

NIKOLA TESLA

PROMETHEUS OF ELECTRICITY

CHAPTER ONE

BY

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January
1978

GLOBAL
MAGNETIC WARFARE

A Layman's View of Certain
Artificially Induced Unusual
Effects On The Planet Earth
During 1976 and 1977.

BY

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January 1978

In January 1848 Karl Marx penned these opening lines to his manifesto of the Communist Party,

"A spectre is haunting Europe - The spectre of Communism."¹

Today, another spectre is haunting, not only Europe, but our entire planet. If we may paraphrase Marx's statement above, it would state:

"A spectre is haunting the Earth - The spectre of Magnetism."

What do we mean by this ominous sounding statement? How could a magnetic field around the Earth constitute a spectre auguring danger? Furthermore, danger for what, for whom? Let us begin with news items.

"A super-powerful, mysterious radio signal, apparently emanating from the Soviet Union, has been disrupting communications throughout the world for months."² This is the lead paragraph by Stephen M. Aug in a feature story in the Washington Star on October 29, 1976. The facts behind this mystery radio signal were first brought to the attention of many governments in Europe and North America by amateur radio operators in early July, 1976.

1. CAPITAL, by Karl Marx, p. 419

Great Books of The Western World. Vol. 50. Marx.
University of Chicago, 1952.

2. The Washington Star, Oct. 29, 1976, by Stephen M. Aug

"Who's Fouling Up Global Radio?"

Further research indicated that the Soviets began these powerful disruptive broadcasts as early as 1971 in brief and intermittent bursts between the USSR and Cuba. But the daily disruptive signals which started in July, 1976 go on as a continuing mystery.

At first the Soviet signals were a nuisance, and no one took them seriously. But as the Soviets refused to reveal the purpose for the signals, speculation mounted. For example, David MacDonald of the Ottawa Journal, London Bureau, wrote in early November, 1976,¹

"Soviet radio emissions that are infuriating BBC radio engineers appear to supply evidence that the Soviet Union is ignoring the spirit of the Helsinki accord by extending preparations for an all-out nuclear war with the West."

"The significance of this particular transmitter is that it has been designed to operate after the ionosphere that surrounds the earth has been destroyed by repeated atom bomb explosions. The ionosphere acts as a sort of mirror off which radio signals are bounced by traditional radio transmitters."

"The transmitter is located in the Western Soviet Union in the Republic of Byelorussia. It is in the industrial town of Gomel, about 175 miles S.E. of Minsk."

1. Ottawa Journal, November 5, 1976 by David MacDonald dateline, London, England. "Soviets Beaming a Doomsday Signal."

"A NATO official said it was first thought that the interference was coming from a powerful new Soviet over-the-horizon radar installation."

"'But now that we know it is a low frequency radio transmitter, we are not much comforted,' he said. 'It plays havoc with our communications when it is working and logic says its purpose is for directing the finish-off punch after most of the West is a nuclear potato chip.'"

Major General George J. Keegan, recently retired as head of U.S. Air Force Intelligence, commented on the Russian broadcast experiments by stating:¹

"That Soviet scientists are 20 years ahead of their American counterparts in developing a gun that would shoot electrons to destroy incoming missiles or warheads in a war. Keegan predicted the Soviets will have this new device 'well before 1980'."

Time Magazine goes on to say (Jan. 10, 1977 p. 27)

"The behemoth is apparently part of a Soviet effort to develop long-distance, over-the-horizon radar. Its signal, which pulses ten times a second, is four times more powerful than the most potent civilian radio stations."

Paul Brodeur in the New Yorker, Dec. 20, 1976 p. 80, states:

"A report published in the New York Times on October 30th of this year revealed that in recent months a mysterious broadband, shortwave radio signal has been broadcast intermittently from the

1. The Washington Post, March 12, 1977 by George C. Wilson.

"Just-Retired General Cites Soviet Threat."

Soviet Union. Dr. Zaret is concerned about the signal not because of its interference with radio and telecommunications but because of its potential for being hazardous to human beings. 'This broadband signal is being pulsed at an on-off rate of ten times per second', he said the other day. 'When I analyzed the Soviet literature for Project Pandora back in the nineteen-sixties, it was very clear that such an encoding impressed onto carrier wave lengths could have a central nervous system effect. In the case of the present (Soviet) signal, I would not be surprised to find that the on-off code at a repetition rate of ten per second could have an effect on the brain's inherent alpha rhythm. So whatever purpose the Russians may have for continuing this transmission, the potential effect in human beings from altering their alpha rhythm cannot be discounted. The Soviets should not be permitted to pollute our atmosphere with this signal anymore than they should be permitted to continue irradiating our embassy in Moscow.'".

The clue as to the Soviet intentions with respect to their radio pul^Sing behemoth lies in the statement "to continue irradiating our embassy in Moscow." Just before the behemoth began its mystery transmissions there appeared an item in the New York Times:

"Washington, July 7, 1976. 'The United States said today that Soviet authorities in recent months had sharply reduced the level of microwave radiation beamed at the American Embassy in Moscow. Robert L. Funseth, the State Department spokesman, said at his regular news conference that as a result of official discussions,

'The strength of the signal beamed to the embassy in Moscow has been greatly reduced from previous recordings, which were themselves well below established United States safety standards.' "

"Mr. Funseth, while providing technical details, refused to comment on why the Soviet Union was beaming the rays, a practice that officials have said began about 16 years ago."

Today there is no mystery about why different nations carry on experiments with various types of electronic radiation including microwaves best known for their use in radar, and high speed food cooking ovens; it is to develop new means of electronic mind control.

Curiously, just as the American State Department was announcing the Soviet reduction of microwave radiation being beamed at the United State Embassy in Moscow, The Soviet Union started its behemoth radio transmitters beaming over the planet.

"Precisely what is generating the signals, what type of intelligence - if any - they are carrying out, and what their purpose is, are all unanswered questions", we read in the New York Times for October 30, 1976.

"Colin Thomas, who is world wide coordinator of interference reports for the International Amateur Radio Union, said in a telephone interview from his home in Leeds, England, that reports of interference from these (Soviet) transmissions have come from amateurs in Sweden, Norway, West Germany, The United States, and Australia. "

"The source of the problem lies in The U.S.S.R." Mr. Thomas said. 'There are thought to be three transmitters involved, but the purpose of the transmissions, this we do not know.' "

"Since August 25, The (U.S.) Federal Communications Commission has written four complaints to the Ministry of Posts and Telecommunications in Moscow, but so far has not had an answer, " the sources said."

"Mr. Thomas said that all of his interference reports were sent to the British Home Office, and that he understood that complaints had been telegraphed to the Russians. But, as with the F.C.C. complaints, there has been no answer."

"King T. Hall, chief watch officer at the F.C.C.'s monitoring branch, said the commission had been getting complaints almost daily since early July. He said complaints had come from basically every Shortwave Radio user; Aviation people for air-ground communications, maritime users - ship-to-shore operators as well as shore-to-ship and ship-to-ship - overseas point-to-point fixed radio services, such as those of the American Telephone and Telegraph Company, The International Telephone and Telegraph Corporation and RCA Global Communications, Inc."

"So severe has the interference become, and so unresponsive have the Russians been to complaints from other countries, that the matter has been referred to the International Telecommunication Union in Geneva."

"Mr. Hall said direction-finding equipment of the F.C.C. had confirmed that the signals emanated from the eastern side of the Baltic Sea."

Time Magazine (January 10, 1977, p. 27) locates the Russian transmitter near Kiev, at the Black Sea town of Nikolayev.

In spite of the protests to the Soviet Union concerning interference with communication systems, there was no adequate diplomatic response--in fact, the Soviet government adopted a policy of Sphinx-like silence. Curiously enough, all the governments of the world also did very little to enlighten their citizens as to what was going on. The average citizen found himself isolated between two walls of silence.

The first definitive analysis of the Soviet technology appeared in the authoritative journal Aviation Week & Space Technology, May 2, 1977, "Soviets Push for Beam Weapon."

"The Soviet Union is developing a charged-particle beam device designed to destroy U.S. intercontinental and submarine-launched ballistic missile nuclear warheads. Development tests are being conducted at a facility in Soviet Central Asia."

"The Soviets also are exploring another facet of beam weapons technology and preparing to test a spaceborne hydrogen fluoride high-energy laser designed for a satellite killer role. U.S. officials have coined the term directed-energy weapons and high-energy lasers."

"A charged-particle beam weapon focuses and projects atomic particles at the speed of light which could be directed from ground-based sites into space to intercept and neutralize reentry vehicles, according to U.S. officials. Both the USSR and the U.S. also are investigating the concept of placing charged-particle beam devices on spacecraft to intercept missile warheads in space. This method would avoid problems with propagating the beam through the earth's atmosphere."

"Because of a controversy within the U.S. intelligence community the details of Soviet directed-energy weapons have not been made available to the President or to the National Security Council."

"Recent events have persuaded a number of U.S. analysts that directed-energy weapons are nearing prototype testing in the Soviet Union. They include:

1) Detection of large amounts of gaseous hydrogen with traces of tritium in the upper atmosphere. The USAF TRW Block 647 defense support system early warning satellite with scanning radiation detectors and infrared sensors has been used to determine that on seven occasions since November, 1975, tests that may be related to development of a charged-particle beam device have been carried out in a facility at Semipalatinsk.

2) Test of a new, far more powerful fusion-pulsed magnetohydrodynamic generator to provide power for a charged-particle beam system at Azgir in Kazakhstan near the Caspian Sea. The experiment took place late last year in an underground chamber in an area of natural salt dome formations in the desert near Azgir and was monitored by the TRW early warning satellite stationed over the Indian Ocean.

3) Point-by-point verification by a team of U.S. physicists and engineers working under USAF sponsorship that the Soviets had achieved a level of success in each of seven areas of high-energy physics necessary to develop a beam weapon.

4) Recent revelations by Soviet physicist Leonid I. Rudakov during a tour last summer of U.S. fusion laboratories that the USSR can convert electron beam energy to compress fusionable material to release maximum fusion energy.

4) (cont'd) Much of the data outlined by Rudakov during his visit to the Lawrence Livermore Laboratory has since been labeled top secret by the Defense Department and the Energy Research and Development Administration.

5) Pattern of activity in the USSR, including deployment of large over-the-horizon radars in northern Russia to detect and track U.S. ICBM reentry vehicles, development and deployment of precision mechanical/phased-array anti-ballistic missile radars and massive efforts aimed at civil defense."

"The Semipalatinsk facility where beam weapons tests are taking place has been under observation by the U.S. for about 10 years. The central building at the facility is believed by some officials to contain a collective accelerator, electron injectors and power stores."

"The building is 200 ft. wide and 700 ft. long, with walls of reinforced concrete 10-foot thick, the entire facility, with its associated support equipment is estimated to have cost \$500 million."

"The test site is at the southern edge of the Semipalatinsk nuclear test area, and it is separated from other test facilities. It is surrounded by a series of security fences."

"The total amount invested by the USSR in the test project for the 10 years' work there is estimated at \$3 billion by U.S. analysts."

"The U.S. used high-resolution photographic reconnaissance satellites to watch as the Soviet technicians had four holes dug through solid granite formations not far from the main large building at the facility."

"Mine heads were constructed over each opening, and frames were built over the holes. As tons of rock were removed, a large underground chamber was built deep inside the rock formation."

"In a nearby building, huge extremely thick steel gores were manufactured. The building has since been removed. These steel segments were parts of a large sphere estimated to be about 18 meters (57.8 ft.) in diameter. Enough gores for two complete spheres were constructed. U.S. officials believe the spheres are needed to capture and store energy from nuclear-driven explosives or pulse-power generators. The steel gores are believed by some officials to be among the earliest clues as to what might be taking place at the facility."

"The components were moved to the nearby mine heads and lowered into the chamber."

"One of the major problems in gaining acceptance of the concept within the U.S. scientific community was to convince high-energy physics experts that the Russians might be using nuclear explosive generators as a power source to drive accelerators capable of producing high intensity proton beams of killing potential."

"U.S. officials, scientists and engineers queried said that the technologies that can be applied to produce a beam weapon include:

- 1) Explosive or pulsed power generation through either fission or fusion to achieve peak pulses of power.

- 2) Giant capacitors capable of storing extremely high levels of power for fractions of a second.

- 3) Electron injectors capable of generating high-energy pulse streams of electrons at high velocities. This is critical to producing some types of beam weapons.

4) Collective accelerator to generate electron pulse streams or hot gas plasma necessary to accelerate other subatomic particles at high velocities.

5) Flux compression to convert energy from explosive generators to energy to produce the electron beam.

6) Switching necessary to store the energy from the generators in large capacitors.

7) Development of pressurized lines needed to transfer the pulses from the generators to power stores. The lines must be cryogenically cooled because of the extreme power levels involved."

"For several years, Air Force Maj. Gen. George J. Keegan, who until his recent retirement headed USAF's intelligence activities has been trying to convince the Central Intelligence Agency and a number of top U.S. high-energy physicists that the Soviets are developing a charged-particle beam weapon for use in an antiballistic missile role."

"It was anticipated by Gen. Keegan and his advisers that the USSR would be forced to vent gaseous hydrogen from the experiments at Semipalatinsk and that early warning satellites could detect it."

"Liquid hydrogen in large amounts is believed by some officials to be utilized to cushion the nuclear explosive generator sphere and for cryogenic pumping of large drift tubes nearly a kilometer in length through which the beams are propagated for underground testing. In both cases, large amounts of gaseous hydrogen are formed and released into the atmosphere, probably carrying large amounts of nuclear debris or radioactive tritium that can be exploded at altitude and dispersed to avoid harming the people below, according to some U.S. scientists."

"Explosions of such gaseous hydrogen discharges are now being detected with regularity from Soviet experiments," a U.S. official said, "and scientific studies of the gas releases and explosions have confirmed their source as being near the Semipalatinsk facility."

"In recent public pronouncements, Gen. Keegan has taken the CIA to task for having rejected Air Force Intelligence information about Soviet beam weapon development. He also has spoken bitterly about a number of top U.S. physicists who refuse to accept even the possibility that the Soviets are involved in beam weapon development. Most of the physicists who would not accept the data were older members of the scientific community who had been involved in research and development from the early days of a project called 'Seesaw'."

"The U.S. attempted unsuccessfully to develop a charged-particle beam device under the project code named Seesaw. It was funded by the Defense Department's Advanced Research Projects Agency but abandoned after several years."

