

Appendix A

50 U.S.C. § 1520a: US Code - Section 1520A: Restrictions on use of human subjects for testing of chemical or biological agents

(a) Prohibited activities

The Secretary of Defense may not conduct (directly or by contract) –

(1) any test or experiment involving the use of a chemical agent or biological agent on a civilian population; or

(2) any other testing of a chemical agent or biological agent on human subjects.

(b) Exceptions

Subject to subsections (c), (d), and (e) of this section, the prohibition in subsection (a) of this section does not apply to a test or experiment carried out for any of the following purposes:

(1) Any peaceful purpose that is related to a medical, therapeutic, pharmaceutical, agricultural, industrial, or research activity.

(2) Any purpose that is directly related to protection against toxic chemicals or biological weapons and agents.

(3) Any law enforcement purpose, including any purpose related to riot control.

(c) Informed consent required

The Secretary of Defense may conduct a test or experiment described in subsection (b) of this section only if informed consent to the testing was obtained from each human subject in advance of the testing on that subject.

(d) Prior notice to Congress

Not later than 30 days after the date of final approval within the Department of Defense of plans for any experiment or study to be conducted by the Department of Defense (whether directly or under contract) involving the use of human subjects for the testing of a chemical

agent or a biological agent, the Secretary of Defense shall submit to the Committee on Armed Services of the Senate and the Committee on Armed Services of the House of Representatives a report setting forth a full accounting of those plans, and the experiment or study may then be conducted only after the end of the 30-day period beginning on the date such report is received by those committees.

(e) "Biological agent" defined

In this section, the term "biological agent" means any micro-organism (including bacteria, viruses, fungi, rickettsiac, or protozoa), pathogen, or infectious substance, and any naturally occurring, bioengineered, or synthesized component of any such micro-organism, pathogen, or infectious substance, whatever its origin or method of production, that is capable of causing -

- (1) death, disease, or other biological malfunction in a human, an animal, a plant, or another living organism;
- (2) deterioration of food, water, equipment, supplies, or materials of any kind; or
- (3) deleterious alteration of the environment.

Appendix B

107TH CONGRESS 1ST SESSION

H. R. 2977

To preserve the cooperative, peaceful uses of space for the benefit of all humankind by permanently prohibiting the basing of weapons in space by the United States, and to require the President to take action to adopt and implement a world treaty banning space-based weapons.

IN THE HOUSE OF REPRESENTATIVES

OCTOBER 2, 2001

Mr. KUCINICH introduced the following bill; which was referred to the Committee on Science, and in addition to the Committees on Armed Services, and International Relations, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

A BILL

To preserve the cooperative, peaceful uses of space for the benefit of all humankind by permanently prohibiting the basing of weapons in space by the United States, and to require the President to take action to adopt and implement a world treaty banning space-based weapons.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the “Space Preservation Act of 2001.”

SEC. 2. REAFFIRMATION OF POLICY ON THE PRESERVATION OF PEACE IN SPACE.

Congress reaffirms the policy expressed in section 102(a) of the National Aeronautics and Space Act of 1958 (42 U.S.C. 2451(a)), stating that it “is the policy of the United States that activities in space should be devoted to peaceful purposes for the benefit of all mankind.”

SEC. 3. PERMANENT BAN ON BASING OF WEAPONS IN SPACE.

The President shall—

(1) implement a permanent ban on space-based weapons of the United States and remove from space any existing space-based weapons of the United States; and

(2) immediately order the permanent termination of research and development, testing, manufacturing, production, and deployment of all space-based weapons of the United States and their components.

SEC. 4. WORLD AGREEMENT BANNING SPACE-BASED WEAPONS.

The President shall direct the United States representatives to the United Nations and other international organizations to immediately work toward negotiating, adopting, and implementing a world agreement banning space-based weapons.

SEC. 5. REPORT.

The President shall submit to Congress not later than 90 days after the date of the enactment of this Act, and every 90 days thereafter, a report on—

- (1) the implementation of the permanent ban on space-based weapons required by section 3; and
- (2) progress toward negotiating, adopting, and implementing the agreement described in section 4.

SEC. 6. NON SPACE-BASED WEAPONS ACTIVITIES.

Nothing in this Act may be construed as prohibiting the use of funds for—

- (1) space exploration; (2) space research and development; (3) testing, manufacturing, or production that is not related to space-based weapons or systems; or (4) civil, commercial, or defense activities (including communications, navigation, surveillance, reconnaissance, early warning, or remote sensing) that are not related to space-based weapons or systems.

SEC. 7. DEFINITIONS.

In this Act:

(1) The term “space” means all space extending upward from an altitude greater than 60 kilometers above the surface of the earth and any celestial body in such space.

(2)(A) The terms “weapon” and “weapons system” mean a device capable of any of the following:

(i) Damaging or destroying an object (whether in outer space, in the atmosphere, or on earth) by—

- (I) firing one or more projectiles to collide with that object;
- (II) detonating one or more explosive devices in close proximity to that object;
- (III) directing a source of energy (including molecular or atomic energy, sub-atomic particle beams, electromagnetic radiation, plasma, or extremely low frequency (ELF) or ultra low frequency (ULF) energy radiation) against that object; or

(IV) any other unacknowledged or as yet undeveloped means.

(ii) Inflicting death or injury on, or damaging or destroying, a person (or the biological life, bodily health, mental health, or physical and economic well-being of a person)—

- (I) through the use of any of the means described in clause (i)

or subparagraph (B);

(II) through the use of land-based, sea-based, or space-based systems using radiation, electromagnetic, psychotronic, sonic, laser, or other energies directed at individual persons or targeted populations for the purpose of information war, mood management, or mind control of such persons or populations; or

(III) by expelling chemical or biological agents in the vicinity of a person.

(B) Such terms include exotic weapons systems such as—

(i) electronic, psychotronic, or information weapons;

(ii) chemtrails;

(iii) high altitude ultra low frequency weapons systems;

(iv) plasma, electromagnetic, sonic, or ultrasonic weapons;

(v) laser weapons systems;

(vi) strategic, theater, tactical, or extra-terrestrial weapons; and

(vii) chemical, biological, environmental, climate, or tectonic

weapons.

(C) The term “exotic weapons systems” includes weapons designed to damage space or natural ecosystems (such as the ionosphere and upper atmosphere) or climate, weather, and tectonic systems with the purpose of inducing damage or destruction upon a target population or region on earth or in space.

Appendix C

Weather as a Force Multiplier: Owning the Weather in 2025

A Research Paper Presented To
Air Force **2025**

by

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Disclaimer

2025 is a study designed to comply with a directive from the chief of staff of the Air Force to examine the concepts, capabilities, and technologies the United States will require to remain the dominant air and space force in the future. Presented on 17 June 1996, this report was produced in the Department of Defense school environment of academic freedom and in the interest of advancing concepts related to national defense. The views expressed in this report are those of the authors and do not reflect the official policy or position of the United States Air Force, Department of Defense, or the United States government.

This report contains fictional representations of future situations/scenarios. Any similarities to real people or events, other than those specifically cited, are unintentional and are for purposes of illustration only.

This publication has been reviewed by security and policy review authorities, is unclassified, and is cleared for public release.

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Appendix D

HAARP EXECUTIVE SUMMARY

HAARP

HF ACTIVE AURORAL RESEARCH PROGRAM

JOINT SERVICES PROGRAM PLANS AND ACTIVITIES

AIR FORCE GEOPHYSICS LABORATORY

NAVY OFFICE OF NAVAL RESEARCH, JUNE 6, 1995

HF ACTIVE AURORAL RESEARCH PROGRAM (HAARP)

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HAARP -- HF Active Auroral Research Program

Executive Summary

As described in the accompanying report, the HF Active Auroral Ionospheric Research Program (HAARP) is especially attractive in that it will insure that research in an emerging, revolutionary, technology area will be focused towards identifying and exploiting techniques to greatly enhance C3 capabilities. The heart of the program will be the development of a unique high frequency (HF) ionospheric heating capability to conduct the pioneering experiments required under the program.

Applications

An exciting and challenging aspect of ionospheric enhancement is its potential to control ionospheric processes in such a way as to greatly improve the performance of C3 systems. A key goal of the program is the identification and investigation of those ionospheric processes and phenomena that can be exploited for DOD purposes, such as those outlined below.

Generation of ELF waves in the 70-150 Hz band to provide communications to deeply submerged submarines. A program to develop efficient ELF generation techniques is planned under the DOD ionospheric enhancement program.

Geophysical probing to identify and characterize natural ionospheric processes that limit the performance of C3 systems, so that techniques can be developed to mitigate or control them. Generation of ionospheric lenses to focus large amounts of HF energy at high altitudes in the ionosphere, thus providing a means for triggering ionospheric processes that potentially could be exploited for DOD purposes.

Electron acceleration for the generation of IR and other optical emissions, and to create additional ionization in selected regions of the ionosphere that could be used to control radio wave - propagation properties.

Generation of geomagnetic-field aligned ionization to control the reflection/scattering properties of radio waves.

Oblique heating to produce effects on radio wave propagation at great distances from a HF heater, thus broadening the potential military applications of ionospheric enhancement technology.

Generation of ionization layers below 90 km to provide, radio wave reflectors (mirrors) which can be exploited for long range, over-the-horizon, HF/VHF/UHF surveillance purposes, including the detection of cruise missiles and other low observables.

Desired HF Heater Characteristics

A new, unique, HF heating facility is required to address the broad range of issues identified above. However, in order to have a useful facility at various stages of its development, it is important that the heater be constructed in a modular manner, such that its effective-radiated-power can be increased in an efficient, cost effective manner as resources become available.

Effective-Radiated-Powers (ERP) in Excess of 1 Gigawatt

One gigawatt of effective-radiated-power represents an important threshold power level, over which significant wave generation and electron acceleration efficiencies can be achieved, and other significant heating effects can be expected.

Broad HF Frequency Range

The desired heater would have a frequency range from around 1 MHz to about

15 MHz, thereby allowing a wide range of ionospheric processes to be investigated.

Scanning Capabilities

A heater that has rapid scanning capabilities is very desirable to enlarge the size of heated regions in the ionosphere Continuous Wave (CW) and Pulse Modes of Operation. Flexibility in choosing heating modes of operation will allow a wider variety of ionospheric enhancement techniques and issues to be addressed.

Polarization

The facility should permit both X and O polarization in order to study ionospheric processes over a range of altitudes.

Agility in Changing Heater Parameters

The ability to quickly change the heater parameters is important for addressing such issues as enlarging the size of the heated region the ionosphere and the development of techniques to insure that the energy densities desired in the ionosphere can be delivered without self-limiting effects setting-in.

HF Heating Diagnostics

In order to understand natural ionospheric processes as well as those induced through active modification of the ionosphere, adequate instrumentation is required to measure a wide range of ionospheric parameters on the appropriate-temporal and spatial scales. A key diagnostic these measurements will be an incoherent scatter radar facility to provide the means to monitor such background plasma conditions as electron densities, electron and ion temperatures, and electric fields, all as a function of altitude. The incoherent scatter radar facility, envisioned to complement the planned new HF heater, is currently being funded in a separate DOD program, as part of an upgrade at the Poker Flat rocket range, in Alaska.

For ELF generation experiments, the diagnostics complement would include a chain of ELF receivers, a digital HF ionosonde, a magnetometer chain, photometers, a VLF sounder, and a VHF riometer. In other experiments, in situ measurements of the heated region in the ionosphere, via rocket-borne instrumentation, would also be very desirable. Other diagnostics to be employed, depending on the nature of the ionospheric modifications being implemented, will include HF receivers, HF/VHF radars, optical imagers, and scintillation observations.

HF Heater Location

One of the major issues to be addressed under the program is the generation of ELF waves in the ionosphere by HF heating. This requires location the heater where there are strong ionospheric currents, either at an equatorial location or a high latitude (auroral) location. Additional factors to be considered in locating the heater include other technical (research) needs and requirements, environmental issues, future expansion capabilities (real estate), infrastructure, and considerations of the availability and location of diagnostics. The location of the new HF heating facility is planned for Alaska, relatively near to a new incoherent scatter facility, already planned for the Poker Flat rocket range under a separate DOD program.

In addition, it is desirable that the HF heater be located to permit rocket probe instrumentation to be flown into the heated region of the ionosphere. The exact location in Alaska for the proposed new HF heating facility has not yet been determined.

Estimated Cost of the New HF Heating Facility

It is estimated that eight to ten million dollars (\$8-10M) will provide a new facility with an effective-radiated-power of approximately that of the current DOD facility (HIPAS), but with considerable improvement in frequency tunability and antenna-beam steering capability. The facility will be of modular design to permit efficient and cost-effective upgrades in power as additional funds become available. The desired (world-class) facility, having the broad capabilities and flexibility described above, will cost on the order of twenty-five to thirty million dollars (\$25-30M).

Program Participants

The program will be jointly managed by the Navy and the Air Force. However, because of the wide variety of issues to be addressed, active participation of the government agencies, universities, and private contractors is envisioned.

HF Active Auroral Research Program

The DOD HF Active Auroral Research Program (HAARP) is especially attractive in that it will insure that research in an emerging, revolutionary, technology area will be focused towards identifying and exploiting techniques to greatly enhance C3 capabilities. The heart of the program will be the development of a unique ionospheric heating capability to conduct the pioneering experiments required to adequately assess the potential for exploiting ionospheric enhancement technology for DOD (Dept. of Defense) purposes. As outlined below, such a research facility will provide the means for investigating the creation, maintenance, and control of a large number and wide variety of ionospheric processes that, if exploited, could provide significant operational capabilities and

advantages over conventional C3 systems. The research to be conducted in the program will include basic, exploratory, and applied efforts.

1. Introduction

DoD agencies already have on-going efforts in the broad area of active ionospheric experiments, including ionospheric enhancements. These include both space- and ground-based approaches. The space-based efforts include chemical releases (e.g., the Air Force's Brazilian Ionospheric Modification Experiment, BIME; the Navy's RED AIR program; and multi-agency participation in the Combined Release and Radiation Effects Satellite, CRRES). In addition other, planned, programs will employ particle beams and accelerators aboard rockets (e.g., EXCEDE and CHARGE IV), and shuttle- or satellite-borne RF transmitters (e.g., WISP and ACTIVE). Ground-based techniques employ the use of high power, radio frequency (RF), transmitters (so-called "heaters") to provide the energy in the ionosphere that causes it to be altered, or enhanced. The use of such heaters has a number of advantages over space-based approaches.

These include the possibility of repeating experiments under controlled conditions, and the capability of conducting a wide variety of experiments using the same facility. For example, depending on the RF frequency and effective radiated power (ERP) used, different regions of the atmosphere and the ionosphere can be affected to produce a number of practical effects, as illustrated in Table 1. Because of the large number and wide variety of those effects, and because many of them have the potential to be exploited for important C3 applications, the program is focused on developing a robust program in the area of ground-based, high power RF heating of the ionosphere.

To date, most DoD ionospheric heating experiments have been conducted to gain better understanding of ionospheric processes, i.e., they have been used as geophysical-probes. In this, one perturbs the ionosphere, then studies how it responds to the disturbance and how it ultimately recovers back to ambient conditions. The use of ionospheric enhancement to simulate ionospheric processes and phenomena is a more recent development, made possible by the increasing knowledge being obtained on how they evolve naturally. By simulating natural ionospheric effects it is possible to assess how they may affect the performance of DoD systems. From a DoD point of view, however, the most exciting and challenging aspect of ionospheric enhancement is its potential to control ionospheric processes in such a way as to greatly enhance the performance of C3 systems (or to deny accessibility to an adversary). This is a revolutionary concept in that, rather than accepting the limitations imposed on operational systems by the natural ionosphere, it envisions seizing control of the propagation medium and shaping it to insure that a desired system capability can be achieved. A key ingredient of the DOD program is the goal of identifying and investigating those ionospheric processes and phenomena that can be exploited for such purposes.

2. Potential Applications

A brief description of a variety of potential applications of ionospheric-enhancement technology that could be addressed in the DOD program are outlined below.

2.1. Geophysical Probing

The use of ionospheric heating to investigate natural ionospheric processes is a traditional one. Such-research is still required in order to develop models of the ionosphere that can be used to reliably predict the performance of C3 systems, under both normal and disturbed ionospheric conditions. This aspect of ionospheric enhancement research is always available to the investigator; in effect, as a by-product of any ionospheric enhancement research, even if it is driven by specific system applications goals, such as discussed below.

2.2. Generation of ELF/VLF Waves

A number of critical DOD communications systems rely on the use of ELF/VLF (30 Hz-30kHz) radio waves. These include those associated with the Minimum Essential Emergency Communications Network (MEECN) and those used to disseminate messages to submerged submarines. In the latter, frequencies in the 70-150 Hz range are especially attractive, but difficult to generate efficiently with ground-based antenna systems. The potential exists for generating such waves by ground-based heating of the ionosphere. The heater is used to modulate the conductivity of the lower ionosphere, which in turn modulates ionospheric currents. This modulated current, in effect, produces a virtual antenna in the ionosphere for the radiation of radio waves. The technique has already been used to generate ELF/VLF signals at a number of vertical HF heating facilities in the West and the Soviet Union. To date, however, these efforts have been confined to essentially basic research studies, and few attempts have been made to investigate ways to increase the efficiency of such ELF/VLF generation to make it attractive for communications applications. In this regard, heater generated ELF would be attractive if it could provide significantly stronger signals than those available from the Navy's existing antenna systems in Wisconsin and Michigan. Recent theoretical research suggests that this may be possible, provided the appropriate HF heating facility was available. Because this area of research appears especially promising, and because of existing DOD requirements for ELF and VLF, it is already a primary driver of the proposed research program.

