

# EIR

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LaRouche Team Launches 'Operation Kepler'  
An Interview with Physicist Sergey Pulinets  
A Multi-Parameter Approach to Earthquake Forecasting

**Life Beyond Sense-Perception:  
Science vs. Mathematics**



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# EIR

## From the Managing Editor

As we “go to press” this week, Lyndon LaRouche has just addressed the nation and the world once again, in an LPAC webcast (April 19), titled, “Our Creative Universe,” a transcript of which will appear in the next issue of *EIR*. In anticipation of that, the contents of this week’s edition is an excellent prolegomenon for the issues raised in LaRouche’s keynote speech and the discussion that followed (the video is now posted at <http://larouhepac.com/webcasts/20110419.html>).

We begin with LaRouche’s *Feature* article, “Life Beyond Sense-Perception: Science vs. Mathematics,” in which he elaborates and continues earlier discussions of the scientific work of the Basement Team of young researchers, who, under his direction, are following in the footsteps of Cusa, Kepler, Riemann, Vernadsky, et al. A renewed urgency in pursuit of a greater understanding of our universe has arisen with the upsurge in activity along the Pacific Rim of Fire. This requires an immediate shift in U.S. policy toward the revival of Glass-Steagall, which will allow us to wipe off the books the trillions of dollars in worthless assets, and to fund the necessary programs in space research and satellite technology upon which the future existence of humanity depends.

To those who would assert, as has the demented Barack Obama, that it is not possible to forecast such events, we would point them to our *Science* section, where we take up the nuts and bolts of the methods, already at hand, for just such forecasts, whose success would mean the saving of untold numbers of human lives.

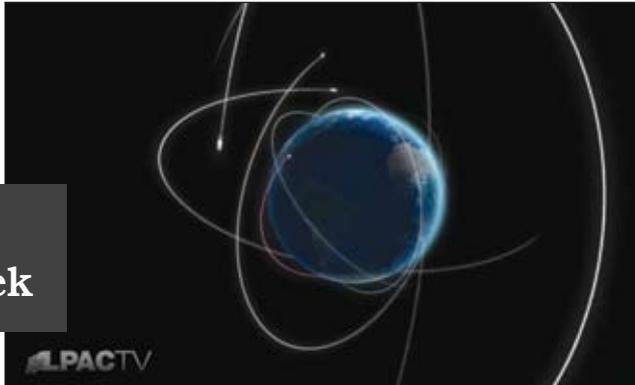
Rising to the challenge, LaRouche and the Basement Team have initiated “Operation Kepler,” a crash program to bring about “Man’s Next Evolutionary Leap,” as their call-to-arms is titled. Operation Kepler proposes an international partnership among nations, “for the measurement and tracking of a vast array of unseen processes, which would provide scientists with the ability to predict and foresee impending earthquakes and other seismic activity.”

Our fascinating interview with Prof. Sergey Pulinets, a researcher of earthquake precursors at Russia’s Fyodorov Institute, confirms that such events are eminently forecastable. And the LPAC Weekly Report of April 13, featuring, along with LaRouche, Basement Team researchers Ben Deniston and Sky Shields, reviews the implications of Professor Pulinets’ provocative remarks.



## Cover This Week

*Satellites circle  
Planet Earth,  
extending Man's  
sensorium*



LPAC-TV

### **4 Life Beyond Sense-Perception: Science vs. Mathematics**

By Lyndon H. LaRouche, Jr. Continuing his ongoing discussion, in collaboration with the researchers of the Basement Team, of the deadly limitations of man's sense-perception, as a method of understanding the universe we inhabit, LaRouche proposes that we look beyond the "footprints" left by sensory experience, to the invisible object which has left those footprints behind. This is the point at which human cognition begins. The rising level of activity along the Rim of Fire, in the form of increased earthquake and volcanic eruptions, etc., means we must quickly eliminate the influence of the "fourth Roman Empire, especially its personification in the White House, the mentally unstable President Barack Obama. This will clear the way for the necessary remedies to both the global financial, and larger cosmic crises we currently face.

## Science

### **23 LaRouche Science Team Launches 'Operation Kepler'**

In the weeks immediately following the devastating earthquake and tsunami which hit northern Japan March 11—a catastrophe which heralded the potential of a civilization-threatening series of huge earthquakes around the planet in the coming period—Lyndon LaRouche launched "Operation Kepler," as a crash program for scientific collaboration which could deal with this crisis.

### **25 Russians Propose Global Warning System**

The concept behind the International Global Monitoring Aerospace System (IGMASS), is forecasting by scientists around the globe, who would issue warnings, "in real time to prevent natural and man-made disasters."

### **26 Interview with Sergey Pulinets: A Multi- Parameter Approach to Earthquake Forecasting**

Professor Pulinets is a researcher of earthquake precursors at the Fyodorov Institute of Applied Geophysics and the Moscow Center for Ionosphere Monitoring; he addressed the European Geosciences Conference in Vienna, which took place April 3-8, where he was interviewed by Daniel Grasenack-Tente of the Civil Rights Solidarity Movement.

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Report: The  
Implications of Sergey  
Pulinets' Approach to  
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A transcript of the April 13 Weekly Report, featuring, from the Basement, Ben Deniston and Sky Shields, who joined LaRouche for an in-depth discussion of the state of the scientific work on earthquake precursors, including a review of the implications of the work of Prof. Sergey Pulinets.

**Editorial**

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LIFE BEYOND SENSE-PERCEPTION:

## Science vs. Mathematics

by Lyndon H. LaRouche, Jr.

April 14, 2011

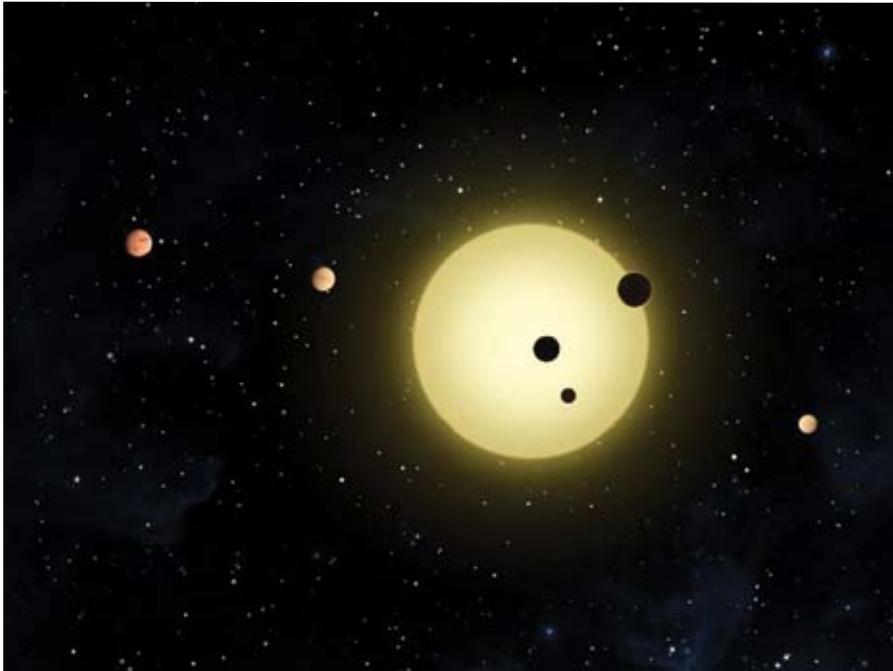
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*I have often been sent questions respecting certain matters of physical science which define the relevant, indicated topic in terms of what is fairly identified in conventional terms of reference, as mathematical “sense-certainty.” For as long as the suggested dialogue remains within the confines of emphasis on formal mathematical reference, the discussion can often proceed within the familiar bounds of a discussion, as within the implied, specifically mathematical terms of reference posed by the legendary “typical questioner.” In the case of more serious qualities of discussions, that convention is no longer a profitable one; a shift to a Riemannian framework of reference is required. Then, what is usually considered as a customary mathematical situation no longer applies. Therefore, for the latter cases, a strictly Riemannian standpoint is to be applied, as in a manner typified by Bernhard Riemann’s own 1854 habilitation dissertation and the related parts of the arguments of Carl F. Gauss and Lejeune Dirichlet.*

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Since August-September 2010, the leading aspects of the work conducted in “the basement” project, have been deliberately shifted, globally, ever farther away from the ontologically paradoxical domain of a merely imagined quality of a physical space-time of “space, time, and matter,” to the premises of an intrinsically noëtic system of universal cosmic radiation. This shift from those earlier premises, from particles in space and time, to the notion of a universal cosmic radiation, has now greatly improved the quality of productivity of the team.

This shift has reflected the effect of the implicitly obligatory standpoint of Academician V.I. Vernadsky’s developed conception of the partition of physical cosmic space-time. The shift induced by Vernadsky’s discoveries is



NASA/Tim Pyle

*The LaRouche Basement project has now shifted to the domain of a Riemannian anti-entropic, cosmic universality, a domain far beyond that of sense-certainty. Shown: an artist's conception of Kepler 11, a Sun-like star around which six planets orbit, as observed by NASA's Kepler spacecraft on Aug. 26, 2010.*

toward a conception which could not have been brought efficiently into existence without locating it within the domain of the specifically Riemannian principles of an intrinsically anti-entropic, cosmic universality.

Thus, it has been noted recently among those associates of mine, that we live actually, within a universe which we sense as surrounding our galaxy, a universe in which we find ourselves to appear to be imprisoned in the embrace of a pervasive red-shift. This apparent effect of this shift in outlook, is an ironical experience which is often the result of the widespread, but wrong-headed presumption that, either, the notion associated with the term physical-space-time has been defined by an implicitly, previously fixed framework of mathematical-physical-time reference, or, even, in the worst case of ostensibly scientific opinion, a universally entropic one. Yet, the contrary evidence, that which is to be premised on the study of the history of life-forms whose development is to be defined within the embrace of our galaxy, has demonstrated that our universe itself is intrinsically anti-entropic throughout.

The subject of the apparently recurring 62 millions-year galactic cycle bearing on the history of the conditions of earthly life-forms, as in the case of the catastro-

phe of the great "lizards," is a prominent, but also increasingly ironical sort of exemplary feature of that line of the discussion.

The essential distinction between the two states of mind, lies in that between the outlook which places a primary emphasis on sense-perception, and that which regards the experience of mere sense-perception from the higher standpoint, not that of mere sense-experience, but, of the view of sense-perception which is subsumed by the notion of mind as such itself.

As I have said, frequently, on this specific account, we must contrast the false standpoint which regards reality as located within the bounds of the sense-perception, a wrongheaded view limited to the footprints left by sensory experience, rather than locating actual existence in terms of the evidence

of reality whose existence must be located ontologically in the invisible object which has caused the footprints to be left behind. The latter being the standpoint of the human mind, rather than the view which adopts sense-perception as the primary location of the attributable ontological expression of functional reality.

The former, wrong-headed, reductionist outlook, had been one which had adopted the implied view of the imagined existence of universal space as being, either, ontologically, a constant "background" of all sensed experience, or a decaying space-time background which is being, in some fashion, "used up" (i.e., "entropically") by the "wear and tear" of experience.

Contrary to the popular, wrong-headed outlook, the "red shift" experience, as such evidence of experience has been noted by one among our "basement associates,"<sup>1</sup> points in the direction of a universe which is progressing to higher ("anti-entropic") ontological states, leaving the eternally laggard and decadent behind.

My view expressed here, the latter one, must be recognized as located ontologically in the expressed standpoint of Bernhard Riemann, as by, implicitly, Nicholas

1. I.e., Ben Deniston.

of Cusa, Johannes Kepler, and Gottfried Leibniz before Riemann, and, implicitly, Plato still earlier.

### *The Two Opposing Views*

The distinction between the noëtic standpoint of Cusa, and his like through Riemann and Vernadsky, and the opposing, entropic outlook of such advocates of the oligarchical principle as Aristotle and empiricist Paolo Sarpi, is expressed, for known human cultures, as the coincidence of the attachment to the specifically oligarchical social principle which is shared among the tradition of those evil, anti-humanistic bastards of the common cult of alleged, or simply accepted notion of universal entropy, bastards as such cases as the Olympian Zeus, Aristotle, King Philip of Macedon, the Achaeonids, and the legacy of the succession of four Roman empires, the legacy from that of ancient Rome through the time of the British imperial system of global monetarism today.

The latter, defective outlook, is expressed in its notably depraved form, by the so-called “green movement” spawned by agencies such as the pro-genocidal World Wildlife Fund (WWF) of Britain’s Prince Philip and his sundry “lickies and lackeys” of today, as by such abominations as the pro-genocidal doctrines of a current British lackey, President Barack Obama. The same, pro-Satanic depravity, is met in the 1950 launching of the nominally European Congress for Cultural Freedom (CCF), which has served as the post-World War II flagship of sorts for the mass-murderous depravity expressed by the so-called “Greenie” pestilence of today, as by the British-controlled puppet known as President Barack Obama.

We must recognize the fact, that what I have lambasted in a certain fashion as the inherent depravity of the practice of a “Green movement,” is nothing other than the same thing as the practice of the system of oligarchism which Aeschylus identified in the worship of the evil Olympian Zeus, a worship which has been the essence of, among other oligarchical forms of cultures, that to which much of Mediterranean monetarist imperialism as can be traced, as in the better known antiquity of Mediterranean cultures from the roots of the Roman empires, as from Octavian’s Capri, to present-day imperial London under the heirs of the consummately evil William of Orange.

It is only when we review the history of European cultures from the vantage-point of mind considered as the primary expression of existence, rather than the

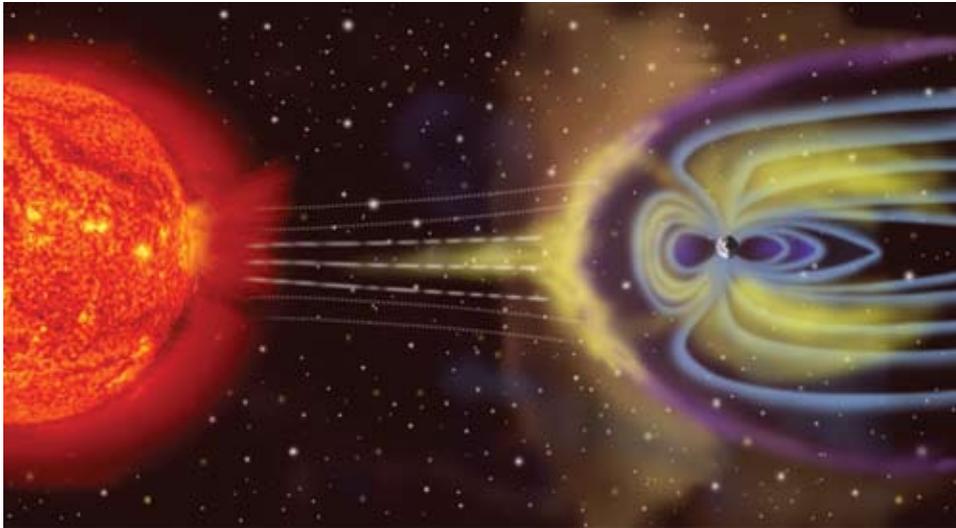
mere shadow-world of sense-perception, that the essential considerations underlying the presently perilous situation of mankind globally today, are brought competently to the surface of today’s realities.

Mankind, most notably that of the willful characteristics of society in the trans-Atlantic region, is now poised immediately at the brink of a threatened global catastrophe for all mankind, as that fact must be recognized as being nothing other than a matter of certain biological and related facts currently, the fact that mankind as a species is now approaching an awesome sort of recurrence of a 62 millions-year galactic cycle which, perhaps, our species might not survive—unless we might be enabled, now, to quickly change our ways in relevant respects. The required list of changes would include such indispensable actions as, despite all the damage that J.P. Morgan’s Alan Greenspan and his Gramm-Leach-Bliley scheme could do, an immediate, full restoration of U.S. President Franklin Roosevelt’s Glass-Steagall law. That restoration would not be a sufficient cure for our present situation; but, it would be an indispensable first step toward bringing on the more likely possibility of our species’ survival.

Imagine a desolate specter of some former planet Earth, from which all trace of the former existence of human life had been turning to dust, or worse. That prospect, including the prospect posed by a range of relevant scientific knowledge of the declining level of Earth magnetism, is probably a closer threat than you might imagine, unless we are enabled to change our world’s ways in the proper direction to offset such a risk, and that soon.

In presenting the preceding statements, I have not exaggerated in the slightest degree. The crucial turn is to be made very soon, and by a leading action to be launched from the United States itself, that almost immediately. The current rates of acceleration into the nearby domain of global hyperinflation, especially, immediately, in the trans-Atlantic sector, have set the relevant, early deadline for reversal of the presently prevalent policies of practice during the next several months, perhaps less, accordingly, unless we in our U.S.A. act to set the pattern which enables the trans-Atlantic community to break free from the homicidal drug of Queen Elizabeth II’s presently reigning European economic-suicide recipe called “the Euro.”

To restate the crucial point presented thus far, the world has presently entered a time corresponding to the not exactly mythical “Twilight of the (evil) Gods.”



NASA

*A declining level of Earth's magnetism is, LaRouche writes, probably a closer threat than you might imagine. Shown: an artist's conception of the magnetosphere.*

## ***The Practical Steps To Be Taken***

That much said now to set the stage for the subject thus placed immediately at hand, here thus far: the challenge placed before all who would be competent leaders of our society out of the presently deepening pit of despair, that Glass-Steagall must be immediately re-enacted, or, else, the United States, and many other nations, are presently doomed to a catastrophe, that during the course of the present year.

There is nothing actually mythical about any actual part of that present threat. Witness the fact, that there have been four successive Roman Empires; the present fourth of these, the present British-centered monetarist form of imperial system, is now in the beginning of its own death-throes, death-throes expressed most visibly in an ominous, rapidly accelerating, presently global hyper-inflationary spiral of growing cultural pessimism's despair.

There is a potential remedy for this problem itself, but not for the British empire; that empire which, like the legendary Samson, will not willingly die alone, and, like the four Roman empires since Octavian on Capri; the principle of empire will demand: "No one shall triumph over our deceased imperial body; if we go down, we will take all of you, like the Emperor Nero and his family house, down with us." British lackey, and U.S. President Barack Obama, is presently lurching inside his own Nero-like fantasy, in the direction of the effects of his morbidly compulsive intent for all of us on this planet today.<sup>2</sup>

2. In my webcast of April 11, 2009, I set forth the essential features of President Obama's personality and intentions. All of those who have sought to reject my assessment of the essential features of that President's personal character and policies have now been exposed as horribly mistaken. Unfortunately, the teaching of a truthful and efficient conception of history had been long removed from our educational systems. Everything I said on April 11, 2009, has been now more than fully confirmed, two years later, even to the finest point of detail. It should now be conceded, "Case closed."

Only the virtual nullification of tens of trillions of nominal, "play-money dollars"-worth of what have been, intrinsically, fraudulent monetarist assets, would halt the presently accelerating process of that disintegration of the United States as an actual nation which has been continued, that which had been done at a generally accelerating rate, since August 2007. This has been the growing menace for humanity under the presidencies of Presidents George W. Bush, Jr., and under Barack Obama thereafter. Only a sudden shift from a monetarist system, back to our Federal Constitution's specification of a credit system, as was done under President Franklin D. Roosevelt, could allow the United States to continue to have an assured existence as a nation during the remainder of the present calendar year.

Only through the transfer of the nominal debts which are of the character of the debts of a merchant-banking system, moved out of the accounts of a credit-system-based commercial banking system, could the general collapse of the U.S. economy led by Alan Greenspan's stooges, Bush and Obama, be halted. Without that return to a constitutional U.S. credit-system, out of a British imperialist monetarist system, the continued existence of our presently imperilled U.S.A. were not possible for the immediate future now before us.

The reason that separation of a credit-system from a monetarist-system must occur, is that the two categories are not interchangeable. Credit, as defined by the implications of the Preamble of the U.S. Federal Constitution,

which replaced the failed monetary systems of the separate states, by a Federal system of constitutional credit, has no principled coincidence with the functions of a monetarist system. Whoever, at whatever level, does not recognize that functional distinction, is not actually competent to judge these matters; and, the failure to recognize that distinction among authorities of relevant rank, can be worse than merely disastrous for our republic's existence.

Admittedly, the shift back to that credit system built into the foundations of our Federal Constitution, would trigger the general bankruptcy of the present, monstrously diseased world monetarist systems. So what! Drink the waters of sweet relief! This would occur through the replacing of the disease called monetary systems, replaced by a credit system operating among respectively sovereign nation-states, preferably a fixed-exchange-rate system. However, that which will be lost to the serried, polluted ranks of merchant banking, must be recognized as the diseased organ which imperils the life of the patient, and the imperative for that surgical action which is to be praised throughout most of humanity, praised as a blessing delivered for the sake of the security of the nations and their people generally.

That much said in the matter of introduction of the subject at hand, we now proceed to the content of the matter to be treated here.

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## I. Experiencing Man's Actual Mind

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The essence of the intellectual, and also spiritual challenge which must be made conscious, has been only rarely achieved today, compared to a time three or more generations ago. The essential quality to be regained, is that which partakes of the categorical nature of the distinction of the developed expression of the powers of the human mind from the imparted effects which are specific to those who employ the speaking voice suited for presenting notions specific to the



EIRNS/Sergei Strid

*The Classical singing voice, placed at a tuning of C=256, is a model of the way to deliver and receive profound ideas "respecting man and nature." Here, the German LaRouche Youth Movement performs Beethoven's Choral Fantasy, January 2011.*

domain of mere sense-perception. Hence, the importance of the specific qualities of the Classical singing voice set at an expression very close to C=256.

Take the case of Johann Sebastian Bach, for example. Does one hear the set of his preludes and fugues as notes on a keyboard, or as a chorus of voices sung in counterpoint? Carry the same notion to the nearest cousin of Classical musical counterpoint, that set in agreement with a well-tempered scale with voice-registration and its register shifts at C=256. Now, carry that over into the expressed distinction of identity of the voices represented in a Bach fugue, each from one another, such that they might be heard speaking to one another, rather than like a cheerfully meaningless mutual sort of merely formal, or even meaningless consonance.

Having taken that point into consideration, now apply it to the manner in which persons today are overheard speaking, either in a dialogue, or as if in a dialogue. Are we producing music, or merely pleasantly seasoned, but otherwise empty minestrone?

Such distinctions are not limited to Classical artistic expressions as such; the state of mind to be expressed by what a Bach well-tempered standard represents, is a model of the way in which to deliver and receive meaningful expressions of ideas "respecting man and nature."

The effect of the loss of Classical artistic modalities in thinking and communication, is to have produced

something akin to “dead men talking.” Therefore, learn to place your mind in the Classical artistic domain of counterpoint which I have just now summarized, instead of trying to communicate in bursts of either digital coding, or the music of brutish reductionists’ babble.

The distinctions which I will be emphasizing, repeatedly, but in varying ways, in the remainder of this present report, are implicitly those which I have just suggested to you in opening this present chapter, now, thus far.

With those several preceding paragraphs in mind now, go directly from the close of the opening two paragraphs of Bernhard Riemann’s 1854 habilitation dissertation, to the concluding, third section. Contrast the view of today’s, unfortunately, still prevalent belief in a mere five senses, to the broader array of images required by Section III of that dissertation.<sup>3</sup> During, and since the work of Riemann, the number of *functionally identifiable* senses has been greatly increased, as he had forecast there, by the development of instruments which have the effect of functioning as independent senses, thus supplementing the repertoire of the merely nominal five. This development has occurred in the manner of adding new specific types of measurements of physical effects which may be demonstrated as existing outside the direct detection by the allegedly “original five.”

Riemann’s 1854 habilitation dissertation must be recognized as having been a principal landmark in the history of science. Since that work was originally published, a competent science could never again presuppose honorable claims to being an actually physical science if practiced according to the notions of what are merely sense-perceptions as such, nor still be considered as expressions of a truly sane mind.

Modern science is, in important part, as if a reborn reflection upon the achievements which had been asso-



Wikimedia Commons

*Modern science was revived by the Renaissance genius Nicholas of Cusa, based on the Classical science of Plato and his followers, through Erastosthenes. Painting of Cusa by the Master of Marienlebens (1480).*

ciated with those among the Pythagoreans and their followers, such as Plato and his followers through Eratosthenes. The vitality of those ancient foundations of modern science, was revived in the development of modern science by circles associated with such Renaissance figures as Filippo Brunelleschi, Nicholas of Cusa, and by such avowed followers of Cusa such as Leonardo da Vinci and Johannes Kepler, and, thence, also Gottfried Leibniz, all of whom employed the creative powers of their minds for mental compositions expressed in that form of expression of Classical-artistic counterpoint.

With those words of caution said, it must be emphasized, that the Fifteenth Century “Golden Renaissance” had risen during an interval of history between the collapse of the medieval

Europe of the Third Roman Empire, during the Fourteenth-century “New Dark Age,” and later efforts of science’s oligarchical adversaries to bring on a Fourth Roman Empire, an attempt which was extended from the time of the fall of Constantinople, through the wake of 1492-1648 religious warfare. So, the accession of the New Venetian Party of William of Orange, expressed a Satanic-like ugliness of the process of the Phoenix-like rebirth of the modern, Fourth Roman Empire, the birth of that British Empire which, presently, still dominates the planet as a whole at this moment, but must be compelled to cease doing so.

