar Dynamo as being Tesla's first design for a machine that can continue to produce electricity after being disconnected from an outside source of power.

## SELF-SUSTAINING CURRENT

Before going into the details of this invention it would be worthwhile to have an idea of how any generator, even in theory, could be capable of producing a self-sustaining current. This has been clearly explained by Walter M. Elsasser in a *Scientific American* article (May 1958) titled "The Earth as a Dynamo."

Elsasser models the earth-dynamo, conveniently for this explanation, on the Faraday generator of a metal disk spinning over a bar magnet placed at the edge of the disk. He notes, also, that the bar magnet could be replaced by an electromagnet which could get its power from the spinning disk by attaching one end of the electromagnet's wire to the outside of the disk and the other end of the wire to the metal rod running through the center of the disk.



3. Faraday Generator with electromagnet

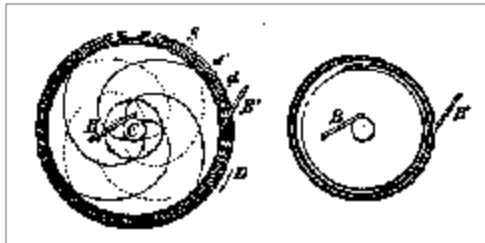
Elsasser then points out that an ordinary disk generator "could not maintain a current for very long because the current induced in the disk is so weak that it would soon be dissipated by the resistance of the conductor [the disk]." This conventional arrangement would not be an answer to "how currents could be built up and perpetuated to maintain the earth's magnetic field." He does, though, propose three options in the dynamo model that would explain the earth's persistent magnetism.

If we had a material that could conduct electricity a thousand times better than copper, the system would indeed yield a self-sustaining current. We could also make it work by spinning the disk very fast... a third way we could make such a dynamo self-sustaining ... is to increase the size of the system: theory says that the bigger we make such a dynamo, the better it will function. If we could build a coil-and-disk apparatus of this kind of scale of many miles, we would have no difficulty in making the currents self-sustaining(6).

Tesla did not have a material a thousand times more conductive than copper, neither was he able to spin a disk at the ultra-high speeds needed to produce such a current, nor did he plan on using a piece of rotating metal several miles in diameter. What he did was to use energy that is usually wasted in a generator and turn it into a source of power.

#### UNIPOLAR DYNAMO

Tesla's design varied from that of Faraday in two major ways. First, he used a magnet that was bigger in diameter than the disk so that the magnet completely covered the disk. Second, he divided the disk into sections with spiral curves radiating out from the center to the outside edge.



4. Tesla's Unipolar Generator

In the Faraday unipolar generator "the current," as Tesla noted, "set up will therefore not wholly pass through the external circuit ... and ... by far the greater portion of the current generated will not appear externally..."<sup>(7)</sup> By having the magnet completely cover the disk, Tesla made use of the whole disk surface in current generation instead

of only a small section directly adjacent to the bar magnet, as happened in the Faraday device. This not only increases the amount of current generated, but, by making the current travel from the center to the outside edge, makes all of that current accessible to the external circuit.

More importantly, these modifications on the Faraday design eliminated one of the biggest problems in any physical system - the reaction to every action. It is this reaction that works to cancel out whatever effort goes into causing the original action. In an electrical system if there are two turns of wire wound next to each other and a current is sent through the wire, the current

passing through the first loop will set up a magnetic field that will work against the current passing through the second loop.

The spiral divisions in the disk cause the current to travel the full radius of the disk or, as in his alternative version of the generator, to make a full trip around the outside edge of the disk. Because the current is flowing in a large circle at the rim of the disk, the magnetic field created by the current not only does not work against the field magnet above the circular plate, as in conventional generators, but it actually reinforces the magnet. So as the disk cuts the magnetic lines to produce a current, the current coming off of the disk strengthens the magnet, allowing it to produce even more current.

Like conventional direct current generators, the unipolar dynamo also functions as a motor if current is put into the disk while under the magnet, and this seems to be the last element that could make the device self-sustaining, that is, capable of generating a current after being disconnected from an outside source of movement like falling water or steam.

Rotation is started by, say, a motor powered by line current. Both a generator and a motor disk are mounted in the magnetic enclosure. As the disks gain speed, current is produced which, in turn, reinforces the magnets, which cause more current to be generated. That current is, likely, first directed to the motor disk which increases the speed of the system. At a certain point the speed of the two disks is great enough that the magnetic field created by the current has the strength to keep the dynamo/motor going by itself.

What process might have kept the unipolar dynamo operating after the powered start-up is speculation at this point, however two features of the generator are significant. First, when a resistive load, like a light bulb is added to the circuit, it lowers the voltage at the center of the disk. This lower voltage at the center means that there is a greater difference in voltage between the center and the outside edge of the disk than there was before the light bulb was added. As the difference between the center and the outside increases, the dynamo works harder and makes more current. Second, yet more important, the dynamo takes either very little, or no energy to keep going because the current coming off the generator is doing double duty. The current makes the bulb glow, but on its way from the generator to the filament in the bulb, it travels a path that adds to the momentum of the dynamo and, therefore, consumes energy at a very low rate. The process continues, it would seem, until heat losses in the filament equal the rotational energy of the generator's flywheel.

In terms of Elsasser's criteria for a self-sustaining generator, the Tesla unipolar dynamo comes closest to satisfying the condition of a better electrical conductor. It is not that a new material is

used, but a new geometry is applied so that the current does not create its own opposing forces. This is similar, but not equivalent, to having a better conductor.

Whether or not the dynamo is in fact a "fuelless" generator it appears to be an ingenious feat of engineering that takes one of the basic principles of nature, an equal and opposite action for every action, and turns it, by the use of a novel circuit geometry, into a reaction that is additive to the original action. Instead of the opposite reaction slowing down the system that created it, the reaction adds energy to the system.

Tesla, however, was not satisfied with his mechanical self-sustaining generator. The dynamo would provide the energy to run a single machine, but his vision was to light cities and in the 1900 *Century* magazine article he elaborated on the theory of such a machine.

Imagine, he suggested, an enclosed cylinder with a small hole in it near the bottom. Let us say that this cylinder, he added, contains very little energy but that it is placed in an environment that has a lot of energy. In this case, energy would flow from the outside environment, the high energy source, through the small opening at the bottom of the cylinder, and into the cylinder where there is less energy. Also suppose that as the energy passing into the cylinder is converted into another form of energy as, for example, heat is converted into mechanical energy in a steam engine. If it were possible to artificially produce such a "sink" for the energy of the ambient medium then "we should be enabled to get at any point of the globe a continuous supply of energy, day and night(8)."

He continued, in the article, to elaborate on his energy pump but changed the image slightly. On the surface of the earth we are at a high energy level and can imagine ourselves at the bottom of a lake with the water surrounding us equal to the energy in the surrounding medium. If a "sink" for the energy is to be created in the cylinder, it is necessary to replace the water that would flow into the tank with something much lighter than water. This could be done by pumping the water out of the cylinder, but when the water flowed back in, we would only be able to perform the same amount of work with the inflowing water as we did when it was first pumped out. "Consequently nothing would be gained in this double operation of first raising the water and then letting it fall down."

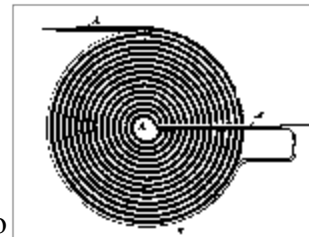
Energy, though, can be converted into different forms as it passes from a higher to a lower state. He said, "assume that the water, in its passage into the tank, is converted into something else, which may be taken out of it without using any, or by using very little power(9)." For example, if the energy of the ambient medium is taken to be the water, oxygen and hydrogen making up the water are the other forms of energy into which it could change as it entered the cylinder.

Corresponding to this ideal case, all the water flowing into the tank would be decomposed into oxygen and hydrogen ...and the result would be that the water would continually flow in, and yet the tank would remain entirely empty, the gases formed escaping. We would thus produce, by expending initially a certain amount of work to create a sink for...the water to flow in, a condition enabling us to get any amount of energy without further effort(10).

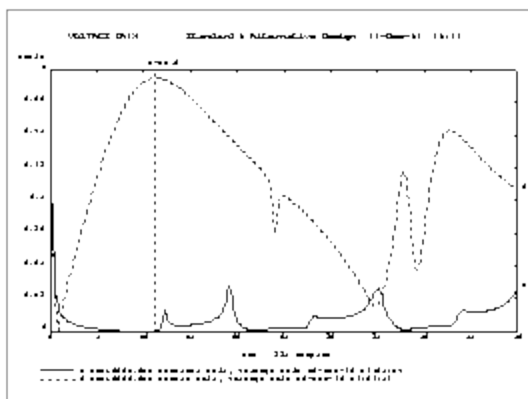
Tesla recognized that no energy conversion system would be perfect, some water would always get into the tank, but "there will be less to pump out than flows in, or, in other words, less energy will be needed to maintain the initial condition than is developed [by the incoming water], and this is to say that some energy will be gained from the medium(11)."

He found that this pumping could be done with a piston "not connected to anything else, but was perfectly free to vibrate at an enormous rate(12)." This he was able to do with his "mechanical oscillator," a steam-driven engine used for producing high frequency currents. The faster the pump would work, the more efficient it would be at extracting energy from the cosmos. Research along this line culminated in the oscillator demonstrated at the Chicago World's Fair in 1893. It was not until much later, in the 1900 article, he revealed: "On that occasion I exposed the principles of the mechanical oscillator, but the original purpose of this machine is explained here for the first time (13)."

It was also in 1893 that Tesla applied for a patent on an electrical coil that is the most likely candidate for a non-mechanical successor of his energy extractor. This is his "Coil for Electro-magnets," patent #512,340. It is another curious design because, unlike an ordinary coil made by turning wire on a tube form, this one uses two wires laid next to each other on a form but with the end of the first one connected to the beginning of the second one.



5. Coil for Electro-Magnets

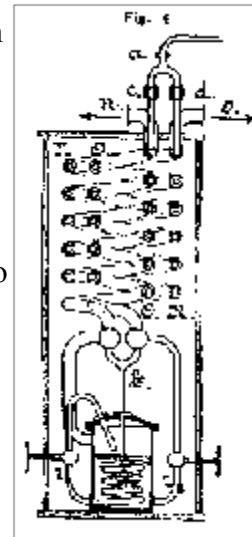


6. Voltage gain comparison capability.

In the patent Tesla explains that this double coil will store many times the energy of a conventional coil(14). Preliminary measurements of two helices of the same size and with the same number of turns, one with a single, the other with a bifilar winding, show differences in voltage gain(15). In figure 6, the upper curve is from the Tesla design, the lower was produced by the single wound coil. The patent, however, gives no hint of what might have been its more unusual

In the *Century* article Tesla compares extracting energy from the environment to the work of other scientists who were, at that time, learning to condense atmospheric gases into liquids. In particular he cited the work of a Dr. Karl Linde who had discovered what Tesla described as a "self-cooling" method for liquefying air. As Tesla said, "This was the only experimental proof which I was still wanting that energy was obtainable from the medium in the manner contemplated by me(16)."

What ties the Linde work with Tesla's electromagnet coil is that both of them used a double path for the material they were working with. Linde had a compressor to pump the air to a high pressure, let the pressure fall as it traveled through a tube, and then used that cooled air to reduce the temperature of the incoming air by having it travel back up the first tube through a second tube enclosing the first(17). The already cooled air added to the cooling process of the machine and quickly condensed the gases to a liquid.



7. Linde's condenser

Tesla's intent was to condense the energy trapped between the earth and its upper atmosphere and to turn it into an electric current. He pictured the sun as an immense ball of electricity, positively charged with a potential of some 200 billion volts. The earth, on the other hand, is charged with negative electricity. The tremendous electrical force between these two bodies constituted, at least in part, what he called cosmic energy. It varied from night to day and from season to season but it is always present.

The positive particles are stopped at the ionosphere and between it and the negative charges in the ground, a distance of 60 miles, there is a large difference of voltage - something on the order of 360,000 volts. With the gases of the atmosphere acting as an insulator between these two opposite stores of electrical charges, the region between the ground and the edge of space traps a great deal of energy. Despite the large size of the planet, it is electrically like a capacitor which keeps positive and negative charges apart by using a non-conducting material as an insulator.

The earth has a charge of 90,000 coulombs. With a potential of 360,000 volts, the earth constitutes a capacitor of .25 farads (farads = coulombs/volts)(18). If the formula for calculating the energy stored in a capacitor ( $E = 1/2CV^2$ ) is applied to the earth, it turns out that the ambient medium contains  $1.6 \times 10^{11}$  joules or 4.5 megawatt-hours of electrical energy.

In order to tap this energy storehouse Tesla had to accomplish two things - make a "cold sink" in the ambient energy and devise a way of making the "sink" self-pumping. Explaining how this process might have worked requires, again, speculation.

Such a "sink" would have to be at a lower energy state than the surrounding medium and, for the energy to continually flow into it, the "sink" would have to maintain the lower energy state while meeting the power requirements of the load attached to it. Electrical energy, watt-seconds, is a product of volts x amps x seconds. Because the period of oscillation does not change, either voltage or current has to be the variable in the coil's energy equation.

In that the double wound coil maximizes the voltage difference between its turns, it is probable that it is the current that is minimized to produce a low energy state in the coil. For the coil to be initially "empty" and at low energy would mean it operated at high voltage with a small amount of charge(19).

The coil, then, would be set into oscillation at its resonant frequency by an external power source. During a portion of its cycle the coil will appear to the earth's electric field as one plate of a capacitor. As the voltage across the coil increases, the amount of charge it can "sink" from the earth's higher energy field will increase.

The energy taken into the coil - through the "small opening" which appears to be the atomic structure of the conductor according to the physics of Tesla's time - is "condensed" into positive and negative components of current, a lower energy state relative to the originating field.

The current is equivalent to the water converted to gases in Tesla's description of the self-acting engine. The current would "escape" from the "sink" into whatever load was connected across the coil. The movement of current into the load would produce a strong magnetic field (the stated intention of the patent) which, when it collapsed, would, again, produce a high potential, low charge "sink" to couple with the earth's electric field.

Because the inflowing energy performs a double function similar to the unipolar generator, supplying current to the load and aiding the pumping function, the system's energy expenditure in moving charge is low, allowing the system to gain more energy from the medium than it expends in its operation. The coil needs no extra energy from an outside source to pump the energy it has extracted.

Energy would come directly from the sun.

A more modern view of such a device, should it prove to operate in this theoretical manner, would be to describe it as a self-oscillating capacitive system. Once the device is set into oscillation, very little power is expended in driving the load. Because it is an electrostatic oscillating system, only a small amount of charge moves through the load per cycle, that is, the coulomb per seconds = amps are low. If the charge is used at a low rate, the energy stored in the



capacitive system will be turned into heat at a slow rate enabling the oscillations to continue for a long period of time.

With his prominent position in the world of science at the time, it is curious why Tesla's invention was not commercialized or at least publicized more. Economics, not science, appear to have been the main factor. The adoption of alternating current was opposed by powerful financiers of the period. Michael Pupin, another leading electrical researcher at the turn of the century, noted in his autobiography:

...captains of industry...were afraid that they would have to scrap some of their direct current apparatus and the plants for manufacturing it, if the alternating current system received any support ... ignorance and false notions prevailed in the early nineties, because the captains of industry paid small attention to highly trained scientists <sup>(20) (21)</sup>.

Tesla's patents for electrical generators and motors were granted in the late 1880's. During the 1890's the large electric power industry, in the form of Westinghouse and General Electric, came into being. With tens of millions of dollars invested in plants and equipment, the industry was not about to abandon a very profitable ten year old technology for yet another new one.

Tesla saw that profits could be made from the self-acting generator, but somewhere along the line he had pointed out to him the negative impact the device would have. At the end of the section in *Century* where he described his new generator he wrote:

I worked for a long time fully convinced that the practical realization of the method of obtaining energy from the sun would be of incalculable industrial value, but the continued study of the subject revealed the fact that while it will be commercially profitable if my expectations are well founded, it will not be so to an extraordinary degree<sup>(22)</sup>.

Years later, in 1933, he was more pointed in his remarks about the introduction of his fuelless generator. In the Philadelphia *Public Ledger* of November 2nd, is an interview with Tesla under the headline "Tesla 'Harnesses' Cosmic Energy." In it he was "Asked whether the sudden introduction of his principle would upset the present economic system, Dr. Tesla replied, 'It is badly upset already.' He added that now as never before was the time ripe for the development of new resources."

It has been nearly a century since Nikola Tesla claimed a radically new method for producing electricity. The need for the development of new resources is greater now than at the end of the last century. Perhaps these overlooked inventions will make his vision of "increasing human energy through the use of the sun's energy" become a reality.

### **Acknowledgment**

Thanks to Mr. John Ratzlaff of Millbrae, California for generously sharing a variety of Tesla material that helped make this paper possible.

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21. Reference 2, p. A-143.
22. For others who followed Tesla with inventions to extract energy from the ambient medium see: Christopher Bird and Oliver Nichelson, "Nikola Tesla: Great Scientist, Forgotten Genius," *New Age*, p. 36 ff, Feb. 1977.

For further information on this page, contact via E-mail: [onichelson@post.harvard.edu](mailto:onichelson@post.harvard.edu)

## Radiant Energy -- Wireless Transformer of High Power Lines?

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*Les Hendershot & Floyd Sweet family of "free energy" devices may be tapping into local high-power lines, not aetheric energy, using a resonant antennae principle. Alternatively, the high-power lines could be serving as an antennae amplifier for aetheric energy.*

**Update, Jan. 7, 2005**

**Curtain Lifted on Kipper Tricks** - Wes Crosiar says he knows how Marcus Kipper has been getting his alleged over unity technology to work. Microwave transmitter in back yard pumps added energy into demo device. Gadget in car does same thing when demonstrating out in the desert. Says Les Hendershot and Floyd Sweet devices are probably of similar ilk.

by [Sterling D. Allan](#)

Feb. 19, 2004

*Pure Energy Systems News Service*

SOMEWHERE IN REMOTE CALIFORNIA

A researcher who thought he had successfully tapped into the holy grail of aetheric energy now thinks the source of the energy he is deriving is most likely being picked up radiantly from local high-power lines.



A month ago, Craig West\* successfully built for himself a device that outputs four kilowatts with much less than that required for excitation of the device. The device even continued output with the excitation source removed in a closed loop. Though to outward appearances, the device seemed "self-powered," West knew that the energy had to be coming from somewhere.

His hope, of course, was that he had been able to tap into "the vast sea of energy that surrounds us," spoken of by inventors such as Nikola Tesla and T. Henry Moray. He was on the high of his life.

He is quick to mention that the design is not his. He learned it from a gentleman in Arizona, who demonstrated to him a one million Watt output before the wires in the coil disintegrated.

With his success, West had investors with 30 million dollars lined up; 10 million up front for a demo, and the remaining 20 million to tell them how it works.

The device worked fine, with repeatable results when he operated it in Arizona where he built it. But when he returned to his remote home in California that is operated by solar energy, far away from civilization, let alone any power lines, the device no longer output more than what went in. Nothing but the location of the device had changed.

The location in Arizona where he built the device is in the vicinity of high power lines, which traipse the landscape throughout Arizona. West also said that he saw a report on the web about Arizona installing new super conducting, under-ground, high-power lines that convey power from Arizona to Mexico.

An Electrical Engineer who was in on the interview with West, mentioned that it is known that if a barbed wire fence, of about a mile in length, with insulators, is run parallel to a high power line that a "one-turn transformer" can be created, inductively coupling some of the power of the high-power lines.

Then, as this story was being composed, a story broke in the UK in which an Artist-Physicist, Richard Box, lit 1300 fluorescent lights from "spare" electricity just floating around in the air around the electric pylons which dot our countryside." (*Evening Post*, UK, Feb. 19, 2004)



(Front Page, *Evening Post*, UK; Feb. 19, 2004) [\[link\]](#)

[click for full-size, full res image](#)

West thinks that the device he built, patterned after that of his associate in Arizona, is somehow serving as a wireless transformer. "Other technologies may in fact be tapping into aetheric energy, but at this point it looks as though this particular family of designs does not." An obvious example would be the radiant energy experiments done by Nikola Tesla, in which no high-power lines were present.

While this pops his bubble of thinking he had learned to tap aetheric energy, he nevertheless realizes that there are a wide range of practical applications that the power companies would find of great use.

Running electricity to a home remote from the grid is prohibitively expensive. Every few hundred feet can cost thousands of dollars.

This device would enable homes that are within a few miles of high power lines to be able to wirelessly tap into those lines.

The exact efficiencies over a given distance are not yet characterized. West is not yet even certain that this is indeed what is happening with his device. He plans to pursue a series of experiments to document and characterize this phenomenon. When the weather clears, and he can get enough money for a tank of gas, he will be making his way to the vicinity of a high power line to see how his device performs. He will then measure the effect at different distances from the line, as well as nearby a transformer station.

Another alternative energy researcher, Larry Rand, citing the work of Dr. [Tom Bearden](#) and [John Bedini](#), urges West to not be so hasty to presume that the high-power line effect is due to his device tapping into the electricity being transmitted by those lines. "Perhaps in this case the power company lines and the device form somewhat of a resonant condition that allows some of the same 'power' from the universe that goes into the power company lines, to enter the device."

"According to conventional physics, there should be little power collected from the power company's transmission lines, unless huge coils are used, in fairly close proximity," says Rand.

Rand even goes so far as to suggest that what is actually happening is that the power grid's method of generating electricity absorbs the lines of aetheric energy away from areas where they would otherwise flow, thus inadvertently robbing everyone in the power line vicinity from equal access to this free energy source from the universe.

Taking this a step further, Electrical Engineer, [Ken Rauen](#), points out that "aetheric energy flow that is redirected means natural energy flows are disrupted." He then asks, "what are the full ramifications on the environment and biological health?"

Inventor [Hector D. Perez Torres](#) of Advanced Research Knowledge asserts that "power company lines act as a sink for natural-occurring RF radiant energy waves in low to very low frequencies (LF/VLF) from 10 kHz to 535 kHz." He said the Power distribution entities know of some interactions between naturally occurring VLF frequencies emitted from the earth, and that "they invert lines at intervals and place filters and suppressors in line" to counteract these effects. "Utility companies expend millions in filtering geodesic 'noise' that affects their systems, like in solar storms."

If it is actually a case of tapping into the electricity in the transmission lines, and not aetheric energy being amplified by the lines, what West is most concerned about is that people will make these devices with the specific intent of stealing power from the grid, similar to unscrupulous

pirating devices in the wireless world of entertainment.

"They are not that difficult to build. It took me 30 minutes to figure it out."

In the same breath, he hopes that the power community will not just run off with his technology for its use as a wireless transformer, and leave him out of the loop. They could benefit tremendously from his knowledge in coming up with ways to detect such devices from a signature frequency output, to be able to intercept individuals tapping power without proper authorization to do so.

Torres postulates that "if we use this power we do not steal power from them but help them suppress the ELF signal improving their transmission."

While it may not turn out to be the holy grail of free energy, it could be a great tool in energy distribution, and could even have applications in wirelessly powering appliances.

West is not alone in having created such a device. There are dozens, if not hundreds of individuals around the planet who have built similar devices that operate on the same basic principles. The pioneers in this field are Lester Hendershot, inventor of the "Power Capture Unit" (1920's); and the late Floyd "Sparky" Sweet, inventor of the Vacuum Triode Amplifier (VTA) or Space Quantum Modulator (1986).

Dr. Tom Bearden, a pillar in the free energy community, when describing the phenomenon of aetheric energy being all around us, uses the analogy of birds sitting on top of high-voltage lines, completely unaffected and oblivious to the power running under them. West is now suggesting that at least some of Bearden's devices may be doing just that -- tapping remotely into the power of the high-voltage lines.

Tom Cullen, Director of Education at Pure Energy Systems, said "Bearden and Moray have taken great measures to understand the true source of energy in their experiments."

According to Marc Wiseman, Director of Information Technology at Pure Energy Systems, West is not the first to postulated that the extra electricity in these particular designs may actually be derived from the power grid -- the very source that the others in this field are hoping to replace. "The ability of power lines to act as a coupling device for some distance away is not a new idea."

Wiseman, cites the work of K. Meyl of Germany, who postulates mathematical models to show that scalar energy and transverse energy can have an interplay between each other. Based on this model, Wiseman extrapolates the idea that the scalar energy surrounding high-power lines could flip over into transverse energy whereby it could be conveyed over long distances away from the lines.

"Very little is known about Extremely Low Frequencies" such as the 60 Hz range of the power lines, because the wavelengths are so large. One wavelength is approximately the width of the United States.

The irony of this belated realization is that one of the prophets of free energy, Nikola Tesla, is revered for his invention of radiant energy technology whereby electricity can be conveyed to remote locations without the use of wires.

"What we seem to have here is a bunch of people who are unwittingly misleading people with the promise of free energy using these devices, when the very source of their energy may be the power grid," says West. Even with Rand's alternative explanation, the aether-focusing properties of the grid are a determining component to the function of this design.

West referred to an inventor in Bullhead City, Earl Davenport, who has a set-up very similar to his, and speculated that his "over unity," as purportedly confirmed by Walter Rosenthal, is a function of high-power lines nearby. Across the River, not ten miles away, in Laughlin Nevada, is a large power plant, with high power lines extending from it in all directions.

Joseph Newman's motor is another possible variation of this wireless transformer phenomenon, according to West. It has a super long wire, with decent capacitance. "Some people build it and claim it works well, others build it and it doesn't work so well. It just may be the story of 'location, location, location.'"

"John Bedini's motor is an even more likely candidate for this phenomenon," says West.

The high-power-line model is not the only possible explanation given by West. He gives at least six other possible causes of the variations in results, such as naturally occurring ley lines that occur at certain distances across the earth. A possible imminent pole shift of the earth's magnetic field could also be introducing sporadic field parameters. Oil pumping at high velocity under ground has been shown to create electromagnetic fields as well. West also includes in his list the



possibility of occult magic at work in which the practitioners are able to create an illusion that defies reality.

Whatever the cause, he has seen variations in the performance of his device that go beyond the variables of the device itself, and he is determined to discover what those outside parameters are.

Steve Elswick of Tesla Tech and editor of *ExtraOrdinary Technology* magazine, has been selling plans to this technology in a variation called the Kipper motor. West encourages Elswick to notify his buyers of this effect if it is shown to indeed be a result of this high-power-line phenomenon.

In a three-way interview with West, Elswick confirmed that he was also witness to the over unity effect demonstrated by Kipper. Elswick also points out that there is not a place in the U.S. that does not have background RF from high-power lines. Based on what he knows of the device and its various manifestations, Elswick does not think this device functions because a wireless transformer effect.

As a micro version of this phenomenon of high-power wire-less transmission, West envisions a scenario in which a con man sets up a microwave oven in one room with its door open as a transmitter, and a "receiver" device is set up in the adjoining room, apparently operating as an "over unity device."

West prefers to not divulge the full set of details about how the device works, lest people begin to make the device in order to steal power.

His device, built of off-the-shelf components, consists of

- a deep cycle 12-volt battery
- a simple 6 - 90 Volt DC motor from a treadmill
- an alternator that has been modified, replacing either the rotor or stator windings with permanent Neodymium magnets
- a bridge with 600-Volt, 35-Amp diode to rectify the alternator output to DC
- a coil (this is the trick) wound with 12-gauge insulated wire

"The gauge of the wire is what determines the power level attainable. The thicker the wire, the more the power."

Regarding the coil, he said, "There is probably not a coil you could name that I am not aware of, but this coil is something I had never seen before."

"If the switch is placed after the coil, you can turn it off, but the device keeps going. There is no visible arc across the switch gap of one inch, yet the current is still running. But if you place the switch before the alternator, it successfully shuts the device down."

"Once the device is running, you can pull the battery out, and loop it back to itself, and it keeps running."

The battery is what West speculates is a key factor in the equation of enabling the proper LCR (inductance, capacitance, resistance) combination to obtain a frequency that enables the device to remotely tap into high-power-lines.

"A battery is a huge capacitor -- of the Farad range," says West.

"The resonance does not have to be exactly 60 cycles. It can be a close multiple. The closer the resonance, the greater will be the interlock."

The wavelength of 60 Hz is over three thousand miles long; but the half, and quarter, and eighth and smaller harmonic fractions of that wavelength also provide a corresponding resonance.

The high-power transmission lines from Arizona to California carry in the range of 500,000 volts, though 200,000 to 400,000 is more typical of high-power lines.

It is not likely that the Utilities have missed a few volts here and there due to these rogue scientists who think they are pulling the power out of thin air, or the aether that surrounds us. If West's discovery is proven out, the ramifications will be disappointing to the Free Energy enthusiasts, but will also lend them some credence for ingenuity which can be put to use in wireless transformer applications. Not all of their devices are driven by this phenomenon. Perhaps science will begin paying closer attention to them -- if anything to guard their power. The scrutiny could do both sides some good. At a minimum, any free energy claim must be proven to be independent of the existing power grid.

If the effect is due to the high-power transmission lines amplifying aetheric energy, as Rand suggests, cooperation with the power companies will be required to scientifically prove this

point. Voicing a sentiment often found in the free energy community who see themselves as being at odds with those who meter and charge for power, Elswick said such an attempt at corroboration "would be a death wish."

Torres points out that an argument could be made that "if a power company is radiating energy of this magnitude they may be violating current FCC law." He also cites the growing body of evidence showing deleterious health consequences found in those who live nearby high-power lines -- a class action suit waiting to happen.

If the effect is a result of the high-power lines redirecting the natural flow of aetheric energy to everyone equally, that presents yet another controversy sure to generate some heat of its own. Calvin Young, an Avionics Engineer, formerly with Boeing, goes so far as to say that the power grid is actually damaging the earth by disrupting the natural flow of aetheric energy.

Torres summarizes, "The main issue is that the power company has nothing to do with a phenomena that existed prior to them. Damming the water does not give them ownership over the rain."

While the grid may have its side effects, the benefits it has brought to mankind are everywhere around us.

This discovery of a probable link between this family of radiant energy devices and their vicinity to high-power transmission lines is likely to open a new chapter in the book of free energy. Its reverberations will be felt for decades to come. It might be raining on the parade, but of such rain comes daffodils.

