

THE TWO GREAT DECEPTIONS IN CONTEMPORARY PHYSICAL OFFICIAL SCIENCE

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**This article is of fundamental importance for
Cosmology and Energy!!!**

1. LAW OF ENERGY CONSERVATION

*In physics and chemistry, the **law of conservation of energy** states that the total **energy** of an isolated system remains constant; it is said to be conserved over time. This **law** means that **energy** can neither be created nor destroyed; rather, it can only be transformed or transferred from one form to another.*

The conservation of energy is a common feature in many physical theories. From a mathematical point of view it is understood as a consequence of [Noether's theorem](#), developed by [Emmy Noether](#) in 1915 and first published in 1918. The theorem states every continuous symmetry of a physical theory has an associated conserved quantity; if the theory's symmetry is time invariance then the conserved quantity is called "energy". The energy conservation law is a consequence of the shift [symmetry](#) of time; energy conservation is implied by the empirical fact that the [laws of physics](#) do not change with time itself. Philosophically this can be stated as "nothing depends on time per se". In other words, if the physical system is invariant under the [continuous symmetry](#) of [time translation](#) then its energy (which is [canonical conjugate](#) quantity to time) is conserved. Conversely, systems which are not invariant under shifts in time (an example, systems with time dependent potential energy) do not exhibit conservation of energy –

unless we consider them to exchange energy with another, external system so that the theory of the enlarged system becomes time invariant again. Conservation of energy for finite systems is valid in such physical theories as special relativity and quantum theory (including [QED](#)) in the flat [space-time](#).

The mechanical equivalence principle was first stated in its modern form by the German surgeon [Julius Robert von Mayer](#) in 1842.^[12] Mayer reached his conclusion on a voyage to the [Dutch East Indies](#), where he found that his patients' blood was a deeper red because they were consuming less [oxygen](#), and therefore less energy, to maintain their body temperature in the hotter climate. He discovered that [heat](#) and [mechanical work](#) were both forms of energy and in 1845, after improving his knowledge of physics, he published a monograph that stated a quantitative relationship between them.¹

Meanwhile, in 1843, [James Prescott Joule](#) independently discovered the mechanical equivalent in a series of experiments. In the most famous, now called the "Joule apparatus", a descending weight attached to a string caused a paddle immersed in water to rotate. He showed that the gravitational [potential energy](#) lost by the weight in descending was equal to the [internal energy](#) gained by the water through [friction](#) with the paddle.

The Law of Energy Conservation is “proven” mathematically without to take in consideration quantum limitations working in some extreme quantum conditions.

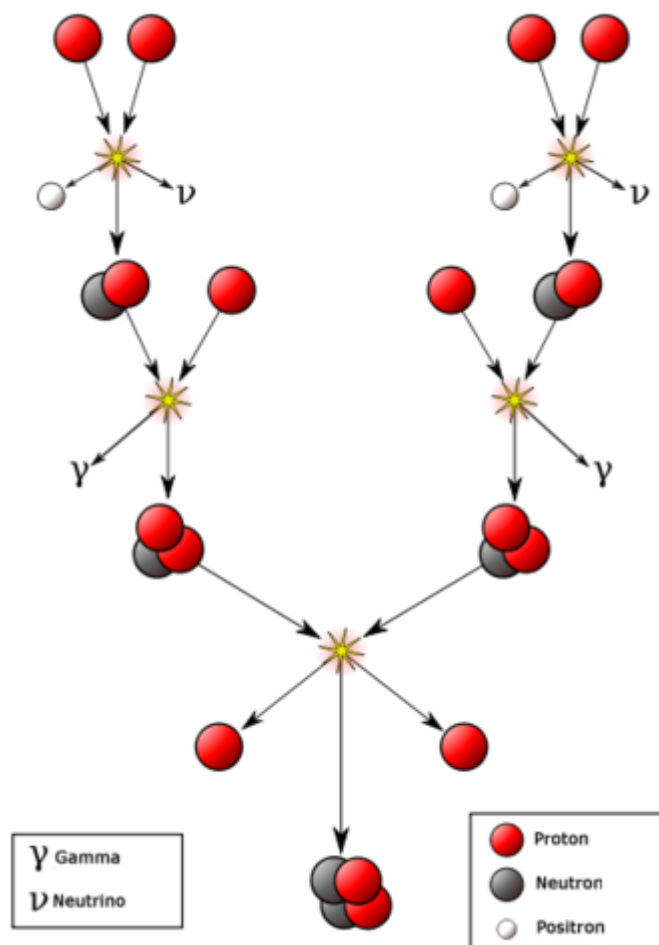
Validity of this universal physical law is investigated and “proven” experimentally only in “normal”, non-quantum conditions. In this article there will be shown that this physical law can be violated when it is in contradiction with some quantum world constants, quantum laws, quantum principles.