In addition to its potential application to long range, survivable, DOD communications, there is another potentially attractive application of strong ELF/VLF waves generated in the ionosphere by ground-based heaters. It is known that ELF/VLF signals generated by lightning strokes propagate through the ionosphere and interact with charged Particles trapped along geomagnetic

field lines, causing them, from time to time, to precipitate into the lower ionosphere. If such processes could be reliably controlled, it would be possible to develop techniques to deplete selected regions of the radiation belts of particles, for short periods, thus allowing satellites to operate within them without harm to their electronic components, any of the critical issues associated with this concept of radiation-belt control could be investigated as part of the DOD program.

2.3. Generation of Ionospheric Holes/Lens

It is well known that HF heating produces local depletions ("holes") of electrons, thus altering the refractive properties of the ionosphere. This in turn affects the propagation of radio waves passing through that region. If techniques could be developed to exploit this phenomena in such a way as to create an artificial lens, it should be possible to use the lens as a focus to deliver much larger amounts of HF energy to higher altitudes in the ionosphere than is presently possible, thus opening up the way for triggering new ionospheric processes and phenomena that potentially could be exploited for DOD purposes. In fact, the general issue of developing techniques to insure that large energy densities can be made available at selected regions in the ionosphere, from ground-based heaters, is an important one that must be addressed in the DOD program.

2.4. Electron Acceleration

If sufficient energy densities are available in the ionosphere it should be possible to accelerate electrons to high energies, ranging from a few eV to even KeV and MeV levels. Such a capability would provide the means for a number of interesting DOD applications.

Electrons in the ionosphere accelerated to a few eV would generate a variety of IR and optical emissions. Observation and quantification of them would provide data on the concentration of minor constituents in the lower ionosphere and upper atmosphere, which cannot be obtained using conventional probing techniques. Such data would be important for the development of reliable models of the lower ionosphere which are ultimately used in developing radio-wave propagation prediction techniques. In addition, heater generated IR/optical emission, over selected areas of the earth could potentially be used to blind space-based military sensors.

Electrons accelerated to energy levels in the 14-20 eV range would produce new ionization in the ionosphere, via collisions with neutral particles. This suggests that it may be possible to "condition" the ionosphere so that it would support HF propagation during periods when the natural ionosphere was especially weak. This could potentially be exploited for long range (OTH) HF communication/surveillance purposes. Finally, the use of an HF heater to accelerate electrons to KeV or MeV energy levels could be used, in conjunction

with satellite sensor measurements, for controlled investigations of the effects of high energy electrons on space platforms. There already is indication that high power transmitters on space-craft accelerate electrons in space to such high energy levels, and that those charged particles can impact on the space-craft with harmful effects. The processes which trigger such phenomena and the development of techniques to avoid or mitigate them could be investigated as part of the DOD program.

2.5. Generation of Field Aligned Ionization

HF heating of the ionosphere produces patches of ionization that are aligned with the geomagnetic field, thus producing scattering centers for RF waves. Natural processes also produce such scatterers, as evidenced by the scintillations observed on satellite-to-ground links in the equatorial and high latitude regions. The use of a HF heater to generate such scatterers would provide a controlled way to investigate the natural physical processes that produce them, and could lead conceivably to the development of techniques to predict their natural occurrence, their structure and persistence, and (ultimately) the degree to which they would affect DOD systems.

One interesting potential application of heater induced field-aligned ionization is already a part of an on-going DOD (Air Force/RADC) research program, Ducted HF Propagation. It is known that there are high altitude ducts in the E- and F- regions of the ionosphere (110-250 km altitude range) that can support round-the-world HF Propagation. Normally, however, geometrical considerations show that it is not possible to gain access to these ducts from ground-based HF transmitters. From time-to time, however, natural gradients in the ionosphere (often associated with the day-night terminator) provide a means for scattering such HF signals into the elevated ducts. If access to such ducts could be done reliably, interesting very long range HF communications and surveillance applications can be envisioned.

For example, survivable HF propagation above nuclear disturbed ionospheric regions would be possible; or, the very long range detection of missiles breaking through the ionosphere on their way to targets, could be achieved. The use of an HF heater to produce field-aligned ionization in a controlled (reliable) way has been suggested as a means for developing such concepts, and will be tested in an up-coming satellite experiment to be conducted during FY92. The experiment calls for a heater in Alaska to generate field-aligned ionization that will scatter HF signals from a nearby transmitter into elevated ducts. A satellite receiver will record the signals to provide data on the efficiency of the field-aligned ionization as an RF scatterer, as well as the location, persistence, and HF propagation properties associated with the elevated ducts.

2.6. Oblique HF Heating

Most RF heating experiments being conducted in the West and in the Soviet Union employ vertically propagating HF waves. As such the region of the ionosphere that is affected is directly above the heater. For broader military applications, the potential for significantly altering regions of the ionosphere at relatively great distances (1000 km or more) from a heater is very desirable. This involves the concept of oblique heating. The subject takes an added importance in that higher and higher effective radiated powers are being projected for future HF communication and surveillance systems. The potential for those systems to inadvertently modify the ionosphere, thereby producing self-limiting effects, is a real one that should be investigated. In addition, the vulnerability of HF systems to unwanted effects produced by other, high power transmitters (friend or foe) should be addressed.

2.7. Generation of Ionization Layers Below 90 Km

The use of very high power RF heaters to accelerate electrons to 14-20 eV opens the way for the creation of substantial layers of ionization at altitudes where normally there are very few electrons. This concept already has been the subject of investigations by the Air Force (Geophysics Lab), the Navy (MU), and DARPA. The Air Force, in particular, has carried the concept, termed Artificial Ionospheric Mirror (AIM), to the point of demonstrating its technical viability and proposing a new initiative to conduct proof-of-concepts experiments. The RF heater(s) being considered for AIM are in the 400 MHz-3 GHz range, much higher than the HF frequencies (1.5 MHz-15 MHz) suitable for investigating the other topics discussed in this summary. As such, the DOD program (HAARP) will not be directly involved with AIM-related ionospheric enhancement efforts,

3. IONOSPHERIC ISSUES ASSOCIATED WITH HIGH POWER RF HEATING

As illustrated in Figure 1, as the HF power delivered to the ionosphere is continuously increased the dissipative process dominating the response of the geophysical environment changes discontinuously, producing a variety of ionospheric effects that require investigation. Those anticipated at very high power levels (but not yet available in the West from existing HF heaters) are especially interesting from the point of view of potential applications for DOD purposes,

3.1. Thresholds of Ionospheric Effects

At very modest HF powers, two RF waves propagating through a common volume of ionosphere will experience cross-modulation, a superposition of the amplitude modulation of one RF wave upon another. At HF effective radiated powers available to the West, measurable bulk electron and ion gas heating is achieved, electromagnetic radiation (at frequencies other than transmitted) is stimulated, and various parametric instabilities are excited in the plasma. These include those which structure the plasma so that it scatters RF energy of a wide

range of wavelengths.

Figure 1. Thresholds of Ionospheric Effects as a function of Heater ERP (unavailable)

There is also evidence in the West that at peak power operation parametric instabilities begin to saturate, and at the same time modest amounts of energy begin to go into electron acceleration, resulting in modest levels of electron-impact excited airglow. This suggests that at the highest HF powers available in the West, the instabilities commonly studied are approaching their maximum RF energy dissipative capability, beyond which the plasma processes will "runaway" until the next limiting process is reached. The airglow enhancements strongly suggest that this next process then involves wave-particle interactions and electron acceleration.

The Soviets, operating at higher powers than the West, now have claimed significant stimulated ionization by electron-impact ionization. The claim is that HF energy, via wave-particle interaction, accelerates ionospheric electrons to energies well in excess of 20 electron volts (eV) so that they will ionize neutral atmospheric particles with which they collide. Given that the Soviet HF facilities are several times more powerful than the Western facilities at comparable mid-latitudes, and given that the latter appear to be on a threshold of a new "wave-particle" regime of phenomena, it is believed that the Soviets have crossed that threshold and are exploring a regime of phenomena still unavailable for study or application in the West.

The Max Planck HF facility at Tromso, Norway, possesses power comparable to that of the Soviet high power heaters, yet has never produced airglow enhancements commonly produced by US HF facilities at lower HF power, but at lower latitudes. This is attributed to a present inadequate understanding of how to make the auroral latitude ionosphere sustain the conditions required to allow the particle acceleration process to dominate, conditions which are achieved in the (more stable) mid-latitude regions.

What is clear, is that at the gigawatt and above effective radiated power energy density deposited in limited regions of the ionosphere can drastically alter its thermal, refractive, scattering, and emission character over a very wide electromagnetic (radio frequency) and optical spectrum, what is needed is the knowledge of how to select desired effects and suppress undesired ones. At present levels of understanding, this can only be done by: identifying and understanding what basic processes are involved, and how they interplay, This can only be done if driven by a strong experimental program steered by tight coupling to the interactive cycle of developing theory-model-experimental test.

3.2. General Ionospheric Issues

When a high-power HF radio wave reflects in the ionosphere, a variety of instability processes are triggered. At early times (less than 200 ms) following HF turn-on, microinstabilities driven by ponderomotive forces are excited over a large (1-10 km) altitude interval extending downwards from the point of HF reflection to the region of the upper hybrid resonance. However, at very early times (less than 50 ms) and at late times (greater than 10 s) the strongest HF-induced Langmuir turbulence appears to occur in the vicinity of HF reflection. The Langmuir turbulence also gives rise to a population of accelerated electrons. Over time scales of 100's of milliseconds and longer, the microinstabilities must coexist with other instabilities that are either triggered or directly driven by the HF-induced turbulence. Some of these instabilities are believed to be explosive in character. The dissipation of the Langmuir turbulence is thought to give rise to meter-scale irregularities through several different instability routes. Finally, over time scales of tens of seconds and longer, several thermally driven instabilities can be excited which give rise to kilometer-scale ionospheric irregularities. Some of these irregularities are aligned with the geomagnetic field, while others are aligned either along the axis of the HF beam or parallel to the horizontal.

Recently, ionospheric diagnostics of HF modification have evolved to the point where individual instability processes can be examined in detail. Because of improved diagnostic capabilities, it is now clear that the wave-plasma interactions once thought to be rather simple are in fact rather complex. For example, the latest experimental findings at Arecibo Observatory suggest that plasma processes responsible for the excitation of Langmuir turbulence in the ionosphere are fundamentally different from past treatments based on so-called "weak turbulence theory".

This theoretical approach relies on random phase approximations to treat the amplification of linear plasma waves by parametric instabilities. Research in HF ionospheric modification during the period 1970-1986 commonly focused on parametric instabilities to explain observational results. In contrast, there is increasing evidence that the conventional picture is wrong and that the ionospheric plasma undergoes a highly nonlinear development, culminating in the formation of localized states of strong plasma turbulence. The highly localized state (often referred to as cavitons) consists of high-frequency plasma waves trapped in self-consistent electron density depletions.

It is important to realize that many different instabilities are simultaneously excited in the plasma and that one instability process can greatly influence the development of another. Studies of competition between similar types of instability processes and the interaction between dissimilar wave-plasma interactions are in the earliest stages of development. However, it is clear that the degree to which one instability is excited in the plasma may severely impact a variety of other HF-induced processes through HF-induced pump wave absorption, changes in particle distribution functions, and the disruption of other coherently-driven processes relying on smooth ionospheric electron density

gradients. Because the efficiency of many instability processes is dependent on geomagnetic dip angle, the nature of instability competition in the plasma is expected to change with geomagnetic latitude. Indeed, observational results strongly support this notion. Consequently, it may be very difficult to extrapolate the observational results obtained at one geomagnetic latitude to another. Moreover, even at one experimental station, physical phenomena excited by a high-power HF wave is strongly dependent upon background ionospheric conditions. A classic illustration of this point may be found in Arecibo observations made when local electron energy dissipation rates are low. In this case, the ionospheric plasma literally overheats due to the absence of effective electron thermal loss processes.

The large (factor of four) enhancement in electron temperature that accompanies this phenomenon gives rise to a class of instability processes that is completely different from others observed under "normal" conditions where the ionospheric thermal balance is not greatly disrupted. At ERPs greater than a gigawatt (greater than 90 dBW), ponderomotive forces are no longer small compared to thermal forces. This may qualitatively change the nature of the instability processes in the ionosphere. Experimental research in this area, however, must wait until such powerful ionospheric heaters are developed.

3.3. High Latitude Ionospheric Issues

Radio wave heating of the ionosphere at mid-latitudes (e.g., Arecibo and Platteville) has occurred under conditions where the background ionosphere (prior to turning on the heater) was fairly laminar, stable, fixed, etc. However, at high latitudes (i.e., auroral latitudes such as HIPAS and Tromso) the background ionosphere is a dynamic entity. Even the location of the aurora and the electrojet are changing as a function of latitude, altitude and local time. Moreover, the background E- and F-region ionosphere may not be laminar on scale sizes less than 20 km and less than 100 km, respectively. Rather, there is the possibility of E- and F- region irregularities (with scale sizes from cms to kms) occurring at various times due to (for example) electrojet driven instabilities in the E-region, and spread F or current driven instabilities in the F-region. High energy particles, e.g., from solar flares, may also lead to D-region structuring. In addition, connection to the magnetosphere via the high conductivity along magnetic field lines can play an important role. The theoretical understanding of high latitude ionospheric heating processes has been improving; however, given the dynamic nature of the high latitude ionosphere, it is important to diagnose the background ionosphere prior to the inception of any heating experiments. This diagnostic capability aids in determining long term statistics, as well as real-time parameters. While such diagnostics have been an integral part of the heating experiments at Arecibo and Tromso, HF heating experiments at HIPAS have been severely hampered by a lack of similar diagnostics.

4. DESIRED HF HEATING FACILITY

In order to address the broad range of issues discussed in the previous sections, a new, unique, HF heating facility is required. An outline of the desired capabilities of such a heater, along with diagnostic needed for addressing these issues are given in Table 2.

(Table 2 not available in this document)

4.1. Heater Characteristics

The goals for the HF heater are very ambitious. In order to have a useful facility at various stages of its development, it is important that the heater be constructed in a modular manner, such that its effective-radiated-power can be increased in an efficient, cost effective manner as resources become available. Other desired HF heater characteristics are outlined below.

Effective-Radiated-Power (ERP)

One gigawatt of effective-radiated-power (90 dBW) represents an important threshold power level, over which significant wave generation and electron acceleration efficiencies can be achieved, and other significant heating effects can be expected. To date, the Soviet Union has built such a powerful HF heater. The highest ERPs achieved by US. facilities is about one-fourth of that. Presently, a heater in Norway, operated by the Max Planck Institute in the Federal Republic of Germany, is being reconfigured to provide 1 gigawatt of ERP at a single HF frequency. The HAARP is to ultimately have a HF heater with an ERP well above 1 gigawatt (on the order of 95-100 dBW); in short, the most powerful facility in the world for conducting ionospheric modification research. In achieving this, the heated area in the F-region should have a minimum diameter of at least 50 km, for diagnostic-measurement purposes.

4.1.2. Frequency Range of Operation

The desired heater would have a frequency range from around 1 MHz to about 15 MHz, thereby allowing a wide range of ionospheric processes to be investigated. This incorporates the electron-gyro frequency and would permit operations under all anticipated ionospheric conditions. Multi-frequency operation using different portions of the antenna array is also a desirable feature. Finally, frequency changing on an order of milliseconds is desirable over the bandwidth of the HF transmitting antenna.

4.1.3. Scanning Capabilities

A heater that has scanning capabilities is very desirable in order to enlarge the size of heated regions in the ionosphere. Although a scanning range from vertical to very oblique (about 10 degrees above the horizon) would be desirable,

engineering considerations will most likely narrow the scanning range to about 45 degrees from the vertical. The capability of rapidly scanning (microseconds time scale) in any direction, is also very desirable.

4.1.4. Modes of Operation

Flexibility in choosing heating modes of operation, including continuous-wave (CW) and pulsed modes, will allow a wider variety of ionospheric modification techniques and issues to be addressed.

4.1.5. Wave polarization

The heater should permit both X and O polarizations to be transmitted, in order to study ionospheric processes over a range of altitudes.

4.1.6. Agility in Changing Heater Parameters

The ability to quickly change heater parameters, such as operating frequency, scan angle and direction, power levels, and modulation is important for addressing such issues as enlarging the size of the modified region in the ionosphere and the development of techniques to insure that the energy densities desired in the ionosphere can be delivered from the heater without self-limiting effects setting-in.

4.2. Heating Diagnostics

In order to understand natural ionospheric processes as well as those induced through active modification of the ionosphere, adequate instrumentation is required to measure a wide range of ionospheric parameters on the appropriate temporal and spatial scales.

4.2.1. Incoherent Scatter Radar Facility

A key diagnostic for these measurements will be an incoherent scatter radar facility to provide the means to monitor such background plasma conditions as electron densities, electron and ion temperatures, and electric fields, all as a function of altitude. In addition, the incoherent scatter radar will provide the means for closely examining the generation of plasma turbulence and the acceleration of electrons to high energies in the ionosphere by HF heating. The incoherent scatter radar facility, envisioned to complement the planned new HF heater, is currently being funded in a separate DOD program, as part of an upgrade at the Poker Flat rocket range, in Alaska.

4.2.2. Other Diagnostics

The capability of conducting in situ measurements of the heated region in the ionosphere, via rocket-borne instrumentation, is also very desirable. Other diagnostics to be employed, depending on the specific nature of the HF heating experiments, may include HF receivers for the detection of stimulated electromagnetic emissions from heater induced turbulence in the ionosphere; HF/VHF radars, to determine the amplitudes of short-scale (1-10 m) geomagnetic field-aligned irregularities; optical imagers, to determine the flux and energy spectrum of accelerated electrons and to provide a three-dimensional view of artificially produced airglow in the upper atmosphere; and, scintillation observations, to be used in assessing the impact of HF heating on satellite downlinks and in diagnosing large-scale ionospheric structures.