\*Craig West is a pseudonym to shield the true identity of the scientist per his request.

## See also

- **The Resonant Coil Project** - "What young Tesla had not yet fully realized, was that under some conditions, a resonating magnetic field can produce standing waves which can trap and transform -- another subtle form of not-yet-understood energy."
- Kipper Motor Plans - by Steve Elswick.
- Kipper Motor Plans Posted - GreaterThings archive of Elswick's posting, Oct. 22, 2004.
- Google > Kipper+motor

## Coincident In the News

- **A Spooky Show to Spark Debate** (*Evening Post*, UK; Feb. 19, 2004) - UK Artist-Physicist Richard Box lights 1300 fluorescent lights from " 'spare' electricity just floating around in the air around the electric pylons which dot our countryside."

## Lester Hendershot

- Google > "Lester Hendershot"
- <http://www.rexresearch.com/feg/feg1.htm#hendershot>

## Floyd Sweet

- Google > "Floyd Sweet"

## Others

- Tom Bearden
- John Bedini
- Ken Rauen
- Hector D. Perez Torres
- K. Meyl

## Feedback

### I doubt it is from the high-power lines

**From:** Steven R. Elswick

**To:** 'Sterling D. Allan'

**Sent:** Thursday, February 19, 2004 5:47 PM

**Subject:** Radiant Energy vs Radiated Energy

Dear Sterling,

It has been brought to my attention that others have now observed effects similar to those that I observed in 2000 when I helped build the Kipper motor. Your article "Radiant Energy -- Wireless Transformer of High Power Lines?" announces the successful tapping of the same source of energy as well as its inherent instability. [...] (For those wishing to build the original version of the Kipper Motor, plans have been made available to members of TeslaTech, see <http://www.teslatech.info> ). It is quite refreshing to read that others have observed the transient anomalous effects that I observed.

Unfortunately, they have focused on the possibility of the device leaching energy from high voltage transmission power lines. Personally, I discount this as a remote possibility, not a probability.

Traditionally such schemes to "steal" power from the power companies required that the "antenna" be located fairly close to the powerlines to gain a parasitic electromagnetic effect. The example stated in the article used a loop of wire ONE MILE long to inductively couple to the transmission lines! The Kipper device uses wire only 6 feet long (conductive to frequencies in the 41Mhz-164Mhz range) ... Furthermore, the device I had was located at least 4-miles from the nearest high-voltage lines. For devices located at

Kipper's place, one would be looking at 10-miles or more to the nearest high voltage lines. As I was unable to resurrect my device at its original location, or at other locations with high tension wires located even closer and in greater numbers, I highly doubt they were the cause.

To the contraire, I would look more towards Tesla's cosmic rays or the natural aetheric flux (zpe) as the source of energy. In the plans I have made available to my members. I have expounded to a much greater degree on this.

However, should the power companies want to use the power line theory to justify a crackdown on free energy researchers, then two issues need to be addressed:

- 1) a radical revision of current accepted electromagnetic doctrine which addresses the inverse square rule
- 2) the explosion of soft tissue cancer which is "enhanced" by electromagnetic fields

Currently, utility companies are fighting tooth and nail the concept that cancer rates are clustered around power lines. If this long range effect really occurs, then power companies could conceivably be liable for elevated cancer rates!

Finally, last but not least, Tesla has written much about this type of energy which he observed... and this is long before there very many power stations cluttering up the electromagnetic spectrum. If the space energy receivers and Kipper-type of devices are inadvertently picking up manmade radiated power, it would be microwave and broadcast radio/TV, which cannot be considered stealing. However, I do not believe that the power densities of manmade radiation would be sufficient for the results I observed. On the other hand, Tesla quite openly and frequently stated that cosmic energy fell on the earth in quantities sufficient to supply all of mankind's needs!

Steve Elswick  
Publisher/Editor - ExtraOrdinary Technology  
520-463-1994 - <http://www.teslatech.info>

## **Military has had radiant conveyance for years**

**From:** [andy pears](#)

**To:** [pes\\_ee@yahoogroups.com](mailto:pes_ee@yahoogroups.com)

**Sent:** Thursday, February 19, 2004 6:18 PM

**Subject:** Re: [pes\_ee] Wiseman on high-power wireless transformers

My friend at Westlands helicopters UK was talking to me recently about the use of wireless transmission of electricity to ground units on the battlefield.

He confirmed that this has been the case during conflict for many years. The reason why we don't have it available mainstream is that it can't be metered in this form.

Andy.

## Ramifications for Continued ELF Research

**From:** [mwiseman1@cox.net](mailto:mwiseman1@cox.net)

**To:** [PES\\_admin@yahoogroups.com](mailto:PES_admin@yahoogroups.com)

**Sent:** Thursday, February 19, 2004 6:16 PM

**Subject:** [PES\_admin] Headlines & Alan Francoeur needs better computer

Sterling:

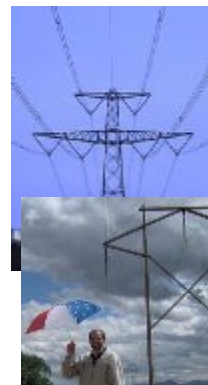
To summarize; our telecom, power lines, as you know, are known to produce low frequency fields whose effects on living creatures is not fully understood. The behavior, transmission and reception, of ELF (extremely low frequency) is not well understood either. It has been known that power lines can induce current in nearby devices. Power lines have been observed to also affect lightning. What has not been known is the radiant nature of the ELF from the power lines. Perhaps this latest story will draw attention and accelerate development of ELF technology. Great efforts have been made in attempting to use ELF for submarine communications, perhaps now we have clues for devising technology better than HARP with less impact on the environment. The work of Dr. K. Meyl of Germany comes to mind as one who worked out the mathematical relationships between scalar and transverse propagation. My thought is that the ELF, unlike frequencies we normally associate with radio phenomena, may involve such transformations, but in a manner different than what we are accustomed with radio phenomena.

## Related Stories

- **Pylon Ambient Energy Lights Fluorescent Bulbs** - Hundreds in UK flock each night to see artistic display of 1300 fluorescent bulbs lit by overhead high-power lines. Lights ebb as a person walks near them. Tubes give a shock when held while jumping off the ground. (*PESN*; March 6, 2004)
- **Shocking Experience Walking Under High-Power Lines with Umbrella** - Discovered: umbrella tines act as an antenna, turning the umbrella holder into a mini transformer. Moist weather seems to accentuate the effect. (*PESN*; June 14, 2005)

## See also

- **PESN Featured News**



# Rediscovering the Lost Art of Coil Winding — **The Resonate Coil Project**

( Real Life Stories are Better Than Fiction. — Tommy Cichanowski — )

Listen to "**Tommy Talk Radio**" about Resonate Coils.

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The Project Setting — "Top of the Hill" — 600 ft. above Winona, MN.

The tower is 405 feet high.

## **Warning !!**

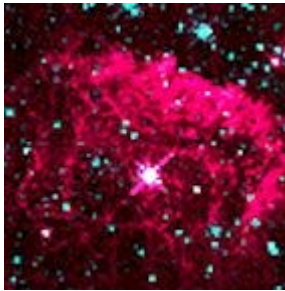
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## **Video Script**

V.O. — Today, More than ever, We are aware that What we see as our Material World, is actually a vibrating system, swimming in a sea of fine Dark Matter and Energy. Our

scientific instruments are detecting ever-smaller realms of particles that make up the clockwork of our Atomic Reality.



Even more intriguing, are the Field Effects that hold our clockwork parts in place. The resulting interplay of field and particles, Creates the possibility for Harmonic Motion.

Harmonic Motion, as we happily know, Provides us with the means for making music. Since the Universe expresses itself through Harmonic Motion, We can rightly call it a "

Magnificent Music Machine ".

The old stories of Galileo discovering Harmonic Motion and the experiments of Maxwell and Faraday, excited the inventive mind of the young Nikola Tesla. His obsessive fascination with Electro Magnetic Resonance, inspired him to invent and patent the foundation for much of the technology we use today.



However, his thinking and ideas were not completely in step with the industrial community of his own day. This climate of attitudes, perhaps tempted Tesla, the Show Man, to attempt a Publicity Stunt.

Some believe that Tesla used his Wardenclyffe tower on Long Island to attempt to resonate the Polar Magnetic Field. His Goal was to create a spectacular display in the Aurora Borealis, for Admiral Perry, Who was camped near the North Pole.

What young Tesla had Not Yet Fully Realized, was that under some conditions, a Resonating Magnetic Field, can produce Standing Waves, which can trap and transform, another subtle form, of Not Yet Understood, Energy.

( © Sightings footage: )

**Explosion !**

V.O. — On June 30, 1908, a remote area of Siberia, known as Tunguska, is devastated by a mysterious force. 2,000 times greater than the bomb dropped on Hiroshima. It left no crater or residue, the usual calling card of a mediator or comet.



Russian investigators, who found metal fragments at the site, suggested that the blast was caused by an alien spacecraft, colliding with earth. But, a new compelling theory about the Tunguska incident suggests that a highly concentrated beam of electrical energy, caused the total devastation in this region. And, that only one man had the scientific knowledge to pull it off.

J. W. McGinniss (President International Tesla Society) — Nikola Tesla: I feel that he was the greatest inventor of the past 500 years.

He is a Michael Angelo. He is a Leonardo da Vinci of science.

Ellen Sherman (President Tesla Wardenclyffe Project) — He gave us A.C. power, the florescent light, radio, robotics. ([A List of Tesla's Patents](#))

Tad Wise (Author "Tesla") — By 1900, he was the "Emperor of Invention". He had eclipsed Edison. He was one of the half dozen most famous men in the world.

V.O. — Heavy praise for a man we seem to know so little about.

When Tesla immigrated to the United States, from Cro-Asia in 1884, his dream of working for his hero, Thomas Edison, became a reality. But, Tesla's development of a "more efficient" form of electricity, called A.C. (Alternating Current) didn't sit well with his new boss, who had already developed the more cumbersome direct current (D.C.).

Tad Wise — Edison just shut him down. "Its D.C. here ! Forget this A.C. Stuff ! Your working for me. I don't want to hear another word !"

V.O. — But, A.C. was superior, as Tesla's biographer Tad Wise points out.

Tad Wise — D.C. doesn't travel well. It is a power form, that can not be stepped-up (transformed) to a high voltage for distribution. A.C. can, and then be Stepped-down again, safely, for use in a home or school or factory.

V.O. — Tesla's brilliant discovery, so impressed industrialist George Westinghouse, that he enlisted Tesla in his bid to harness the hydroelectric power of Niagara Falls.

Finally, the movers and shakers of the day, were noticing Tesla.

Tad Wise — He became a good friend of Mark Twain's. He met all the millionaires. He made a point of meeting all the millionaires.

V.O. — One of those millionaires was J.P. Morgan.

**Tad Wise — And, J.P. Morgan was the fellow that gave him \$150,000, probably the equivalent of ten million dollars today, to build Wardenclyffe.**

**V.O. — Wardenclyffe, was the name Tesla chose for what he believed would be his greatest contribution. A huge transmitter that would provide electrical power to the world, without the use of wires.**

**Tad Wise — What he didn't tell Morgan, was that he wanted, to send power, to the world, for Free !**

**( Original Footage: Tower )**

**Tommy C. — Tesla's plan was ingeniously simple, and actually works !**



**You just need a**

- **Tower that you can resonate.**
- **An oscillator of moderate power,**
- **Some tuning equipment, and**
- **a little tweaking,**

**to get things ready.**

**Now you are all set, to send out your excitation signal.**



**On the receiving end all you need is**

- an appropriately wound and tuned resonant circuit,
- a ground rod of good quality, and
  - one wire going to your light bulb.



**Yes, there is just one wire connecting the coil to the light bulbs. That's it! The transmitted energy from the tower sets up standing waves in the resonate circuit and the "vacuum energy" "lasers out" and powers the light bulbs. Even this little cardboard mailing tube coil, which is being powered by the AM tower outside, although very**

**inefficient, shows at least, that under the right conditions, this concept of Tesla's, does work!**

**However, providing free power for everyone did not go over well with Tesla's financial backers. Not after the power station at Niagara Falls was completed.**

**( © Sightings footage: )**



**V.O. — Journalist Ellen Sherman believes, that this was the beginning of the end for Wardenclyffe.**

**Ellen Sherman — J. P. Morgan, did not want to back something that was going to give free**

energy to people. Who, he could put no meter on. He could not get any money from it, what so ever.

**Tad Wise —** When Morgan pulled his support, he not only ended Tesla's career as the major scientist of his day, but, he made a laughing stock of him, in the eyes of his scientific peers. When that was all pulled away from him, he was a desperate man on any number of fronts.

**V.O. —** And, that desperation, may have lead him to use the partially constructed tower to conduct a fateful experiment, in the summer of 1908.

**Oliver Nichelson (Science Writer) —** Tesla was something of a showman. He had lost the backing of his principle financial supporters and he was the kind of person who might try a large public event that would bring attention to his work.

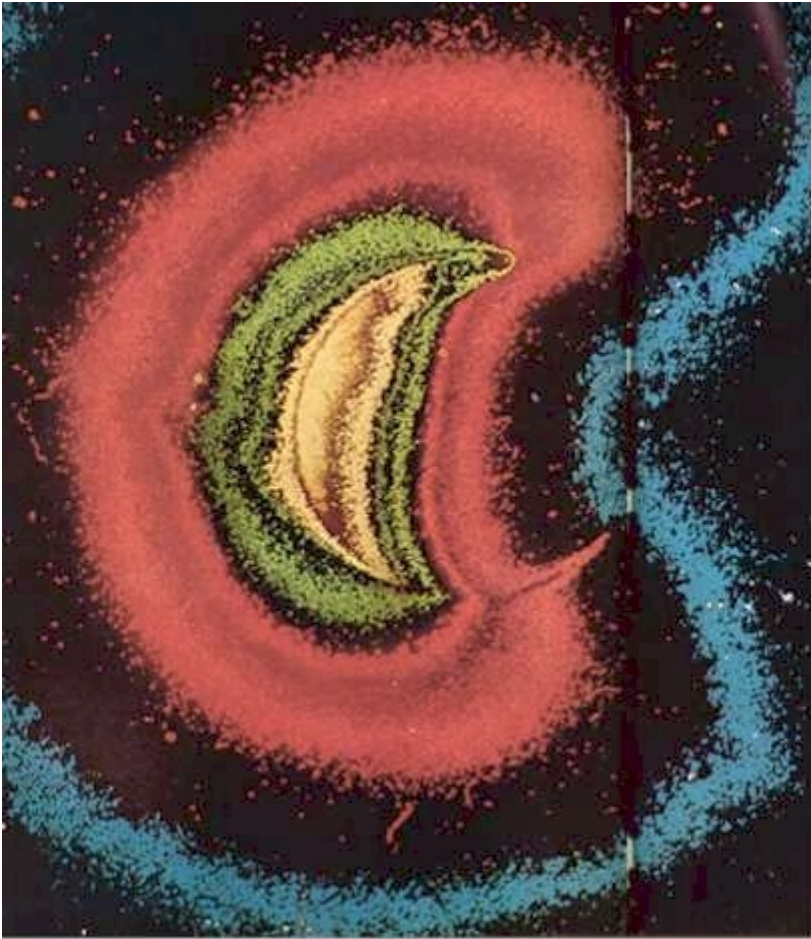
**V.O. —** Oliver Nichelson has found evidence that Nikola Tesla may have been planning to aim his electrical beam at the North Pole, in order to put on a dramatic light show for Admiral Perry, who was in the misted of his historic expedition. A small miscalculation in distance, could have had devastating results.

**Oliver Nichelson —** There is Tesla's research station in Long Island, and then I drew a line to Tunguska in Russia, and interestingly enough, that line crossed right near the north pole, and came very close to Ellesmere Island, where Perry would be camping over for the winter.

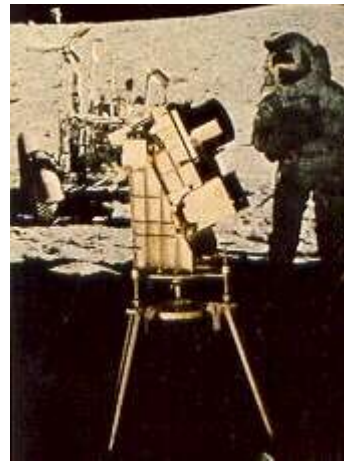
**V.O. —** Nichelson and others theorize that Tesla's aim was "True", but, he grossly underestimated the effect gravity would have on his electrical energy beam.

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## A View of Earth's Electric Field from the Moon



This photo was taken from the moon by Apollo 16. A ultraviolet camera was used with a lithium fluoride filter, exposed for 15 seconds.



The photo shows an positive electric field, comprised of **hydrogen** ions, around the Earth brought about by light photons knocking electrons out of their gas molecule orbits. This electrical field has outer layers that are +350,000 volts DC relative to ground, extending 16,000 miles into space. Longer exposures show that the geocorona extends to 100,000 miles.

The dark side of earth is to the right and here you can see a real force potential that we rightly can call "**The Power of Darkness.**"

Although the cause has been only recently discovered, broadcast engineers have had to deal with its harmful effects to radio equipment from the very beginning. Special resonate coils are installed on all antenna towers that are not grounded to drain off this nuisance energy.

**Nikola Tesla**, the true inventor of radio, writes about his experiences; "... The truth is this. In the air the potential increases at the rate of about fifty volts per foot between the upper and lower ends of the antenna. The masses of the charged atmosphere are constantly in motion and give up electricity to the conductor, not continuously but rather disruptively, this producing a grinding noise in a sensitive telephonic receiver. The higher the terminal and the greater the space encompassed by the wires, the more pronounced is the effect ..."

As we can see from the photograph, the energy at night is much more pronounced near the equator. At the above rate, the day time voltage at the top of a 400 foot pyramid would be about 20,000 volts. However at night, the voltage would be a couple of hundred thousand volts around midnight.



Electrostatic motors have been built similar to this electrostatic generator, that have produced one horse power of energy — 33,000 foot-pounds per minute – 746 watts ( absolute ).

Note however, that these systems are good at attracting lighting since they readily emit "streamers" and therefore the system must be designed to handle strikes.

Since lightning wants to move in a straight line, sharp bends and spark gaps are

incorporated into the design.

[ Could it be, that Nikola Tesla's resonate coils, interacted with the Earth's electric field, producing standing waves, that created a "gravity trap" which collected "Zero Point Energy?" ]

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J. W. McGinniss — Instead of this operating as he thought it was going to, there is a tremendous explosion in the Siberian region. Forests are laid flat, reindeer herds disappeared, small towns, completely gone.

**V.O. — J. W. McGinniss of the International Tesla Society, is convinced that the Tunguska tragedy is linked to Tesla. He disagrees with those who think that Tesla was purposely building a weapon of mass destruction, on a global scale.**

**J. W. Mc Ginniss — Of all the great scientists of this country, that went to work with the Manhattan Project, there was one scientist who refused to do that, and that was Nikola Tesla. He did not believe in a general destructive weapon. He wanted to introduce something that was a lot more incisive and certainly indefensible, and that was his death ray.**

**This thing was so powerful, that it would deliver fifty Million volts, into an area, that was one tenth of a millionth of an inch in diameter (0.0000001 inch). If you put that much pressure in that small a space, there is nothing that can stand-up to it. It could cut a ship in half.**

**V.O. — While the U.S. government went ahead with its Atomic Bomb strategy, a Secretive interest in Tesla's work, seemed to be at work shortly after his death in 1943.**

**Tad Wise — The day following his death, the F.B.I. under the auspices of the O.A.P., which is the Office of Alien Protection, broke into is apartment, broke into his safe, and stole or confiscated all his papers and affects. Now, the O.A.P. had no business being there. He had been a been a citizen of the United States since the previous century. So this was a ruse, they needed to get in there somehow.**

**( Original footage: )**

**Tommy C. — Just a of couple weeks before Tesla's death, the US Navy had conducted their fateful experiment hoping to make a ship invisible to radar. The Philadelphia Experiment, did for a moment cause the ship to become invisible. Totally Invisible. It then reappeared for an instant, and then having collected enough cosmic energy in the standing waves surrounding the ship, it was teleported more than a thousand miles away in an instant.**

**V.O. — Our Military indeed, had more than one interest in the possible effects of resonance. Tesla had several times made cryptic statements regarding things that he had seen happening, while he was operating his equipment. "If only you had seen the things I have," he would remark.**

**( © Sightings Footage: )**

**V.O. — Recently declassified documents, only hint of the great discoveries that may have been hidden in Tesla's safe.**

**He had developed a sophisticated "particle beam / death ray", and he had the know-how to successfully transmit an enormously powerful wave of electrical current, through the atmosphere, and halfway across the world.**

**Could it be, that through his personal papers, our government gained knowledge that should by rights, make Nikola Tesla the father of "Star Wars" technology.**

**Tad Wise — They realized that, Tesla was always ahead of his time.**

**V.O. — What amazing discoveries did the F.B.I. find inside Tesla's safe at the Hotel New Yorker ? We may never Know ! Shortly after their retrieval, the files disappeared, and have not been seen, at least not publicly, since then !**

**[ Did Tesla really cause the Tunguska explosion?**

**I have been unable to find any evidence that proves he did not. He had the motive, the means and was in the right location at the time.**

**A friend of mine, who worked at Sandia National Lab, says the explosion pattern is consistent with what one might expect from a comet. But, the lack of any physical evidence and the unusual biological effects that have been discovered in the region, suggests to me that we need to keep an open mind —Tommy C— ]**

**( Original Footage: )**

**Tommy C. — Today, most researchers agree, that a transmitter powerful enough to do what Tesla wanted, would have had potentially serious health effects, even if, these other phenomenon, could have been safely controlled.**

**In Tesla's day, the high frequency currents needed to use his technique, had very limited commercial applications. Today, the Electro-magnetic spectrum is crammed with users.**

**However, let us not let the details of Tesla's application, take us from the due consideration of this workable concept. The transmitting tower's power was needed to stimulate the coil. To over come Electro-magnetic inertia, so to speak. It is not needed to make the coil work. A simple local oscillator, just a fraction of a watt in power, is fully capable of setting up the standing waves needed to gather our cosmic energy.**



Using this method, I have obtained exciting results. There have been days when I have felt that I had just broken every law of physics that I had ever heard of, and there was a day when my heart stood dead still for seconds, before panic and total Pandemonium set in !!! — Especially after hearing stories like the one above !!!

The life of a researcher sure has its moments ...



I was working with a new multi-staged, Tesla type coil, that I had just built at my cousin Steve's shop. Steve is the chief engineer for a number of radio stations and his shop is in one of the transmitter buildings. Getting unexpected, off the scale readings from my coils, I was tuning the coil and adjusting the test equipment when ... **All the power goes off !**

A few seconds later, the backup power comes on, only to be accompanied by a loud audible alarm, that neither I, nor my cousin new existed. I jumped up and started checking the meter readings on the transmitters, to see if they were on the air, and working properly. Outside, all the air raid sirens in town had been tripped and were adding to the din of confusion.

Then, Steve's pager started going off, again, and again, and again, displaying emergency 911 codes; KAGE - FM, off the air ... CD Country, off the air ... Home 101, off the air ... La Cross Radio, off the air ... KWNO, off the air ... KAGE - AM, off the air ...

The whole valley had gone out ! 50 miles, up and down the river, was without power. And, that mysterious alarm was still sounding in our transmitter room, only to be out done by the fact, that now, KAGE FM, was now playing

eighteen CD's simultaneously, over the air. An hour and a half later La Cross, Wisconsin was still without power.

**When one is working with the mysterious and the unknown, can one really know, at a moment like that, what actually happened ?**

**The alarm, creating standing waves of its own, was not easy to locate. It sounded like it was coming from everywhere. Finally, after a couple of minutes, it was discovered to be coming from a recently acquired typewriter. One mystery solved at least.**



**The true cause of the power outage, became known a couple of Days later and I'm happy to report, that, I didn't do it. I'm glad because I really don't want anyone to think, that anything I am doing is truly dangerous.**

**A paddle boat, the American Queen, had failed to lower its stacks, while going under some major power lines, and had pulled them down. No one was hurt, but, one of the boat's pilots had been interview by our local paper the day before and was saying how much he loved his job and how he intended to keep at it until he retired, if he didn't " fuckup ! " Oops !!!**

**The pilot had called down to the "Ship's Master" asking permission to lower the stacks, but was told not to. "The river is low enough. You should clear them by about a foot", he was told.**

**The river wasn't !**

**As heart stopping moments go, this one even topped the time when I set off a small Hydrogen explosion while doing some advanced material experiments at the University of New Mexico.**

**Tesla's experiments, on the other hand, often were dangerous. He was constantly testing the limits of the possible. His idea of the possible. There was no one around telling him "It" couldn't be done. And since he invented radio**

**communication, in his day, radio interference wasn't an issue.**



**Well today, our radio airways are a buzzen with derivations of Tesla's inventions. Satellites, Cell Phones, GPS systems, air craft navigation and even garage door**

openers, all require that unwanted radio emissions in their bands be kept to a minimum. Today's world has no place for a bold explorer like Tesla who enjoyed making ball lighting and creating spectacular light displays with high-powered arcs.

Peek back to 1894. Marconi is testing the first spark-gap transmitter. In spite of splattering garbage throughout the spectrum, he causes no interference. With only one transmitter and receiver on planet Earth, "mutual interference" is impossible. Only with a second spark transmitter can Marconi encounter interference. Building the second spark-gap transmitter created the need for "Wave-length Allocation"! — Jeremy Lansman

Consider too, that Marconi's transmitter was only a toy compared to the Radio Frequency Power Emissions produced by Tesla's experiments.

So, before I started my resonate coil studies, I considered it prudent to consider the possible ramifications of my actions. Having worked with electronics for more than 37 years, I had a good idea what I was up against. This included of course, an endless stream of people, who, just absolutely knew "It" couldn't be done.

What ever in fact "It" was.



Working with my Cousin, [Steve Schuh](#), was a must! Steve does FCC proofs of performance for several radio stations, so, he has all the fancy equipment needed to monitor the radio spectrum during my experiments. Additionally, most of the experiments were done at an isolated country setting to further reduce the possibility of interfering with radio communication.



If you look closely, you can see the radio tower.

## Getting down to the doing



Now, if energy can neither be created nor destroyed, where is all this energy coming from?

**What is the source of the energy?**

About 1880, shortly after radio was discovered, the great mathematician James Clerk Maxwell

wrote the equation that combined "Electric" and "magnetic energies into his famous wave equation which explains how radio works.

His theory says, that emanating from an antenna — a point source — a wave of energy is moving out into space at the speed of light ( in a vacuum ) and this radiation contains a large electrical component and a small magnetic component. This is what we call Electrical-Magnetic radiation or EM.

This type of radiation is comprised of photons which have vibratory properties. We divide this large electromagnetic spectrum where they can operate into subgroups for convenience of discussion. The spectrum encompasses; Gamma-rays, X-rays, UV, Visible light, Infrared, Microwave, TV, Radio, ELF and more.

This electromagnetic spectrum that we work with daily, represents the solutions to Maxwell's equation using only positive numbers. About one hundred years later, professor Wm. Tiller at Stanford University, decided to explore the properties of the equations using negative numbers — the part of the graph that lies below the "X" axis.

This part of the graph describes another class of light energy that Tiller called "Super Lamination." This solution says, that from infinity — from all directions — into the point flows a "radiation" ( something ), that is mostly magnetic in nature and has a small electrical component. This radiation has a velocity of  $C^2$  ( the speed of light squared ) or 10 billion times faster that that of visible light. This energy can possibly account for what we call "The Atomic Weak Force." ( This may also help explain, why both Tesla and I have calculated propagation velocities faster than the speed of light in our experiments, when normal propagation velocities are expected to average around 80% the speed of light in our coils. )

Tiller did very little with his new idea. He published a few papers and went on to work in other areas.

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Now, if one is going to engineer a device that will produce a certain type of output, one should learn as much as possible about the energy going into the device.

### **For one thing, does it bite?**

For many years, I refused to work on TV sets even though I had more than fifteen years experience in the electronics business.

**I Don't Do TV's, They Bite !!! I would respond to a request to do so.**

My early encounters with televisions had not gone well.

Not well at all ...

I once found myself on the floor, against the wall, across the room, from a television I was working on, with no recollection of how I came to be there in that strange position. I had two tiny white marks on one of my fingers that hurt a whole-lot, and took months to heal.

This event was vaguely reminiscent of another, where I found myself in a similar posture, up against a fence in a pasture, more than several meters away from a hay wagon, on which I was attempting to load two new born, twin Holstein heifers.

Later, during the time I was setting up Dr. John V. Milewski's whisker crystal lab, at the University of New Mexico, there was an accident at the high-energy lab across the driveway.

Large energy storage devices called "capacitors" were used in experiments.

An experiment wasn't working and a grad-student standing several feet from a high voltage capacitor saw the problem and pointed at it.

His action caused an electrical arc, similar to a lighting bolt, and he was killed instantly.

Since then, signs have been placed on all the doors and windows ...

**— Do Not Enter —  
Under Any Circumstances !**

I also had one of those days. — I managed to trigger a small hydrogen explosion at the whisker crystal lab.

Fortunately, the reaction was chemical, so the university is still there.

### **When all else fails, throw everything at it !**

John Hutchison of Vancouver, Canada, tinkered with an array of simultaneously interactive fields; a combination of electrostatic, magnetic, microwave and Tesla Coil fields. Without predictable warning and with some randomness, these fields interacted with objects. Levitations, thrust weights, glowing, apparent softening and bending of hard metal alloys, and strange alloy separations were some of the phenomena reported.

**Without predictable warning and with some randomness !!!**  
**— This is what I call dangerous poking around !!!**  
**— Not everyone survives such careless Mixing !!!**

So, What does this say about the Nature of Matter ???

**Energy Fields have the power and ability to completely alter the nature and properties of matter !!!**

===> Taking a Good Look at Gravity <===

More ...

— Learn the Basics of Resonance —

**Click the "Reset" button before closing window, ...  
or your system might crash !!!**

Some Background Information

A Working "Crossed-Field" Antenna — (3.3 times over unity?)