The reigns of true empires which are monetarist systems in their character, such as the Phoenix-like series of four successive qualities of Roman empires, are almost never consistently synchronous with the social and scientific developments which the reigns of empires overlap. Empires rise, decline, and collapse, at the same time their predecessors are hurrying to collapse in turn, as they, in their turn, are decaying in a compelling impulse of preparation for the arrival of those powers which might be coming to supersede them.

Throughout the recurring ebb and flow of such his-

3. “Anwendung auf den Raum” (“Application to Space”).

torical processes, what has remained constant, is a certain specific potentiality for goodness which distinguishes the human species from all other known creatures. That is the distinction whose embodied effect is the unique quality of the potentially noëtic mental powers of the human mind. The empire seeks to crush mankind into the state of animal-like perpetual sameness, as today's so-called "environmentalists" express the inherent evil of bestialization lately named "creative destruction." In the meantime, see the contrast to the Promethean man who works to burst the bonds of oligarchical tyrannies, by unleashing the formerly captive intellect of the oppressed by means of the flourishing of a new renaissance of human creativity, as the winning of the freedom of our U.S. constitutional republic from the evils of the British empire, illustrates the point.

This desired pattern of upward developments and declines, has occurred in a form which Riemann's own practice emphasizes in the opening two paragraphs, and the concluding section of his dissertation.

He begins in the manner in which the customary presumption of the conventional five notions of senses had sought to be bounded, as by friction, within limits, as the fraudulent concoction of the "Second Law of Thermodynamics" had attempted to do through the continuing succession of processes within which science has repeatedly superseded itself. In the conclusion of Riemann's dissertation, the renaissance which serves to liberate the oppressed is presented as to be effected by aid of forms of instrumentation which form an initial listing of those newly created instruments which provide us access to the outer and innermost limits of earlier scientific practices of sense-perception. Such discoveries as the latter, are the instruments which provide us the breakthroughs by which humanity gains access to breaking into man's actions in the regions of what had been, before then, both the very small and the very large, regions which had been situated as out of reach of scientific practice in earlier times.

Similarly, by the same rule presented by Riemann there, mankind's science has repeatedly added to the known specific varieties of qualities of extended physical space, including the discoveries of experimentally validated categories represented as physically distinct qualities. These latter types include those existing among the members of the expanding roster of qualities of known types of extended physical space-time. Academician V.I. Vernadsky's extension of non-living,

plant and animal, and human cognitive categories of extended physical space-time, is combined in effect as a single, crucial case. The inter-relations defined in the manner developed for this purpose by Vernadsky, et al., are typical of the matter of principle involved.

There is a well-ordered definition of these higher qualities of the ostensible supplements for sense-perception, which has been provided for us by the emergence of the recognition that space, time, and matter, as themselves, lack the quality of intention desired for what was hoped to be "the solidly independent verities," a faulty intention which was formerly associated with the misinformed habit of treating space, time, and matter as respectively independent qualities of experience. For effective science today, there is now only "space-time-matter," rather than a set of discrete divisions among the three usually referenced categories. Such advances are typified by the example presented by the evidence of the astonishing parametric characteristics of the function of the Crab Nebula, as shockingly new, recent evidence from the most recent years, attests.

### ***Sarpi: A New Satan Enters***

So, it goes, in the actually successful examples from the history of the emergence of modern European science under the influences of such as Dante Alighieri's discoveries and those of his Fifteenth-century followers. These followers include Filippo Brunelleschi, Nicholas of Cusa, and Cusa's principal, explicitly avowed scientific followers, such as Leonardo da Vinci and Johannes Kepler. These exemplars have presented us with evidence of the crucial significance of Kepler's uniquely original discovery of the principled characteristics of the Solar orbits of Mars and Earth, as Kepler did through the use of a "vicarious hypothesis," as in Kepler's uniquely original, more crucial discovery of the principle of universal gravitation.

The particular significance of the content of the process of generating that latter discovery, is that the definition of a universal principle of gravitation required the contrast of two, respectively independent qualities of measures, that of both sight and of the harmonics of hearing, for locating the principle of gravitation outside either of those two attributed sensory metrics. The role of the system of natural musical harmonics pivoted on the natural register-shifts of the properly developed human singing voice in a durable singing voice's range of about  $C=256$ , was a crucial feature of any deep in-

sight into the implications of Kepler's discovery in astrophysics.

The particular significance of Kepler's precedent for treating our immediate topic in this report, is what Albert Einstein recognized as Kepler's implicit discovery of a universe which is, as Einstein specified, always finite, but never bounded.

There is a significant correlative of this line of argument, in what has been the consistent incompetence of statistical forecasting in economics, and also in the similar follies of many persons psychologically conditioned into a relatively numbed state of reliance on the inherently incompetent, merely nominalist, statistical-mathematical methods widely used as "cheap shot," allegedly "standard" forms of substitutes for the traditionally, standard experimental methods of competent modes of scientific investigations.<sup>4</sup>

While financial prices do have their effects in political economic processes, there is no actually physical science in what usually accepted as "mathematical economics."

At this point, we must make time for a crucially important interlude here, a reflection on the subject of the origins and role of the still reigning British Empire: "the Fourth Rome."

Since the fall of what is called, presently, "ancient Greece," in the Peloponnesian War, and the later death of Alexander the Great, the potentialities of the Mediterranean maritime cultures were bent on the systemic moral depravity of that monetarist system known as the original Roman Empire. The causes and effects of that aspect of Mediterranean and later European history, are to be classed under the heading of what was known to the ancients of those and somewhat earlier times as "the oligarchical principle."

Among the so-called ancient Greeks, this oligarchi-

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4. For example, there is no competence in the use of statistical methods as doctrinal pretexts for separating earthquakes and volcanos into mutually exclusive categories, functionally. Similarly, virtually all statistical economic forecasts are consistently, and scandalously incompetent charlatanism. As the presently pervasively bankrupt trans-Atlantic system of economic doctrine of practice demonstrates, there never was, nor is, a correlation in principle between monetary values and the actual ordering of physical-productive practices. To the extent that the economic policies of nations have been competent, they achieved this only by violating every imaginable rule of mere statistical-economic forecasting, as I have done repeatedly, with exemplary success during a span from Summer 1956 to the present most recent date of my forecasting. What most often connects two points within an economy, is a more or less catastrophic interval of purgative bankruptcies.

cal system was embodied in the reign of those classed as "gods," the reigning oligarchy, over the remainder, those captives known as the mere "mortals." Such are also the evil would-be "gods" of Wall Street and London today.

The earlier phase of the imperial system based on this notion of a maritime culture of a system of master and slave, was typified by the role of the infamous advisor to King Philip of Macedon, Aristotle. Aristotle was, most notably, a skilled specialist and researcher in the homicidal political art of poisoning. With the collapse of the third Roman Empire in a so-called "New Dark Age," a fourth Roman empire emerged from the rubble of the 1492-1648 period of religious warfare. That was the new incarnation of a Roman empire based on the Sarpian principle of "The New Venetian Party" of William of Orange, as the kernel of what was soon to become the still existing, present British Empire.

The history of this origin and rise of what was to become that British empire, is of the following crucial significance for the competent understanding of the global crisis-conditions facing modern civilization presently. The following aspects of the matter are now added as follows, to clarify the way in which crucial developments bearing on contemporary policy-shaping of the trans-Atlantic region inherited their importance for today.

### *The Satanic Evil of Henry VIII*

The beginning of that process of evil is to be traced from a certain moment in the life of King Henry VIII, as to be traced from the advent of that already indicated, high-ranking official of the Venetian system, Francesco Zorzi, an impassioned foe of the influence of the Cardinal Nicholas of Cusa.

Zorzi chose to disguise his identity as an official of Venice, through affecting the disguise of employment in London as, for a certain time, the key Venetian controller of England's Henry VIII. Zorzi acted in concert with other members of the same Venetian circle operating under the direction of the infamous Venetian Ten, members of a circle including such Venetian agents as Cardinal Pole and Thomas Cromwell.

It was, as I have already emphasized above, the takeover of Henry VIII, in an operation centered around the King's fiddle-footed impulse to seek a divorce from his Habsburg wife, which transformed the early stages of post-1492 religious warfare into the worst horrors within the entire span of the 1492-1648 interval of the resulting Catholic-Protestant warfare preceding the

Peace of Westphalia.

The crucial consequence of this affair of Henry VIII and his marriages, is the switch of Henry's allegiance, from the Papacy to the English adoption of the Protestant cause. The role in this alignment of the English House with the Protestant faction within the 1492-1648 interval, is the process which established the British monarchy as pivot of the Fourth Roman Empire, and of the Venetian-controlled monetarist-imperialist system which has dominated modern Europe since the period of Zorzi's key role in the Venetian intervention into that process, which would, in historical fact, establish the future role of the British monarchy as the pivot of the reigning world imperial system up to the present date of last report received on that account.

The realization of this destiny embedded in Henry VIII's loins, proved to have been the crucial subsequent strategic development coming out of the 1618 to 1648 phase of continued religious warfare, which was the 1688 arrival of the New Venetian Party's William of Orange, to take over the British Isles from the decadent Stuarts. These British Isles were thus selected to become the intended command post for the new maritime empire which would become, through the curse of the so-called "Seven Years War," the fourth Roman Empire, as that exists still, to the present day.

The rather silly, popular mis-description of that actual British Empire under the heirs of William of Orange, seeks to confuse the reality of the matter by limiting the dupe's view of empire as that of a mere colonialist power, rather than a modern, British imperialist expression of the same principle as the three earlier models of the Roman Empire. The British Empire, like the three phases of the Roman monetarist empire which preceded it, secured its essential quality, as, later, Rosa



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*England's Henry VIII (r. 1509-57) came under the sway of the Venetian spy Francesco Zorzi, whose advice sparked the bloody religious warfare that lasted until the 1648 Peace of Westphalia. (Henry, in a painting, after a lost work by Hans Holbein the Younger.)*

Luxemburg clearly understood the principle of imperialism embedded within the continued existence of modern Britain, as the doomed destiny of a monetarist system of imperial control inherited from Caesar Augustus' scheming on the Isle of Capri, a control exerted through the mechanisms which have been the primary form of existence of the British empire, a system of intrinsically usurious international loans.

That form of that empire, as it has continued to evolve in that same morally putrid direction under Queen Elizabeth II, has been a political imperial force lately distinguished by its post-1971 control over a supranational system of monetarism coordinated through the British Commonwealth, the so-called Inter-Alpha Group of banking organization. The chief target for the destruction of the United States has been flagrantly displayed since 1971, as a systematic process of induced self-destruction of the United States through aid of the follies of those incumbent U.S. Presidencies which have been submissive to

London-defined global policies, as merely illustrated by such typical cases as the disgusting U.S. support for the British colonialist Malvinas War and the related British imperialist scheme of its asset J.P. Morgan for the destruction of the U.S. Glass-Steagall Law by the 1999 act of sodomy expressed as Gramm-Leach-Bliley.

Enter Paolo Sarpi and the birth of the British empire.

### ***Some Relevant History of the Case***

The specific distinction of modern British imperialism from the earlier three forms of Romanticism, is a feature which had emerged around the Anglo-Dutch developments during the course of the 1492-1648 reli-

gious warfare. The notable phase of that turn was situated in the role of Paolo Sarpi's exploitation of the follies of the Council of Trent. The difference emerged in the following leading aspects. Whereas Sarpi adhered to the underlying assumptions of the Aristotelean systems, he recognized, as the Habsburg-led Catholic party of that time did not, that the scientific revolution launched by the great ecumenical Council of Florence, as, most notably, the scientific and related work of Nicholas of Cusa's founding of modern science, had evoked deep-going cultural changes in European culture which could not be entirely reversed.

In fact, it was the Protestant factions, as in France, England, the Netherlands, and Germany, which came under the influence of the forms introduced by Paolo Sarpi which would emerge as the victor by the close of the Sixteenth Century.

So, in the rise of France's great fool Louis XIV, despite the opposition to that folly by the great minister and successor to Cardinal Mazarin, Jean-Baptiste Colbert, the foolish Louis XIV allowed himself to be trapped by the folly of the 1685 Revocation of the Edict of Nantes.

With that revocation of Nantes, the rise of Sarpi's party in Europe was secured as a part of the rise of the power of William of Orange's faction through a key role of the hoaxes of Descartes' faction, as Descartes' role was represented by the Abbe Antonio Conti who was assigned to serve as the creator of the black magic hoaxster Isaac Newton, and, thus as leading adversary of Gottfried Leibniz and Leibniz's influence during the course of the first half of the 18<sup>th</sup> Century.

This turn into France's depravity came with the ominous death of Cardinal Mazarin and the betrayal of the Edict of Nantes under the foolishly ambitious Louis XIV. Louis XIV's folly prepared the way, through perpetual warfare, for that later Seven Years War and the 1763 Treaty of Paris which would establish the British



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*The failure of France's Louis XIV to take the wise advice of his minister Jean-Baptiste Colbert, led to the 1685 Revocation of the Treaty of Nantes, which had allowed religious toleration in France. Thus was the rise of Paolo Sarpi's Venetian party secured. This painting, by Henri Testelin, is titled, "Colbert Presenting the Members of the Royal Academy of Sciences to Louis XIV in 1667."*

empire as the Fourth Roman Empire, from that time to the present date. As Germany's greatest Chancellor, Bismarck, had foreseen the British empire's motive in what was to become two "world wars" and more, that "Seven Years War" which had actually first secured the British monarchy's position as an emergent world empire, has been the policy which has shaped most of the worst of those strategically tragic events which have ruined the world since the virtual "loss of the horseshoe nail" which began the selection of the British Empire by Venice's use of the pathological personality embedded in Henry VIII.

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## II. Science and the Soul of Man

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Consider the case of a key figure in the effort to shape the outcome of the world of the Sixteenth Century, the case of the founder of competent forms of modern European strategy, Niccolò Machiavelli. Here, on this occasion, science, as defined by the exemplary Cardinal Nicholas of Cusa, had deeply touched the soul of man.

Machiavelli, who must be understood as born five years after the death of Nicholas of Cusa, and twelve years prior to his crucially significant acquaintance with Leonardo da Vinci, had been a significant, and, intellec-

tually, the ablest figure in the government of the Republic of Florence, until the crushing of that Republic by the military victory of the grown-decadent Medici family's household over the Republic. Notably, the literary product of Machiavelli's life-span (1469-1527) must be compared today with the reign of that great foe during those events shaped in large degree by the influence of the circulation of Machiavelli's writings of that time throughout and beyond the span of the intrinsically evil monarchy of England's Henry VIII (d. 1547). For reason of that success, Machiavelli, the leading, and most influential genius in military and related strategy of that century, was hated, hated because the work of his superior mind was so greatly feared in England, as in certain other centers of power, during, and beyond the space and time of the principal events of the mid-Sixteenth-century Europe.

Since that time, the study of the work of Machiavelli was employed to present the foundations of modern strategy in the leading programs of training of military and related intelligence professionals in the very definition of the name of "modern strategy." It was for that same reason, that Machiavelli had become so much hated and feared in Britain, largely still to the present date. At the least, this has been the case up to the point of the 1989 collapse of the Soviet system under the most unfortunate, and hence widely despised as an ostensibly treacherous figure, Mikhail Gorbachov: the so-to-speak "Tricky Dick" of the Soviet Union's history until the present date.



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*Niccolò Machiavelli was the leading genius in military and related strategy of the Republic of Florence, until its crushing by the then-grown-decadent Medici family, in the early 16th Century. Machiavelli, portrait by Santi di Tito (late 15th Century); above, the courtyard of Palazzo Medici-Riccardi.*

Nonetheless, amid all the relevant, usually muddled chatter about the subject of Machiavelli, both in generally published observations, and as a founder of modern strategy, I must say, that from the standpoint of my own experience in the field of intelligence respecting economic and related strategy, very few presumed specialists, even today, have actually grasped the actual principle underlying the root of the effectiveness in what has proven to have been the force of his writings.

Respecting what I have written here on the subject of strategy in this chapter thus far, there is no mere accident responsible for the commonplace foolishness of most peoples and governments in the matters of the results of gambling in finance, public policy, and warfare, of attributing the alleged genius to what passes in an often duped public opinion's zeal for admiring alleged "success." "Success," for many, especially the election of a worse than silly choice for President, or a somewhat kindred event in Europe, is the image of the brass-ring in a "merry-go-round," something gained, but rarely actually earned. Few cases expose that sort of pop-

ular delusion as thoroughly as the celebrated figure of Machiavelli. Actually, the lesson is rarely seen to have been actually learned, that success and failure exist not in the momentarily attained trophy seized, nor in the eating, but, in frequent cases of remembered French and other elections, in the kind of belly-ache which the putatively victorious party has gained for itself.

As President Charles de Gaulle might have agreed,

in one sense of ironies, or another.

Competent strategy, when designed for actual benefit of mankind, rather than the winning of some silly, or worse sort of mere game of sport, lies in the deserved immortality of the enterprises served by those who served the needed benefits of mankind. Contrast the victory of the Adolf Hitler, who had been chosen for his place in the history of power by both the Bank of England and such Wall Street enterprises as the Wall Street Brown Brothers Harriman represented by the same Prescott Bush who was to have fathered two generations of worse than useless U. S. Presidents George H.W. and George W. Bush. True achievement is to be located in the benefits expressed as advances in the general welfare of mankind considered as a whole.

The actual content of the higher object of strategy, as Machiavelli's genius is centered on this feature of his published writings, is the advancement of mankind. That can mean the same intention expressed by Aeschylus in admiration of the character of Prometheus' service to the cause of all mankind. "Where is thy victory!?" Where is death's sting?!

Such is the essence of the genius expressed by the work, and the influence of the work of Niccolò Machiavelli which has been his contribution to human understanding of the proper choice of purpose which must underlie all notions of strategy.

### ***Sarpi and Russell's "The New Aristotle"***

As a certain British diplomat candidly remarked in a message to me on the subject of Bertrand Russell, Russell is fairly described as the most evil public figure of the Twentieth Century. What better could be said of the Russell who, in September 1946, prescribed immediate plans for the launching of a pre-emptive nuclear destruction of the Soviet Union, as if a deceased Adolf Hitler's intentions against the Soviet Union were to be continued, Winston Churchill style?

At that time, Russell and Company had presumed that the United States and Britain would have secured a relevant arsenal of nuclear weapons before the Soviet Union had developed a comparable arsenal. In fact, the Soviet Union had not only acquired some use of the designs of the Anglo-Americans, but, through the influence of the great genius of Academician V.I. Vernadsky in educating the Soviet scientists in its own independent quality of nuclear-weapons capability, the Soviet Union was ahead of the Anglo-Americans in relevant aspects of deployable potential.

For some failed intellectuals in Anglo-American circles, Russell appeared to have abandoned "preventive nuclear warfare," for the sake of a desire for peace. Of such ironies intelligent opinion says, the snake has not abandoned his venom, but, simply, changed the tactics selected for an even more monstrous expression of the same goal, this time for thermonuclear pre-emption, instead of air-dropped nuclear-fission bombs. Thus, we had Russell's shift to what amounted, in effect, to the intention of threatening a thermonuclear Armageddon, instead of the earlier scheme for unprovoked nuclear weapons bombardments. That for some silly people, such as Russell's silly dupes, is a means for avoiding war.

Those who actually understood the peculiar twist of evil which might be met among Russell's cronies in the cult of systems analysis, as I did over the course of the 1960s and beyond, would not be fooled. They would not be fooled by the schemes associated with the Russell-steered grounding of the International Institute for Applied Systems Analysis (IIASA). The kind of peace depending upon the adoption of vast schemes for human extinction, such as those of Russell's intention, can not be ultimately distinguished, in any essential way, from the mass-genocide which is the avowed policy of the devotees of British consort Prince Philip's proposal for mass-extinctions advanced under the title of the "vast population reductions" of the World Wildlife Fund (WWF). Nuclear, or thermonuclear extinction, or the schemes for genocide premised on "environmentalist" hoaxes, as both were stoutly proposed by Bertrand Russell, as in the genocidal doctrines promulgated by the Barack Obama Administration now, as in the policies of Adolf Hitler earlier, are all the same policy, if and when policy is considered in the light of the results of its practice, in the end.

Consider the similar case of the effort to ban nuclear power, especially when that proposed policy is combined with the fraud of pretending the reduction of "carbon emissions" is anything but another trick for promoting genocide through that expression of mass-homicidal, biological warfare against the size of human populations, schemes for "population reductions" far beyond anything ever attempted the Adolf Hitler regime—but not Hitler's backers in the Bank of England and, also, in such U.S. Wall Street locations backing Hitler's rise to power in Germany, such as Brown Brothers Harriman's Prescott Bush, who was the father and grandfather, respectively, of two rather silly, subsequent Presidents of the United States who did not like

me very much, to say the least.

Turn attention back to the case of Paolo Sarpi to find the deeper meaning of all that I have introduced into this present chapter, thus far. Focus on the crucially relevant implications of the humanist policies of both the founder of modern science, Cardinal Nicholas of Cusa, and the patriot Niccolò Machiavelli. Start with the matter of the relevance of the case of Cusa to the case of Machiavelli's influence as a strategist.

### ***Precursors of Cusa's Revolution***

The actual birth of modern society had been begun, implicitly, by the role of Charlemagne's "geopolitical" revolutionary shift of the region associated with such parts of today's Europe as today's territory of France and Germany, and some adjoining areas.

There are two most critical elements of background chiefly to be considered.

The first is located in a certain evolution of the Christian church best known today for the role of St. Augustine, and the movement of the leading centers of the Augustinian confession, via such as Isidore of Seville, and, then, later, into the fabled "Irish monks," and, thence the honest efforts to civilize England's Saxons, and, beyond that, the ecumenical expressions of the policies and practices of Charlemagne who formed an alliance against a decadent Byzantium with such leaders of the Arab Renaissance as Caliph Haroun al-Raschid. This pattern formed the arrangement through which the common cause against a degenerating Byzantine form of the Second Roman Empire, as typified by the cooperation between Charlemagne and Haroun al-Raschid, threatened to bring about the destruction of the Roman empire, and to create the basis for a truly civilized form of progress in the region of a Mediterranean bounded by Europe, west Asia (including ancient Iran), and North Africa.

Secondly, not only did Charlemagne establish the first serious pioneering in the development of the essential physical conceptions of a modern nation-state economy; but, the crucially revolutionary element of physical practice within that, was what is fairly identified as Charlemagne's geopolitical revolution against the maritime form of imperial tyrannies represented by all principal expressions of what had been the original Roman Empire of Caesar Augustus:

*the maritime form of social-class basis of oligarchism on which the fabled legacy of the social*

*class of the Olympian, anti-Promethean Zeus has been premised, to the present day.*

The central structural feature of Charlemagne's geopolitical revolution, was the creation of a network-system of rivers and canals of the type which would, later, be the form of structure of rivers and canal-building expressed by the development of the thrusts for trans-continental railway systems of North America and continental Europe. The power expressed by such trans-continental inland developments lay in both the giant advances in the physical-economic productivity of the relevant inland regions, and the creation of a potential strategic system which outflanked, by land, the end of the virtual physical-economic power of maritime tyranny of the original Roman Empire and its successors. This was the same issue, during the period of Charlemagne's reign, which the spread of the U.S. achievement of the world's first trans-continental railway system represented as the threat of the doom of the British empire, which London recognized in the American-prompted economic revolution based on trans-continental railway-building in Germany and Russia, set off in the immediate wake of the 1876 Philadelphia Centennial celebration.

Thus, the British royal family's 1890 ouster of Germany's Chancellor Bismarck, was correctly recognized by Bismarck as a "new Seven Years War" which was actually launched with the treaty, between the British Prince of Wales and Japan's Mikado, for aggressive warfare against China, Korea, and Russia. Later, in the post-World War I early 1920s, that Britain-Japan alliance adopted the U.S. Naval base in Hawaii as a target for total destruction, as the case of the court-martial of U.S. General Billy Mitchell attests to the treasonous elements in even certain parts of the U.S. military.

For the British empire, still today, the geopolitical war against the United States, Germany, Russia, and China, is still fully ongoing geopolitical policy still today. The assassination of U.S. President John F. Kennedy, done to eliminate President Kennedy's stubborn blocking of a U.S. war in Indo-China, was repeated, in the assassination of a Robert Kennedy whose nomination and election as a new U.S. President would have been virtually assured, but for the fact that Robert Kennedy, too, was assassinated in what the British geopolitical interest would have considered as a "timely fashion."

Some Europeans, and others, still to this day, can not bring themselves to face the elementary fact of

actual history, that the British empire, was always, since the reign of William of Orange, even, implicitly, the time of the mission of Venice's virtual chief of intelligence for the Council of Ten, carrying out the role implicitly assigned to the British monarchy by the skein of consequences leading from the matter of the divorce of the homicidal lunatic known as Henry VIII.

The related folly among the leaders of the nations of Europe, and also most of our recent cases of often blustering, but almost always weak-brained U.S. Presidents, such as 25<sup>th</sup> Amendment, Section 4 candidate for peremptory retirement Barack Obama, is their stubborn folly of failing to recognize that the system of Europe, from the time of the founding of the original Roman Empire to the British Empire of Queen Elizabeth II today, is not an expression of a national strategic interest, but a global, imperial one. The relevant power lies not in what nations believe; it lies, instead, in the manner in which silly mere monarchs and the like refuse to recognize the elementary fact of European history in the large, that the Roman Empire was, and remains an empire, with an imperial, monetarist reflex as its perceived imperial interest, still today. Even when Queen Elizabeth II insisted on this point of British imperial interest "within the Commonwealth," as in her address occurring in the context of the vote on the failed Danish referendum.