4.2.3. Additional Diagnostics for ELF Generation Experiments

These could include a chain of ELF receivers to record signal strengths at various distances from the heater; a digital HF ionosonde, to determine background electron density profiles in the E- and F-regions; a magnetometer chain, to observe changes in the earth's magnetic field in order to determine large volume ionospheric currents and electric fields; photometers, to aid in determining ionospheric conductivities and observing precipitating particles; a VLF sounder, to determine changes in the D-region of the ionosphere; and, a riometer, to provide additional data in these regards, especially for disturbed ionospheric conditions.

4.3. HF Heater Location

One of the major issues to be addressed under the program is the generation of ELF waves in the ionosphere by HF heating. This requires locating the heater where there are strong atmospheric currents, either at an equatorial location or at a high latitude (auroral) location. Additional factors to be considered in locating the heater include other technical (research) needs and requirements, environmental issues, future expansion capabilities (real estate), infrastructure, and considerations of the availability and location of diagnostics. The location of the new HF heating facility is planned for Alaska, relatively near to a new incoherent scatter facility, already planned for the Poker Flat rocket range under a separate DOD program. In addition, it is desirable that the HF heater be located to permit rocket probe instrumentation to be flown into the heated region of the ionosphere. The exact location in Alaska for the proposed new HF heating facility has not yet been determined.

4.4. Estimated Cost of the New HF Heating Facility

It is estimated that eight to ten million dollars (\$8-10M) will provide a new HF heating facility with an effective-radiated-power of approximately that of the current DOD facility (HIPAS), but with considerable improvement in frequency tunability and antenna-beam steering capability. The new facility will be of

modular design to permit efficient and cost-effective upgrades in power as additional funds become available. The desired (world-class) facility, having the broad capabilities and flexibility described above, will cost on the order of twenty-five to thirty million dollars (\$25-30M).

5. PROGRAM PARTICIPANTS

The program will be jointly managed by the Navy and the Air Force. However, because of the wide variety of issues to be addressed, substantial involvement in the program by other government agencies (DARPA, DNA, NSF, etc.), universities, and private contractors is envisioned.

Appendix E

Joint Vision 2020 Emphasizes Full-spectrum Dominance

By Jim Garamone, American Forces Press Service

WASHINGTON, June 2, 2000 – "Full-spectrum dominance" is the key term in "Joint Vision 2020," the blueprint DoD will follow in the future.

Joint Vision 2020, released May 30 and signed by the chairman of the Joint Chiefs of Staff, Army Gen. Henry Shelton, extends the concept laid out in Joint Vision 2010. Some things will not change. The mission of the U.S. military today and tomorrow is to fight and win the nation's wars. How DoD goes about doing this is 2020's focus.

Full-spectrum dominance means the ability of U.S. forces, operating alone or with allies, to defeat any adversary and control any situation across the range of military operations.

While full-spectrum dominance is the goal, the way to get there is to "invest in and develop new military capabilities." The four capabilities at the heart of full-spectrum dominance are dominant maneuver, precision engagement, focused logistics and full-dimensional protection.

These four capabilities need the full capabilities of the total force. "To build the most effective force for 2020, we must be fully joint: intellectually, operationally, organizationally, doctrinally and technically," the report states.

The report says that new equipment and technological innovation are important, but more important is having trained people who understand and can exploit these new technologies.

The joint force must win over the full range of conflict, be prepared to work with allies and cooperate with other U.S. and international agencies.

Adversaries will not stand still. They, too, have access to many cutting-edge developments in information technology.

"We should not expect opponents in 2020 to fight with strictly 'industrial age' tools," the report states. "Our advantage must ... come from leaders, people, doctrine, organizations and training that enable us to take advantage of technology to achieve superior warfighting effectiveness."

Adversaries will probably not challenge U.S. strengths, but seek to attack the United States and its interests through "asymmetric means." They could identify vulnerable areas and devise means to attack them.

"The potential of such asymmetric approaches is perhaps the most serious danger the United States faces in the immediate future - - and this danger includes long-range ballistic missiles and other direct threats to U.S. citizens and territory," the report says.

Joint Vision 2020 addresses full-spectrum dominance across the range of conflicts from nuclear war to major theater wars to smaller-scale contingencies. It also addresses amorphous situations like peacekeeping and noncombat humanitarian relief. Key to U.S. dominance in any conflict will be what the chairman calls "decision superiority" -- translating information superiority into

better decisions arrived at and implemented faster than an enemy can react.

The development of a global information grid will provide the environment for decision superiority.

Innovation has always been a hallmark of the American military. In 2020, this native American talent will be even more important.

"The services and combatant commands must allow our highly trained and skilled professionals the opportunity to create new concepts and ideas that may lead to future breakthroughs," according to the report. Inherent in this statement is the commitment to not penalize service members if their innovations do not work.

"An experimentation process with low tolerance for error makes it unlikely that the force will identify and nurture the most relevant and productive aspects of new concepts, capabilities and technologies," the report states.

Normally applied to communications and materiel, "interoperability" in the military became a catchword in the 1970s, when it became apparent that many of the NATO allies could not operate with each other. Joint Vision 2020 expands the term to include the development of joint doctrine and information sharing.

Joint Vision 2020 is a blueprint. While many of its facets could come true, not all will. Changes in the world or changes in America may render some points moot. Joint Vision 2020 carries on some of the recommendations to transform the U.S. military from Joint Vision 2010. Other portions of 2010 are gone or changed.

Appendix F

European Parliament Report

On the Environment, Security and Foreign Policy (A4-0005/99)

14 January 1999

HAARP - a weapons system which disrupts the climate

On 5 February 1998 Parliament's Subcommittee on Security and Disarmament held a hearing the subject of which included HAARP. NATO and the US had been invited to send representatives, but chose not to do so. The Committee regrets the failure of the USA to send a representative to answer questions, or to use the opportunity to comment on the material submitted.⁽²¹⁾

HAARP (High Frequency Active Auroral Research Project) is run jointly by the US Air Force and Navy, in conjunction with the Geophysical Institute of the University of Alaska, Fairbanks. Similar experiments are also being conducted in Norway, probably in the Antarctic, as well as in the former Soviet Union.⁽²²⁾ HAARP is a research project using a ground based apparatus, an array of antennae each powered by its own transmitter, to heat up portions of ionosphere with powerful radio beams.⁽²³⁾ The energy generated heats up parts of the ionosphere; this results in holes in the ionosphere and produces artificial 'lenses'.

HAARP can be used for many purposes. Enormous quantities of energy can be controlled by manipulating the electrical characteristics of the atmosphere. If used as a military weapon this can have a devastating impact on an enemy. HAARP can deliver millions of times more energy to a given area than any other conventional transmitter. The energy can also be aimed at a moving target which should constitute a potential anti-missile system.

The project would also allow better communications with submarines and manipulation of global weather patterns, but it is also possible to do the reverse, to disrupt communications. By manipulating the ionosphere one could block global communications while transmitting one's own. Another application is earth-penetrating, tomography, x-raying the earth several kilometres deep, to detect oil and gas fields, or underground military facilities. Over-the-horizon radar is another application, looking round the curvature of the earth for in-coming objects.

From the 1950s the USA conducted explosions of nuclear material in the Van Allen Belts⁽²⁴⁾ to investigate the effect of the electro-magnetic pulse generated by nuclear weapon explosions at these heights on radio communications and the operation of radar. This created new magnetic radiation belts which covered nearly the whole earth. The electrons travelled along magnetic lines of force and

created an artificial Aurora Borealis above the North Pole. These military tests are liable to disrupt the Van Allen belt for a long period. The earth's magnetic field could be disrupted over large areas, which would obstruct radio communications. According to US scientists it could take hundreds of years for the Van Allen belt to return to normal. HAARP could result in changes in weather patterns. It could also influence whole ecosystems, especially in the sensitive Antarctic regions.

Another damaging consequence of HAARP is the occurrence of holes in the ionosphere caused by the powerful radio beams. The ionosphere protects us from incoming cosmic radiation. The hope is that the holes will fill again, but our experience of change in the ozone layer points in the other direction. This means substantial holes in the ionosphere that protects us.

With its far-reaching impact on the environment HAARP is a matter of global concern and we have to ask whether its advantages really outweigh the risks. The environmental impact and the ethical aspect must be closely examined before any further research and testing takes place. HAARP is a project of which the public is almost completely unaware, and this needs to be remedied.

HAARP has links with 50 years of intensive space research for military purposes, including the Star Wars project, to control the upper atmosphere and communications. This kind of research has to be regarded as a serious threat to the environment, with an incalculable impact on human life. Even now nobody knows what impact HAARP may have. We have to beat down the wall of secrecy around military research, and set up the right to openness and democratic scrutiny of military research projects, and parliamentary control.

A series of international treaties and conventions (the Convention on the prohibition of military or any other hostile use of environmental modification techniques, the Antarctic Treaty, the Treaty on principles governing the activities of states in the exploration and use of outer space including the moon and other celestial bodies, and the UN Convention on the Law of the Sea) casts considerable doubt on HAARP on legal as well as humanitarian and political grounds. The Antarctic Treaty lays down that the Antarctic may be used exclusively for peaceful purposes.⁽²⁵⁾ This would mean that HAARP is a breach of international law. All the implications of the new weapons systems should be examined by independent international bodies. Further international agreements should be sought to protect the environment from unnecessary destruction in war.

21 This section is based on information from the hearing.

22 Dr Nick Begich, speaker at the hearing.

23 The ionosphere contains vast protective magnetic fields known as the Van Allen belts which intercept charged particles (protons, electrons and alpha particles).

24 In 1958 the US Navy exploded 3 devices containing nuclear material 480 km above the South Atlantic. Designed by the US Department of Defence and the Atomic Energy Commission under the code name Project Argus. Source: Dr Rosalie Bertell.

25 Article 1, the Antarctic Treaty.

http://www.europarl.europa.eu/sides/getDoc.do?type=REPORT&reference=A4-1999-0005&format=XML&language=EN#_part7_ref22

Appendix G

UN Weather Weapons Treaty

UNGA RES. 31/72, TIAS 9614

CONVENTION ON THE PROHIBITION OF MILITARY OR ANY OTHER HOSTILE USE OF ENVIRONMENTAL MODIFICATION TECHNIQUES

Adopted by Resolution 31/72 of the United Nations General Assembly on 10 December 1976. The Convention was opened for signature at Geneva on 18 May 1977.

TEXT PUBLISHED IN: United Nations General Assembly Resolution 31/72, Annex; see Official Records of the General Assembly, Thirty-first Session, Supplement No. 39 (A/31/39), pp. 37-38. International Legal Materials, Vol. XVI, No. 1, January 1977, pp. 88-94 (Engl.); World Armaments and Disarmament, SIPRI Yearbook 1978, London 1978, pp. 392-397 (Engl.); Shindler & Toman, eds., "The Laws of Armed Conflicts."

The States Parties to this Convention,

Guided by the interest of consolidating peace, and wishing to contribute to the cause of halting the arms race, and of bringing about general and complete disarmament under strict and effective international control, and of saving mankind from the danger of using new means of warfare,

Determined to continue negotiations with a view to achieving effective progress towards further measures in the field of disarmament,

Recognizing that scientific and technical advances may open new possibilities with respect to modification of the environment,

Recalling the Declaration of the United Nations Conference on the Human Environment, adopted at Stockholm on 16 June 1972,

Realizing that the use of environmental modification techniques for peaceful purposes could improve the interrelationship of man and nature and contribute to the preservation and improvement of the environment for the benefit of present and future generations,

Recognizing, however, that military or any other hostile use of such techniques could have effects extremely harmful to human welfare,

Desiring to prohibit effectively military or any other hostile use of environmental modification techniques in order to eliminate the dangers to mankind from such use, and affirming their willingness to work towards the achievement of this objective,

Desiring also to contribute to the strengthening of trust among nations and to the further improvement of the international situation in accordance with the purposes and principles of the Charter of the United Nations,

Have agreed as follows:

ARTICLE I

1. Each State Party to this Convention undertakes not to engage in military or any other hostile use of environmental modification techniques having widespread, long-lasting or severe effects as the means of destruction, damage or injury to any other State Party.
2. Each State Party to this Convention undertakes not to assist, encourage or induce any State, group of States or international organization to engage in activities contrary to the provisions of paragraph 1 of this article.

ARTICLE II

As used in article 1, the term "environmental modification techniques" refers to any technique for changing - through the deliberate manipulation of natural processes--the dynamics, composition or structure of the Earth, including its biota, lithosphere, hydrosphere and atmosphere, or of outer space.

ARTICLE III

1. The provisions of this Convention shall not hinder the use of environmental modification techniques for peaceful purposes and shall be without prejudice to the generally recognized principles and applicable rules of international law concerning such use.
2. The States Parties to this Convention undertake to facilitate, and have the right to participate in, the fullest possible exchange of scientific and technological information on the use of environmental modification techniques for peaceful purposes. States Parties in a position to do so shall contribute, alone or together

with other States or international organizations, to international economic and scientific co-operation in the preservation, improvement and peaceful utilization of the environment, with due consideration for the needs of the developing areas of the world.

ARTICLE IV

Each State Party to this Convention undertakes to take any measures it considers necessary in accordance with its constitutional processes to prohibit and prevent any activity in violation of the provisions of the Convention anywhere under its jurisdiction or control.

ARTICLE V

1. The States Parties to this Convention undertake to consult one another and to co-operate in solving any problems which may arise in relation to the objectives of, or in the application of the provisions of, the Convention. Consultation and co-operation pursuant to this article may also be undertaken through appropriate international procedures within the framework of the United Nations and in accordance with its Charter. These international procedures may include the services of appropriate international organizations, as well as of a Consultative Committee of Experts as provided for in paragraph 2 of this article.

2. For the purposes set forth in paragraph 1 of this article, the Depositary shall within one month of the receipt of a request from any State Party to this Convention, convene a Consultative Committee of Experts. Any State Party may appoint an expert to the Committee whose functions and rules of procedure are set out in the annex which constitutes an integral part of this Convention. The Committee shall transmit to the Depositary a summary of its findings of fact, incorporating all views and information presented to the Committee during its proceedings. The Depositary shall distribute the summary to all States Parties.

3. Any State Party to this Convention which has reason to believe that any other State Party is acting in breach of obligations deriving from the provisions of the Convention may lodge a complaint with the Security Council of the United Nations. Such a complaint should include all relevant information as well as all possible evidence supporting its validity.

4. Each State Party to this Convention undertakes to cooperate in carrying out any investigation which the Security Council may initiate, in accordance with the

provisions of the Charter of the United Nations, on the basis of the complaint received by the Council. The Security Council shall inform the States Parties of the results of the investigation.

5. Each State Party to this Convention undertakes to provide or support assistance, in accordance with the provisions of the Charter of the United Nations, to any State Party which so requests, if the Security Council decides that such Party has been harmed or is likely to be harmed as a result of violation of the Convention.

ARTICLE VI

1. Any State Party to this Convention may propose amendments to the Convention. The text of any proposed amendment shall be submitted to the Depositary, who shall promptly circulate it to all States Parties.

2. An amendment shall enter into force for all States Parties to this Convention which have accepted it, upon the deposit with the Depositary of instruments of acceptance by a majority of States Parties. Thereafter it shall enter into force for any remaining State Party on the date of deposit of its instrument of acceptance.

ARTICLE VII

This Convention shall be of unlimited duration.

ARTICLE VIII

1. Five years after the entry into force of this Convention, a conference of the States Parties to the Convention shall be convened by the Depositary at Geneva, Switzerland. The conference shall review the operation of the Convention with a view to ensuring that its purposes and provisions are being realized, and shall in particular examine the effectiveness of the provisions of paragraph 1 of article I in eliminating the dangers of military or any other hostile use of environmental modification techniques.

2. At intervals of not less than five years thereafter, a majority of the States Parties to this Convention may obtain, by submitting a proposal to this effect to the Depositary, the convening of a conference with the same objectives.

3. If no conference has been convened pursuant to paragraph 2 of this article

within ten years following the conclusion of a previous conference, the Depositary shall solicit the views of all States Parties to this Convention concerning the convening of such a conference. If one third or ten of the States Parties, whichever number is less, respond affirmatively, the Depositary shall take immediate steps to convene the conference.

ARTICLE IX

1. This Convention shall be open to all States for signature. Any State which does not sign the Convention before its entry into force in accordance with paragraph 3 of this article may accede to it at any time.
2. This Convention shall be subject to ratification by signatory States. Instruments of ratification or accession shall be deposited with the Secretary-General of the United Nations.
3. This Convention shall enter into force upon the deposit of instruments of ratification by twenty Governments in accordance with paragraph 2 of this article.
4. For those States whose instruments of ratification or accession are deposited after the entry into force of this Convention, it shall enter into force on the date of the deposit of their instruments of ratification or accession.
5. The Depositary shall promptly inform all signatory and acceding States of the date of each signature, the date of deposit of each instrument of ratification or accession and the date of the entry into force of this Convention and of any amendments thereto, as well as of the receipt of other notices.
6. This Convention shall be registered by the Depositary in accordance with Article 102 of the Charter of the United Nations.

ARTICLE X

This Convention, of which the Arabic, Chinese, English, French, Russian and Spanish texts are equally authentic, shall be deposited with the Secretary-General of the United Nations, who shall send duly certified copies thereof to the Governments of the signatory and acceding States.

IN WITNESS WHEREOF, the undersigned, being duly authorized thereto, have signed this Convention

Done at Geneva, on the 18 day of May 1977.