Fractal Antennas Offer Benefits

Maxwell's Equations in Magnetic Media

Energy-sucking Radio Antennas — N. Tesla's Power Receiver

Sympathetic Vibratory Physics — It's a Musical Universe !

**Nikola Tesla's Automobile**

**An Introduction to the Mysteries of Ground Radio**

**Ion Valve Technology Explained**

**A Very Good Reason to Study Resonate Coils !!!**

**High Temperature Super Conductors Are Now Possible !!!**

**Super Conducting Materials Can Be Used To Store Huge Amounts of Energy Efficiently !!!**

## Research Notes

### Warning !!

This article deals with and involves subject matter and the use of materials and substances that may be hazardous to health and life. Do Not attempt to implement or use the information contained herein, unless you are experienced and skilled with respect to such subject matter, materials, and substances. Neither the publisher nor the author make any representation as for the completeness or accuracy of the information contained herein, and disclaim any liability for damages or injuries, whether caused by or arising from the lack of completeness, inaccuracies of the information, misrepresentations of the directions, misapplication of the information, or otherwise.

RE-sept-91-p34

James Clerk Maxwell first formulated his formulas in 1873. These formulas provided a mathematical foundation for relating observed electric and magnetic effects.

Until recently, the second solution to Maxwell's equations, the negative number ( Imaginary Numbers ) solutions, have been ignored by most of our industrial community. This has proven to be ... Quite an Over-sight !

These Solutions, further display the binary nature of our universe.

Maxwell's intuitive sense for the natural order in the world, lead him to the idea that, a changing electric field gives rise to an associated magnetic field.

Ampere's law says that, a magnetic field with apparent rotation is present around a small region when either, an electric current or a changing electric field is present in that region. This is one of Maxwell's equations.

Faraday showed that the work per unit charge, called the electromotive force in a coil of wire was related to the time-rate of change of the magnetic flux enclosed by the coil.

Lenz's law says that a voltage and hence a current will be induced in a direction, in such a way, as to produce a magnetic field that tends to oppose the change in flux. The opposition is not complete, since the induced current dies away rapidly, due to the resistance, once the driving flux is held stable.

One of Maxwell's equations says that a changing magnetic field is associated with an electric field, whose apparent rotation about a point is proportional to the



time–rate of change of the magnetic field. Since the curl is not zero, an electric field associated with a changing magnetic field is, therefore, not conservative.

Gauss' law, plus Faraday's law gives a complete picture of an electric field. It has a divergence due to electric charge at a point, and it has curl due to changing magnetic field at a point. If there is no charge, there is no divergence; if there is no change in the magnetic field, there is no curl.

From the perspective of the coil, the physical effects on "q" are the same, implying that electric force and magnetic force are really manifestations of the same underlying phenomenon. (this is an essential fact of "electromagnetic theory, that led to Einstein's theory of relativity.)

Faraday's law relates an electric field, to a changing magnetic field. Ampere's law relates a magnetic field, to a changing electric field. A changing electric field is accompanied by a changing magnetic field, and vice versa. The four Maxwell equations, give a complete picture of the electric and magnetic fields.

The "field" concept, tries to associate something that happens at one point, with what happens at another point, even though there may be no material objects connecting those points.

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( Get These Books ! )

[A treatise On Electricity and Magnetism – James Clerk Maxwell](#)

Vol. 1 & Vol. 2, Dover Publication Inc. Republication of the third and final 1891 edition.

Electromagnetic effects are described by use of mathematical quantities called quaternions, and the currently discredited elastic ether model, rather than, the modern idea of vector fields and empty space.

However, the 1887, Michelson and Morley experiment, that formed the basis of the "vector field" concept, was designed only to detect static elastic ether. No attempt was made to detect a highly dynamic ether. At the time, the technical equipment needed wasn't available.

The following observations, Can Not be explained via vector fields.

Maxwell's books are required reading, and possibly can explain the following Electrical Observations.

## Tachieon Research Project #1

*March 21, 1992*

Steve, Kim and Tommy set up a lab experiment at Intellego's engineering department.



We started with a solenoid coil from a water valve. The coil was rated at 220 VAC. and had a DC resistance of 68 ohms and an inductance of 262 mh. 12 VDC was used to generate a changing magnetic field in this air core coil.

A scope with a 10 meg – 10 pf. input impedance was placed across the coil to monitor the coil's voltages.

The 12 VDC was briefly switched across the coil about 3 times a second and the results noted on the scope. A distinct ringing was noted when the DC circuit was broken. The ringing was measured to determine its frequency and it was found to be 24,080 hz. The ringing decayed in an exponential manner. It was noted that when a screw driver or a socked ratchet was placed in the coil core the ringing would be suppressed. However when a magnet was placed in the core no change in performance was noted.

A Fluke multimeter with a peak hold was used to measure the peak AC voltage and it was found to be 1352 volts.

The coil was load with first a 470,000 ohm resistor and then a 100,000 ohm resistor the amplitude of the output signal went down a little indicating that power was being delivered to the resistors.

The sensitivity of the scope was turned up to inspect the "hum interference" being picked up by the coil and it was noted, that there was a ringing on the induced 60 hz. signal on both the positive and negative portion of the wave form. The ringing started at the point on the waveform, just as the sign wave started to decrease from its maximum rise–time. The ringing was again counted and again found to be 24,080 hz. An audio oscillator was set to 24,080 hz and we attempted to hook it to the coil. Upon approaching the coil with the 600 ohm feed lead, the subject amplitude increased dramatically and was sustained.

Much effort was given to the notion that the current pickup of the coil was due strictly to induction. The coil was placed inside a special magnetic alloy shield, with a resulting increase in the output current. This was just the opposite, of what we might have expected to happen. Many other efforts were made to determine if the coil was deriving the ringing energy from some source of electrical interference. After a couple of hours of effort, no source or other explication was discovered.

Another coil, with a length of 1000 ft. and a larger diameter, was tried and the same effect was noted, however, the ringing frequency was different. This coil rang at 108,450 hz.

Efforts were made to add a capacitive component, to the circuit, of the correct value (180 pf.) to enhance or tune out the ringing, with no effect either way observed.

Other efforts were made to alter the ringing effect, but few useful results were noted.

*March 22, 1992*

Another coil was found today. It came from an ammonia solenoid valve made Alco Valve Co. in St. Louis, Mo. It was very similar to the first coil we used, maybe even wound by the same company.

The coil was rated at 230 VAC 60 hz 17 watts, and had a DC resistance of 71 ohms.

A door bell buzzer was removed from the "coop", to be used as a vibrating switch to pulse the coil.

Steve and I met at Inteligo and hooked up the experiment. The buzzer was inserted into the circuit in such a way that the contacts of the buzzer pulsed the 12 VDC supply into the coil.

The scope was connected and measurements made. No ringing was noted and the voltage measured 50 volts pp. The waveform had the classic inductor discharge pattern.

The frequency of the buzzer was varied for each configuration of wiring and orientation. Always the same basic results.

Pulsing the coil by hand again, produced the 24,080 hz ringing waveform.

The buzzer was rewired to reposition the buzzer coil in the circuit, and measurements were made again. The same results were obtained.

The second coil was wired in series.  
No change.

The second coil was placed on top of the other coil.  
No change.

The second coil was rotated 180 degrees, and placed on top again.  
No change.

The second coil was placed next to, and away from, the first coil, etc.  
No change.

The second coil was wired in parallel and the sequence repeated.  
No change.

The sequence was repeated, pulsing the coil by hand. Same results, while displaying the 24,080 hz ringing.

A 50,000 volt diode was placed in the circuit, between the coil and bulb, and the measurements were made at the bulb. The full waveform was seen on the screen.

A high voltage capacitor was placed after the diode, and hooked to the other side of the coil (ground). Pure DC was seen on the scope, in excess of the scope's voltage range.

The Fluke was used to measure the "real time" voltage. With hand pulsing, voltages in the range of 320 DC were obtained.

The Fluke was set to measure peak DC voltage, and with hand pulsing a reading of 2000 VDC was obtained with the 10 meg. scope and bulb also in parallel.

12 VDC was wired to the heater element, at one end of the bulb, to facilitate the ionization of the mercury, but the bulb still did not display luminance.

*March 23, 1992*

4 hour meeting at Steve's house to go over the physics involved and to analyze the information we have collected so far.

Came to some conclusions and developed our plans for the next step.  
This should do it... The bulb will light.

*March 24, 1992*

(Got to find my notes.)

[Advanced Materials - The Resonate Coil Project](#)

[Site Link List - Element List - Hydroculture Salts](#)

[The Tortoise Shell Life Science Puzzle Box Front Page](#)

## David Hudson's "Grand Science Adventure"

( The Making of a [True Wizard](#) )

I was sent a 5+ hour videotape by Dr. Milewski, a retired [Los Alamos Scientist](#) who specializes in Advanced Materials. The note on the tape said ...

**"Tommy — STUDY the Part on Superconductivity. It is VERY GOOD !!!"**

The tape has so much Wonderful Information, that I couldn't resist posting these [audio clips](#).

**Here, We are Exploring the Real Science that is Proving ...**

**All is One, and One is All, and We are All Together.**

— Tommy Cichanowski —

[ David Hudson — a cotton farmer — is a very good story-teller. He is speaking to an audience of non-professionals about an adventure that started on his farm during soil analysis. He is talking about his personal experiences in the everyday real world of science, as he explores his obsessive mystery using the best analytical equipment on the planet. These audio clips present basic concepts, which must be understood by everyone who is involved with the sciences, or engineering. For others, Hudson presents some very fascinating history about the Middle East and the "[Dark Ages](#)".

I have added material to help produce a very non-mathematical, "high resolution" look at the electromagnetic interactions of our bio-system. Interactions between atoms is what chemistry and biology are all about, and is a main focus at this web site. From an engineering stand point, the first and primary focus of our studies is to learn the role that electrons play in helping to manifest the dynamic world of which we are a part.

Electrons are binary creatures. They spin on their axis, buzz all over the place — usually in well defined orbits when single — and are used as "feed stock" for natural transmutational processes — radio is one example. A radio tower is analogous to a flashing light bulb — flashing to ( with ) the beat of the music. Radio waves are a form of light ( electro-magnetic energy ) that we create from electrical power.

It is easy to view the electron's whole life style as one gigantic cosmic dance. The topic of superconductivity is very useful, if one cares to understand the nature of the dance floor, and the cosmic music, which makes these silver balls dance. ]

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**The Atomic ORME and S-ORME States of Matter**  
— SUPERCONDUCTIVITY TECHNICAL OVERVIEW —  
— Skip Overview —

( This information is essential for ALL physics and chemistry students — High School and up. )

The nuclei of some, if not all, atoms can exist in two different major states — the "High Spin State" and the "Low Spin State." Some atoms, at least, when in the High Spin State take on "superconductor" properties at temperatures near ambient. When in the High Spin State, atoms can exist as Mono-atomic entities ( monatomic ) — they are not chemically bonded to other atoms. Atoms of different masses have the same "Moment of Inertia" when in the "High Spin State." Also, when in the "High Spin State" atoms change their relationship with gravity and now manifest only 55.6% of the weight they have in the "Low Spin State."

Additionally when in the High Spin State, the nuclei of the atom distorts, and the shape progresses from spherical ( normal range – 1.3 to 1 ), to elongated, to dumbbell shaped ( in excess of 3 to 1 ) at which point it fissions. When the aspect ratio of the atom's nucleus reaches 2 to 1, the nucleus can switch to the High Spin State, and the atom reconfigures its shape and acquires the ability to interact in ( just ) two dimensions with other High Spin Atoms spaced at nodal distances — 6.34 angstroms.

High Spin Atoms do not have any valence electrons, and therefore are perfect insulators with respect to current flow. Their ability to carry power is the result their being able to flow independent electron pairs known as Cooper pairs — electrons with complementary spins. When the electrons pair, their magnetic vortices connect directly producing an entity with a large electric component and a small magnetic component — photons. The magnetic energy pulls the two electrons together, while the electric component pushes them apart, keeping them separated and maintaining their complementary spin. An additional axis of rotation then develops, and this is what gives the Cooper pair some properties of a photon. When in a superconductor, the Cooper pairs are held in the nodal orbits by the reconfigured Coulomb Force of the High Spin nucleus. The Photons flowing along the nodal wave complex have a velocity that is about that of sound ( according to Hudson – I think perhaps slower. I also suspect, that the photon is without the vibration that gives it color. )

[ In air sound travels at about 1,100 feet per second. The actual speed is dependent on air pressure, temperature and humidity. Sound travels faster in water and faster still in metals. This topic of propagation velocity is very important and has many applications. ]

Normal electron current travels in the outer regions of an atom's electron shell, where the unpaired valence electrons travel to great distances from the nucleus. The "electron current," hops along these orbital regions, and sometimes an electron exchange occurs with an atom. The basic resistance of a material is dependent then, on how many electrons have orbits outside the positive screening field of the atoms nucleus — unpaired, valence electrons.

— [Related Material](#) —

Before an atom can join the super conducting group, it must go into the High Spin State. And, before this can happen the atom must have all its electrons paired and pulled into the nucleus' screening potential. This allows for tighter [magnetic bonding](#) of the electron pairs.

Transition elements possess a unique property in that the electrons in the Partially filled outer orbitals can interchange under the right conditions with electrons in the partially filled inner orbitals ( d ). This is the underlying basis of catalytic reactions. ( A catalytic reaction is a chemical reaction that occurs much more rapidly than normal without the catalyst itself participating in the reaction. ) When they get close enough, they can release their magnetic relationship with the atom's nucleus, and form a closed magnetic loop with each other. This allows them to get closer still, opening the door for the transformation.

So basically, our "superconductor want-to-be" steals or releases an electron(s), and this operation turns the atom into an electrical ion — normally, a very good electron current conductor. However, at this point, when the electric force comes into play, the atom goes into the High Spin State and becomes a perfect insulator with respect to electron flow. The atom now, has paired and pulled all of its electrons inside the positive screening field of the nucleus, and there are no longer, any valence electrons available to flow current.

In order for electrical energy ( power ) to move through the super conducting system, the electrons of the current must join to form "Cooper Pairs." The pair then behave as an independent unit and take on an additional "Spin Characteristic" and become transformed into photon energy quanta. [ [Resonate circuits](#) are used to perform this energy conversion / transformation in all broadcast equipment. ]

David Hudson discovered that the mono-atomic state can exist naturally and remain in a stable state in the transitional group elements. (ORME [Orbitly Rearranged Mono-atomic Elements](#) )

He also discovered that in this state, the atoms can join to become a many atom resonance coupled system of quantum oscillators, resonating in two dimensions, indeed perfect superconductors, at room temperature. ( S-ORME [ [A many atom system of](#) ] [Super Conducting Orbitly Rearranged Mono-atomic Elements](#) )

A superconductor is ...

a many atom system of atoms operating in two dimensions along a standing wave.

[ By definition, a superconductor is a material that is so in balance, "that it will not allow any external magnetic fields inside the superconductor's domain." ]

A single atom in itself is not a superconductor.

You need to "conduct" from somewhere to somewhere.

[ In part 3, Hudson does a wonderful job of explaining super conductivity in simple terms. ]

**A superconductor can respond to a magnetic field of  $2 \times 10^{-15}$  Ergs.**

**There are  $10^{18}$  Ergs in a Gauss. 1 Gauss = 1 Maxwell per  $\text{cm}^2$**

[ Gauss — a unit of magnetic flux density. It has such a value that if a conductor 1 cm long moves through a magnetic field at a velocity of 1 cm per second, in an induction mutually perpendicular, the induced emf is one abvolt. One abvolt is  $10^{-8}$  volt. ]

The Magnetic Field of the Earth is 0.56 Gauss.

### Special Properties of the "Transition Group Elements"

They are in an uncertain state as regards their positive or negative electro-charge behavior.

There is a high population of these mono-atomic atoms occurring naturally all around us. Hudson measured 2,219 ounces per ton of mono-atomic ( monatomic ) atoms in his farm soil — his "ore" which he discusses in the sound clips.

Hudson also learned, through spending lots of his own money, that most of our "space age" test instruments are not calibrated to report on these mono-atomic atoms. We know that these atoms are a part of our biology, and it is now known that they play a special role in our Brains. ( The "old ideas die hard" at universities. ) Our health depends on us fully understanding the biological functioning of these mono-atomic atoms, and insuring that they are present in our diets.

## **Listen to David Hudson tell the story of his "Science Adventure."**

Watch David Hudson in your mind, as he becomes a "True Wizard" during his Grand Adventure of Discovery.

( "Presented for the layman by a layman" — David Hudson — Cotton Farmer )

**"David Hudson at the Ranch" — November 16, 1995**

### Introduction

[Part One - mp3](#) [Part Two - mp3](#) [Part Three - mp3](#) [Part Four - mp3](#)

### Discussions of Science Journal References and Test Results

[Part Five - mp3](#) [Part Six - mp3](#) [Part Seven - mp3](#) [Part Eight - mp3](#) [Part Nine - mp3](#)

[Meisner Field Excerpt](#)



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If you enjoy these sound clips, and think you might want to listen to them again,  
Please, save them to your hard drive so we don't overload my web server.  
In this way, you will have more bandwidth to explore the links and images that are posted here.

**David Hudson spent 8.7 million dollars learning this Scientific Information.**

**He used the BEST Test Equipment we have here on this planet !!!**

**He documented that ...**

1. There exists in nature large quantities of atoms that exist singularly — They are not bonded to anything — "Mono-atomic Atoms." ( ORME – Orbitally Rearranged Mono-atomic Elements )
2. The transition group of elements have a large population of these mono-atomic atoms ( monatomic ) existing naturally in nature.  
[ Hudson found large quantities on mono-atomic elements in the soil of his farm.
  - 6–8 oz. per ton of Palladium ( 187.5–250 ppm )
  - 12–13 oz. per ton of Platinum ( 375–406.25 ppm )
  - 10–12 oz. per ton of Gold ( 312.5–375 ppm )
  - 150 oz. per ton of Osmium ( 4,687.5 ppm )
  - 250 oz. per ton of Ruthenium ( 7,812.5 ppm )
  - 600 oz. per ton of Iridium ( 18,750 parts per million )
  - 1,200 oz. per ton of Rhodium ( 37,500 ppm ) [ 3.75% !!! ]

Since plants contain some of all the elements that are present in the soil in which they are grown, we need to learn the role these elements have in our biology.

These tests only measured Rhodium and Iridium.

- 4 oz. Carrot Juice — Rhodium: 127 milligrams ( aprox. 1,133 ppm ) — Iridium: "small amounts"
- 4 oz. Concord Grape Juice — Rhodium: 127 mg — Iridium: 48 mg ( 429 ppm )
- 4 oz. Essiac tea — Rhodium: 12 mg — Iridium: 120 mg ( 1,071 ppm )
- 1 oz. Aloe vera Gel — Rhodium: 60 mg — Iridium: 10 mg

Compare these numbers to a generic hydroculture solution.

Note: One part per million of the essential element Boron, in a hydroculture solution, is Toxic to plants. ]

ORMUS Effects On Plants

3. Elements do not display metallic properties until they group into clusters of 2 – 33, or even more atoms.
4. Most of our scientific analytical instruments are only calibrated to detect the "metallic groupings" of elements and fail to report "high spin mono-atomic atoms" and single atoms (or small groups) as being present in the sample.
5. Some of these elements can become "High Temperature Superconductors" when their nuclei are in "High Spin State." ( S-ORME [ A many atom system of ] Super Conducting Orbitally Rearranged Mono-atomic Elements )
6. Mono-atomic Rhodium and Iridium have been found in pig and cow brains at a rate of about 5% of the dry weight matter. This suggests that these elements have a very important function in higher mammals ( at least ). [ [Mirror Neurons](#) ]
7. Many food plants, herbs, etc. can, and do concentrate these elements, when they are present in the soil. This is one indication of an essential element.
8. [Optimal Health](#) most likely cannot be achieved without these elements in our diets — there are more than 34 different atoms involved.
9. Super Conducting mono-atomic elements show great promise for advanced technology devices such as fuel cells and batteries and also, for the creation of new [advanced materials](#).

**The Second Part of Hudson's "David Hudson at the Ranch" Lecture**  
**David Hudson's Historical Background Studies of the "White Powder of Gold"**  
 [ "Ark of the Covenant" "Philosopher's Stone" "Holy Grail" "Elixir of Life" ]

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**Heat is one component of the music — one instrument.**

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Temperature in ...	Fahrenheit:	<b>&lt;====&gt;</b>	Centigrade:
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**Zero degrees Centigrade equals 273.16 degrees Kelvin.**

[ Kelvin temperature is the measure of vibrational energy Between Atoms with no vibration being equal to zero. ]  
 [ When we talk about the heat of a room, we are talking about the external temperature surrounding the atom's domain. ]  
 [ The atom also has an internal temperature, and this too is expressed with Kelvin Units. ]

**The "Dancers" of Our Physical World, and Some of Their "Moves."**

[Important words, and relationships, which Hudson discusses — \[ sub-atomic Parts, and Forces \].](#)

**Nuclear atom.** — The atom of each element consists of a small dense nucleus which includes

most of the mass of the atom. The nucleus is made up of roughly equal numbers of neutrons and protons. The positive charges of the protons enables the nucleus to surround itself with a set of negatively charged electrons which move around the nucleus in complicated orbits ( Low Spin State ) with well defined energies. The outermost electrons which are least tightly bound to the nucleus play the dominant part in determining the physical and chemical properties of the atom. There are as many electrons in orbits as there are protons in the nucleus.

"The nuclei of atoms are a few Fermi in diameter" – Fermi is a unit of length equal to ...  $10^{-15}$  meter. [ The Crystalline Ionic Radii of Rhodium with a +3 charge is  $6.8 \times 10^4$  Fermi. ]

The diameter of the nucleus is between  $10^{-15}$  and  $10^{-14}$  meters, and the relatively vast distance in which the orbital electrons circle about it is illustrated by the fact that this nuclear diameter is only  $10^{-4}$  to  $10^{-5}$  of the entire atomic diameter.

The electrons are arranged in successive shells ( q.v. ) around the nucleus, circling in orbits like planets and comets do around the sun; the maximum number of electrons in each shell is determined by natural laws, and the extranuclear electronic structure of the atom is characteristic of the element ( in the Low Spin State ). Each orbital path can be occupied by two electrons if they have complementary spins.

The electrons in the inner shells are tightly bound to the nucleus; requiring high energy particles to alter. The electrons in the outer shells are responsible for the chemical properties of the element. — See Bohr's atomic theory, Heisenburg's theory, shell and sub-shell.

**Nucleon.** — Any particle found in the structure of an atom's nucleus. The most plentiful ones are neutrons and protons.

**Nuclide.** — A species of atom distinguished by the constitution of its nucleus. The nuclear constitution is specified by the number of protons, Z; number of neutrons, N; mass number A ( = N + Z ) and atomic mass.

**Atomic weight.** — Atomic weight is the relative weight of the atom on the basis of oxygen as 16. For a pure isotope, the atomic weight rounded off to the nearest integer gives the total number of nucleons ( neutrons and protons ) making up the atomic nucleus. If these weights are expressed in grams they are called gram atomic weights.

**Neutron.** — A electrically neutral elementary particle of mass number 1. It is believed to be a constituent particle of all nuclei of mass number greater than 1. It is unstable with respect to beta-decay, with a half life of about 12 minutes. It produces no detectable primary ionization in its passage through matter, but interacts with matter predominantly by collisions and, to a lesser extent, magnetically. Some properties of the neutron are: rest mass, 1.00894 atomic mass units; electric charge, 0; spin quantum number, 1/2; magnetic moment,  $-1.9125$  nuclear

Bohr magnetrons.

**Proton.** — An elementary particle having a positive charge equivalent to the negative charge of the electron but possessing a mass approximately 1,837 times as great. The proton is in effect the positive nucleus of the hydrogen atom.

**Angstrom** =  $10^{-10}$  meter — a unit of length used in measuring the cyclical length of light waves.

**Electron.** — The electron is a small particle having a unit negative charge, a small mass, and a small diameter. Its charge is  $(4.80294 \pm .00008) \cdot 10^{-10}$  absolute electrostatic units, its mass  $1 / 1837$  that of the hydrogen nucleus, and its diameter about  $10^{-14}$  m ( 10 Fermi ). Every atom consists of one nucleus and one or more electrons. Cathode rays and Beta rays are electrons.

**Ion.** — An ion is an atom or group of atoms that is not electrically neutral but instead carries a positive or negative electric charge. Positive ions are formed when neutral atoms or molecules lose valence electrons; negative ions are those which have gained electrons.

**Ionization potential.** — The work ( expressed in electron volts ) required to remove a given electron from its atomic orbit and place it at rest at an infinite distance. It is customary to list values in electron volts (ev.) 1 ev. = 23,053 calories per mole. ( Mole = the Molecular Weight in grams, multiplied by  $6.02 \cdot 10^{23}$  Atoms )

**Electron-volt ( ev ).** — Energy acquired by any charged particle carrying unit electronic charge when it falls through a potential difference of one volt. 1 Electron-volt =  $(1.60207 \pm .00007) \cdot 10^{-12}$  erg.

Multiples of this unit are also in common use: the kilo- (  $10^3$  ), million- (  $10^6$  ), and billion (  $10^9$  ) electron volt.

**Positron.** — A particle of the same mass  $M_e$  as an ordinary electron. It has a positive electrical charge of exactly the same amount as that of an ordinary electron ( which is sometimes called a negatron ). Positrons are created either by the radioactive decay of certain unstable nuclei or, together with a negatron, in a collision between an energetic ( more than one  $M_{ev}$  ) photon and an electrically charged particle ( or another photon ). A positron does not decay spontaneously but on passing through matter it sooner or later collides with an ordinary electron and in this collision the positron-negatron pair is annihilated. The rest energy of the two particles, which is given by Einstein's relation  $E = m \cdot c^2$  and amounts to 1.0216 mev altogether, is converted into electromagnetic radiation in the form of one or more photons.

**Beta-particle, ( Beta ray [  $\beta$  ] ).** — One of the particles which can be emitted by a radioactive atomic nucleus. It has a mass about  $1 / 1837$  that of the proton. The negatively charged beta

particle is identical with the ordinary electron, while the positively charged type ( positron ) differs from the electron in having equal but opposite electrical properties. The emission of an electron entails the change of a neutron into a proton inside the nucleus. The emission of a positron is similarly associated with the change of a proton into a neutron. Beta particles have no independent existence inside the nucleus, but are created at the instant of emission. — See Neutrino

**Alpha-particle, or alpha-ray.** — One of the particles emitted in radioactive decay. It is identical with the nucleus of the helium atom and consists, therefore, of two protons plus two neutrons bound together. A moving alpha particle is strongly ionizing and so loses energy rapidly in traversing through matter. Natural alpha particles will traverse only a few centimeters of air before coming to rest.

**Neutrino.** — An electrically neutral particle of very small ( probably zero ) rest mass and of spin quantum number  $1/2$ . When the spin is oriented parallel to the linear momentum the particle is the antineutrino. When the spin is oriented anti-parallel to the linear momentum the particle is the neutrino. Postulated by Pauli in explaining the beta decay process.

Whenever a beta ( positron ) particle is created in a radioactive decay so is an antineutrino ( neutrino ). The two particles and the parent nucleus share between them the available energy and momentum. Neutrinos and antineutrinos can penetrate amounts of matter measured in light years without appreciable attenuation. Detected by Reines and Cowan using antineutrinos from fission reactors and large scintillation detectors.

**Gamma rays ( nuclear x-rays ).** — May be emitted from radioactive substances. They are quanta of electromagnetic wave energy similar to but of much higher energy than normal x-rays. The energy of a quantum is equal to  $h \cdot \nu$  ergs, where (h) is Planck's constant (  $6.6254 \cdot 10^{-27}$  erg sec ) and ( $\nu$ ) is the frequency of the radiation — cycles per second. Gamma rays are highly penetrating, an appreciable fraction being able to traverse several centimeters of lead.

**Photon.** — A photon ( or Gamma-ray ) is a quantum of electromagnetic radiation which has zero rest mass and an energy of  $h$  ( Planck's constant ) times the frequency of the radiation. Photons are generated in collisions between nuclei or electrons and in any other process in which an electrically charged particle changes its momentum. Conversely photons can be absorbed ( i.e., annihilated ) by any charged particle.

**Momentum.** — Quantity of motion measured by the product of mass and velocity.

Cgs unit, — one gram-centimeter per second. Dimensions, — ( mass  $\cdot$  length  $\cdot$  {time}<sup>-1</sup> )

A mass (m) moving with a velocity (v) has a momentum, — [  $M = m \cdot v$  ].

If a mass ( $m$ ) has its velocity changed from  $v_1$  to  $v_2$  by the action of a force ( $F$ ) for a time ( $t$ ), —  
(  $m \cdot v_2 - m \cdot v_1 = F \cdot t$  ).

**Moment of Inertia.** — A measure of the effectiveness of mass in rotation — [ the amount of energy involved in this dance move. ] In the rotation of a rigid body not only the body's mass, but the distribution of the mass about the axis of rotation determines the change in the angular velocity resulting from the action of a given torque for a given time. Moment of inertia in rotation is analogous to mass ( inertia ) in simple translation. The cgs unit is  $\text{g}\cdot\text{cm}^2$ .

Dimensions, — (  $m \cdot l^2$  ).

If  $m_1, m_2, m_3$ , etc. represent the masses of infinitely small particles of a body;  $r_1, r_2, r_3$ , etc. their respective distances from an axis of rotation, the moment of inertia about this axis will be

$$I = ( m_1 \cdot r_1^2 + m_2 \cdot r_2^2 + m_3 \cdot r_3^2 + \dots )$$

or  $I =$  The summation of all (  $m \cdot r^2$  )s.

**Inertia.** — The resistance offered by a body to a change of its state of rest or motion, a fundamental property of matter. Dimension, — [  $m$  ]

**Moment of force or torque.** — A measure of the effectiveness of a force to produce rotation about an axis, measured by the product of the force and the perpendicular distance from the line of action of the force to the axis.