2. NUCLEAR FUSION

Official science claims that nuclear fusion is the source of Sun's energy. At the core where temperature and pressure are very high hydrogen atoms fuse into helium atom and release energy in the form of Gama rays.

All stars **die**, and eventually — in about 5 billion years — our **sun will**, too. Once its supply of hydrogen is exhausted, the final, dramatic stages of its life **will** unfold, as our host star expands to become a red giant and then tears its body to pieces to condense into a white dwarf.

Nuclear fusion in the Sun



The proton-proton fusion process that is the source of energy from the Sun.^[1]

The **energy** from the **Sun** - both **heat** and **light** energy - originates from a **nuclear fusion process** that is occurring inside the **core of the Sun**. The specific type of fusion that occurs inside of the Sun is known as **proton-proton fusion**.^[2]

Inside the Sun, this process begins with **protons** (which is simply a lone **hydrogen nucleus**) and through a series of steps, these protons fuse together and are turned into **helium**. This fusion process occurs inside the core of the Sun,

and the transformation results in a release of energy that keeps the sun hot. The resulting energy is **radiated** out from the core of the Sun and moves across the solar system.^[3] It is important to note that the core is the only part of the Sun that produces any significant amount of **heat** through fusion (it contributes about 99%).^[3] The rest of the Sun is heated by energy transferred outward from the core.

Steps

The overall process of proton-proton fusion within the Sun can be broken down into several simple steps. A visual representation of this process is shown in Figure 1. The steps are:^[4]

1. Two protons within the Sun fuse. Most of the time the pair breaks apart again, but sometimes one of the protons transforms into a **neutron** via the **weak nuclear force**. Along with the transformation into a neutron, a positron and neutrino are formed. This resulting proton-neutron pair that forms sometimes is known as **deuterium**.
2. A third proton collides with the formed deuterium. This collision results in the formation of a helium-3 nucleus and a **gamma ray**. These gamma rays work their way out from the core of the Sun and are released as **sunlight**.
3. Two helium-3 nuclei collide, creating a helium-4 nucleus plus two extra neutrons. Technically, a **beryllium-6** nuclei forms first but is unstable and thus disintegrates into the helium-4 nucleus.

The final helium-4 atom has less mass than the original 4 protons that came together (see $E=mc^2$). Because of this, their combination results in an excess of energy being released in the form of heat and light that exits the Sun, given by the **mass-energy equivalence**. To exit the Sun, this energy must travel through many layers to the **photosphere** before it can actually emerge into space as sunlight. Since this proton-proton chain happens frequently - 9.2×10^{37} times per second - there is a significant release of energy.^[3] Of all of the **mass** that undergoes this fusion process, only about 0.7% of it is turned into energy. Although this seems like a small amount of mass, this is equal to 4.26 million metric tonnes of matter being converted to energy per second.^[3] Using the mass-energy equivalence, we find that this 4.26 million metric tonnes of matter is equal to about 3.8×10^{26} **joules** of energy released per second!

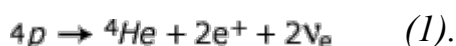
This claim is wrong!!! False! The fusion energy of our sun and all massive bodies in the universe is NOT THE INNER SOURCE OF ENERGY OF THEIR BODIES THAT MAKE THEM SO HOT FOR BILLION OF YEARS! This claim is just an excuse for the poor basic dogmas accepted by university scientists.