"A number of influential U.S. physicists sought to discredit General Keegan's evidence about Soviet beam development. The general attitude was that, if the U.S. could not successfully produce the technology to have a beam weapon, the Russians certainly could not. 'It was the original not-invented-here attitude,' one of the U.S. physicists said.

"There were about 20 hypotheses advanced by these physicists and the CIA's Nuclear Intelligence Board as to what the facility at Semipalatinsk was being used for by the USSR. One theory was that it was a supersonic ramjet test site and another was that it was a nuclear reactor test site for commercial applications."

"That was based on the layout, which resembled some reactors in the USSR."

"There is now no doubt that there is dumping of energy taking place at the site with burning of large hydrogen flames," one official said. "What bothered the Nuclear Intelligence Board at first was that it was hard to imagine that some seven technologies critical to the weapons concept could be perfected there within the time frame presented and not be detected by us."

It is obvious that the splashing of radio interference all over the planet originating in the Soviet Union has military scientists on edge as they try to second guess Soviet intentions and technology. It is not too surprising that the U.S. military analysts would "guess" that the Soviet Union is developing a "directed-beam" weapon- for this idea has a long history. The invention of the directed-beam goes back to the year 1900 when Nikola Tesla invented his "magnifying transmitter" which developed such high voltages that it equalled lightning bolt effects found in nature. However, he did not reveal to the world the development of his "directed-beam" until his 78th birthday. Joseph W. Alsop, Jr., writing in the New York Herald Tribune on Wednesday July 11, 1934, says under the headline, "Beam to Kill Army at 200 Miles, Tesla's Claim on 78th Birthday."

"Dr. Nikola Tesla, inventor of polyphase electrical current, pioneer in high frequency transmission, predecessor of Marconi with the wireless, celebrated his 78th birthday yesterday by announcing his invention of a beam of force somewhat similar to the death ray of scientific romance."

"It is capable, he believes, of destroying an Army 200 miles away. It can bring down an airplane like a duck on the wing, and it can penetrate all but the most enormous thicknesses of armor plate. Since it must be generated at stationary power plants by machines which involve four electrical devices of the most revolutionary sort, Dr. Tesla considers it almost wholly a defensive weapon. In peace times, he says, the beam will also be used to transmit immense voltages of power over distances limited only by the curvature of the earth."

"He came to the idea of a beam of force, he said, because of his belief that no weapon has ever been found that is not as successful offensively as defensively. The perfect weapon of defense, he felt, would be a frontier wall, impenetrable and extending up to the limits of the atmosphere of the earth."

"Such a wall, he believes, is provided by his beam of force. It is produced by a combination of four electrical methods or apparatuses. First and most important is a mechanism for producing rays and other energy manifestations in free air. Hitherto vacuum tubes have always been necessary. Second is an apparatus for producing unheard-of quantities of electrical current and for controlling it when produced. The current is necessary as power for the first mechanism. Without this, no rays of sufficient strength could be produced. The third is a method of intensifying and amplifying the second process, and the fourth is a method of producing "tremendous electrical repellent force."

"These four inventions in combination, enable man to loose in free air forces beyond conception." Dr. Tesla remarked mildly."

"By scientific application we can project destructive energy in thread-like beams as far as a telescope can discern an object. The range of the beams is only limited by the curvature of the earth. Should you launch an attack in an area covered by these beams, should you, say, send in 10,000 planes or an army of a million, the planes would be brought down instantly and the army destroyed."

"The plane is thus absolutely eliminated as a weapon; it is confined to commerce. And a country's whole frontier can be protected by one of the plants producing these beams every 200 miles. Nor should they be much more costly than an ordinary power plant."

"The beam of force itself, as Dr. Tesla described it, is a concentrated current—it need be no thicker than a pencil-of microscopic particles moving at several hundred times the speed of artillery projectiles. The machine into which Dr. Tesla combines his four devices is, in reality, a sort of electrical gun."

"He illustrated the sort of thing that the particles will be by recalling an incident that occurred often enough when he was experimenting with a cathode tube. Then, sometimes, a particle larger than an electron, but still very tiny, would break off from the cathode, pass out of the tube and hit him. He said that he could feel a sharp, stinging pain where it entered his body, and again at the place where it passed out. The particles in the beam of force, ammunition which the operators of the generating machine will have to supply will travel far faster than such particles as broke off from the cathode, and they will travel in concentrations, he said."

"As Dr. Tesla explained it, the tremendous speed of the particles will give them their destruction-dealing qualities. All but the thickest armored surfaces confronting them would be melted through in an instant by the heat generated in the concussion."

"Dr. Tesla declared that the two most important of the four devices involved in his force beam generator, the mechanism for producing rays in free air, and the mechanism for producing great quantities of electrical current, had both been constructed and demonstrated by actual experiments. The two intensifying and amplifying apparatuses are not yet in existence but he displayed the most perfect confidence that when they are, they will work as he expects them to do."

In a letter to His Majesty's government of Britain, dated August 28, 1936, Tesla offered the secrets of his "beam of force" weapon. During the ensuing correspondence with, The Director of Mechanisation, the War Office, London, S.W. 1 [84/T/3458 (M.G.O.4.b.)], there is a letter from Tesla dated October 26, 1937 in which he states:

"My discoveries and inventions for securing complete immunity from any form of attack constitute the most revolutionary technical advance in history and will affect profoundly the future of humanity. They will save the lives of millions of people and prevent destruction of property of inestimable value in all countries. They may also be the means of preserving and strengthening the greatest empire on earth."

Tesla in this letter pressed for an early decision on the part of His Majesty's government, and then said, "I am indifferent now as to whether these terms are accepted or not, but venture to point

out in all deference that if England does not take advantage of the present opportunity, some foreign power might later exact a price so great as to strain to the utmost the financial resources of Great Britain and cripple it seriously."

I might add that Tesla estimated in 1937 that the first beam of force plant could be built for 10 million poundssterling. Who knows, but God, what the history of World War II might have been, had the British, 1937, developed Tesla's beam-of-force defense system? Today, forty years later, there is a possibility that the scientists of the Soviet Union have solved the secrets of Tesla's beam-of-force system, now called the directed-beam system. The full implications of the possible Soviet breakthrough is best summarized in the editorial in Aviation Week for May 2, 1977:

"The Soviet Union has achieved a technical break-through in high-energy physics application that may soon provide it with a directed-energy beam weapon capable of neutralizing the entire United States ballistic missile force and checkmating this country's strategic doctrine."

"The hard proof of eight successful Soviet tests of directed-energy beam weapon technology gives new and overriding urgency to bring these developments into the public domain and rip the veil of intelligence secrecy so that this whole matter of vital national urgency and survival will finally be brought to the attention of the President of these United States, the Congress and the citizens of this republic whose future is at risk. In all of the previous four years that these Soviet developments have been known to the official

intelligence community, they have been stifled by a conspiracy of skepticism and silence and never once penetrated to the highest decision-making councils of this country."

"The incredible story of how the Soviets leap-frogged a generation of high-energy physics technology and developed a workable experimental model of a directed-energy beam weapon now has been largely verified by the successive Soviet tests at Semipalatinsk and Azgir and the brilliant work of a small group of extremely young physicists in this country. The fact that this country still has a chance of avoiding a crippling technological surprise that could render its entire strategic missile force ineffective is due to the courageous, dogged and perceptive work of a handful of U.S. Air Force intelligence specialists who polarized around the leadership of Maj. Gen. George Keegan, Jr., recently retired chief of Air Force intelligence."

"We do not suggest any formal conspiracy to suppress the mounting evidence of a massive Soviet research, development, and industrial push aimed at the goal of an anti-ICBM directed-energy beam weapon. Rather it was a combination of smug American assurance that the Soviets were simply not capable of out-reaching us in any technological race and the intellectual arrogance of elderly scientists who through the ages have spent their twilight years proving that the next generation of breakthroughs is 'impossible'."

"In modern times, we have the continuing example of Dr. Vannevar Bush, who thundered that the ICBM was a technical impossibility, and the assortment of scientists in the Eisenhower era who firmly believed that manned spaceflight should be abandoned because the human system could not survive its rigors."

"It was a similar group of high-energy physicists, some heavy with Nobel laurels, who encouraged the natural technical illiteracy of the Central Intelligence Agency to discount the steadily growing stream of Soviet developments and to lead the bitter intramural battles that suppressed the evidence from higher government councils for crucial years."

"There is still considerable debate over the real significance of the Soviet tests at Semipalatinsk and Azgir and how long it will take the Soviets to translate their experimental developments into a usable weapon. But there is no longer much doubt among top-level U.S. high-energy physicists that it is feasible to develop a directed-energy beam device."

"There is also an element in the Pentagon that can visualize the eventual Soviet deployment of the directed-energy beam weapon as the end game of an intricate chess exercise that began with the 1972 negotiation of the anti-ballistic missile treaty, which effectively stopped not only U.S. deployment of an anti-ICBM system but also most of its significant on-going research and development. The hypothesis for this chess game, which ends in the early 1980's with the triumphant Soviet shout of "check and mate," involves the U.S. finding its strategic deterrent ballistic missile force stripped of any defensive system, with the Soviets using their anti-ICBM directed-energy beam weapon to negate any U.S. retaliation and a strong civil defense shield to minimize damage from the few warheads that might penetrate."

"The race to perfect directed-energy weapons is a reality. Despite initial skepticism, the U.S. scientific community now is pressuring for accelerated efforts in this area."

"It is absolutely essential that the remaining chapters of this debate be conducted in public where every American citizen, from President Jimmy Carter on down, is aware of the elements that will determine this nation's future. It is far too important an issue to be cloaked in the obscure bureaucratic in-fighting of the intelligence community."

"It could be a fatal error for this country to continue to put its major strategic reliance on a single type weapon for which an effective counter is already looming on the technical horizon."

However, great these threats may be for the future of the world, over-the-horizon radar, and beam-of-force technology are not the end of possible interpretations of the Soviet experiments. The Soviet Union faces more chilling prospects in its future climatology than any war threat could pose. On October 9, 1976, the following report by Robert C. Toth of the Los Angeles Times was dispatched from Leningrad,

"The Arctic, the Northern Hemisphere's weather factory has been growing steadily colder for the last 30 years, according to polar researchers here, and they expect the downward trend to continue at least through this century."

"Even if it does, there will not be another Ice Age. But it will be bad news economically, particularly for the Soviet Union, whose northern location makes it more vulnerable to such temperature changes."

"The new cold spell already has cut the Arctic shipping season by a full month—from three to four months in the mid-1940's to two to three months now, according to Nikolai A. Volkov, chief of ice forecasting at the Arctic and Antarctic Research Institute here."

"A potentially more serious problem of colder weather would be the effect on agriculture, which suffers from low productivity even in the best of times."

"Since the early 1940's, the average annual temperature over the Kara Sea, which stretches midway along the Soviet coast, has dropped three degrees centigrade (5.4 degrees Fahrenheit) from minus-10 to minus-13, Volkov said. Drops of one and two degrees centigrade have been recorded in adjacent seas."

"Each degree centigrade drop in a farming region cuts one week off the growing season, it has been estimated. Russian growing seasons already are short less than 120 days, or 17 weeks, for 60% of the Soviet Union and as little as 13 weeks, in some Siberian grain-growing regions. One or two weeks, more or less, can be crucial to a harvest in such conditions."

"Repercussions of deepening cold also would include higher national energy costs for heating, and smaller catches and more distant fish hauls for Soviet trawlers."

"The Russian polar researchers are very cautious about the future. 'We are not predicting another Ice Age, but there will be at least some hard periods ahead for Arctic navigation,' Volkov said in an interview."

"'We know firmly that a cold period has started and the whole Arctic is involved,' he said. 'It will take 10 years more study to know how long it will last and how cold it will get.'"

What is the response of the civilization of the USSR to this long term threat to its food supply? Lowell Ponte, formerly with International Research and Technology Corporation, a think-tank that has done environmental warfare research for the U.S. Pentagon,

has this to say: (from Gallery, December 1977, pp. 114ff.)

"The changing climate threatens richer nations in other ways as well. For the Soviet Union, repeated crop failures during the early Seventies forced them to turn to America for wheat purchases. This is more than embarrassing to Kremlin leaders, who see dependence on U.S. food as a threat to Soviet sovereignty and who tremble when they read a published CIA study that says American's 'food weapon' may give the U.S. power in the world 'comparable to what we had at the end of World War II,' when the United States had a global monopoly on nuclear weapons."

"Soviet croplands are closer to the North Pole than those of any other major nation, so her self-sufficiency in food is likely to wither in the first icy blasts of colder climate."

"But in 1977, as bizarre cold and drought devastated the United States and Canada, the Soviet Union enjoyed splendid weather and harvested record crops. This is no accident, according to Canadian and American scientists I spoke with who are involved in military intelligence."

"The Soviets spend more than any other country on attempts to tamper with weather. They seed clouds. They have projects to divert several rivers flowing northwards into the Arctic Ocean. Their computer studies show that these projects will decrease ice in the Arctic, enhance their own climate, and very likely mess up the weather over croplands in neighboring China."

"But last winter the Soviets tried something new and frightening. They launched into an elaborate pattern of polar-orbiting satellites. The U.S. did the same, and leaked a set of cover stories to the press saying that we were racing to perfect 'laser-cannon killer satellites.'"

"Sounds impressive, unless you know, as I do, that we perfected such satellites years ago."

"These new satellites apparently had much to do with the 'high energy electrical impulses' from the Soviet Union that last winter played havoc with shortwave radio listeners and radio amateurs throughout the world."

"American scientists have known for years that such high energy transmissions cause an 'electron rain' in the ionosphere above their antennas. But five years ago, the Soviets began experimenting with an old theory that by configuring such transmissions, it would be possible to deflect storms and even to move the jet stream, thereby altering global weather."

"The experts I spoke with are convinced--and the Canadian Government has issued a secret diplomatic protest to the Soviet Union about this--that the Soviet experiments were part of the cause of the terrible winter North America suffered in 1977."

"From the Pentagon's point of view, the U.S. has been in a secret race with the Soviets for decades over development of such environmental weapons."

"Through the Pentagon's cosponsored Project Stormfury, we have studied how to weaken, redirect or create hurricanes--which, with their ability to unleash the force of a hydrogen bomb every minute, make a tempting weapon."

"What, for example, was Project Nile Blue? According to the Pentagon, it was a harmless computer study in operation during the Sixties and early Seventies designed to discover if the Soviets were trying to tamper with our climate. Ah, but environmental warfare is a tricky business."