Cgs unit — the dyne-centimeter. Dimensions, — [  $m \cdot l^2 \cdot t^{-2}$  ]. If a force ( $F$ ) acts to produce rotation about a center at a distance ( $d$ ) from the line in which the force acts, the force has a torque,  $L = Fd$ .

**Viscosity.** — All fluids possess a definite resistance to change of form and many solids show a gradual yielding to forces tending to change their form. This property, a sort of internal friction, is called viscosity; it is expressed in dyne-seconds per  $\text{cm}^2$  or poises.

Dimensions, — [  $m \cdot l^{-1} \cdot t^{-1}$  ]. If the tangential force per unit area, exerted by a layer of fluid upon one adjacent is one dyne for a space rate of variation of the tangential velocity of unity, the viscosity is one poise.

Kinematic viscosity is the ratio of viscosity to density. The c.g.s. unit of kinematic viscosity is the stoke.

**Coulomb.** — The meter-kilogram-second unit of electric charge equal in magnitude to the charge of  $6.25 \times 10^{18}$  Electrons = the charge transported through a conductor by a current of 1 Ampere flowing for 1 second. It is the quantity of electricity which must pass through a circuit to deposit

0.0011180 grams of silver from a solution of silver nitrate.

One picoamp =  $10^{-12}$  ampere.

**Abvolt.** — The cgs electromagnetic unit of potential difference and electromotive force. It is the potential difference that must exist between two points in order that one erg of work be done when one abcoulomb of charge is moved from one point to the other. One abvolt is  $10^{-8}$  volt.

**Volt.** — The unit of electromotive force. It is the difference in potential required to make a current of one ampere flow through a resistance of one ohm.

**Ohm.** — The practical mks unit of electrical resistance, equal to the resistance of a circuit in which an electromotive force of one volt maintains a current of one ampere.

**Conductance.** — the reciprocal of resistance is measured by the ratio of the current flowing through a conductor to the difference of potential between its ends. The practical unit of conductance, the mho, the conductance of a body through which one ampere of current flows when the potential difference is one volt. The conductance of a body in mho is the reciprocal of the value of its resistance in ohms.

**Newton.** — The force necessary to give acceleration of one meter per second per second to one kilogram of mass.

**Maxwell.** — The cgs emu magnetic flux is the flux through a  $\text{cm}^2$  normal to a field at 1 cm from a unit magnetic pole.

**Nodal points.** — Two points on the axis of a lens such that a ray entering the lens in the direction of one, leaves as if from the other and parallel to the original direction.

**Centripetal force.** — The force required to keep a moving "mass" in a circular path. Centrifugal force is the name given to the reaction against centripetal force.

**Quantum.** — Unit quantity of energy postulated in the quantum theory. The photon is a quantum of the electromagnetic field, and in nuclear field theories, the meson is considered to be the quantum of the nuclear field.

**Radiation.** — The emission and propagation of energy through space or through a material medium in the form of waves.

The term may be extended to include streams of sub-atomic particles such as alpha-rays, or beta-rays, and cosmic rays as well as electromagnetic radiation. Often used to designate the energy alone without reference to its character. In the case of light this energy is transmitted in bundles ( photons ).

**Power.** — The time rate at which work is done. Units of power, — the watt, one joule ( ten million ergs ) per second: the horse-power, 33,000 foot-pounds per minute, is equal to 746 watts.

If an amount of work ( $W$ ) is done in time ( $t$ ) the power or rate of doing work is  $P = (W \div t)$

**Potential ( electric ).** — at any point is measured by the work necessary to bring unit positive charge from an infinite distance. Difference of potential between two points is measured by the work necessary to carry unit positive charge from one to the other. If the work involved is one erg we have the electrostatic unit of potential. ...

**Work.** — When a force acts against resistance to produce motion in a "body" ( cohesive energy domain ) the force is said to do work. Work is measured by the product of the force acting and the distance moved through against the resistance ( which in many cases is inertia ).

**Cgs units of work, — the erg,** a force of one dyne acting through a distance of one centimeter.

Dimensions, —  $[ m \cdot l^2 \cdot t^{-2} ]$ . One erg equals ...

- 1 dyne-centimeter;
- $1 \cdot 10^{-7}$  joules;
- $2.3889 \cdot 10^{-8}$  gram-calorie ( mean );
- $9.4805 \cdot 10^{-11}$  BTUs ( mean ) British thermal unit;
- $1.0197 \cdot 10^{-11}$  gram-meter;
- $7.3756 \cdot 10^{-8}$  foot-pound;
- $2.3730 \cdot 10^{-6}$  foot-poundal;

The **Foot Pound** is the work required to raise a "mass" of one pound a vertical distance of one foot where  $g = 32.174 \text{ ft./sec}^2$ . The foot-poundal is the work done by a force of one poundal acting through a distance of one foot.

The International **joule** ( 1.000165 absolute joules ), a unit of electrical energy, is the work expended per second by a current of one International ampere ( 0.999835 absolute ampere ) flowing through one International ohm ( 1.000495 absolute ohms ).

The **Kilowatt–Hour** is the total amount of energy developed in one hour by a power of one kilowatt. One Kilowatt–hour equals ...

- 1,000 watt-hours;
- 1.3410 horse power-hours;
- 668,449 Lumen-hours;
- 3,413.0 BTUs ( mean );
- $3.6710 \cdot 10^5$  kilogram-meters;
- $8.6001 \cdot 10^5$  gram-calories ( mean );
- $2.6552 \cdot 10^6$  foot-pounds;
- $3.6000 \cdot 10^6$  joules ( absolute );  $10^{13}$  ergs.



**Lumen.** — The lumen is the unit of luminous flux — [ photons vibrating in the visible light region of the electro-magnetic spectrum ]. It is equal to the luminous flux through a unit-solid angle ( steradian ) from a uniform point source of one candle, or to the flux on a unit surface all points of which are at unit distance from a uniform point source of one candle. A uniform point source of one candle intensity thus emits  $4 \cdot ( 3.14 \dots )$  lumens.

One lumen = 0.001496 watt.

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**Metallic Elements** in general are distinguished from the non-metallic elements by their lustre, malleability, conductivity and usual ability to form positive ions. Over 80% of the elements in the periodic table are metallic in nature.

In order for a material to have metallic properties, electrons must be free to run throughout the Lattice Structure. And in order to have a lattice structure, there must be multiple atoms to form a crystalline like structure. So, a single or a few atoms do not have a lattice structure and therefore do not manifest metallic properties.

**Non-metallic Elements** are not malleable, have low conductivity and never form positive ions.

**Oxidation.** — is any process which increases the proportion of oxygen, or acid-forming element, or radical, ( or removes electrons ) in a compound.

**Reduction.** — is any process which increases the proportion of hydrogen, or base-forming elements, or radicals, in a compound. Reduction is also the gaining of electrons by an atom, or an ion, or a molecule, or a metallic cluster, thereby reducing the "positive valence potential" of that which gained the electron.

**pH.** — The pH notation is an index of Hydrogen's chemical activity, ( or the positive [ acid ], or negative [ base ] ionic activity ) in a solution.

The basic principles of the workings of pH in water solutions, can be applied when working with metals.

**Paramagnetic materials.** — ( are attracted to a magnetic field, but not magnetized ). Are those within which an applied magnetic field is slightly increased by the alignment of electron orbits. The slight diamagnetic effect in materials having magnetic dipole moments is overshadowed by this paramagnetic alignment. As the temperature increases this paramagnetism disappears leaving only diamagnetism. The permeability of paramagnetic materials is slightly greater than that of "empty space."

**Diamagnetic materials.** — ( are repelled from a magnetic field but not magnetized ). Are those within which an externally applied magnetic field is slightly reduced because of an alteration of the atomic electron orbits produced by the field. Diamagnetism is an atomic-scale consequence of the Lenz law of induction. The permeability of diamagnetic materials is slightly less than that of "empty space."

**Degree of freedom.** — The number of the variables determining the state of a system ( usually – pressure, temperature, and concentration of the components ) to which arbitrary values can be assigned.

**Colloid.** — An entity phase dispersed to such a degree that the ( electromagnetic, inertial, + ) surface forces become an important factor in determining its properties.

In general particles of colloidal dimensions are approximately 10 angstroms (  $10^{-9}$  m ) to 1 micron (  $10^{-6}$  m ) in size. Colloidal particles are often best distinguished from ordinary molecules due to the fact that colloidal particles cannot diffuse through membranes which do allow ordinary molecules and ions to pass freely.

**Zeta Potential.** — Zeta Potential is a measure of the electrical force that exists between atoms, molecules, particles, suspensoids, cells, etc., in a fluid. Zeta Potential represents a basic law of Nature, and it plays a vital role in all forms of plant and animal life. It is the force that maintains the discreteness of the billions of circulating cells, which nourish the organism. The stability of simple inorganic man-made systems is also governed by these same laws.

**Nuclear Magnetism.** — Many nuclei have magnetic dipoles, and the possibility arises that a specimen of matter may exhibit gross external magnetic effects associated with its nuclei. However, nuclear magnetic moments are several orders of magnitude smaller than those associated with the electronic motions in an atom or ion. The magnetic moment of an electron associated with its spin, for example, exceeds that of the proton ( the nucleus of hydrogen ) by a factor of 660.

Gross external effects for nuclear magnetism are smaller than the corresponding ( electronic ) paramagnetic effects by the square of ratios of this order of magnitude, because (a), all else being equal, the external magnetism is reduced by such a ratio, but (b), the very fact that the magnetic dipole moment of the nucleus is smaller means that the thermal vibrations are proportionally ( to a good approximation ) more effective in reducing the degree of alignment of the elementary dipoles in an external magnetic field; thus all else is not equal, and the ratio enters twice.

Techniques such as the Rowland ring are far too insensitive to detect nuclear magnetism. We describe here a nuclear resonance technique by means of which nuclear magnetism can readily reveal itself. This method is also vastly useful for studying paramagnetism, ferromagnetism,

antiferromagnetism, and ferrimagnetism, in all of which cases the magnetic effects are associated not with the nuclei but with the atomic electrons. The nuclear-resonance technique was developed in 1946 by E. M. Purcell and his co-workers at Harvard. Simultaneously and independently, F. Bloch and his co-workers at Stanford discovered a very similar method. For these achievements the two physicists received a Nobel prize.

**Magnetic Resonance Periodic Table** — This periodic table is customized to be of most utility to users and researchers of magnetic resonance. The [Biomedical Magnetic Resonance Laboratory](#) and the [University of Illinois](#) provide this service to the magnetic resonance community at large to foster scientific communication and progress.

**Period.** — in uniform circular motion is the time of one complete revolution. In any oscillatory motion it is the time of a complete oscillation.

**Acceleration.** — The time rate of change of velocity in either speed or direction. Cgs unit, — one centimeter per second per second. Dimensions, —  $[l \cdot t^{-2}]$ .

The International Committee on Weights and Measures has adopted as a standard or accepted value of 980.665 cm/sec<sup>2</sup> or 32.174 ft/sec<sup>2</sup> for the acceleration due to gravity.

**Amorphous.** — Without definite form, not crystallized.

**Crystal.** — The "ideal crystal" is a homogeneous portion of crystalline matter, ( q.v. ) whether bounded by faces or not.

Crystalline matter is matter that possesses a triperiodic structure on the atomic scale. It is characterized by discontinuous vectorial properties that give rise to "crystal planes" [ (1) crystal growth ( faces ); (2) cohesion ( cleavage planes ); (3) Twinning ( twin planes ); (4) gliding ( gliding planes ); (5) x-ray, electron, or neutron diffraction ( "reflecting" planes ); all of which are parallel to lattice planes. ]

**Allotropy.** — The property shown by certain elements of being capable of existence in more than one form, due to differences in the arrangement of atoms or molecules. — See Monotropic and Enantiotropic.

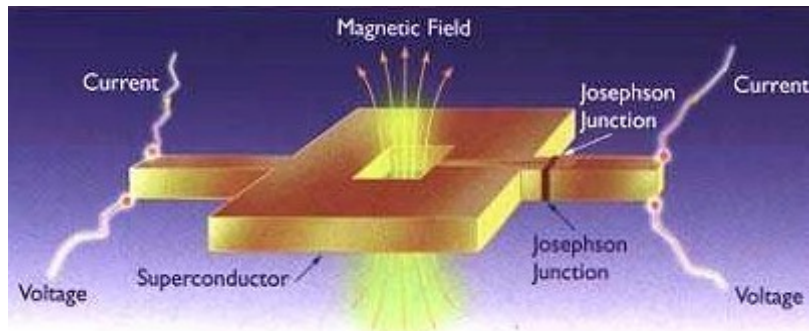
**Anneal.** — to heat ( glass, metals, etc. ) and then cool slowly to prevent brittleness; to fire or glaze, as in a kiln.

**Temper.** — the state of a metal with regard to the degree of hardness and resiliency; a properly proportioned mixture; to temper steel by heating and sudden cooling — usually in oil.

**Avogadro's Number.** — The number of atoms or molecules in one mole or gram-molecular weight of a substance.

A number of values of the Avogadro number, which is usually denoted by  $N$ , have been found by various methods, generally lying within a range of 1% about the value  $(6.02486 \pm 0.00016) \times 10^{23}$  per gram-mole ( physical );  $(6.02322 \pm 0.00016) \times 10^{23}$  per gram-mole ( chemical ).

### SQUID ( Superconducting QUantum Interference Device )



A SQUID is the most sensitive type of detector known to science. It consists of a superconducting loop with two "Josephson Junctions". SQUIDS are used to measure magnetic fields.



A 122 channel SQUID  
Laboratory of Medical Physics

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- Handbook of Chemistry and Physics — Forty-fourth edition, printed May, 1963
  - The Merck Index – Sixth Edition — 1952
  - Webster's New World Dictionary of the "American Language" — Second College Edition, 1980 ( newly revised )
  - Compilation by Tommy Cichanowski
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### Zero Point Energy — Tachyons — Ether — Gravity

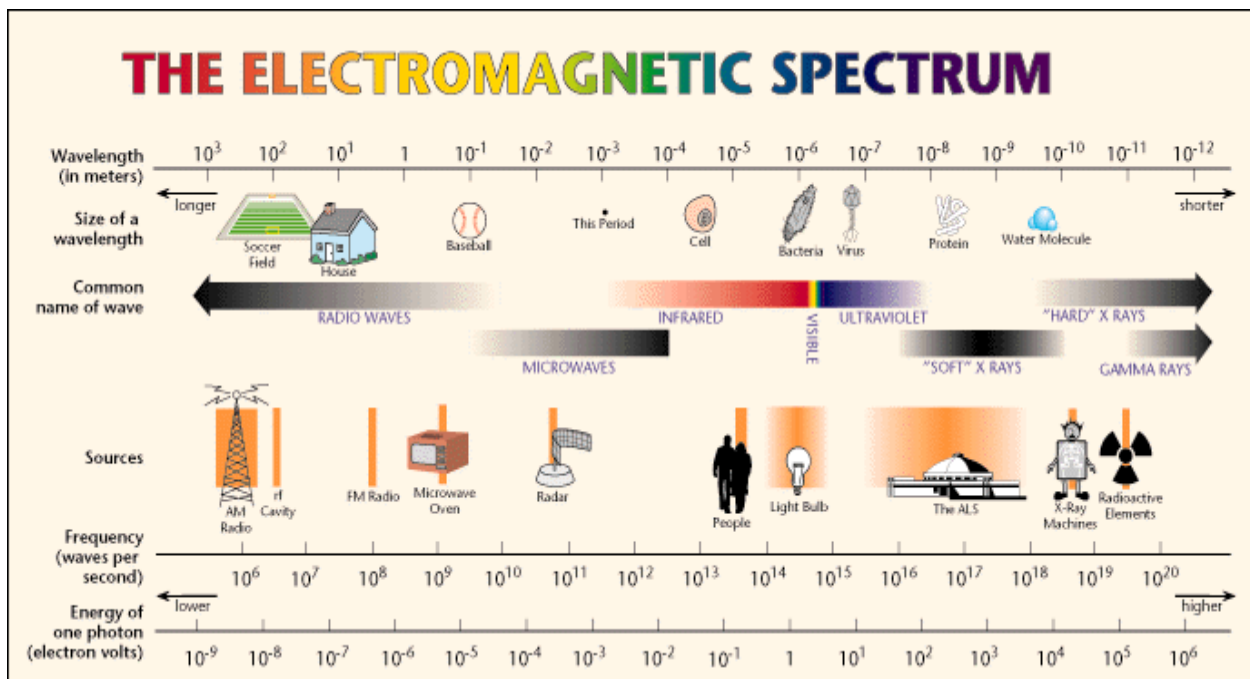
**Zero Point Energy.** — The energy that remains in the vacuum ( "empty space" ) after all currently acknowledged energies have been subtracted.

**Tachyon.** — also known as "Zero Point Energy," is the modern notation, used by many, for the ancient concept of ether ( aether ).

About 1880, shortly after radio was discovered, the great mathematician James Clerk Maxwell wrote the equation that combined "Electric" and "magnetic energies into his famous wave equation which explains how radio works.

His theory says, that emanating from an antenna — a point source — a wave of energy is moving out into space at the speed of light ( in a vacuum ) and this radiation contains a large electrical component and a small magnetic component. This is what we call Electrical-Magnetic radiation or EM.

This type of radiation is comprised of photons which have vibratory properties. We divide this large electromagnetic spectrum where they can operate into subgroups for convenience of discussion. The spectrum encompasses; Gamma-rays, X-rays, UV, Visible light, Infrared, Microwave, TV, Radio, ELF and more.



This electromagnetic spectrum that we work with daily, represents the solutions to Maxwell's equation using only positive numbers. About one hundred years later, professor Wm. Tiller at Stanford University, decided to explore the properties of the equations using negative numbers — the part of the graph that lies below the "X" axis.

This part of the graph describes another class of light energy that Tiller called "Super Lamination." This solution says, that from infinity — from all directions — into the point flows a "radiation" ( something ), that is mostly magnetic in nature and has a small electrical component. This radiation has a velocity of  $C^2$  ( the speed of light squared ) or 10 billion times faster than that of visible light. This energy can possibly account for what we call "The Atomic Weak Force."

( This may also help explain, why both Tesla and I have calculated propagation velocities faster than the speed of light in our experiments, when normal propagation velocities are expected to average around 85% the speed of light in our coils and broadcast feed lines. )

Tiller did very little with his new idea. He published a few papers and went on to work in other areas.

Could Tiller's concept account for some of the properties of "Zero Point Energy?"

Zero Point Energy would have to have a velocity very much faster than the speed of light if it is the causal force of Gravity, and it would have to be absorbed by "Matter," or more correctly energy domains.

Atoms follow the basic rules of our "Mechanical Universe." If Zero Point Energy is behaving as a fluid, mechanical laws can account for many observations, and help us better understand Magnetism and Cooper Pairs.

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April 2003

Today the "String Theory" is  
in vogue.

This theory states that strings of energy acquire motions, which produce the properties of sub-atomic particles, and these particles in turn, then produce our Wonderful World of Atoms.

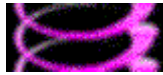
Delightfully, this simple idea produces the simple particle set described above. All those funny little particles with their funny little names are synthetic creations — hopefully some with amazing possibilities — and don't exist naturally in nature to any great extent.

And just as exciting, the "boys" playing with the big telescopes are telling us, that two-thirds of our Universe is made up of "Dark Energy" with the other one-third being actual matter.

Some 28% or so of this is comprised of what is called "Dark Matter", leaving a mere 5% of our Universe, which can actually be seen with a telescope. This "Dark Energy" is most likely the energy described by professor Wm. Tiller.

In the very practical sense then, this means that engineering practical devices is not very hard at all. The science presented at this web site will help you clearly see the ways we have learned to create a happy technological world.

String theory combines quantum mechanics with general relativity, using a "new structure" of space-time. String theory explicitly requires the existence of 10



dimensions for the math to work. There is then an eleventh invisible dimension that is "curled up" into an infinite number of tiny loops within.

Particles interact by exchanging particles with other particles. This is how gravity works. Here we see the universal principle of "Breath" working throughout nature.

The Tarot speaks of ten principles that make up our dynamic physical world. Card 10 is the first expression of this dynamic world combining the interactions of the preceding nine static concepts into the first magnification of a dynamic system. Its primary symbol, the spinning wheel, represents the continuous processes of death and renewal. Card 11 is then the next dimension of our universe. It tells us that through gentle action we can control the first 10 dimensions through the eleventh. The operative word is "Gentle".

### **Engineering Cooper Pairs**

**A technical discussion of Dr. R. Raymond Rife's Raytube system.**

[ A system capable of quickly and safely destroying harmful organisms — infections, bio-terrorist agents, cancer. ]

The more I learn, the more I see  
The more it is apparent to me  
That our whole Universe as it should be  
Is a Joyous Dance, a Cosmic Symphony

It is the Breath of God filling a balloon  
And our whole Universe singing its tune  
Is God's "Music Machine" in the Balloon  
On which He is playing a happy tune

**Another Look at the Creation Story**

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— On the subject of Gold —

... orthodox medicine offers the gold therapy in rare cases — although it vehemently has persecuted as an "outsider", the only Physician who can explain the Action Principle of this therapy. The physician from Wuppertal, Dr. Aschoff, was able to show that gold can re-normalize



the "magnetic" properties of the blood and thereby the basis for its "structural order." This is a phenomenon, which demonstrates the relationship to the effect of the previously mentioned Priorè machine and which leads to new findings in cancer research. Silver has the opposite effect. It damages the electrostatic order (the parallelism of the electron spin) and it produces instead disorderly "electrical" behavior. For this reason, gold fillings in teeth are the treatment of choice. Silver-amalgam fillings do not belong there.

— Reference —

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Special Properties of the "Transition Group Elements"  
My Original "David Hudson" Page

ORMEs Exist As Single Atoms and Therefore Are A Gas !!!  
Observations and discussion by John V. Milewski, Ph.D. - Good Pictures

The Expanded Periodic Table of the Elements  
as David Hudson Describes

A Simple Overview of "Atomic Valance Bonding" and "Zeta Potential"  
This info is needed to understand David Hudson's description of screening potential.

Learn How Atoms and Colloids can Control Water Molecules  
as David Hudson Describes — ( Described using Computer Animations )

"The Gravity Debate" — Does Gravity Push or does Gravity Pull ???  
New investigations into gravity throw sizable doubt on Einstein's Theory of Gravity.

Explore Our "Magnetism Page"  
How Does Magnetism Really Work?

Understanding the Nature of Heat  
The Atomic Wiggle Wiggle Dance

Understanding the Electric Force  
We are just now beginning to understand.

Here is a definition for electron volts  
<http://hyperphysics.phy-astr.gsu.edu/>

Here is a definition for electron volts  
<http://musr.physics.ubc.ca/>

This is rather nice Unit Converter

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## High-Spin Monatomic Research

### An Introduction to the Mysteries of Ground Radio

David Hudson's discoveries help explain this mystery.

### "Earth Energy and Vocal Radio" Nathan Stubblefield

Are ORMUS materials at work here also?

### "Endless Light" Dr. Thomas Henry Moray

What was the makeup of this mysterious rock?

## Physicists Advance Theory for New Class of Quantum Phase Transition

Rice University-led physicists have made a key advancement in understanding how complex quantum fluctuations play a role in the transformation of metals from one electronic state to another.

## BIOlogical TRANSMutations

More insights into Atomic Nuclear changes.

The world isn't flat !!! Neither is the Nucleus of the Atom Static and Unchanging.

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## Using Hydroponics to Understand the Earth's Life Processes

On the Atomic Level.

### Tommy's History of Electricity and Western Technology

"Those who do not remember the past are condemned to repeat it."

### The Make Up of Our "Engineer able Atomic World"

We Know How to, and CAN Take Care of Everyone.

### The Tortoise Shell Hydroponic Reference Center

The Art of Growing Plants with Mineral Water

### The Wonderful World of Advanced Materials

Making Things, by Assembling One Atom at a Time.

### Tommy's Resonate Coil Project

Needed for Superconductor Batteries

### Maxwell's Equations in Magnetic Media

A static magnetic field is produced by stationary electric currents.

[m-state \(ORMUS\) materials dissolved in water.](#)

**Magnetic Traps**

[The Art of Healing Ourselves](#)

**You Are In Charge of Your Body !**

[Tortoise Shell Web Site Link List](#)

**You Can Get There From Here.**

[The Tortoise Shell "Science of Health" Newsletter](#)

**— Putting an End to Disease on Our Planet —**

[The Tortoise Shell Life Science Puzzle Box – Front Page](#)

**Understanding the Puzzle of Life**

## **MAXWELL'S EQUATIONS IN MAGNETIC MEDIA**

The most striking feature of a magnetic material is the fact that it can give rise by itself to a static magnetic field in outer space. According to Maxwell's equations, a static magnetic field is produced by stationary electric currents, and the problem arises of the nature of the currents responsible for this field. The question is non trivial and poses deep conceptual difficulties, as confirmed by the fact that the existence of permanent magnets has been known to mankind since ancient times, but the discovery of the relationship between this kind of magnetism and electric currents is less than two centuries old, and Ampère's intuition of the existence of molecular currents inside matter could be given a scientific basis only with the advent of relativistic quantum mechanics.

The basic quantum nature of the magnetism of magnetic materials raises the point of how these quantum effects should be treated in the classical setting of macroscopic Maxwell's equations. An acceptable solution is to postulate the existence in magnetized matter of elementary pointlike and permanent *magnetic moments*, and to describe a magnetic material as a collection of such moments. All quantum effects are lumped in the properties of the individual moments. By accepting their existence as an additional fact, to be added to the existence of electric charges, one is able to describe the behavior of magnetic materials by purely classical means, in terms of solutions of magnetostatic Maxwell's equations.

A second relevant point is that the motion of elementary charge and moment carriers in magnetic bodies is extremely intricate and irregular. A detailed treatment would be hopeless. However, if we are interested in effects taking place on a sufficiently coarse scale, we can get rid of these complications by taking convenient space averages over elementary volumes, small enough with respect to the characteristic scale of interest, but still large enough to contain at any time a

substantial number of particles. [...] By working with these local averages, one loses the fine details of the processes occurring inside each elementary volume, but one obtains a description in terms of smooth quantities, perfectly suited to the study of phenomena taking place over a scale much larger than that of the elementary volumes.

In the following sections, we shall concentrate on those aspects of Maxwell's equations that are of direct relevance to magnetic materials. No attempt is made to give a comprehensive presentation of the general properties of Maxwell's equations, for which many texts can be found in the literature, nor to give detailed derivations of all the relations that will be stated. In Section 3.1, we briefly summarize Maxwell's equations, we discuss magnetostatic equations and we introduce the concept of elementary magnetic moment. Section 3.2 discusses how the magnetic state of a body can be characterized in terms of the magnetization vector. Finally, Section 3.3 discusses energy conservation and energy dissipation caused by eddy currents.

- 3.1 Magnetostatics
  - 3.1.1 Maxwell's equations
  - 3.1.2 Stationary currents
  - 3.1.3 Magnetic moments
- 3.2 Magnetized media
  - 3.2.1 Magnetic moments and magnetization
  - 3.2.2 Electrostatic analogy
  - 3.2.3 Demagnetizing fields
- 3.3 Energy relations
  - 3.3.1 Energy of stationary current distributions
  - 3.3.2 Energy of individual magnetic moments
  - 3.3.3 Poynting theorem
  - 3.3.4 Eddy-current dissipation
- 3.4 Bibliographical notes

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### **DREAM SEA**

**This wonderful biography requires considerable examination of archetypes, their suffusive power, and the world in which they materialize. To comprehend the power and import of what Dr. Thomas Henry Moray truly discovered, we must**

pass through the waters of time most arcane, until we emerge fully prepared to appreciate the wonder of his find. Why this is so will become most apparent as we progress through the narrative. His story begins, strangely enough, in the sea of dreams and archetypes.

Histories, dreams, sagas. Told by ancient philosophers and bards, the great epics contained dim recollections from an archaic world. Singing the glories of lost kingdoms and lost civilizations, poets transported their listeners into another age. Hearing rhythmic elaborations of verse, ancient audiences glimpsed enchanted visions of towering mountains, fabled citadels, and magnificent cities. The bards brought them into the very portals of The Golden Age. Utopia. After hearing of them, the mysterious lost worlds seemed easy to reach.

Poets, bards, and historians provoked their listeners with symbols, images, and themes. Lives were always filled with a special sense of clarity, purpose, and direction after the bard sang. The telling of these long sagas provoked great inward excitement, stimulating aetherial hope and dream quest. In strong evocations of rhyme and verse, of mythos and pathos, individuals were infused with new and impassioned desire. The sagas remain the engine-works of civilization.

Shared archetypes activate human hearts toward specific desire. In the mouth of bards, each archaic saga initiated great and historically memorable human works. Lovers sought pure love, adventurers sought ultimate adventure, and travelers journeyed forth for unknown horizons. Seekers all. Seekers after the ideal world and its wonders.

The long entwining themes were set with little jewels. Unfamiliar wonders suffused these worlds. Exotic and mysterious artifacts. Familiar accoutrements and accessories of fortunate Utopian dwellers. Invariably, the marvelous inhabitants of lost worlds employed strange and magickal technologies. Hearing these legends, one was always inspired to recapture or reproduce the magickal artifacts and accessories described by the bards.

Enthralled with themes of love and valor, the beauty of silvery princesses and strength of bronzed heroes, young listeners sought to emulate the heroes. Adventures, excitement, thematic focus and purpose. Life was explained in the song. These wonders, so very evocative, are yet difficult to comprehend unless they were in some way real. It was known that many poets were once themselves noblemen of high degree. Educated and knowledgeable. Until they themselves were changed by the song of former bards, they knew lives of luxury and riches. The sagas drew these men away from the ease of villas and marbled estates with their irresistible power. More aged bards and troubadours had passed to them their precious treasures of verse and epic, until the heart of legend and myth found new strength. Transferred among truth seekers, glorious mythos survived the centuries. Mythic credibility finds an essential heart of truth, being drawn of histories and arcane priestly records from distant lands.

On sapphire blue-splashed seacoasts, the naturally radiant and great ascending mountains of violet and green founded the worlds in which Utopian lovers dwelled. They were the royal originators of civilization, immortals whose goodness and wisdom was boundlessly expressed in mighty civilizations of

archaic splendor. Cloud-piercing towers of silver, dazzling beacons of pure white light, and fabled harbors where golden pillars heralded immortal seafarers home signaled the approach toward wonder.