Appendix H

http://foia.abovetopsecret.com/ultimate_UFO/Advanced/HAARPResearchAndApplications.pdf

Appendix I

Homage for Dr. Rosalie Bertell (1929-2012)

by Professor Emeritus Dr. Claudia von Werlhof, Austria

Rosalie Bertell helped to organize the first meeting of this type in the European Parliament in 1999, one year before her book about the development of military technologies appeared, *Planet Earth: The Latest Weapon of War*, a book hardly anyone seems to have read because the book was never properly distributed.

I myself read it in 2010. In Germany, we founded the Planetary Movement for Mother Earth, translated Bertell's book into German and published it as *Kriegswaffe Planet Erde*, an updated version with new texts from Bertell herself and others. A Spanish translation is going to appear in Mexico soon and we need a publisher for the 2nd English version.

Bertell, born in the United States, died last year at the age of 83. She was incredibly engaged as an active international scientist, an expert witness for the United Nations, founder of various international institutions, a lifelong member of the Order of the Grey Nuns of the Sacred Heart, Pennsylvania and a world renowned eco-feminist: a courageous fighter for public health and Mother Earth, the living Cosmic Being she loved so much!

Between other awards, Bertell received the Right Livelihood Award in 1986 for her unique work about the dangers of nuclear radiation: "No Immediate Danger? The Future of A Radioactive Earth," 1985—one year before the nuclear accident at Chernobyl.

In *Planet Earth*, she documents the development of new military technologies in nuclear and post-nuclear planetary dimensions in East and West after WWII, a period of 60 years. She defines them as "plasma weapons, weather warfare, and geoengineering."

The "Tesla-weapons" function mostly via pulsed electromagnetic waves that can originate earthquakes, tsunamis, volcanic eruptions, droughts, floods, and other changes in the weather as well as in the ocean currents all over the Planet. Since 1974, for instance, these weapons have been used to melt down the Arctic. (The existence of these technologies was already described in the U.N. ENMOD Convention of 1977, calling for a ban on their hostile use.)

Today, Rosalie might have liked to say:

The present ongoing weeks-long weather warfare with Chemtrails over the whole of Europe proves that greenhouse gases are NOT the real cause of climate change. It is the military experimentation of decades that is causing seemingly "natural" changes and catastrophes. Mother Earth has already been turned into a mega-weapon, threatening not only survival conditions, but also the life systems of the Earth, so that our Planet has already been severely damaged, and that before we really know how it indeed functions.

Geoengineering, therefore, does not "save" the Earth. On the contrary, the propagation of civil geoengineering today is only hiding the military activities behind it, which aim to take control and power over the whole Planet, putting it at risk consciously and irresponsibly.

We the people cannot tolerate a military that continues to wage a secret war on and against our Planet, behaving like God and destroying life, the Blue of our atmosphere, and Mother Earth Herself. Such a criminal and diabolical undertaking of dimensions never heard of has to STOP immediately!

Appendix J

Scalar Wars: The Brave New World of Scalar Electromagnetics (2001)

by Bill Morgan

Electric power is everywhere present in unlimited quantities and can drive the world's machinery without the need of coal, oil, gas, or any other of the common fuels.

- Nikola Tesla

At any point and at any time, one can freely and inexpensively extract enormous EM energy flows directly from the active vacuum itself.

- Tom Bearden, Lieutenant Colonel, U.S. Army (Ret.)

Others are engaging even in an eco-type of terrorism whereby they can alter the climate, set off earthquakes, volcanoes remotely through the use of electromagnetic waves . . . So there are plenty of ingenious minds out there that are at work finding ways in which they can wreak terror upon other nations . . . It's real, and that's the reason why we have to intensify our efforts.

- Defense Secretary William Cohen, 1997

When he was asked, "Does the government listen to Tom Bearden?" Bearden said: "Let me speak carefully. I am very satisfied with how I've been listened to in the quarters where the rubber meets the road. The West is no longer defenseless, not by any means. Cannot amplify it further than that."¹

Scalar Electromagnetics needs to become common knowledge as fast as possible, for the sake of the survival of life on earth. To that end I have put together this small primer of Bearden's ideas, as a kind of "beginner's guide" to his website.

This article has six sections: I. New Waves; II. Tapping the Waves; III. Weaponization; IV. Healing; V. Psycho-energetics; VI. As It Stands. (Note: Throughout, "EM" means "electromagnetic" and "LW" means "longitudinal wave.")

¹ <http://www.cheniere.org/correspondence/021102a.htm>. See Bearden's latest book, *Oblivion: America at the Brink*, available at Bearden's website <http://www.cheniere.org/sales/buy-ob.htm>.

I. New waves discovered

Longitudinal EM energy fills vacuum of space, the time domain of spacetime, time as compressed energy, $E=tc^2$, waves of time, phase conjugate wave pairs.

I guess the first thing to try to comprehend is that a "new" kind of electro-magnetic (EM) wave has been discovered in the empty vacuum of space which, when engineered, can be an inexhaustible supply of energy in great magnitude at any place in the universe. The word "new" is in quotes because the discovery really goes back to Nikola Tesla and his discovery of what he called "radiant energy." It is also not "new" because the Russians (KGB) have been working on this technology for over 30 years and have weaponized these "new" longitudinal scalar waves to a great degree. These are the weapons Nikita Khrushchev spoke of in January, 1960.

By 1957-8 the Soviets had progressed to the point of a giant scalar EM accident in the Urals which exploded nearby atomic wastes, devastating the area. They had also progressed to development of great new superweapons using their new energetics - weapons to which Khrushchev referred in 1960 when he informed the Soviet Presidium of a new, fantastic weapon in development, a weapon so powerful that it could wipe out all life on earth if unrestrainedly employed.

- Tom Bearden

After over 30 years of development, and extensive testing around the globe, these new scalar electromagnetic weapons are up and running and ready to go. Tom Bearden at *Cheniere* discusses the history of these new scalar electromagnetic weapons in his paper "Historical Background of Scalar EM Weapons."

Some Immediate Implications

The implications of successful engineering of the longitudinal waves are enormous and will change the world as we know it, one way or another. Among other things, these discoveries mean that:

1. The solutions to the energy crisis and the "oil problem" are in hand. These oil wars are unnecessary. There is endless energy available freely from the domain of time.
2. Unbelievably powerful weapons are not only possible, but are already operating in several nations.
3. The cure of diseases such as cancer and AIDS, in fact nearly any disease, has become possible within a few years of sufficient funding. Everyone can be made healthy and stay healthy.

4. Mind control on a mass scale has now become possible, and the machines to do it are already in place in certain nations. It has become possible to mentally enslave whole populations with the twist of a few dials.

So the layman will need to understand that there is a new kind of electromagnetic energy that is altogether different from what he knows, e.g. radio, TV, cell phones, etc. The ordinary EM waves that we have known are called transverse EM waves, to distinguish them from the new **longitudinal EM waves. These scalar waves do not actually exist in our "material" world, but exist only in the vacuum of empty space, or the time domain.** And we must keep in mind that this vacuum of space we speak of exists through everything. Even our bodies are mostly empty space between atoms and molecules. So the gateway to this seething ocean of energy can be there at every point in the universe, is all around us and all through us.

Emptiness is Full

Col. Bearden refers to this ocean of energy as being of the "time domain."

We live in a 3-dimensional world physics calls "3-space." But there is also spacetime, or 4-space, the "4th dimension." Time itself is compressed energy, compressed by exactly the same factor by which matter is considered compressed energy: the speed-of-light-squared.

So we have a new companion to the famous $E=mc^2$. It is now paired with $E=tc^2$ (where t is actually "delta-t," or change in time). And as the atomic bomb released the compressed energy in matter, so can we now unleash the tremendous energy that is compressed in time itself.

Some New Terminology of Scalar Electromagnetics

Those [Russian] weapon scientists resurrected an old term from the history of electrodynamics, called "energetics." That is their approach to a unified field theory, where everything is based on energetics. This model as its foundations uses a very similar approach to that "single fundamental unit" model, where energy is the unit. If one makes the energy EM in nature, then one has the Russian energetics approach. This unified approach gathers everything in, including all energy actions and relations in inert matter (the first branch of energetics, called by the same name), all field and matter interactions in living matter (the second branch of energetics, called "bioenergetics"), and all mind operations and mind-matter interactions (the third branch of energetics, called "psychoenergetics"). [Ed: Sometimes called "psychotronics" by the Russians.]

Note that the weaponeers sliced energetics into three branches, with each branch depending on the nature of the "targeting." So I took a hint from them. They had already weaponized it highly. [See also "Subdivisions of Soviet Energetics."]

- Tom Bearden

Rick Andersen in an article called "What is Scalar Electromagnetics?" describes the new science this way:

Scalar EM is the brainchild of Lt. Col. (retired) Thomas E. Bearden, a systems analyst and wargames specialist who has been advocating a view of electromagnetics based on the notion of a vast, unseen background of scalar energies (as opposed to vector energies) that underlie all physical reality.

If Bearden is correct, then we can build devices that enable us to alter gravity, time, inertia, and the apparent mass of an object. This of course has ENORMOUS implications for military applications, space-vehicle drives, time-travel, teleportation, paranormal phenomena, and just about every other area one can think of.²

Time-energy, time-currents, and time-structuring play the dominant role in electromagnetics. Time-as-energy eventually becomes engineerable as easily as spatial energy now. We are always dealing with spacetime and with spacetime curvature.

- Tom Bearden

The scalar energy discovered in the vacuum of space is sometimes called "zero-point" energy. Thomas Valone explains how this term came about.

What does "Zero Point" mean?

Boyer traces the historical 'creation of the vacuum' as proceeding in stages in parallel with the historical development of ideas about the vacuum. To paraphrase, he says that in the 17th century, it was thought that a totally empty volume of space could be created by simply removing all matter and, in particular, all gases. That was our first concept of the vacuum. Just get rid of all the gas.

Late in the 19th century, it became apparent that the region still contained thermal radiation. But it seemed that the radiation might be eliminated by cooling. So the second concept of getting a real vacuum is to cool it down to zero temperature. Just go all the way to absolute zero. Then we've got a real vacuum. Right? Well, since then, both theory and experiment have shown that there is a non-thermal radiation in the vacuum and that it persists even if the temperature could be lowered to absolute zero. Therefore, it was simply called 'zero point' radiation.³

For our very survival, it is absolutely imperative that informed citizens be aware of this dramatic change, which is just now starting. The powerful new science and engineering must be controlled and used for humanity's benefit, not its detriment. Else it will eventually be let loose unrestrainedly, to destroy all life on earth - a possibility indicated by Nikita Khrushchev in 1960.

² http://twm.co.nz/Beard_scalem.html

³ <http://www.seaspower.com/InsideZeroPoint.htm>

- Tom Bearden

II. Tapping the waves

Endless free energy, Tesla's radiant energy, the dipole as the gateway to the energy of the void, MEG in one year, Bedini, Yakuza, etc. End of oil, geopolitical chaos, rogue groups. Move Over GE & Big Oil, Energy is Everywhere! Third-world nations set to rise.

Certain powerful interests did not wish the extended electromagnetics to be discovered or taught. That, after all, would lead to free energy and loss of economic control of the citizens. That was precisely why Nikola Tesla was suppressed... Today it is still being suppressed by the orthodox establishment.

- Tom Bearden

The vast seething ocean of energy of the vacuum, the longitudinal scalar EM waves of the time domain, can now be tapped and "transduced" into ordinary (transverse) EM energy in our 3-Space world. The process can be compared to putting a paddlewheel into a river. The energy acquired is free, since the river is there flowing whether we tap it or not. And it is a mighty river, and is not diminished by our paddlewheel. This means that a permanent solution to the "energy crisis" is at hand, if only those who hold it so secret would give it up to humankind. It means our species' insane use of oil is no longer necessary. We can make automobiles that need no fuel at all. We can build motors that power themselves. It means that unlimited electrical power can be available for free anywhere in the world. Every house and even shack can have its own power supply. Of course, there is the cost of the equipment at first, but the energy flow is free for the presumably very long life (no moving parts) of the generator. It will probably take decades to shift over to scalar power.

But the ability to tap the scalar (longitudinal) EM waves of the vacuum (which exists everywhere) also means that unbelievably powerful weapons can be and already have been developed. In fact, these weapons are so dangerous that the fear engendered becomes a psychological obstacle to the grasping of the facts... The possibilities of these new weapons tapping the huge energies of time are so terrifying it is natural for the mind to simply say: "I don't want to hear about that." And the government, likewise, pretends these weapons do not exist and tries to keep it secret from the people, because most people would indeed be truly alarmed to know the actual situation.

The physics and mathematics of the longitudinal waves and the time domain are clearly beyond the layman, but I recommend scanning through them anyway just to get a sense of the wonder and the elegance of it all and some of the exotic terms which are used. Two of the most important papers by Col. Bearden are "Giant Negentropy from the Common Dipole" and "The Final Secret of Free

Energy.” Despite the complexity of the science involved, Bearden sums up the essential secret of it all in a few words.

There is no problem at all in extracting all the energy one wishes from the active vacuum, anywhere in the universe, at any time. Just make a dipole. The problem is in (1) catching some of that freely gushing EM energy in a circuit containing a load, and (2) dissipating the caught and collected EM energy in that load to power it, without using half the caught energy to destroy the source dipole's. That is the ONLY real energy problem on the planet, and always has been.

- Tom Bearden

A dipole could be a battery polarized into negative and positive. Or the terminals of a generator. Or any magnet with its two poles. Or an atom with its positive and negative charges. Or the earth's magnetic field, the sun, and all heavenly bodies. Even a galaxy must be some kind of mega-dipole. Wherever there is a dipole, there is already immense scalar EM energy ushering out of and back into the vacuum. And there have already been demonstrated a number of diverse methods for tapping that energy as it flows. (John Bedini, Edwin Gray, Bruce de Palma, and others). Bearden provides what he calls a "partial list" on his website.

In other words, nature then gladly gives us as much EM energy flow as we need, indefinitely - just for paying a tiny little bit initially to 'make the little dipole.' After that, we never have to pay anything again, and nature will happily keep on pouring out that 3-flow of EM energy for us. This is the giant negentropy mechanism I uncovered, performed in the simplest way imaginable: just make an ordinary little dipole.

- Tom Bearden

[Note: The section addressing the Motionless Electromagnetic Generator (MEG) has been deleted. To follow up on it, please go to http://www.prahlad.org/pub/bearden/scalar_wars.htm#MEGStatus or [cherniere.org](http://www.cherniere.org).]

Free Energy has been Suppressed: Secret Government Aware of Free Energy

In this world of contemporary times, all the agencies, CIA, FBI, KGB, NSA, Electric Power Research Institute, DARPA, Brookings Institution, Henry Kissinger, Edward Teller, et al., all are aware of [free-energy researcher Bruce] DePalma and his ideas.

Because these individuals and institutions are employed by the ruling elite to forecast the future and satisfy present needs and demands, it is clear that free energy is a threat to the world order constructed by business and the mindset of those who want to own the world. Free energy represents Man's aspirations and dreams of freedom and equality, uniform division of resources and the ability to choose one's own future.

The fact that free energy is suppressed speaks to the greed and self-interest of a ruling elite which, even in the face of an emergency of global starvation, resource depletion and environmental pollution, will not give one inch if it means loss of control. This is an attitude of paranoid delusion and fantasy which can only arise from the alienation of a class of elitists who, through their money, are completely insulated from the reality of the day to day fight for existence of the common man.

- Bruce DePalma, "The Problem of Free Energy"

Before the turn of the century, Nikola Tesla had discovered and was utilizing a new type of electric wave. Tesla repeatedly stated his waves were non-Hertzian, and his wireless transmissions did not fall off as the square of the distance. His discovery was apparently so fundamental (and his intent to provide free energy to all humankind was so clear) that it was responsible for the withdrawal of his financial backing, his deliberate isolation, and the gradual removal of his name from the history books.

- Tom Bearden

Bearden describes one clear case of the suppression of free energy when the Yakuza killed the Kawai engine in his very presence in Huntsville, Alabama: "That night a jet arrived from Los Angeles, with a Yakuza on board. The next morning Kawai no longer controlled his company, his invention or his own fate. The Kawai party was in fear and trembling. The Yakuza coldly dissolved the agreement, they packed up the two Kawai engines we had, and left. And that was that."

So it is not only governments who are keeping this revolutionary technology from seeing the light of day. The Yakuza? KGB? The Aum Shinrikyo cult?⁴

Energy Crisis Solved

One of the "must read" documents at *cheniere.org* is "The Unnecessary Energy Crisis: How to Solve It Quickly," especially since the "oil wars," which Bearden has foreseen for decades, have now already begun.

To avoid the impending collapse of the world economy and/or the destruction of civilization and the biosphere, we must quickly replace much of the 'electrical energy from oil' heart of the crisis at great speed, and simultaneously replace a significant part of the 'transportation using oil products' factor also. The technical basis for that solution and part of the prototype technology required are now at hand... we now know how to easily initiate at will continuous and powerful 'electromagnetic winds' from the vacuum. Once initiated, each free EM energy wind flows continuously so long as the simple initiator is not deliberately destroyed... The present energy crisis then is due totally to that 'conspiracy of ignorance' we referred to, maintained by the scientific community for more than 100

⁴ See "Top-Secret Weapons Testing?" by Harry Mason, *Nexus* magazine, Vol. 4 No. 5 (Aug.-Sept. 1997).

years. This is the real situation that the environmentalists must become aware of if they are to see the correct path into which their energies and efforts should be directed - to solve both the energy crisis and the problem of gigantic pollution of the biosphere...

The nontechnical person - e.g., a Senator or a Congressperson - is operating under a distinct disadvantage. If he or she takes the stance that much better electrical power systems can readily be achieved, he or she is in fact opposing almost the entire set of University, Government Technical, Power Company, Battery Company, and Organized Science communities. Further, in most cases his technical advisors are themselves from one or the other of those communities, and likely to go back into that community or those communities when the Senator or Congressperson leaves office, or even before. So the Congress and the non-technical government community at large operate at a great disadvantage...