The power of the empire depends upon the ability of the monarch of the empire to preoccupy the loyal member nations of the empire with the customary practice of killing one another, that at a rate, and in sufficient numbers, to weaken the relevant members of the empire sufficiently to keep the contending parties tied to the imperial apron-strings. This is what was done to the United States by means of that assassination of President John F. Kennedy which was used to destroy the sovereignty of the United States by luring it into the lunacy of a decade of that futile carnage in Indo-China against which General Douglas MacArthur had warned a President Kennedy who was solidly committed to preventing the folly of sending the U.S. into the ruinous adventure in Indo-China.

When we consider the background of the strategic effects of the assassination of a President Kennedy who refused to allow the wasting of the existence of the U.S.A. in a needless, wasting, geopolitical war in Indo-China (as the Soviet Union enjoyed a kindred folly in Afghanistan, then as now), we should be able to understand the implications of the threat which Char-

lemagne's "geopolitical" revolution introduced to a Europe of the successive Roman empires.

For the Roman imperialists, the issue in all cases was principally twofold. The first issue was the mere fact of any land-based "geopolitical" threat to the power of the succession of Roman empires. The second, was the fact that the victory of the opponents of the imperial systems, would eliminate the existence of supranational forms of oligarchism on this planet, probably forever. This is precisely the issue as expressed in explicit terms by the British form of the catastrophic process of internal decay of the number, the minds, the morals, the bodies, and the territories of the global British empire of today.

What we have considered in this chapter until now, has been, as noted in passing, the turmoil associated with the millennium-and-a-half from the founding of the Roman Empire until the great ecumenical Council of Florence: the period of almost the entirety of a European-centered culture's history during the period preceding the life of Jeanne d'Arc and that great ecumenical Council of Florence which was chiefly the beginning of modern European civilization. Modern European civilization has been, in all essential respects, an ambiguous reaction, for, and also against, to the fact of the central impact of the great ecumenical Council and of its most exemplary historical figure, the Nicholas of Cusa who has been not only responsible for most of the great cultural revolutions in economy, art and science introduced by modern Europe. For the rest, the question to be asked, is "What do you have yet to discover?"

To situate the role of Cusa's founding of modern physical science, economy, and Classical artistic composition, through aid of such exemplary followers as France's Louis XI, Leonardo da Vinci, Raphael Sanzio, Johannes Kepler, and Gottfried Leibniz, we must include the follower named Christopher Columbus. Columbus' own role in the discovery of the Americas is ironical in several ways.

First, Columbus's discovery of the finiteness and form of the Earth was based on a discovery based on a policy of Nicholas of Cusa. This policy depended to a large degree on the work of the ancient scientist, and leader in maritime researches, Eratosthenes' measurement of the Earth's size. The estimates provided to veteran Atlantic mariner Columbus by the associates of the then already deceased Nicholas of Cusa, were successful in bringing the work of discovery to a certain level of accomplishment, but the fact that the Spanish and Portuguese operations in the Ameri-



*Columbus's discovery of the New World was undermined by the policies of the Habsburg dynasty in the Americas, until the colonization of New England by the Mayflower party, and the founding of the Massachusetts Bay Colony. Left: Columbus; below: "The Mayflower Arriving in Plymouth Harbor," by William Formsby Halsall (1882).*



Pilgrim Hall Museum; Plymouth, Mass.

cas were under the overlordship of the Habsburg dynasty, ruined much of the effect of the discoveries. So, the actual intention of Cusa was postponed until the combination of the colonization of a territory of New England in the Americas by the combined actions of the Mayflower party and the founding and original development of the Massachusetts Bay Colony under the leadership of the Winthrops and Mathers.<sup>5</sup>

Thus, Columbus succeeded as an explorer, but his

5. The French colonization of Canada, effected under the conditions provided by the part of Jean-Baptiste Colbert, suffered, as did the Massachusetts colonization, by the advent of the influence of the New Venetian Party's William of Orange. In France, the death of Cardinal Mazarin and the accession of Louis XIV did much, that over the strong objections of Colbert, by the defective Louis XIV himself in entangling France in the lure of the Netherlands-based New Venetian Party and the related influence of both of the prominent charlatans René Descartes and Abbé Antonio Conti.

accomplishment was transformed into failure by that Habsburg influence over the Iberian Peninsula which was otherwise expressed by the 1492 mass expulsion of Jews from the Spain which had been the most significant of the areas of the surviving relations among Charlemagne's France, Haroun al-Raschid, and that religious peace among Christians, Islam and Jews in the Peninsula which had been a heritage from the time of the life of Charlemagne and Haroun al-Raschid.<sup>6</sup> That development signaled the full-throated outburst of the Inquisition, a development which was used to turn all of western and central Europe into the hell-hole of mass-murderous bigotry which was the chief tool of bloody tyranny which provided the conditions for that period of religious warfare throughout Europe of 1492-1648.

That reign of religious warfare was chiefly the product of a Venice-led determination to destroy the work of the great ecumenical Council of Florence, and the attempted suppression of the eruption of modern science centered in the heritage of the labors of Nicholas of Cusa.

Yet, that period of religious-rooted wars as if among ferocious beasts, rather than peoples, was required to destroy a

modern Europe sufficiently, both economically and morally, to bring on the establishment of the monetarist system specific to today's British Empire. That established a system which is, essentially, the Fourth in a series of Roman Empires since that created on the Isle of Capri between the future Caesar Augustus and the priests of the cult of Mithra. The essence of that evil, can be reduced to a single working sort of religious notion, the belief in monetarism—"the gospel according to lucre," not Luke.

Yet, science was not entirely destroyed in this madness which reigned, as if almost absolutely in respect to extent, during the 1492-1648 interval. In fact, the recent developments in science since, implicitly, the death of

6. The expulsion of the Jews was an atrocity in and of itself; but, far worse was the murderous state of relations among sundry confessions which that expulsion of the Jews signalled, and also promoted.

President Franklin Roosevelt, and that in both the Americas and Europe, have brought civilization itself to the present prospect of an immediate and pervasive new dark age of mankind, comparable to, and similar, but potentially deeper than, and more prolonged than that of Europe's Fourteenth-century "New Dark Age." "Green" has become the color of a putrid mass of rotting, dead human flesh.

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### III. Is There a Chance for Man?

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Turn our attention back to the implications of the role of Niccolò Machiavelli. Why did both the British monarchy and the Habsburg faction not merely hate, but dread Machiavelli so fiercely as they, at least the relatively sentient ones, have generally continued to do up to the present time?

There are, chiefly, two standpoints of reference for identifying the role of Machiavelli in modern European history. For both views of the matter, the needed answer for the questions provoked by the stubbornness of his achievements, lies in a consideration of the proper, but, nonetheless, ironical set of meanings of the concept of "the flank" in warfare. Does the successful flanking force often seem, to those who had been its intended victims, to be a dark force, as if like the fabled *Erinyes*, striking suddenly out of darkness, whose very presence, although in relatively limited numbers, sometimes throws its targets into a state of hapless confusion, as in the famous case of the role of Frederick the Great's hand at Leuthen?

Take the exemplary case of France's Louis XI, who, ultimately, virtually bankrupted the greater force of his adversaries, as if by luring them with bribes into the trap which became their state of despair. In the end, it must have seemed to Louis' opponents: "How did such men as ourselves seem to lose their underwear without any of them willfully removing his shirt, trousers, and boots?"

The answer, in this case, is, of course, "human creativity," or should we not torture the wicked by saying, "the spirit of Promethean fire"?

In Louis' case, the price of peace was more than



*"Does the successful flanking force often seem, to those who had been its intended victims, to be a dark force, as if like the fabled Erinyes, striking suddenly out of a darkness whose very presence, although in relatively limited numbers, sometimes throws its targets into a state of hapless confusion, as in the famous case of the role of Frederick the Great's hand at Leuthen?" Shown: "Frederick the Great Addresses His Generals Before the Battle of Leuthen," by Adolf von Menzel (1858).*

repaid by that increase of productivity of the French population, by avoiding not merely certain great costs of warfare, but using the seemingly costly peace for the relatively far richer harvest which that same peace made possible. Louis' brutish Norman and kindred adversaries stole, but did this, repeatedly, by increasing the relative amount of French national income to French bribes of its enemies, available to be stolen by them less, and less, and less, as was done by the policy of Henry VII, who chose Louis as his model, in his deployment against the evil Richard III. Louis XIV was no worse than the silly, sick fool and dummy which U.S. President Barack Obama has shown himself to be. So, in the course of the warfare under Habsburg leadership, from 1492 to the 1648 Peace of Westphalia, the man who knows only how to rape and steal by brutish means, as in the case of the British puppet Barack Obama presently, lacks, thus, the ability to generate those science-driven gains in intensity of relative energy-flux density through which the power of peace would permit the means of creativity to flourish.

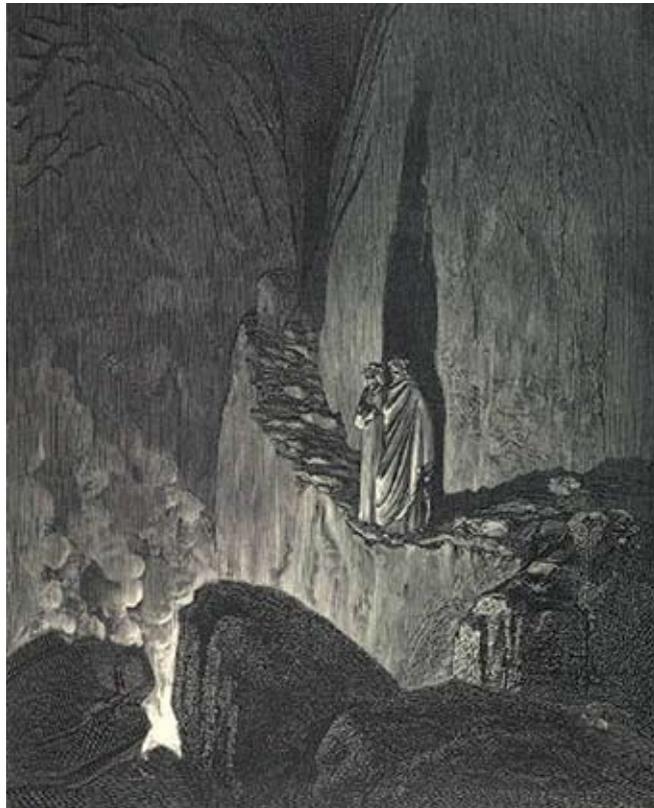
So, the martyred Jeanne d'Arc, whom the wildly perjured English party baked alive into her death, inspired the process leading into the triumph of martyrdom in the subsequent great ecumenical Council of Florence. It is there that you may discover a recognition of the source of the fear which had awed and horrified

the powerful forces mustered as the foes of Machiavelli up to the present day; there you find the root of the dread of the power of the Peace of Westphalia among my own, and also your personal enemies today.

Is that not precisely the lesson which neither U.S. President George W. Bush, Jr. nor Barack Obama was ever able to demonstrate? Both of them, and their accomplices, have acted precisely as did the man who ate the goose which had been producing the golden eggs, as that man might have cried out: "That was the liberation of my freedom to choose!"

In saying that, I have exaggerated nothing. I cite the exemplary case of that properly infamous scamp known as the Adam Smith who, like the figure of Charles Dickens' "Artful Dodger," ran dirty errands for that Old Fagin properly known as the modern New Venetian Party puppet Lord Shelburne! What should be written of the wretchedness of such sometimes powerful ogres as the model of a British imperial monarchy which, in the end, must go down like the Emperor Nero, or like the figures which Dante Alighieri portrayed in the *Inferno*? Have there not been moments when we are afforded the opportunity of a glimpse into the curiously awesome power which even the hated name of Machiavelli came to represent to the forces of evil, even by a shudder or two, when that subject-matter arises in the course of certain conversations among the dwindling ranks of the literate, still today?

There is a power, like that to which Percy Bysshe Shelley alluded so passionately in the closing paragraph of his draft of his **A Defence of Poetry**. That exhibition of power presented by Shelley's piece, had awed me in the early years of my adult manhood, and I had never since then lost a relevant sense of awe of Shelley's grip



*"Abandon all hope, ye who enter here," should be written on the portal to each of the four Roman empires, as it was on the gate to Hell, of Dante's Inferno. Shown: "The Punishment of the Evil Counselors," Canto 26, Circle 8; engraving by Gustave Doré (1864).*

Classical compositions, including that of Classical modes in statecraft and science since even earlier than Aeschylus and Plato, is not a fairy story. The opposition to Plato has been, chiefly, blind faith in the experience of a sense-certainty which is that great debilitating lie which has destroyed many nations, and, especially great empires, until now.

I must emphasize the fact, for your attention here, in the following way.

### ***The Thesis at Hand***

It is as I have taught, especially in respect to my role as a remarkably successful economist within the range of the class of matters to which I attend. I have taught that the greatest common folly among the putative economists and the national regimes which they actually, or merely pretend to serve, is their pathetic appearance of placing faith in the statistical doctrines of sense-certainty, that done most notably in respect to the functions of forecasting. I have rarely known of an al-

on the power of prescience he exhibited on the occasion of his writing those lines, a sense of him which has gripped me over the course of the subsequent decades.

It is the same power which is implicit for the adequately witting in the argument of Bernhard Riemann's 1854 habilitation dissertation. Today, I have come to know it, not perfectly, but intimately, and rather well. Today, I have sufficient evidence at hand to know that there is nothing which can not be made to become scientifically knowable respecting the deep principle of the universe whose presence the shadowy apparition unleashed in Shelley's concluding paragraph bestirs among the witting.

The hand of metaphor, as expressed in all great

leged economic forecaster of some actual prominence, who was not pathetically wrong in his, or her pretensions. On this account, such persons are to be condemned either for their affection for “sense-certainty,” or, worse, by some impassioned faith expressed in their pretending to ride in pompous triumph upon a dead horse which had never actually lived, a dead horse called statistics.<sup>7</sup>

Consider the actually profound issue of a matter of scientific fact which customarily befuddles both the customarily common set of those who are to be classed as self-duped contributors and duped readers of what passes for the editorial pages of such as **The New York Times**. Theirs has been, and continues to be a delusion centered in the experience of some mixture of portions of variously actual, or merely feigned sense-certainty. The thematic point which this argument of mine implicitly subsumes, as since the opening of this present report, is my well-informed insistence on the fact of the specific essence of popular folly, among the presently learned and unwashed alike: a folly which is their obsessive attachment to the notions of sense-certainty. Even in their lies, which are often premised upon faith in that hoax of the so-called “true believers,” which is even a merely pretended faith in the presumption of the magical powers of sense-certainty.

The truth of the matter is to be seen in the invisible foot which has left its pattern of footprints across a muddied field. If you are among the truly witting, must you not weep in pity for those who believe that it is the footprints which created the foot? They express their outrage: “I do not believe in an unseen foot,” and, therefore, footprints prove only that statistics show that only footprints actually exist; they argue that, “therefore, an unseen foot could not actually exist!”

They do not believe in the actual duplication of the cube by Plato’s friend Archytas. They believe in the delusion of the squaring of the circle which had reigned in most relevant quarters until Brunelleschi’s physical-experimental demonstration of the ontologically physical reality of the physical principle of the catenary. They believe, solidly, in the existence of mystically emptied portions of physical space. They do not believe in the physically proven principle of Kepler’s uniquely original discovery of gravitation. Their lurid superstitions

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7. Worse than that would be the “Cambridge systems analysis” of the associates and dupes of Cambridge’s Bertrand Russell, such as those associated with the International Institute for Applied Systems Analysis (IIASA).

reach as far as denying the existence of crucial-experimentally demonstrated universal physical principles, in favor of mere statistics; they believe in the magical powers of “statistics” over even the universe as a whole. One might suspect that some more knowledgeable of the gypsy tea-leaf readers might have spent a profitable night or two in laughing at the pregnant irony implanted in even the mere name of “broker.”

### *On the Subject of Human Creativity*

First of all, the so-called “Second Law of Thermodynamics” was never anything better than an outright lie. Among the most relevant, and also convincing pieces of evidence to this effect, has been the known record of the order of succession of known living species on the surface of planet Earth itself, a body of evidence implicitly covering many millions of years of the attributable origins and development of living processes on Earth.

The expert scientific evidence assembled by my associates has been, that the principle of life itself has used its own nature to transform the accessible depths and upper regions above the surface of the Earth itself in a pattern which transforms the conditions on the Earth in such a fashion that higher forms of organization of living species and their interactions are the characteristic of the history of life on our planet.

I may report that it has become a settled scientific fact among unblemished scientific opinion, as the work of discoveries by Academician V.I. Vernadsky has demonstrated his richly insightful genius as a follower of Bernhard Riemann in these matters, that, whereas all known forms of existence are expressions, in principle, of anti-entropic ruling principles of existence, the power of willful creativity on this account has been unique, in our experience to date, to the special nature of the human individual.

All forms of life are, in principle, anti-entropic in their subsuming, essential quality of principled ordering; but, only mankind, the human individual, is known presently to us as manifesting the potential of voluntarily generated higher forms of physically efficient knowledge of an endless principle of willfully ordered anti-entropy by the action of the individual human mind.

This fact, points our attention directly to both the role of Nicholas of Cusa in the progress made possible for modern society, and in the influence of Cusa’s principle on the role performed by Niccolò Machiavelli on behalf of the effort expended for the establishing of that higher republican order of political society which both the cause

of the original Republic of Florence, and of his own role expressed in his principal writings have advocated.

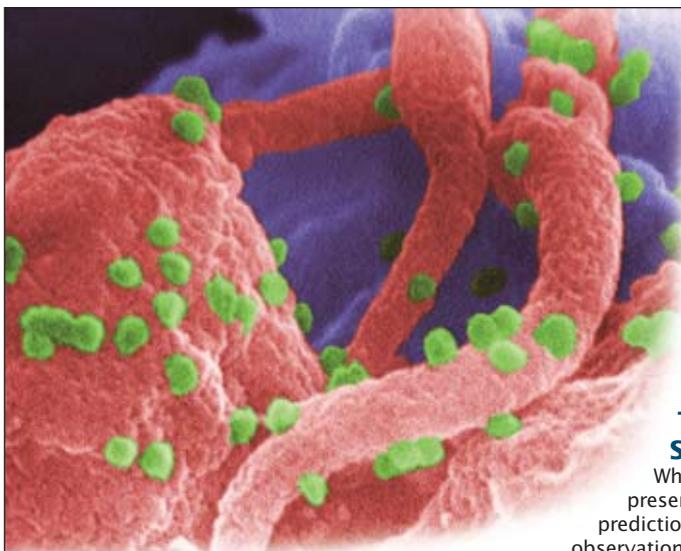
The essential feature to be adduced from those writings of his, has been the mobilization of the creative powers of labor of the human individual and within society on which depend man's powers to increase the willfully creative intellectual capacity which happens to coincide in nature and intention with the effective increase of the power of mankind to fulfill such instructions as that informed view of specifically human behavior bearing upon the assigned destiny of mankind which is set forth within the opening chapter of **Genesis**.

With the work of the exiled Machiavelli, the power incorporated in the principled basis for that injunction became both a principled obligation of mankind, and also a definition of the principle of action by, and within society, through which the end and means of the truly constitutional principle specific to human existence are united as if by the fingers of a common fist. In other words, the means and purpose of warfare must be united in an at least imperfect realization of this intent: as General Douglas MacArthur expressed this in his advice to President John F. Kennedy on avoiding all extended possibilities of land wars in Asia.

There were those who enjoyed the opportunity for that war, which would have been impossible without the assassinations of both President John F. Kennedy and his prospectively electable brother Robert later. It was by the unleashing of that war, for which the assassinations of the two brothers were crucial, that the United States was induced to destroy itself, step by step, as has been done, up to the present moment when the very continued existence of decent human life on this planet is in presently immediate doubt, for as long as the poor sick President Barack Obama remains in that office.

The issue is the indispensable role of the properly universal physical principle of human creativity, expressed originally in great works of Classical artistic composition, and, as a result, the flourishing of great advances in the science-driven increasing of the applied energy-flux density of society, per capita and per square kilometer, is rendered possible. Without that Classical cultural and scientific progress, human society as we have known it until now, were doomed to an early extinction, hopefully a temporary such distinction.

With that much said, you should now consider yourself informed respecting the truth about Niccolò Machiavelli.



## 21<sup>st</sup> CENTURY SCIENCE & TECHNOLOGY

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# LaRouche Science Team Launches ‘Operation Kepler’

April 16—In the weeks immediately following the devastating earthquake and tsunami which hit northern Japan March 11—a catastrophe which heralded the potential of a civilization-threatening series of huge earthquakes around the planet in the coming period—Lyndon LaRouche launched “Operation Kepler,” as a crash program for scientific collaboration which could deal with this crisis. It is on the success of this proposal for creating international cooperation for the most advanced scientific exploration of Earth, the Biosphere, and the Solar System—a true scientific renaissance on a world scale—that mankind’s survival depends.

On April 11, LaRouche’s Political Action Committee issued a call to arms on this project, pointing to some of the extraordinary videos now posted on the LPAC website ([www.larouchepac.com](http://www.larouchepac.com)), with leading earthquake scientists and the LaRouche Basement Team, which are dedicated to furthering the effort. This statement provides the most appropriate introduction to the transcripts of the two videos which follow.

## **Man’s Next Evolutionary Leap**

“Fifty years have now passed since Man first stepped into space. As we celebrate this great evolutionary leap accomplished by our species, we should affirm in ourselves that man’s presence in space is not a choice or a

matter of opinion; it is the only true pathway to the long-term survival of the human race—a responsibility endowed on us by our Creator to live and work as co-creators of this universe, pulling ourselves up to successively higher scientific platforms in the course of our immortal mission to understand and improve that universe, and ultimately, to subject it to our creative will. As we face the now impending existential test, as to whether our species has the moral and intellectual fitness to survive a coming storm of great earthquakes and the like, this extraterrestrial imperative takes on a hue of urgency that makes it the defining political agenda for humanity as a whole right now.

“It is now undeniable that phenomena that we witness here on the Earth are inseparable from processes galactic in scale. In fact, the most significant developments in the biosphere—the periods of both mass extinction and expanded speciation—are showing themselves to be directly tied to galactic events, occurring on an approximately 62-million-year cycle, as our Solar System bobs up and down through the galactic plane. In addition to these long-wave processes, we are also now seeing that significant evidence exists which correlates dramatic seismic events, such as the recent wave of M8 earthquakes and greater, with solar activity such as massive flares and coronal mass ejections.

“There is much that we do not yet know about these processes, but, as we enter both a period of intensified

solar activity, and, more broadly, as our Solar System swims back into the more volatile and dangerous regions of the galactic plane on its 62-million-year cycle, we must ask ourselves: Why are we, as cognitive human beings, not fully committed to monitoring and attempting to understand these processes? Why instead are we actively dismantling and taking down our capability to do so?

“In the wake of the disastrous earthquake and tsunami in Japan, international statesman Lyndon LaRouche called for the launching of what he dubbed ‘Operation Kepler,’ an international partnership among sovereign nations for the consolidation of a design for a global array of space-based and ground-based monitoring devices, for the measurement and tracking of a vast array of unseen processes, which would provide scientists with the ability to predict and foresee impending earthquakes and other seismic activity. This program would be based on the method of scientific insight demonstrated by Johannes Kepler, in his *The Harmonies of the World*, in which he utilized the contradiction between the images of the universe provided by two different human sense organs—in his case, sight and sound—which gave him the ability to discover the unseen principle of universal gravitation.

“A modern-day Operation Kepler would extend this method of scientific discovery into the vast array of extended sensory instruments which mankind has the power to develop, to ‘see’ processes which are completely invisible to our five biological senses. By triangulating among these artificial senses, all tracking different proven earthquake precursors, both terrestrial and extraterrestrial, and interpolating from the contradictions which arise among them, mankind would be able to derive a view of reality completely unseen by any of the individual measuring instruments from among the complex composing this globally extended sensorium. With this insight, we would be able to competently predict the occurrence of earthquakes, tsunamis, and other seismic events, and mobilize rapid, large-scale evacuations and relocations, thus saving countless numbers of human lives. Scientists such as Sergey Pulnits, Pier Francesco Biagi, and others have presented crucial material demonstrating that these earthquake precursors are indeed detectable and fully identifiable.

“This initiative, Operation Kepler, for the urgent mobilization of a global scientific and political col-

laboration—one based not on competition among various blocs of nations, but truly founded for the purpose of achieving the common aims of mankind—is the basis for a total revolution in international affairs, putting on the table the urgent necessity of both an anti-usury Glass-Steagall credit system here in the United States, coupled with a global fixed-exchange-rate system internationally, and the immediate expulsion of Barack Obama from the Presidency, on the grounds of Amendment 25 Section 4 of the U.S. Constitution.