"Because natural systems are so powerful, it is a matter of executing judo or kung fu on Mother Nature--of finding subtle points where a bit of human disruption can set off chain reactions and tip huge but delicate natural balances in ways that start hurricanes or change the course of mighty wind currents. In other words, the mere knowledge of where these pivot points are gives one the ability to use them."

"Nile Blue gave our military leaders such knowledge, gave them the power--in complete secrecy--to disrupt weather over nations unfriendly to the United States. Was this done? We have no way of knowing."

"The superpowers may turn to climate modification. The U.S. and U.S.S.R. have already secretly discussed damming the Bering Strait, a 54 mile-wide stretch of water between Alaska and Siberia. Dam it, say some scientists, and you would block the flow of icy Arctic Ocean water that now flows into the Pacific and down the West Coasts of Canada and the United States. This, they believe, would make the Pacific Ocean much warmer, thaw out and open to farming hundreds of millions of acres of frozen land in Alaska and Siberia, enhance climates in much of North America and the Soviet Union, and even turn southern California into a rain forest getting 200 inches of rain annually."

"Computer studies show that the Bering Dam idea has a few minor drawbacks."

"This is why the recent Soviet experiments to bend the jet stream are so horrifying and irresponsible. To improve their own climate the Soviets are willing to risk the well-being of billions of other humans elsewhere on the planet."

"Apparently the United States and Canadian governments are saying nothing about this, lest they be forced to explain how they knew what the Soviets were trying or to tell what similar research they were doing."

"Clearly it's time we took such research out of CIA and military hands. This sort of tampering is too dangerous^{ous} to leave to people who wear ribbons and have lightning bolts on their visors. It's time, too, that the people of the world's democratic nations understood that this past winter was not a freak or fluke."

It is small consolation to note that all the ideas and technology for weather modification were carried out by Nikola Tesla in 1900. Tesla almost got recognition for this work, and we quote from the New York Times, November 7, 1915. The headline states:

"Tesla's Discovery: Nobel Prize Winner"

"Transmission of Electrical Energy without Wires, which affects Present-day Problems."

"To Illuminate the Ocean, Scientist says, Collisions will be Avoided, and Unlimited Water Drawn to Irrigate Deserts"

"Nikola Tesla, who with Thomas A. Edison, is to share the Nobel Prize in Physics, according to a dispatch from London, said last evening that he had not yet been officially notified of the honor. His only information on the matter was the dispatch in the New York Times."

"I have concluded, he said, 'that the honor has been conferred upon me in acknowledgement of a discovery announced a short time ago which concerns the transmission of electrical effects of unlimited intensity and power can be produced, so that not only can energy be transmitted for all practical purposes to any terrestrial distance,

but even effects of cosmic magnitude may be created."

"Mr. Tesla said the discovery had a direct and vital bearing on the problems now foremost in the public mind. For instance, he said, wireless telephony would be brought to a perfection undreamed of through the application of this discovery. He added: 'We will deprive the ocean of its terrors by illuminating the sky, thus avoiding collisions at sea and other disasters caused by darkness. We will draw unlimited quantities of water from the ocean and irrigate the deserts and other arid regions. In this way we will fertilize the soil and derive any amount of power from the sun. I also believe that ultimately all battles, if they should come, will be waged by electrical waves instead of explosives.'"

Alas for Tesla - The Nobel Prize was never formally awarded to him. But his ideas and experiments on weather modification were quite specific - and used the same magnifying transmitter power source - as would be used in an over-the-horizon radar, or a directed-beam weapon. What is not generally known is that Tesla invented a device that performs the functions of a true - over-the-horizon radar which he called "telegeodynamics". In this invention he introduced controlled seismic tapping of the earth, and with proper receivers, he claimed to be able to keep track of every moving vehicle on the planet. But it would be more colorful to quote his own words in an interview on his 79th birthday from the New York Times, July 11, 1935.

"He confined himself yesterday to three of his startling adventures in the realm of theoretical and practical science. One of these, he said, 'would appear almost preposterous.' The second, he said with true candor, 'would be considered absolutely impossible by any competent electrical engineer.' The third would knock the props out from under the theory of relativity, he said, but in this case also he expressed his doubt that the modern generation of scientists would take his challenge seriously."

"He has measured cosmic ray velocities from Antares, he said, which he found to be fifty times greater than the speed of light, thus demolishing, he contended, one of the basic pillars of the structure of relativity, according to which there can be no speed greater than that of light."

"One of the subjects, which he hoped, he said, will come to be recognized as his 'greatest achievement in the field of engineering,' was, he said, the perfection by him of 'an apparatus by which mechanical energy can be transmitted to any part of the terrestrial globe.'

"This apparatus, he said, will have at least four practical possibilities. It will give the world a new means of unfailing communication; it will provide a new and by far the safest means for guiding ships at sea and into port; it will furnish a certain divining rod for locating ore deposits of any kind under the surface of the earth; and finally, it will furnish scientists with a means

for laying bare the physical conditions of the earth, and will enable them to determine all of the earth's physical constants.

"He called this discovery 'tele-geodynamics,' motion of earth-forces at a distance."

Further details about this invention are given in The New York American of the same date. The headline is: "TESLA'S 'CONTROLLED EARTHQUAKE'"

"Nikola Tesla, father of radio and of the modern method of electric power transmission, observed his 79th birthday yeaterday by drinking a quart of boiled milk and outlining the latest of his many startling discoveries."

"This is an apparatus by which energy can be transmitted to any part of the earth, with practical possibilities in the navigation of ships, discovery of ore deposits and determination of the physical properties of the earth's interior."

"His experiments in transmitting mechanical vibrations through the earth - called by him the art of telegeodynamics - were roughly described by the scientist as a sort of 'controlled earthquake.'

"The rhythmical vibrations pass through the earth with almost no loss of energy, he said, and predicted the system in time will be universally adopted, since it furnishes as 'unfailing means of communication.' He asserted:

"'It becomes possible to convey mechanical effects to the greatest terrestrial distances and produce all kinds of unique effects of inestimable value to science, industry and the arts.'

"The invention could be used with destructive effect in war, he said, by exploding bombs thousands of miles away which had been equipped with apparatus to receive the vibrations."

Tesla once said to a reporter with respect to his telegeodynamic art of "controlled earthquakes" that with a small amount of power it would take about two weeks vibration of the earth to bring it to full resonance - "and it could be made to split in two - like an apple." Is there a possibility that the Soviets are experimenting with Tesla's method of "controlled earthquakes"?

First, let it be known that 1976 is officially considered to be **amongst the worst years** ever in the toll ~~from~~ earthquakes. *I quote:*

The New York Times, Monday, January 24, 1977,

"'76 Termed Among Worst In Toll From Earthquakes"

"Washington, Jan. 23 (UPI) - If reports about the death toll from a 'great' earthquake in China are true, 1976 was the world's worst year for quakes in modern times, according to the United States Geological Survey."

"Government scientists said Thursday that a reported 655,000 people were killed during the 'great' China earthquake last July - a number exceeded only in the year 1556 when 830,000 fatalities were recorded in China.

"The year was a deadly one 'not because there was an unusual number of earthquakes, but because many of the stronger quakes were centered in areas of high population or less resistant building construction where they could do the most damage,' said Waverly Person, a geophysicist who works at the geological agency's National Earthquake Information Service in Golden, Colo."

"There were at least 50 'significant' earthquakes - that caused deaths or were of 6.5 magnitude or greater - during the year, Mr. Person said. In addition to casualties from the great China quake, at least 40,000 other earthquake-related deaths were reported in 1976, he said."

"These include at least 23,000 deaths in Guatemala on Feb. 4; 1,000 deaths in northeastern Italy on May 6; 5,000 to 8,000 killed by the earthquake and resulting tsunami in the Philippines Aug. 16, and about 5,000 deaths in eastern Turkey on Nov. 24."

Let it be fully understood that no implication is made here that the Soviet experiments are in any way responsible for this record in earthquake effects. This is not to say that the Soviets are not experimenting with Tesla's method of "controlled earthquakes". Of the many great earthquakes of 1976 there is one that demands special attention - the July 28, 1976 Tangshan, China earthquake. The reason that this earth quake attracted my attention is that it was preceded by a light flareup of the entire sky over Tangshan.

Also, this earthquake occurred during the first month of the Soviet radio emissions - when the Soviets themselves did not fully understand what results to expect.

From the very beginning of the Soviet radio emissions, Canadian authorities furnished me with all the relevant data required to analyse the signals, namely, times that the signal was over Canada, the oscillograph tracings of the radio waveforms, the field strength, current and voltage characteristics, etc. The most prominent effect was that when the Soviet emission was on at full strength - the sky would light up like an ionized-gas lamp - just as Tesla had predicted. This lighting of the sky effect due to the Soviet radio emissions pulsed into Canada was described on March 27, 1977, in the EVENING STANDARD.¹

"One evening last month a strange new kind of lightning in the sky created such a disturbance in the city of Timmins, Ontario, that an official of the Canadian Government was called at home and asked to muster a team of scientists for an immediate investigation.

"The lightning was bluish white and made a pattern on the oscilloscopes nobody had ever seen before."

"It began at 7:30 PM as a few small needles of light, building up until 10:30 PM into great flaring fireworks which blazed for another hour and then died away. Even those who did not see it heard it on FM radio, normally free of noise, and on television,

1. EVENING STANDARD, LONDON, ENGLAND p. 15 April 13, 1977, by Jeremy Campbell. "Are the Russians changing our weather?"

the lighting^{effects} sounded like bursts of machine gun fire each about eight seconds long.

"That night in Timmins seems to represent some kind of climax or finale", said Watson W. Scott, Director of Operations at the Canadian Department of Communications in Ottawa. "Last summer the Russians were like a bull in a china shop, all over the place as if they hardly knew what they were doing. Now it looks very much as if they are accomplishing whatever it is they set out to accomplish."

And what had the Soviets accomplished? No one yet knows for sure. But there are some clues. Just before the great earthquake of July 28, 1976 that levelled Tangshan, China and killed over 650,000 people it is known that the Soviet Behemoth transmitter was in operation. "Just before the first tremor (at Tangshan) at 3:42 AM the sky lit up 'like daylight'. The multi-hued lights, mainly white and red, were seen up to 200 miles away. Leaves on many trees were burned to a crisp and growing vegetables were scorched on one side as if by a fireball. The shock itself came with terrific suddenness."¹

It is also known from private reports that I have had from observers on the scene that all radio reception (AM and FM) in the Tangshan area was disrupted by either static or total blackout for many hours after the earthquake struck. The first full report

1. New York Times, June 5, 1977 p. 18.

of what happened at Tangshan was not released by the Chinese until 10 months after the event, and we quote this report in some detail from the New York Times, June 2, 1977 in a dispatch from Tokyo by Andrew K. Malcom.

"In a highly unusual display of official candor, Chinese authorities have described last summer's giant Tangshan earthquake as the most deadly in China in more than four centuries."

"The officials said that the July 28 quakes, the full details of which have been shrouded in secrecy, threw some residents of Tangshan City six feet in the air and carved a swath of devastation four miles wide and five miles long through the heart of that heavily populated metropolis. Tangshan is a major Chinese industrial and coal-producing area 100 miles from Peking."

"These and other new details of the disaster there emerged after dozens of briefings given by the Chinese to Cinna and Larissa Lomnitz a husband-wife research team from the National University of Mexico in Mexico City. They were interviewed here after their departure from China, where they had gone with their daughter Tania on what they all thought would be a routine two-week seismological research trip."

"Soon after their arrival on May 16, it became obvious that China had selected them as the bearers to the world of the first official description, albeit a partial one, of the Tangshan disaster. 'Naturally, we got very excited,' said the 52-year old Mr. Lomnitz."

"But the Lomnitzes' schedule, as detailed by Kou Wen Chue, director of the Seismological Division of the State Seismological Bureau in Peking, began with several days of briefings about the quake, including ^aseries of meetings with seismological experts from Tangshan's Hopei Province, who experienced the tremor and took part in rescue work. The Mexican couple were told they were being given previously secret information as a courtesy to fellow members of the undeveloped third world."

"The Lomnitzes were not permitted to visit Tangshan, formerly a city of about one million about 100 miles southeast of Peking, nor were they given casualty figures, which are regarded in China as matters of national security."

"But scores of disaster descriptions, parts of photos, the data presented and repeated references to the tremor's vast devastation prompted Mr. Lomnitz to suggest that the Tangshan quake must have produced more casualties than any other shock since 830,000 people died in China's Huasien County earthquake in 1556, the most deadly earthquake in recorded history."

"Yes, the Mexican was told in China's acknowledgement of a vast death toll, he was correct. It makes the Tangshan shock, which registered between 7.8 and 8.2 on the Richter scale, officially far worse than the 1923 Tokyo earthquake in which 140,000 perished and the 1920 tremor in China that saw 200,000 die. A Richter reading over 7 indicates a major disaster, and in a populated area, major loss of human life."

"The Chinese never mentioned a specific death toll and Mr. Lomnitz never asked for one. 'I fear it will be a long time until they say,' he said."

"But neither did the officials seize upon numerous opportunities to minimize the death total or to deny previous published estimates that there had been at least 655,000 fatalities in seconds on that humid July night."

"Just before the first tremor last summer at 3:42 a.m., the sky over Tangshan lit up 'like daylight,' waking thousands who thought their room lights had been turned on. The multi-hued lights, mainly white and red, were seen up to 200 miles away."

"Half a mile from the fault line, which ran north-northeast and south-southwest, one field of corn the size of an airport, was knocked over, in the same direction, as though by some giant wind. Leaves on many nearby trees were burned to a crisp and growing vegetables were scorched on one side as if by a fireball."

"The powerful subterranean movement wrenched the surface earth several feet apart in some places, moving pieces of fence, for instance, up to 1.53 meters -- about 1 1/2 yards--out of line. The initial shock was a right lateral movement and the strongest aftershock was left lateral."

"The earthquake shock itself came with terrific suddenness. One man described it as a 'huge jolt from below' that threw many people up against the ceiling. In Tangshan, which lay directly over the epicenter, people clinging to trees or posts were swung around by the swaying earth. Thousands of structures collapsed simultaneously 'as if they were made of cards,' a survivor said."

"Thousands of sinkholes, shaped like bomb craters, appeared throughout the Tangshan area. Trees were snapped off or uprooted. Railroad tracks became tangled wreckage. Rockslides were numerous, including one downtown^{at} Tangshan City's Fong Huang Hill."