- Tom Bearden

Bearden states the urgency of replacing centralized power grids with highly dispersed and local taps on the freely flowing energy of the active vacuum. Given the abilities of the Tesla howitzers, the power grids of all nations are sitting ducks.

III. Weaponization

Scalar interferometry, Tesla howitzer, Tesla dome, heat/cold, dudding, 10 nations have them, dead-man fusing & Insane Systems, scalar strategy, earthquakes and weather wars, solar storms, mind attacks, leased to Yakuza, many examples of testing, quantum potential weapons.

Indeed, Soviet energetics weapons are now capable of destroying both our triad shield, our homeland, our armed forces in the field, and our population, quickly and efficiently. We have a new "gap" of monumental proportions: not a missile gap, not a submarine or bomber gap, and not even a particle beam or laser gap. We have a scalar electromagnetics or electrogravitation gap.

- Tom Bearden

We have a new weapon, just within the portfolio of our scientists, so to speak, which is so powerful that, if unrestrainedly used, it could wipe out all life on earth. It is a fantastic weapon.

- Khrushchev, to the Presidium, Jan. 1960

We've totally missed the most incredible 'secret superweapons' development program of all times, and the worldwide testing of the weapons themselves. Hiroshima and Nagasaki should serve as object lessons in the price of ignorance of such technological breakthroughs.

History does repeat itself. But this time it's not we Americans who got the great new superweapon first.

- Tom Bearden

Remember, the power for these weapons comes from the time domain, longitudinal EM waves in the vacuum of empty space, and the power is tremendous and mind-boggling. Being able to blast away at any target from a distant control booth is something that has never happened before. This is incredible power to be in control of and it divides the history of weaponry into "before" and "after." The destructive power of these weapons is delivered instantaneously to the target from the local vacuum of the target.

Questioner: Are you saying that real energy can be transmitted faster than the speed of light?"

Bearden: Yes, but hyperspatially -- not through 3-space, but "around" it. Again, this means that it's possible to produce energetic changes in a distant system at a distant place, without transmitting energy "through space" in the normal sense. You transmit "around" space, so to speak, and directly in time or through a higher dimension, depending on the model you're using to understand this. Further, the speed of the internal EM energy transmission is not limited to the speed of light.⁵

Here are some initial considerations about scalar weapons and scalar wars:

1. Tesla Howitzer
2. Tesla Domes
3. Rogue groups
4. WW III
5. Russian "UFOs"?

The Tesla Howitzer and its modes of action

Source: Tom Bearden's weapons slides and Fer-de-Lance Briefing

For one thing, there is no delivery of anything to any place. Bombs are obsolete. So are the planes to get them there. No helicopters necessary. All current nuclear devices are rendered nearly useless by electronic "dudding." All distant-destruction can be done from a control room, and to any point on earth. The new weapons could even cause storms on the sun! Thus, there is great urgency to make these new facts public and known, with the hope that all nations would come together to ban the use of scalar weapons.

Two scalar antennae together with the computers to control them make up a scalar interferometer, and according to Col. Bearden the Russians have hundreds of such installations already. These interferometers are called "Tesla Howitzers." They can deliver a giant blast of energy to the distant target site, true "action-at-a-distance."

⁵ http://twm.co.nz/beard_interview.htm.

The first howitzer mode is called the "exothermic" mode of operation because immense EM energy blasts outward at the target site. The blast of a scalar howitzer can be of near nuclear level in destructiveness and can be repeated easily at that place or nearby, or anywhere. The howitzer can use a lesser exothermic power setting and simply destroy all electronics in the target area. Thus they can render our nuclear missiles inoperable as they sit in their silos by "frying" the electronic circuits that guide them. *They can bring down any airplane anywhere in the world, at any time. Any person anywhere, if their exact position is known, can be assassinated without a shot being fired.* The howitzers can also bring down power grids anywhere in the world at any time. Thus they could bring Wall Street to an instant halt by disabling all its electronics. Even this one little easy tweak of the howitzer could cripple the U.S. economy in a single day.

No wonder the "leaders" don't want you to know! This is a new era we are in. The discovery and development of scalar interferometry has put us in a new world, whether we like it or not. Anyone could be expected to go into denial, the befuddled senators and congressmen included. But we have to wake up.

In a second howitzer mode called the "endothermic" mode, the howitzer sucks energy out of the target area, essentially creating a blast of cold at the distant target. It is even capable of freezing parts of the ocean. Bearden gives a number of cases where these "cold explosions" have been witnessed, mostly by airline pilots. April 9, 1984: A huge mushroom cloud of mostly water is seen rising miles into the sky from out of the ocean, an awesome sight. In the endothermic mode, the sucked-out energy must go somewhere, so it is vented out at some other chosen spot on the earth. These endothermic plumes have been photographed by satellite.

The exhaust in the left picture is about 150 miles long, and is nearly horizontal (about 1.5 degrees above the horizontal). It is entirely consistent with the continuous exhaust from a 'dumping transfer' scalar EM howitzer in the continuous exothermic mode. (The primary howitzer, of course, was activated in the endothermic mode.)

- Tom Bearden

By using both of these heat (exothermic) and cold (endothermic) modes together, the weather can be altered anywhere. Warm the air over here, cool it down over there, put a curl in the jet stream, dissipate clouds, create clouds, whip up a tornado. Bearden speaks about using the endothermic howitzer mode as a weapon of war:

Cold explosions can be used to freeze tanks, personnel, and equipment. The equipment and tanks thaw out. The personnel thaw out too, but they are dead when they do.

- Tom Bearden

(This endothermic mode of the howitzers makes me think that there might one day be a cure for the problem of global warming after all. Could not a big device, situated in space or on the moon, be able to vent a great deal of excess heat

outside the atmosphere into space, thus functioning as a kind of planetary thermostat?)

While the United States has experimented with electromagnetic weapons using ordinary transverse EM waves, the longitudinal [LW] weaponized waves are truly of another order altogether. For one thing, they do not have to travel through space, for they come from the time domain, which is everywhere. The energy of the blast, the heat or light or whatever, comes from the vacuum of space at the location of the target itself. This is astonishing. The weapons actually just trigger the release of immense energy from the vacuum at the target location.

...it is possible to focus the potential for the effects of a weapon through spacetime itself, in a manner so that mass and energy do not 'travel through space' from the transmitter to the target at all. Instead, ripples and patterns in the fabric of spacetime itself are manipulated to meet and interfere in and at the local spacetime of some distant target. There, interference of these ripple patterns creates the desired energetic effect (hence the term energetics) directly in and through the target itself, emerging from the very spacetime (vacuum) in which the target is imbedded at its distant location.

- Tom Bearden

The big Tesla howitzers are aimed at their targets by using a worldwide electromagnetic pattern called the "Woodpecker Grid," begun by the Russians in 1976.⁶ The woodpecker grid is just that: a grid of EM waves which provide a channel for the LW waves to any point on earth. Computers use the woodpecker grid information to hone down the aiming of the howitzers to a pinpoint location on earth. (For that matter, it could be under the earth, in space, or under the sea.)

A third howitzer mode is what Col. Bearden calls "Mind-snapper" mode. This is a truly frightening mode which affects the electromagnetic mind-body connection. Being mind-snapped at a low level would cause you to lose consciousness. Being mind-snapped at a slightly higher power would "entrain" all minds in the target area into a kind of hypnogogic trance, a state in which they would all be highly susceptible to suggestions and orders. Being mind-snapped at high level would so disrupt the mind-body connection that everyone in the target area would fall down, instantly dead. Not only that, everything around you and inside you would be killed, so that your sterilized body would not rot for quite a long time.

The Mind-snapper can be used for a small area, or to kill an entire population. In fact, using the scalar waves to affect the human mind has become a new field in its own right, and has been dubbed "psychoenergetics." (Discussed below in section 5). Bearden describes the use of the howitzer in mind-snapping mode against people as causing unconsciousness or death:

⁶ Hear the Woodpecker signal at <http://www.cheniere.org/misc/woodpeckersound.htm>.

From a military viewpoint, these scalar EM weapons are really quite all-around weapons. For example, they are very lethal against personnel. Set in the 'high intensity pulse mode,' one blast and a person's nervous system is destroyed instantly. Total, instantaneous death results. One can blast away at entire groups of infantrymen, for example. It's the peak power that's important, not the average power. So the weapon doesn't require too much battery power. Set on a lower intensity pulse mode, one zap can simply knock out a person, rendering him instantly unconscious. Quite useful if one needs prisoners to interrogate. Also very silent, which is useful in operations employing stealth and surprise.

- Tom Bearden

Those hit by the scalar EM weapon, however, have a most peculiar death mode. Death comes instantly and totally. There is no convulsion, no response. The entire nervous system is destroyed instantly. Every living cell in the body is killed instantly, including all bacteria, germs, etc. A body hit with this thing falls like a limp rag and lies where it falls. It doesn't decay in even 30-45 days. In a macabre fashion, it's been reduced to something like food irradiated with nuclear radiation; everything is killed, so the material is preserved for an extended period before any decay can set in.

- Tom Bearden

He goes on to say that the same "bazooka-sized scalar EM pulse weapon" can also be used to knock out a tank with one shot (or pulse). So tank warfare is obsolete. Helicopters? "...if he's attacked by a helicopter or a fixed-wing aircraft, he can bring the same weapon to bear on it. He can knock down a chopper or a jet. With one shot."

Obituary for Tank Warfare: Tanks useless against portable LW weapons

For example, suppose one attacks a tank [with an LW weapon]. With scalar EM pulse, the personnel die instantly. Total personnel kill is achieved. All electronic systems of the tank are duded. Total systems kill is achieved. The ammunition in the tank explodes. Total kill is achieved. The fuel explodes. This is another total kill mechanism. That tank has been killed totally by a variety of mechanisms, all simultaneously. That's a k-kill in any analyst's book. And don't worry about retrieval and repair. That tank is finished permanently. Even the most modern tank is just as vulnerable as the most obsolete."

- Tom Bearden

One begins to get the idea of how profoundly the conventional means of warfare have been obsoleted. All the usual weapons of war have been rendered nearly useless! And *Star Trek's* "Phaser," with its "stun" and "kill" modes is here at last. Although it is the weapons aspect of scalar electromagnetic which has received the most developmental effort, Bearden points out that a great many other

amazing things that may be accomplished in this new field of science. Beam me up, Scotty!

Superluminal communications systems, hyperspace drive, and materialization and dematerialization are all hypothetically possible, using scalar electromagnetics. As the technology develops, we should see the development of many of the systems long thought impossible except in science fiction.

- Tom Bearden

Bearden describes a huge test of the Russian scalar weapons systems which occurred in 1985, a test that went completely unnoticed by western scientists:

Just before May 1, 1985, the Soviet Union performed a "full-up" operational test of their entire strategic scalar EM weapons complex. This test was detected and monitored periodically by Frank Golden. Some 27 of these giant Soviet 'power tap' were locked into the molten core of the earth, producing forced (entrained) scalar resonance of the entire planet on 54 controlled frequencies under our very feet. The remainder of the scalar frequency spectrum was ablaze with literally hundreds of Soviet scalar transmitters: probably the entire strategic scalar command and control system to underwater submarines, higher command centers, distant commands, etc. was activated in the giant exercise.

*For several days, the system was exercised on a mind-boggling scale, apparently as part of the Soviet Union's highly accentuated 40th anniversary celebration of the end of World War II. Ironically, not a single U.S. intelligence agency, laboratory, or scientist detected this monstrous exercise for the new Soviet leader, Gorbachev. Not a one of them had a detector for scalar EM radiation, and not a one of them **officially** believes the exercise ever happened.*

- Tom Bearden

The Woodpecker grid/howitzer weapon system can be placed over the ocean and used against cruise missiles, naval surface-to-air and surface-to-surface missiles, submarine-launched ballistic and cruise missiles, etc. Placed over a carrier task force, it can also take care of the aircraft launched by the carrier as fast as they are launched. It can also handily take care of the missiles launched by guided-missile cruisers of the accompanying task force.

- Tom Bearden

The whole series of the Fer-de-Lance briefing slides and comments is a "must read" for anyone wanting to be aware of the actual state of things in this world right now. It is a new world and it takes some getting used to. Fer-de-Lance speaks clearly, for the layman, of the way things stand. What is it like to operate these Tesla Howitzers? Col. Bearden gives us an idea in his "Fer-de-Lance" briefing, Slides 66-71. Who needs armies anymore? An entire war can be fought and won by a handful of men sitting in a comfortable control booth! The scalar

electromagnetics revolution has made all previous forms of warfare nearly obsolete.

Why haven't the Russians used the scalar weapons yet? Bearden gives his thoughts on this in "Fer-de-Lance." The power of these weapons is so great that an accident or war could wipe out all life on earth, and even affect the sun.

As can be appreciated, this entire concept [MAD] is now totally obsoleted by the Soviet possession of scalar EM weapons. The 'mutual assured destruction' capability -- or MAD concept as it was so aptly named! -- is no longer mutual. And for two reasons: (1) the Soviet surprise attack could destroy essentially all our Triad forces wherever they are in the first attack. (2) Even if a very small number of our strategic forces survive, the puny strike we could attempt to launch could be repeatedly decimated from launch to terminal phase.

The restraint on the Soviets is not because of our Triad forces. The restraint is twofold: (1) a second nation has scalar EM weapons, and would undoubtedly unleash them upon the Soviet Union with great violence if such a massive world-wide destruction of U.S. forces occurred or was threatened (is it really 'accidental' that six major Soviet missile ammunition storage sites mysteriously exploded within seven months?); (2) the closed-loop scalar radiation exchange system of Earth-Sun could be inadvertently 'tweaked' in the feedback loop from Earth to Sun, so that a large solar scalar resonance was stimulated. In that case the Sun could emit a mighty resonant 'burp' that would simply wipe out all life on Earth in a fiery shower.

The 'terror' in the 'balance of terror' between nations has just increased by many, many orders of magnitude. The biblical prophecy that the Earth will be wiped out by 'fire and brimstone from heaven' is very near fulfillment now. Put another way, the pucker factor -- even on the Russians who may contemplate unleashing Armageddon -- is higher than any Western strategic analyst has ever imagined, even in his wildest nightmares. Truly these weapons are 'more frightening than the mind of man has imagined,' as Brezhnev put it in 1975.

The frightening scalar EM weapons can be used, but only very, very gingerly indeed. If a slight mistake is made, everybody loses everything.

- Tom Bearden

But the Russians (KGB) are not the worst of it. Bearden claims that some of the scalar weapons have been leased to the Yakuza for about a billion a year, and that only the KGB is holding the Yakuza in check from making a full-scale all out scalar attack on the west . . .

Tesla Howitzers in Weather Mode: How to Make Weather

Engineering the weather is duck soup; they tested that over the U.S. in 1967, and entered upon continuing operations over North America on July

4, 1976 as a grim kind of KGB 'Bicentennial Gift' to the United States. Here's how it is done with several interferometers.

First, the interferometers can deliberately make 'high pressure areas' (cool the air so it shrinks and its 'footprint' pressure on the ground increases because its density increases) and 'low pressure areas' (heat the air so that expands and its 'footprint' pressure on the ground decreases because its density decreases). Well, if one makes the highs and lows where one wishes them, and judiciously and somewhat slowly moves them along a given path, these highs and lows will entrain the jet streams and thus 'steer' the weather.

So if you wish a very cold snap or attack, go up into Canada and start these actions to steer down some streams that bring some very frigid air. Establish other highs and lows judiciously to 'block' or 'slow' other jetstreams and flows as desired. In this way, one can pull the 'large cold air masses coming down from Canada' deep into the southern U.S. at will. They do it regularly. If you wish an ice storm, add an additional current of warm moist air you bring up (steer up by using artificial highs and lows) from the ocean. Where they meet, you will get freezing rain, then sleet, then severe icing accumulating. This type of attack does rather large damage to the struck area.

- Tom Bearden

. . . Bearden relates a startling incident in these ongoing "weather wars":

During the spring of 1986, abnormally strong Soviet weather engineering occurred over the U. S., causing a drastic drought in the southeastern U.S. This drought was broken by a colleague who used an extremely powerful scalar EM device to redirect jetstreams. A most unusual and unique signature of the 'blocking' against the Soviet scalar EM actions resulted: Two huge circulations developed in the atmosphere, clearly showed as two adjacent giant 'holes' in the swirling cloud cover over the middle and eastern U.S. Between these two giant holes, the cloud circulations formed a stream of clouds moving to the south looking very much like a giant vertical 'bar' of a huge Y-shaped cloud flow. Several national weathermen commented on this unusual pattern which had not been observed before. The pattern continued day after day as the blocking continued.

Tesla Howitzers in Earthquake Mode: How to Make an Earthquake

Here's how you initiate a very large earthquake with such weapons. Take a convenient fault zone. Focus the interferometry on the fault zone in the 'diverging' mode, and deposit EM energy there in the rocks on both sides, increasing (slowly) the stress in the rocks by the reverse piezoelectric effect (deposit excess energy, get crystal mechanical movements). Do it slowly and the stress will build up to large pressures well above a plate slip minimum energy required. At some point, the rocks yield and one or

both sides 'slip' and move rather sharply, giving a very large earthquake in that zone. Do the same thing down in the earth. (Remember: LWs easily penetrate right through the earth and ocean at will, and so the 'interference zone' focus can be inside the earth or beneath the ocean, at will.)

Anyway, focus this thing down to where the active part of the volcano is still slumbering, down where the hole in the plate has been made. Keep increasing the deposition of energy in the magma itself, and eventually the increasing pressure from deep within that volcano underground will cause an eruption. Build the energy slow, and the eruption will likely be much larger.