## A Global Monitoring System

“There are already signs of interest from various nations to cooperate in such a scientific program, such as recent suggestions made by Roscosmos Director Anatoly Perminov for the creation of what he calls ‘an international global aerospace monitoring system,’ pooling potential earthquake precursor data currently being collected by many separate nations for use by centralized scientific teams. There are also nascent studies being conducted by small but courageous bodies of scientists into solar-terrestrial and galactic-terrestrial relationships which have significant relevance for the science of earthquake forecasting, as cited with the cases of Biagi and Pulnits. These scientific teams need merely to be unleashed, with the sufficiently abundant funding to allow them the freedom to experiment and make new and revolutionary discoveries in yet-unexplored domains of physical science.

“So, as we celebrate the fifty-year anniversary of man’s first expedition into interplanetary space, which U.S. astronaut Ron Garan, one of the crew of three aboard the Soyuz spacecraft which just docked with the International Space Station, described as ‘a giant leap in our evolution as a species,’ let us affirm in ourselves the true nature of the human being. We are the only creature which has the power of willful upward evolution. Just as mankind, in the person of Yuri Gagarin, made one willful evolutionary step towards a galactic identity for the human species, let us now make another such voluntary evolutionary leap, by dedicating ourselves to the creation of an expanded sensorium, as LaRouche’s Operation Kepler defines it, allowing us, first, to exert willful control over predicting and mitigating the destructive effects of earthquakes, tsunamis, volcanoes, and the like, and (eventually) to developing the power and understanding to control, and perhaps, ultimately, prevent them.”

# Russians Propose Global Monitoring

April 18—“How many victims do we need?” asked Prof. Sergey Pulinets, before we decide to set up a global warning system on earthquake/tsunami activity. In fact, the Russians are already working on setting up that system, which would make the difference between life and death for countless people.

Starting in 2007, a number of Russian scientists began to organize for an International Global Monitoring Aerospace System (IGMASS), which would bring together scientists worldwide to create a system of global monitoring against natural disasters. The first working session of the group took place on Sept. 27, 2010. At present, most such precursor research is done by scientists in their private capacity—with Japan, Italy, Greece, and Russia having the most significant programs.

The concept behind IGMASS is forecasting, in order to be able to issue a “warning in quasi-real time to prevent natural and man-made disasters.” Above all, it requires the commitment of governments, which would fund centers on the various continents, to process the information from a broad array of sensors, and alert the countries involved.

In an interview given to the English-language television network Russia Today April 4, the head of the Russian space agency, Anatoli Perminov, described the network as he conceives it:

“Twenty-three countries have joined this project. Each space-faring nation, you know, possesses different data, depending on the satellites they use for remote sensing and for meteorological research.

“We are proposing that these nations put their data in processing centers, and that these centers be located on different continents: in North America, South America, Africa, Asia, and Europe. Based on the data received in

the centers, recommendations would be made to world leaders. In addition, there are small, poorer countries that do not have their own space vehicles and satellites and such things. At the same time, it is often these countries that are afflicted by floods and earthquakes. Indonesia, for example. In fact, the information would also be useful to other countries.

“All the data will be processed in the computer centers and supplied to every country in [the] form of risk warnings, saying, for example, that an earthquake hazard will be high in several places around the globe in the course of the next two weeks. In that way, mankind will be prepared for an earthquake.

“Notification may also touch upon what is happening in distant galaxies. It’s possible that stars concentrated there will produce an impact on Earth. Or, in four years, some asteroid will approach the Earth within a distance of 200 kilometers. That would be a very serious threat. Precisely such information is, in fact, what governments need, rather than just telemetry from a space craft that is of no use to them. They don’t even know how to decode the information. Therefore, we are proposing to create such a global monitoring system.”

There is not yet a time frame for setting up this expensive, life-saving system, Perminov said. So far, the U.S. has not signed on.

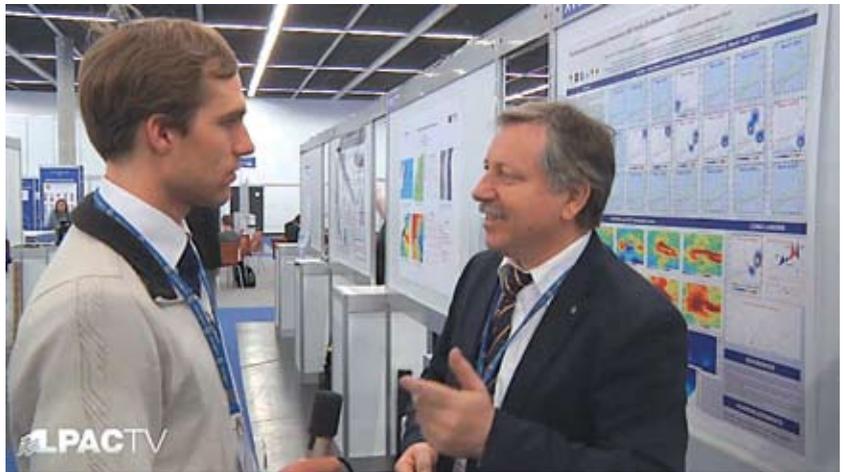


IGMASS

*IGMASS (International Global Monitoring Aerospace System) brings together scientists from around the world to create a global monitoring system against natural disasters.*

# A Multi-Parameter Approach to Earthquake Forecasting

*Prof. Sergey Pulinets, a researcher of earthquake precursors at the Fyodorov Institute of Applied Geophysics and the Moscow Center for Ionosphere Monitoring addressed the European Geosciences Conference in Vienna, which took place April 3-8, 2011. Dr. Pulinets was interviewed during the conference by Daniel Grasenack-Tente of the Civil Rights Solidarity Movement (BüSo), the German political party of the LaRouche movement. A video of the interview is available at [www.larouhepac.com/node/17944](http://www.larouhepac.com/node/17944).*



BüSoTV

*Prof. Sergey Pulinets (right), an expert on earthquake precursors, was interviewed by the BüSo's Daniel Grasenack-Tente, at the European Geosciences Union in Vienna.*

**Daniel Grasenack-Tente:** Professor Pulinets, thank you very much for joining us here. We're at the European Geosciences General Assembly for 2011, and just yesterday there were a number of presentations on the question of the different kinds of precursors in different domains of the electromagnetic spectrum, which we can use to hopefully, at some point, have a real forecasting capability for earthquakes. Let's discuss what you've been looking at. What is the significance of electromagnetic precursors to earthquakes in your work?

**Pulinets:** Okay, I prefer to talk not only on the electromagnetic precursors, but earthquake preparation is a complex physical chemical process, having been started from the Earth's crust, up to the atmosphere and ionosphere. And they have different kinds of manifestations. Within the period—we are talking now about short-term prediction—so it is something like a few weeks, up to a few days, and hours, before the seismic shock. And because it is a process which generally connects many factors, we try to find an approach which gives us the opportunity to explain what is happening, why we see so many different variations or anomalies during

this preparation period.

The first reason is very natural. When you have a release of energy, which is equivalent to several thousand nuclear bombs, it is impossible to store this underground, and in one moment to release it. The Earth is a living matter, and there are some processes—storing of the stress, and this stress has to manifest itself in some parameters.

So, the most natural is that when you have the formation of cracks inside the crust, you change the system of the gas migration inside the Earth's crust. The main components of this are CO<sub>2</sub>, helium, hydrogen, and radon, which is a radioactive gas, which is a product of the decay of uranium. It is present everywhere. For sanitary purposes, when you build your house, you monitor for radon to be safe in your house. It is a heavy, odorless gas. But it was detected many, many years ago, that its release increases before an earthquake, because this gas migration carries this radon and water coming up to the Earth's surface. Probably you have seen the video from Japan showing

water going up during and before the earthquake. So, water also carries radon with it.

And now starts the very interesting process which is characteristic for many, many natural events. For example, you know that now the variations of the cosmic rays associated with the formation of the cloud cover over our planet—why? Because the cosmic rays produce ionization of water. The ions become the centers of condensation of the water vapor. Water vapor condenses around the ions and you obtain the nucleation which is the center of condensation for the formation of clouds.

The same is happening with the coming of radioactive matter of radon, on the ground surface, close to the ground surface, because radon is very heavy. It also produces ionization of air. Ions become the centers of condensation, and form large clusters of these ions, and envelopes of many, many water molecules.

### Hydration of Ions

**Grasenack-Tente:** You mentioned in your presentation the ionization process, and the hydration of the ions.

**Pulinets:** Hydration, yes. Because it is not pure condensation, because people who know physics quite well say that there should be saturation vapor to have condensation. But hydration does not need saturation. In any level of humidity, relative humidity of air, you will have hydration of the ions. So, with 30% of humidity, still you will have hydration of ions.

And when the molecules of water become attached to the ion, they release their free energy that they had when they were in the air, which is named latent heat. And this latent heat is a source of the thermal energy which is registered just over active tectonic faults. It can be monitored by the satellites. They show very nicely the configuration of the active tectonic faults during the period of preparation of the earthquakes.

**Grasenack-Tente:** What period are we talking about?

**Pulinets:** We are talking about a few weeks before the earthquake. We have activation of the tectonic plate where the epicenter is situated. So, we can see the heating of the borders between the tectonic plates, and active tectonic faults, which is a smaller structure.

So, starting from the ground surface, we see the thermal anomalies along the active tectonic faults, which manifest that we have release of radon along the

tectonic faults. And the geophysical perspective shows that we have, at the peaks, a maximum of radon concentration over tectonic faults. They are sources of the radon coming from the ground.

So the first level is the ground surface. Then, this heat starts to accumulate, and because you have a temperature difference between the fault and the area outside the fault, it starts mixing, due to the temperature difference. You have the horizontal motion and convection motion, because the heated air tries to go up, and it is transformed into some small spirals. Chirality is formed, and these small chiral structures tend to merge. In chaos theory, it's named reverse cascade instability. They merge and form a large thermal spot, which could be registered in the upper layers of the atmosphere.

Simultaneously, this transformation of the latent heat also could be registered by satellites. There are some products in some NASA sites, which give you directly the latent heat fluxes over a special region, and we were able to detect these latent heat fluxes before many, many earthquakes.

For example, before the [Dec. 26, 2004] Sumatra earthquake, the total thermal energy released was one order of magnitude was higher than the mechanical energy released during the earthquake itself. So you can imagine what huge power is inside, in such a simple thing as water vapor. People ask, what is the source? It is the Sun. The Sun prepares this water vapor because we have constant evaporation of humidity from the rivers, from lakes, from surf, and all the time we have this water vapor which contains this latent heat, and during condensation it is released. So, the source of this energy is the Sun.

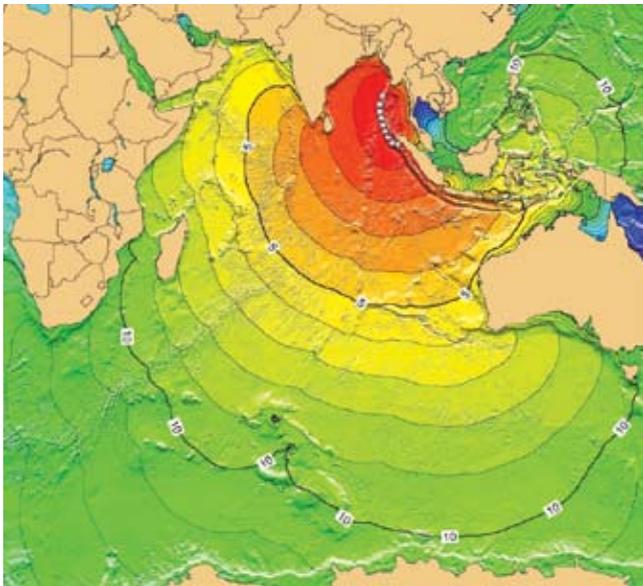
But now we come into the electromagnetic.

**Grasenack-Tente:** Okay, yes.

**Pulinets:** So these thermal anomalies could be registered not only in the form of heat, that we measure by temperature, but as radiative heat—infrared radiation, which is in the electromagnetic spectrum, with wavelengths from 8 to 12 microns. This is a window which is transparent for the clouds. And it is possible to measure, even through the clouds. And Dr. [Dimitar] Ouzounov [of NASA/Goddard Space Flight Center's Earth Observing System] is measuring these infrared emissions at the top of the atmosphere. It is something like from 8 to 12 kilometers.

**Grasenack-Tente:** Under the ionosphere?

**Pulinets:** No, the ionosphere is much higher, it's



NOAA/National Geophysical Data Center

Before the Dec. 26, 2004 Sumatra earthquake, the total thermal energy released was one order of magnitude higher than the mechanical energy released during the earthquake itself, Pulinets explained. “So you can imagine what a huge power is inside, in such a simple thing as water vapor. People ask, what is the source? It is the Sun.” Shown below: a village near the coast destroyed by the tsunami; inset: graphic showing the power of the 9.4 quake in Sumatra.



Wikimedia Commons

100 kilometers. This is 10 to 12 kilometers altitude. And very precise and special techniques were elaborated, using previous measurements—for example, NOAA [National Oceanic and Atmospheric Administration], 20 years ago. We have a very good background, which allows us to estimate that in this place—

### Precursor Anomalies

**Grasenack-Tente:** Sorry, so these precursors, these phenomena, you mean 20 years—

**Pulinets:** No, for 20 years we have had measurements to calculate the anomaly against this background. We started our study more or less 10 years ago. And we are able to see the dynamics of the development of these heat anomalies on the top of the atmosphere, before the earthquake. These anomalies usually appear a few days before the earthquake. And there are specific features, that they are sitting over the area of the earthquake preparation. They can move a little bit, exactly along the tectonic plate’s border, or along the active tectonic fault, but are very close to the future epicenter. So this is a first, a very reliable, signature of the approaching earthquake. And now we have very good statistics for this. For all recent major earthquakes, we have the data showing the appearance of this OLR anomaly, which is outgoing longwave radiation.

Without any exclusion, we see it over the ocean,

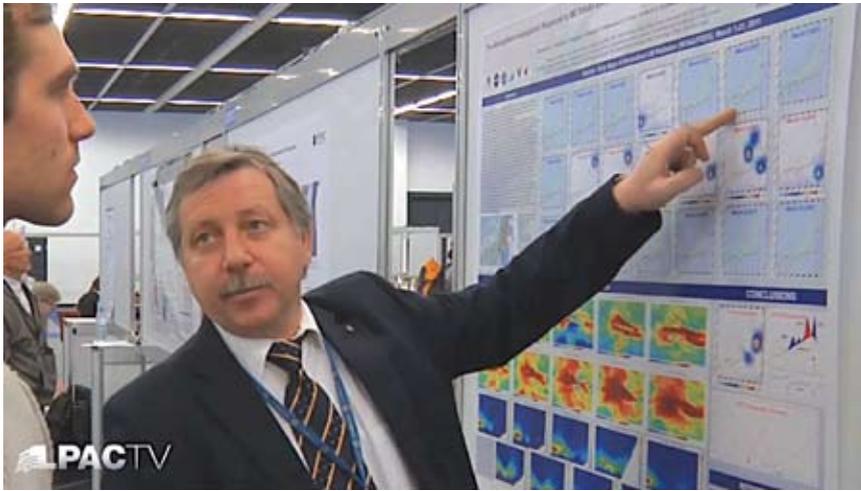
inland, near the shore, not dependent on where the epicenter is. It is an advantage in comparison with any other techniques for precursors, because many of these precursors would be detected only inland. But because we deal with the gas, which could be released from water as well, we see anomalies over the water. You can see here, here, here [points to chart on wall], anomalies sitting over the water.

**Grasenack-Tente:** What instrumentations do you use to measure this?

**Pulinets:** It is infrared sensors, which are installed on the majority of remote-sensing satellites.

**Grasenack-Tente:** They all have them?

**Pulinets:** Like NOAA satellites, Aqua, Terra, it is modest device, a VHR in NOAA’s satellite, and similar devices—for example, on board the Russian Meteor satellite we have a similar device. European satellites, every remote-sensing satellite now has an infrared sensor, and we need the frequency band, or wavelength band, between 8 and 12 microns.



*Professor Pulinet indicates anomalies in precursor techniques.*

Now, we are going to the upper layers, the ionosphere. The ionosphere is a part of our atmosphere, but partly ionized. Its ionization comes mainly from ultraviolet radiation, emitted by our Sun. Some part is ionized by X-rays, and energetic particles, but the main source of the ionization is ultraviolet radiation.

So, because we have radiation only during the daytime, we have increase of ionization during daytime, and decrease during nighttime, and the variations of electron concentration look like a sinusoid—as you can see in daily variations. And it has been studied for many, many years. We have very good models, which explain the climatology of the ionospheric behavior. Also, we know very well the behavior in this sphere during active solar events, like solar flares, geomagnetic storms; for any point, we have the regional models, which can explain what will be the behavior of the ionosphere during the magnetic storms.

So, we know the behavior of the ionosphere during the quiet time condition, and during the magnetic storm condition.

And starting from this, we are looking at some anomalies which are associated with the earthquake, how these anomalies in general can appear in the ionosphere.

**Grasenack-Tente:** Because there could be different sources for—

**Pulinet:** No, the source is the same. We live in an electrical environment. We never think about this, but when you're standing here, it is a vertical electric field which has a gradient of 100 to 150 volts per meter. So,

between the top of your head and your legs, you have a potential difference of 220 volts, like a power source.

The problem is, that the conductivity of air is very low. So, the current which we have inside the atmosphere is  $10^{-12}$  amperes per square meter. What is the source of this potential difference? We have a potential difference between the ground and the ionosphere. This potential difference is created by thunderstorm activity. All over the world we have global thunderstorm activity—in Africa, in America—mainly thunderstorm activity is over the land. But

this is not so important. The thunderstorm discharges provide the positive potential of the ionosphere in relation to the Earth.

And we have the potential difference between the ground and the ionosphere, which is something like 250, up to 500 kilovolts. And this potential difference is dropped into this bulk of atmosphere, from the ground surface, up to more or less 60 kilometers, for this global electric circuit. Usually, they take the lower border of the ionosphere, near 60 kilometers. But the most potential drop we have is in the so-called boundary layer of the atmosphere. The boundary layer is the layer where we have turbulent motion of the air. In the upper layers, we have no such turbulent motion; it is a continuous gradient, without the mixing that we have in the ground source.

And so, you can imagine—you have a potential difference. You have a resistor, which is our atmosphere. And if you change the value of this resistance, it means you change the conductivity of this layer, near-ground layer, and this conductivity is changed by the appearance of these ions produced by radon. First, you will observe the increase of conductivity, and then, when these ions grow, and become large clusters which are not moving, and cannot carry the electrical current, you will have the drop of conductivity. Like, for example, in sandstorms, when you have a lot of sand and dirt. For example, in dirty cities, the electric field is larger than in the open field, because due to the presence of dust and aerosols, the conductivity drops.

It's the same thing when you have the formation of these large clusters, which we spoke of before, a drop of

conductivity leads to a change of the ionospheric potential relative to the Earth.

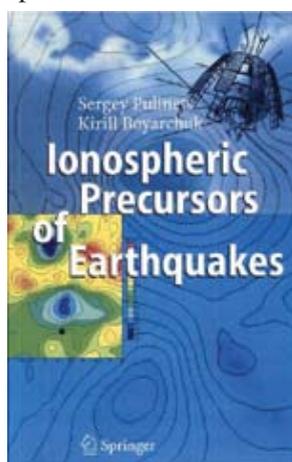
So the ionosphere feels the earthquakes through the global electric circuit, through the change of conductivity of the atmosphere. But the ionosphere is a highly conductive medium. It tries to maintain its equipotentiality. If you have a good conductor, all the parts of this conductor have the same electrical potential. If something changes, it tries to redistribute the electron concentration and ions to maintain its equipotential.

What does it mean to redistribute? There is the appearance of the drift or electric currents within the ionosphere, and you have a formation of irregularity over the area where you have the anomaly of conductivity.

**Grasenack-Tente:** And that's what you've been talking about with the total electron content.

**Pulinets:** Yes. And the parameters of the ionosphere could be measured by a multitude of techniques. It is a ground-based vertical sounding, called ionosondes. We can put the same ionosondes on the satellite, and it will be topside ionospheric sounding. You can measure the total electron content between the satellite and the ground. You can make ionospheric tomography from the low-orbiting satellites.

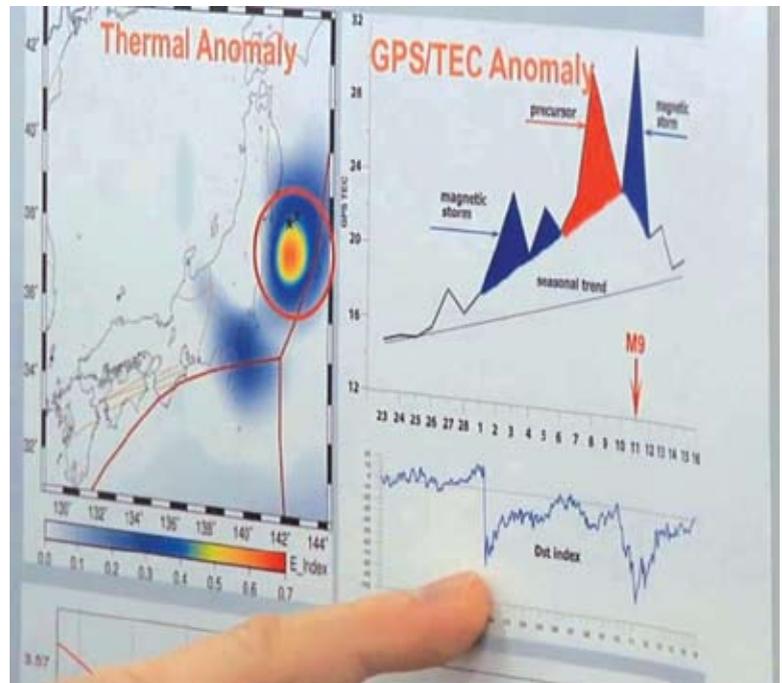
So there are a lot of techniques; all of them were tested, and all of them show the anomalies in the ionosphere.



I have a book published by Springer, *Ionospheric Precursors of the Earthquake*. You can find there everything explained, and what is happening. But I also can say, that from the majority of earthquakes, we see ionospheric anomalies which are very close to the thermal anomalies in their position, and they are also coherent in time. But we see propagation of these

anomalies from the ground surface up to the ionosphere, so usually the ionospheric anomalies appear one day later, or the same day as the thermal one.

FIGURE 1



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### The Japanese Earthquake

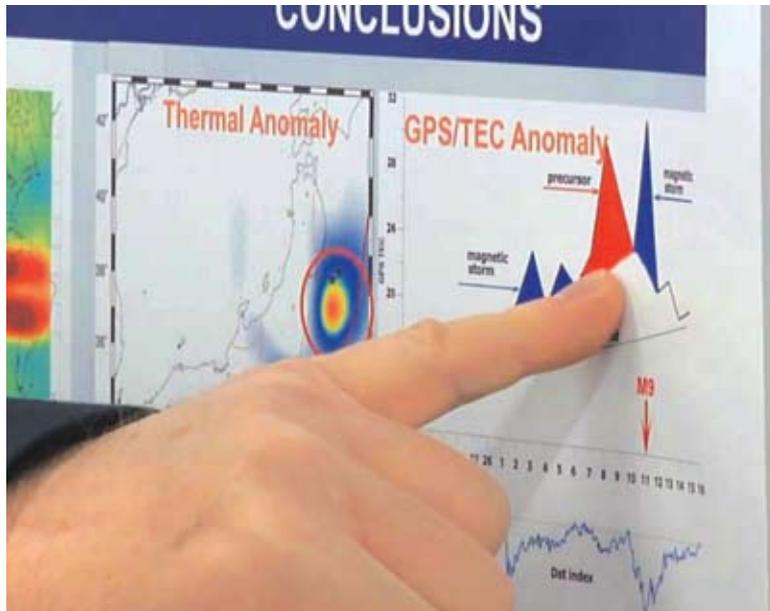
**Grasenack-Tente:** Now you have on this poster here, some things related specifically to the 9.0 earthquake in Japan.

**Pulinets:** Yes, it was a very difficult case for analysis, for many reasons. One of them is that the earthquake happened between two geomagnetic storms. One of the indicators of the geomagnetic storm, is global equatorial geomagnetic index, which is named the “Dst Index.” And this is a graph of this geomagnetic index (Figure 1), and when we have the sharp drop, it means the start of the geomagnetic storm. And then we have the recovery phase; we have quiet geomagnetic conditions; and then the next storm, which happened exactly at the moment of the earthquake.

**Grasenack-Tente:** That's very interesting, because that brings up, as with a lot of these things that we can't see directly, it requires that we need as broad a range of sensory instruments as possible, to correlate and make sure that we can annihilate things—

**Pulinets:** Okay, the correlation of solar and geomagnetic activity with seismic activities is a very difficult task. Because statistically, some people show the existence of correlation, while other people show there is no correlation. A very careful study of this

FIGURE 2



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should be carried out. But I can confirm, that very often, it happens that a geomagnetic storm is very close to the earthquake, but we cannot say that geomagnetic storm [equals] earthquake, no. Sometimes the geomagnetic storms could be one, two days before the earthquake.

**Grasenack-Tente:** Sometimes after.

**Pulinets:** Sometimes, one, two days after. Sometimes, like we have here, simultaneously with the earthquake.

So, it looks like we have the common source of origin, which provokes both these events, and they appear close in time.