Mountain terraces, ringed by strange lightning mirrors, pierced the air with deadly star blue rays in defense of the citadel. Peace and respect reigned supreme. Large emerald green crystals worked in the heavens, bringing blue and sweet perfumed winds. Distant isles were traversed beneath the waves in dolphin-like vessels. Golden-framed mirrors of Mercury, gifts of unknown age and origin, conveyed travelers among disconnected silver terraces set like jewels in the sea mountain world.

Wide plazas of white stone, pyramidal temples of crystal, floral avenues, gardens with soft green pools and waterfalls. All were suffused with the topaz yellow radiance of lanterns, which never extinguished. None were ever ill in these Utopian lands, except for the illness of love. All lived for centuries. Special elixirs and violet lamps blessed young and old alike, bringing health, wholeness, and joy to their recipients. Large shields of onyx, set in unknown metals, permitted one to see across the waves to distant amethystine islands. Copper dialettes to show the time were everywhere, controlling the very hour. Mighty artisans directed twisted pipes of tin, magickal winds shrieking and lifting great stones through the air.

And the wonderful people who inhabited these lands were always persons of nobility, enlarged minds, virtuous and wise, living full lives of joy. Their persons were glorious, radiant, possessed of rare abilities. They seemed always adorned by desirable magickal accessories; rings, buckles, bracelets, necklaces, jeweled brooches, belts, capes, helmets, shields, swords ... all the tools of magickal technology.

Their homes were wonderful and rich, flooded with fine fare and luxurious furnishings having magickal aspect. Their nights were flooded with the wonder of stars, planets, and radiance; the radiance of rare lanterns and hearths, which never consumed fuel or ceased pouring forth their effluves. Utopia was never more clearly portrayed.

By rhythms of small drums and soft strains of harps, poet-sages sang and spoke heartfelt fables. Tears ran down his bearded face and onto a colorful robe when he sang of lost love. Musicians played softest music when the bard became emotional incapable of speaking further. Anger and authority quivered in his voice when heroes vanquished evil sorcerers. And the songs went on. Young children of noble families laid gifts before the honored bard. Misty white grapes, bread wreathes with raisins and honey, crystal cold mountain water in terra cotta pitchers, and golden goblets of purple wine.

The telling of the tale often took a few days. During this time, an entire civilization was raised and destroyed. The tale told, the aged bard was escorted by a great host of devotees where, just as mysteriously as he arrived, he vanished off into time.

The themes of these timeless tales are powerful elements. We each yet resound with them. The imagery is the power. Of these tales there is no end. But the

images, the themes, the quests, the magickal artifices. Something in these evokes the very deepest of desires. We each wish for that eternally radiant world.

The power of the tale is the archetype, which projects them forth. During contact with the tale, listeners are absolutely engaged with the worlds described. Group transcendent experience and metadimensional contact. Phenomena with which Pythagoras was well familiar unified societies in the telling of sagas. The tales told by bards are eternal themes. The images, persistent reminders of historical realities. They emerge from visionary worlds, having timeless import. Being messengers of the eternal sea, the bard functioned as prophet for his people. The very mention of the mysterious worlds, their artifacts, and accessories captivates the mind of society with lost connections from archaic worlds.

Why do these specific images have such a deep and powerfully evocative effect on us? Each image and metaphor, which performs this marvelous effect on us, is, in reality, a visitor from a forgotten land. The images haunt and hurt us with a strange desire. They are archetypes, symbols, runes, communicating to us directly from an uncharted sea. The symbols are eidetic discharges from the mysterious sea of dreams, the consciousness in which we fuse with our world. The themes, images, and symbols persist for centuries, flooding the world mind. Archetypes travel from person to person, a message from eternity. Archetypes annihilate time and distance. All those who merge with the archetypes momentarily find themselves in the same timeless locations, viewing the very same scenes.

The archetypes project forth from the unfathomable deep, the dream pool of humanity. Found in fables, they are relics of lost archaic civilizations. These images have great power. Archetypes are quasi-material realities, demanding our active attentions and creative cooperation. The great armada of images proceeding forth through the epic poets have powerfully evocative effects on society. It is they, in truth, which are responsible for slow forward movements of technology.

Visitors from the very deepest wells of consciousness, symbols and archetypes have stimulated our beings with their radiant power of vision and desire, impulse and motivation. They generate technology. Humanity has for centuries felt their mysterious urge forward. The chief desire of certain individuals has been to find the wonderful tools of magick described in legends ... to locate the natural loci where dreams and Nature "fuse" in material solidity. Sufficiently motivated travelers and wise archaic masters of natural science claimed the successful materialization of specific archetypes. Forgotten lands and fabled treasures were located. Large silver mirrors were pulled from vine-covered lagoons. Gemlike lanterns radiated cold green light.

There are those who insist that dreams, images, and symbols are metaphysical ephemerals lacking material reality or ability to materialize. Humanity is subject to all the archetypes and symbolic pressures which surge up from the timeless sea. Dream waves ebb and flow in the mind of humanity. The dream potential is the true and prolific power, which suffuses and drives the world. Historic dreams actually found their natural material expression. Great and notable natural discoveries were preceded by haunting dream images, by which the discoverer

was driven. After thorough search throughout natural locales, the dreamed thing was remarkably found in its material form. Natural "correspondence" between dream and nature has been the common historical experience. Certainly endless dreams of seacoasts materialized from the dreams of Columbus.

Those with ability to articulate dream visions produce notable developments in art and science. Symbols, images, and visions of dreams project mysterious visionary artifacts, of which artists and scientists attempt reproduction. The accuracy of their success is wholly determined by the accuracy of their response to the dream image. Artists and scientists alike seek articulate reproduction of their dream symbols in each, their various media. The gracious gift of technology is a deliberate result of both emerging dream treasuries, and the artisans who reproduce them.

Society is helplessly moved in the great tide of dream images. Each epoch is determined and defined by the dream images, which provoke the "epochal theme" or "zeitgeist". The archetypes surge in waves, relentlessly expressing themselves and materializing as arts and technologies. Archetypes, though metaphysical, find material correspondence. Romantic artisans know this. When the outward flow of inner experience merges with the inward flow of outer experience, then dreams locate their material correspondence with rare precision.

Dreams materialize when we look for them in natural settings. Sensitive and attentive to this mystical crystallization of thought in matter, the wondrous and continual surging of consciousness reveals strangely haunting "similarities" and "synchronicities" ... between things seen in dreams, and our day-to-day world experience.

## **ETERNAL LANTERNS**

Every symbol, artifact, and accessory of the Utopian world emanates light. Transported earthly visitors first remark at this suffusive light. Their host joyously explains that "the light comes from everywhere". This magickal radiance is the light of consciousness itself. Mythologies and histories alike are replete with reports of the "endless light".

The radiant beauty of mythical "eternal lanterns" stimulates and provokes timeless scientific desire. Their endless effulgence remains their single most fascinating aspect. Can such a light source exist in the material world? The mystery of that eternal radiance could neither be compared nor equaled on earth. Firecraft did not reproduce the quality of Utopian ideal radiance. Such eternal light projects joy and wonder. Neither their radiance nor the vivifying thrill ever fade with time.

The image and symbol of the eternal lantern permeates mythology. However separated in distance or time, mythologies the world over each speak of eternal lanterns. The symbol of the eternal lamp is a haunting object, which we most desire. A wordless message of hope and life beam forth, most directly representing divinity.



Believing that eternal lanterns once existed in the fabled world, ancient qualitative science sought them with a deep faith that they could be found. Ancient conquerors made extensive search for eternal lanterns and other such "fabulous" treasures. To locate, recapture, or unearth these lamps provided a formidable conqueror's quest. Likewise, numerous radiant sources were discovered and described by credible naturalists.

As centuries passed, certain scientific artisans claimed that they had successfully reproduced eternal lanterns. According to some bards of the Middle Ages, there were lands where dreams had literally materialized. Kingdoms and rare wonders lay to the east, possessors of magickal technology. Following this trail of legends and marvels came Marco Polo. Among the material proofs, which he brought home to Venice, there were also new legends and reports. Marco Polo told of palaces and kings, kingdoms and artifacts, exotic natural wonders and anomalies. Caravans of archetypes and symbols.

In the city of the great Khan, there were hundreds of fabled rubies, thousands of gold tablets, and millions of standing soldiers. Marco stated very plainly that, in the outlying provinces of the Khan's empire, radiant stones and magickal accessories were commonly employed for a great variety of purposes. He had seen some of these marvels with his own eyes. One particular legend, which he was fond of retelling, is rarely heard or mentioned today. It centered about the fabulous Prester John, mythical King of the East. Prester John sat in a magickal throne room, a great flooding radiance shed by special rare gems. The unearthly light of his throne, an undying light. He employed the radiance of these rare gems to render his throne room sacred, enlightened, vivifying, and quiescent. His knights were continually flooded with strength and love for their cause because of these radiant stones.

Through the agency of special viewing stones, Prester John gained instant knowledge of distant events. Empowered to project peace and benevolence to distant warring lands, he watched and interceded over whole regions through these magickal means. He was able to project help to those lands through rays, which came from his magickal stones. Famines reversed, plagues eradicated, joy restored, Prester John was the protector of nations who did not know him. Prester John ("Pastor John"), the mystically advanced Christian King, is a notable story of Mongol origin. The eternal lantern, one of innumerable archetypes, persists in mythologies the world over.

Marco claimed he had seen black rocks used in Cappadocia to produce light and heat. In parts of the same region, he claimed to have seen "black oils" taken from bubbling earth pits for the same purpose. Scholars rejected everything he had to say when they heard these two reports. Long after his passing, when coal and petroleum were later discovered by Europeans, all the words of Marco Polo were heeded without question. The wonder of eternal radiance, Prester John, and magickal technology continued to occupy human curiosities throughout the following centuries.

All lands and peoples have the eternal lantern in their dream treasuries. Nordic mythology ascribed "eternal lanterns" to the gnomes, who both inherited and manufactured them. The gnomes used their mystical lanterns to light gem-

studded subterranean palaces. The lanterns themselves had names, archaically crafted by famed gnome masters. Made of radiant stones, they continuously emanated soft colors and an atmosphere of great delight. The magickal lanterns themselves were fabricated from rare glowing elements and gems.

In fables, mystical eternal lanterns are made of humanly inaccessible minerals and elements. Legends continually remind us that magickal elements and gems have archaic world-origins, remnants of the lost world. Uncorrupted by the touch and taint of mortals, they frame the evidence of a first creation. Their properties, pure and sacredly honored, emerge from the dream world.

Fables teach that all beings naturally seek these materials. Certain beings, gnomes the most frequent species, covet these lanterns with a rare viciousness. The "radiant stones" reveal the first world Nature and all its wonder, the "lost elements" of which the old world was made.

In the fables, the magickal elements are said to yet exist in the deepest recesses of the earth and in special secret mountains. Spiritual prowess is required to both recognize and retrieve the minerals. The "hidden folk" always see what mortals cannot, plucking magick gems and mining magick metals from their archaic repositories with ease. Gnomes, faeries, elves, and angels jealously retain the secret of radiant stones and radiant lanterns. When humans manage to obtain them, there are consequent complications.

The magick elements and radiant stones are always wonderful to all who behold them. Their radiance is divine. Mysterious beings reverence the appearance of the radiant stones. Humanity especially cherishes and desires them. Elves cynically remind us why we have lost both the first world and the wonder elements of which it was made. The wondrous gems and metals invariably come from "forgotten archaic ages". They are "first created matter", "sacred gems", and "starry metals". They are the material of the old world.

Fables report that these wonderful elements come from the times just after the beginning of creation. Having been buried in the angelic rebellions, some remain in the deep recesses of earth. Others, having been thrown among the stars, reside in the stardust, awaiting the time when they may return to bless humanity. They hold the key to human conscious progress, requiring only humility before they may be discovered.

Mystery minerals and radiant gems are often found where natural catastrophism is at work. Radiant stones are loosened from archaic imprisonment by strange events, which the "hidden folk" worriedly pursue. They jealously guard their treasures from "bumbling" humanity. Wonder elements are found in the dearth of volcanic explosions, flung up from mysterious metaphysical depths. Some fall to earth from space, glowing and pulsating. Whether thrown out of earth or space treasuries, they are usually found by adventurous humans whose lives become transformed. What these persons do with their treasure usually determines their fate, a moral lesson concerning the abuse of power.

There are peaceful ways in which the radiant stones are located in some tales. There are those who see magickal glowing pools of water by night. Venturing in, they manage to find the rare "wish-granting" glowing gems. Some only appear

during certain astrological seasons, under specific "heavenly signs". They are seen only by sensitives who, with greatest care, find them radiating their light when touched by the crescent moon. Mysterious visitors often add a "pinch" of magick dust into the mixtures of old despondent alchemists. When this alchemical projection has performed its work, the molten metals become joyfully radiant.

"Lost elements" grant their bearers strange abilities and miraculous powers. The abilities they give often require a small exertion of mind, with a resultant magnification of intent. Wearing the radiant gems, one can become invincible or invisible. One can pass through walls. One can fly, lift great weights, bring lightning or storms, and perform unheard superhuman works. These mysterious materials link dreams directly with the world. They are windows through which archetypes flow directly into our world. Wish amplifiers. The very artifacts of Prester John. Magickal technology requires the radiant stones. They are the lost talismans, the lost instrumentalities that guide and extend human consciousness. Radiant stones are the reagents of every lost technology. Those who find them become heroes or villains. The legends tell both of the location and loss of mystery elements. They may be found, granted, or stolen. Each means of obtaining them has its consequences. Magick rings are given to humble recipients by angelic visitors. Mystical necklaces are given in return for humanly kind gestures to children. They are fabulous rewards from gnomes, faeries, and sprites. Little children and humble old folk often accidentally find magickal materials by the deliberate design of "hidden ones". Radiant crystalline jewels are often found by humans who enter unfamiliar glowing caverns and grottoes through accidental circumstance. Wanderers, lost in a storm, find caverns of wonderful radiant treasures in places they can never relocate.

There are those whose lust for power drives them to acquire the lost elements through evil sorceries. There are mysterious alchemists who stumble on the strange minerals, taking them by night from their "sacred resting place". Working their excessive "treatments and chemical labors" until the magick is released, they often become the terrors of the countryside.

Evil alchemists, betraying the sacred calling, challenge rule and dominion. Working feats of mind magick and enslaving the populace, they portray the dangers associated with the misuse of magickal technology. A hero is usually summoned by a rival good wizard to destroy such evil alchemists. The fabled confrontations always pits magick against magick, the hero having been given an equally great talisman by which to succeed. Love is the key to winning the battle. Love stimulates the radiant gems. Greedy and ruthless hunters steal them from forgotten temples, plucking red glowing gems from the eyes of idols with rude steel knives.

When the "wonder elements" are lost, they are lost through misuse and pride. They are often taken from the wicked by mysterious and protective guardians of humanity. Jealous and hapless fools accidentally drop their radiant stolen prize into wells, seas, burning pools, and crevasses of ice. The magickal elements and radiant stones are often lost just after certain worthy persons have been blessed by their magick. These materials seem impossible for most humans to keep. The

loss of the wonder elements is always attended by great sadness and regret. Those who lose them are shunned, their villages fading into a disappointing and lackluster future. In the closing verses of these stories, one is always taught to expect their re-emergence. Hopeful that the rediscovery of lost elements will raise society into a clarified future, there are always promised signs by which we know of their appearance on earth. World conscious revolution always requires the radiant rocks.

These mysterious "lost elements" and "radiant stones" continually emerge from the deepest memories of humanity. Their re-emergence in the social symbolic lexicon is irrepressible. The greatest themes of modern science fiction are all archaic in origin. Their symbols, however updated and modified, have arcane roots. The archetypal image of both the eternal lantern and the magickal elements reappeared with the "Green Lantern" comic book series of the 1930's, where the eternal emerald lantern from another world conferred its power to one who would justly bear the magick ring. Charging the ring by the eternal radiance of the emerald lantern, the ring-bearing knight swears to protect the world from evil. He then learns the secret psychotronic power of the ring.

While the images of Prester John's fabulous courtroom illuminated the minds of those who thrilled to their hearing, a new and unexpected materialization was historically chronicled.

So dramatic an episode in human history, it yet demands a complete bibliomantic examination. There was an instance in time, a true psychosocial event, in which archetype met human desire in material form.

## **RADIANT ROCK**

During the late Middle Ages, a great variety of remarkable "radiant rocks" were suddenly and unexpectedly discovered. These discoveries emerged from the mountainous regions of Central Europe in continual waves. It was the country folk who found them. Approaching in a timid, childlike wonder they saw the impossible. A powerful and unusual radiance was found emerging through the very rocks of the mountainsides. Light seemed to be streaming out of the hillsides! The brilliant green and blue mineral light was seen among familiar mountain rocks after sundown. As reported, the light was brilliant, far above the brightest light of the full moon.

Most of the first fortunate individuals who made these discoveries were not scholars or craftsmen. Typically, they were shepherds, mountain villagers, pilgrims, and wanderers; the innocents whom angelic hosts historically visit with messages of love. The glowing rocks seemed to be windows on some underground domain. Possibly from unknown cavern worlds beneath! Nights were spent watching the rock radiance in absolute wonderment. The radiance was considered an apparition, a divine event. The light was beautiful, glorious, and unfamiliar. It brought with it the atmosphere of another world.

Here was a new revelation, a new kind of light, which did not come from fire. The rocks gave forth a bright light, bright enough to illuminate the faces of those who stared into them in disbelief. Though shining for hours with no other energy

source, this cold rock-light would not die! Those who discovered these strange glowing rocks believed themselves to have been favored by miraculous visitation, answers to fervent requests.

Stories began emerging from different parts of the world concerning these very same radiant rocks. Some of these were given names. Some were associated with the saints. Others were simply named for those who found them, or the place from which they were dug. A few brave souls were not afraid to attempt sampling the find. Unearthed, pieces were brought indoors. Though separated from their parent rock mass, they continued illuminating cabin interiors with their rare and cold radiance. Undying fire. Cold, pure endless light!

Most of the rocks came from familiar regions, yet their radiance was never before seen. Innumerable opportunities existed for the observation of the brilliant and spontaneous radiance. But, why had no one reported such wonders? Had no one ever seen these lights before? The shepherds who frequented those very places had crossed and recrossed their grazing paths for countless centuries. Yet, they had seen nothing unusual. Certainly nothing this noteworthy was ever observed by anyone familiar with the very terrain in which the manifestations had taken place. This equally profound and perplexing mystery now formed additional evidence concerning the radiant rocks, one which surrounded them with an additional and inescapable aura.

It was apparent that these were divinely inspired events, utterly new creations. This was the accompanying awareness, which boosted their fame into public consciousness. Clergy and monastics became enthralled...humbled by the notion that science and theology were not, as most had assumed, separate experiences. Archetype, visionary desire, and natural reality had been brought into material fusion.

The radiant rocks foretold a coming dawn, an Age of Light perhaps! For the people of this time period, the phenomenon was material evidence of the ancient faith. The glory of these special radiant crystals brought about a curious form of devotion. Taken as miraculous signs, each were displayed before persons of both low and high estate. Cathedrals displayed them for the common folk. The rocks were seen as sacred artifacts, befitting the treatment rendered toward relics. Private viewings, accompanied by all the pageantry of liturgical service, were held before the courts of kings.

Here was a new breath of promise, a silent comforting word. In this atmosphere of prayerful silence, the miraculous stones radiated their eerie green or blue light to the wonderment of all who beheld in silent awe. Certain varieties were exceedingly brilliant, some reporting a radiance far above the brilliance of full moonlight. In a few other instances the report of radiant brilliance approaching sunlight was confirmed by credible authorities. Those who worshipfully gazed at these rocks in the silent cathedrals awaited metaphoric answers. It was difficult to imagine that former scholars had separated innervation and external Nature, calling the one "fantasy" and the other "reality".

In the clear light of these wonder rocks there was some powerful sense of a lost innocent world and its wonderful radiant vitality. A new and striking atmosphere seemed to capture all the scholars who approached the brilliant rocks. Gazing

into their wondrously bright and seemingly endless radiance, one had the sense that the Divine Presence was mystically shining through "corrupt matter". It was light from death, the complete antithesis of the fire paradigm. Here, the production of light did not require the death of living thing. The light did not emerge through the consumption of fuels, the soul of the green forest. This matter was not "corrupt". This was a rare kind of matter, unknown except for the legends and fables, which accurately described them in every detail.

With each discovery of a new radiant mineral, more proof was added to the ancient belief that Creative Light had not indeed abandoned the world of tears. Where death seemed the ruling power, it was the light of these rare gems, which heralded sweet proof that Divine Love was yet reaching for humanity. Those who both studied and reported their experiences with these radiant rocks certainly knew the comparative illuminating power of candles and bonfires. When they likened the brilliance of these strange rocks to full moonlight or of sunlight, they were neither being scientifically primitive or emotionally excessive.

It is astounding to recount the historical density of such finds during the early Renaissance. Arcane journals and manuscripts contain anecdotes of these discoveries, although found with difficulty in widely scattered fragments. They are the remains of notable past events in the indelible historic record.

Scholarly minds reeled under the dream-impact of possible new technologies. The wonders, which could emerge from the proper implementation of these rocks, would take some time to fully develop. Would these rocks respond to the mind? Would they influence actions without contact? Could they be used to move heavy objects? Could they make one invisible or invincible? It is very significant that those who sought the development of radiant technology used the very archetypes of legend to guide their efforts.

There were those who now ran to the mountains in search of radiant rock. Many new varieties were found, but few gave the rare radiance produced by the original finds. Large crystals of fluorite and barite were torn from mountain scarps. Having been exposed to intense sunlight, each was then methodically taken into dark chambers for examination. In the clutches of secular scholars who sought purely mechanistic explanations, the comparatively weak glow of these rocks also remained incomprehensible. They did not equal those, which had previously been found. Words and logic failed to explain what Nature had revealed.

Late Renaissance science was searching everywhere for more examples of this wondrous rock luminescence. As continual examples of these fluorescent phenomena were found, science could do nothing more than simply collate the evidence. Soon, a large collection of minerals and experiences had been patiently compiled. Yet, none of the forthcoming finds quite equaled those early and spectacular events, which heralded the discovery of the famed radiant rocks of Europe.

Never was such a singularly religious treatment of the phenomenon ever seen again; and it is indeed curious that the radiant intensity of later retrieved rocks, mostly barites and fluorites, did not match those reported during the first spectacular wave of discovery. The original stones surfaced in the courts of various nobles throughout the Renaissance, the coveted possessions of rulers.

Their appearance and disappearance followed the rise and fall of their power. It has been impossible to trace the whereabouts of these rare gems whose great radiant intensity was "frightening". Discoveries of natural radiance such as these never made their appearance in Europe.

In the absence of newer reports, these remain inexplicable. Spontaneous sources of light made their appearance throughout the following centuries, but the truly great radiant light sources seemed to have dimmed once more. In this, the scholar is faced with a mystery. What is the reason for their appearance and disappearance down through the centuries?

## **NEW RADIANCE**

When the element "phosphoro" was discovered in 1669, the frightened alchemist Brandt fell down in silent prayer. He is often depicted in this poise at moment of discovery. Fascinated preoccupation with radiant rocks and other related phenomena always re-emerged with each new century. They came with great regularity during the Eighteenth Century, mostly associated with bioluminescent phenomena. Luminous insects, fungi, coral, fish, mushrooms, and so forth. The light they gave was neither eternal, nor radiant. These were again heralded ... but not with the great sense of awe or religious reverence rendered to those first wondrous manifestations.

There were those who grew accustomed with the "disappointing" nature of quests and natural finds. This sad tendency became the "expected outcome" of belief in any kind of visionary artifact. Disappointment and hopelessness was associated with the quest for dream archetypes in material nature. Nevertheless, several significant discoveries continued to overthrow this negative worldview, vindicating those who expect the natural world to surprise them.

A mysterious radiant stone was discovered in Connecticut during the latter 1600's by a Mr. Steele. Living in East Haddam at the time, Mr. Steele discovered a truly marvelous and precious stone, which he claimed visibly, radiated incredible volumes of light. He confided secretly with his landlord, a Mr. Knowlton, that he would soon be able to procure it in secret. He referred to the stone as "the carbuncle", relating that a huge sum of money would be theirs to share if only the secrecy could be maintained until time of disclosure. Mr. Steele seemed to infer that he had found a large deposit of the white material, and this increased the earnest expectations of his landlord.

By night, Mr. Steele brought the "white rounded carbuncle" back to the boarding house under thick covers. Despite the attempt at cloaking the stone, it glowed with an intensely penetrating radiance. In the dark, the light grew to an incredible and anomalous proportion, far exceeding that of sunshine. This material was secreted into the cellar of the house, one "not having any windows". There, Mr. Steele "worked on the material by night", performing chemical operations on the substance.

Despite the thick stonewalls, the light of this stone "shone right through" to the outer meadows. So great was its penetrating strength that the entire house appeared illuminated by fire, being seen at very great distances by curious

others. In addition to this mystery, large and continual booming sounds were heard surrounding the stone and the house. Mr. Steele stated that these sounds emanated from the stone. He labored on the stone every night until it was impossible to hide the secret any longer from neighbors. Mr. Knowlton, the landlord, thought it bewitched by Indian sorcery and angrily warned Mr. Steele to cease his evil acts.

Wrapping the carbuncle in sheet lead and taking on a disguised appearance, he fled from the town by sailing ship. Because of the stone's remarkable luminescence and equally powerful thunder, it was impossible to hide the stone. It has been presumed that the sailors, superstitious and frightened of the accursed carbuncle, simply threw him overboard with the object in his grasp. England, Steele's intended destination, was never reached by him. The stone, of course, was lost.

The large mysterious stone was originally dug out of a very specific hillside, known by the residents of the area. From descriptions given by the now-late Mr. Steele, a local cleric found the very spot. The cleric is the same gentleman, a man of impeccable character and irreproachable honesty, who wrote the journal from which the tale was derived. He spoke of the existence of the mystery carbuncle as a fact, in greatest confidence.

The cleric said that lightning was frequently drawn into the hillside at that very point, loud booming noises constantly emanating from the place regardless of the weather. The place was also known to the Native Americans, who treated the district as a sacred spot. Puritans believed the place bewitched, and avoided it with great terror. No mention was ever made of the strange substance again.

While sounding completely fanciful, such stones were actually observed in New Guinea by numerous traders who managed to penetrate the high mountains of Mount Wilhemina. These adventurers reported that native villages employed large "balls of stone" to brilliantly light the night darkness. The giant glowing stones were exceedingly bright, resembling "suspended moons". These filled the jungle region with their radiance, giving a surreal quality to the place. The source of the mysterious light found, those of the expedition were completely astounded. Poised high on very large pedestals, the huge white balls of stone glowed with a brilliance equal to that shed by electric lanterns. Their light did not fade with time.

Another such account came through Ion Idriess, a famed Australian writer. Aborigine elders, while recounting island history to him, reported the existence of "the booyas". These were large balls of stone, which glow with an eerie magickal light. Three of these stone "scepters" were known in the area. Poised on tall pedestals of bamboo, the light shed by the booyas was so bright that it enveloped its spectators. Held up toward the sky, the stone flashed with a brilliant cold green light, and was thus "charged". Villages thus illuminated by greenish white brilliance were seen far off at sea.

The diary of a conquistador (Barco Centenera, 1601) told of a similar, if not exact, stone ball lantern. The setting was Paraguay, in the city of Gran Moxo. There he reported discovering a huge stone pedestal, some twenty-four feet in height. This pillar was surmounted by a huge ball of stone, which shone with such brilliance that it illuminated both the lake and the inhabited area.



The English Colonel P.H. Fawcett reported hearing of cities in the same South American jungles whose people employed a similarly strange means for illuminating their night times. These were the very same kinds of cold green balls of stone, poised on very tall stone pedestals. Colonel Fawcett, of utmost integrity, sacrificed his life while seeking the ruins of these lost cities. His qualified opinion was that these places were "contemporary remnants" which retained the forgotten knowledge of ... much older civilizations.

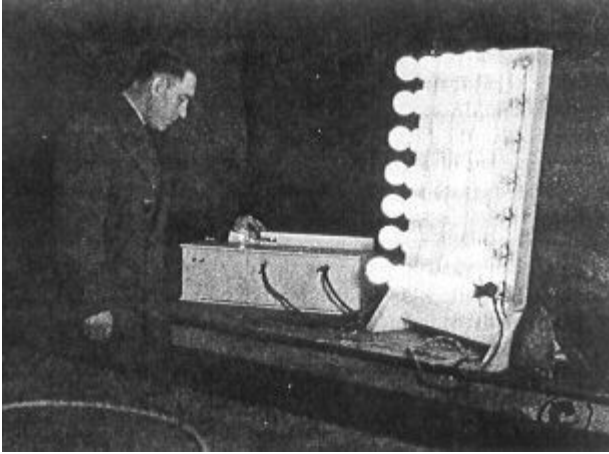
There are those who claim to have retained some portions of these legendary materials. Nicholas Roerich, symbolic master artist, traveled to Mongolia in 1925 after learning from monks of a famed stone, which "fell from Orion". Securing the stone on behalf of the monastery in which it was housed, he claimed to have discovered its amazing mind-expanding qualities. Both Nicholas and Helena Roerich accompanied a fragment of the stone to a neighboring monastery where it was enshrined.

These sacred stones, elements of the first world Nature, were said by him to radiate a sharply defined consciousness. The monks attested to the ability of this stone to "maintain peace and elevate consciousness to all the outlying districts". In these mountainous lands, timeless traditions preserve what centuries of European history would have erased. Could this have been the very stone, which Marco Polo had reported? Was this one of the "magickal stones" employed by Prester John? The couple returned home, encrypting the truth of this remarkable find in a series of mystical books ("On Eastern Crossroads", "Legend of The Stone", "Abode of Light").