- Tom Bearden

Tesla Howitzers in Tesla's "Big Eye" Mode: How to Make a Big Eye in the Sky

By using longitudinal wave interferometry in a weakly endothermic mode, a new kind of "radar" is now possible, one which can look right through the earth and oceans. Because the endothermic mode extracts energy from the distant target, a pattern of the target area can be scanned for in the returned energy.

Thus the receiver produces a representation of the energy extracted from various locations within the distant endothermic zone. By displaying the received signals on an appropriately scanned screen, a representation of the distant scene in the intersection zone can be created. Indeed this is a special kind of 'microwave interferometry' and -- with modern techniques -- the imagery obtained might be surprisingly good. With development, it might even become as good as the image presently obtained by side-looking acquisition radars.

Interestingly enough, since scalar EM beams will easily penetrate the earth or the ocean, one can also look beneath the earth or beneath the ocean with this type of scanning scalar interferometer. The importance of this capability to strategic and tactical reconnaissance is obvious. Camouflage, cover, and concealment have no effect on such a system. One can easily look inside buildings and into underground facilities. With a small system such as this, the U.S. Marines at Khe Sahn would have had little difficulty locating the tunnels continually dug under the perimeter by the Viet Cong. And targets under jungle canopies are directly visible.

- Tom Bearden

Tesla Howitzers can destroy all life on earth: How to Make a Storm on the Sun!! (Just make a big mistake with your Tesla howitzers)

The deepest dangers of the use of scalar weapons are frighteningly pointed out by Bearden when he considers that the sun, earth and moon (actually the whole solar system) is a delicately balanced arrangement of scalar (longitudinal) EM radiation. There is a scalar connection between the earth and the sun, which are

both giant dipoles gushing energy in the time domain. Big scalar events on the earth could alter this balance causing true catastrophe, such as solar storms:

Indeed, a solar response could be stimulated so that the Sun would violently belch and destroy our biosphere, among other effects. Accordingly, use of huge scalar EM weapons is a double-edged sword. Unless carefully employed, use of the weapons could cause a terrible backlash to the user as well as the victim, and even accidentally cause the destruction of the earth itself. It is not accidental that in 1960 Khrushchev stated that his new fantastic weapon could -- if unrestrainedly used -- destroy all life on earth.

This appalling backlash potential is apparently what prompted Brezhnev in 1975 to make so strong an effort to get agreement to outlaw the development of 'new weapons of mass destruction' more frightful than the mind of man had even dreamed of. Gromyko even introduced such a draft agreement into the proceedings of the United Nations. The first article of the draft agreement indicated that the nature of the weapons referred to would be negotiated. Sadly, the entire Western world did not even know what the Russians were talking about.

- Tom Bearden

Tesla domes provide near-perfect defense shield. (Slide at cheniere.org)

The Tesla howitzers can be used in a nearly impregnable defensive mode whereby they throw up a dome (Tesla Dome) or a sphere (Tesla Globe) of highly powerful electromagnetic energy, enough to "dud" or destroy missiles which try to penetrate them. Once again, this energy is not going through space from the howitzer, but being made to emerge from the local vacuum at the location of the shell. KGB tests of these domes have been witnessed by airline pilots around the world. Bearden gives many examples of the Tesla domes being sighted around the world in his briefing paper "Fer-de-Lance." (Russian dome test, another globe incident, yet another globe test). These giant electromagnetic domes can be hundreds of miles across, or narrowed down more to total impermeability.

Such a shell may be several hundred miles in diameter at the base. The enormous energy required to form such a defense shell is obtained by a 'scalar power tap' into the molten core of the earth itself, as previously explained. In late April/early May 1985, 27 such 'power taps' were placed in the earth by the Soviets. If each tap is capable of powering four to six large scalar EM weapons, then the Soviet strategic scalar EM arsenal contains over 100 monstrous superweapons capable of generating exothermic explosions, endothermic explosions, engineering the weather, locating and destroying underwater submarines, detecting and destroying ballistic missiles shortly after launch, detecting and destroying long range strategic bombers as soon as they are airborne, etc.

By using nested domes, one can protect the domed area even against nuclear radiation itself. Tesla globes can be used to hit airborne targets by simply placing

a globe of any chosen size in the flight path of the incoming missile. It does double duty because the missile hits it going in, and then the rubble hits it again going out the other side.

While the U.S. persists in its useless boondoggle "missile defense system" by shooting a missile with a missile (missiles which would already have been "dudged" by the Tesla howitzers) between the domes and the globes, the Russians (KGB) have in hand (operational) a nearly perfect missile defense system. Someone should ask the Secretary of Defense if the U.S. Tesla domes are in place. And over which cities? How powerful are our American Tesla domes?

Bearden cites a number of examples of these domes being tested around the world: March 20, 1969 | March 24, 1977 | August 17, 1980 | June 17, 1966 | June 18, 1982 | June 22, 1976.

In a slide from the Fer-de-Lance briefing, it is shown how the "woodpecker grid" itself also acts as a sensor, detecting any missile launch anywhere, and how the howitzers can respond instantly by delivering a blast to exactly the right coordinates, right along the channels of that same grid which is feeding the location information about the missile launch. This certainly beats "trying to hit a bullet with a bullet," especially since YOUR bullet would probably be instantly inoperable in a real scalar war situation.

Rogue groups in the government

Bearden fears that these scalar electromagnetic secrets may have fallen into the hands of what he called secret "rogue groups" within the labyrinthine depths of the black-ops special-access domain of the secret government:

In the extreme, such a deep black program can even become a 'captured' program which is totally in the hands of rogues and no longer reports to or is bound by the dictates of the parent government. They have their own agendas. And being rogue groups, they may well bring in unethical, immoral tricks: assassination, bribery, entrapment, disinformation, plausible deniability, etc. A certain percentage of a highly secret rogue group will wind up using all these things and more. It's a human characteristic, the old primate dominance game, only now disguised and hidden under deep classification... Highly classified groups are greatly enabled to joust more widely, unethically, and immorally because it is so deeply hidden. So very deep classification evokes the growth and intensity of rogue groups. It's the old 'Power corrupts, and absolute power corrupts absolutely' routine... Due to loose formation of rogue groups inside such programs, they may have dual or triple purposes, may not operate under very much legitimate government control at all, and may operate specifically for the purposes of the rogue group or groups that have gained control.

The involvement of at least some rogue groups, some being 'cowboys' who operate well outside all laws and ethics, could also result in such

things as assassinations, clandestine testing on individuals without their consent, etc. In short, it could account for what seems to be actually occurring.

World War III has already begun

Because it is now possible to cripple the power grids and electronics of any nation, that nation could be reduced to economic ruin without ever firing an actual "shot." Without electricity, Wall Street cannot operate; without electricity, you quickly need martial law. One no longer needs to wage a conventional war anymore at all. There are now lots of new ways to bring any nation to its knees.

We are at war, whether we like it or not. And we are going to have strategic strikes on an unparalleled scale for us. Pearl Harbor was nothing compared to what is coming down, once we consider the 'augmentation' and such. When that factor is considered, then it's a totally new ballgame on replacing the power system. There isn't going to be much choice; the old one is going to be destroyed or so badly crippled that it will collapse the U.S. economy in a way we have not seen since 1929. Of course, in such a case hitting us, we will be under martial law, the works, everywhere. For one thing, it's the only way you can keep the cities from imploding from within, by the criminal element, looting, robbing, killing, etc. Simply wait and see; it's on the way.

- Tom Bearden

Although Bearden has for years decried the "scalar-gap," and chided the military for falling so far behind the Russian KGB in the field of scalar electro-magnetics, recent statements indicate that things may at last have changed somewhat:

In the new war, the first phase of WW III has already been completed. Hence President Bush's recognition that this is a total war and has to be taken to the enemy no matter where he may be hiding or in what sanctuary or in what foreign nation. This is an entirely different war than anything the U.S. has ever fought in its history, and before it is over, it is going to kill more Americans than have died in all the previous wars in our history. The news media and the public have not yet recognized that awful situation and predicament. Most are already thinking that, well, we won in Afghanistan, so it's just about over. Instead, it has only just begun.

Anyway, that's a brief uptake on some of the weapon situation today. Some 10 nations or more now have LWIs, and five have the QPs. I'm still working on how many have the appalling negative EMP weapons, but would estimate 6 or 7 nations have them in one stage or the other, either deployed or in at least advanced development. And in my estimation, the Yakuza will have them within three to five years if they have to build them themselves, and quicker if they can buy them from the Russians, Chinese, or ???

Are the Russians making "UFOs"?

Scalar electromagnetics engineering opens the possibility of antigravity vehicles and "hyperspace travel." In other words, we can now make our own UFO's! Of such scalar-powered antigravity vehicles, which have now become possible, Bearden has this to say:

We might expect to see such vehicles glowing. Their various surface features and mechanisms might appear to be glowing or revolving lights, etc. They could exhibit incredible 'aerodynamic performance,' seemingly in the atmosphere. Actually, they would not be moving through the atmosphere at all, but through a higher space outside each particle of atmosphere. They could seem to materialize and dematerialize. They could seem to plunge into the ocean or rise out of it. They could even seem to operate under the ocean or inside the earth itself. Such anomalous vehicle performances have been seen all over the world, particularly since a few years after WWII.

It appears that one or more nations of Earth are operating such vehicles now in great secrecy; our own 'government' may even be one of these. If so, it isn't our true government government; instead, it's the control-group government. It's government at the operational level, but at higher level it belongs to certain control groups who have penetrated our government's vitals and taken over all such projects.

In an excellent article on her *Earthfiles* website, Linda Moulton Howe reports on the utter bafflement of Norwegian scientists over mysterious lights appearing in the valley of Hessdalen, Norway. She writes of the research there: "The results can be broken down into two groups: 95% are thermal plasmas and 5% are unidentified solid objects. The plasmas emit long-wave radio frequencies, and strangely their temperatures do not vary with change in size or brightness." She quotes the scientists' research summary:

- (1) most of the luminous phenomenon is a thermal plasma;
- (2) the light-balls are not single objects but are constituted of many small components vibrating around a common barycenter;
- (3) the light-balls are able to eject smaller light-balls;
- (4) the light-balls change shape all the time;
- (5) the luminosity increase of the light balls is due to the increase of the radiating area. But the cause and physical mechanism with which radiation is emitted is currently unknown.

This would almost certainly seem to be another example of the testing of the scalar howitzers. It is baffling because, as Bearden points out repeatedly, Western scientists have limited knowledge of the scalar electromagnetic principles by which the howitzers operate. The Hessdalen scientists were completely baffled as to where the energy of these plasma balls was coming from.

Ms. Howe interviews Massimo Teodorani, Ph.D., astrophysicist, who released the report on the 2001 Hessdalen sightings. The scientist speaks of the baffling

phenomenon observed: "I don't know how it is possible that Nature is spontaneously able to do that. Anyway, we deduce that the plasma is trapped inside a sort of magnetic cage and the magnetic cage closes around the plasma and keeps it fixed in some way, prevents it from expanding. But where does it come from? We don't know."

By what we have been considering here, we can recognize the signatures of scalar electromagnetic engineering. If it is a Tesla howitzer, then the energy for the plasma balls is coming from the vacuum of spacetime at the very location of the balls themselves, triggered by scalar interferometers aimed through the woodpecker grid. *These kind of balls can be used as marker beacons giving feedback for precision aiming of the howitzers.* The energy of the marker beacon can be read back into the computers giving precise location information for pinpoint aiming. The target area can be very small or widened out.

There is a little movie of one of the Hessdalen plasma balls here. It would seem to be a clear documentation of a scalar howitzer marker-beacon. How many other current "UFO" sightings are actually the witnessing of Tesla howitzer tests?

In fact there are a great many anomalous events of the past few decades which might very well be explained by the Russian testing of their longitudinal electromagnetic weapons. It would seem that the mysterious appearance of crop circles around the world could be accomplished by feeding a precise mathematical graphic pattern into the computerized aiming software and change the very molecular structure of the crops themselves along the lines of that pattern. The stalks fall over from the localized effect of the longitudinal waves. A plasma ball tracing patterns? Are they slyly sending a message to see if we are "getting it" yet?

IV. Healing powers of longitudinal waves

Healing via longitudinal waves, time reversal of cells (de-differentiation), Priore's machine, Bearden's proposed "blanket" version, using the electric power grid for healing waves or for broadcasting disease patterns. Scalar Biowar.

The good news!

Any sort of disease whatsoever - physical or mental - will be rapidly curable, simply and cheaply. It will be possible to reverse aging and rejuvenate the person. It will be possible to regrow limbs and straighten misshapen spines - and directly remove the causes of mental diseases and cure them as well. Lifespan will be staggeringly increased, without 'old age's debilitation.' AIDS, cancer, leukemia, and genetic diseases will be completely conquered. The potential for a true golden era is upon us, for all humanity.

– Tom Bearden

Proof of the healing powers of longitudinal waves from the vacuum is seen in the work of **Antoine Priore** who produced longitudinal scalar waves using a gigantic

glass tube filled with plasma. He himself did not understand why it worked or how it cured cancer in animals.

The Priore team cured terminal tumors, trypanosomias, and other dread diseases in laboratory animals in France, in the 1960s and 1970s, under rigorous scientific protocols by eminent scientists. The Priore project was funded by the French Government to the tune of several millions of dollars (equivalent).

...Prioré's machines concretely demonstrated a nearly 100% cure of all kinds of terminal cancers and leukemias, in thousands of rigorous laboratory tests with animals. These results were shown to medical scientists as early as 1960.⁷

Bearden has stated that the longitudinal EM waves can have a healing effect because they always come in pairs called "phase conjugate pairs" and one of the pair is time-reversed. This enables engineering of the waves to "pump" the cells of the body (with waves from the time domain) and actually time-reverse the cells back to a previous healthy condition. The scalar cure of cancer does not involve killing the cancer cells, but rather pumping them with time energy into a previous condition. I know this seems miraculous, and is it not?

Priore and his giant plasma tube

This healing power in the longitudinal waves of the time domain is a mind-boggling thing to face. It took me months to get through it, and to suffer the fact that the cure for cancer and AIDS was right there, in this new scalar electromagnetics technology, and that it has been kept back from the people for so many decades now.

Bearden has a great deal to say about the work of Antoine Prioré, who himself did not understand why his machine worked. Priore did not know about the longitudinal scalar waves of the time domain. In fact, Tom Bearden has supplied at last the missing explanation as to how that big giant two-story glass tube consistently cured cancer in animals:

The medical implications are enormous. By just reversing the damaged cells back to a previous physical state, this gives a physics mechanism for controlled cellular dedifferentiation, in biology terms. Physicians will time-reverse diseased, damaged or aged cells back to an earlier healthy condition, including all the cellular genetics. Normal cells are just reversed to a slightly younger condition.

We believe this mechanism explains the revolutionary but baffling electromagnetic cures achieved by a team of outstanding French scientists in the 1960s and early 70s, working with inventor Antoine Prioré. In lab animals, cures were achieved for terminal tumors, infectious diseases such as trypanosomiasis, and atherosclerosis. In addition, deliberately suppressed immune systems were dramatically restored.

⁷ <http://www.cheniere.org/priore/index.html>

We hypothesize that this is the long-sought mechanism of how the living body heals itself. In short, the body's cellular control system induces cellular reversal by weak time-domain pumping of the damaged cells and the affected area. The cellular regeneration system performs all healing of cellular damage in the body; the immune system heals nothing, not even its own damaged cells.

For the first time medical science can develop as a science of healing rather than a science of intervention. And it will develop as a science of unlimited healing, since no pathogen can resist action by curved spacetime engines.

Bearden has extended the Priore work, with the previously missing knowledge now in place, and designed a revised system (for irradiating the body with longitudinal waves) which gets rid of Priore's giant glass plasma tube and uses instead an antenna unit which surrounds the body. He has also provided the missing explanation of how it works. There is an article from *Explore* magazine, Part I and II.

In fact, Bearden has presented to the U.S. government a plan to use a portable version of a Scalar Healing Blanket where wire channels in the blanket act as a scalar antenna, which can both send and receive scalar electromagnetic waves. A two-minute treatment of the waves is sufficient to restore the body to its earlier healthy condition. Thus, even thousands could be treated easily and quickly in a biowar mass attack situation:

To defend against things like anthrax attacks on our civilian population centers, we also have recommended to the U.S. Government the crash development of small, portable treatment machines-using similar 'antiengine-forming' and cellular reversing 'porthole technology.' [See Figure 13 on previous page]. Such portable machines could be developed cheaply and quickly, and present government facilities could be used to massively attack the correlate database production problem.

The portable treatment units could be cranked out by the hundreds of thousands and flooded down through emergency response agencies such as the police forces, the National Guard, emergency hospitals, emergency response teams, etc.

- Tom Bearden

The Scalar Healing Blanket would fit into large suitcase. It has three basic parts: the longitudinal wave generator, a laptop computer, and the antenna-blanket. The plan was a stroke of Bearden's genius, but unfortunately it fell on befuddled government ears. "Unfortunately, so far the DOD [Dept. of Defense] doesn't even understand what the heck we're talking about!"

"Healing with Energy": <http://www.explorepub.com/articles/energetics.html>

We tried very hard in 1998 to call attention to the extreme national need for the most urgent possible development of a portable computer-

controlled treatment device based on the experimentally proven Prioré methodology, but extended to a much simpler and far more rapid method of treatment. Quick development of this technology could lead to a suitcase size device, capable of treating a patient in less than one minute, and stopping the symptoms and disease progress cold, then reversing it. Three 'less than a minute' treatments one week apart would be required for complete cure. As an added advantage, partial reversal of aging in older patients would also be accomplished as a bonus, in addition to time-reversing the damaged and diseased cells...