But, why do we, for example, interpret this as a precursor? Because here (**Figure 2**) this effect of the geomagnetic storm, which is blue, should decay, because here we have a quiet condition. But contrary our expectation, we have the sharp growth of electron concentration on the 8th of March, that is, three days before the earthquake. And this is supported, the GPS TEC, is supported by iono-

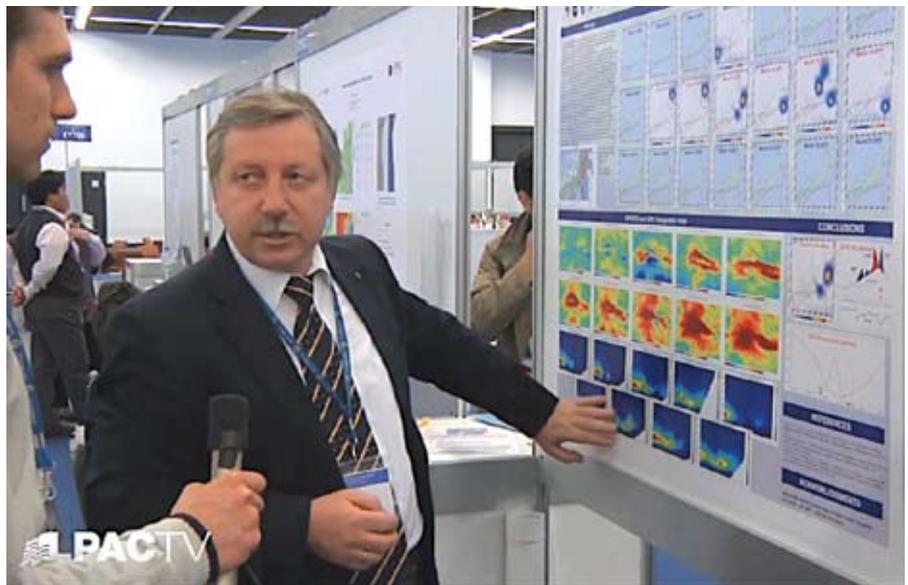
spheric tomography, which is another technique to study the ionosphere—it is a low-orbiting satellite—and they have a two-frequency transmitter onboard, and you put it on the ground, like a line or a chain of receivers, which receive the satellite signal, and you can, from this registration, reconstruct the vertical cross-section of the ionosphere in the plane of the satellite orbit.

Like tomography, you have many, many rays between the satellite and several receivers, and you process, by tomography technique, this multitude of rays, and reconstruct from this, by special mathematical procedures, the vertical structure. And this [points to wall chart] is the tomography reconstruction for the chain which is in the Sakhalin region, the Sakhalin Island of Russia, which is very close to the northern part of Japan. These receivers belong to the corporation Russian Space Systems. Our co-authors Romanov and Shahr are responsible for this result. And they also observed the large positive anomaly, again, on the 8th of March.

So, we have completely different techniques [pointing at the chart]: this is GPS TEC (Total Electron Content), this is tomography; and they demonstrate the same thing.

And the next one is the ground-based ionosondes.

And the next one is the ground-based ionosondes.



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*Professor Pulinets points to tomography reconstructions of the Sakhalin region.*

An ionosonde is radar working in the shortwave-frequency band, from 1 to 20 MHz. It is broadcasting, and they actually were designed to monitor and predict the propagation of radio waves. When we had no VHF broadcasting and FM broadcasting in the '30s, '40s, and '50s of the last century, the broadcasting was in the HF [high-frequency] waveband. And these devices were designed especially to monitor the state of the ionosphere, to predict the radio-wave propagation in this frequency band. And now, they are used to monitor space weather, because the ionosphere is very sensitive to solar effects, and every country has its own network of ionosondes. In Japan, we have four ionospheric stations: Wakkanai, Kokubunji (Tokyo), Yamagawa, and Okinawa.

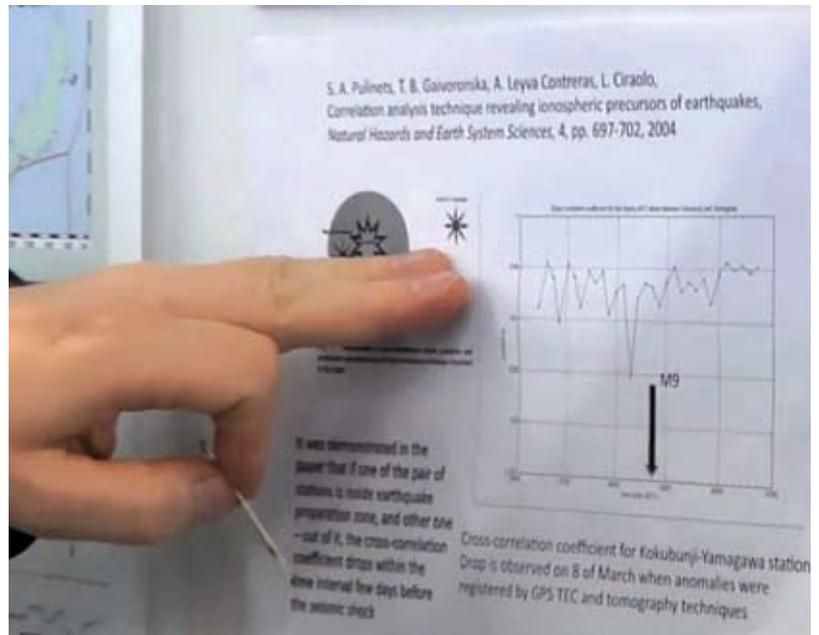
And we were able to elaborate the technique, which shows that, due to the specific variability of the ionosphere before the earthquake, when you have a station close to the epicenter, and try to correlate this station with another station which is far from the epicenter, the cross-correlation coefficient drops before the earthquake. This (Figure 3) is a cross-correlation coefficient between Kokubunji, which is close to the epicenter, and the Yamagawa station, which is far from the epicenter. We have the configuration described in our publication.

And again, on the 8th of March, we see the drop of cross-correlation coefficient, like in GPS TEC and ionospheric tomography. So, three independent techniques show the same thing for this earthquake, three days before the main shock.

And the last result: We tried to compare, in the same season, for example, of the year, and mainly, more or less for the same solar activity, because the ionospheric density depends on the solar activity, but last year and this year are not too different in this, so we took the variations of the electron concentration for year 2010, for the period from the 23rd of February to the 23rd of March, and for year 2011, for all four ionospheric stations. And simply, we subtracted from 2011, the 2010 data. And this is the difference.

**Grasack-Tente:** Can you say where the origin is, of what's originating the high-frequency waves?

FIGURE 3



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**Pulinets:** I told you: This wave is emitted; it is like a radar. It's an installation, it sends pulses to the ionosphere, and obtains the reflection—

**Grasack-Tente:** Where the radar is, is not—

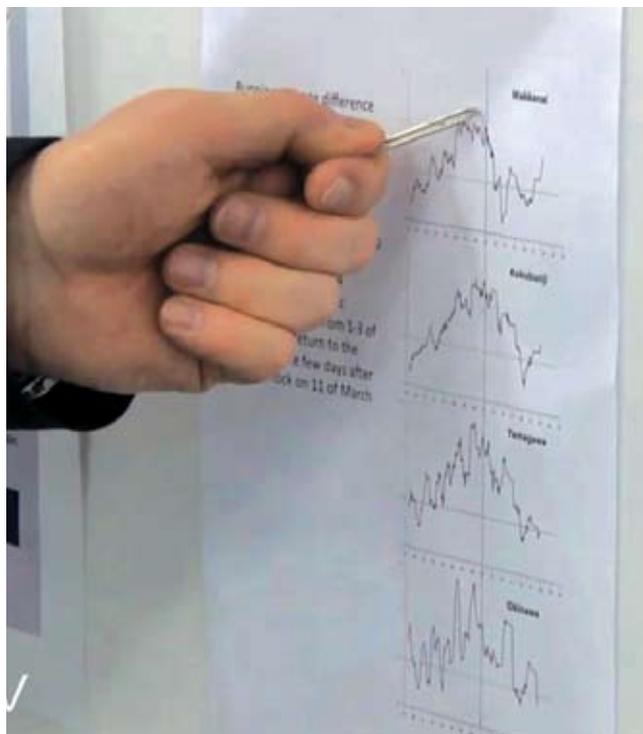
**Pulinets:** No, no. Different frequencies are reflected on the different altitudes of the ionosphere. The higher the electron density, the higher frequency you need to reflect from the ionosphere. So, the ionosonde is starting to send pulses from 1 MHz, and goes up to 20 MHz, and received the reflections from the ionosphere. And the specific frequency is named “critical frequency”—the ionosphere is no longer able to reflect the radio waves, and they pass through it. And these are the main parameters used by the ionosonde, and we use just the critical frequency, which reflects the maximum electron concentration in the ionosphere.

So, from 2011, we subtract 2010. And you can see (Figure 4), starting from something like the 5th of March, the increase and then decrease. And this is the moment of the earthquake. So, this is from North to South: Wakkanai, Kokubunji, Yamagawa, Okinawa.

**Grasack-Tente:** Yes, a pretty big spike. Okinawa's a bit more erratic.

**Pulinets:** Yes, but Okinawa is at a low latitude, which is affected by the so-called equatorial anomaly, which

FIGURE 4



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appears in the equatorial ionosphere. So, it's much higher variability than at the mid-latitude stations.

### A Multi-Parameter Analysis

So, what I would like to underline more: that our approach is a multi-parameter analysis. We can say that it's very difficult, almost impossible, to make some kind of prediction using only one parameter, for example: thermal, ionospheric, VLF propagation, so on, so on. But if you have something like what we name "synergy" of the processes, we see that all of them are connected, and show the same area, within the same time-interval, and we see some development of the processes, starting from the ground surface, like surface temperatures, and air temperatures, and at the top of the atmosphere, then the ionosphere, and we see these dynamic, all this complex of the effect, we may say that this is a multi-parameter precursor of the earthquake. This is our approach.

**Grasenack-Tente:** And it's interesting, because you noted that also with the geomagnetic storms. It poses the question: Well, where's the physical cause? That still needs to be investigated? Where's the principal cause?

Just one thing I wanted to say, because Professor [Pier Francesco] Biagi was saying that their main problem is they just don't have enough sensors. They have very few sensors—throughout Europe there are only seven. And if you had a global array of these things, then they could be looking where all the things are happening all around the world.

**Pulinets:** There is a difference between ground-based measurement and satellite. With the satellite, we have a global picture, without exclusion. This is an advantage.

**Grasenack-Tente:** You're saying you have the instrumentation, is that right? Because right now, we're seeing that NASA's getting huge cuts to its budget.

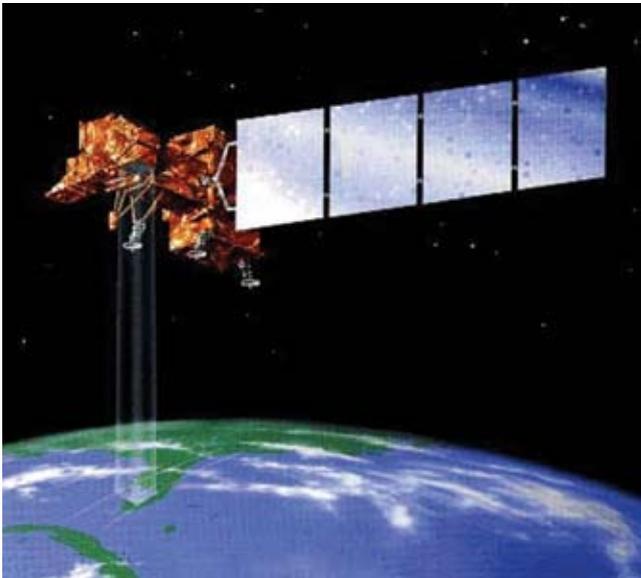
**Pulinets:** It's a big pity, because we can develop these technologies, and many other countries are trying to build their own satellites—for example, China is now on the way, building specific and directed satellites to measure electromagnetic precursors of earthquakes, to be launched in 2014. But, I think, looking from the perspective of what we have now in Japan, what a tragic event, how many people, in such a highly developed country—but this demonstrates that nature makes no difference between the poor and the rich country, whether developed, not developed, we cannot fight with nature, we cannot overcome this very strong and disastrous event. So, we need to take *urgent* actions to start our activity now. We have demonstrated that we are able, *at least*, to give some kind of warnings. We can't say about predictions, but we can say, in this area, in the next few days, we expect some seismic shock, and we are able to even estimate the future magnitude.

Of course, many, many things are not clear, but we cannot prolong, into infinity, our investigation. How many victims do we need, to continue our investigations?

**Grasenack-Tente:** I think it's very important. I think it's clear with the number of victims we have, that we have to do it right now. That we should escalate.

**Pulinets:** Yes.

**Grasenack-Tente:** The question I have to you on that, specifically, one, are all the instrumentations there, in place, that you need? And if you didn't have money restrictions, what would you want to see implemented, so that you could immediately begin setting up things that we could use to recognize precursors all around the



NASA

*Remote-sensing satellites are among the array of detection techniques used for forecasting weather events. Shown: Goddard's Earth Resources Technology Satellite, launched in 1982.*

world? Every nation, along the Rim of Fire, and beyond? What would you need for that?

**Pulinets:** Okay, at the present moment, we have quite enough remote-sensing satellites, and many countries, including the United States have plans, for example, in the Polis [satellite mapping] project, to launch more satellites having the infrared sensor onboard.

**Grasenack-Tente:** There was one called DESDynI, that was a [proposed] satellite that was cut, that was actually not launched. Then you had the GOES-11, which was launched, but they didn't have the ground crew to analyze the data! So, it's up there doing stuff, but, you don't have people analyzing the data. And one thing you mentioned before is that, you've done this work, but there's only so much that two or three people can do.

**Pulinets:** Yes. In principle, we can start now, if we have at least some specific laboratory, with staff, more or less, I estimate, of ten people: It's enough to start to analyze the data on infrared, GPS TEC, VLF propagation. It is enough to do some kind of warning, at least of some areas like California, Japan, the Mediterranean, Mexico. We have enough instrumental means. It does not mean we should now stop, should not develop other types of measurements, and increase our ground-based network.

But we should take, as an example, medicine; for

example, the problem of cancer: It was thought that it was *impossible* to overcome! Then, the doctors start to—one kind of cancer now is treatable, then the second one . . . and it is expanding! Because people do not stop! They are doing what they can do, at the present moment! And we should do the same: We should do what we can do at the present moment.

But at the present moment, we need some support, because we are very few, we are under pressure from different sources for different reasons. We need to be living in quiet, good conditions to work, to have more human resources—I said something like a ten-person laboratory. And I'm sure that we are now able to make good progress, improving this technology and elaborating the techniques, especially application techniques for the short-term work.

## The 62-Million-Year Cycle

**Grasenack-Tente:** Well, this is great. You basically answered all my questions. I've just one more. I've sent you some material on the kind of work that [the Basement Team] has been looking into, especially looking at the fossil records showing biodiversity, volcanic activity from volcanic rock, which shows some very clear cycles, of 60-62 million years of increase and decrease of biodiversity and also increase of volcanic activity at around the same time. And because you mentioned that there's also the phenomenon of the geomagnetic increased activity, which goes along with the things that you guys are measuring with some kind of phase-shift, have there been any thoughts to look into that, that there may be an increase in general sensitivity within a longer time frame, due to some external sources?

**Pulinets:** Okay, yes. What we know from historical data—let's start from the shorter periods, for example, the Maunder minimum of solar activity. In the 16th-17th Century, you know that in Holland we had ice; we have a lot of literature showing the people ice-skating, and so on, and now it's very warm. And from the historical measurements of the solar activity, we have seen that it was very low, extremely low, not at all like the 11-year solar-cycle activity. What we observe now, is that we had an extremely long period of low solar activity; it was not predicted by anybody.

We had a [solar] minimum which lasted at least two years, or up to three years longer than it was expected. One reason is that there is some variability in the activity of our star, which provides the life on the Earth. The

second, which is more important, and probably may have more grave consequences, is reversals of the geomagnetic field. From polar geomagnetic data, we have seen that the polarity of the geomagnetic field was changed several times during the history of our planet, and during this period, it's very dangerous because, during the transition, we'll have some period—nobody knows how long it will be—when we will have almost no geomagnetic field.

**Grasenack-Tente:** There's no polarity, is that what you mean?

**Pulinets:** Yes, yes. It is flipping.

**Grasenack-Tente:** It's in flux.

**Pulinets:** Yes, and this geomagnetic field protects us from the extreme solar energetic particles.

**Grasenack-Tente:** Cosmic rays.

**Pulinets:** And cosmic rays. It deflects them. And we will have some period when the geomagnetic field of the Earth will be very low, and this may give rise to changes of biodiversity of our planet.

So, if we do not talk about periodicity, we also have such events, like asteroids and so on, encountering our planet, which can produce huge devastation and changes in our environment, but it is not periodical, it is stochastic.

And another periodic change is a movement of our Solar System, through the arms of our galaxy. Inside the arms, we have the larger concentration of matter, and so, the lower flux of the cosmic rays. And, we know that cosmic rays do have an effect on the cloud coverage and the temperature on our planet. So there are some theories—I have not developed these, but I have seen publications—that in an ice period, and in the higher temperature periods, there were changes with the periodicity of the passing of the Solar System through the arms of the galactic: Between the arms, we have lower [temperature], so higher flux of cosmic rays; inside the arms, lower flux of cosmic rays. This is an-



*In the 16th and 17th centuries, during the last “Little Ice Age,” much of Europe experienced extreme cold periods, with ice covering the ground for months at a time. Here, the Flemish artist Pieter Bruegel portrays a scene from the severe Winter of 1565-66.*

other source of the variability.

But all these things are more speculations than science. We should make more investigation to say something definite, but your question was, what I think about this.

**Grasenack-Tente:** Yes. I agree, we need more investigations.

**Pulinets:** I told you about the possible reasons for periodicity of life.

**Grasenack-Tente:** We can start with Moon and Mars, looking to see if there's seismic activity there. It would be interesting to see if there's similar activity right now on other planets.

**Pulinets:** Yes, but it is not so easy.

**Grasenack-Tente:** But that's human civilization!

**Pulinets:** Yes, you are young, so you will have more interesting information, and probably the next probes would be able to investigate other planets of our system!

**Grasenack-Tente:** It depends on if we have politicians who just keep spending money on bank bailouts, and not on science, and investigating the Solar System: Then we have a definite problem, for that perspective. All right. Thanks very much.

**Pulinets:** Thank you.

# The Implications of Sergey Pulinets' Approach to Earthquake Forecasting

*The following is an edited transcript of the LPACTV Weekly Report of April 13, 2011, along with a selection of the graphics. It can be viewed at <http://www.larouchepac.com/node/17959>.*

**John Hoefle:** Hello, welcome to the LaRouchePAC Weekly Report for April 13, 2011. I'm John Hoefle, and with me in the studio today are two members of our Basement Team, Ben Deniston and Sky Shields, and of course, Lyndon LaRouche.

We have an interesting development, it's a good development today, and some very interesting reports, so, Lyn, let's get right to it.

**Lyndon LaRouche:** We had a discussion of the progress of the crisis, the global crisis, and this discussion led to a fairly thorough review, particularly in light of a report which was presented by a Russian of Ukrainian origin, and this provoked, I think, some explication of the implications of what his remarks have been, in addition to what we had known earlier. And this was a time, I thought, and we agreed, that we should go through a summation by representatives of our Basement Team, to review the implications of the update given by Sergey [Pulinets]. So, why don't you take it away.

## Layers of Instrumentation

**Ben Deniston:** To start, I think it's important that we take the thing in layers, because there are very clear layers to what's been discussed and proposed. Sergey, who presented his work in the video that's on the website [<http://www.larouchepac.com/node/17944>; and transcript, above], is an expert who's been studying earthquake precursor ac-

tivity, anomalous activity in the ionosphere and the atmosphere, and in various other ranges, preceding earthquakes anywhere from days to weeks before the event. Obviously, this is of crucial importance, given the developments we've been covering in the last number of weeks since the Japan quake put the real crisis this poses in the forefront.

One thing to put out very clearly—he was very forceful on it—is that the first layer to look at, even immediately, right now, is what systems we have, both ground-based and satellite systems, which are capable of detecting an array of these precursor events. That is sufficient for a limited amount of warning systems, currently; if we actually had the right facilities, and investment in the personnel required, we could, even using the existing systems, even if they weren't designed for it explicitly, we could provide some limited advanced warning of where major earthquakes are likely to strike.

But then, the other thing that comes up, is that no single precursor is going to give you a definite idea if an earthquake is going to occur. What's required, the way he discusses it, is a multi-parameter approach, where you're taking fundamentally different types of instrumentation, measuring fundamentally different types of activity, on the ground, in the atmosphere, in the ionosphere, and even higher, and only when you get certain unique types of correlations of anomalous activity from these different instrumentations, does that give you a real signal that something is likely to occur at some point in the near future.

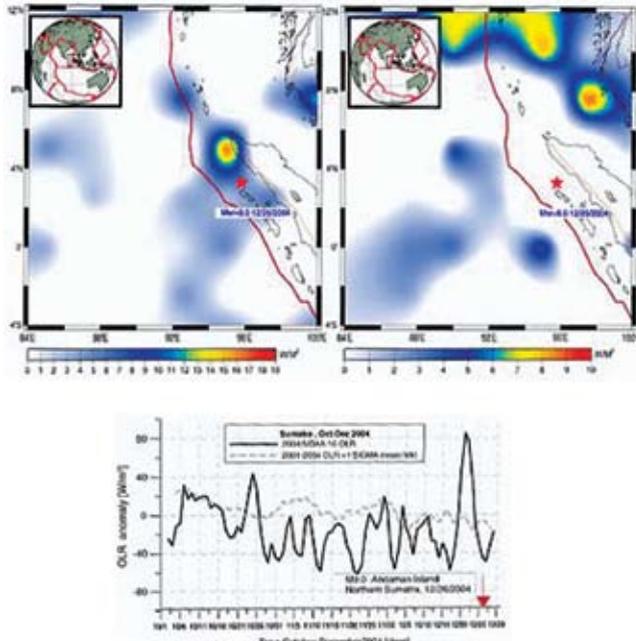
And so, to present some of this material, one thing we've done, is take just two examples of large earthquakes that have been stud-



LPACTV

*Ben Deniston: "The only reason we're not doing warnings right now, is there's simply no funding to set up the personnel and laboratories needed to process all this data in real time."*

FIGURE 1



Dimitar Ouzounov et al., 2007.

*Infrared radiation spiked five days before the December 2004 Sumatra earthquake.*

ied, and so we will present an example of how this presently looks, with the current science.

### Observing the Sumatra and Sichuan Quakes

The first one was the earthquake that hit Indonesia, Sumatra, in December of 2004, which was an extremely large earthquake and extremely devastating earthquake, deadly earthquake. There’s been a large number of scientific studies published, looking at the anomalous types of precursor activity before this quake struck.

The first study was published by a grouping led by somebody in the United States<sup>1</sup>; as we’ll see here with the imagery (Figure 1), they were using weather satellites, which have the ability to detect infrared radiation emanating from the Earth.

1. Dimitar Ouzounov, Defu Liu, Kang Chunli, Guido Cervone, Menas Kafatos, Patrick Taylor, “Outgoing long wave radiation variability from IR satellite data prior to major earthquakes,” *Technophys* 431 (2007).

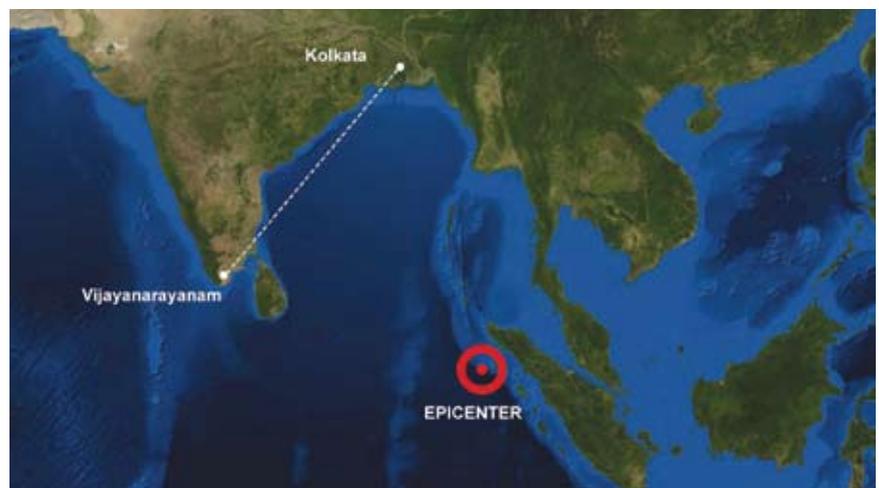
And they’re able to look at the data provided by these weather satellites in the period leading up to the earthquake, and they found very clearly, five days before the earthquake struck, a very large anomalous spike in the infrared radiation being emitted from what was soon to be the epicenter region. That’s what you see on the map (above), and then you get a representation of the spike in the OLR (below), outgoing long-wave radiation, which stands for a type of infrared radiation. You see a very clear spike in the five days leading up to the earthquake.

So this is one type of instrumentation, looking at a certain section of the electromagnetic spectrum, which showed signs of anomalous activity. If you were only to rely on just this one type of instrumentation, you could get other effects that would produce a similar reading, which might not be related to an earthquake precursor; but you take this another step, and start to look at more types of readings that we have for this specific event.