## **ELECTRIC ROCK**

Numerous explanations for the phenomena of luminescence and phosphorescence flood the technical literature of the day. Each seek mechanistic explanation for the remarkable radiance of certain materials and apparatus. Despite these academic speculations, the phenomena of luminosity and phosphorescence represent some very essence of our deepest dreams and mythic desires. Strange light sources form the heart of all artifices of legendary magick. These are fascinating archetypes, which surpass our merely intellectual fixations. Why their mere mention fills us with an awesome reverence has much deeper source.

Each new technological epoch is always accompanied by the emergence of new and remarkable light sources. From the latter part of the nineteenth century until the middle 1930's there was an abundant emergence of such devices. While many of these "lanterns" required the forced generation of energies, there were a significant number of devices, which did not. In the following account, we will see that the fables of "lost magickal elements" and "radiant rocks" are grounded in truth.



**Dr. Thomas Henry Moray, an electrical engineer, began research on aerial static generators in 1910. He succeeded in deriving usable electrical energy from the earth's electrostatic field. Many others had achieved similar results in the century preceding Dr. Moray. Patents of "aerial batteries" fill the archives (Vion, Ward, Dewey, Palenscar, Pennock, Plausen). Their remarkable efficiency required only the establishment of elevated stations in**

**appropriate places, each differing in the actual mode of extracting the atmospheric energies. Some of these aerial battery systems successfully provided the utility requirements of small factories and telegraphic exchanges.**

**Dr. Moray was fascinated with the concept of drawing electrical energy directly from the environment. His initial and primitive tests brought a modest amount of electrical energy from his aerial battery design, producing clicking tones in a telephone receiver. With this device, he gradually developed enough atmospherically derived energy to light a small neon "arc lamp". Dr. Moray was encouraged, but not satisfied with these results. There had to be a way to get much more energy from the environment.**

**Static-field systems are necessarily tall aerial structures, requiring a great deal of space. Some designers used large balloons to hoist their static collectors. Others simply utilized fixed structures: large mountain-poised screens, point-studded poles. Benjamin Ward used an astounding "directional chute" which "funneled" electrostatic winds. Aerial batteries relied on the surface area of structures to absorb electrostatic charges. The larger the system, the more the available electrical power. Moray wanted to miniaturize these large systems. If miniaturization was to be the design goal, there would be a necessary and revolutionary change in the approach.**

**While investigating the output of his device, he discovered a feature of the natural static energy, which had somehow been overlooked by other aerial battery designers. The electrostatic power had a flimmering, pulsating quality to it. He learned of this "static pulsation" while listening through headphones, which were connected to telephone wires. The static came in a single, potent surge. This first "wave" subsided, with numerous "back surges" following. Soon thereafter, the process repeated itself. The static surges came "like ocean waves". Indeed, with the volume of "white noise" which they produced, they sounded like ocean waves!**

**These peculiar waves did not arrive with "clock precision". Just like ocean waves, they arrived in schedules of their own. Dr. Moray was convinced that these were world-permeating waves. He came to believe that they represented the natural "cadence of the universe". This intriguing characteristic suggested that small**

amounts of pulsating electrostatic charge might be used to induce large oscillations in a large "tank" of charge. The resultant oscillating power would be applied to industrial use. But experiments in these avenues were not very promising.

Dr. Moray believed that the earth's natural electrical energies were derived from the mineral content of the ground. He therefore began examining minerals with a rare devotion. Everywhere he went, mineral hunting was the first impulse. These minerals became quite a collection. Each was examined in his small laboratory to discover any possible new electrical properties, which might reveal the truth of his ideas.

There was practical truth in his first suppositions. The early days of Radio utilized mineral crystals to detect signals. Tesla was perhaps first in announcing that selenium crystals could detect the special rays with which he was principally occupied. Thereafter several different personalities claimed to have "discovered" the crystal detection method.

Essentially solid state in nature, the method uses mineral crystals to "detect" radio signals. Fine wires ("catwhiskers") touched mineral surfaces at specific "sensitive points" and were tuned with a small coil. One could receive radio signals without batteries by employing this detector. When connected with an aerial, a ground rod, variable coil tuner and headphones, the resulting "crystal set" provided a means for receiving strong radio signals. As children, many of us had these little crystal sets. They are still popular and may be purchased for a few dollars in science shops today.

Since the crystal was the key to better radio reception, experimenters were searching the mineral kingdom for new and more sensitive detector crystals. Early radio magazines taught the eager hobbyist how to mount special radiosensitive mineral crystals. There were several favorites of which radio hobbyists were very fond. A brilliantly reflective metallic crystal having a silvery blue cast, Galena was the mineral of choice. Pyrite, otherwise known as "fool's gold", is a close second to Galena. As a radio detector, Pyrite gives a good signal strength in the headphones. Some preferred Molybdenite, a mineral that is especially sensitive to infrared energy as well as radiosignals. Radio amateurs were always trying new mineral crystals to see which ones amplified radio stations with greater strength and clarity. Each had their favorite crystals. Little did the radio enthusiasts know why there was mystery in this quest for "radiant crystals"!

Advancing the science of crystal radio detection, certain researchers discovered that contact-combinations of minerals gave stronger signal amplifications. When carborundum and silicon crystal nuggets were pressed together with little springs in a metal tube, the signal strength was enormous. Small battery voltages turned these mineral detectors into amplifiers, early transistor-like detectors. Bi-mineral and bi-metallic hybrids were tried with good results. Mineral-metal, mineral-mineral, even multiple minerals in contact with two different metals produced enormous magnifications of signal strength.

Some detectors incorporated carnotite, a radioactive mineral. This greatly increased conductivity with a resultant enormous signal magnification. Coating

aerial points and catwhiskers with autonite, another mild radioactive mineral, produced amplified signals. There were small companies, which manufactured synthetic minerals ("Radiocite" and "Russonite"). These claimed superiority in the signal-boosting ability. There were scores of other sensitive minerals, which gradually appeared in the journals, some natural and rare, and some synthetic compositions.

In light of these wonders, a full-scale assault on the mineral kingdom was launched by both private and government research labs. It was discovered again that the mineral world is not simple. The mineral world is mysterious and locale-specific. Each ground site where minerals are found evidences unique mineral combinations and admixtures. The special qualities of identical mineral species can vary completely among geographic points.

Galena contains critical element traces, which differ completely among mining sites. It was found that Galena, taken from certain special sites in Kansas, gave an excessively clear signal output with high volume. This natural Germanium rich variation placed it far above other galena samples in radio-sensitivity. In addition, these crystals visibly differ from Galena taken from other places, having a rare blue green hue.

## **GROUND ENERGY**

Crystal sets were the ruling radio technology in the early 1900's. Listening to radio stations through a crystal set is still a treat! The sounds are startlingly clear ... and loud. An old neighbor told how his great-uncle so tuned the crystal set that "everyone in the house could hear the music". Most crystal radio sets are "unpowered" radios. The entire study field of unpowered radios has been receiving enough attention lately for the publication of several books on the subject.

The anomalous strength of crystal radio signals has much to do with design, conductivity, crystal quality, aerial surface, and ground contact. In many cases, the aerial may be completely eradicated when the ground connection is "right". In fact, the aerial can be eradicated, but not the ground. It is the ground connection, which is all-important.

Amateurs are rediscovering that specific ground points emanate radio signals in sufficient quantities to power loudspeakers! Recent reports from three independent researchers reveal that crystal radio reception through ground connection alone is shockingly powerful. The developed radio power in these crystal radio receivers was so strong that volume controls were installed to limit the output sound!

According to each report, crystal received radio signals actually seemed to "grow in strength" with time. The anomalous growth is one, which numerous researchers have noted. The pattern follows the "vegetative growth" which Reichenbach observed in his "Odic" energy and which Stubblefield saw in his "electrical earth waves". Vegetative growth patterns appear as a gradually increasing signal, reaching frightening volumes at the maximum. In one such instance, the weak signal strength required headphones. Within several days

however, the headphones had to be replaced with a small loudspeaker. This loudspeaker was then replaced by a much larger diameter horn. Finally, the horn had to be disconnected periodically because neighbors complained of the "outrageous booming sound". Vegetative signal growth. Not an electrical characteristic.

One may view the crystal radio receiver as a tuner of crystal ad, the radio signals and other electrical values merely appearing as epiphenomena (Meinke). Recall that Reichenbach hoped to use Od in a new non-electrical technology, and that later pioneers developed Radionic instruments to these ends. The engineering convention of the early Twentieth Century had not yet realized the active appearance of these more fundamental energies in their circuits, as did their predecessors in the telegraph industry.

The idea of obtaining and using "ground energy" is covered in secrecy. What would happen to fossil fuel companies were it even suspected that vast electrical energy could be simply pulled from the ground at specific points? These energies began "making their appearance" during the years of telegraphy. Well placed telegraphic ground plates were able to operate with energy simply taken from the ground. Several early telegraph lines historically continued signaling among stations, though their batteries had been "dry and dead" for several years! I spoke to an engineer who saw this kind of system operation when yet a teenager. Seeing this strange system in full working order so impressed him that, developing that rare taste, he forever sought such anomalies as a lifelong passion. Numerous articles from the last century retell exact details concerning these phenomena.

It is possible to demonstrate its principle with ground rods and galvanometers. Yes, there is great energy in the earth, vast natural energy that is accessible only in specific points. But the true and fundamental identity of that energy has been questioned. Most qualified investigators observe that ground energy does not "begin" as electricity. Electricity from the ground only appears after several natural stages of transformation. Vegetative growth. This is evidenced in old telegraph lines where measured currents do not provide adequate wattage for the activities, which are thereafter observed in the components. This was especially true for the forgotten chemical telegraph systems, where scarcely any electrical current managed the successful exchange of strong signals.

The forgotten science of selecting "special ground sites" is re-emerging among VLF radio researchers. No two-ground sites are ever the same. It is possible to probe around in a garden with simple meters and metal rods to prove this claim. Touching carbon and iron rods to the ground registers as currents ONLY when specific points are touched. It is fascinating to find extremely active sensitivity spots immediately adjacent to points, which produce absolutely no response in meters. The effects measurably increase despite rod separations.

In no manner can these be referred to as "electrolytic" or "battery actions", since the requirement for best energy extraction by this method is dry ground. Rainwater destroys these effects. Moreover, it is only when the right ground contacts are made that one will watch the meter "pin". There the meter will remain until the rods are removed. Such energetic discharges can continue for months!

Removing the rods, however, produces a more astounding phenomenon. The meter, dropping to "zero", does not rise again when the rods are replaced in their very same ground-points. One can lift one rod out of its well, watch the meter drop, and then instantly replace the rod with no resultant energy rise. Ground energy withdraws in a manner suggestive of "biological irritation". Each of these phenomena may be demonstrated to personal satisfaction with very simple apparatus.

## **THE SWEDISH STONE**

Dr. Moray traveled to Sweden as a missionary of the Mormon Church in 1911, visiting relatives for a summer. He frequently hiked through the lovely green meadows and blue mountain ridges to examine and collect more minerals. Here, in the historical land of gnomes, he found an unexpected treasure. But it was this part of his biography, which separated Dr. Moray from fictions and fables.

It was during one such mineral expedition that Dr. Moray found a soft, silvery white mineral, which greatly attracted his attention. Despite his great difficulty in obtaining the necessary parts for even a simple laboratory examination, he found that silver cat-whiskers produced electrical rectification. When the silver contacts touched the mineral, the stone would pass battery currents in one direction. Believing that this material might be useful as a new industrial radio product, he stored a good quantity of the stone for his voyage back to America.

Dr. Moray never elaborated on the "discovery" portion of his story. He mentioned only that he obtained the material from two separate Swedish sources. The first samples were crystalline, being found in a hillside outcropping of rock. The second, a smooth white powder, was scraped from a railroad car in Abisko. Both materials were identical in composition. No doubt, he wished to secretly preserve the location of this mineral lode for future use, since he never told of the exact source location.

Endowed with extremely peculiar electrical properties, the stone provoked great surprise. Implementing the mineral as a crystal radio detector, he discovered several unexpected phenomena in quick succession. Dr. Moray discovered that radio signals were so amplified by this mineral that headphones were destroyed by the current. He then scaled up the output to accommodate a very large loudspeaker. Tuning in any station produced excessively high volumes of sound without external power! The fact that these crystal radio receivers required no extra power when achieving these activity levels suggested new experiments. His assessment of the mineral was mystical. His perplexing comment had no prior equal in the electrical world.

"What I have found is a mineral radio detector, having self-amplifying abilities".

Now, bright blue-white sparks were observed playing along the thin wire connections around the mineral at specific station settings. Mysterious! Incredible! The stone provoked a world of theoretical "problems". Any device with "self-amplifying abilities" is necessarily drawing its power from somewhere. But, from what place of origin was this "Swedish Stone" drawing its self-

amplifying abilities? According to convention, there were no such sources to be found.

Unable to yet find an answer, he modified his theory on earth electricity. He came to believe that natural earth electricity was entirely developed through special minerals like the one he found. Minerals, he reasoned, were able to modify more fundamental energies, which emerge from the ground. During the process, electrostatic charge is developed. This is why the earth maintains its charge. It possibly explained why the earth static-charge also "flimmered" in pulsations. Whatever causative energy was manufacturing the charge in minerals was obviously a pulsating one.

There was no precedent for the peculiar behavior of this mineral. No existing electrical explanations for the activities whatsoever. Despite his inability to comprehend why the stone performed these marvels, Dr. Moray continued his empirical experiments. In the process, he developed several modifications of his original theory. Based on strong intuitions, he formed a doctoral thesis in 1914, postulating the existence of a "sea of energy" from which all future power would be derived.

## **CRUCIBLE OF THE STARS**

These events all took place in the obscure privacy of Dr. Moray's early life. In 1917 he was married. He managed to obtain several successive engineering jobs, all the while pursuing his dream of deriving energy from the earth. Between 1914 and 1921 he was unable to pursue this experimental work for any sustained time, the happy duties of work and family life absorbing all his attentions. His engineering employment record is prestigious, considering the time frame. He was employed as Designer and Engineer by the Utah Power and Light Company, Engineer for the Phoenix Construction Company, Assistant Chief Engineer for the Arastard Construction Company, and Division Chief Engineer for the Mountain States Telephone and Telegraph Company.

Having labored on his mineral through a sudden inspiration, he now advanced the operation of the device, a cylinder of eight-inch diameter and six inches height. Utilizing an aerial and a good ground rod, Dr. Moray successively powered both a 100-watt incandescent lamp and a 655-watt heater. It was found that deeper ground rods produced visibly brighter lights. The world did hear from Dr. Moray in 1925. There, in Salt Lake City, he began performing wonders with his new "energy receiver".

Several local witnesses observed these experimental proceedings. It was seen that power increased with increasing ground rod depth. He now approached several authorities in hopes that the invention be given proper treatment in an established research laboratory. Then, he anticipated that the industrial groups who handled power generation would be the most reasonable people to contact for the deployment of his revolutionary technology.

In that October, Dr. Moray brought witnesses from the Salt lake City General Electric Company in order to formally disclose his discovery. The demonstrations proceeded as before. Dr. Moray showed that the removal of either the aerial or the

ground caused power to fade, proving the external source of the energy. Several qualified witnesses arrived from Brigham Young University to observe the device in action. Themselves engineers, he allowed them to examine and dismantle the device completely so that there would be no accusation of fraud. They even tore the boards open to see if there were any concealed transformer coils or batteries, which would account for the tremendous power production. No fraud could ever be found in this severe examination. The one component, which Dr. Moray would never show the others, was the size of a pocket watch. In it was his precious "Swedish Stone". In a strange way, in a most remarkable way, Dr. Moray had found an eternal lamp! This caught all the authorities off guard. Careful to watch over and protect every rigidified dogma and institution, the guarded hierarchies of self-centered authority were shaken from their foundations.

Academic authorities declared that Dr. Moray's device was simply receiving energy from power lines or local radio stations. They demanded that he take the device to various locales in order to pinpoint both the true source of the energy and establish operation criteria. No industrial development of the device would be considered, they stated, until he complied with the stated requirements.

Taken across the countryside in hopes of realizing the failure of the device, these academicians were thunderstruck when the device continued operating. It was impossible to find a place where the output showed any slight drop in power. The device worked during snowstorms, rainstorms, and in deep mineshafts. It was sealed in a metal vault, dragged many miles away from power lines, and taken to mountainous terrain, which did not sustain any radio reception.

In each location the device suffered not one degree of diminished output. Appliances usually tested simultaneously in these desert locales included thirty-five lamps each rated at one hundred fifty watts, a one thousand watt hand iron, a heater, and a fan. Moray himself wished to test whether the device would drive a plane or submarine. The device was taken up in a plane and submerged in a watertight container at the bottom of a lake. In each case the output remained the same.

Once, while demonstrating the device before a group of electrical engineers, a sudden sustained dark blue spark of some eight inches length was observed. When the engineers saw this, they were truly amazed, as the spark discharged from one of the output leads into midair. The incoming energy had actually momentarily exceeded the sustaining ability of the receiver. Obviously, this energy was coming in "from the outside". It was later found that this blue "spark energy" was a current, which could penetrate several solid plates of glass.

Some analysts identified this display with "high frequency electrostatic" energy, but this was an impossible conclusion, since the glass-conducted current could perform all the same energetic wonders as if passing through metal wire. The question was then to address the exact nature of the receiver's current output. Was this a different kind of electrostatic energy? Were the output currents of a different "species" altogether?

Now, Dr. Moray guarded his detector with special care. The new component was no longer the size of a small pocket watch. The modified detector looked like a small crucible with its cover-welded shut. This, Moray removed and placed in his



pocket whenever the tests were completed. He later revealed the nature of the device, stating that it contained a piece of the soft "Swedish Stone" and "a few extra additives". A few close associates were permitted to examine this component. There was nothing more than what his drawings showed in its metallic shell. The whole secret lay in the nature of the mineral, the lost and miraculous mineral. The radiant stone. What remarkable truth did Dr. Moray learn? How had he managed to transform his device into this veritable powerhouse?

## **SPACE RAYS**

Years before this demonstration, the absence of reasonable academic explanations forced Dr. Moray to plunge into study. Preparation for his thesis required a substantial personal library, which he had gradually acquired. In the process, he secured several rare fifty-year-old volumes on radioactivity. These included the theories of Nikola Tesla and Dr. Gustav Le Bon, both of whom had each published extensively on the subject.

Tesla's theory of radioactivity has never been adequately appreciated, despite the fact that he was first in demonstrating the existence of cosmic rays. When announced, after a period of intense investigation, Tesla was heckled by the American academic community. But, long before Henri Becquerel and Marie Curie investigated radioactivity, Nikola Tesla first called attention to the notion that matter was spontaneously converting into energy. This process, Tesla stated, was an eternal one. A steady external shower of stimulating "cosmic" rays was penetrating all matter. These "cosmic rays" bombarded and disintegrated all matter. The process was measurably increased during the daylight hours because, Tesla stated, the bombarding rays come from the sun. These external rays were possessed of incredible electrical potential.

Tesla cited particle potentials exceeding "one hundred million volts". He said that he had measured these potentials with "special" detectors. These might have been selenium detectors in vacuum bulbs, as used in his radio receiver patents. The electrified particles were constantly bombarding all materials, causing radioactivity to be observed. Tesla stated that all matter was in the eternal disintegration process. He claimed that the more dense metal elements were more easily recognized as "radioactive" because the dense materials were "better targets". According to this viewpoint, radioactivity was the manifestation of externally sourced agencies. Tesla insisted that the true source of radioactivity was outside, not within, matter. Ray bombardments "from cosmic space" were his explanation.

Tesla defined true cosmic rays as an entrant light-like effluve having incredible penetrating power. These were in no way similar to the conventional cosmic rays detected by Gockel (1910), Hess (1912), Kohlhorster (1913) or Robert Millikan (1925). Tesla viewed his discovery of these light-like effluves as holding the only promise for energy application. According to Tesla, the energy of these effluves greatly exceeded those of cosmic ray "particles".

When Moray read these ideas, he seemed to find a piece of the puzzle, which so eluded explanation. Another researcher, a contemporary of Tesla, succeeded in advancing the "external bombardment" theory of radioactivity with new experimental proofs. Dr. Gustav Le Bon, a Belgian physicist, examined and compared ultraviolet rays and radioactive energies with great fascination. Concluding from experiments that energetic bombardments were directly responsible for radioactivity, he was able to perform manipulations of the same. He succeeded in diminishing the radioactive output of certain materials by simple physical treatments. Heating measurably slowed the radioactive decay of radium chloride, a thing considered implausible by physicists.

In each case, Le Bon raised the radium temperature until it glowed red-hot. The same retardation of emanations were observed. He found it possible to isolate the agent, which was actually radioactive in the radium lattice, a glowing gaseous "emanation" which could be condensed in liquid air. Radium was thereafter itself de-natured. Being exposed to the external influence of bombarding rays, the radium again became active. The apparent reactivation of radium after heating required twenty days before reaching its maximum value.

Dr. Le Bon was utterly dumbfounded when; forcing theory into fact, other colleagues announced the "immutability of radioactive decay". He also perceived where their erroneous logic would ultimately lead when they cited "internal instability" as the source of radioactivity. Separating themselves once more from the external world of energy, they would lose more than they imagined themselves gaining.

Le Bon disagreed when physicists began isolating the heavy metals as "the only radioactive elements. He had already distinctly demonstrated for them that "all matter was to a degree radioactive". He was first to write books on the conversion of ordinary matter into rays, an activity he claimed was constant. He showed that this flux from ordinary matter could be measured. Le Bon stated that the reason why all matter was spontaneously emanating rays was not because they were contaminated with heavy radioactive elements. Ordinary matter was disintegrating into rays because it was being bombarded by external rays of a peculiar variety.

The external source continually bombarded matter, producing a continual energetic release, "an effulgence" of energy. Because the energetic disintegrations of matter occurred under focused sunlight, he first cited a special photoelectric effect. But, judging that nuclei were actually disintegrating in this process, he saw the need for a new and "extended" photoelectric effect. Matter disintegration and conversion into energy were both described in several treatises written by Dr. Le Bon thereafter. He described matter conversion processes, which may only be termed "photonuclear" in effect. He suggested that photonuclear reactions take place in all solar irradiated matter. Light itself could convert ordinary matter into pure energy. Exposure to focused sunlight could demonstrably convert certain light metals into "energetic emanations".

He traced the actual portion of the solar spectrum which first manifested this matter-converting ability, isolating it in the deep ultraviolet bands. In these experimental arrangements, full focused sunlight fell on metal plates with their

remarkable electrostatic radioactivity the result. But, the natural process of radioactivity in all materials proceeded without help from experimenters. What portion of the solar spectrum existed which could continually bombard matter and produce the observed radioactivity of all metals?

Le Bon stated that there were invisible and highly permeating solar spectra whose power could pierce buildings. They existed beyond the light rays, beyond the deep ultraviolet. Through the use of special sensitive emulsions, he demonstrated the unique identity of the mysterious rays. Dr. Le Bon showed that he could take photographs of outdoor scenes right through laboratory walls. He distinguished them from ordinary infrared rays. "Dark light" he called it, identifying it with Reichenbach's Od luminescence. "Dark light" was a part of the solar spectrum, which could sufficiently penetrate all matter and disintegrate it.

## **PHOTONUCLEAR REACTORS**

Radioactivity was a very slow process. Elements were not being consumed every day in a rapid, uncontrolled process of dissolution. The tremendous amounts of released energy did not measurably diminish the mass of any source metal. Why was the radioactive process so very slow and moderate? What natural condition moderated the otherwise annihilating matter-dissolving process?

In Dr. Le Bon's thesis, the photonuclear reaction involved a special "coupling action" which naturally existed between element and ray. Each element responded to a specific light energy series. Whenever the proper ray struck near the specific element, there was a disintegration "reaction". It was not necessary for the ray to strike the element dead-center. The mere proximity of the ray to an atom of the element was sufficient to stimulate atomic disintegration.

Disintegrated atoms could produce very distinct products of particles, forces, and rays. These products and the nature of the radioactive disintegration was determined by the element used and its specific range of resonant rays. One could design a reaction by appropriately arranging elements and rays. Not every ray, which struck near an element, could provoke the photonuclear reaction. Specific rays and specific elements were necessarily brought together before the reaction could begin. A "fortunate providence". Furthermore, that this bombardment was a true reaction and not just a simple collision became clear by experiment.

According to Le Bon, the intensity of the bombarding rays was not important. When deep ultraviolet rays couple with the proper "resonant" element, showers of identical rays were liberated. The photonuclear reaction was a high-yield electron reaction. Careful theoretical survey of the photonuclear reaction reveals its activity to be a high yield electron reaction. Proper entrant photons from space observably stimulate electron cascades in specific materials. Each photon was capable of stimulating the emission of countless others in a chain reaction which completely swept through the material.

In this mounting cascade, prolific volumes of atoms were disintegrated. Only the presence of elemental "impurities" blocked the continual disintegration of certain elements. The photonuclear process was a chain reaction of far greater

significance than those, which rely on the release of slow neutrons. Since a single such ray could stimulate the dissolution of a great number of atoms, energetic emissions were constantly being radiated from the most ordinary of materials. Only the spurious and scattered nature of solar light prevented the complete annihilation of all terrestrial elements. Nevertheless, the incidents in which proper rays and elements were "resonantly" disintegrating were sufficiently high to produce measurable radioactivity in all matter.

Dr. Le Bon stated that there were solar rays having far greater potential than the deep ultraviolet. The stimulation of radioactive emissions took place in "successive stages". The complete disintegration of matter occurred when very specific gamma rays resonantly coupled with the proper elements. Such ultra photo nuclear reactions released unimaginable amounts of energy. These photonuclear reactions were "complete". There were no intermediate particles formed by these disintegrations.

Thus, only specific gamma rays could completely disintegrate a specific resonant element. It was by these rays that matter was completely converted into pure energy with no intermediate particles. Thus, in the absence of these gamma rays, the reactions were "incomplete" ... far less than the "peak" possible conversion into pure energy. These incomplete reactions produced the various particles and rays, which physicists were studying as "radioactivity". Continuing his thesis, Dr. Le Bon discussed the cosmic condition, calculating the amount of energy potentially released in his photonuclear process. It was only the rarity of specific gamma rays and the equal rarity of their resonant elements, which prevented the world from dissolving in a flash. Thankfully, the earth surface elements which would dangerously explode by this process into pure energy had long been providentially been dissolved. Stars were eternal reminders of this potential.

Le Bon showed that rare gamma ray bombardments had indeed penetrating all matter, creating the steady conversion of matter into energy in the stars. What Dr. Le Bon had succeeded in demonstrating was never really appreciated by those who later became enthralled and entrapped by thoughts of nuclear fission.

He could arrange the focused action of such stimulating rays with resonant elements, incalculable volumes of energy being derived under control. The output would last for an eternity. An eternal lantern! Dr. Le Bon was the very first theorist to cite "intra-atomic" energy as the future world energy source. He also was first to design and operate special reactors for the conversion process. Light metals being the "fuel" for his photo nuclear reactor, he stated that matter would not be radically diminished even when the disintegration continued for a century or more.

The photo nuclear process was one in which all sorts of strange intermediate particles could emerge. Some of these might not be of the "known" particles. Dr. Le Bon also spoke of these as "aetheric" conversions. There were two extremes in the photonuclear process. One, a range of partial conversions produced numerous particles and rays. The other involved the "complete conversion" of matter into energy.

Le Bon showed how specific resultant energies could be determined by "designing" the photonuclear process. One can theoretically tailor these

reactions to produce heat, light, motive force, projective force, attractive force ... whatsoever kind of energy is desired. His "intra-atomic energy" was the result of tailor-made reactions in which physicists could determine the energetic outcome with precision. One could produce pure electrostatic flux with no other dangerous emissions by reactively coupling the proper rays and elements together.

The absence of dangerously penetrating rays prevented the complete dissolution of terrestrial elements into energy. All naturally observed radioactivities were incomplete and "haphazard". Solar energy normally contained insufficient concentrations of both deep ultraviolet rays and more transcendent rays to release uncontrollable amounts of energy. Nevertheless, Dr. Le Bon declared that the photonuclear process could be harnessed.

In astonishingly simple experiments, he repeatedly demonstrated that the proper resonant coupling of rays and simple elements did release sufficient charged particle volumes to surpass those of the so-called natural radioactive elements. He performed this feat with both magnesium and tin in highly focused sunlight. The resultant pure electrostatic release exceeded the radiant output of radium itself! When colleagues protested that he had simply evoked the "photoelectric effect", he proved them wrong by demonstrating the two effects side by side. The photoelectric effect, erroneously attributed to Heinrich Hertz, was actually discovered by Nikola Tesla. It was found that ultraviolet rays could stimulate the emission of electrons from light metals. The output from this effect was enormously magnified when specific rays were matched with specific elements. When this resonant coupling was arranged, the emanations were anomalous and prolific.

Le Bon charted the resonance of rays and elements, beginning in the deep ultraviolet. Each experiment showed that pure electrostatic energies could be extracted from the partial disintegration of light metals when very specific deep ultraviolet rays were filtered. He also showed the tiniest introduction of gamma rays, could stimulate complete and rapid energetic conversions in the appropriate resonant elements. Where did the gamma rays come from? Stars radiated gamma rays earthward. It was the crucible of the stars.

## **SEA OF ENERGY**

In these texts Moray found pieces of what he was looking for. The answer to his energy source possibly lay in rays, released from the sun and the stars. It was intuitive guidance perhaps, but this is all he had to work with. The Le Bon photonuclear theory was the closest anyone had come toward providing Moray with clues toward explaining the performance of his energy-receiving mineral. He came to believe that the crystalline lattice of the "Swedish Stone" was intercepting certain of these rays. The necessary research now would involve determining their exact nature. He would also need to discover why his strange silvery white mineral was able at all to intercept these rays. Additionally, why was the ground connection always necessary?

If the crucibles of the stars were converting their matter into radiant energy, then the energy received would be an eternal source. For the moment, he looked up in thanks. The stars were supplying all the energy the world ever needed. Manifestly, here was Providence again at work. How he had managed to find the mystery substance was in itself a chance, which no one could have foreseen. How he would use its power would now determine both his and the world's destiny. Eternal lanterns!