"Fires broke out. 'People in China,' said Mr. Lomnitz, 'are still obviously very shaken up.'"

"The Lomnitzes were particularly impressed with China's efforts on earthquake studies and predictions. 'There's no doubt the Chinese are predicting earthquakes,' Mr. Lomnitz said. 'The West has a lot to learn. The Chinese missed on the last one, but they realize the rapidly increasing hazards of earthquakes in a modern world with an increasing populace and increasing economic investments of power lines, factories, irrigation works and nuclear power plants.'"

"The risk of catastrophe is growing. But the Chinese are first to admit the art of prediction is as yet a very primitive one. They say, 'We don't understand what happens before an earthquake, but we have to try to use everything.'"

"Thus, a vast nationwide network of professional and amateur observation stations monitor earth movements, magnetic fields, subsoil pressures, electrical resistance of rocks, changes in ground water tables and well levels as well as strange animal behavior, such as unusual commotion and fighting among farm animals, or the sudden hibernation of snakes and bears."

"They kind of play down the animal studies,' Mr. Lomnitz said, 'but the fact is before every earthquake there is some unusual animal behavior. Unfortunately, not all unusual animal behavior precedes an earthquake.'"

"In January 1976, a quake prediction was made for either the Peking-Tientsin area or the Tangshan area. But an imminent-earthquake warning was never issued, the Chinese said, because there were none of the unusual smaller foreshocks and other indicators gave ambiguous readings."

"One station near Tangshan showed a drop in electrical sensitivity shortly before the quake, but most other stations registered no change. And unusual behavior among 33 species of animals occurred so close to the quake that there was not enough time to react."

"Lightning-like flashes have been reported in other earthquakes, including the one that did extensive damage to Haichen in southern Manchuria on February 4, 1975. "

"Witnesses told of a brilliant light above the focal point of the quake. It was apparently observed at the moment of the tremor, rather than before it."

"Changes in naturally occurring currents within the earth, as well as in the earth's local magnetism, have been reported before quakes and have been used by the Chinese to issue warnings. The intensities were very weak."

Besides the clear sky lighting effect, it is important to note that a disturbance of animal behavior has been observed before the Tangshan, and other earthquakes. A few days after the Soviet emissions were loosed on the world, one of the first signs of the effects of this signal were noted on marine life in the New York area. The following facts were reported in the New York Times, July 8, 1976:

"Commercial fishermen have discovered a huge fish kill off New Jersey in an area at least 55 miles long and 30 miles wide just south of the controversial sewage sludge dump off New York Harbor."

"The dead fish have been discovered on the bottom of the ocean by fishermen who drag their nets and by scuba divers who have examined shipwrecks."

"The area is from Sandy Hook to Barnegat Inlet, about 55 miles down the Jersey Shore."

"An official of the Sandy Hook laboratories of the National Marine Fisheries Service said that if the kill was as large as fishermen had described it, it would be the biggest kill in the area since 1968."

"I went out to a shipwreck, and it was completely dead, starfish, eels, lobster, all sizes of crab--everything was dead," said Pat Yanatan, a microbiologist who is environmental committeeman for the Eastern Diveboat Association."

"Mr. Yanatan and others who have observed the kill say the ocean is befouled by yellowish brown water below the thermocline--the layer of water between the warmer surface zone and the colder deep-water zone."

"David Bulloch, president of the Sandy Hook-based American Littoral Society, said that he and many of the fishermen in the area believed the sewage sludge dump to be the cause of the polluted condition."

"But Commander R. Lawrence Swanson, who heads the New York Bight project of the Federal Marine Ecosystems Analysis program, said: 'At this time I don't see anything that is indicative that sewage sludge is the cause of this problem.'"

"Commander Swanson also believes that the sludge dump played little or no part in the pollution wave that befouled 70 miles of Long Island's beaches two weeks ago."

"He added that water tests last week of the affected area off Jersey indicated that 'the oxygen values were below 1 mililiter per litre,' which he said was less than the minimum of oxygen for ocean life to survive."

"Nobody 'can remember anything like this,' Mr. Yanatan said of the kill. 'For 15 years, the water quality has been getting progressively worse,' he added."

This effect of the Soviet emissions on Marine life in the New York area is debatable because of the low oxygen content of the water, and the presence of sludge. But our next finding is more telling because it occurred in very clean ocean waters, and coincided with the heavy Soviet emissions preceding the Tangshan earthquake of July 28, 1976. This report is from the New York Times of Tuesday, July 27, 1976, with the headline, "Experts are Puzzled by a New Beaching of Whales."

"As a lighthouse crew in the Dry Tortugas fought to save some of the 30 beached pilot whales today, experts were puzzling over why, after four years without such beachings, three groups of deep water mammal have stranded themselves ashore in two weeks."

"The latest stranding was thought to involve pilot whales, a variety of porpoise. The creatures trapped themselves in three to six feet of water yesterday on Loggerhead Key, a tiny island in the Dry Tortuga chain about 70 miles west of Key West, officials said."

"Coast Guard officials said that communications with the lighthouse were difficult and it was not known how many of the animals were still alive. Lighthouse workers were reported to be spraying the mammals with water to keep their skins from drying."

"Last Thursday, five animals thought to be pilot whales but later identified as false killer whales beached themselves near Fort Myers, about 150 miles northeast of the Dry Tortugas."

"Earlier this month, 25 spinner dolphin died in a mass beaching near Sarasota, about 50 miles north of Fort Myers on the Gulf Coast."

"One of the false killer whales died, and the four others were reported in guarded condition at an aquarium today."

The reason the effects on dolphins, porposes and whales are so important is that they are sensitive to very, very small electric and magnetic pulsations--especially in a sea salt environment--and their only escape is to get out of the water. What these mammals of the sea were experiencing can be surmised from similar effects of the Soviet emissions observed on human beings. I quote extensively from the London Sunday Mirror for July 19, 1977 and July 26, 1977:

The headline states: "Have You Heard the Hum?"

"A mystery hum is tormenting hundreds of people in Britain. Scientists are baffled by the nagging, low-frequency noise."

"Some victims are said to have been driven to suicide by the strange sound, and there have been complaints from people living in London, Bournemouth, Cardiff, Blackpool, Ipswich and Paisley, near Glasgow."

The hum is usually described as sounding like an idling deisel engine or a pump and it is thought that thousands of people may have heard the noise without bothering to report it."

"But in spite of the complaints and pressure from MPs, the Department of the Environment has rejected calls for an official investigation."

"Complaints to the department have been redirected to local health authorities."

"What is thought to be the cause of the hum?" Some sufferers blame the telephone system. Others accuse aircraft radar."

"North Sea gas and oil rigs are considered possible sources."

"One group of sufferers thinks the noise 'comes from abroad.'"

"The most incredible theory is that the hum is transmitted by a Spaceship circling the earth."

"Scientists are sure about one thing, though. The hum is NOT connected with sonic booms or jet noise."

"One scientists has now stepped forward to try and solve the mystery--Dr. Geoffrey Leventhall, head of the acoustics group at Chelsea College, University of London."

"He is convinced that the victims--many of whom he has visited--are certainly not cranks."

"Dr. Leventhall says: 'Definitely, something very odd is going on.'"

"We have picked up a low-frequency sound with a sensitive microphone."

"It was so amplified so that we could reproduce it in the laboratory."

"It is not unlike the sensation you might experience from a ship's engines--though on a reduced scale."

"Dr. Leventhall said the sound could be due to fluctuations in the atmosphere, such as air turbulence."

"If it is that, there is nothing we can do,' he said. 'But we need to do a lot of work to track down this phenomenon. I have applied for a Science Research Council grant to enable me to make a proper, long-term study.'"

"One of the hum victims, 64 year old Mr. Paul Wallace, is compiling a register of fellow-sufferers."

"He has more than two hundred names so far and claims that three people have been driven to suicide because they could not endure the sound."

"Mr. Wallace, a translator, of Bournemouth, Dorset, said. 'I cooperated in some work at Southampton University two years ago and a report was sent to the Department of the Environment, but they took no action."

"Another victim is mother-of-three, Mrs. Maisie Gatward, who looks after handicapped children."

"She is even more distressed because her daughter, Debra, 14, is now also affected."

"Mrs. Gatward said at her home in Windmill Lane, Greenford, Middlesex: 'The noise is terrible."

"At times, I have had to run out of the house because of it."

"Said Mrs. Gatward's daughter Debra: 'I first noticed this low humming sound when I was eleven. Since then, it has been there nearly all the time."

"I am studying for my O-levels, but sometimes I just can't concentrate on my work. I often get a headache."

"Dr. Leventhall has interviewed the Gatwards. 'Mrs. Gatward is anything but neurotic,' he said."

"She is a well-adjusted and sensible woman."

"Two more victims of the hum are Dr. Chris Gilford, who retired recently as an acoustics expert at Birmingham's Aston University, and his wife, Phyllis."

"I have done some investigating, but the results are puzzling,' said Dr. Gilford."

"My wife can hear the noise persistently and clearly. It is affecting her whole life."

"Mr. Ralph Scott, a senior environmental officer with Ealing Council, Middlesex, has the names of sixty victims of the hum filed in his office."

"He has carried out tests in their homes, using a special tape-recorder."

"Dr. Leventhall believes people in other countries may also be hum victims and there is support for his view from the Environment Department."

"A spokesman said, 'We are aware of the problem and of research by universities both here and in America. The Noise Advisory Council has also contacted us, but we do not feel that a research project would be justified.'"

The Sunday Mirror for June 26, 1977 headlined: "Hounded by this Nagging Noise Hum!"

"We asked a straight question last week: Have you heard the HUM?" Hundreds of readers wrote to tell us how The Hum has:

"Ruined their health, driven them to thoughts of suicide, forced them to sell up and move and defied all efforts to trace the source."

"This astonishing response to our report, describing a low-frequency noise--rather like a distant diesel engine idling--makes two things clear."

"Something odd is going on, and scientists are baffled. Many of the 500 letters expressed their gratitude to the Sunday Mirror for airing a problem they thought was 'peculiar' to them."

"Scores of sufferers told how they had walked the streets or driven around at night, desperately trying to locate the source

of this nagging noise."

"Victims have called in gas and electricity inspectors, nuclear energy officials, noise pollution officers and acoustics experts."

"At least four universities--London, Oxford, Southampton, and Yale in America--have been involved in experiments. All, apparently, without success. But the Environment Department, as was reported last week, has so far refused to launch a major investigation. All inquiries have been referred to local health authorities."

"Dr. Geoffrey Leventhall, head of the acoustics group at Chelsea College, University of London, who is investigating some cases, has been refused a Science Research Council grant to finance a long-term study."

"He said yesterday: 'They don't seem to consider the subject important enough.'"

"But there must be an answer somewhere, and only a proper, scientific programme might find it."

Now the reader may well ask--how can the Soviet emissions affect the behavior of animal and man? The answer is very simple. The Soviet emissions are basically broad band electromagnetic waves that are pulsed into the earth over the repetition rate from 4 to 15 pulses per second. It is this extra low-frequency pulsing of the radio emissions into the earth that produces a weak magnetic field that affects animals and man. One of the top experts in the world on this subject is Dr. W. Ross Adey, and I quote his opinion on this subject from The Washington Post, May 29, 1974.

"Very weak electrical fields generated by the machinery and power lines surrounding us may be subtly affecting our brains and

influencing our behavior, according to a University of California at Los Angeles scientist."

"Dr. W. Ross Adey of the UCLA School of Medicine said the fields have to be of a certain strength and at particular frequencies to cause this effect. Stronger fields at higher frequencies do not seem to produce any behavior changes." (*my italics*).

"Adey, along with Drs. Rochelle Medici, Suzanne Bawin and L.K. Laczmarek, has been studying electrical fields at frequencies between 2 and 15 hertz (cycles per second)."

"The frequencies between 2 and 15 hertz also occur naturally in the brain. In biofeedback training, for example, subjects are taught to recognize their own natural 8 hertz 'alpha rhythm' and then consciously focus on this wave to produce feelings of serenity or calmness."

"But not all frequencies are conducive to peace of mind. When test monkeys were exposed to weak electrical fields at 7 hertz, Adey said, they increased their estimate of the passage of time. Instead of performing a task every five seconds, as they had been trained to do with some precision to win a food pellet, the animals did the task every 4 seconds under the influence of electrical fields."

"Whether humans respond in exactly the same way is not known for certain, Adey said, but similar tests conducted in Germany in the mid-1960's with human volunteers suggest that there is some affect. Some of the human subjects reported that their circadian rhythm--their 24 hour 'biological clocks'--were reset to as much as 35 hours as a result of the tests."

"As weak as they are,' Adey said, 'the artificial fields seem to exert their influence by entrainment--that is, coupling their bit of energy to that normally present in the functioning brain. In some instances, the artificial and natural frequencies appear to add together to heighten brain activity; in others, they may cancel each other out and depress brain cell workings.'"

"Adey and his group also have explored the biochemistry of the brain (using experimental cats) under the influence of weak fields and found that changes do occur. The process is complicated, he said, but involves changes in the distribution of electrical charges on the surface of the brain cells."

"The research to date raises the question of whether we have a potential means of modifying behavior,' Adey said. 'This is purely speculative on my part!'"

Another powerful behavioral modifier is the status of the air we breathe. For example, if our breathing air has a decrease in the amount of electrical charge (less electrons) - this causes *one* to get fatigued and depressed. If the same air has more electrical charge (more electrons) *the* mood is elevated and we become stimulated, activated, and even excited. One of the *powerful* mechanisms in nature that *increases* electronic charge in the air is lightning. *Lightning* bolts ionize (light up) the air, and besides *increasing* electron charge - also produce most of the extra - low frequency (ELF) waves on the planet earth. Normally,

these mechanisms are well-balanced and safe for living things. However, unusually high voltages between the ground and clouds, i.e. over 100,000,000 volts, also produce ozone. Ozone is ^{made up of} _^ three atoms of oxygen - written as O_3 . Ozone in weak concentrations (0.5 parts per million) has a stimulating effect on mood and behaviour. When ozone increases above 1 part per million - it becomes a dangerous gas.