There was another grouping led by a number of people out of India.<sup>2</sup> They looked back at the data of radio communications between two stations in India. And when they looked back at the data, they saw evidence that, as the radio waves propagated through the ionosphere, between the two stations, as you see in the map (Figure 2, they saw evidence that the way the radio waves were propagating was being affected by some

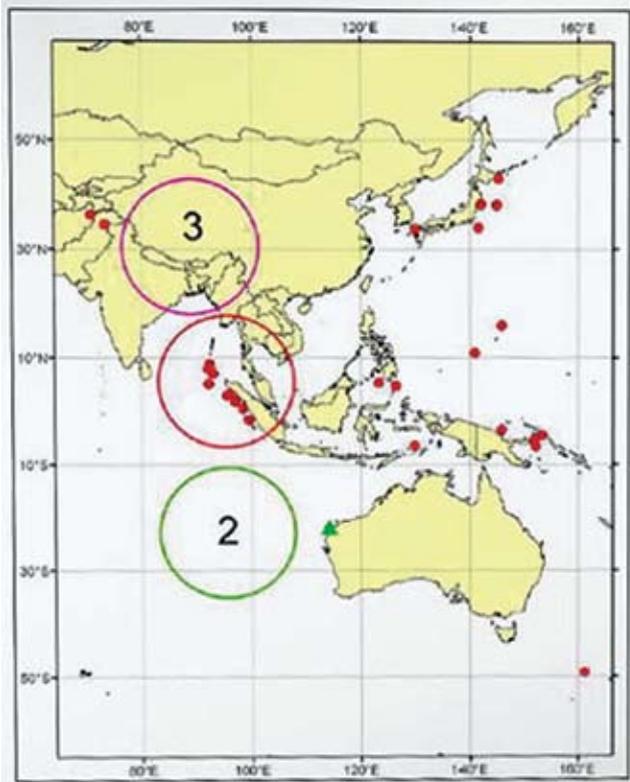
2. Sandip K. Chakrabartij, M. Saha, R. Khan, S. Mandal, K. Acharyya, and R. Saha, “Unusual Sunset Terminator behaviour of VLF signals at 17KHz during the Earthquake episode of Dec., 2004,” URSI General Assembly, 2005.

FIGURE 2



*Two Indian radio communications stations observed the December 2004 Sumatra earthquake; their data showed a spike in anomalous activity in the ionosphere four days before the quake.*

FIGURE 3



A. Rozhnoi et al., 2008.

*DEMETER satellite data showed anomalous activities in its radio signals in the area of the Sumatra earthquake, starting one month before that earthquake.*

anomalous activity in the ionosphere. And when they looked back at the data, this spike occurred four days before the earthquake.

This case is interesting. Even though it's not necessarily directly over the epicenter, the anomalous activity occurring above the epicenter was actually affecting the broader region of the ionosphere, such that these communication signals were being affected by this anomalous activity.

There was a third case,<sup>3</sup> looking now at a different type of instrumentation, this time looking at the data provided by GPS satellites, which do certain radio signaling to the ground, and they found when they looked back at this activity, that five days before the earthquake, there was evidence above where the epicenter was soon to be, of anomalous changes in the structure

3. Tiger J.Y. Liu and Y.I. Chen, "Ionospheric Precursors of the 26 December 2004 M9.3 Sumatra Earthquake," *Res. Lett.* 2008 (under review as of date of Internet posting).

of the ionosphere. They were specifically measuring the total electron content of the ionosphere in this region, and looking back at the data, they saw that there was anomalous change in activity, five days before the earthquake.

And, we were able to also pull up a fourth independent case, this one also interesting. The previous study that I just mentioned was done by a grouping in Taiwan. This fourth case<sup>4</sup> was done by a grouping in Russia, where they used data from the DEMETER satellite. For a whole month prior to the Sumatra earthquake—very large, devastating earthquake—when they looked back at the data, for a whole month, this satellite was registering anomalous activities in its radio signaling back and forth to the ground (**Figure 3**), another indication that there's some type of unusual, unexpected fluctuation in the ionosphere, associated with this earthquake.

Three of these are specifically ionospheric fluctuations, but they're different types of fluctuations, which wouldn't necessarily be associated with each other, other than being part of an earthquake precursor. The first case was an infrared radiation anomaly, not associated with the ionosphere. So you have distinctly different types of sensory apparatuses, detecting four cases of anomalous activity building up to this quake.

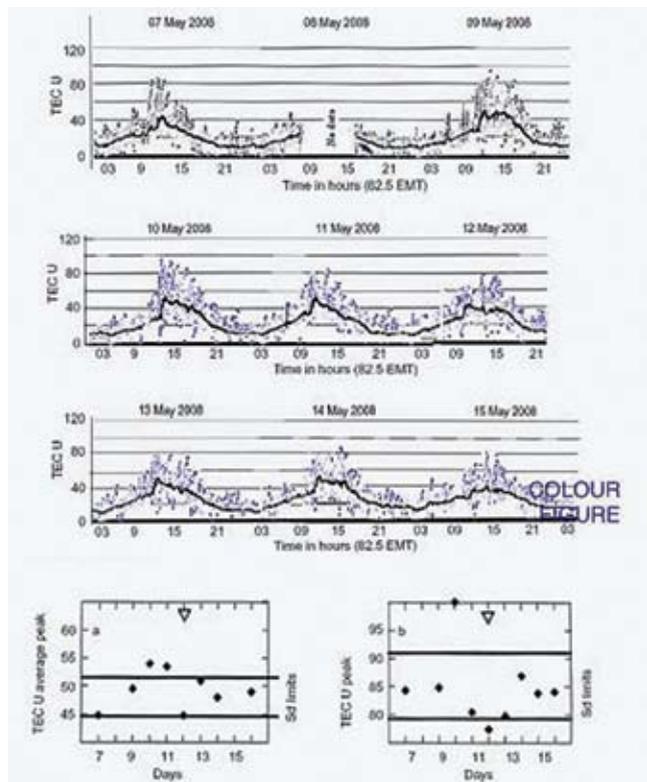
A second event that we looked back at, was an earthquake that struck Sichuan, China in May 2008: an 8.0 magnitude earthquake—a very large, very devastating earthquake. We found three studies, by independent groups, independent countries, looking at different types of activity; we found very clear cases of anomalous activity in different ranges of these sensory instrumentations.

The first one,<sup>5</sup> published by a group in India, when we look back at the data, three days before the earthquake (**Figure 4**) they saw a very clear spike up, and then on the day of the earthquake a very dramatic drop down, in the total electron content of the ionosphere (**Figure 5**). They were looking at GPS satellites to get this. You can see that on the graph.

4. A. Rozhnoi, M. Solovieva, O. Molchanov, "Variations of VLF Signals Received on DEMETER Satellite in Association with Seismicity," Proceedings of the 7th International Conference "Problems of Geocosmos" (St. Petersburg, Russia, 26-30 May 2008).

5. M. Devia; A.K. Barbaraa; A.H. Depuevab; Y.Y. Ruzhinb; V. Depuevab, "Anomalous total electron content (TEC) and atmospheric refractivity prior to the very strong China earthquake of May 2008," *International Journal of Remote Sensing*, Vol. 31, No. 13, 2010.

FIGURE 4



M. Devia et al., 2010.

Satellite observations of the quake near Sichuan, China, May 7-15, 2008 showed a spike in total electron content of the ionosphere three days before the earthquake, then a dramatic drop on the day of the quake (May 8).

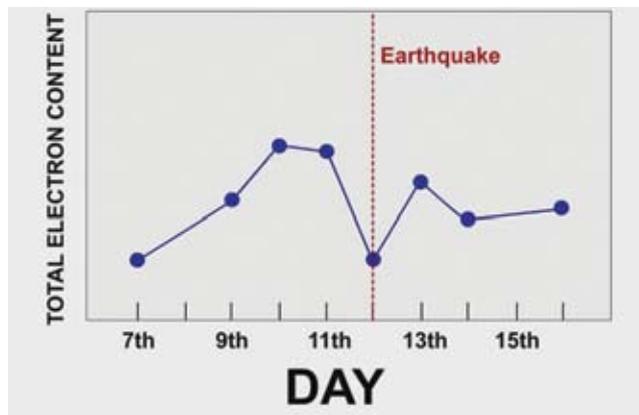
A second study,<sup>66</sup> independent again, by a grouping of people in Poland and France, used a different type of measure that we haven't brought up yet: They used this DEMETER satellite, which was rather unique while it was operating, because it could actually fly through the ionosphere. In a number of these previous cases, they were using radio transmissions through the ionosphere, and the way those radio transmissions were affected by the different structures of the ionosphere, would give some indication of the structure of the ionosphere. This one was actually able to fly through certain levels of the ionosphere—

**LaRouche:** Night or day?

**Deniston:** I think daytime, because it was set to do a solar synchronous orbit, this satellite specifically, so it

6. Jan Bleckia, Michel Parrotb, Roman Wronowska, "Plasma turbulence in the ionosphere prior to earthquakes, some remarks on the DEMETER registrations," *Journal of Asian Earth Sciences*, 2010 (in press as of date of Internet posting).

FIGURE 5



A schematic view of what is graphed in Figure 4.

always comes to the same location at the same time of day roughly. The ionosphere fluctuates, day to night, and there are other types of regular fluctuations you can expect. So, this satellite they set up with a specific type of orbit, where you would basically work out the daily variations, from the daily solar activity. If you work out these daily variations, then you get a sense if something unexpected pops up.

So, in this case, starting 11 days before the quake, and then with more intense peaks, 6 days and 3 days before, you had anomalous electrical fluctuations in the region directly above the quake. So that's a second case, for this Chinese quake.

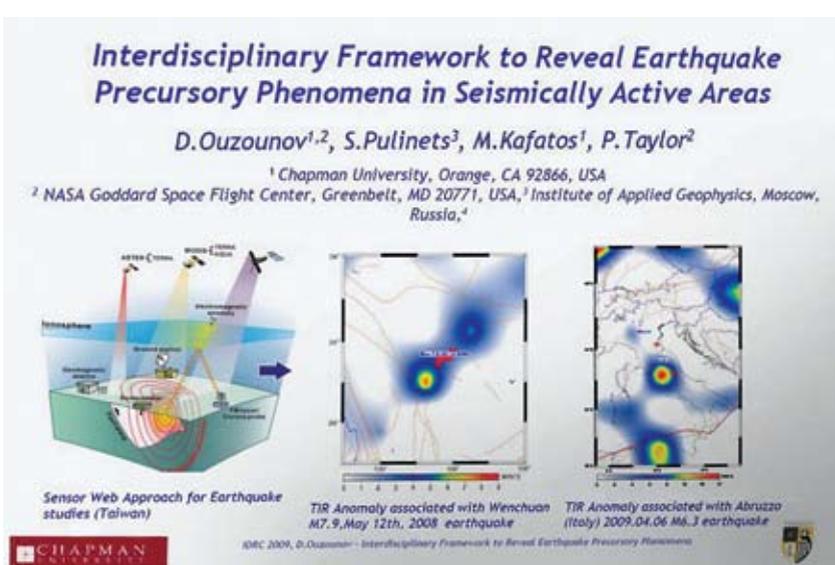
And then, a third case, again completely independent, different instrumentation: You had a "thermal anomaly," anomalous heating of the ground, starting six days before the earthquake hit, which was detected by NOAA and NASA weather satellites (**Figure 6**).

### Nobody To Analyze the Data?

So, again, three completely different groupings, using three different types of instrumentation, all showing anomalous activity prior to this major, catastrophic quake.

There's obviously plenty of grounds to say, there's something anomalous going on here. It's a very important point to note that most of these studies were actually "hindcast" studies: After the earthquake happened, they said, what types of instrumentation do we have that were recording various forms of activity in that region? And then they would go back and look at the data that these satellites or ground-based systems had been recording, and they would analyze it, and they

FIGURE 6



D. Ouzounov et al., 2009.

These researchers found anomalous heating of the ground, starting six days before the Sichuan earthquake.

would say, “Oh, here’s this spike in activity; here’s this spike in activity.”

The satellites were always up there, recording all the activity, so the instrumentation sensed the anomalous activity when it happened. As Sergey emphasized, the only reason we’re not doing warnings right now, is there’s simply no funding to set up the personnel and laboratories needed to process all this data in real time. If we had teams of people, even with the current instrumentation, analyzing the data 24 hours a day, in real time, you could be looking and cross-correlating these different types of anomalous activity—it’s not immediately going to be a perfect prediction system, but it will at least give you high likelihoods of the need for warnings, where are the danger areas, these types of things. That could be done immediately.

But currently, there’s just no support to give these people the types of laboratories, infrastructure, personnel that they need to operate. So that’s useful to pose; it’s kind of a first layer for policy,

immediately. The only reason that’s not being done, is that the policy is not set up to actually support the activity that could be going on. We obviously need to activate that, but we should activate it from the standpoint of taking the research further, to figure out much more precise prediction capabilities, what types of new instrumentation we need. And to do what we want to do now, but do it from the standpoint beyond just finding anomalies and pointing them out, but then, setting up the instrumentation that will give us more motion towards actually figuring out what is really causing these events. What exactly are the solar relations to these events? What exactly is the galactic relation to these events?

So, as an immediate policy, we need to activate what we have already, but do

it from the standpoint of the type of investment towards a real mastery over this whole array of anomalous activity.

### No Such Thing as ‘Empty Space’

**Sky Shields:** Yes, that’s significant. To give sort of a recap, you get an idea of all these different types of precursor material. There was an image that I thought was interesting, which was one used by two of the presenters, Sergey Pulinets and then [Dimitar] Ouzonov: a very nice image of a bunch of blind scientists fondling an elephant,



LPACTV

*Sky Shields: “The entire universe is a constant soup of cosmic radiation material. Not only is it nowhere empty, but it’s incredibly energetic, so energetic, that it’s a real safety consideration, moving astronauts through this.”*

and each one is looking at the different portions of it, and they have it labeled with the different earthquake precursors, all the different types of thermal anomaly, electromagnetic anomaly, funny things in the ionosphere; and each person is trying to describe it as a thing in and of itself. But obviously, the implication of the image is that you’re looking at one, clear phenomenon there.

That is, when you’re looking

at something like an earthquake, you see what looks like a singular event. If we're acting like animals, and we're sort of on the ground next to them, it shocks us the same way it would shock them—well, that's actually an insult to the animals, as we'll see in a second. But if we're behaving unconsciously, these seem like discrete events. But in reality, you've got one continuous process there. You've got a real, steady buildup of an amazing amount of potential, that feeds into these single earthquake events.

I mean, you think about something like what hit Japan—and Sergey made this point—you've got something that's orders of magnitude beyond the largest nuclear weapons we've ever used actively in fighting.<sup>7</sup> Something like that doesn't just happen without any sort of indication beforehand. You've got a buildup process there, that's massive, equally as massive as what's released, obviously. So you know that that's going to manifest itself in what we call "precursors."

But to understand that, requires figuring out how to conceptualize this system as a whole, *everything*, including all the phenomena that are occurring on Earth, the entire development of Earth, the Biosphere, etc.; and we'll see that all of Earth's history is involved in being able to make a real model of the forecasting. But also, its interaction with the galaxy, and then the universe as a whole; and we'll be able to demonstrate that, and it will underscore the fact that there's no such thing as "empty space," when talking about phenomena within the Biosphere, or outside the Biosphere, or their interaction.

### Where Lightning Strikes

I'll make the point, that the first thing is sort of a qualitative idea of what some of this precursor material is representing. I'll begin here: Take a look at a global lightning map (Figure 7). You get an interesting picture of where these things occur. Most lightning strikes are all not only above land—because you know there's

7. See Pulinets interview, this issue. Pulinets says that the amount of energy is larger than several thousand nuclear bombs.

FIGURE 7

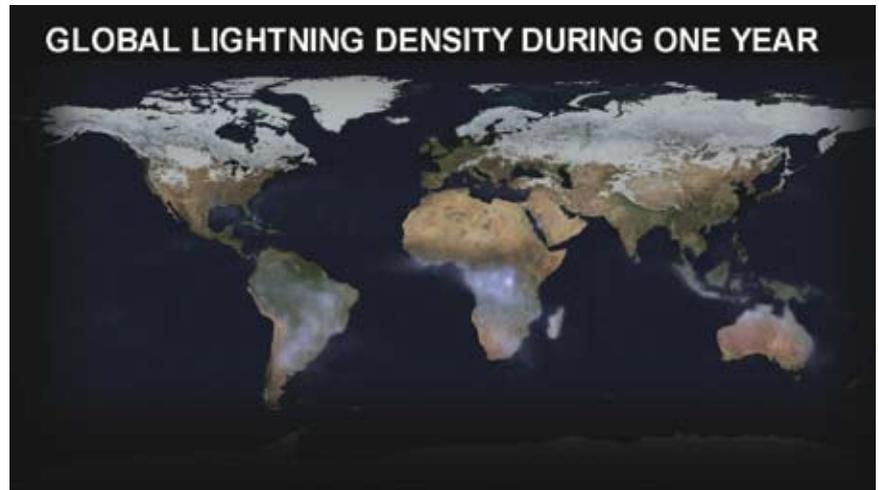


FIGURE 8



very little lightning activity above the oceans—but also there is very little outside certain key, dense areas. You take a look at Central Africa (Figure 8), and you see that the vast majority of all lightning strikes on the planet are concentrated in this one area; there are also concentrations down in South America, concentrations in various places in Southeast Asia, also along the Gulf of Mexico and various tropical regions in the United States.

They're concentrated where all of the highest densities of plant life are located! This is for a very specific reason: In order to get the development of a thunderstorm, you have to be able to have water vapor rise at a very rapid rate, that requires sudden heat changes on the ground, to force evaporation suddenly. That forces

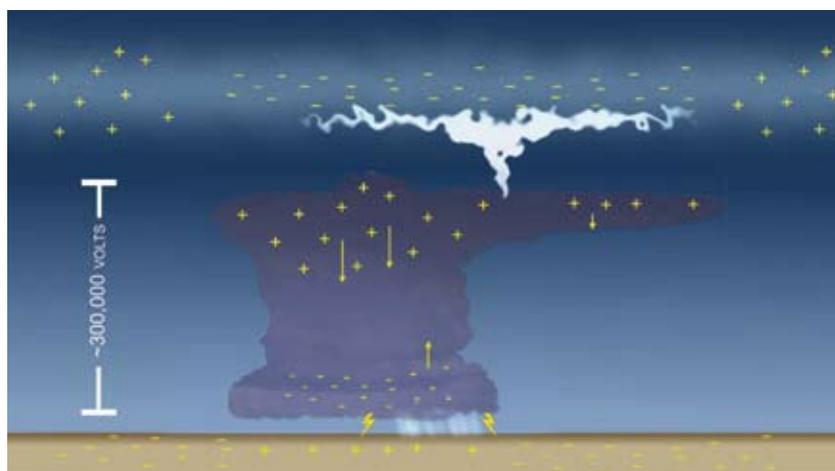
FIGURE 9a



FIGURE 9b



FIGURE 10



Both the ground and the ionosphere are conductors, and the thunderclouds behave like a battery in the circuit.

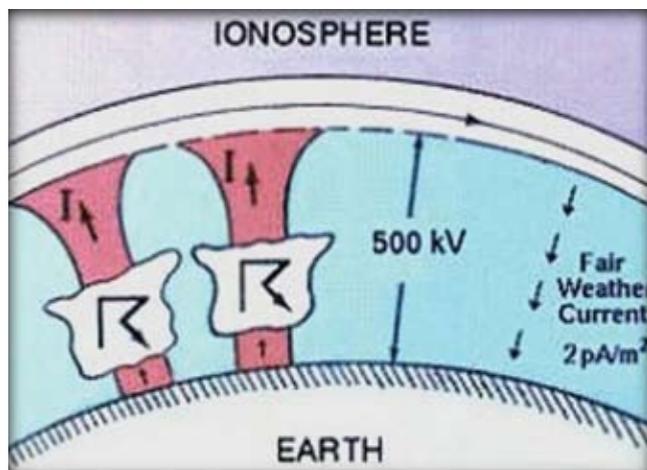
the types of clouds that can create the cloud separation that generates lightning in thunderstorms. That only happens at the moment you get large bodies of water on land, in the form of soils and other things that can heat rapidly. Bodies of water like the ocean, or even lakes, heat much too slowly to be able to produce the rapid precipitation that would give you thunder clouds and lightning.

So, you see here that lightning is a phenomenon that does not occur until you have life colonizing land (and we're going to have a video on this, coming out very soon, by some colleagues of ours in the Basement). So, this gives at first, a very different picture of what's happening, and what we mean when we talk about the Biosphere: You already start to get the smell, that this is an incredibly energetic phenomenon. As we'll point out later, the energy that's involved in that evaporation becomes massive amounts of stored energy from the Sun, and that's capable of doing an amazing amount of work, as we'll see.

But the first thing to look at, is the work performed by these thunderclouds, as they form (Figure 9). Now, this part of it is unknown, why this occurs: why, with the thunderstorm formation, you get this charge separation. But you do. You get a very distinct charge between the top and the bottom of the thunderclouds. It's that charge separation that facilitates, on the bottom side, the phenomenon that we recognize as lightning. You get the formation of a very specific charge at the bottom of the cloud, what's called a "shadow charge," on the ground. You get a reverse mirror image of that, and you begin to get an attempt, from both sides, to balance out that amazing potential that's built up between the cloud and the Earth's surface.

As a result, you get the ionization of the air, which normally is a very good insulator, and which normally would keep current from flowing; you get the

FIGURE 11



The “fair weather field,” where there is no thunderstorm, reconnects the two conductors: the ionosphere and the ground.

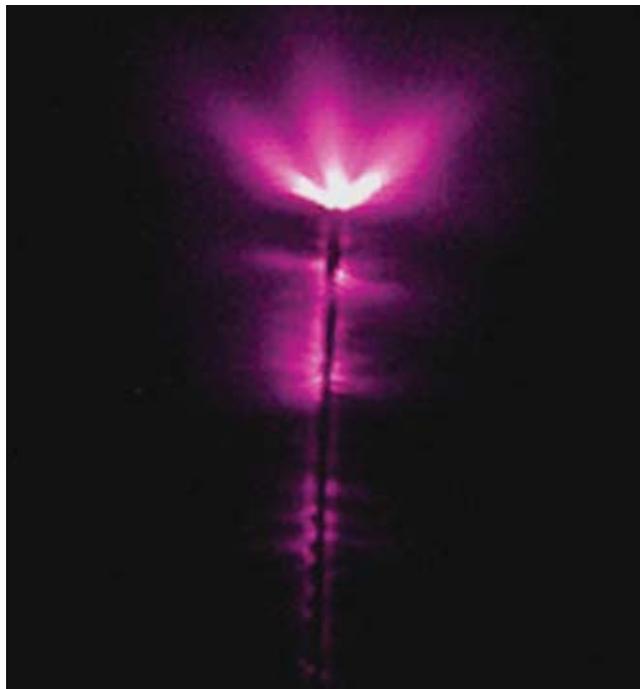
ionization which turns it into a current-carrier. And if you watch it, you see what are called these little “leading strokes,” coming down from the cloud, up from the ground, trying to meet each other. When they finally *do* meet, you get the boom that you recognize as a lightning strike. And if you play it in slow motion, you can see that this thing looks like a repeated series of strikes, as it sucks all the different charge areas out of the cloud, equalizes each of those areas with the ground. That’s fascinating, that’s amazing.

What wasn’t noticed until recently, is, when you look at the topside of the clouds, you’re getting the exact same effect happening (Figure 10). Here, you get what are called the “sprites”; they are different other kinds of electrical discharge, from the top of the clouds, up into the ionosphere, which is a region of the Earth’s atmosphere which has been ionized, based on the intense ionizing radiation from the Sun.

Now, because it’s ionized, you’ve got the stripping of atoms from their electrons, and you’ve got a very efficient current-conductor. As the potential balances out between the top of the cloud and the ionosphere, it’s able to immediately transmit that throughout the entirety of the ionosphere. Meanwhile, you’ve also got the ground, which, as we saw, is able to release this charge to the cloud, is also an efficient conductor.

So, you’ve got these *two* conducting surfaces here, between the ground and the ionosphere, and if you were to treat it like an electrical circuit, engineering-style, the cloud functions like a battery in that circuit.

FIGURE 12



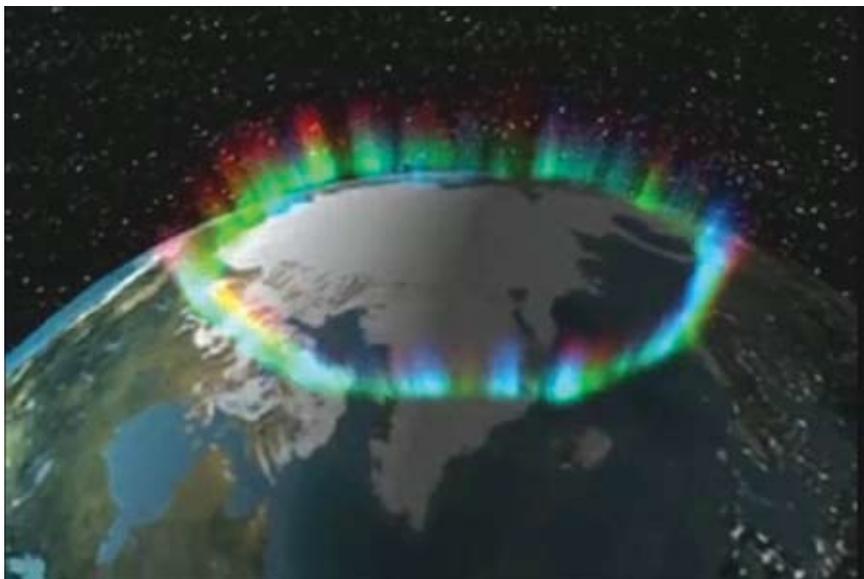
St. Elmo’s fire: ionization of the air causes the glow, including of objects on the ground, during thunderstorms.