According to Le Bon, universal matter is turning into energy in an unceasing photonuclear process. The process occurs in the stars, driving their vast expulsions of light and other energies. In doing so, they too were special radiant sources, flooding space with all kinds of rays. The sun was such a source. Being so very near to the earth, its permeating influence could not be ignored. The sun expelled prodigious volumes of rays throughout its space. Earth received a great gale of these rays. Some of them were visible. Most were not. Natural radioactivity was the result.

All materials were theoretically being bombarded by these permeating rays. This was especially evident when certain materials were exposed to focused sunlight. If the more invisible rays of the sun were the most likely candidates for the Swedish Stone's activity, then there should be energy maxima and minima throughout the day.

As Moray read of Le Bon's elegant tabletop experiments, he could not help but marvel over the apparent conclusive quality of his statements. Certainly, they were pale in comparison with those, which he himself was obtaining. But it was the Swedish Stone, which made the difference. What Dr. Le Bon did not have was "the stone". Something about the structure of this stone permitted a powerful electrostatic emission possibly under the ordinary influence of solar rays. Its phenomenal output greatly exceeded that which was experimentally produced by any single element of natural origin.

The mineral possibly held the secret to intercepting special solar rays. The mineral held the secret to releasing the staggering electrical output, which he was learning to harness. Adding his own experimental verifications to Le Bon's theory, Dr. Moray studied photonuclear process in materials other than elemental ones. While Le Bon studied pure metals (tin, magnesium, lithium, cesium, and potassium), Dr. Moray focused his attention on the crystallography of minerals.

If it were possible to discover which rays from space activated his mineral, then perhaps it would also be possible to improve the operation of the detector. Isolating the specific rays, which he believed were responsible for the "Swedish Stone" phenomenon, would give more credence to the Le Bon explanation. In addition, if it were possible to match synthetic microcrystalline structures with their "proper" ray energies, then he could develop even more powerful electrostatic emitters.

The study was completely revolutionary. Dr. Moray advanced the Le Bon theory to the point where it became a plausible thesis. He was convinced now that a "radiant sea of energy" suffused the earth. Moray repeatedly stated that this "sea of energy" continually permeated the earth in energetic gusts. The rays he proposed were responsible were "from beyond the gamma ray bands".

Recognizing that these naturally prolific energies and their strange dynamics required a special interceptor, Dr. Moray stated that:

"The most widespread and mightiest of the natural forces has remained so long unrecognized ... because man lacked the reagents necessary for the proof of its existence".

Dr. Moray had found one of those reagents in the form of a mineral crystal. An eternal lantern!

Nikola Tesla always spoke of the means by which the energy of space rays could become available to humanity. Moray named his device the "COSRAY" receiver, believing that mineral intercepted cosmic rays were causing the material to disintegrate. The disintegration process in his mineral detector was not complete, electrostatic charges being the photo-reactive products. The dream of endless power was in his possession. But there would be necessary new research in order to greatly intensify the output of the receiver.

## **RADIOACTIVE IMPULSES**

Though his earliest experiments produced several kilowatts of "electrical energy", it would require much longer development for his mineral to be worked into a completely potent energy source for humanity. Dr. Moray observed in his early experiments that the extremely powerful "electrostatic" energy came in powerful intermittent pulses. In circuits outfitted with a few radio-tuning components, he found it possible to "sharpen" the effect. The operation of the device was never stable in those days.

Large bluish sparks often sprang out of the connector wires, this effect having been observed in public several times during early trials. The escaping electrostatic energy was wasted because the receiver could not sustain the incoming power levels. This represented a potential of energy, which could be harnessed under the proper conditions. But how to sustain the tremendous power? After having studied the theoretical writings of Dr. Le Bon Dr. Moray believed that he had found the most probable explanation for the intermittent electrostatic bursts.

If solar energy was an incoming gale, then that gale might not be completely homogeneous. What appeared to be a steady stream might, on closer inspection, be a completely disruptive flow. Judging from the observed solar surface, it was more likely that solar rays were being expelled in intermittent violent explosions. Both the activity of the mineral and its unpredictable pulsing quality could be explained if one assumed that very special space rays were arriving on the earth's surface in solar "gusts" and "explosions". In his own terms, they arrived "like huge ocean waves". "Radioactive waves" he called them.

So. The blue sparks appeared because the intermittent gamma ray pulses arrived in unpredictable bursts. Now as he watched the radiant receiver producing its intermittent bursts of electrostatic energy he understood what was occurring. The individual impulses were potent. Each contained enough energy to run hundreds of appliances for the fraction of time during which they were received. Taken over

a longer time period their intermittent nature made them generally ineffective for common utility. The solution to this major obstacle was a means by which the initial surge could be stored and thereafter "spread out" over a great time period. New kinds of energy components were therefore devised by Dr. Moray for this very purpose.

Dr. Moray developed several novel circuits in which these components were combined and staged. Several "COSRAY" receiver models were developed in the process. The intermittent impulses were applied to special capacitors through equally special electrical "plasma switches". Received burst energy was "leaked" into these components. The system then spilled out their contents into each successive output stage until the accumulation was too enormous to contain. Back surges were blocked by appropriate components. The volume of electrostatic energy poured forth like a sustained lightning bolt.

Dr. Moray developed a strange plasma "tube" in which the mineral was poised. There were several features of this "tube" which may be best comprehended when studying the diagrams. The mineral was poised against the inside surface of a metal crucible, pressed there by several other small beads of another substance. A straight metal cat-whisker touched this conglomerate of beads; the lead from this was drawn outside the crucible. The whole assembly was filled with an inert gas and hermetically sealed. The crucible was referred to as the "tube". It was a hermetically sealed solid-state composition having a metallic envelope.

This component, with all of its parent samples were soon placed in a large safe after each experiment. Experimental developments in these regards were completely empirical and thoroughly painstaking. But, very gradually, he had developed a number of models whose output energy was truly impressive. His continual work with the design was accompanied by continual private exhibitions. Between the years 1925 and 1929, he performed the tests before hundreds of qualified personnel.

In its most powerful embodiment, Dr. Moray described his "bucket brigade" of multiple staged components. A few minutes were always required in order to "tune in" the receiver. Earlier models required an initial "spark start" which was supplied by a small handheld "frictive" generator. Once tuning was established, the energy would appear immediately, lights instantly reaching full candlepower. Dr. Moray successfully developed 7500 watts through radiant energy conversions. The most powerful embodiments each supplied 50 kilowatts. This output could run the needs of a small factory throughout the day.

On several occasions there were obvious environmental "interferences" which temporarily stalled the activation phase. But once these were overcome, the device operated with a familiar constancy, which defied all physical rule. Sharp hammer blows or physical impacts commonly interfered with the detection process. This was due to the frailty of silver wire contacts touching the "Swedish Stone" inside his special metal tube.

The smaller device served as a solar observatory, a completely unexpected instrument. Dr. Moray could make direct observations of solar pulsations. The device followed solar patterns, producing its most powerful outputs during the



day. It also showed a very minor corresponding change during the night. Considering that the outputs were so enormous, Dr. Moray was not disappointed. He was simply fascinated.

The precious mineral became "more precious" when he discovered its rarity. Identifying the material with local varieties of the same, he found to his very great amazement that only the Swedish Stone produced the energetic output. This material was completely phenomenal in nature.

Demonstrations with his vastly improved detector model still required an aerial "absorber". The pulsating electrostatic output more powerfully manifested with taller and larger surface area aerials. No activity occurred without the aerial and ground connections. Activity also vanished when the aerial was "shorted", touched, or approached in any way. The earliest photographs show a large outdoor aerial to which the receiver was necessarily attached. The unit was made less attached to this physically stationary poise when a small copper aerial was strung across the room. The need for even this aerial was also eventually replaced by an internally connected copper plate.

Comprehending this requirement demands study of earlier writings. The cosmic rays, which Tesla reported, were "ultra material particles" which were capable of passing through glass. Tesla observed how projective cosmic rays of this kind were literally drawn into metals. This metallic focusing effect allowed a capacitative surface, effectively extending the space connectivity of the Moray detector tube. The detector "tube" was really a sealed metal crucible, the metallic products fused in place and filled with argon. It was reasoned that space rays were focused by the detector's metallic envelope, just as certain X-Rays can be focused by appropriate metal forms. The copper plate conductively exposed more of the mineral to surrounding space, making it a more efficient focal point for the specific stimulating space rays. The one feature, which Dr. Moray was never able to dispense with, was the ground connection. Ground connectivity alone made this device operate, a characteristic, which was studied with great intensity. His almost daily displays had notable witnesses from the region. The strange "electrical machine" became a topic of great interest among the scientific and corporate communities surrounding Salt Lake City.

Being the size of a tabletop radio receiver, the knob-covered mahogany box generated some seventy five hundred watts of electrical energy. Photographs show that the output from this device was conducted to external appliances by two heavy cables. The total output was strong enough to brilliantly light fifteen two hundred watt lamps. Additional power from this device operated a small flatiron, a heater, and a fan.

He continually claimed that the detector was receiving radioactive signals from the sun and stars. Moray's device utilized these radioactive signals to a degree, which does not seem possible when contemporary principles are applied. Despite these theoretical boggles, history repeatedly teaches that empirical discovery rules and often contradicts what existing science considers "possible".

Mysteries surrounded the output currents, especially when they were applied to electrical household appliances. Currents from the Moray receiver were able to raise the candlepower of ordinary household lamps far above their normal output

rating. When operating such incandescent lamps, the filaments themselves never lit. But the gaseous spaces above the filaments became a brilliant ghost-white. Moreover, the temperature of the lamps remained externally cold to the touch. Several persons at various times reported that physical movement near the device, whether of the whole body or of hands, could throw the tuning off. This would cause the lights and other attached appliances to "go off". His new receiver used several special "tubes" in parallel. These "tubes" were hermetically sealed metal containers. A dear friend, Gabriel Mes, machined parts for Dr. Moray. Through Mr. Mes, several European craftsmen in England and Germany fabricated special parts for the tubes. Alfred Burrell, a local jeweler and watchmaker, soldered contacts and fine silver wires. No one else was ever permitted to see or handle the interior of these strange metal tubes. Dr. Moray referred to them as "boosters" in his patent application of 1931 (application 550611).

The boosters were delicate. Large vibrations would dislodge the internal contacts, causing the operation to fail. In another large family gathering, Dr. Moray demonstrated his receiver using a long copper wire as the "absorber". Someone asked what would happen if they touched the wire. Dr. Moray said that the lights would go out. When then asked whether this would cause shock, they were informed that it would not.

Currents from the receiver produced strange optical phenomena. Photography became very difficult when using the light from lamps lit by the receiver's output. Large dark spots blacked out most of the photographic detail immediately over the lamps, while the surrounding dark spot boundary gave a sharp clarity. This clarity was a visible effect, persons noting the stark details, which these lamps conferred throughout their surroundings. In addition, these dark spots had defined diameters, extending beyond the lamps perhaps only half a foot.

The dark spot phenomenon was anomalous because the actual light radiated by the lamps photographically extended beyond the dark spot. Rooms photographed by these lamps were awash in foggy gray regions, which seemed to hover in mid-air near people. While the fogging effects were captured on film, no such phenomena could be visibly detected. Fogging could be explained if invisible ground-sourced arcs were discharging from the device into the open air surrounding the receiver. Careful examination reveals that this is so.

The dark spot, which surrounds the receiver, is a "brush like" discharge of a very special energy. It extends in a confined perimeter surrounding the receiver. The ground connection seems implicated in this process, identical radiant black discharges having been observed in grounded radionic tuners. Dr. Moray understood that his energetic "waves" were incredibly small impulses of enormous power. Was the earth capable of receiving, sustaining, and vibrating back such gamma ray impulses? Was the earth the absorbent medium, his mineral being the converter? New theoretical analysis was demanded by these penetrating questions.

Motors, rebuilt to accommodate the energy supplied by the receiver, ran at extremely high speeds. They, like the lamps, also ran "cold". Dr. Moray reported that when they ran in the dark, they were surrounded by a violet corona. The

paradox in these matters came when the current was applied to ordinary resistive heating units. When properly resisted, the currents produced heat. Dr. Moray showed this effect in ordinary electrical floor heaters, which became red-hot. In his numerous public and private demonstrations, Dr. Moray showed that the energy receiver could light conventional lamps, rewired motors, and power heaters.

In the largest COSRAY receiver, Dr. Moray successfully converted cosmic rays into fifty kilowatts of electrical energy.

Part of his lost art, which made this fifty-kilowatt radiant receiver possible, was a special "stage-by-stage" amplification. It was by this staged reception and amplification (quoted as his "bucket brigade" amplifier) that all the received energy was handled, being absorbed among several simultaneous channels and "spread out" into one energetic flow.

Dr. Moray described his multiple staged process as one by which "a small spark was expanded into a bonfire". The radiant energy from space was received through ultra-pure Germanium, whose cosmic ray response came through "seven window frequencies". The Germanium had to be ultra-pure, since contaminants (arsenides) would absorb and block released electrons of the photonuclear reaction. When measured in the laboratory, each tube measured the unheard capacity of one Farad!

Dr. Moray, a remarkably gifted electrical engineer, necessarily redesigned power transformers to efficiently handle the excessive voltage from his receiver. A peculiar "step down" process simultaneously involved both an impulse decrease and a voltage decrease. This, achieved through successive transformers stages, successfully brought down the rapidly impulsing high voltage into a low frequency high-current state. The developed currents were definitely not simple electron currents, since they failed to operate conventional motors without rewiring, and operated heavy amperage appliances without heating.

No professional investigator was ever able to comprehend the operation of the Moray device in electrical terms alone. While the attributes of currents derived by the device seemed electrical, their overall effects were decidedly of a different nature. Physicists continually pressed Moray to repeat his explanation of his principles, hoping to get more information on its secrets. The device, so obviously successful, was a true engineering anomaly. In fact, presentation of the device was a "moment of truth" for many. How very fortunate these men were both to have met Dr. Moray and to have personally witnessed the operation of his receiver!

There were those colleagues who were each genuinely thrilled by his discovery. Some postponed judgment on their assessment of the device, declaring that the actual operation might depend on some new "battery" effect. Chemical actions in the detector tube, they said, might be causing a temporary strong emission of energy. Only a timed test of the detector would prove this out. If there was such a chemical explanation for the tube performance, then time would show a gradual waning of energies received. The engineers were very anxious to see this test performed. It would necessarily be conducted in a "sealed" enclosure. They

quickly added that such a possibility, while detracting from the lofty concepts expressed by Dr. Le Bon, would be noteworthy enough if found true.

This devalued critique revealed a curious ignorance in so-called professionals, whose reputations were more highly prized than the "moment of truth" which had arrived. Moray insisted that the device relied not on any battery action, but on receptive sensitivity to the suffusive "sea of radiant energy". There were other protocols and agendas within each of these tests of course. There were those whose fears were being continually confirmed with each successful test. These individuals reported back to their superiors, confirming the potential threat of the new technology.

Moray patiently obliged all of the scientific seekers during these new public tests. The improved device was repeatedly taken out beyond the inductive limits of power lines, into remote desert areas. Grounds were driven deep, the aerial was erected, and the device was tuned. Once power appeared, the system was sealed and left alone. Four, five, seven days ... time mattered not. The radiant energy device continued operating. No one ever mentioned the excessive heat, which should have come from the sealed trunk, were the current an ordinary electrical variety. No. Instead, the device ran "cold".

Certain academicians, fearful of what his discovery meant for existing theory, took him to task on both his methods and theoretical assertions. If it were possible, these professorial committees might have convinced even Moray that his device "didn't work because ... it shouldn't work". Academicians now wished to study Moray's diagrams and materials "on their own". He freely gave them all the pertinent drawings and diagrams concerning the device, but never parted with his original Swedish Stone material. This was secretly and safely locked away from imminent theft.

These professionals, eager to "get their hands on the gadget" cited Moray's "paranoia" as proof that the device was a fraud. Governmental monopoly being the theme of that time period in America, the extent of a highly coordinated "daisy chain" would now reveal the true extent of its boundaries. The REA was constantly intercepting Dr. Moray's grant proposals through professional individuals who were connected to nationwide REA activities. These frustrating occupations stalled the development and proliferation of Radiant Energy technology for two decades, while justly deriving no commitment from Moray.

Wishing now to simply publish his findings in the professional journals, he found that "obtaining permission" to do so would "necessarily" come from University authorities. Opposition now came from University bureaucrats who "refused to handle" the information. The very individual who previously congratulated Moray for "having achieved the impossible", now wrote damaging letters to the very agencies from which Moray hoped to receive funding. Declaring that Moray had "not sufficiently proven the validity of his claims", these letters seemed to be appearing in every energy-related government office long before Moray's formal proposals arrived.

In an aggravating display of smug arrogance, academes began to play the "word game" with Moray. It apparently was expedient to prove that the device did not really work! Physicists examined his reports and plans, returning indefinite

conclusions. These non-committal verdicts so enraged the patient Moray that he decided to take his material directly to the government institution, which would grant him exclusive manufacturing rights to his designs. If no one else was interested in the discovery of the century, then he certainly would undertake the manufacture and distribution of COSRAY receivers if need be!

The next step was to obtain a patent. In 1931 he decided to assail the patent office with numerous applications. Basing his patents on several different claims, he had hoped that at least one application would be accepted. True to the formula, each such application was returned without explanation. Each was stamped with the official "REJECTED" seal. No title, treatment, or adjustment, which he made ever, seemed satisfactory to the Patent Registry. After this obvious stall action was repeated far too many times to recount, he reached for his last ounce of patience. Trying to take opportunity from the words of those who once sought to diminish his discovery, he inwardly cringed and wrote what he considered his "very last application". In this, he cited the operation of the device the result of a "new battery action". He thought that, should the patent court officers not officially recognize the validity of his past descriptions, they would at least grant patent licensing on this descriptive basis. His firm resolve was to stop applying, a costly process, until the obvious shady identities behind the patent rejection process clarified themselves and came forward.

Interceptions at a high level were preventing the proliferation of his revolutionary technology. In fact, coupled with academic cooperation, no journal would ever publish his data. In effect, no one would ever hear the very existence of the Moray device. If possible, no information would ever escape from the inventor's own immediate neighborhood. Isolating and imprisoning the inventor to small town perimeters became the new regulatory device.

The Patent Officers rejected his last claim, churning out the response, which he also expected. Clearly, there was more behind this merry-go-round behavior than a simple misunderstanding of technical descriptions. He was being stalled for very deliberate reasons. There was no hope of making the Patent Court accept his findings. His was a "no win" situation. Utilities, engineering groups, university personnel, publishers ... far too many agencies had already visited the Patent Officers with connections and claims of their own in the matter of Dr. Moray.

Thereafter, he permitted numerous repeat examinations by those who obviously believed him to be a fraud, but eventually lost patience with the skeptics and critics. Here was proof of an enormous phenomenon before their very eyes and all their professional expertise could manage was doubt! Dr. Moray could not waste time with them, moving his research into new avenues and applications. There were many associated phenomena he would discover while experimenting with the Swedish Stone. But social pressures would now seek to divide his time, and far worse.

## **SOCIAL CRUCIBLES**

This phenomenal activity eventually attracted the wrong kind of attention. Of course the radiant energy received by his wonderful mineral was absolutely free,

and everywhere plentiful. Its industrial proliferation would trigger a revolution in the power and light utilities around the world. This possibility was not the favored topic of discussion among the local boardroom members. During the Depression, the REA (Rural Electrification Association) was anxious to "addict" as many isolated rural families as possible to the utilities. Forcing such people to accept the electrical utilities may have been "security" for those whose patronage was buying out the government.

Depression was long and hard for all working class Americans. It was difficult to imagine that the upper class was moving into newer investments and higher ideals, while millions of children were starving. Therefore and unfortunately, socialism was the attractive dream of many disgruntled Americans. In those days a seductive utopian dream of economic equality, socialism had none of the negative connotations, which are associated with Stalin and the Cold War. The Soviet Union was simply and naively viewed as a land where workers were all equal, moving corporately toward a common ideal.

To starving, jobless Americans who watched the rich driving through town in expensive cars, socialism was the war cry of the times. But this, of course, was the "party line" with which socialists drew outsiders in. Daniel and John Magdiel, close friends of Dr. Moray, had become members of the Communist Party. Having gained reputation as American Communists, they independently decided to "help" Dr. Moray. Perceiving that their friend was being stalled by the industrialists for good reasons, they decided to take his "cause" to the Russian Government directly.

In 1926, Daniel Magdiel traveled to Russia with this in mind. The naive plan was to interest a nation whose policies on new technology were "unregulated". The story of Dr. Moray now took an unwilling turn in a direction of political intrigues. Among the many academes and industrial officials who visited Moray, one individual was distinctly not an American citizen. Colonel Yakavlev, an official of the Communist Party, was a representative of high esteem in Russia. He kept his fanatical devotion hidden deep within a smiling exterior, while shopping for new technology.

The American Government was so busy eradicating and regulating new technological developments on behalf of its old family patrons, that it did not recognize a vulnerability to foreign privateers. The naive academes and industrialists who attended Moray's exhibitions did not restrict Col. Yakavlev, seeing in him no potential future threat. Military interests would gradually be attracted, but only after this foreign presence expressed interest in Moray. Superficial liberty is seductive. Obvious when Moray was imprisoned in his own neighborhood by resistive industrialists, the determination to block the Radiant Receiver was a foregone conclusion.

The indifference to revolutionary ideas has repeatedly proven deadly. And the regulation of revolutionary ideas is deadly. The ideal of a new and better world condition completely escapes the urgent pursuit of governments. Governments frequently act only on behalf of their controlling patronage, an old and traditional reflex. In this instance, the successful military penetration of the national interior

by a "vacationing" Soviet Colonel was inadvertently made possible because of economic depression.

Had American investors seized the Moray system and implemented it, their fortunes would have been unlimited. What now occurred "looked very bad" for the inventor in the eyes of later investigators? In 1929, Col. Yakavlev invited him to New York. There, the two men were to meet with "superiors" at the AMTORG Trading Mission. Moray found himself, however, in the offices of General Electric. Meetings occurred after work hours in secretive fashion. Moray did not like this one bit. He left New York abruptly and returned home.

Daniel Magdiel contracted with Dr. Moray to construct a large and completely equipped research laboratory in Salt Lake. Moray was so pressed for capital to develop his technology that he accepted the grant from the young Soviet Union through his friend Daniel. Moray performed research with absolutely no political consequences in mind. He simply needed the money. Daniel Magdie later moved to Mexico in 1952 for obvious political reasons. By 1933, foreign nations were not the only ones interested in Dr. Moray. Government "regulatory commissions" on electrical utility were the very first to plague Moray.

Contact between the Rural Electrification Association and Dr. Moray began in 1939, with the approach of several officials. Mentioning that Daniel Magdiel and the REA Administration were "going to have a meeting", this individual brought several engineers along. Suddenly, interested parties began arriving at Moray's laboratory. The REA called in a "scientific expert" who, in a very short span of time, attempted to both destroy the receiver and eradicate Moray.

While entering his darkened laboratory, Moray was actually confronted by gunman. One of this company of assassins was the "scientific expert" sent by the REA. A scuffle ensuing, guns were fired among both assailants and Dr. Moray, their intended victim. Moray drew his revolver and fired back with unerring accuracy. They never again harassed Moray, although a "liquidation" threat was made by a government agent in the hearing of young John Moray. Agents were continually harassing Moray to "come back to the work or face the consequences". Moray had anticipated death threats, having replaced all the car windows with bulletproof glass. He continually carried his own revolver.

These more visibly honest expressions of vehemence stand as warnings. Those who will continue imagining that government bureaucracies are legitimately interested in democratic ventures are gravely mistaken idealists. Doubt, anger, and murder. These three proceed from the heart of the fearful, propelling the self-destructive "conspiracy" of human nature away from the ideals. Away from wonder. Away from the lost and glorious world.

## **SOCIAL TOUCH**

Retrieved patent applications of Dr. Moray have been closely examined. The examiners rejected claims for the radiant energy receiver despite the working model and the statements of credible witnesses. Apparently there are times when demonstrations and working motors are not "sufficient proof" in the Patent office! The technical basis of rejection was a mere semantic tool used to keep the device

out of the industrial complex. Examiners claimed that current could not be developed in his device because it "ran cold". How curious that several crystal radio receivers were given license that year. These sets "ran cold"! Either the examiners are not sufficiently educated or quite aware of the annual agenda ... as it alternates from year to year.

Though Moray's own patent was never granted, it is most curious that another virtually identical application appears in 1926. Patent 2.032.545 by H.B. McElrath antedates that of Moray, and is virtually identical to it! Complete with a working model, this five-stage amplifier utilizes special radioactive minerals to operate phonographs, public address systems, as well as radio-television receivers. Output volume is strong. The device can amplify radio and phonograph signals without the application of external energy, and requires no tube replacements.

There are several other examples of these patents, which have been retrieved, the McElrath system not being the only one to emerge during that time period. Several inventors (Blackmore, Hubbard, Winkelman, Ainsworth, Burke, Farnsworth, Hart) developed remarkable energy amplifiers and electrical sources, which implemented small amounts of, unrefined radioactive materials. What is more remarkable is the cavalier manner in which the McElrath patent and others, though licensed, never reached the consumer market. None of these patented devices were ever mass-produced. After studying sufficient numbers of such patents, one realizes that corporate connected regulators and examiners established an active search for all emerging energy devices.

All patents having to do with free energy are purposefully blocked from reaching social scales of proliferation, as is evidenced by the great number of patents which never reached the market place. All we have are the official documents, proof that the designs both really existed and that they were successfully operated as described. Certain principle authorities of the University were given a folio of drawings and notes by Dr. Moray in confidence. The drawings surfaced years later, when Bell Laboratories patented their "transistor". The very same designs. Transistor development was the direct outgrowth of Moray's research, being directly derived from his own early models. Improbable? The attorney in charge of Bell Laboratory transistor patents was the very same person who handled the Moray patents.

Dr. Moray maintained his own research laboratory throughout these years, working as a consultant for the radio industry. Various radio companies employed his expertise in the design and manufacture of superior vacuum tube receivers. The golden age of radio saw notable developments in circuit design by Moray. Working for E.H. Scott Radio Labs, he pioneered the development of their famed "Philharmonic", "Imperial", and "LSB" receivers. These chrome-plated grand consoles produced an uncharacteristic "velvety warm" AM and Short-wave reception which sounded like PM.

The notably unusual Moray radio circuits made possible the reception of small stations as far away as Antarctica! On one occasion witnesses clearly heard Admiral Byrd broadcasting from "Little America". Company brochures and journals show Moray and E.H. Scott in Scott's industrial radio laboratory. Later specializing in the design of efficient vacuum tubes and vacuum tube circuitry, it



was not difficult for Dr. Moray to find numerous such consulting positions. When Moray went to work for Hammerlund Industries, he developed their "Super-Pro" series. The clarity achieved in these designs was reminiscent of sounds heard through crystal radio receivers.

Employing principles learned through his work with the Swedish Stone, he designed true cold cathode tubes. In these, radioactive materials were used in place of thermionic cathode emitters. Applications of these tubes for continuous high-output operation were employed in military designs. Dr. Philo T. Farnsworth independently developed numerous such radioactive cathode tubes during the same time frame. His cesium coated "multipactor" design is a pure photonuclear reactor whose anomalous outputs baffled radio engineers of the day.

Dr. Moray's talents were admired and sought by numerous radio companies. He helped the Fisher Radio Company by designing the famous Fisher Model SO stereo amplifier. All of these designs built by Dr. Moray had characteristic coil structures in which signals were very efficiently built up to maximum volumes through successive stages, a development learned through working with his radiant receiver.

Among fellow engineers and technicians he managed to find several warmhearted persons who perceived genius in this gentle man. Gaining their confidence, he invariably discussed his notions of the "sea of energy", always arousing intense excitement. No one doubted his words or his claims. No one qualified his statements. He was respected by all with whom he came in contact. Friends were completely convinced of his claims. Their friend and colleague had a world-revolutionary discovery, a discovery that would change society completely.

Whereas professorial concerns balanced empirical fact against dogma and patronage, Dr. Moray found opened minds in the nation's industrial workshops. This was his first best clue about truly influencing the scientific community. Thereafter, his approach maintained this personal touch. Numerous lectures were given concerning radiant energy and the possibilities of employing radiant energy principles. No doubt Dr. Philo Farnsworth, a young man living in Salt Lake City at the time, read of these early talks. Both men independently pursued similar inspirations.

## **FUTURE TECHNOLOGY**

Besides the principle radiant device, his power receiver, Dr. Moray demonstrated several different wonders over a period of many years for countless witnesses. Visions of the future, several thousand persons witnessed these remarkable technologies, whether during birthdays, barbecues, prayer meetings, or formal and informal lectures. Hosts of neighbors, relatives, friends, and guests each beheld the full range of his liberal hospitality in these regards.

Dr. Moray never stopped discovering the remarkable new properties of the Swedish Stone. He generalized the principles learned from Le Bon's original thesis, developing revolutionary applications of photonuclear reactions in other materials and chemical compositions. Three distinctly different applications of

the general principle were produced over the years following his original discoveries.

The first of these was an accidental effect, found during his experiments with the radiant receiver. This strange discovery manifested while attempting to "tune" the Stone with an early-grounded radio receiver. He found to his very great amazement that he was tuning, not radio stations, but local neighborhoods! Headphones attached to the device produced a world of local sounds where no microphones were present. The sounds he heard were human conversations and common workday sounds. Tuning into these eerie vocalizations, he eventually traveled to the very spots and identified the very voices and sounds heard from so very far away. The device was no microphone.

Sealed in a bell jar, its connections were solidly drawn under the bell to outside headphones and ground. Tuning mechanisms were all housed below the thick glass tank. It has been reported that this function would only work when the Moray "tube" was pointed at the ground. Several photographs show this mysterious "secret listening device" or "sound pickup device".

Dr. Moray displayed the listening device for family, students, engineers, and friends alike. Each was able, with unerring precision, to locate the neighborhood spots into which the device had penetrated. It was imagined that this device received sonic vibrations in the radiant envelope just at ground level. Tuning with the device permitted a strange "lateral ground sweep" of this envelope.