Now one of the effects observed from the Soviet ELF emissions has been large scale lighting up of the sky. This produces large amounts of ozone. The World Meteorological Organization (WMO) maintains a Global Ozone Research and Monitoring Project which measures ozone concentrations at some 80 points on earth. At the Point Barrow, Alaska Station there was observed a significant increase in ozone concentration during the winter of 1976-77 when the Soviet emissions were high. In the normal course of events this perturbation in ozone level would have gone unnoticed. But Canadian Scientists, monitoring the Soviet emissions did take note of the event. There are also airline flights that traverse this region on routine flights from the mainland U.S. to Tokyo. I quote the experience of airline personnel from The Wall Street Journal for May 5, 1977, under the headline "A NEW DANGER ALOFT FOR AIR TRAVELERS: OZONE-GAS SICKNESS."

"New York - Airline crew members and passengers may face a new hazard: ozone sickness, which has apparently struck hundreds of persons during recent flights.

"Ozone gas is in a layer of the earth's atmosphere; normally it has been far too high to cause any problems for airline trips. But now it has apparently been causing illness because airplanes are flying higher to conserve fuel and because the ozone itself has dipped closer to earth.

"Whether low doses of ozone cause any long-term effects isn't known, doctors say. But in the short run enough ozone in the air can trigger a racking cough that may last for hours, severe shortness of breath, headaches, fatigue, eye irritations and sometimes bloody noses. Describing one recent flight, a Pan American World Airways stewardess says, 'Almost everybody in the cabin was coughing and wheezing - the place looked like a tuberculosis sanitarium.'

"When the ozone sickness first struck, apparently a few months ago, no one knew what it was. The symptoms, however, are setting off myriad repercussions."

"The normal oxygen molecule consists of two oxygen atoms while the ozone molecule consists of three. The airline ozone problem isn't restricted to a particular type of aircraft. United Airlines, for example, says scores of people on 35 of its coast-to-coast

flights have been hit by the ozone sickness. The flights were in Boeing 747 jumbo jets and McDonnell Douglas DC8s and DC10s."

"Many recent cases of the illness, however, appear to be on board Pan Am flights from New York, San Francisco and Los Angeles to Tokyo. These flights use the Boeing 747 SP (the initials stand for 'special purpose')."

"Last year, when Pan Am became the first airline in the world to introduce the SP on its routes, stewardesses were the first to begin complaining."

"The stewardesses themselves weren't sure what was happening."

"But the number of complaints began rising - and in strange ways. 'People seemed to have trouble going out to Tokyo, but not coming back,' Mr. Waltrip of Pan Am says. 'We couldn't figure it out.' "

"In January, however, the complaints skyrocketed. 'Previously we were having trouble on six to nine flights a month, but beginning in January it went to 12 to 18 flights a month,' Pan Am's Mr. Waltrip says. As Mr. Lindner of the transport union puts it: 'At the start of January, all hell broke loose; over a period of months we've gotten hundreds of complaints.'"

"Flights to Tokyo were affected more than return trips because westbound flights, due to adverse winds, fly even higher than eastbound flights. Westbound flights also fly closer to the North Pole; ozone is closer to the earth at the North Pole than it is farther south."

"Airlines stepped up their air samplings, and this time they included a measurement for ozone. Even before the airlines' problem had cropped up, the Occupational Safety and Health Administration had been proposing that industrial workers not be exposed to ozone concentrations during an eight-hour period averaging higher than 0.1 part per million. According to Pan Am, its measurements soared up to 0.6 part per million."

"United added: 'Airlines have flown upward of 100 million hours on jet aircraft since they were introduced in 1959, and this is the first time something of this nature has been reported.'"

"The Concorde supersonic transport, which cruises at up to 60,000 feet, hasn't run into any ozone problems."

"The reason, says an official of British Aircraft Corp., which helped build the plane, is that the Concorde was designed from the start to eliminate the ozone problem. The Concorde achieves this by bringing air into the cabin from a very hot stage of the engine's compressors. The heat breaks the ozone down."

"But there is still concern. Ozone in high concentrations is widely used in the chemical industry, and doctors know that at extremely high concentrations - say 10 parts per million, or 100 times the OSHA recommended level - ozone can cause swelling in the lungs, bleeding and death. There are also studies, mostly in animals, suggesting that even at low concentrations, ozone might cause serious cellular damage. But long-term studies in man are

few. 'Little is known about chronic exposure to very low concentrations such as might be expected to occur in air crews flying frequently as high altitudes,' says Siegfried Gerathewohl, chief of research planning at the FAA's office of aviation medicine."

These same causes which produced excess ozone from Alaska to Southern California ^{(forced} a northward swing of the Jet Stream, under the influence of the Soviet emissions, over the Pacific Ocean) are behind the two year drought in this region, and generate high voltages in the atmosphere with excessive heat lightning.¹ I quote the net result in this area from Time, August 22, 1977, under the headline:

"FOREST INFERNO IN THE WEST."

"In the vast tundras of Alaska and in the timberlands and national parks of California, Oregon, Arizona and Utah, forest fires have devoured huge swaths of magnificent territory. Most of the blazes have been started by heat lightning, and many are still out of control. Alaska has lost 1.6 million acres, or 2,500 sq. mi., in the worst destruction since 1971. California, the most scorched after Alaska, has lost more than 288,000 acres, despite the deployment of 10,000 fire fighters."

Not only was there an excess of ozone, drought, forest fires, and the HUM on land, but the same Soviet emissions, in a way not yet known, cause dangerous oxygen dissociation in the water, possibly into hydrogen peroxide. The effects on sea life, as

1. See Appendix I, p.3.

we reported earlier for the last two weeks of July 1976 - continued elsewhere on other species.

On December 11, 1976 The New York Times reported, "MILLIONS OF DEAD SQUID ON CAPE COD BEACHES A PUZZLE TO BIOLOGISTS"

"Eastham, Mass., Dec. 11 (AP). - Biologists are trying to figure out why millions of squid have come ashore on Cape Cod beaches since mid-October, where they have died in the freezing air."

"'Some days there are so many of them on the beach that it's impossible to walk without stepping on them,' said Robert Prescott of the Cape Cod Museum of Natural History."

"If rescued and thrown alive back into the sea, the long-tentacled squid immediately come back ashore."

"The squid, some of them two feet long, ride the waves onto the beaches. Then they push themselves above the water's reach by squirting water through the jets they use for propulsion, and wiggle on the sand until they die or are killed by hungry birds."

"Various theories have emerged to explain the apparent mass suicide. One is that it has been caused by decimation of schools of fish, squid's natural enemies, by foreign fishing fleets."

"In Cambridge, the Center for Short-Lived Phenomena has also noted that squid are much more plentiful than usual in the waters off Cape Cod. It said that commercial fishermen have caught up to 11,000 pounds of squid in two hours. Ordinarily they would bring in 10 to 20 pounds."

A headline from The New York Times, Feb. 8, 1977 states:
"PILOT WHALES BEACH THEMSELVES AND DIE." This occurred at Fort George Island beach at Mayport, Florida. About 100 whales died by beaching themselves.

In The Gulf of Mexico, June 3, 1977 at Corpus Christi, Texas - Thousands of sharks converged near the shore and swam in aimless circles. On June 5, 1977 The New York Times reported that "Sharks at Gulf Coast Island Vanish as Mysteriously as They Arrived." In the same area, on July 30, 1977 thousands of dead fish were mysteriously washed up on the shore of the ship channel in Corpus Christi. Authorities believed there was an oxygen depletion in the water.

During the winter of 1976-77 my colleagues in Canada and I were made aware of another effect. A government official, Andrew Michrowski noted that when the Soviet emissions were pulsing his area at 6 pulses per second, he was getting severe headaches. He reported this to a member of The Royal Canadian Mounted Police, Counter-intelligence Group. This mountie waited for the next major set of Soviet emissions at 6 pulses per second which occurred *one day* between 2:30 PM and 4 PM local time in Ottawa. He then interviewed 46 mounties in his office unit, and asked them what they had experienced between 2:30 and 4:00 PM on the previous day? Forty out of forty-six mounties reported headaches severe enough to be noticeable. When I received this news in late February 1977, I

within this frequency range, the TMT can be used to produce the following effects:

- (a) Transmit large amounts of electrical power (without wires).
- (b) Modify those electrical, ionic, and weather motion effects in the atmosphere, stratosphere, and ionosphere which control weather.
- (c) Serve as a motion detector for objects moving below the surface of the sea, on the sea, on land, and in the air.
- (d) Cause "controlled earthquakes".

These four basic effects were adequately described by Tesla as early as 1900 in a series of U.S. Patents, and articles.

All the data cited thus far, and the interpretation of this data is rather straightforward, and would not present any truly novel idea of surprise for the sophisticated scientist. But there is one application of the TMT that was not, to the best of our knowledge, described by Tesla. This is the possibility that the fundamental Tesla frequency (6.67 - 7.83 Hz) can act on the human brain in such a way as to influence behaviour through mind control. In order to test out this possibility Puharich and Beck undertook to carry out experiments on sophisticated humans with the following results:

- (a) The magnetic pulse of the earth was monitored by means of a tuned magnetic coil, and it was found that the earth "beats" with a steady ^{or intermittent} sine wave with a power peak at the upper end of the Tesla frequency, ca, 8 Hz.

THE NEW YORK TIMES, WEDNESDAY, JULY 27, 1977

Con Ed's Explanation

1 8:37:17

Lightning strikes two 345,000-volt lines, knocking out both. Indian Point 3 nuclear power plant is cut off from system.

2 8:55:53

Lightning strikes two more 345,000-volt lines, knocking out one. The other is restored automatically.

3 8:55:53+

Fifth 345,000-volt line short-circuits for reasons not established.

4 9:19:11

The Leeds-Pleasant Valley 345,000-volt line short-circuits for reasons not established.

5 9:19:53

Pleasant Valley equipment, now overloaded, shuts itself off automatically.

6 9:22:11

New York Power Pool directs LILCO to cut off its overloaded 138,000-volt line to Con Ed's system.

7 9:22:47

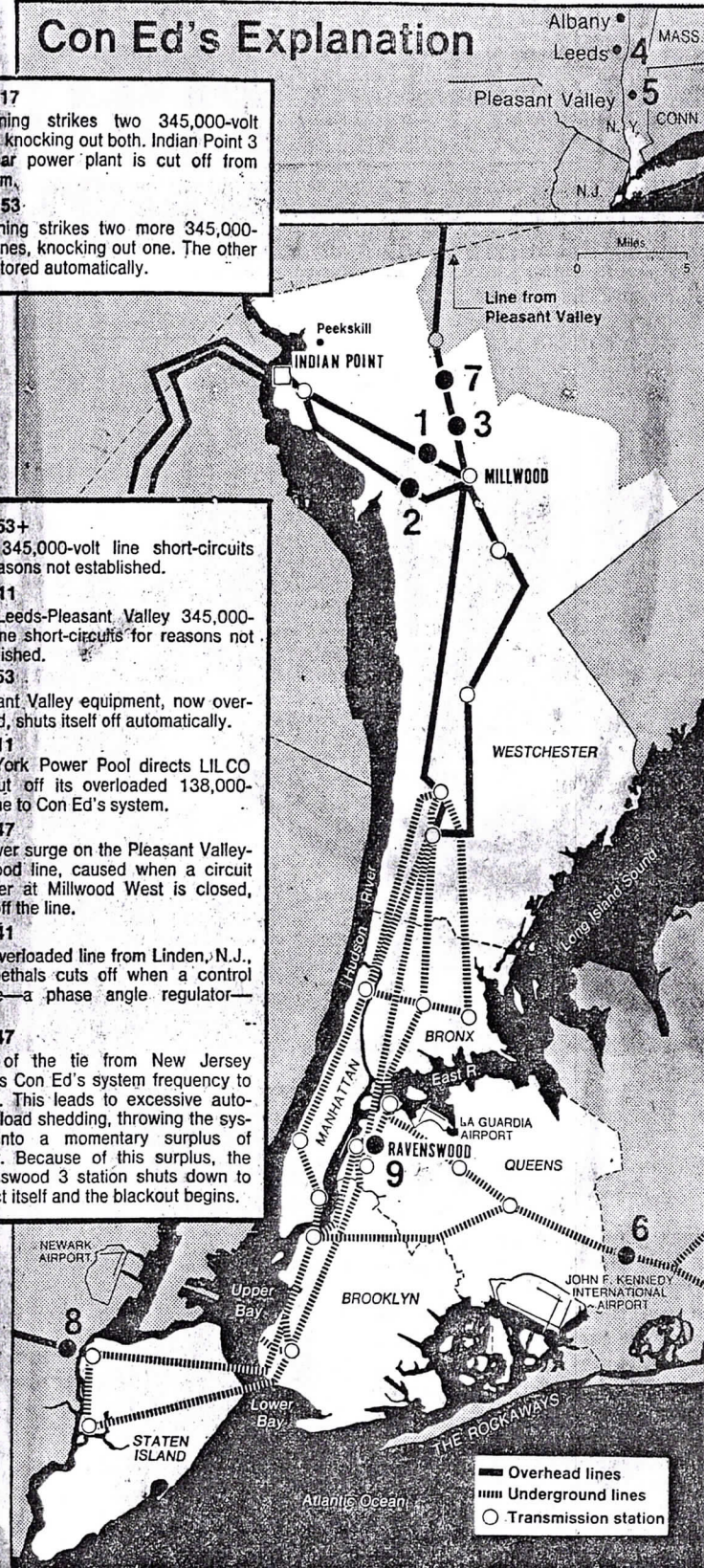
A power surge on the Pleasant Valley-Millwood line, caused when a circuit breaker at Millwood West is closed, cuts off the line.

8 9:29:41

The overloaded line from Linden, N.J., to Goethals cuts off when a control device—a phase angle regulator—fails.

9 9:29:47

Loss of the tie from New Jersey causes Con Ed's system frequency to waver. This leads to excessive automatic load shedding, throwing the system into a momentary surplus of power. Because of this surplus, the Ravenswood 3 station shuts down to protect itself and the blackout begins.