*The solar **neutrino problem** concerned a large discrepancy between the flux of solar **neutrinos** as predicted from the **Sun's** luminosity and measured directly. ... Of the three types (flavors) of **neutrinos** known in the Standard Model of particle physics, the **Sun** produces only electron **neutrino**.*

The three years 2001 to 2003 were the golden years of solar neutrino research. In this period, scientists solved a mystery with which they had been struggling for four decades. The solution turned out to be important for both physics and for astronomy. In this article, I tell the story of those fabulous three years.^{[1](#)}

The first two sections summarize the solar neutrino mystery and present the solution that was found in the past three years. The next two sections describe what the solution means for physics and for astronomy. The following sections outline what is left to do in solar neutrino research and give my personal view of why it took more than thirty years to solve the mystery of the missing neutrinos. The last section provides a retrospective impression of the solution.

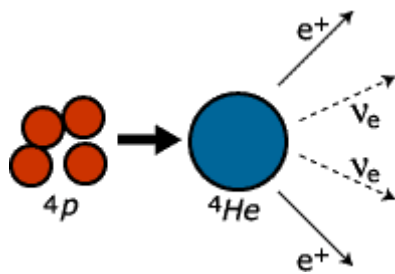
During the first half of the twentieth century, scientists became convinced that the Sun shines by converting, deep in its interior, hydrogen into helium. According to this theory, four hydrogen nuclei called protons (p) are changed in the solar interior into a helium nucleus (${}^4\text{He}$), two anti-electrons (e^+ , positively charged electrons), and two elusive and mysterious particles called neutrinos(ν_e). This process of nuclear conversion, or nuclear fusion, is believed to be responsible for sunshine and therefore for all life on Earth. The conversion process, which involves many different nuclear reactions, can be written schematically as:



Two neutrinos are produced each time the fusion reaction (1) occurs. Since four protons are heavier than a helium nucleus, two positive electrons and two neutrinos, reaction (1) releases a lot of energy to the Sun that ultimately reaches the Earth as sunlight. The reaction occurs very frequently. Neutrinos escape

easily from the Sun and their energy does not appear as solar heat or sunlight. Sometimes neutrinos are produced with relatively low energies and the Sun gets a lot of heat. Sometimes neutrinos are produced with higher energies and the Sun gets less energy.

The neutrinos in equation (1) and the illustration below are the focus of the mystery that we explore in this article.



Neutrinos have zero electric charge, interact very rarely with matter, and – according to the textbook version of the standard model of particle physics – are massless. About 100 billion neutrinos from the Sun pass through your thumbnail every second, but you do not feel them because they interact so rarely and so weakly with matter. Neutrinos are practically indestructible; almost nothing happens to them. For every hundred billion solar neutrinos that pass through the Earth, only about one interacts at all with the stuff of which the Earth is made. Because they interact so rarely, neutrinos can escape easily from the solar interior where they are created and bring direct information about the solar fusion reactions to us on Earth. There are three known types of neutrinos. Nuclear fusion in the Sun produces only neutrinos that are associated with electrons, the so-called electron neutrinos (ν_e). The two other types of neutrinos, muon neutrinos (ν_μ) and tau neutrinos (ν_τ), are produced, for example, in laboratory accelerators or in exploding stars, together with heavier versions of the electron, the particles muon (μ) and tau (τ).

Neutrinos are missing

In 1964, following the pioneering work of [Raymond Davis Jr.](#), he and I proposed an experiment to test whether converting hydrogen nuclei to helium nuclei in the Sun is indeed the source of sunlight, as indicated by equation (1).

I calculated with my colleagues the number of neutrinos of different energies that the Sun produces using a detailed computer model of the Sun and also calculated the number of radioactive argon atoms (^{37}Ar) these solar neutrinos would produce in a large tank of chlorine-based cleaning fluid (C_2Cl_4). Although the idea seemed quixotic to many experts, Ray was sure that he could extract the predicted number of a few atoms of ^{37}Ar per month out of a tank of cleaning fluid that is about the size of a large swimming pool.

The first results of Ray's experiment were announced in 1968. He detected only about one third as many radioactive argon atoms as were predicted. This discrepancy between the number of predicted neutrinos and the number Ray measured soon became known as "The Solar Neutrino Problem" or, in more popular contexts, "The Mystery of the Missing Neutrinos."