In one demonstration, two headphones were connected to the device. Once tuned, Dr. Moray handed the headphones to two different persons. Three others were asked to go out in front of the house and carry on a conversation. Dr. Moray said that they would be tuned to the three individuals. Upon listening at the headphones, the conversation was distinctly heard. Each listener could clearly distinguish who was speaking. In addition, the sound of rain falling on the pavement was also clearly heard. During this demonstration, one of those listening decided to "tune in" for himself. One turn on the sweep knob, and the amazed younger listener began to hear other conversations and sounds. He later wrote that he distinctly heard the whistle of a train, the voice of a stationmaster calling out "all aboard", and other simultaneous conversations. He identified the sounds coming from the local railroad station ... more than five miles distance from the tuning site.

During this entire demonstration no one carried an external transmitter. The doubters were all put to silence when the young man mentioned what he heard from the railroad station. No one at the railroad station was carrying any kind of transmitter. Sweeps could be made of the entire surrounding area by turning the dial. How this is possible challenged the very heart of electrical science. Questions concerning the basic notions of earth energy were asked.

How were these distant living sounds being derived from a ground wire? Did the sounds associated with human activity somehow have a "biological" effect on the radiant energy environment? Government agencies were most interested in these devices. Years after his unfortunate experience with the REA, Dr. Moray took the listening device with him to Fort Monmouth (New Jersey) Radio Signal labs in

1950, where he developed the system in a top secret government research project. He rarely mentioned the device again.

A second most amazing area of discovery, which Dr. Moray engaged, concerned therapeutic ray-devices. After working with his radiant energy receiver Dr. Moray began noticing radium-like burns on his hands. In an effort to cure his own problems, he delved into the mysterious surrounding biological healing. Radio frequency stimulation of the body was often used to speed healing process. Broken bones evidenced a rapid repair time when exposed to certain radio impulses. Cuts, bruises, and some burns were also healed by the use of specific radio impulses.

Dr. Moray then studied the use of various radiant therapies, with particular regard for radium and cobalt therapies. He determined that, while each of these methods had their specific effect and use, a more penetrating radiation would outperform all of these systems. He began experimenting with systems of his own, developing several remarkable tubes for the projection of rays. During the research he had found that certain ray energies could enhance tissue repairs without harming the body. He now applied the theory of Le Bon, intent on producing novel and unknown rays through photo nuclear reactions.

He arranged specific elements and radioactive composites in low-pressure gaseous tubes. The idea was to stimulate a near aetheric disintegration of matter, releasing deeply penetrating radiance, which was far less energetic than gamma rays. Near light like emissions was his goal. Tesla generated these in high vacuum tubes with carborundum buttons. The light from Tesla's tubes provoked physiological stimulations of a healing variety. After a thorough series of experiments, he wrote several articles on the subject. In his short treatise on "Alpha, Beta, and Gamma Ray Therapy" he wrote:

"Because the fundamental radioactive process does not originate in the electronic structure ... on the surface of the atom ... but in the center of the atom, deep therapy is possible over a long time period..."

Dr. Moray developed and used his special "ray applicators" with the deepest conviction that their penetrating powers would render therapy without damage, himself having been the living proof. The theory behind his devices was profound. Learning the radiance emitted by tissues during self-repair, he could apply the same radiance artificially to stimulate repair. Light-like penetrations could stimulate deep tissue healing with specific precision if made gentle enough.

"These rays will penetrate one half inch thickness of lead ... and yet they will not injure healthy tissues because of the internal "phantom" characteristics ... and the nature of the active material used..."

These mystifying statements indicate the revolutionary nature of the Moray therapeutic devices, large bell-shaped tubes and blown glass containers (patent 2 460.707). Careful study of this design reveals four distinct ray tube forms and several possible variations of each. His therapeutic ray tubes utilized a variety of gases and radioactive materials in judicious proportions and combinations.

With these devices and others like them, Dr. Moray now freely investigated the strange world of gamma and "Aether ray" energies. Taught in science classes as deadly, Moray found out that gamma rays could neutralize the radioactivity of natural ores and perform other wonders. Remarkably, these patents were granted. There are those who yet declare that Dr. Moray revealed the secret of his radiant detector in this patent.

According to reputation, exposure to radiant output from these Moray ray tubes was non-hazardous and "thrilling". Some of these devices employed windows of quartz or of ruby glass to project the rays. Output from these large bell jar tubes is body-permeating, made to invigorate the entire being. Their stimulating and refreshing influence reportedly produced an invigorating response similar to intravenous injections of vitamins (Bearden).

The YAROM tube ("Moray" backwards), is a blown glass device which is not unlike a cylindrical Zworykin iconoscope tube (Lehr). Electrically activated by 250 Kilovolt impulses, electronic currents are directed toward a strangely configured multi-staged target of unknown compositions. When operating, the device releases a soft, healing pink light. This permeating light appears within tube, easily traveling through the blown quartz walls to the outside air. Hands can block the light, but longer exposures prove their permeating effects. Moray claimed that these rays originated deep within atomic nuclei.

Exposing various materials to the output of this comparatively small ray-tube, Dr. Moray found it possible to stimulate the growth of crystals and metals. The divided gold content of mining soils were actually made to "grow" by exposing them to specific gamma rays. This led to other more dramatic research objectives, his third revolutionary development.

## **ENERGY INTO MATTER**

By 1961, Dr. Moray was describing a means by which received radiant energy could be "directed anywhere", an obvious reference to a new development. This would have coupled his radiant energy receiver with the ray tube applicators.

His principle forte being metallurgy, Dr. Moray applied his knowledge to various related fields of study; crystallography, metallurgy, and radiant energy. Comprehending these principles very thoroughly now, he was able to "design" crystalline and metallic compositions whose response to radiant energies, whether natural or manmade, would produce specific radiant products, whether special rays or particles.

In addition to the use of crystalline materials in absorbing radiant energy, Dr. Moray explored the possibilities of converting rays directly into matter. His experiments in these regards received notice when, in 1965, he addressed the 68th national Mining Conference in Denver on the subject of transmutation. Originally begun in 1945 as a method for raising the yields of soils taken from gold mines, Dr. Moray rented and employed a linear accelerator at high personal cost. The accelerator, rented from VARIAN associates, obtained very specific energetic electrons for his process.

Exposing various materials to the output of this particle accelerator, Dr. Moray found it possible to stimulate the growth of crystals and metals in these tailings by special treatments. This process closely followed his work on tissue curative rays, an obviously analogous theoretical development. John Moray's statement went as follows:

"... the process we have described is in reality a crystal growing bath, activated by irradiation. As the gold atoms come into being by transmutation, they become 'gregarious', resulting in the crystal formation. From this observation there is every reason to suspect that low-grade ores and mine tailings provide, not only seed for crystal growth, but also a nuclear environment which is well advanced, or uniquely favorable for the formation of the precious metals by ... transmutation...".

In a rare and amusing episode, Dr. Moray found that the scant precious metal content of mining soils were actually made to "grow" by exposure to specific electron energies. Gold, silver, and platinum micro-crystals were found throughout these "tailings", but in widely scattered "seeds". These rays experimentally demonstrated ability to cause the "organic" growth of tiny gold crystals scattered throughout these soils. Processes developed by Dr. Moray included mixing the tailings in numerous chemical baths.

His numerous references to the "reagent" and the "environment" indicate that these "catalysts" were the most important feature of his process. The lumpy clay like slurry was poured into large disc-shaped molds of varying depth. These were exposed to electron bombardment on a conveyer belt system made entirely of wood and resins. There were significant "interferences" whenever plastic or metal (especially copper) was employed in the ray chamber.

Early experiments required the "aging" of slurry mixtures, an essential feature of the process. Later statements indicated a new success. With special improvements in catalytic solutions, Moray found it possible to mix the slurries and expose them directly to the rays without "aging" them. He mentioned that the cost of these solutions was not more than fifty dollars per one hundred gallons.

Gold obtained from this 8 million electron volt LINAC system was efficiently produced. But Moray wished to boost this efficiency beyond all expectations. He therefore began to study transmutative reactions within the slurry with greater attention. When it was found that particle bombardments were often not consistently flowing through the samples, Moray designed a special "resonant chamber". This "undulated" with the incoming blasts, producing incredibly high yields. He measured their ability to transmute in terms of cost. Total yield versus total cost.

In tailings, which initially assayed at 0.18 ounces Au per ton, the resulting yields were often as high as 100 ounces of gold and 225 ounces of silver! Moray estimated from his results that increased gold percentages ranged between 107 and 329 percents! Once exposed to these electron blasts, the mildly radioactive buttons necessarily had to "cool down". These buttons were then treated with gamma rays. This "treatment" rendered them "neutral", **Moray having discovered how to denature radioactive matter**. These de-natured ore samples were sent to assay offices and analyzed. Their yields confirmed by chemists, Moray proceeded

with the manufacture of gold for a time. He then turned his attention on the possibility of raising the levels of weak uranium deposits by his method. The results of these experiments were classified.

It is said that he later designed a small system of his own for the production of gamma rays in prolific quantities. Designed and operated along parameters, which embodied his rare knowledge of rays and metals, these were implemented in the gold-growing process with greater success. The use of gamma ray fluxes greatly outdid the performance of cumbersome LINAC devices, which were more costly to operate and maintain. Dr. Moray employed radiant bombardment in a special element transmuting process of his own design.

He produced coppers and leads having astounding refractory qualities. Impossible to melt below two thousand degrees Fahrenheit, the lead was the wonder of every metallurgist who received his samples. His coppers were so strong and heat resistant that he employed them as bearings in his high-speed motors. An undisclosed alloy, made by the Moray process, could withstand twelve thousand degrees Fahrenheit without melting. We developed extraordinary metals and alloys.

## **MYSTERY MINERAL**

Dr. Moray continued researching phenomena which the Swedish Stone produced, but recognized that he would eventually "run short", having used so much of it in his past experiments. Multiple staging in his last few designs required much of the material. Realizing that his progress toward industrial aims would rely on the artificial synthesis of the mineral, he therefore subjected the Swedish Stone to a complete microanalytical profile.

Dr. Moray considered that, perhaps only specific chemical parts of the mineral were the real "active" components. In addition, perhaps also there were also components, which actually limited or "blocked" the photo-reactivity. A synthesized compound would eliminate the blocks and maximize the activators. Far more power would then be received and converted to usable energy. Nominal sized COSRAY receivers could theoretically produce giga-watts of electrical energy.

For a moment he considered that, perhaps nature had achieved what could not be humanly achieved. In this case, he knew where to obtain the mystery mineral again in large quantities. Himself an excellent metallurgist, he eventually succeeded in synthesizing his rare material in a laboratory furnace. Moray mentions that it was only after synthesizing the material that he realized the rarity of his original find.

We do not know if Dr. Moray improved the material beyond the Swedish Stone composition. What we yet know of this synthesized material is that its primary ingredient is ultra-pure Germanium. Dr. Moray constantly complained to chemical supply houses that their Germanium was "not pure enough". Germanium is derived from euxenite, argyrodite, and germanite. Of the three, euxenite contains radioactive elements and several rare earths. Euxenite decomposes into [Y Er Ce Ti Nb Fe U O], Argyrodite into [Ag S Ge], and germanite into [Cu Ge Ga].

**Dr. Moray determined a small radioactive content in the Swedish Stone (Lehr). The various "doping" materials in his synthetic mixture include zinc sulphide, iron sulfide, bismuth, and three other secret elements in "combination". These latter chemicals were never known by outsiders, but have been revealed as a combination of thorium, caesium, and radium sulphide.**

**Careful analysis of these materials, with sensitive attention to their combined functions, was achieved several years ago by an extraordinary electrical engineer and visionary (W. Lehr). His conclusion is that the Moray component is a photobias diode, which is sensitive to a specific resonant series of signals. Beginning with the X-band, and increasing through to the gamma ray series, the Moray device is a high frequency band-passing gate. A non-rectifying diode. The system responds to specific incoming signals as well as those, which are "transduced" through the radioactive materials, which are included in the mixture.**

**It has been hypothesized that the Swedish Stone was rare variety of the mineral Spodumene. Spodumene grows in gigantic crystals, some of these measuring in excess of forty feet in certain locales. Brilliant pink or white, its crystalline surface is smooth. When fractured or crushed, it becomes a smooth silvery white material. Large Spodumene deposits are found in Sweden. Spodumene decomposes into [Li Na Al Si O].**

**Whether his Spodumene sample contained Germanium, we will never know. Perhaps his knowledge of the Le Bon photoreactions permitted the design of a distinctly new radiant-receptive mixture. It is not generally known what, in fact, is being done with the material and the detector. Some have suggested that Dr. Moray may have destroyed the essential parts of the device. Those who worked with Dr. Moray attest to the absolute validity of his claims. Each witnessed the operation of the radiant energy receiver. Each comprehended somewhat of its essential secrets. Each attempted in some small manner to duplicate these findings. Each subsequently developed certain designs, which demonstrated varying degrees of success in releasing anomalous outputs of electrical energy.**

**True to the archetype of discovery, this is not the only time such a mineral has appeared during this latter part of our century. In another rare documented instance of haphazard discovery, Arthur L. Adams, a retired electronics engineer, claimed to have discovered a smooth silvery gray "electroradiant" mineral in Wales during the 1950's. He found the mineral with a device of his own design. When fine wire contacts touch the mineral surface, high voltages are produced. They are strong enough to constantly sustain a sizeable current in an external load.**

**This mineral (Adamsite) produced prodigious amounts of electrical power in proper circuit configurations. When sliced into thin layers and stacked among metallic contacts, the power output is greatly magnified. When dipped into water, the output increases. When the stone is then removed, the water retains an ability to produce electrical power for hours.**

**British authorities managed to seize the material and all the inventor's research papers, claiming to be studying the material for "future social distribution". We**

are not likely to see this mineral from the British Government (or any other government) until a social change is demanded.

Other energy-receptive devices, which use electroradiant minerals, have appeared this century. Devices built by several different inventors supplied enough power to light their own homes for years after disconnection from the power utilities (Amman, Molinet). The device by Amman (1930's) used special "chemicals and minerals" in conjunction with electrical capacitors. With this device it was possible to operate an entire household worth of electrical appliances. A subsequent development proved that the device could power an electric car indefinitely.

More recently, an amazing example of this technology has been produced by Gene Molinet in 1982. His development was the result of an astounding observation made while repairing an airplane radio. Removing a crystal component, Mr. Molinet received a heavy shock. He then undertook a complete study of crystals and magnetic fields. His device was observed by an electrical engineer who reports that it somehow utilized Galena and magnets in specific spatial relationships, requiring a firm ground connection for its successful operation.

## **ENDLESS LIGHTS**

Numerous voices throughout the years have expressed desire to reproduce the effects obtained by Dr. Moray. All are after the missing "Stone"! This is certainly one of the most tantalizing mysteries in the annals of lost science. Many opinions have been tenaciously held by researchers concerning the means which Dr. Moray employed in his cos RAY receiver. We also find a great many theoretical propositions and equally as many technical approaches in this quest.

There are indeed several major problems, which face those who wish to probe the Moray mystery. There are also several related discoveries of importance help in clarifying our perspectives in these regards. In addition, there have been a significant group of researchers whose work, in combination, reveals the most probable explanations for Dr. Moray's remarkable achievement in radiant energy reception.

The logic trail shifts with the findings and moves with the conclusions. But the rewards for society are great, provided one can match an empirical demonstration with the theory. Above all things, we must not imitate those whose fixation on textbook-approved conventions lead into blind alleys. Building and toppling our house of cards is not frustrating for those who thrill to this quest.

It is imperative that, when academic conventions fail to supply adequate conclusions, one must actively exercise human meta-cognition over statistics. The prerogative to choose alternative possibilities. To look outside "the facts", and look around "the barriers" of dogma. Therefore this short section will serve to air some of the many ideas historically offered in explanation of the COSRAY detector. The goal, we remember, is reproducing his results. The reward is benefiting humanity with an energy revolution.



In the absence of hard empirical data, the search for the Moray detector is very much a process of eliminations! When considering the available radiant energy of the natural environment, one is faced with remarkable contradictions. These contradictions, however, may not invalidate the obvious demonstrations, which Dr. Moray engaged. Researchers have studied a short-wave radio phenomenon known as "bursters" and "drifters". The "bursters" come as short but transcendently powerful electrical signals.

Radio "bursters" remain in one frequency, pouring all of their power into the receivers which entune them. They seem to "stand in place" in a columnar manner, growing in strength with increased time. When once entuned, the small input seems to attract all the available incoming energies until the receiver can no longer handle the power. Bursters destroy receivers and perform other strange electrical feats. "Radio-drifters" are related to bursters, differing only in their frequency "drifting" nature. One investigator has judged the actual energy content of radio-drifters as exceeding a megawatt (D. Winter).

Evidence of staggering incoming power, the energy of the drifter is difficult to explain with conventional theory. Recall that Dr. Moray first became aware of the power potential in space energies while employed by the Telegraph and Telephone Company. His extensive preoccupation with the "ocean like surges", heard through the long lines in headphones, prompted all of his successful research. There are those who therefore believe that Dr. Moray was tapping the energy of the potent auroral electrojets, which constantly surge in the ionosphere above us. They therefore do not cite cosmic rays or any such radiant sources in explaining what Dr. Moray "realistically achieved".

These researchers believe that his discovery of the Stone provided a material, a semi-conductor, capable of very high frequency avalanche conduction. The very high voltages, instantaneously released in substantial capacitances such as telephone lines, were capable of flowing through an external circuit to power several appliances. In essence, they believe that the Stone permitted the construction of a high frequency diode having solid-state negative resistance (Lehr). It is a common observation that certain impulse energies cannot "pass" through silicon diodes, while effortlessly finding conductive passage through Germanium diodes.

His employment of the early aerial and ground elements provided the capacitance through which the electrostatic energy was absorbed. It was probable that Dr. Moray further enhanced the threshold conductivity of Germanium with special radioactive additives so that it would respond with both speed and increasing saturation to the mounting electrostatic energies. Primarily developed in the large capacitance of his ground connection, these energies passed unnoticed by most experimenters. What was needed to tap this tremendous energy reservoir was a "low threshold switch". Therefore, the examination of the Moray device proceeds as a study of conduction bands and quantum potential energies in crystals.

Some writers proposed that Moray had developed a "cosmic ray diode". In this model, the Moray receiver is treated as a transducer in which cosmic rays drive electron currents. The special material is the ray sensitive material in which this conversion process supposedly occurs.

If we use the available potential energy of a single cosmic ray, we find that it could raise only one ten-thousandth of a watt's worth of electrical energy. If cosmic rays were intercepted by the pellet, producing extensive photonuclear cascades, then why was the ground connection needed at all? According to the calculated values, a detector the volume of that used by Moray could never intercept enough cosmic rays to achieve the demonstrated outputs. The stone pellet itself did not offer sufficient interceptive cross section to be the whole generative center of Moray's device. Clearly the stone pellet was part of a much larger "organized activity" involving the ground.

There is an alternative model, which focuses attention on the necessity for ground connection in the device. While aerials could be eliminated from his apparatus, it was not so with the ground connection. One recalls that Dr. Moray was never able to do without the ground connection. Also the successful operation of the device required a "tuning" procedure. What was he tuning"? Both good ground connection and sensitive tunings were indispensable for obtaining the enormous energies demonstrated in his COSRAY detector.

The volume of cosmic rays intercepted by a volume of ground is vast. Ground entrant cosmic rays would stimulate the activation of vast free electrical volumes. Any section of ground would effectively become an available "interception plate" of vast size. These free charges would "leak up" into any radio ground connection, producing significant and conspicuous "static" power when tuned to certain frequencies. "Tuning into" these radio bands, the ground "interception plate" would pour its vast electrical surpluses into any detector, producing lightning like discharges.

This model sounds plausible, but why would the Swedish Stone be the necessary item then? Why would not any radio receiver locate these frequency bands? The infrequent observation of "bursters" lends this objection some credence. Could bursters simply be a rare "radio detectable" solar emission, one in which electrical impulse are surging at lower frequency? The pulse which Moray was able to constantly receive might then have been occurring in the microwave band (Lehr).

This model might lead in the right direction provided we shifted our attentions to an alternate kind of energetic spectrum. If ground entrant cosmic rays produced a special and distinct subatomic "vibration" in the ground, one which could not be entuned with ordinary radio receivers, then the mildly radioactive Swedish Stone acts as a special kind of receiver ... both tuning and receiving ground-wide "radioactive impulses".

Such "radioactive waves" would appear as a "white noise" in a grounded radioactive detector. Specially tuned settings would release the energy into the receiver. We might liken the process to rain falling on the surface of a lake. As the rain comes in sheets and gusts, the lake surface becomes "rimpled" with the disturbance. Tuning into this violent surface of energy would be equivalent to using a straw in order to obtain a coherent flow. Getting a gush of water from such an incoherent vibrance is nearly impossible. A wider "pipe" would not enable a greater extraction of energy. Moray did not rely on ever-larger cross-section ground connections. This would be the requirement if we were utilizing

radioactive white noise. If such a draft of energy were coming through the fine wire contacts on the pellet, the delicate connections would burn away before any energy could ever be extracted.

When considering "ground secondary radiations", one would have to account for the "reflective surface" within the ground capable of absorbing the cosmic rays and "vibrating". What would be the exact nature of the "absorbent" ground medium? Would it be free electrons? Is there a possibility that the actual medium of absorption was something more exotic than electrons ... some subatomic particle sea of which we are yet unaware?

The entire notion of cosmic ray absorption requires the ability of a fluidic medium to absorb the projectile energy of entrant cosmic rays. If the fluid were "free electrons", then the cosmic rays would pierce it like bullets fired into water. The resultant energetic violence would produce no coherent pattern, only a "frothy electrostatic disturbance". A slim possibility might exist for entuning the major "harmonics" of such a frothy white noise, obtaining an electrical output. But the incoherence of all resultant "white noise" energy is still the reasonable objection to this otherwise good model.

The "ground plate" theory might more reasonably apply in this instance. Where individual entrant cosmic rays might affect only white noise disturbances in either an electron sea or exotic subatomic sea, sudden gusts would suddenly "deform" a large ground region of the absorbent medium. The resultant whole regional deformation and recovery would represent a coherent energetic impulse of great power. These gusts could be entuned, the short and unexpected impulses being maximized in the proper circuitry. This is exactly what Dr. Moray described.

The sudden gust may produce a powerful electrostatic potential, which appears above the normal background of white noise as "oceanic waves". Furthermore, if the sudden burst energy is electrostatic in nature (received into a terrestrial electrical "tank"), it is certainly received as a singular impulse with a very rapid decay among progressively lower harmonics. In this latter case, the gust impulse would enter the white noise sea, being lost in the incoherence.

In addition, we do know that conventional cosmic rays evidence abrupt showers when measured across a broad ground region. Rare interstellar cosmic rays, mostly nuclear fragments from stars, manifest in "showers". But these do not coincide with the periodicity required for the Moray effect. Solar flare activity would account for a far greater energetic flux, manifesting the "bursts" and "impulse waves" which Dr. Moray observed. We must also remember that, both Tesla and Le Bon considered natural radioactivity as the sign of "true cosmic rays". What conventionalists measure and call cosmic rays do not explain the constancy of radioactivity, and cannot be that of manifestation to which they referred.

If solar cosmic ray showers were not a steadily observed event, then Moray's "cosmic rays" are not conventional. If that is so, then we must determine the nature of both entrant showers and absorbent media. If the earth "energy absorber" proves to be another energy stratum, like the aether of early Victorian

physics, then we must discuss how such a fluidic energy can be conducted into the metal wires of Moray's device.

And what if the Moray energy receiver is not responding to "conventional" cosmic rays at all? To what then did Moray refer when speaking of "cosmic" and "radioactive waves"? There are those researchers who believe that Moray "cosmic rays" or Moray "gamma rays" may be completely different entities than those, which academes identify. Dr. Moray believed that it was "neutron bombardment" which were responsible for the powerful electrostatic emissions coming forth from his mineral. One may then consider that Moray agreed with Tesla when speaking of cosmic rays. To be specific, the Teslian definition of cosmic rays had nothing to do with those, which are conventionally described or studied by astrophysicists, being "light-like effluves". Tesla said they were not easily detected. If proper detection of these effluves requires radioactive materials, then the most noteworthy work toward this achieving this goal was performed in special galena radio detection circuits by Daniel Winter.

According to the theories of Tesla and Le Bon, radioactive materials are the dense targets of external energetic streams. These streams were said by Moray to come in sudden "gusts". Mr. Winter proved this principle. Galena crystals were touched with carnotite-tipped cat-whiskers. Remarkable electrostatic "spikes" appeared when sensitive spots were touched, the magnitude of which was almost impossible to measure. The device was receiving an anomalous vast energy, which came in sudden bursts.

Coupling two such detectors across a space of several feet, it was possible to show a phase-heterodyned signal, which existed as a tension between the two receivers. In other words, the lagging response between each carnotitegalena detector showed that "radioactive" waves were traveling across space. Moreover, these waves were of small impulse lengths, seeing that they could be heterodyned across such a short detection space. The waves were those, which "caused" the radioactivity of the carnotite samples. Energy bursts appeared when the waves surged. That they were traveling was revealed through the phase-lag between each receiver.

Such phase lag in radioactive materials can be easily see through careful darkroom examination of radium dial clock faces. Maintaining the dial in a constant dark condition for days permits a most amazing observation. What is seen supports the theory of Le Bon. Radioactive luminescence very obviously "flimmers" from edge to edge in endless processions, as if induced from the outside.

One uses this phenomenon as a visual detector of these external radio-inductive waves, observing sudden soft gusts of light, which often spread through and across the luminescent matter. This wavelike luminous manifestation was the phenomenon, which Victorians marveled over in a device known as the "sphintharoscope". The flimmering waves reveal a specific band of external energetic induction, the true cause of radioactivity according to Le Bon. Small radioactive additions to appropriate conductive materials might produce the requisite detector of Teslian cosmic rays.

There are those who reduce Moray's detector to an "atomic battery" (P. Brown). Victor Hart, a researcher who once worked with Dr. Moray, developed a special tube of his own. Witnessed by several credible witnesses, this tube resembles a Farnsworth Multipactor (Brown, Lindemann, Redfern). Cathodes are housed at opposed ends of the tube, the anode being a screen at the tube midpoint. The vessel is filled with helium and argon gases at low pressure. The target anode is a brass screen coated with a carnotite mixture (probably with caesium).

Activated by a four thousand volt discharge, the tube springs to life. Electrical meters, which are, attached to the device "go off scale" with the increased output, the tube emitting thunderous sounds and a blinding white light. In addition, there is a radiant flux, which drives distantly placed Geiger counters off-scale. The device is clearly an energy amplifier, taking electrical power at one volume and magnifying it. The agency of this transformation is, very obviously, the natural radioactive material used in the target.

Perhaps the ground surges were not "radioactive" in nature at all. Both the use of an ordinary ground connector and the simple tuning mechanism indicates a radionic activity. In fact, this is the most satisfying model to date. It organizes all the divergent aspects of the Moray receiver quite effortlessly. It does require a new perspective however.

The Swedish Stone might have served as a conductor and magnifier of Od. Such Od radiance could never stimulate electrical charges for Baron von Reichenbach. Perhaps Dr. Moray had found one of those "mineral gates" where this did occur. It may have been in the nature of the mineral itself to effect conversions of Od into electrostatic currents. In citing this possibility we encourage the re-reading of the Reichenbach biography and consider his science of Radionics.

Remember, though Moray was able to replace the aerial with a copper plate, Dr. Moray was never able to eliminate the ground system entirely. The absolute need for the tuning device indicates a necessary radionic tuning component. With the detector in firm ground connection, the mineral became Od radiant. Od currents grow in time, saturating and magnifying in ground lines of any small cross section. Od discharges across space, producing black radiant auras and smokey white photographic traces when arcing into nearby people. The radionic model effectively unifies all the aspects of the Moray receiver, and keeps with the essential simplicity of his descriptions. Obtaining that "magickal mineral" remains the last key to the process!

## **ETERNAL RADIANCE**

There were and are those who would assault the story of Dr. Moray, relegating it to the myths of lost dreams and their dreamers. Yes, discoveries are dreams, which never disappear entirely from the social psyche. They are messengers from the world soul, the sea of dreams, the land where eternal light is forever radiant. The mere existence of the idea is the proof that such a world exists. The mere appearance of an idea invades the inertial world where dead minds see no light. Similar discoveries with those of Dr. Moray remain as myths in common places, plaguing those who seek to resist and regulate them. Lost wonder

elements of the first world do not yield to the proud. They continue to manifest among the humble.

Resisting the flow of discoveries maintains dynastic fortunes. Addicting society to any particular utility secures that utility for centuries if need be. Those with desire for absolute economic control produce a self-defined "status quo".

Protecting the threatening information became an obvious priority among certain power groups. While resisted by a continually accumulating industrial resistance, the social implementation of "lost science" is a statistical certainty. The imposed forgetfulness, brought about by those whose financial concerns outweighs their social concerns, does not eradicate Discovery. Discovered things, we know, have a mysterious way of haunting the social consciousness.

The archaic disappointment of fire, which split the human psyche, produced qualitative and quantitative sciences. The archaic disappointments rule quantitative science in the physics of thermodynamics. The archaic curse was turned to advantage by modern moguls, who employ the all-consuming need for fuel into a means for gaining profit. The world system operates on the notion that wonder cannot be real, that no light can exist for eternity, and that light dies in the absence of fuel. Dr. Moray was one among many who discovered a means for breaking the fire-fuel chain. Throughout the entire time in which Dr. Moray taught, lectured, and conducted his many varieties of research we see the inspired man at work. Dr. Moray made demonstrations of his original discovery before thousands of guests and assembled witnesses with regularity. Each was permitted to see, touch, and handle the radiant energy receiver. Furthermore, Dr. Moray had the scruples of a deeply religious man, whose ethical and highly moral character stand as proof enough of his integrity and essential character.

Dr. Moray's lifelong preoccupation with mineralogy, crystallography, and metallurgy produced equally astounding related developments in three different areas of study: distant communications, medical technology, and metallurgy. The search for an endless lamp, for eternal radiance, is a dream image, which yet beckons scientific dreamers. A rare few, like the wonderful Dr. Moray, have discovered and seen its power.