The New York Times/July 27, 1977

during the lateafternoon Wednesday it moved south and intensified. I was at home that evening in the area covered by the number (2). I watched the storm approach shortly after 8:00 PM. It was a high windstorm that created many small whirlpools of air damaging many trees. The sky was filled with repeated flashes of heat lightning with much rumbling of thunder - but no rain fell. I idly wondered if the Soviets were on the air, and turned on my short wave radio - sure enough the steady staccato of the Soviet behemoth was there. I switched off the radio, and went back to watching the strange storm as it repeatedly flashed lightning across the sky. At about 8:45 PM my electric lights went out. But I didn't really pay too much attention to this event, because my stand-by electric generator automatically cut in, and I was with electricity in a minute. But this event prompted me to turn on a radio and listen to a continuous-news station. Before long I learned that "lightning" had knocked out the power lines marked (1) and (2) on the map, and that a large portion of my county - Westchester - was without electricity. The map also shows the sequence from (1) to (9) in which the power system serving the New York City area was disabled. By 9:36 PM the entire system was shutdown - and the Great New York City Blackout of 1977 was on in full force. There is no need to reiterate what happened on that night of terror, but a few headlines will suffice to recreate the drama. The unique thing about this blackout was that within

minutes after 9:36 PM, thousands, then hundreds of thousands of people from all of the Boroughs of New York went on a pillage rampage. I quote from the Daily News, Friday, July 15, 1977; the headline said:

"LIGHTS GO ON, END NIGHTMARE"

"3,400 Jailed, 558 Cops hurt in

25 Hours of Terror"

"The Great Blackout of 1977 ended late last night after 25 hours that saw the city racked by arson and looting in a night and day of 'terror.'"

"The awakening from the total power blackout left many streets littered with ugly debris, and a strange, groggy day of empty skyscrapers and locked stores and hushed subways and streets without traffic lights, and buildings that were burning for no sensible reason.

"It was quite a night and a day for New York City, and before it was over:

10 million people had been without electrical power for varying periods of time.

6,000 commuters had been stranded in subway and commuter trains.

More than 3,400 persons had been arrested for looting and related charges.

558 cops had been injured in battling looters.

Firemen had responded to 2,225 alarms involving 851 fires, more than 50 of them classified as 'serious'; 38 firemen were injured and there were two civilian deaths."

'And untold millions of dollars in revenues were lost in the virtual shutdown of the city's business community."

"The goal of all the investigations will be to determine exactly how it was that the world's greatest city was plunged into darkness for the second time in 12 years - and only four days after Con Ed Chairman Charles Luce had said: 'I can guarantee that the chances of a brownout or a blackout are less than they have been in the last 15 years, and that the chances are less here than in most other cities in the United States.'"

"No matter how well-prepared the utility was, it was not ready for what Luce yesterday called 'an act of God.'"

"In an afternoon press conference, Luce said there has been three separate lightning strikes in northern Westchester County that had found Con Ed's Achilles heel."

"As in the blackout of 1965, there were countless acts of supercivilization. Civilians found flashlights and directed traffic, people rescued other people from stalled subway trains and elevators, hotels and restaurants opened their doors and made room for sojourners to sleep and doctors in darkened hospitals

performed heroic emergency surgery by the dim glow of automobile headlamps and flashlights.

"But if the darkness brought out the best in some, it brought out the worst in others. Looters roved in bands through many parts of the city, breaking into stores and helping themselves to merchandise. Even when police began to arrive, the looting continued - in some cases police were routed by looters who pelted them with objects thrown from the shadows."

In a press conference on 26 July, 1977, Mr. Arthur Hauspurg, president and chief operation officer of the utility, Con Edison summarized his investigation of the causes of the Blackout. This is what he said,

"The major events that led to the blackout included a series of severe lightning strokes beginning shortly after 8:37 PM on July 13. The first of these short-circuited two of the 345,000 volt overhead transmission lines linking the Buchanan and Millwood substations in northern Westchester County, and interrupted a third 345,000 volt feeder connection to Orange & Rockland Utilities.

"Without these 'outlets' for power from the Power Authority of the State of New York's Indian Point 3 generating station, that generator shut down automatically. But some of that electric supply was replaced immediately with power from other generators on the Con Edison system, and some was supplied by heavier loadings on the tie lines that remained in service.

"About 18 and a half minutes later, Mr. Hauspurg noted, a second series of severe lightning strokes short-circuited two more 345,000 volt lines linking the Buchanan, Millwood and Sprain Brook substations. One of these was restored to service automatically, but the other could not be restored.

"At about the same time, a fifth 345,000 volt feeder -- between Millwood and Pleasant Valley substations -- opened automatically. The cause of this incident is among the items being investigated.

"With only one 345,000 volt tie to the north remaining in service, the 2,000,000 kilowatts of generation from outside the Con Edison system was redistributed to the remaining ties, causing sharp increases in their 'loadings.'

"Efforts were made to reduce the loadings -- or amounts of electricity each was carrying -- particularly on the line connection the Con Edison system with Public Service Electric & Gas between New Jersey and Staten Island. Those efforts were not successful, and at 9:14 PM, steps were taken to reduce voltage reduction. The purpose of these steps was to 'spread' the amount of electricity available to meet demand without actually interrupting service to any customers.

"At about 9:19 PM, Mr. Hauspurg said, the only remaining 345,000 volt transmission line linking the Con Edison system to other systems on the north short-circuited, further increasing the load on transmission lines from the east and west.

"Within a minute, lower-voltage links to the north opened automatically, and about 2 minutes later, the transmission link between Con Edison and the Long Island Lighting Company was opened by the latter company at the direction of the New York Power Pool.

"At 9:24 PM, with the only major transmission link -- to Public Service Electric & Gas -- severely overloaded, steps were taken to cut off service to Con Edison customers in outlying areas of Westchester, the Bronx, Queens and Brooklyn, in an effort to prevent more extensive interruption.

"Just before 9:30 PM, the link to Public Service Electric & Gas short-circuited, system frequency declined, and the automatic load-shedding equipment went into operation. Records investigated during phase one of the Con Edison study indicate that the supply deficiency amounted to 1,300,000 kilowatts, but that the automatic load-shedding devices cut off about 1,800,000 kilowatts of demand.

"This produced a supply surplus on the system, and frequency and voltage rose above the normal levels, causing Con Edison generating equipment to disconnect itself from the system to prevent damage. By 9:36 PM, the entire system shut down."

I sent one of my research assistants to this press conference. On my behalf, she asked him some crucial questions, and the interview went as follows:

"The Con Ed spokesman was Arthur Hauspurg, president and chief operating officer of the utility.

"He stated there had been \$10,000,000 damage to equipment, among these 3 or 4 transformers, that were lost.

"'Transformer that failed at Buchanan did not fail during shut-down. It failed during restoration attempt. We do not know the reason. It was energized. No indication that there was lightning then--no vandalism - no arson. This is one of the transformers that will have to be replaced.'"

"After the conference I went up to the dias and asked Mr. Hauspurg the following questions:

Solveig: You stated that the Buchanan transformer that failed - did not fail at shut-down, but at the time of the restoration attempt, about 10:30 PM when you energized it, and that at that time there was no lightning, no vandalism no arson...is that correct?

Mr. Hauspurg: 'Yes.'

Solveig: Why was the transformer destroyed then?

Mr. Hauspurg: We don't know. The cause is undetermined. We may never know. We energized for about a minute.

Solveig: But how could you put current into it when all power went out at 9:36 PM, and this was about 10:30 PM?

Mr. Hauspurg: You don't put current into a transformer. We energized it. But it was not energized on the low side. We don't know why it was destroyed. But it wasn't lightning. It could have been so many things---the switching, the---- the ---- We may never know."

Now I must explain why these questions were asked. About 10 p.m. when all the electric lights in my home REGION were off, and the storm had ceased, I went out to observe the beauty of the night sky unpolluted by electric lights. The sky had cleared following the rainless storm, and the stars were quite bright. I was at the north end of my house looking north toward the Indian Point Nuclear Power Plant shown on the map. I already knew from the radio reports that all of the "lightning" strikes had been within a few miles of my home, and that the Indian Point Nuclear Plant had been shut down.

As I quietly stood there wrapped in a deep meditative state, drinking up the starlight, the sky ahead of me lit up with an expanding dome of eerie greenish-blue light. It was ^{about} 10:30 p.m. I was shocked into the thought that the nuclear power plant had blown-up and I would soon hear the shock wave. But no shock wave came as the sky remained lit for some 30 seconds. I immediately thought of the strange, eerie sky illuminations over Timmins, Ontario induced by the Soviet signal emission. Then the light collapsed, and it was dark, and it was quiet--even the crickets had been silenced. What had created this light? I returned to the radio. Soon a report came that a transformer had been struck by lightning in the area I had observed.

But I knew this was a lie because I had observed the area before, during, and after--and there was no lightning. The local paper, The Citizens Register, carried a number of eyewitness accounts of the sky illumination, *the next day, July 14.*

The headline read: "Blaze Lights up the Sky."

"I thought the world was coming to an end. It was an eerie feeling."

"I saw the flash and I said, 'Hey, come out here and watch the world end.'"

"These are just several responses Croton residents had today when asked if they saw the bright flash which lit the sky from Buchanan to Ossining at about 10:30 Wednesday night."

"Yes, I saw that. Strange. What was it anyway?' one man asked."

"According to Buchanan Pt. Edwin Meyer, Jr. a power transformer on Broadway, about a quarter-mile from the Indian Point nuclear generators, was struck by lightning approximately an hour after lightning struck a power plant in Rockland County, leaving the entire New York Metropolitan area without electricity."

"Unofficial reports were that oil to lubricate the generator caught fire and produced welding torch-like glow."

"From Croton, it looked like the entire Indian Point operation had blown up, but there was no sound. The sky turned red, then electric blue lasting for at least 30 seconds. One man standing near the Croton Fire Patrol station in Harmon said it looked like Mars."

"Croton Police Lt. Reginald Lambruschi said all power in the village was out at 9:29 p.m."

Point. Normally he doesn't pay any attention to planes overhead, but this sound was loud, very loud. Sound continued after light in sky went out. The sound seemed to be moving - as if it did come from a moving plane - sound seemed to come from West in direction of Indian Point.

"At 10:30 PM he heard a noise - but quite a different noise - as if it were a crack of lightning - momentary illumination of sky as with normal lightning - then total complete darkness - saw several flashes of light. This second illumination he later found out, occurred when the transformer exploded.

"Thursday July 21 -- I phoned the Con Ed Public Relations Dept. The woman who answered said "Which publication are you with? I said - none I am a private person - and my question is - "Why did the sky light up when the transformer in Buchanan was destroyed?"

"She answered, "We don't know. Some say it was a fire-ball - but the reason for the light in the sky is undetermined. Some say it was a fire-ball - some say it was our equipment that mal-functioned, but no one knows."

Black-out witness: John M Antonuk, 3 Feeney Road, Ossining, N.Y.

"He was at home when the lights went out at about 9:35 PM, July 13, 1977. He immediately put on his uniform - went out to the intersection of 134 and 9A and put up flares. He came back every half hour to check flares - so at about 10:30 PM at the intersection

of 134 and 9A he saw the sky light up - saw the whole range - from inception to end - duration 30 seconds. Looking NW above tree level - when he first noticed it - the light seemed to rise - it became like daylight - you could read a newspaper by its light. Light seemed to be diffracted by clouds - because light had like a curve to it, a dome. Colors were - white to a blue-white - duration 10 seconds -- next 10 seconds of a white eerie green - gradually to a pale red and then the whole light faded away.

"His first thought was: "Good grief Charlie Brown, what the hell was that?"

"He knew it was not lightning. The last lightning bolt happened 40 minutes prior.

"By the way this man is a remarkable witness - he is an artist - does layout and design - therefore has a keen eye for color."

I want the reader to be aware that Routes 9A and 134 intersection is just 1 block from where I viewed the same sky illumination.

Black-out witness: Mr. Peter Beatus.

"His home is in Croton...night of black-out was at home with wife -- lights went out at 9:24 PM (he knows exact time because electric clock stopped). He sets time according to short wave radio World Wide time out of Greenwich, ENGLAND.

"He put batteries in his transistor radio, and battery-operated TV, and listened to radio coverage of black-out as well as TV Channel 2. About 10:30 PM noticed a strange light from outside

flooding into room. Went outside with his wife onto their deck and looked at sky toward Indian Point. The entire sky was lit up like an aur_ora borealis - pale green tinted light - like daylight accompanied by strange HUM. First heard HUM when light flooded room while they were inside their house. When they went out onto their deck the HUM was much louder sounding. Sounded like a very low pitched electrical hum. He said it reminded him of when you pass by a relay station on the highway - the juice in the high tension lines - it sounded like that. He was not so surprised to see the light in the sky - BUT WAS VERY SURPRISED TO HEAR THE NOISE - THE HUM. They thought that INDIAN POINT had been hit.

"The light lasted for about 4 minutes - when the light ceased so did the strange HUM.

"His brother also lives in Croton just down the mountain and the brother phoned him (brother's wife was hysterical - was convinced that Indian Point nuclear reactor had blown up). The brother mentioned the strange HUM - they also heard it at the same sound level."

The local utility company, Con Edison, has issued three major reports on the events of the July 13th black-out. Their FIRST PHASE REPORT, SYSTEM BLACK-OUT AND SYSTEM RESTORATION, JULY 13-14, 1977, shows under Appendix A-1, a map of the electric system at Time: 20:37:17, July 13, 1977, Operation 1. In the upper left hand corner, the hatched square is Indian Point Nuclear Generator Station. The transformer that blew up at about 10:30 p.m. is shown just below this square as TA5.

TIME: 20:37:17

JULY 13, 1977 OPERATION 1

LEEDS 345 KV

ROSETON

TO ROCK TAVERN CHG & E

311

81 82

84 83

301

FDR

94 TO NEW SCOT.

93 TO NEW SCOT.

FROST BRIDGE CONN. L&P

FDR PLEASANT VALLEY 398

115 KV

CONN. TO CHG & E NIAGARA-MOHAWK NYS E & G

R61 NO. 1

R93932

CARMEL 99102

FDR 16

FDR 11

138 KV

MOHANSIC NYS E & G

MILLWOOD EAST 138 KV

96951

96952

9826

5E

6E

7E

3E

96961

W83

W84

W82

W81

W97

W98

W99

W93

W82

W64

W73

W89

W74

TO XMR NI AT DUNWOODIE NO. 138KV

TO XMR SI AT DUNWOODIE SQ. 138KV

SPRAIN BROOK 345KV

HUDSON 6-7

330KV

FARRAGUT

TO RAINEY

71

72

73

74

75

76

77

78

79

80

81

82

83

84

85

86

87

88

89

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100

TO E. 13TH ST. S/S LINE B3402 (TIE TO HUDSON PSE & G) % ASTORIA 6 %

KEY

- OPEN PRIOR TO FIRST OCCURRENCE
- LINE AFFECTED BY THIS OCCURRENCE
- CIRCUIT BREAKERS OPENED BY THIS OCCURRENCE
- EQUIPMENT OFF SYSTEM AS RESULTS OF PREVIOUS OCCURRENCE

OPERATION 1

20:37:17

Fault Phase B To Ground Close To
Millwood On Feeders W97 And W98

System Conditions

- (1) Generation Off: Indian Point #2, Bowline Point #2,
Astoria #6
- (2) Transmission Lines Out: Feeder B3402
- (3) Breakers Open: None

Sequence

Description

Zero +	Phase B to ground fault on feeders W97 and W98
Zero + 3 cycles	Feeder W98 opens auto at Buchanan (Breakers 3 and 5) Feeder W98 opens auto at Millwood (Breakers 16 and 18) Feeder W97 opens auto at Millwood (Breakers 10 and 12)
Zero + 4 cycles	Feeder W97 opens auto at Buchanan (Breakers 1 and 6) Feeder W96 transfer trip to Indian Point #3
Zero + 13-1/2 cycles	Feeder Y88 opens auto at Ladentown (Breakers 3 and 6)
Zero + 104 cycles	Feeder W97 (Breaker 12) recloses successfully at Millwood West

The page following the map, (p. 82) shows the sequence of events as the first two "lightning" bolts hit the system at Buchanan.