Possible explanations

Three classes of explanation were suggested to solve the mystery. First, perhaps the theoretical calculations were wrong. This could happen in two ways. Either the predicted number of neutrinos was incorrect or the calculated production rate of argon atoms was not right. Second, perhaps Ray's experiment was wrong. Third, and this was the most daring and least discussed possibility, maybe physicists did not understand how neutrinos behave when they travel astronomical distances.

The theoretical calculations were refined and checked many times over the next two decades by me and by different researchers. The data used in the calculations were improved and the predictions became more precise. No significant error was found in the computer model of the Sun or in my calculation of the probability of Ray's tank capturing neutrinos. Similarly, Ray increased the sensitivity of his experiment. He also carried out a number of different tests of his technique in order to make sure that he was not overlooking some neutrinos. No significant error was found in the measurement. The discrepancy between theory and experiment persisted.

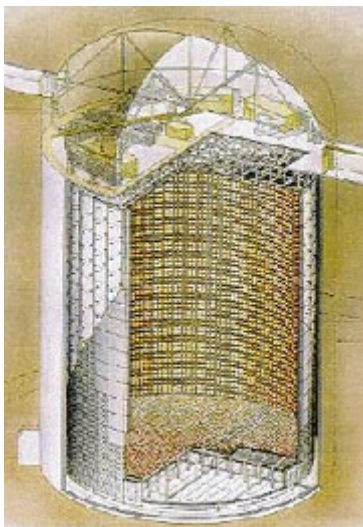
What about the third possible explanation, new physics? Already in 1969, Bruno Pontecorvo and Vladimir Gribov of the Soviet Union proposed the third explanation listed above, namely, that neutrinos behave differently than physicists had assumed. Very few physicists took the idea seriously at the time it was first proposed, but the evidence favoring this possibility increased with time.

Evidence favors new physics

In 1989, twenty-one years after the first experimental results were published, a Japanese-American experimental collaboration reported the results of an attempt to "solve" the solar neutrino problem. The new experimental group called Kamiokande (led by [Masatoshi Koshi](#) and Yoji Totsuka) used a large detector of pure water to measure the rate at which electrons in the water scattered the highest-energy neutrinos emitted from the Sun. The water detector was very sensitive, but only to high-energy neutrinos that are produced by a rare nuclear reaction (involving the decay of the nucleus ^8B) in the solar energy production cycle. The original Davis experiment with chlorine was primarily, but not exclusively, sensitive to the same high-energy neutrinos.

The Kamiokande experiment confirmed that the number of neutrino events that were observed was less than predicted by the theoretical model of the Sun and by the textbook description of neutrinos. But, the discrepancy in the water detector was somewhat less severe than observed in the chlorine detector of Ray Davis.

In the following decade, three new solar neutrino experiments deepened the mystery of the missing neutrinos. Experiments in Italy and Russia used massive detectors containing gallium to show that lower energy neutrinos were also apparently missing. These experiments were called GALLEX (led by Till Kirsten of Heidelberg, Germany) and SAGE (led by Vladimir Gavrin of Moscow, Russia). The fact that GALLEX and SAGE were sensitive to lower energy neutrinos was very important since I believed I could calculate more accurately the number of low energy neutrinos than the number of higher energy neutrinos. In addition, a much larger version of the Japanese water detector, called Super-Kamiokande (led by Totsuka and Yochiro Suzuki), made more precise measurements of the higher energy neutrinos and confirmed the original deficit of higher energy neutrinos found by the chlorine and Kamiokande experiments. So both high and low energy neutrinos were missing, although not in the same proportions.



The Super-Kamiokande Detector, University of Tokyo. The detector consists of an inner volume and an outer volume which contain 32,000 and 18,000 tons of pure water, respectively. The outer volume shields the inner volume in which neutrino interactions are studied. The inner volume is surrounded by 11,000 photomultiplier tubes that detect pale blue [Cherenkov](#) light emitted when electrons are struck by neutrinos.