So, you’ve got the thunderclouds behaving like a battery in a circuit. What you see from these two conductors, is another aspect of that, which is that everywhere else on the planet is what’s called the “fair weather field,” where you’ve got the reconnection between those two conductors, between the ionosphere and the Earth (Figure 11). Everywhere on the planet, you’ve got a steady flow of charge, of current—*slight*, but significant. The *potential* between those two plates can range between 150,000 volts and 600,000 volts of potential.

This makes, I think, in a real clear way, the “no empty space” polemic: Not only do you have nothing empty there, but you’ve got an *amazing* amount of potential charge just across that difference, there. That’s something huge, and it’s incredibly active, and we’ll be able to see the role it plays in these earthquake phenomena.

And here’s an image (Figure 12), to give you an idea, which I like a lot: People are familiar with the phenomenon, maybe, of a corona discharge. In thunderstorms it’s often called “St. Elmo’s fire,” which is when that potential builds up so much, that *everything* on the ground, typically sharp objects, but everything—people

FIGURE 13



One “organism,” one system, one universe.

included, animals; in Texas and other places you see it on the Longhorn cattle, that you’ve got electrical discharge coming off the horns, and everything glows with this, it’s “burning” with this St. Elmo’s fire. That’s the part *you see*: That’s where you can see the air ionizing, you can see this glow. Even when you don’t see the glow—that’s just when it’s intense enough, that you can see—even when you don’t see that, you’ve got this constant discharge occurring.

To give you an idea of the invisible substance that you’re inside of, *that* connects all the way down, as far as we know, into the ground, and likely much deeper than we know. It also continues an *amazing* distance, out into so-called “space,” again making clear, this is not empty. Those effects, any effect you see changing in that potential here, that space between the Earth and the ionosphere, is communicated into the ionosphere, changing the ionosphere, and we’ll see it again, in very specific ways, around earthquakes. All the changes in the ionosphere, immediately communicate into the entire magnetosphere of the Earth. That’s obviously communicated out into the interplanetary magnetic field, and you start to see, you’ve got a *huge system* there: solid, fluid, organic, all interacting.

### The Electromagnetic ‘Platform’

And we’ll see, as we start looking through that whole system, where all these very specific precursor

phenomena are coming from (**Figure 13**). Every single one of these separate things that we’ve been observing, really is part of *one* creature, one organism, one process that’s capable of being observed, studied, *and read*—very clearly read, to understand what its current behavior and future behavior is going to be. And the reading of its future behavior is what we’ll register as the earthquake precursors that Pulinets and others are looking at.

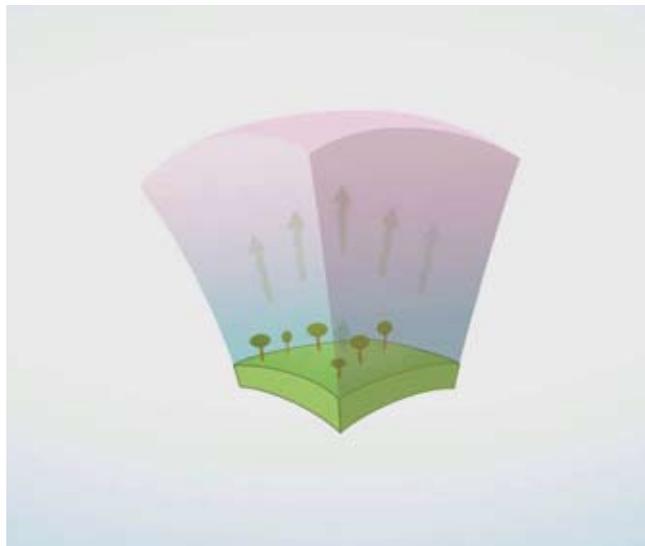
So, have in mind that you’ve got this constant flow, constantly being stirred up by these thundercloud formations. Other effects of it, we’ve discussed. In our *Extended Sensorium* report (*EIR*, Feb. 4, 2011, <http://tiny.cc/1cs65>), Peter Martinson discusses the fact that the sense of

time in animals, and in humans, the internal sense of time, is largely connected to what’s often called the “global electric circuit”—that this steady flow exists. Because if you can shield people from it, they lose their ability to keep track of time; if you shield animals, they lose their ability to coordinate certain types of behavior.

It’s significant, that if you go back in Earth’s history, this established itself, just before animal life moved onto land. The first thing you had, on the order of millions of years for smaller plants, and then for larger and larger plants, moving onto land, carrying, for the first time, large amounts of water, *as their bodies*, as their bodies, onto land, basically moving the environment you had in the oceans, onto the surface of the land, creating the ability for these evaporative processes to move, the water cycle to move. And then, generating with it, these types of electrical phenomena, and structuring the space, what you might call an “electromagnetic platform,” building the structured space, the structured platform, that’s required for animal life to be able to sustain itself on land. So, have that whole process in mind, because that’s what will be our basis for being able to discuss all the other phenomena, the precursor phenomena we want to look at.

So, hold that aside, and we’ll look at one other thing.

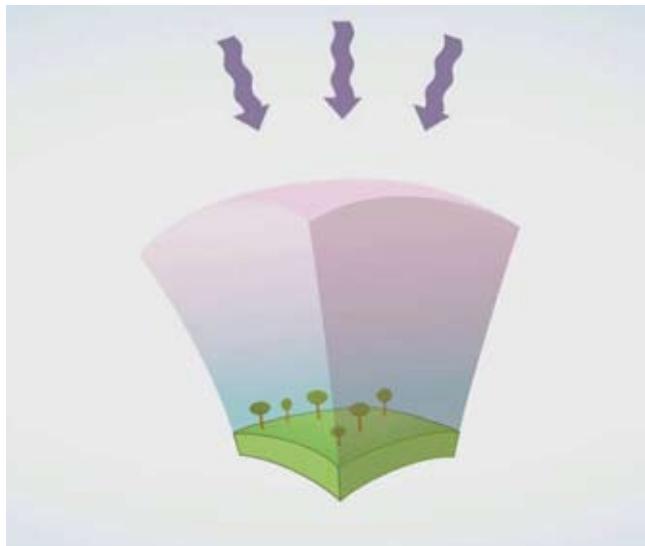
FIGURE 14a



LPACTV

*The release of ionizing radiation during an earthquake.*

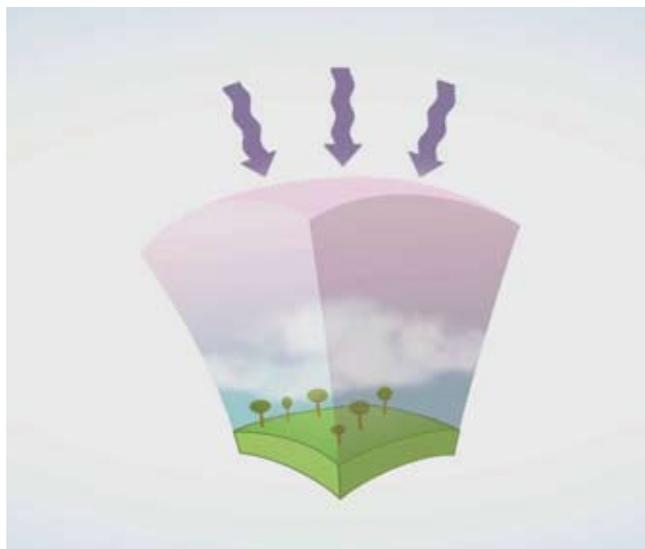
FIGURE 14b



LPACTV

*Cosmic radiation penetrates the Earth's atmosphere.*

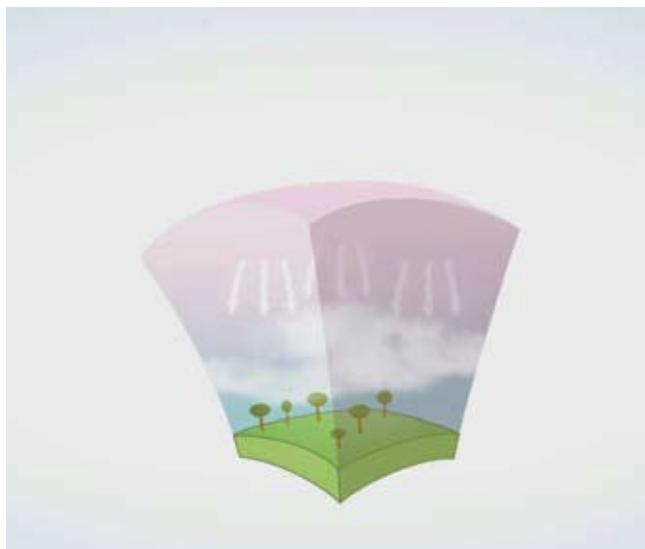
FIGURE 15a



LPACTV

*Cosmic radiation interacts with the Earth's atmosphere, resulting in showers of chain-reactions, of transformation*

FIGURE 15b



LPACTV

### **Ionizing Radiation**

In connection to earthquakes, the period leading up to earthquakes, and then the actual release of energy in the earthquake itself, there's ample evidence that you can observe different types of ionizing radiation being released (**Figure 14**), essentially the same thing we describe as cosmic radiation, but now moving in the other direction. There are various reasons that this could be the case. One that Pulinets has put forward, and other

people have put forward, is that you have large amounts of radon gas being formed at various locations in the Earth. This is a natural decay product. It occurs in several decay series, several that we find within the Earth itself. Obviously, this is a gaseous radioactive material, so as certain materials are moving from one solid state to another, they're passing through this radioactive gaseous state; that results in massive buildups of pressure, at different places in the Earth.

FIGURE 16



*The Solar System moves through the spiral arms of our galaxy.*

As to what other mechanism might facilitate that, we'll leave that as a potential. What that would mean, is that, in the event of certain kinds of major tectonic changes, you would get the release of this gas. This is measurable, people have seen it. Pulinets made the point that this is something you search for in your house; you search to see whether you've got dangerous levels of radon emission. But in an earthquake, this, or whatever other mechanism may be causing the ionizing radiation, would give you an effect that looks a lot like what Henrik Svensmark has described for cosmic radiation (**Figure 15**).

He describes certain types of cosmic radiation, most of these galactic and extra-galactic cosmic radiation. The entire universe is a constant soup of this cosmic radiation material. It's composed of it. Not only is it nowhere empty, but it's incredibly energetic, so energetic that it's a real safety consideration, talking about moving astronauts through this. It has huge effects on living tissue—it's invisible, but it has serious effects on living processes.

It has a very specific interaction with Earth's atmosphere, very specific. This exact same atmosphere that was developed by plant life as plants moved onto land, functions as a sort of interface, that translates the activity of this radiation into very specific types of phenom-

ena we observe on the Earth. One that Svensmark identifies is, as these energetic particles hit the Earth's atmosphere, they form particle cascades: One particle strikes material, and the other particulate material in the atmosphere, and you get these showers. You get these showers of chain-reactions, of

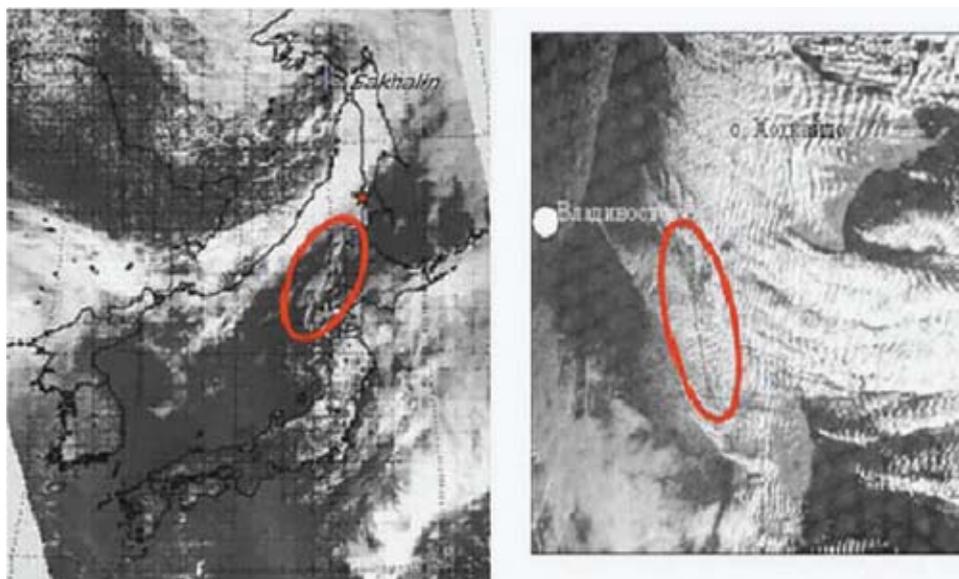
These have all sorts of different effects: These have the effect of ionizing certain parts of certain gases in the atmosphere, creating a very particular structure, of which the ionosphere, as we discussed before, is one layer. But the significant thing you get, down in the troposphere—beneath the iono-

sphere, down in the region that we would normally refer to as where weather events take place, you get cloud formation, etc.—is that this creates very specific ions, that can serve as nuclei for condensation, and in places where you would normally not get condensation. That is, the density of the water vapor is not enough to cause what you would normally recognize as condensation, these nuclei seed the clouds, and so, you get clouds forming where otherwise they wouldn't.

As a result, you get this pattern of cloud formation that corresponds to major galactic changes, and, as the work of Svensmark showed, and collaborators of his, you can see cycles of global warming and cooling, which are tied to the supposed, the theorized motion of our Solar System, both through the arms of the galaxy (**Figure 16**) and then, in and out of the plane of the galaxy.

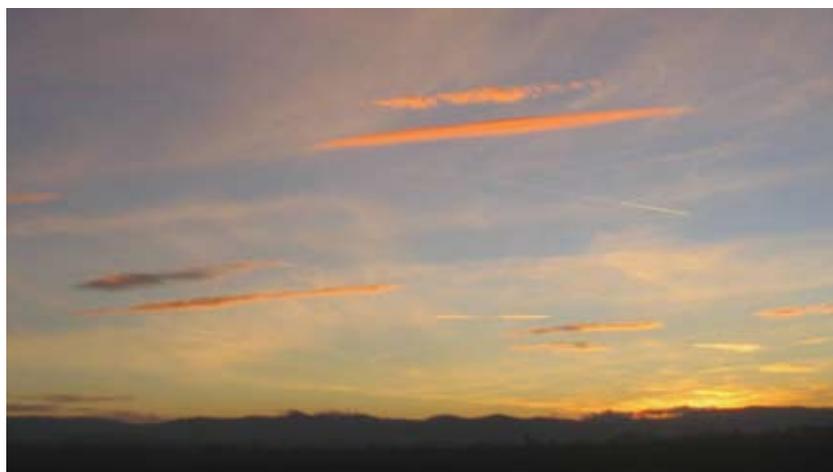
If you look, you see that global heating and cooling cycles have *nothing* to do with human activity. None of this stuff that you're getting from the Greenies right now—all of that becomes completely invalid, as soon as you take a closer look at any process on this scale. When you look at this scale, what you *do* see, is these massive changes in climate, which are correlated to what the Solar System, the galaxy, are doing as a whole.

FIGURE 17



Seeding of clouds occurs with the radiation emitted during earthquakes, over earthquake sites. Shown are Sakhalin Island (left) in 2008 and Japan (right) in 2004.

FIGURE 18



So-called “earthquake clouds” are highly structured, with sharp edges, lining up with earthquake faults.

Now, that same mechanism of seeding of clouds, occurs with the radiation that’s emitted during earthquakes, and this has been a lot of the study that Pulinets and collaborators have been undertaking. That, as you look over earthquake sites—now this is in Sakhalin Island in 2008 (Figure 17), and then Japan in 2004—you see what has often been described by eyewitness evidence, as “earthquake clouds” (Figure 18). You get these very sharp clouds formed, very structured, sharp

edges, lining up with earthquake faults, and which don’t drift as the other cloud patterns move and drift.

Now, this is an indication that something in the fault itself, connected to the earthquake, is causing the formation of these different cloud structures, and you can see in the images that it’s very sharp, very crisp. Depending on what’s the polarity, what’s produced by the ionizing radiation, you’ll either get a very sharp appearance of clouds, or a very sharp absence of them, but you’ll see this very clear distinction mapping out.

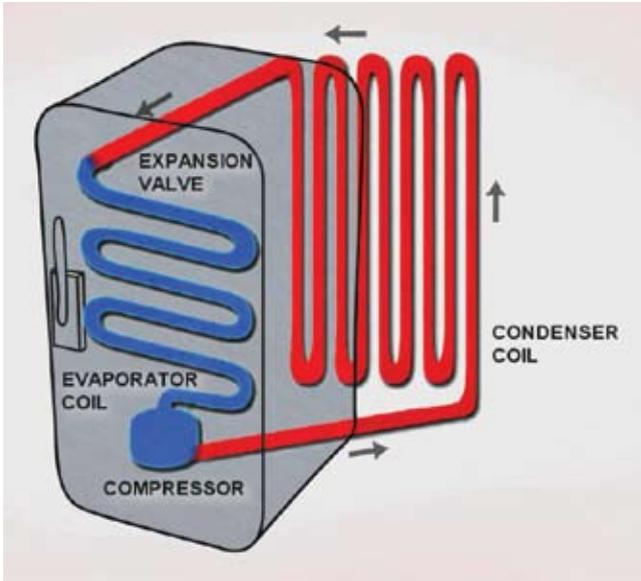
That’s something that can be seen as a clear precursor. And if you look at a lot of this anecdotal historical evidence, you find what it is: There’s lots of discussion of “earthquake clouds,” “earthquake weather”; this was sort of known, but now you can start to see how it fits into a much bigger, single system.

### Anomalies in Heat Release

But then, Pulinets’s team noted that connected to that, connected to the formation of these little condensation nuclei, is an image for everybody to take a look at. I think people have some idea, maybe you’ve had some direct experience with it: how your refrigerator works (Figure 19). Taking water and

boiling it, requires the input of heat, to convert water into steam. That heat is essentially stored in the steam, as you may have noticed, if you’ve ever accidentally opened a pot too early and had your hand over it and gotten a steam burn. The reverse is also true: In order to condense that steam back into water, you’ve got to release that heat that was put into it in the course of boiling it. Now that means, connected to all condensation, you get a heat release. Now, typically this is done sort

FIGURE 19



The mechanism of condensation and heat release in a refrigerator: an analogy to the condensation caused by ionized particles being released in connection with earthquakes.

of directly: You want to get condensation, you do it by cooling the gas, in order for it to condense.

But, now what happens if you force the condensation without cooling it, without managing it by adjusting the temperature yourself: You'll get a corresponding release of heat. And that's what is happening in the condenser coil of your refrigerator. You're forcing the condensation of your cooling fluid, and you're getting the release of heat that was picked up from the items in the fridge. So your coolant is moving into the fridge, absorbing what little heat is left there; as it leaves, you condense that fluid again, and what heat was there is pumped out, so when you feel the little coils in the back of your fridge and the heat in the back there, that's all the heat that used to be in your food, that's all being steadily pumped out.

Take that mental image, and go back to the condensation being caused by the little ionized particles being released in connection with these earthquakes: You should get not only the formation of certain clouds, not only the formation of water vapor, but you should get the release of massive amounts of heat—and

you do. This shows up as thermal anomalies that are picked up by weather satellites.

So our weather satellites that are looking at infrared radiation, the idea was originally to pick up different kinds of cloud structures, but in the maps they're trying to get, you sort of get, as an accidental picture, what are called "thermal anomalies": You get these anomalous areas of heating, and in many cases, as Ben was saying, if you look at the measurement of this long-wave radiation, they find that it will map back to fault lines, with particular characteristics, prior to earthquakes. And these are thermal anomalies that are observed. This is the example in Gujarat, India (Figure 20).

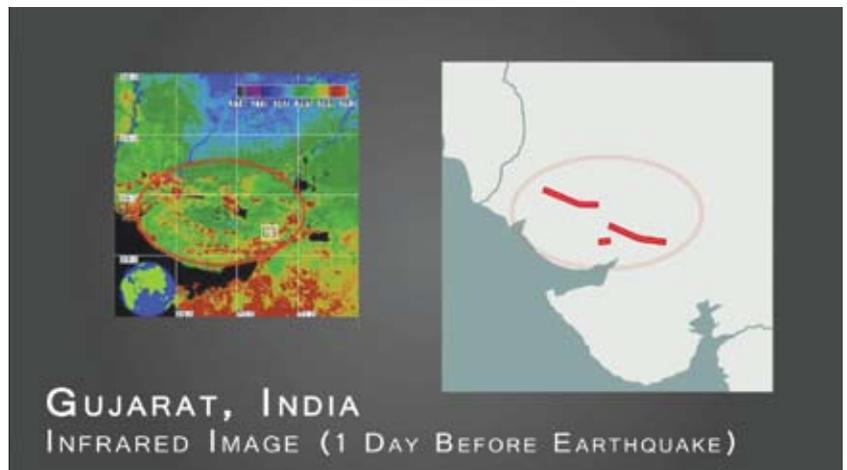
### Thunderstorms and the Ionosphere

So you've got a whole set of things here: You've got the peculiar cloud formation; you've got these different thermal anomalies. But now, go back to what we talked about in the beginning, with the global electric circuit, and you realize, that you've got this image here (Figure 11), of the "fair weather field."

So, we've got thunderclouds, which are forcing, creating a potential difference, so they act sort of like batteries. You know, that's the way a battery works: A battery's got a potential difference between the two ends. You link that up through a whole process, one end to another, and it fuels the whole thing.

All these various thunderclouds, in that little belt around the Earth that we looked at earlier, those thunderclouds are steadily fueling this process; maintaining this potential, again, 150,000 volts to 600,000 volts, between the Earth and the ionosphere, depends on what

FIGURE 20



Thermal anomalies measured by infrared detection devices before an earthquake.

goes up in the thunderclouds, comes down through what's called the "fair weather field" everywhere else, and so much so, that you can measure it. If you take three sensors anywhere on the planet, you can map out every lightning strike location on the surface of the planet, because, no matter where you're placing your sensors, you can triangulate it, because of its global effect. You can also measure the change in the fair weather field places in the planet, based on what happens around the thunderstorms.

This is a complete system. But now, its behavior depends on the behavior of that dielectric, that little insulating layer of the atmosphere. What happens if you release the ionizing radiation of the type that Svensmark is talking about, or the type that Pulinets is showing, or others are showing, as connected to these earthquakes, into that column of what's normally your dielectric, that has a certain, very minimal conducting capability?

You change that conductivity, and Pulinets shows that, you do it in two ways: First, the free ions *increase* the conductivity of that column, as they collect water molecules around them; as they collect the water vapor into these droplets, they *decrease* the conductivity. It's as though, in that column, you're creating a wire, and then you're creating an increased insulation. If you create that wire between your two conducting plates there, you create a sudden ability to discharge more rapidly from the ionosphere down into the ground. That shows up as an ionospheric anomaly.

It shows up as a much bigger anomaly, because, as we said before, that plasma, that ionized plasma, ionized as a result of the Sun's activity, that makes it a perfect—a near-perfect—a very excellent conductor. That means it's going to try to equalize the potential across the entire surface; as soon as that little column is changed by the earthquake, you're going to detect a change throughout the entire surface, that's going to try to equalize that change of potential. That's observable.

Now, if you look back, that change corresponds to what you see, both what DEMETER observes, what the various observing satellites are noticing as ionospheric changes, prior to an earthquake, during an earthquake, and after the earthquake. *Those changes in the iono-*

FIGURE 21



*Not detected by the human sensory organs, but powerfully influential on our planet: Earth's magnetosphere is revealed by the "extended sensorium" of instrumentation.*

*sphere also translate into changes in the Earth's magnetosphere that are recognizable. The entire process is perturbed.*

And you notice, you've got something there now (**Figure 21**)—again, *all* in what were otherwise invisible, to your "in the box" senses. All these processes are invisible, except in one respect, as we'll discuss, but more or less invisible to the sort of "untrained" mind; but they're completely visible to this array of sensory apparatuses, many of which, again, weren't specifically designed for this purpose. They were designed to observe other things, but they pick up these as phenomena. So, this gives you a whole class of precursors that you can sort of see as you're treating this thing as a single organism.

### Changes in Animal Behavior

But to add to the earthquake clouds, we'll add one more anecdotal precursor, the change in animal behavior, connected to earthquakes. Now, this has been observed, reported—during the one quake in China we reported on, it was even used as an early warning system, to evacuate a city in time to save many lives, by observing the strange behavior in animals. There are lots of anecdotal reports about changing behaviors of different kinds of sea animals, seemingly, in particular, animals that are inclined to use different types of electronavigation.