From the same report, we have the Con Edison statement under Section B-1, about the "sky illumination" event we have been describing for the past few pages. Their report on "Rapid Restoration Attempts" is reproduced on the following pages. All they have to say is in the last sentence "a fire was reported on the TA-5 transformer at Buchanan which was connected to the W93 feeder."

The heart of the entire mystery of the July 13th New York blackout lies in this one event, and yet all the experts overlooked it. Let me reconstruct for the reader what actually happened.

We know by subsequent world wide collection of data from radio amateurs that the Soviet behemoth was transmitting steadily for three days--July 11, July 12, and July 13 from the U.S.S.R. -- probably from the Gomel area. This means that the earth was being charged up electrically, and since the Soviet beam emission is about 42 miles wide when a standing wave of energy has been built up--it would manifest as a 'thunderstorm,' with 'heat lightning,' and general 'illumination of the sky' when a major electrical discharge occurred between the earth and the atmosphere. As the major electrical charge built up to a discharge with 'sky illumination' *effect*, humans and animals would 'hear' the 11 Hertz Hum.

All these events occurred in the period between 20:00 hours and 22:36 hours in the region of Buchanan, New York where the 'lightning strikes'(1) and(2) hit the Con Edison transmission lines. Now all these transmission towers and lines are protected from lightning hits

SECTION B-I
RAPID RESTORATION ATTEMPTS

Immediately following the system shutdown at 21:36 hours on July 13, 1977, the System Operator received and initiated a number of telephone calls to establish the condition of system equipment.

A rapid restoration without full sectionalizing of the system was attempted. Portions of Westchester and isolated parts of the city were connected together at this time.

Millwood West Feeders 80 and W81 were energized by closing circuit breakers at Pleasant Valley via the Energy Control Center remote control supervisory.

As each feeder was energized, the protective relays immediately opened the associated circuit breakers and deenergized the feeder.

Buchanan Feeder W93 was energized from Ramapo feeder Y94 by closing Circuit Breaker 9 at Buchanan via the Energy Control Center remote control supervisory. This supplied power into Sprain Brook Substation. Circuit Breaker 6 was closed at Buchanan and Orange & Rockland energized feeder Y88 from Ladentown to Millwood West via feeder W97 from Buchanan. Protective relays immediately opened the circuit breakers at Ladentown and deenergized feeder Y88. Protective relays on Buchanan feeder W93 operated and deenergized the feeder about the same time a fire was reported on the TA-5 transformer at Buchanan which was connected to the W93 feeder.

from above by two steel cables. The cables are so positioned that lightning from above will hit them first, and protect the power lines below. Since the artificial lightning generated by the Soviets is reversed in its direction from that of natural lightning-- the towers and transmission lines struck on July 13 were damaged from below.

However, the most significant event of all was the illumination of the sky when all of the electrical power was out of the system-- and *ultimately*, the attempt to 'energize' Buchanan Feeder W93 cannot account for the amount of electrical potential required to ionize the nitrogen of the air (which is about 100,000,000 volts between a cloud and ground). The standing wave generated by the Soviet transmitter is designed to reach these potentials.

The fact that the 'sky illumination' expanded from the ground upward in a dome-shaped form proves that the following sequence occurred. The transformer, TA 5, acted as an ELF energy receiver, and concentrated the ^{conduction of the} electrical potential between the ground and the air. This set up a conduction path very much as occurs in a lightning stroke. The electricity surged from ground through the transformer into the air with enough current (something of the order of 1000 amperes is required) to ionize the nitrogen and oxygen molecules of the air to glow in the colors actually observed. The hum occurred because the high potential was travelling through the ground and air (both sonic conductors) at the ELF value of 11 Hertz. The current and voltage surging through the receiver transformer overheated and overloaded it to the point where its 34,000 gallons of coolant oil exploded and burned. The explosion and burning was the final product (not the cause) of the sky illumination effect.

Thus we learn that the Soviet emission system is capable of "sensing" certain kinds of very large transformers which makes the entire electrical transmission system in "standing wave" areas subject to disruption. The combination of such electrical system disruption, blackout and 11 Hertz (or 11 pulses per second) entrainment of the brain electrical waves produces what in fact occurred in the New York City blackout--rioting, looting, arson, and other disruptive behavior.

It is possible to predict that the Soviet system can also be used to explosively ignite the atmosphere; stored combustible materials (oil, gas, grain, etc.), and underground deposits of inflammables. If the Soviets continue these reckless global experiments--some major unforeseen disaster could occur.

How did this incredible technological feat occur in the hands of the Soviet scientists--and why was the free world caught totally unaware of the awesome danger it ^{now} faces?

The answer is almost ludicrously simple. The Soviets simply copied and improved upon the ideas and inventions of Nikola Tesla, who fully articulated them to the world as early as 1899. Furthermore, Tesla did everything humanly possible to make the governments of Canada, Great Britain, and the United States of America aware of his inventions both for war and for peace. Let it be known that Tesla was always preoccupied with peace--and not war. Who is this Promethean giant, Nikola Tesla, who is scarcely remembered by men? A detailed study of the life and works of Tesla will give us all the knowledge needed to understand and deal with the contemporary (1978) threat to life on this planet.

APPENDIX I

INDEPENDENT CONSULTANT'S OPINION

December 6th, 1977.

MEMORANDUM

TO: FILE

FROM: G. H. B. (G. H. BENNETT)

SUBJECT: High Power Electromagnetic Experiments in the U.S.S.R.

I have to-day been speaking with Dr. Andrew Michrowski a civil servant in the State Department of the Government of Canada who has been acting as a technical advisor to the Cabinet on certain specific aspects of the negotiations between the United States of America and the U.S.S.R. concerning the re-drafting of the SALT Agreements. For the past two years Dr. Michrowski has been collecting data and analysing all available information on the High Power Electromagnetic Experiments being carried on by the Russians at a site near Riga in Latvia on the Baltic Coast and at Gomel near Minsk some 250 miles south of Riga.

I have been following the situation described herein from its beginning. Information in this memorandum comes from a number of sources but the correlation of it comes from this conversation to-day with Dr. Michrowski.

On October 14th, 1976 radio communications all over the world were disrupted by powerful radio waves emanating out of Soviet Russia. Numerous official radio monitoring stations scattered throughout the world registered specific details on this occasion. Subsequently these signals reappeared, sometimes a very low frequency, sometimes a very high frequency and at irregular intervals for irregular lengths of time. Official protests were lodged by Canada, Britain, United States and the Scandinavians to Russia who apologized for the interference, due they said to experiments they were conducting. Both amateur and professional radio communications personnel monitored these broadcasts, attempting to identify their nature, origin and purpose. The defense and intelligence services of the United States were particularly concerned and by December of 1976 they had convinced themselves that the bursts came from powerful Soviet "over-the-horizon radar signals". This became the official explanation for a while and it was very plausible.

But then the nature of the radiations changed dramatically. Very large standing electromagnetic waves were formed thousands of miles long, originating from below the ground and extending right up to the ionosphere.

These standing waves had a periodicity varying between 4 pulses per second up to 26 pulses per second. Obviously these could not be over-the-horizon radar signals; everyone had to re-think their ideas. For about a year these electromagnetic waves appeared sporadically with no further explanation from the Russians, only a promise to turn down their experiments and eventually stop altogether.

Innumerable explanations were put forth on the Western side, but the only substantial advance made was to determine that the electromagnetic radiation originated from a single source near Riga in Latvia. The transmitter at Gomel near Minsk was only brought into operation when things began to get out of hand in the spring of this year.

The present understanding of these phenomena (which is accepted by a large body of scientists and other professional analytical investigators but by the vast majority of politicians and other influential laymen) ties together a number of apparently disparate and independent events.

A Soviet scientist in Canada on an official exchange visit said that he knew some now very old individuals in Russia who had in their youth known Tesla. Apparently sometime ago these individuals were approached by Russian scientists, who attempted to extract from them all the information they could recall regarding Tesla's early experiments.

While working in Quebec, this Soviet scientist and a lot of other unidentified people, including Canadian civil servants, visited Arthur Mathews (the last known surviving Tesla assistant) on many occasions and all wanted details of Tesla's original equipment.

Nikola Tesla was one of the great pioneers of electrical phenomena, believed by many people to be the greatest electrical engineer that ever lived. In the summer of 1899 Nikola Tesla set up an experimental laboratory near Colorado Springs where he proceeded to conduct some rather amazing experiments. Tesla said "...this planet, despite its vast extent, behaves like a conductor of limited dimensions. The tremendous significance of this fact in the transmission of energy in my system had already become quite clear to me. Not only is it possible to send telegraphic messages to any distance without wires, as I recognized long ago, but also to impress on the entire globe the faint modulation of the human voice. Far more significant is the ability to transmit power in unlimited amounts to almost any terrestrial distance and almost without loss." To prove his point Tesla lit a bank of 200 carbon filament lamps consuming about 10 kilowatts, 26 miles from the experimental station, without any physical connection between them; - something that has never since been repeated. The whole experiment was officially witnessed and recorded under the auspices of Fritz Lowenstein. An illustration of the equipment with which this was accomplished is attached to this memorandum. [Illustration omitted].

Mr. Tesla did a number of other things with this equipment. He produced artificial lightning measured at 12 1/2 million volts, -until very recently the highest man-made voltages ever recorded. He also measured the standing waves that were produced in the earth by his equipment. His prime intention so he told the media was "sending a telegram from Pikes Peak to Paris". It is quite clear from some of the records that had been handed down that he was experimenting with long distance wireless communication and the wireless transmission of power from one point to another. Tesla also studied fire balls produced during lightning storms and produced them artificially. These are homogenous, self-sustained spheres of ionic plasma. These exhibit most of the desirable plasma characteristics that are sought in order to generate fusion power.

The Soviet delegate indicated that duplication and development of Tesla's original work was being undertaken inside the Soviet.

In the early 1960's Robert Uffen a geophysicist at Queen's University showed fairly conclusively that long-term worldwide climatic changes coincided with changes in the earth's magnetic field. This was taken up in a number of Universities. At Columbia University, the Lamont Doherty geological observatory found that when the intensity of the magnetic field decreased the average temperatures decreased and vice-versa. Dr. J.W. King of the Appleton Laboratory in the United Kingdom published in the January 18th, 1974 issue of NATURE a paper which shows the link between meteorology and geomagnetism and thereby founded the science of magnetometeorology. Dr. King's starting point is a remarkable similarity between the pattern of the magnetic field of our planet over the northern hemisphere and the pattern of the contour lines of atmospheric pressure. Both patterns have a double "pole" like a dumbbell and the dumbbell shape is aligned in much the same way for both pressure and magnetic distributions. In meteorological terms the centers of low pressure that dominate northern hemisphere circulation coincide with the centers of greatest magnetic intensity. A great deal of evidence has been forthcoming to show that there is a very close correlation between weather and the earth's magnetic field and that variations in the magnetic field, particularly those variations caused by the eleven year sun spot cycle, have a direct effect upon the weather on this planet.

After the Russians had been producing their very high powered, low pulsed, long standing waves, meteorological reports coming in to the National Centre of Atmospheric Research in Boulder, Colorado showed that a blocking mechanism was in effect along the west coast of North America. Another was located on the east coast and a third was located in Europe running north and south along the Polish/Russian border, extending up into Finland and down into Romania. These blocking mechanisms lasted an unusual length of time, too long to be considered due to natural causes, and at the time there was no explanation for them, - rational or otherwise.

Simultaneously with these meteorological blocking mechanisms, very large standing electromagnetic waves were detected which geographically coincided with them. These waves contained an enormous amount of electrical excitation, enough according to some experts, to deflect the normal trade winds. While they lasted there was abnormal cold weather in the United States and Canada, with snow in Miami and floods and weather chaos in western Europe. After they were gone there was a very bad drought in the western part of the United States.

The military forces of the United States, directed from the Pentagon, use spy satellites to monitor Russian military activities. Amongst many other things they monitor the disposition of Soviet submarines around the globe. This is accomplished by detecting the very low frequency radiation produced by propellers of the submarines as they revolve. For some time the signals received by the spy satellites for this purpose had been interrupted by some strange signals which the Defense Chiefs were unable to identify until they were told of the existence of these very low frequency standing waves being produced by the Russians. They immediately checked and found that the signals they were receiving were indeed from this source.

Tesla listed somewhere in the order of 150 different things that could be accomplished using the ideas and equipment that he had generated. One was to create a "death ray". Another was the ability to create a gigantic wall of charged particles, effectively acting as an electronic screen against electromagnetic radiation and beams of charged particles.

In 1975 United States Air Force Major General George J. Keegan, who until his recent retirement headed U.S.A.F. Intelligence activities passed to William Colby, then head of the C.I.A. and to a number of its nuclear scientific advisors, detailed information showing that the U.S.S.R. was developing a charged-particle beam device designed to destroy United States intercontinental submarine launched ballistic missile nuclear warheads. The activity is being carried on at Semipalatinsk some three hundred miles north of the Siberia/China/Mongolia joint border point. This installation involved a huge amount of civil engineering construction works, including enormous welded steel hollow spheres of such gigantic proportions that it is believed they are used as containers in which to detonate nuclear devices which thereby provide sufficient energy to drive the charged particle beams under development. The energy from the explosion is conducted over pressurized gaslines into giant capacitors inside one end of a large thick-walled building. Along the 700-ft. side are located the electron injector gun and the collective accelerator. The power is fed into them to produce a proton beam which is bent at an angle by magnetic mirrors and propelled near the speed of light along drift tubes running underground about a kilometer. The drift tubes are evacuated to simulate operating the beam in space and are used only for beam propagation testing. There are five concentric rings constructed around the building about five kilometers apart. At each 5 degree of arc a vertical sensor is placed to measure beam impact for beam tracking.