Evidence obtained during this decade indicated that something must happen to the neutrinos on their way to detectors on Earth from the interior of the Sun. In 1990, [Hans Bethe](#) and I pointed out that new neutrino physics, beyond what was contained in the standard particle physics textbooks, was required to reconcile the results of the Davis chlorine experiment and the Japanese-American water

experiment. Our conclusion was based upon an analysis of the relative sensitivity of the chlorine and the water experiments to neutrino number and neutrino energy. The newer solar neutrino experiments in Italy and in Russia increased the difficulty of explaining the neutrino data without invoking new physics.

New evidence also showed that the solar model predictions were reliable. In 1997, precise measurements were made of the sound speed throughout the solar interior using periodic fluctuations observed in ordinary light from the surface of the Sun. The measured sound speeds agreed to a precision of 0.1% with the sound speeds calculated for our theoretical model of the Sun. These measurements suggested to astronomers that the theoretical model of the Sun was so accurate that the model must also predict correctly the number of solar neutrinos.

The last decade of the twentieth century provided strong evidence that a better theory of fundamental physics was required to solve the mystery of the missing neutrinos. But, we still needed to find the smoking gu

On June 18, 2001 at 12:15 PM (eastern daylight time) a collaboration of Canadian, American, and British scientists made a dramatic announcement: they had solved the solar neutrino mystery. The international collaboration (led by [Arthur McDonald](#) of Ontario, Canada) reported the first solar neutrino results obtained with a detector of 1,000 tons of heavy water₂ (D₂O). The new detector, located in a nickel mine in Sudbury, Ontario in Canada, was able to study in a different way the same higher-energy solar neutrinos that had been investigated previously in Japan with the Kamiokande and Super-Kamiokande ordinary-water detectors. The Canadian detector is called SNO for Solar Neutrino Observatory. For their first measurements, the SNO collaboration used the heavy-water detector in a mode that is sensitive only to electron neutrinos. The SNO scientists observed approximately one-third as many electron neutrinos as the standard computer model of the Sun predicted were created in the solar interior. The Super-Kamiokande detector, which is primarily sensitive to electron neutrinos but has some sensitivity to other neutrino types, observed about half as many events as were expected.

If the standard model of particle physics was right, the fraction measured by SNO and the fraction measured by Super-Kamiokande should be the same. All the neutrinos should be electron neutrinos. The fractions were different. The standard textbook model of particle physics was wrong.

Combining the SNO and the Super-Kamiokande measurements, the SNO collaboration determined the total number of solar neutrinos of all types (electron, muon, and tau) as well as the number of just electron neutrinos. The total number of neutrinos of all types agrees with the number predicted by the computer model of the Sun. Electron neutrinos constitute about a third of the total number of neutrinos.

The smoking gun was discovered. The smoking gun is the difference between the total number of neutrinos and the number of only electron neutrinos. The missing neutrinos were actually present, but in the form of the more difficult to detect muon and tau neutrinos.

The epochal results announced in June 2001 were confirmed by subsequent experiments. The SNO collaboration made unique new measurements in which the total number of high energy neutrinos of all types was observed in the heavy water detector. These results from the SNO measurements alone show that most of the neutrinos produced in the interior of the Sun, all of which are electron neutrinos when they are produced, are changed into muon and tau neutrinos by the time they reach the Earth.

The measurement of the total number of neutrinos in the SNO detector provided the fingerprints on the smoking gun.

These revolutionary results were verified independently in an extraordinary tour-de-force by a Japanese-American experimental collaboration, Kamland, which studied, instead of solar neutrinos, anti-neutrinos emitted by nuclear power reactors in Japan and in neighboring countries. The collaboration (led by Atsuto Suzuki of Sendai, Japan) observed a deficit in the detected number of anti-neutrinos from the nuclear power reactors. A deficit had been predicted for the Kamland experiment based upon the solar model calculations, the solar neutrino measurements, and a theoretical model of neutrino behavior that explained why the previous calculations and measurements seemed to be in disagreement. The Kamland measurements significantly improved our knowledge of the parameters that characterize neutrinos.

Where did the missing neutrinos go?