The method proposed to the DoD in 1998 used normal EM in a peculiar way to force the body itself to make its own time-polarized EM waves, and pump every part of its cells -- including the genetics -- in the time domain.

Quite simply, we are going to be struck this way -- QP spreading the immune systems of the populace, plus professional smallpox, anthrax, etc., BW attacks on our population centers, and by other means we've spoken of in other papers and briefings.

- Tom Bearden

The Dark Side of the Force: Creating and broadcasting disease

Speaking of the scalar wave induction of disease by longitudinal wave patterns, Bearden refers to work by French scientist Kervran and Russian scientist Kaznacheyev, who proved that any disease could be transmitted electromagnetically.

It works this way: the Kaznacheyev experiments (and others) demonstrated that any cellular disease or disorder can be initiated into cells at a distance by electromagnetic means (albeit unusual EM in nature). The decades of microwave radiation of the U.S. Embassy in Moscow was an ongoing set of 'stimuli' to ping the U.S. system and, by its response, ascertain how far along it was in its knowledge of such weapons. The radiation was responsible for many health changes in personnel and for the eventual deaths of three U.S. Ambassadors."

- Tom Bearden

In a letter he writes:

Yes, the Kaznacheyev experiments were quite real; 15,000 or so in military research institutes in Siberia. As with so many other novel areas investigated and developed by the Soviets, most U.S. investigators just assumed normal EM, which is not what the Kaznacheyev experiments involved, and not what was carrying disease induction patterns from one cell culture to another in rigorous lab tests.

How to "Broadcast" Diseases: Longitudinal EM Biowars

Bearden explains how the new quantum potential weapons can be used to induce disease-at-a-distance in a population, or to "spread" the immune system so thin that a conventional bio-attack would be greatly potentiated. By

"broadcasting" virtual disease patterns over a population, the immune system is so overloaded by the presence of the "shadow" diseases that its effectiveness is thinned out:

In short, alter the internal wavestructure, and one creates a curved spacetime 'engine' that acts on mass in any fashion one chooses to design -- including initiate diseases...Now visualize one of these 'vacuum engines' or 'spacetime curvature engines' that acts on mass to generate the exact effects produced by anthrax (or any other disease one wishes)...Call the virtual state of a disease engine the disease pattern in the 'shadow' state, just prior to becoming observable...and the master cellular control system responds to 'coming events that cast their shadows before.' In short, it responds to the upper level of the 'shadow state' of a disease, still in the virtual state! (Hey, virtual particles are real, virtual photons are real, virtual ST curvatures are real -- just very fleeting, only for another to immediately arise.) The exchange of virtual particles is known to generate all forces in physics anyway!...

So the cellular control system responds to 'shadow state' disease patterns. Enter a QP weapon application. Place a quantum potential weapon 'area' on the United States, so that the entire populace is in it, then slowly introduce and bring up in the shadow state the necrotizing fasciitis [flesh-eating] disease engine. At some point, the cellular control systems will react and order the immune system into action. In other words, immune system resources will be committed against this 'immediately coming' enemy. Bring it on up a little, but still just in the shadow state. Voila! Humans form a bell-shaped distribution curve. And even if the structure of the QP fluctuates a little, fluctuating a bit stronger and a bit weaker, etc., a few of those targeted bodies will now actually develop necrotizing fasciitis. So far, just like the U.S. Embassy targeting, except a different 'carrier.'

But now there is an exact signature that this is what is doing it, and not normal vector carriers of disease and contact or exposure infection. The few cases of necrotizing fasciitis that break out will be most puzzling. They will be randomly scattered across the entire nation, and so few that the vector carrier and contact or exposure explanation completely fails. And that one happened, right here in the U.S., not so long ago. Check it out.

So carefully adjust the patterns for, say, 12 major terrible diseases, to that 'adjusted and desired shadow state level.' Now add all 12 patterns into the internal structure of the quantum potential. Now it has 12 shadow state disease engines in it. Place that one on a populace. The cellular control systems order the immune systems into action, and they now have to commit their finite resources to 12 different areas. This greatly thins the response an immune system can make to any one of those 12 disease patterns! In short, it 'spreads' the capabilities of the immune system, which can be galvanized to great effort but only can perform a small bit against each area.

Suppose one of those "galvanized" areas in the targeted populace's immune systems is anthrax. And suppose the bad guys now hit one or more of those cities with a professional anthrax attack. A former OTA study showed that a professional anthrax aerial spray attack against Washington D.C., dispensing 100 kilograms of anthrax spores in the spray, will account for 1 to 3 million casualties. And that's in an 'unthinned' set of immune systems. In the 'thinned' set, one can at least double or triple and even up to five times that estimate. So conservatively now there would be from 2 to 6 million casualties. And even mild anthrax spray attacks in other 'thinned' cities would also be amplified.

That one is being set up or already set up right now. There are other such 'augmentation' setups also under way. So the weapons alluded to by the SecDef in 1997 are already being employed. WW III has already begun, and our populace (and our scientific community) is blissfully unaware of it.

- Tom Bearden

Most of us can remember the strange outbreaks of the so-called "flesh eating disease." It seemed to break out here and there randomly with no known cause. Bearden believes this was a test of the newer quantum potential weapons which go even beyond the capabilities of the Tesla howitzers:

The Kaznacheyev 'disease induction by novel electrodynamics' work is also the basis for the spacetime curvature engines (not EM signals!) carried by quantum potential EM biological weapons for distant induction of diseases, etc., into the population of an entire nation or area, such as the U.S. This quantum potential disease induction weapon -- capable of attacking an entire population of a nation or area -- has been tested several times in the U.S. at very low levels, in the shadow state only, and it has a most peculiar signature. E.g., one test used necrotizing fasciitis engines.

The disease 'engine' was deliberately kept down in the 'shadow state' (virtual state, just below the observable state) so that only a tiny bit of the populace with depressed thresholds would 'breach the observable threshold' due to the population forming a bell-shaped curve as to the threshold level. The major signature of the test was that the cases of the disease broke out totally statistically and randomly, spread all over, without any 'disease vector' in between.

In short, it was not spread in any manner required by normal deterministic disease vectoring, but was a totally random set of occurrences. Several other diseases were also tested this way in the American populace, with precisely the same signature.

Apparently one planned use of such an augmented clandestine BW weapon will be smallpox, e.g. As you know, the Russians did develop smallpox for biological warfare, and even developed a new strain against which previous vaccination is ineffective. The vast numbers of expected

casualties, coupled with immune system spreading, are absolutely irresistible to the Russian mind. You can count on it that they have seen that the smallpox is already on site here in the U.S. and in the hands of professional terrorist teams. Of course, the Russians/KGB will protest they have nothing to do with that! Yet likely the KGB will have flatly arranged it or at least assisted it. The capability for mass destruction of the nation is so lucrative and easy to achieve in advance that they would never be able to resist doing it.

Bearden believes the Gulf War Syndrome involved the use of scalar technology to induce a disease state, as he stated in a 1997 interview:

I'll say this flatly, and I won't answer any further questions about it: the Gulf War Syndrome was induced with this stuff. All the rest were contributing factors that everybody's talking about... There are some deeper signatures, if you look into it very deeply, that show you exactly how it was done and the fact that it was induced. It was a test. It was a test of a very special kind of weapon I have not talked about yet. Anyway, you can use it to create diseases.⁸

Besides using the woodpecker grid to target a population, the entire electrical grids of nations can be used as "channels" for disease patterns to be broadcast to all people near that grid. Your own house wiring can become an antenna, broadcasting these "shadow" patterns of disease, weakening your immune system. And here one faces the frustrating fact that the same power grids could be set to channel patterns which would keep the entire population healthy, rejuvenated, continuously bathing in the time-reversing old-age-defying energy of the spacetime vacuum. We have no idea yet of how long the human life span could be increased with this new technology. People might be able to live two centuries, given full humane development of this technology.

V. Psychoenergetics

Mental entrainment, inducing hypnogogic trance, mind control, broadcasting thoughts and feelings, the Ant World, education via EM [LW] mental download, the "Feelies," revolution in spirituality, "enlightenment machine?" Scalar churches?

Psychoenergetics is simply using the scalar interferometers to manipulate and engineer the human psyche. To me it is the most mind-boggling and frightening aspect of longitudinal wave engineering.

The mind is electromagnetic in nature, and itself of the time-domain. It is not observable in 3-space. There is no thing you can point to that is the mind. As Bearden says, "The mind is time-like." The longitudinal scalar EM waves are also of the time-domain. By overlaying certain infolded patterns (oscillations in time)

⁸ http://twm.co.nz/beard_weapon.htm

on the longitudinal waves, a thought or feeling may be made to arise in a person or persons who are in the interference zone (where the wave beams cross). The person will not notice anything, feeling that this thought or idea is his or her own idea. The longitudinal wave pattern might be a wave of panic or fear that spontaneously sweeps over you, perhaps inexplicably. It could even be in the form of a sudden intense patriotism. It could be explicit words and phrases, which everyone would think they had thought of by themselves. Or it could be rage and hatred, angry and violent. On the other hand it could also be a continuous sense of docility and placidity. This is the brave new world of psychoenergetics and the coming "Mind Wars."

Scalar Psychoenergetics in its most primitive form simply "entrains" all minds in the target area into a deep hypnogogic trance. In this state of mind people would be suddenly extremely suggestible, and would likely believe anything they are told, and would obey any orders given. Talk about winning the hearts and minds of the American People!

Tom Bearden makes me think of Paul Revere, who heroically conveyed important warnings for the sake of the new nation. But the words of the famous phrase have now strangely and curiously mutated into the once-inconceivable: "One if by land, Two if by mind." Indeed one strategy in a Mind War would be to simply take over the minds of the "leaders" of the enemy nation. The targeted leader would not be aware that anything was amiss, although he might begin to make unexpected changes in policy. And are, in fact, any of our "leaders" already having secret thoughts that are not their own? Who knows? Frighteningly, we can no longer be sure. The new sciences of scalar electromagnetics and psychoenergetics are even now plunging humanity into a sudden science-fiction-like world beyond anything in humanity's previous imaginings.

The Russians reached the point in the mid 1990s that they could take over control of a person's mind, with modified longitudinal EM waves including some time-polarized EM waves, and with a team of specialists (estimate 25-30 per transmitter, and one transmitter and team per controlled person).

- Tom Bearden

In a slide Bearden illustrates how a Scalar War would involve a psycho-energetics attack on the operators of the enemy scalar installation, entraining their minds into hypnogogic trance and getting them to shut down their systems. And ultimately psychoenergetic warfare goes to the very heart of human identity itself. For if my thoughts might no longer be "mine," then who and what am I? Can my very sense of being "me" be hijacked by some nefarious psychoenergetic scheme? Will the "secret government" eventually dictate directly into your mind how you feel about yourself? Or what you think you are? Or what you should do?

How Does Longitudinal EM Mind Control Work?

The physics of scalar psychoenergetics as expounded by Col. Bearden seems even more arcane and over-my-head than that of extracting energy from the vacuum. I can't understand it, but I look through it anyway. Each time another tiny understanding might occur, or a term might fall into place. I know the mathematics is forever beyond me.

One paper to begin with is *Mind Control and EM Wave Polarization Transductions*. This is such serious stuff that Bearden includes a strong warning about misuse of this knowledge. Psychoenergetics weapons can mentally maim and physically kill.

Warning! (From *Mind Control and EM Wave Polarization Transductions*)

This article refers to experimental research techniques which can be detrimental or lethal in the hands of any but highly skilled, qualified experimental scientists proceeding under proper laboratory safety procedures. The purpose of this article is strictly for information to properly qualified and authorized scientists in certified laboratories. We do not propose or condone any use of these procedures for nonapproved practice of medicine without a license. Neither the publisher nor the author are responsible for accidents or outcomes in the use of these experimental procedures and techniques. Any researcher who performs these procedures and experiments is acting on his or her own volition, and is solely responsible for insuring safety, qualifications, and legality of the acts and their results. We neither suggest nor condone unauthorized experimentation on human subjects. Such is a criminal violation of the constitutional rights of the subject under Federal and State laws, and is both illegal and immoral.

- Tom Bearden

After the serious warning comes the description of the paper. This is heady stuff for the layman.

Calling full attention to the special note above, in this paper we present a high-level overview of the novel electro-magnetic nature of mind operations, mind and body coupling, and intent - the induction of physical 3-space EM energy changes into the brain and nervous system, and into every cell of the body, from the mind's time-like coherent operations. We summarize the time-polarized electrodynamics used to engineer and affect mind operations and the mind-body coupling loop. Transduction mechanisms whereby differing EM wave polarizations can be transformed one-into-the-other are presented.

- Tom Bearden

I will leave it to the technically astute to try to understand the mechanisms of operation which are described in scientific language. But there are tidbits for the layman. Here he speaks of the difficulty Western scientists have in opening up to the "immaterial" (longitudinal wave) nature of the human mind.

Western Science Remains Largely Materialistic

Ironically, most Western scientists are materialists and consider 'mind' as a mystical and nonscientific concept. They tend to consider mind operations and functions either to be simply "meat computer" operations and functions, or at best to be very weak ordinary transverse-wave EM operations and functions in the brain and nervous system. This serious self-limitation exists because in the body we measure only weak TW [transverse wave] EM operations and functions correlated to biological behavior and brain operations. We simply do not know how to measure 'mind operations' directly.

With no mind measurements possible and no instruments, it is understandable that Western science considers only the physical side of the mind-matter interface.

Presently our scientists do not measure the longitudinally-polarized EM wave operations and functions in the body and around it in nature. Few of them are aware that a maelstrom of such LW [longitudinal wave] functions exist in the body and in all of nature in general.

- Tom Bearden

Western methods of influencing the mind with EM waves have only used transverse waves, not the longitudinal waves of the vacuum. If only transverse waves are used one pretty well has to hit the target mind with a sledgehammer of waves.

Brute Forcing Time Functions versus Fine Control Methods

Ironically, Western mind control researchers using transverse EM waves for mind control research, are using a brute force method of evoking and using vacuum engines (spacetime curvature engines) and a special form of general relativity, although they do not appear to realize it.

While KGB scientists also use TW EM 'brute force' TW waves when necessary, they do 'imprint' or 'activate' those waves with the desired internal LW and time-polarized EM wave and photon structures required to directly perform the mind engineering desired...

These 'fitted brute-force models' certainly can be very powerful, and certainly can produce the exact results shown in the experimental verifications of the fittings. However, they do not of themselves allow sophisticated design for example of the necessary time-polarized wave assemblies for engineering the entire human collective unconscious simultaneously, or for engineering the entire collective unconscious of all species on Earth (i.e., Gaia's collective unconscious), or even for precisely engineering the memory and knowledge base of an individual.

- Tom Bearden

The seemingly magical operations of psychoenergetics, sometimes called "psychotronics," cannot be achieved with ordinary transverse EM wave energy. But they are possible with longitudinal scalar waves because the mind itself is scalar in nature.

We note that all mind operations are time-like, i.e., they are comprised as scalar EM photon functions and scalar EM wave functions. Thus the mind is a very special kind of electromagnetic system, existing in the time domain...

- Tom Bearden

The engineering of the mind can only be accomplished with the waves of time. The course of psychoenergetics development necessitates the building of a vast database of settings and patterns which bring about given mental and/or emotional states. A kind of "genome" of the psyche. Bearden describes the process of the decoding of this "genome":

Now the scientists would perform many phenomenology experiments, making one little change at a time and profusely recording the data. Each time, they would establish the physical change(s) that occur in the body and/or the mental and emotional changes that occur in the mind for each spectral reinsertion back through the "ship's portholes". They would simply but painstakingly (over some years) build up an extensive database of those individual correlates.

In these experiments, the experimenters will eventually be able to provoke any body or mind change they wish. Strong emotion. Intense pain. Intense pleasure. Painful thoughts. Images. Memories. Perceptions. Dreams. Visions. Memory losses. Memory changes. Personality changes. Etc. The "delta" in the emission spectrum (the changes from zero reference spectrum) represent the precise totality of all mental, physical, organic, chemical, etc. changes and interactions.

A second stage in the research would be to test the correlates and porthole insertions upon a statistically significant cross section of ordinary people, and/or specialized populations (such as toughened soldiers). The program would evolve a highly complex, very effective, ever-improving science and technology of mind and behavior control and engineering mechanisms, complete with finished database and developed applications equipment.

Summing up his paper, Bearden speculates on what the actual situation the science of psychoenergetics probably is. The intense secrecy with which this knowledge has been kept from the public has led to the current farce of the "government" pretending it all does not exist, and this secrecy may have now put us at great risk.

The implication is that in the West one or more highly classified, sustained, heavily funded developments in advanced mind control programs, probably exists and probably has existed for some time. Due to

loose formation of rogue groups inside such programs, they may have dual or triple purposes, may not operate under very much legitimate government control at all, and may operate specifically for the purposes of the rogue group or groups that have gained control.

In a nutshell, that's what may be going on in the clandestine mind control projects in several Western governments. The involvement of at least some rogue groups, some being 'cowboys' who operate well outside all laws and ethics, could also result in such things as assassinations, clandestine testing on individuals without their consent, etc. In short, it could account for what seems to be actually occurring. As also is "usual" in such a mess, one or more of the rogue groups eventually may become very powerful because their secret weapons are very powerful. They may become confident, thinking they have the "best in the world." They may actually believe they are ahead of the Russians...

Remember that, in every large and powerful human organization, the basis for rogue groups is power and secrecy. They are always seeking to increase their power, control, influence, prestige, etc. Nothing else. Patriotism and mission are - to rogue groups - often just idle words. They have their own agendas. And being rogue groups, they may well bring in unethical, immoral tricks: assassination, bribery, entrapment, disinformation, plausible deniability, etc. A certain percentage of a highly secret rogue group will wind up using all these things and more. It's a human characteristic, the old primate dominance game. Only now disguised and hidden under deep classification.