Now, think back to what we said, back in the Devonian to the Silurian—I think I've got the right ages

there—when you’ve got the first motion of plant life onto land, facilitating the ability for animal life to move onto land. So you’ve got the entirety of animal life on land being built within this platform established by plant life. What happens to that animal life, as you start to perturb that basis for its existence there on land, is that you’re going to see recognizable changes in behavior, in connection with those changes. As you mess with the behavior of that current flow, you *will* see, and you *do* see, different types of anomalous animal behavior, most of which seems to be connected to their ability to navigate. So you’ll get the beaching of different kinds of animals, etc.

All that should give the idea, and hopefully, we can create an image of it, that you’ve got a single, continuous process there that’s recognizable, that extends all the way from some, as-yet-untouched region within the Earth—we have no idea how long and how far that goes yet. We’ve tunneled an *insignificant* distance into the Earth; human knowledge has actually extended farther into space, than it has into the body of the Earth. And as we know, we’ve taken very limited steps into space; we’ve only taken the very precursory actions off the planet.

So, it extends much deeper than we know into the Earth; it extends much, *much* more distant than we know off of the Earth. As far as we’ve got an ability to make observations, or take our different sensory data, this whole process extends; it’s fueled by extragalactic cosmic radiation. *We*, in response, serve as a beacon in return. If you take a look at the tops of those thunderclouds, those exact same thunderclouds, as they’re pumping the discharge into the ionosphere, charging the ionosphere; if you take a look, we recently saw, by accident, as we had the Fermi gamma-ray telescope up there to look for these huge gamma-ray bursts outside, gamma-ray objects, they noticed that you’re also getting massive gamma-ray bursts *from the Earth itself*.

And you look down and you realize what’s happening is, you’re getting these huge bursts of gamma radiation from above these same thunderclouds. So, by the

activity of the Biosphere, suddenly, the Earth itself becomes a beacon. So, we’re not just receptive; we’re also communicating back. What we’re communicating, we don’t know—we might want to have some say in that, and see if we can not let the plants have all the say! But right now, they’re sending some kind of message out.

Connected to that, you get these bursts, you get the creation of antimatter, which has secondary gamma-ray bursts connected to it. You get this *hugely* energetic process there, and again, it’s functioning in this continuum. This completely filled, active, structured, knowable continuum, which fills all of space, has got a character to it, is involved in a constant anti-entropic development: that that’s the thing that we as a species

should be acting on, and the establishment of an early warning system for earthquakes would be a first step towards that, and a necessary step!

### The Galactic Effect

**LaRouche:** So therefore, what we’re looking at, with your remarks here, is the nature of the comprehensibility of the kind of process we’re dealing with. And we didn’t even touch some of the deeper things, which we can touch more deeply at a later time, or it may come up here.

But the point is, the thing is totally foreseeable. I think “predictable” is a bad word, I think foreseeable is a better term.

We know, in particular, that, as Sergey reports, if you give him a number of people, he can create a facility which would actually make up for the gap; that is, a facility which could actually assimilate this kind of information and process it in a coordinated way—take the coordination among these different types of phenomena, monitor them, and then put together the picture that we know now, retrospectively, by seeing these different types of phenomena. And putting one laboratory system to work, under which, say, a dozen specialists, who are really commanding the operation, in touch with and working with other institutions throughout the planet, we have a system of forecasting which gives us an indication of what we’re getting to.

The more important thing, of course, is the deeper



LPACTV

Lyndon H. LaRouche, Jr.: “A revolution in what we will define as science is actually coming out.”



J. Hester (ASU) et al., CXC, HST, NASA

*A composite image of the Crab Nebula, combining optical data (red) from the Hubble Space Telescope and X-ray images (blue) from the Chandra Observatory. We still don't understand what it's doing, but it's doing something big!*

one: the question of the galactic effect. All of this stuff is tied to the galaxy, and it's only since we began to pay more emphatic attention to this question of the galactic connection, and also to the idea of cosmic radiation; once we, in our organization, beginning last Summer, went from our work on NAWAPA [North American Water and Power Alliance], as a NAWAPA, and began to look at the galactic implications of this—because we're concerned about what these changes in the Earth, by NAWAPA, are going to mean—and what we touch upon, in other respects, by looking at these things, since then, we've had in our organization, a much-improved capacity to understand this whole process.

And a revolution in what we will define as science is actually coming out. When we deal with this thing as a cosmic phenomenon, as opposed to the old, crude, stupid, space-time-matter conception; once we look at this thing as a *cosmic* process, and look even, simply, at the relations within the orbit of our galaxy, we look at this kind of phenomenon, and then look back at Earth in the context of this phenomenon, we now see that we have to think about the universe in com-

pletely different terms.

This, interestingly, has two areas of impact. One, is the Einstein impact, Einstein-Planck, which is the precursor of this kind of thinking. The second one is Vernadsky. So, Vernadsky brings us what's crucial for this kind of forecasting, which is why some of our Russian friends are the best at it. The Russians and the Ukrainians are the best at it, because under the Soviet system, they went heavily into this kind of area of work.

And now we've got a situation, where we know, we have a better understanding. We still don't understand what the Crab Nebula is exactly doing to us, but it's there, and it's doing something big. We don't know what the intergalactic relations are, but we're beginning to get a smell of them, that they're very important. So we find that ordinary human beings, or extraordinarily ordinary human beings, like our friend Sergey and their teams, are actually putting together, from their modest resources, relatively speaking, exactly the kind of way we have to think about the universe.

### **What Holds People Back?**

And we don't know that we can save mankind. I think we should say openly, as I said yesterday: The greatest danger, and Franklin Roosevelt said it in one word, so to speak, but I don't think even understanding what he said gets across to a lot of people: We have nothing as much to fear as fear itself. And, when we're afraid of something, so afraid of it, we don't bring it up, we don't discuss it, because we don't want to frighten people, we're doing precisely that! We're frightening people in the name of *not* frightening them.

What we have to do is sort of civilize our fears, and look at our fears straight in the eye. And the greatest danger, which is typical of the Baby-Boomer generation, and has affected the sequential generations, is they say, "Don't tell me about it! I don't want to hear about it! Don't tell me, you'll get me upset."

We had, in the Baby-Boomer generation, the rise of an idea of cowardice, of intellectual cowardice, which actually, when you think about strategy, military strategy, it's the kind of cowardice, which means a mighty army is going to crumble at the first flanking operation! With the Baby-Boomer generation, we have potentially

what could have been a mighty army, which, on the basis of its “mother’s fears”—mother says, “Don’t do that! Don’t do that! Don’t think about it, don’t mention it! Don’t talk about it!” These kinds of fears, which did not exist in my generation, the World War II generation, have made the American people, and Europeans, *impotent, psychosexually impotent*, because they look at fears as things you talk about!

And it’s by talking about the threat to humanity, which we know is a *credible threat* to the existence of humanity, coming up on the 62-million-year cycle, by closing our minds to it, we are failing to discover the means by which we might *avoid* that unfortunate conclusion!

Therefore, those, like the current President—who of course is a mental case, a frankly mental case, and that’s a technical fact; that’s not an opinion, that’s a technical fact—by tolerating this, we have reduced our people, with the Green movement so-called, and similar kinds, we’ve reduced the people of the planet, or many parts of the planet, to such a degree of cowardice, that it’s *cowardice seeking extinction*. That kind of cowardice, is a desire to become extinct, so you won’t feel the pain any more. You get away from the pain by killing yourself. And that’s what’s happening.

And this is what’s happening here, in what you’ve laid out, and we’ve only scratched the surface here. What we’ve laid out, demonstrates that this problem is a *cognizable problem*, and it’s only our own stupidity, in refusing to investigate these lines, which we should investigate to a further level, which causes the human race to be in danger! The human race could become extinct, not because it has to go extinct—we can’t answer that, yes or no—but we certainly are helping the extinction of the human mind, and human beings generally, by failing to face this thing, straight up!

And that’s another reason for getting rid of President Obama, for putting him into this 25th Amendment, section 4. And we have to put him there, because *his fears*—he seems to be asserting his arrogance, and threats and so forth. But actually what motivates this guy, is terror. He’s terrified into stupidity, and he’s aggressively defending his stupidity. And his stupidity, and the way he defends it, is a threat to the existence of the United States, and humanity generally. And we don’t have people in the Congress, or in the Presidency right now, generally, who are willing to take that on.

It’s the psychosexual impotence of the Baby-Boomer generation, which is threatening the potential

extinction of mankind! And our job is to scare the hell out of them, because they have to face these fears, because if you don’t face them, you don’t identify them, you’re not going to seek the methods by which to overcome the cause of the fear. And that’s what we’re looking at here. This is enough, to say—look, you’ve broken it down, effectively, to the point that we can say, “Hey! This is comprehensible.”

## **Sense Perception Is Not Reality**

There’s nothing mysterious about this—there are lot of unknowns, we recognize that; but it goes to a more fundamental question, which, of course, is our shtick: People believe so much in sense-perception, as such, and believe in it as an exact truth, believe that it’s reality, sense-perception is reality.

What we know in science is that sense-perception is *not* reality. Sense-perception is a footprint of a man who can’t see: He walks through the thing; you don’t see him, you see the footprints, and you call the footprints, “We’re worshipping God! We’re worshipping the footprints.” This is the way human beings act when they say, “I’m being practical.” Practical is a synonym for being stupid, and dangerously so, suicidally stupid. What we’re doing, by looking at the shadows, which we’re looking at here, the shadows of reality, we see that the shadows correspond to a reality which sense-perception does not give us. We go outside sense-perception per se, to these other factors, and suddenly, “Hey! The universe makes sense!” We don’t know all the answers, but it makes sense.

And if we get people to understand what we’re trying to say, then they will come out of their cowardice! And the thing, as Roosevelt said, then: Nothing so much to fear, as fear itself. And the Baby-Boomer generation is a generation of fear, which generates fear, and produced a generation which is—actually the younger generation now, under 25 is increasingly nonfunctional. They’re not functional as human beings! Their capacity to face reality, is being destroyed, and a dwindling number, a dwindling, tiny minority of that generation is still capable of functioning.

And the key, the source of that, is this question of fear. As Roosevelt said: We have nothing as much to fear, including in *this* area, including in the cosmic problems, including the galactic problems, the threat of galactic extinction: We have nothing as much to fear, as fear itself.

If we had not lost 40 years of science, we would not

be in the mess we're in today. And therefore we have to say, "What do we have to correct?" We have to correct, and eliminate the popular opinion among the Baby-Boomer generation and its followers, which destroyed the ability of the people of the United States and Europe, to actually act, in *rational* defense of themselves. Mankind has always lived in terms of the unknown. Mankind has lived only because we're the only species that can invent new powers of conception. The Green movement is a movement of extinction. You want a 62-million-year cycle? Have a Green movement. That'll do it: It'll kill off the human species. And therefore, people have to realize that if they're Green, they're not really qualified as loyal members of the human race.

That's our lesson here.

**Shields:** Right.

**LaRouche:** Very simply, a few things, as we have done here, as Sergey did in his remarks, we can make realistic, what the factors are that we have to understand, to *begin* to understand what this problem is, and to *begin* to understand what direction of investigation we must go into, in order to answer the unresolved questions.

### A New Leadership

We need a new leadership in this—I think, in yesterday's and today's development, in the announcement of the reinstatement of the Glass-Steagall Act, if restored, as intended by this action in the Congress, if that's restored, Obama's going to be out. He'll probably leave in a fit of rage—even the British won't be able to stop him from doing that—and we have a chance for humanity.

But we're going to have to change our opinion, the opinion of the population, so they're no longer—like the Green movement. The Green movement is people



EIRNS/James Rea

*This 250,000-person anti-nuclear demonstration in Berlin on March 23, after the Japan earthquake, shows the insane impact of the Green ideology on the population at large.*

who have been driven into becoming fascists by their Green fears. They're afraid of reality, and their fears, their hysterical fears, become worse than Hitler, as a menace on this planet. And if we don't overcome these fears, by forcing people to accept reality, we're not going to have a human race. That is, this can be a self-inflicting, self-perpetuating disaster for us. And this is extremely important: We break this Green movement nonsense, then humanity has a chance. If the Greenies take over the planet, the planet's finished, and the human race is finished.

**Shields:** And it's significant, all these developments make them so clearly and explicitly obsolete. Everything: Their whole view of the way the universe works, as you said, is based on no actual evidence.

It's based on no actual scientific knowledge, it's based on an internal neurosis, and internal psychosis, a willful detachment from reality, that they wish to impose on everybody else, even at the expense of everybody else's lives.

**LaRouche:** That's exactly it. That's where we are. And this Green movement is, right now, as you see in Europe in particular, the greatest threat to the human race, that we've faced by far. Hitler was a minor threat, compared to the Green movement, and Hitler was actually a forerunner of the Green movement. If you look back to the 1920s, when the British got him started: Anti-technology, anti-science. Anti-human.

**Deniston:** One thing that definitely stuck out in Sergey's interview, was the way he raised the solar relation question. These guys are already under a lot of pressure, even on the question of whether you can have these precursor events that you can detect and have some type of warning systems. There's an even larger persecution of people who are daring to take up some of



EIRNS/Stuart Lewis

*The power of Classical artistic creativity, said LaRouche, is what you get with “the use of the function of irony.” The late Classical singer William Warfield was a master of irony. Here he is shown teaching a class with Schiller Institute chorus director John Sigerson (1995) (top); and reciting a poem at a Schiller Institute conference (2000) (right).*



EIRNS/Stuart Lewis

very clearly.

**LaRouche:** It’s what I’ve just written about. I’ve dealt with the subject before, but I’ve written about it, because of the general circumstances.

The problem of mankind is, so far, that stupidity is belief in sense-certainty, and the typical guy who says, “I believe in what my hands, what my senses tell me.” And those people are not quite fully human. Because, as we see, in the indicators of these earthquakes, and we see the factors, even animals

know what human beings don’t know! And human beings can know this very easily, if they decide not to be animals: Because if they believe they’re animals who are limited in their reactions according to what they consider sense-perceptions, which they call “reality”—it’s what they *call* reality: “I’m a practical man, don’t give me this

these more frontier questions, within the scientific community of the solar relations, these activities, and the galactic relations, especially.

He made the point, that you have cases where you have the solar activity directly coinciding with the earthquake activity on the Earth; you have cases where you had it prior to the earthquake activity; you have cases where you have the solar activity coming after the earthquake activity. But no one, just looking at it, is going to deny the fact that there’s repeatedly a very clear, not always one-to-one, but very often a relationship between these two things.

He said it quickly, but he said, “What does that point you to? That points you to, well, maybe there’s something causing both.” Maybe there’s something directly relating to the activity on the Earth, and the Sun; like you said, we want to define what we know, and then define what we don’t yet know, as the clear question of the investigation. I think this comes up as one of them,

stuff!” A practical man is a person who is not fully human.

Because we see, that when you look at this thing, you unmask it, you realize that the precursors are not some mysterious thing from outer space. They’re what the human beings are too stupid to recognize, as long as they try to be practical: It’s only when they look outside their sense-perception.

### **The Nature of Man Is Creative**

And there’s a deeper question here: It’s the nature of man. Greenies are morally stupid, that is, they are sub-human, morally! Because, the nature of mankind is our human creativity. Now, the Greenies, who are essentially the slaves of the worship of Zeus—that’s what they are. They just say, “We have to stick to our animal nature. Therefore, if we don’t have a sense organ which comes to us in infancy, which teaches us how to react to this stuff, it doesn’t exist.”

And the idea of discovery of principles in the universe which go beyond our sense-perceptual training, doesn't occur to them. They say, "Well, let's be practical. Let's be practical." When you hear a person saying, "let's be practical," you know you got a stupid man on your hands, and a stubbornly stupid one.

The problem is, we are so tied up, by Liberalism, the philosophy of Liberalism, of the pleasure/pain principle, that we recognize as reality that which gives us sensual pleasure and sensual pain. We do not recognize what's going on which is not in that category! That makes us an animal, not a human being! That makes the people who believe that, like the Greenies, not really fully human beings, but more like animals, because they do not believe things they *can* know, because it interferes with what they call their "pride of sense-perception."

Whereas, when you look at the animals then, you take the number of animal species which *do* recognize these precursors, they're not conscious of them, but they react to them, you recognize: Hey! Mankind is intrinsically stupid, because mankind is not intelligent enough to respect even what these animals react to, and other species react to; how the system is organized.

Then you look at how much of this planet's existence, going back several million years, on the existence of Earth, and looking at the 62-million-year cycle, and you look at the evolution of the planet, under the influence of life, and under the influence of human creativity, and you realize that what sense-certainty teaches you is stupidity!

And therefore, what happens as a result is, by believing in Liberalism, you believe that there are *no knowable principles* in the universe; there is only your interpretation of sense-perception. Yet, we know that with the aid of instruments, and by the aid of the mind, we can discover messages being sent to us, which are not just sense-perceptual messages, but in the same way that we're measuring these earthquake effects! The same way that Sergey and company are doing that: You're taking a complex of things, some things you can directly perceive; some things you can't. Some things you see by indirection, as in animal behavior, other kinds of behavior; you put these together, you find that your mind is capable, by discovery, of encompassing a larger universe than human sense-perception gives you. And you're able to understand how to use sense-perception.

In other words, you're able—when you have a man walking, when an invisible man is walking through the mud, he leaves footprints. Do you have the intelligence to adduce the presence of the man, or do you think that footprints are making those imprints? The typical person today, the so-called realist, has no conception of humanity. They don't see the man, the invisible man, who's creating the footprints by his walking. And that's where we fail.

**Shields:** To the extent that human beings identify with their physical senses, with their physical self, that's the extent to which, when you die, you just die.

**LaRouche:** Exactly.

**Shields:** To that extent, you're a groveling mortal.

**LaRouche:** Can you use the footprints of the invisible man walking, can you use the footprints to identify the man? So that therefore, instead of having the idea that "I *know* practical effects," which are sense-perceptual effects, do we have the ability to say that the human mind is outside sense-perception, and higher? Can we identify what the human mind's function is? Not by sense-perception, but by the implications of what we see as the ironies created by sense-perception?

And therefore, we have a limited number of people on Earth today, who believe in the human mind, and who are actually creative. The destruction of Classical artistic composition, has destroyed the main mechanism by which civilized forms of life, have been able to exist as human.

By the introduction, in 1950, of the sexual congress, or, as we call it, the "Sexual Congress for Cultural Freedom," by introducing this attack on Classical artistic composition, and Classical music in particular, we have destroyed the ability of mankind—through the denial of Classical artistic composition, we denied the powers of the human imagination, on which we rely, to understand the significance of unique phenomena! And therefore, the loss of Classical artistic composition, and our relationship to it, is the source of the stupidity. It's like brain-deadness: If you reject Classical artistic composition, you don't have scientific discovery. You don't have the capability of doing it. You just have stupid people, trying to be practical. And they're practically already dead, as a result. We're doomed.

And this is what the lesson is: We've got to get man-

kind to understand the existence of what we call the human mind, as not being the compounding of sense-perceptions, but as something which *sees* sense-perception, i.e., the footprints in the mud, as being organized by something which you don't see, which is the human being, the human mind!

**Shields:** Because in that lies human immortality.

**LaRouche:** Yes, and what is called the birth of Classical artistic creativity, is precisely that. If you have the power of Classical artistic creativity, which you get with the use of function of *irony*, in Classical poetry, the function of irony in Classical music composition, and you prefer the “ugh-ugh” variety of entertainment, then you've lost your humanity.

You have people out there, these Greenie types of movements, and their kinds of entertainment, the way they dance! What they consider music—bum-bum-bum-bum-bum! This is the definition of their loss of powers of humanity. Because it was through *Classical* artistic composition, through the sense of the principle of irony, that mankind's cultures were able to progress to a certain degree of brilliance.

What we have done, in the course of the 20th Century, we have increasingly, beginning with the so-called World Wars period, destroyed that Classical artistic capability. We've rendered people functionally stupid, and it's their functional stupidity and fears associated with that—it's like the guy, you're cut off from a sense of time. You no longer have an inner sense of time. This is the same kind of effect: If you believe in this kind of culture we have, the Greenie culture and so forth, if you believe in that, you're talking about a human species that's on the road to extinction. Because they've lost that power of creativity upon which humanity's existence has always depended.

Because that's what the importance of this is; it's not just saving man, practically, from these kinds of effects, which I'm sure we can do. But we're destroying the mechanisms, so to speak, the invisible mechanisms—invisible to our sense-perceptions—by which we're able to conquer these problems. And that's the issue here.

And a nation, that can not get rid, under the 25th Amendment, Section 4, of the Constitution, can not get rid of a President, who is, in fact, in effect by his very presence, the greatest threat to humanity on this planet, today... Because, if the United States survives, the world will survive, because it will only survive in this

way. And without our initiative, and what reposes in our Constitution, we can't inspire the rest of the world to take the actions, by which it can survive. Without that, without a shift from the so-called “practical mind” of the stupid person, of the half-brain-dead person, into this other view, into the view of the mind as a creative mind, only in that way, can we save humanity. And even something like what faces us now, could be the extinction of mankind.

And we have to realize the relationship of the continuation of this person in the Office of the Presidency as the threat of the extinction of mankind. When people wake up to that, we'll make it! But it's like, in all warfare, I can tell you, any war in which a Baby-Boomer generation is involved, is a war you're going to lose, because they have decided to lose it implicitly, before it's started.

That's the flanking principle, the principle of the flank. The principle of the flank is not some big physical principle; there are physical principles involved. The principle of the flank is, the enemy you're attacking, whom you're going to outflank, is incapable of reacting rationally in behavior, a rational response to the threat. All the interesting threats, of military threats in flanking, have come where an inferior force, numerically, has outflanked and destroyed—utterly destroyed!—what is apparently a superior force!

Now, that is a phenomenon of the human mind. The outflanked force is the one whose mind is not capable of responding to what the flanking force clearly understood. That's the secret of warfare in politics. That's why we can win. We're not a threat to them: Their stupidity is.

**Hoefle:** That's the importance of Glass-Steagall. Everything that we've just described is the potential future of mankind. And what the Brutish Empire is trying to do, with their monetary system, is kill off most of the people of the world, to prevent this future from happening. Glass-Steagall is our weapon to destroy them.

**LaRouche:** I'm very happy about that appearing finally. I don't think the President is happy at all about that! He's going to do everything possible. Are we going to survive? The answer is, “Are you going to get rid of this President?” Going to put him in a booby hatch where he can be comfortable and safe? He may not like it! But he'll be comfortable, and we'll keep him alive. And his punishment will be, to live with his wife. With her shopping list!

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## Editorial

### *Pass Glass-Steagall Now!*

A door to sanity was opened on April 12, when Rep. Marcy Kaptur (D-Ohio), joined by Reps. Walter Jones (R-N.C.) and James Moran (D-Va.), reintroduced her bill to restore FDR's Glass-Steagall bill, H.R. 1489. There is no more important piece of legislation that is, or could be, before the nation. The question is, will the American people take this opportunity to ram this bill through?

The one thing that's clear is that Congress cannot be relied upon to follow through on its own. It's full of cowards, or worse, who spend their time begging for dollars from Wall Street, and there is no indication that that has changed. It's going to take a virtual earthquake to make sure this bill goes through, a political mobilization beyond anything this nation has seen in decades.

You say, we've been here before? Not really. Let's put this mobilization in context.

We, as mankind, are facing the convergence of two deadly crises: first, the approaching potential extermination of the human species as a result of our galaxy and Solar System entering a new phase; and second, the collapsing power of the British Empire, which threatens to drive mankind down into a new Dark Age. Looked at in the ordinary way, these crises, especially the galactic one, are terrifying, apparently overwhelming, and unprecedented. Any day now, we could wake up to find huge chunks of California, or Washington State, collapsed into the Pacific Ocean—and the United States literally sunk.

But if we face this reality, we will not go into panic, or denial. Rather, we will take up, with even more urgency, the strategic flank on both crises—the imposition of Glass-Steagall, and the removal of Barack Obama. This is the only available path for our survival—short-term and long-term.

The re-enactment of Glass-Steagall, as FDR pushed it through in 1933, and LaRouche conceives it today, means imposing the standards that will wipe trillions of dollars of potential claims off the books. Wall Street will die—but what of it? We will wipe out the monetarist system, and reinstitute an American credit system. Once we wipe out the \$15-17 trillion in bailout money which is now “on the books,” we can put that money to productive use, starting with saving the cities and states, which are in dire straits, if not at a point of no return.

We're on the edge of possible extinction, by either the blowout of the imperial system, or the actions of our Solar System within the galaxy. Either way, the solution lies with getting Obama out, and implementing Glass-Steagall.

But, can we get Congress to move? One thing that's in our favor is the increasing mood of hatred against the President, especially among Democrats. Sixty percent of the House Democrats rejected Nerobama's deal with the Devil on the budget in a vote April 14—a stunning repudiation. But it's going to take a lot more, coming from the people themselves, to get the necessary action.

Lyndon LaRouche put it this way April 16:

“The revolt against the President is good. The Democratic Party has two priorities right now: Pass Glass-Steagall and bring about the destruction of Obama. Either we get Obama out of office soon, or there is no hope for this country or the world. Push through Glass-Steagall and get rid of Obama. He has to go because he is insane. Things beyond people's imagination are going to happen soon, and we have to be prepared. That means Obama has to be safely removed from office now.”

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