Even if this arrangement is successful in producing an effective electrical beam of charged particles sufficient to destroy an incoming ballistic missile, the whole thing is too cumbersome and clumsy for operational use. The amount of power is enormous and does not justify the end result. The dangers in operating something energized by nuclear detonation is enormous. At Azgir in Kazakhstan near the Caspian Sea, the Soviets have built a powerful fusion pulsed magnetohydrodynamic generator as a possible alternative as a power supply for a charged particle beam system. Experiments took place last year in an underground chamber in an area of natural salt dome formations in the desert and was monitored by the United States early warning satellite stationed over the Indian Ocean. However, even this device would be too clumsy for actual operational use.

If Tesla was right about his apparatus being able to produce an electronic beam or wall of charged particles then this would be a far more suitable device for operational use. On a relative scale the equipment is very simple, the power input is much smaller and the system operates on basic principles and not by brute force, which is what the Semipalatinsk and Azgir operations are attempting. Members of the Soviet scientific delegation to Canada did say that the experiments on Tesla's work was directed towards producing a death-ray and a wall of charged particles.

[Insert] In 1915 Nikola Tesla published the work in which he described some 150 applications of his apparatus. The basic mode of operation of most of the applications is based on making the earth an electronic resonator, - stimulating the inner molten core of the earth (which in its convection motion acts as an electrical generator thereby producing the earth's magnetic field. core into giving out more energy than is normally produced, and to do this in a controlled manner at selected low frequencies. Measurements made by the monitoring stations of the Canadian Government's Department of Communications have verified that there is more energy coming out of the North Pole than the South Pole when the Russian experiments are in progress.

In 1976 there was considerable publicity given to reports that the Russians had managed to aim a laser at some United States spy satellites and blinded them. Initially these reports were denied by the Department of Defense. Later the Pentagon admitted that the satellites had been blinded, but blamed it on the existence of unusual flares from disrupted gas pipelines within the Soviet Union. This was considered a far-fetched excuse. In more recent statements the Defense Secretary, Harold Brown, has admitted that two satellites had been destroyed, but this cannot be confirmed.

If the Russians have been able to produce Tesla's "death-ray", there can be little doubt that they are also developing Tesla's "wall of charged particles". Success in this endeavour has frightening

START →

[Insert] The energy to keep the molten core molten is believed to be due to radio-active material in the heart of the core.) causing it to generate and give out more energy than it receives. The incoming magnetic radiation acts as a trigger or catalyst to stimulate the earth's [go to insert about "core--

implications. A curtain of such particles around Moscow or any other big city would shield against any missile attack. It is in this regard that the choice of Riga and Gome[?] as sites for Tesla transmitters is significant. Curtains of charged particles thrown up from these two locations could, between them, intercept any missiles dispatched by NATO forces against Moscow. One additional installation located somewhere on a line between Moscow and Murmansk could intercept any missile fired against Moscow from the contiguous states of the U.S.A. Once the technology is thoroughly mastered the Russians could quickly defend all its major cities and major military installations, since in relative terms compared to other major defense projects, such as its naval power, the industrial and financial resources required would be modest. The military and strategic implications of this possibility can be readily appreciated.

Three items associated with the SALT negotiations are significant and inter-related.

- (1) It is almost certain that it was the overwhelming desire of the Soviet authorities in 1976 to have the developments we have been discussing completed before the impending SALT negotiations began. To achieve this they instituted a crash program of development and were prepared to risk interruptions of worldwide communications and detection of their experiments and thereby disclosure of their objectives to the western powers. The ends justified the means.
- (2) As part of this crash program, the Soviet scientists set up much larger more powerful standing waves, boosting the power to 40 million kilowatts producing what they calculated to be the optimum resonant frequency transmitted of 7 pulses per minute. The result was enormous standing waves of an amplitude far greater than they had calculated. So large in fact that they were thoroughly frightened and shut down the equipment. Under normal circumstances when power is removed from standing waves in a resonant circuit they normally dissipate in what is termed a "damped oscillation", with the wave amplitude decreasing exponentially with each completed cycle and in a relatively short time they are dissipated altogether. However in this case this did not occur and the standing waves maintained almost their full amplitude. Thoroughly alarmed, - in fact their subsequent actions show that they were undeniably "scared stiff" - the

Soviets started radiating intense bursts of high frequency power in effort to disseminate these waves and make them fade away. These waves encircled the entire globe, bouncing off each other when they met. Many experts believe that the earthquake in the Indian Ocean which measured 9.1 on the Richter scale, -the biggest earthquake in the history of mankind- was caused by two of these waves which collided at that point at that time, late in August 1977. There were two other major earthquakes that coincided with these Soviet made standing waves colliding, one, -near Samoa and the other near the Solomon Islands. It may be coincidence but these earthquakes marked the end of these standing waves which the Soviets had been unable to control.

- (3) During the SALT re-negotiations the Soviets most uncharacteristically and very suddenly requested that the clauses that banned the use of artificial manipulation of weather patterns as a means of waging war be modified to include very specifically the use of electrical means of stimulating and modifying global and local weather patterns. In making this request the Soviets were stepping completely out of line with their normal known methods of negotiation. On May the 18th, 1977 with what appeared to be imprudent haste, the Soviet Government signed an agreement with the United States and 29 other countries promising never to attack each other by starting man-made storms, earthquakes or tidal waves. The date is significant because at that time the Soviets were desperately trying to disperse their standing waves by converting their transmitter at Riga and Gomel to send out giant pulses of very high frequency energy. There was no apparent success and the waves continued on throughout May and into June, only ending when the three giant earthquakes occurred.

These three items when reviewed in context are obviously inter-related.

For every physical object in the universe there is some frequency at which, if it is mechanically vibrated, it will resonate and the energy imparted at each cycle will accumulate and the amplitude of vibration will increase until the object breaks or shatters. It so happens that

the resonant frequency for very large crude carrier vessels (the giant oil tankers) lies within the range of frequencies used by the Soviets to create these giant standing waves. Experts on both sides of the iron curtain now strongly suspect that these standing waves could cause such large ships, if caught in an area where the waves are being propagated, to break apart. More precisely, - investigations now underway are trying to determine whether some recent mishaps were so caused.

Among the 150 different applications outlined by Nikola Tesla, were the worldwide transmission of speech; the worldwide transmission of telegraph; the transmission of electrical power over great distances; the generation of death-rays; the generation of a curtain of charged particles; the ability to modify weather patterns; the generation of isolated electrical plasmas (i.e. Fireballs) and man-made lightning. Surprising as these may seem in their wide range, even more amazing is the claim by Tesla that any number of these phenomena could be achieved simultaneously and independently with one single equipment installation. If true it represents something close to the ultimate in economic cost effectiveness.

In addition to all the foregoing, for more than 40 years reports have been written, experiments have been conducted and observations recorded, on the effects of electrical fields upon the mental faculties of human beings. It is well known that strong pulsating electrical fields pulsing within the frequency range of the alpha and/or beta rhythms of the human brain can interfere with the physiological functioning of the mind and produce devastating psychological effects in most people. Based on these observations there has been considerable serious investigation of the use of powerful radio transmissions as a mass psychological weapon in the arsenals of modern warfare. A Pentagon Defense Intelligence Agency classified report, parts of which have been released into the public domain, states that Soviet researchers have found that people exposed to low-level microwave radiation "experience more neurological, cardiovascular and hemodynamic disturbances than do their unexposed counterparts". According to this report scientists from the Soviet Union know a lot about the biological effects of low-level microwave radiation, knowledge from which can be derived methods for causing disoriented human behavior, nerve disorders or even heart attacks. The White House Office of Telecommunications Policy has been intensely pursuing similar studies but very few results have been reported to date. The Pentagon Defense Intelligence Agency report defines a malady known as "Microwave Hearing", in which sounds and possibly words appear to be originating intracranially, induced by signal modulation at very low average power densities. Combinations of frequencies and other signal characteristics to produce other neurological effects may be feasible in several years, states the D.I.A. report. The Soviets have also studied changes in body chemistry and brain function including heart seizure from microwave radiation. The latter has been accomplished experimentally

in frogs by Soviet scientists who synchronized pulses of microwave signal with the animal's heart beat, beaming the radiation at the frog's chest. The relationship between these experiments and the Soviet practice of bombarding the United States' Moscow Embassy with low-level microwave radiation is obvious.

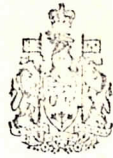
The situation however is not as one-sided as this report may indicate. The Governments of the western powers are fully aware of the Soviet operations and the interpretation that can be put upon them. In the United States the Defense Department has been trying to develop a death ray for more than a decade (as was reported in our report on nuclear fusion, February 1975). The main work occurs at the Defense Department's laser weapons development group at Kirkland Air Force Base in Albuquerque, in New Mexico, and is known by the code name Eighth Card, operated under the aegis of the Defense Advance Research Projects Agency. For a long time they struggled with lasers and more latterly with beams of charged particles, making very slow progress, following a "brute force" approach. In the last 18 months considerable advances have been made and significant results achieved. Since the disclosure that the Soviet scientists are developing electron beam weapons for use in outer space for the purpose of destroying enemy satellites and incoming missiles, the Pentagon has admitted that they have ongoing programs for the development of electron beam weapons. The wide range of laser based weapons are under development for a wide variety of uses by all three departments of the military. They range from infantry guns to blind enemy personnel, through laser guided bombs and missiles to heavy duty naval weapons, anti-missile defense systems and satellite killer weapons for use in outer space. The technology of using charged particles, either beams or curtains, -is nowhere near as advanced. The general consensus of opinion at the present time is that the Soviets have a tremendous lead in the development of actual lasers and charged particle high energy technology. Their hardware devices have much higher performance and greater power densities than their United States equivalents. On the other hand the western powers have a much better grasp of the technology for using these devices once they are developed. The technology and the hardware for deploying these weapons, aiming, firing and controlling them are much more highly developed than in the Soviet Union.

Neither have the works of Nikola Tesla been ignored in the United States. The Pentagon has been interested in some of the phenomena that Tesla described and have subscribed to experiments and development work based thereon. One of these is a contract with Golka Associates, Brockton, Massachusetts. This company was founded by Robert A. Golka, a man who has been intensely interested in and studied extensively, the works and theories of Nikola Tesla. Under this contract, in an Air Force hangar at Wendover, Utah, Robert Golka has constructed his modern equivalent of Tesla's experimental apparatus. His approach has

not been to duplicate exactly Tesla's equipment and experiments, but to interpret them in terms of modern knowledge and modern materials, believing that in this way a quantum jump can be made to a point one stage further than Tesla actually achieved. His results have been outstanding, but, say the skeptics, unlikely to uncover the fundamental basic laws which only Tesla knew and took with him to the grave.

In summary, although the foregoing does not cover the whole story (all the available information would fill a full novel size book and is writing such a book for publication in June next year), there is obviously a prima facie case for alarm on the part of the western powers. If the developments envisaged here are in any way feasible, extrapolation from present knowledge to forecast what may be happening within the next few years leads to the conclusion that the threat of mutual annihilation as a deterrent to nuclear warfare may no longer be a viable policy and the danger of a nuclear holocaust becomes very real.

Addendum: - It should be noted that there are many other explanations for the weather behavior discussed in this memorandum. Some of them are based on established disciplines and more solid data than the electromagnetic wave theory but none are completely watertight. For the earthquakes, at least one other theory has higher acceptance than that implied here, -the theory of tectonic plate movements. But new knowledge always modifies old ideas. It must be borne in mind that the Key to Progress is an open mind and so far no single theory for these phenomena has been verified.



THE SENATE
CANADA

Ottawa, March 11, 1977.

The Honourable B. J. Danson, P.C., M.P.,
Minister of National Defence,
House of Commons,
O t t a w a.

Dear Barney,

RE: Soviet Energy Emissions

From time to time since July 1976, wireless energy transmissions emanating from Riga and Gomel (with several transmitters at each point) in Russia disrupted NATO communications and radio broadcasts of the BBC and similar stations in Europe and South America, particularly in Argentina.

For sometime now I have been working with a small group of Canadian and American scientists and researchers with a view to duplicating a system invented by Nikola Tesla some 70 years ago for the wireless transmission of electrical energy. In fact, for a number of years in the province of Quebec, Tesla developed tidal power at Tadousac and transmitted it a distance of 25 miles without wires.

It occurred to us that the Russians were experimenting with a Tesla device in the transmission of this energy, and one of our group, Mr. W. Scott, of the Department of Communications, arranged for stations right across Canada to monitor the Russian signals. Unfortunately, shortly afterwards, the Russians, due to so many complaints from other countries, discontinued their transmissions or transmitted them over such short periods of time that it was impossible to do the kind of monitoring that was required to get the necessary information to come to any definite conclusion as to what exactly the Russians were doing. However, the results we did obtain were extremely interesting and an analysis of them by our experts indicated that the Russians were indeed using Tesla's system.

But for what purpose? It was clearly not the type of signal for any type of communications system. Radar is a

possibility and in discussing this with the Defence Research Board, we found they had concluded that the Russians were experimenting with over-the-horizon radar. However, the tremendous radio frequencies spill-over makes this theory also unlikely.

The most likely explanation, therefore, is that the Russians were testing some sort of electromagnetic defensive screen. Tesla himself designed such a screen in 1935 but his efforts to arouse the interests of NRC and Prime Minister Mackenzie King were unsuccessful.

We are very anxious to compare the results of our monitoring with that of the monitoring carried out by other NATO countries, and particularly Denmark. The purpose of this letter is to explore the possibility of obtaining through you this data which is purely technical and not privileged or classified. The information we are most interested in is as follows:

- (1) The frequencies, signal strength and power output of the Russian emissions.
- (2) Results of satellite monitoring of closed formations above these points since July 1976.
- (3) Results of coordinated seismic monitoring since July 1976.
- (4) Any variations in the electric charges through the earth's crust from that area.
- (5) Results of monitoring of signals from the reciprocal pole. (This would be a point a few miles east of New Zealand.)
- (6) Any information that may be available on the history of the transmitting stations and the primary research people in them.

Hoping to receive a favorable reply and with kindest personal regards.

Yours sincerely,

C.W.C.

C. W. Carter.

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