The Russians, with their additional knowledge of the actual mechanisms in the transforms, will be much more advanced than the West, because their fundamental psychoenergetics science is far more advanced, so long as we continue to use the old U(l) electrodynamics. Further, the Russians have decades of use of longitudinal interferometry beams to reach right through the earth and ocean and produce stringent EM effects at a distance. So they will also be able to do the same things here in "mind control" with LW [longitudinal wave] interferometers, through intervening mass.

- Tom Bearden

Bearden cites two examples where he believes the Russian KGB tested the psychoenergetics capabilities of their scalar interferometers. One was the case of Captain Button in his A-10 "Warthog" aircraft on April 2, 1997:

Over Arizona, Captain Button was thrown into a hypnogogic state, and his perceptions instantly altered and controlled. In his instant "dream-waking" state, everything seemed perfectly normal. His sense of direction was altered a bit more than 90 degrees, so he simply corrected and turned and "flew toward the range", actually flying off course by more than 90 degrees and ignoring radio contacts. He flew right on out of Arizona.

At one point he circled, probably thinking he was over the range, and he probably dropped his ordnance there. Then he "flew on back toward home," as he thought in his waking dream state, until his fuel ran out and he crashed and died in the explosion - dream-thinking until he died that everything was normal. All the while, his sense of the passage of time was altered. To him, in his dream-thinking, dream-acting state, everything was normal and nothing untoward had happened. So the distant KGB transmitters and associated psychoenergetics team controlled him for over an hour.

Indeed, that was the exact purpose of the test: demonstrate control (at a great distance) of a skilled person performing highly skilled tasks.

The paper *Mind Control and EM Wave Polarization Transductions* ends with the most chilling and frightening possibility of all: the psychoenergetic engineering of the human species as a whole.

The Ant World: The Final Race for Direct Mind Control of the Entire Human Species

The KGB psychoenergetics weapons scientists-because of their direct measurements and detections (and use) of t-polarized waves and LWs [longitudinal waves] for decades-also understand that Jung's collective unconscious mind (of the entire human species) also has its own time-like operations and correlates, which one measures also when using t-polarization measurements and sorting it all out. The collective unconscious mind operations are buried several levels deeper inside the recursive Whittaker structuring inside the EM fields, waves, and potentials.

The KGB scientists also know that something very like Gaia - a collective unconscious mind for all species on earth - also exists, and they are striving to be able to sort out and measure that one as well. The Gaia operations are buried even deeper in the recursive structuring inside the EM fields, waves, and potentials.

Actually, from day one, the Russian mind control scientists have had their eventual goal set upon this 'deeper area of mind and possible mind control' of the entire human species. I am convinced that the KGB psychoenergetics scientists understand this deeper area. If they can learn to directly engineer the collective human species unconscious, they can then convert the human species easily into a sort of 'ant' society, modeled along ideal Communism lines, except of course with an excluded 'hierarchy at the top' running everything. The 'ant society' - communist style - is still a variation of feudalism (all systems tend to feudalism or some form thereof). The KGB psychoenergetics weapon scientists are seriously pressing on toward that very goal. In my opinion they are not very far from it right now...

Some versions of Russian mind control devices were used on Russian soldiers in the Afghan War to condition them for performance of merciless acts.

More about "The Ant World"

Whether it is the Russians planning an "ant world" society or rogue U.S. black-ops groups withholding a great boon from human race, the secrecy on all sides around has allowed largely criminal elements to take over this technology while leaving the civilized elements in the dark. Openness and the spreading of this knowledge among good and decent people is essential, and for that we will have to overcome our frightened denial.

Meanwhile, rogue groups amongst Western clandestine mind control researchers will probably arise if they have not already done so. They will likely seek to increase their personal control and further isolate the programs from orthodox government review and from government and legislative control. They may even divert the research into highly illegal and unethical means, because it furthers their own rogue agendas. That is how clandestine U.S. government research can sometimes go sour, unless great care is exercised by the oversight committees in the House and the Senate.

Sometimes when rogue groups do gain control and total secrecy of a given new technological area, then what appears to be 'U.S. government operations' do start to encompass a criminal and unethical operations, hidden usually beneath the deep veil of high classification. Also, if it's 'scientific,' no one is ever brought to justice, even if the "evil science actions" are uncovered and publicly revealed.

- Tom Bearden

Like the huge energy of the Tesla howitzers, the ability to engineer the mind with longitudinal waveforms is a seeming "magical" thing which can be used for good or ill. Bearden envisions that further developments will allow something like the "downloading" of knowledge via scalar interferometry. Everyone could be highly educated, and quickly and easily.

In the conclusion of the paper *Mind Control and EM Wave Polarization Transductions* Bearden makes a plea to the nations of the world regarding the use of psychoenergetic engineering.

Let us hope this great new area, already off to a bad start, can be bridled and steered in the direction helping and healing people, rather than killing or abusing them. The excesses in its bad use are a potent threat to all nations on earth.

Yet it can revolutionize medical science, education, communication, and psychology. We foresee the day - perhaps 30 years hence - when education will be accomplished by directly loading the software into the mind. Then in three weeks one will "load" a doctorate, say, in physics; in three more weeks one will also load a doctorate in chemistry; another three weeks, in electrical engineering; another three weeks, an M.D., and so on. When that happens, then truly everyone on earth can be educated. Freedom from ignorance may well be another great freedom that is legally

recognized. There will be no impoverished large groups lacking the education to find decent, productive jobs.

We urge all nations to use the principles involved: not for human abuse, but for healing, educating, uplifting, and life-expanding of every person on earth. If we do, we shall all have a far brighter future. Then we shall check what has started out to be the Sword of Damocles and turn it into the golden Millennium.

- Tom Bearden

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VI. As it Stands - 2002

Anyway, it's presently a "Mexican stand-off" with the various parties maneuvering with check and countercheck. That is the real "balance of terror" that is held by such a fragile balance.

You can see the implications if such weapons fall into the hands of the radical terrorists. Ordinary positive energy EMP shooters can be made fairly readily and cheaply from nearly just Radio Shack parts or surplus parts. It just takes some know-how... When and if the Yakuza [Japanese mafia] gets those (and they will, it's just a question of time), you can begin to appreciate some of the turns this present terrorism and our war on it will take.

- Tom Bearden

...

Beyond the Howitzers: Quantum Potential Weapons: Do not use EM propagation through space

As more and more nations acquire the scalar interferometers, Bearden speculates on the next generation of longitudinal weapons called "quantum potential" [QP] weapons.

The quantum potential weapons are presently only held by three nations: Russia (in the hands of the KGB, which is now know by its new name), Brazil, and the "friendly little nation." Red China may be working on them, but is just at the beginning...

The QP weapons have been highly reserved by the Russians. However, the complete extent of their capabilities is still being figured out..."The quantum potential weaponry (possessed by only three nations) is supreme, because it uses multiply connected spacetime, and DOES NOT involve propagation of EM energy through space as does the longitudinal EM wave interferometers . . .

The operational deployment of full-scale strategic QP weapons on site in Russia occurred at the end of 1989, which is when the formal weapons

first went operational. These weapons are not in the inventory of the regular Russian armed forces, but all research and development, manufacturing, deployment, and manning and employment is under the ruthless control of the KGB. Shortly thereafter (within weeks), the KGB leased many of their earlier longitudinal EM wave interferometer (LWI) weapons to a rogue Japanese group comprised of the Aum Shinrikyo and Yakuza.

- Tom Bearden

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Emptiness is Full of Energy

*The Tao is an empty vessel;
it is used, but never filled.
Oh, unfathomable source
of ten thousand things!*

*Oh, hidden deep but ever present!
I do not know from whence it comes.
It is the forefather of the gods.*

- Lao Tzu, *Tao Te Ching*

* * *

Subject: RE: Article on Tom Bearden and "Scalar Wars"

Date: Fri, 22 Mar 2002 22:54:01 -0600

Bill,

Well, I must say I'm astounded at your persistence and hard work in congealing all that together. My compliments on a hard job quite well done.

Couple tiny things: In the area mentioning Kervran and Kaznachejev: Kervran was French; Kaznachejev was and is Russian... We knew of three nations having the QP weapons for some time. Then we found out last year that five nations had it. So that explains my using the figure 'three' first (which represented what I knew at the time). Later I found out about the other two nations. China, e.g., only deployed its QP weapon this past year. So that explains the apparent contradiction between me using 'five' in later papers and "three" in earlier ones. It was the best information I had at that time. Might mention that so the reader will understand the apparent discrepancy. Otherwise, it's pretty accurate.

Just now I'm letting the weapons take care of themselves; have to, as I will be recovering now for nearly a year from now after the heart attack last year and discovering that I had contracted mycoplasma (the BW-modified kind) in Canada in 1968. Finally got a test which confirmed the chronic mycoplasma (which I had for 33 years!). The stuff burrows inside one's red corpuscles, then draws

nutrients from the hemoglobin, hardening it and reducing its ability to take on oxygen (by as much as 50% or more). The resulting symptom is loss of endurance (which I had for that 33 years) - the so-called "chronic fatigue syndrome". Many of the Gulf War Veterans who are sick also have it, though they apparently have other complicating factors as well. A very high percentage of persons with chronic fatigue syndrome also have mycoplasma. The treatment for the long-standing mycoplasma infection of that nature is to stay on antibiotics for a year. The only time the mycoplasma is vulnerable is when one wears out a red cell in normal usage, and the body makes a new red cell to replace it. The mycoplasma comes out of the dying cell to infect the new replacement cell, so it is exposed and vulnerable at that specific time and that time only. The antibiotics kills it at that time. Hence the necessity to stay on antibiotics for such a long time so it is continuously in your bloodstream (I've already been on antibiotics for over two months, and have at least 10 more months to go). We also take a little medical oxygen every day.

Another symptom of the mycoplasma infection is the association of runaway fibrillation of the heart. To stop that, there are pills one takes, and they stop it. But they also further reduce the volume of blood pumped by the heart, so that this projects one right back into the hypoxia, dizzy, loss of balance, etc. Catch 22 situation; the fibrillation will build and cause heart attack, stroke, etc. if not stopped, and if stopped it puts you back in the hypoxia which can cause many things! With the conventional treatment, you're damned if you do and damned if you don't. Hence the need for a little extra medical oxygen, so you can take the "heart clamp" pill and stop the fibrillation, but also augment the oxygen enough to continue to survive without a stroke or some such. Interestingly, it's very difficult to even obtain a mycoplasma test, and Medicare fights you tooth and nail over paying for the oxygen. Either they will pay for it or I'll pay for it myself; it is absolutely necessary.

After a heart attack, one is treated in the heart clinic by specialists who are very caring and excellent practitioners, but know nothing of mycoplasma infection, so do not consider it even a part of "heart disease", and who are rather puzzled when one has no clogging of the arteries, has the right count of red corpuscles (largely nonfunctional, of course, but there), pumps the right amount of blood, etc. So they identify and treat only the runaway fibrillation, do not prescribe the oxygen -- and essentially place you on a regime as best they know, but one that is guaranteed to kill or maim you or turn you into a totally disabled person or human vegetable via stroke, paralysis, etc. Fortunately my family doctor will prescribe the oxygen anyway, though I may have to pay for it myself. Whatever works!

*However, I'm slowly improving little by little, working as much as I'm able to and trying to finish my book, *Energy from the Vacuum: Concepts and Principles*, and get it to the publisher for publication later this year. Hopefully the book will turn all the interested young grad students and post-docs loose in the free-energy area. They will not have to spend 30 agonizing years to get to where I am and where a few others are, but can simply start here and go forward. Since*

speed to develop energy from the vacuum is of the essence because of the world situation, I'm moving on it as fast as I am physically able to.

Meanwhile, working with the AIAS (Alpha Foundation's Institute for Advanced Study). The AIAS (15 authors) has now gotten about 20 scientific papers published in leading journals (Foundations of Physics, Foundations of Physics Letters, Physical Scripta, Optik, etc.) dealing with electromagnetic energy from the vacuum. Several more are either approved for publication or in the review process also. So slowly we are getting it into the mainstream scientific literature. Hopefully it will be in time, but it's cutting it close.

Very best wishes, Tom Bearden

Appendix K

PROPOSITION 65 SKY

[DRAFT prepared by R. Michael Castle Ekimcastle@yahoo]

A Proposed Law that will protect our unified atmosphere from artificial pollution, written by American Citizens

Proposition 65 Sky - A proposed Law that effectively bans and prohibits the spraying/deployment/dispensed or otherwise release into the atmosphere of the planets natural air column:

- Any organic chemical or inorganic chemical · Any element of the Periodic Table
- Gases/Solids or Electromagnetic Wave
- Radio waves from Extreme Low Frequency (ELFs) through ultra high frequency including microwave energies traveling through the atmosphere and reflected back to the planet surface, land, water or artificial structure.
- Biological substances, viruses, pathogens, microbes or other life including bacterial forms, natural or genetically engineered.

PURPOSE

Ceasing Aerial Chemical Treatment of the Unified Atmosphere/Stratosphere, within the earth's gravity field. (CACTUS)

SCOPE

A vote by the U.S. Congress or Citizens of the United States of America, if passed, will prohibit the release of and effectively abate the raining back-to-earth's surface, a "waste" chemical, biological material or electromagnetic waves.

Current law and International Treaty does NOT recognize chemicals, elements, biological materials or electromagnetic waves that fall to earth or are radiated into space and reflected by the earth's ionosphere or orbiting/geostationary satellite, in a focused beam to a portion of the earth's surface, land or water or atmospheric clouds or moisture vapor or a aerial object, craft or platform.

These "wastes" of chemical-biological or radiated/reflected energies are de-missions of hazardous and otherwise toxic materials, agents or radiations, therefore, are hazardous wastes, Characteristically, hazardous wastes and potentially lethal exposure to spatial radiated energies.

This Law is intended to interrupt and impede the "rain" of chemical, electromagnetic and biological pollutants falling back to the earth's surface and declare a moratorium on Climate Changing Science, Global Warming Mitigation Aerial Scattering Operations, RF Dominance Mil/Ops RFMP/VTREPs, Mind Control ELF/ULF weapons, Psychotropic weapons, Viral Pathogenic vaccines aerielly sprayed en-masse onto any segment of the human species or the environment, also included in these would be the drug Eradication Programs that are broadcast aerielly including organic chemicals glyphosphate, triclopyr or genetically engineered microbes referred to as biocontrols/bioherbicides.

Chemical, electromagnetic or biological experimentation on Humans or the Environment or implementing Integrated Aircraft/Space Craft Navigational Systems that utilize high energy electromagnetic microwaves, Extreme Low Frequency (ELFs) or Ultra Low Frequency (ULFs) and the focused plasma technologies, until such time that exacting public and private scientific studies can prove the benefit(s) of any aerial/space deployment of any of these technologies with a clear and unbiased statement of the human health risks of each technology and an Environmental Impact Statement that cannot be modified with options or alternative selections under NEPA.

Human Health Risk Assessment conducted by either an independent or Governmental Agency would include a specific review process by Medical and Health Care Insurance Providers. This provision to the HHRA protocol seeks comments from the "Insurance Industry" on projected human medical and health impacts caused by the deployment of these technologies.

CLAIMS OF NATIONAL SECURITY/EXECUTIVE ORDERS

A provision in this proposed law that prohibits the usage of Presidential Executive Orders or military claims of National Security Issues as the fundamental reason(s) for deployment of aerial or space-based chemical, electromagnetic or biological "weapons" or security devices or experiments, or Climate Modifying Technologies, in which all assessment criteria is waived. Amendments of current laws, in view of National Security Issues or declarations that irrevocably mandates a full scope Human Health Assessment and full, all encompassing, Environmental Impact Statement(s) that have been properly conducted, filed with a minimum of the U.S. Congress oversight and found to have NO negative effects nor consequences on humans, critical organisms or the biosphere.

MONITORING

A mandate by this law that directs the U.S. Environmental Protection Agency to construct and maintain regional facilities for the purposes of monitoring Electromagnetic Radiation Levels (EMRL) in or onto the populace of the United States. All frequencies and types of radiation are inclusive in this proposed law. Establishment of Maximum Radiation Exposure Limits (MREL) to humans (all age groups and races) and to critical organisms and the environment/biosphere.

HIGH EMR ALERT DAYS

Rules established for issuance of "EMR Alert Days" to alert citizens in a given region that the exposure to high EMR is probable. Educating the public to the risks and dangers associated with high EMR exposure and methodologies for mitigating, preventing and/or reducing the exposure potential. Clearly identified sources of direct and spatial EMR.

This proposed law should establish an original Standard for Electromagnetic Radiation Exposure (EMRE).

Appendix L

"Our Mission and What We Do"

Environmental Protection Agency (EPA)

<http://www2.epa.gov/aboutepa/our-mission-and-what-we-do>

The mission of EPA is to protect human health and the environment.

EPA's purpose is to ensure that:

- all Americans are protected from significant risks to human health and the environment where they live, learn and work;
- national efforts to reduce environmental risk are based on the best available scientific information;
- federal laws protecting human health and the environment are enforced fairly and effectively;
- environmental protection is an integral consideration in U.S. policies concerning natural resources, human health, economic growth, energy, transportation, agriculture, industry, and international trade, and these factors are similarly considered in establishing environmental policy;
- all parts of society -- communities, individuals, businesses, and state, local and tribal governments -- have access to accurate information sufficient to effectively participate in managing human health and environmental risks;
- environmental protection contributes to making our communities and ecosystems diverse, sustainable and economically productive; and the United States plays a leadership role in working with other nations to protect the global environment.