The solution of the mystery of the missing solar neutrinos is that neutrinos are not, in fact, missing. The previously uncounted neutrinos are changed from electron neutrinos into muon and tau neutrinos that are more difficult to detect. The muon and tau neutrinos were not detected by the Davis experiment with chlorine; they were not detected by the gallium experiments in Russia and in Italy; and they were not detected by the first SNO measurement. This lack of sensitivity to muon and tau neutrinos is the reason that these experiments seemed to suggest that most of the expected solar neutrinos were missing. On the other hand, the Kamiokande and Super-Kamiokande water experiments in Japan and the later SNO heavy water experiments had some sensitivity to muon and tau neutrinos in addition to their primary sensitivity to electron neutrinos. These water experiments revealed therefore larger fractions of the predicted solar neutrinos.

What is wrong with neutrinos?

Solar neutrinos have a multiple personality disorder. They are created as electron neutrinos in the Sun, but on the way to the Earth they change their type. For neutrinos, the origin of the personality disorder is a quantum mechanical process, called “neutrino oscillations.”

Pontecorvo and Gribov had the right idea in 1969. Lower energy solar neutrinos switch from electron neutrino to another type as they travel in the vacuum from the Sun to the Earth. The process can go back and forth between different types. The number of personality changes, or oscillations, depends upon the neutrino energy. At higher neutrino energies, the process of oscillation is enhanced by interactions with electrons in the Sun or in the Earth. Stas Mikheyev, Alexei Smirnov, and Lincoln Wolfenstein first proposed that interactions with electrons in the Sun could exacerbate the personality disorder of neutrinos, i.e., the presence of matter could cause the neutrinos to oscillate more vigorously between different types.

Bruno Pontecorvo in his office at the Joint Institute for Nuclear Physics, Dubna, Russia in 1983. Pontecorvo was discussing physics with his collaborator Samoil Bilenky. Later that afternoon, Pontecorvo celebrated his 70th birthday with a party.

Even before the SNO measurement in 2001, phenomenological analyses of all the solar neutrino experimental data suggested with rather high confidence that some new physics was occurring. The preferred neutrino parameters from these pre-SNO analyses agreed with the parameters that were selected later with higher confidence by the SNO and Super-Kamiokande results. But, the smoking gun was missing.

The SNO and Super-Kamiokande results taken together were equivalent to finding a smoking gun, because they referred to the same high-energy solar neutrinos and because the experiments used techniques that were familiar to many physicists. Also, both experiments included many checks on their measurements.

What is wrong with the standard model of particle physics?

The standard model of particle physics assumes that neutrinos are massless. In order for neutrino oscillations to occur, some neutrinos must have masses. Therefore, the standard model of particle physics must be revised.

The simplest model that fits all the neutrino data implies that the mass of the electron neutrino is about 100 million times smaller than the mass of the electron. But, the available data are not yet sufficiently definitive to rule out all but one possible solution. When we finally have a unique solution, the values of the different neutrino masses may be clues that lead to understanding physics beyond the standard model of particle physics.

There are two equivalent descriptions of neutrinos, one that is expressed in terms of the masses of the neutrinos and one that is expressed in terms of the particles with which the neutrinos are associated (electron neutrinos with electrons, muon neutrinos with muon particles, or tau neutrinos with tau particles). The relations between the mass description and the associated-particle description involve certain constants, called “mixing angles,” whose values are potentially important clues that may help lead to an improved theory of how elementary particles behave.

Solar neutrino research shows that neutrinos can change their personalities or types. The mathematical discription of this malady determines quantities that we hope will be useful clues in the search for a more general theory of how fundamental particles behavior.

Wrong!!! There is no such thing as ‘missing neutrinos’ because there is no such thing as ‘fusion of hydrogen’ in the sun and all massive bodies in the universe!!!

Different types of neutrino are massless and they cannot change their flavors!!!

My explanations of these two fundamental problems in physics are following below! They are supported by numerous experiments conducted by me during more than three decades and are based on God’s Revelations. They are Words of God!!!

When I was a little boy, I looked at the sun very often and was filled with fear at the thought that someday the sun would burn out and not give us anymore light and heat. Later, in high school, I learned that the sun is a huge nuclear power plant and that its hydrogen nuclear fuel will be exhausted after about 5 billion years. Intuitively, however, I rejected this scenario, but at the time I did not have, naturally, a solution to the problem of the sun’s energy source. Now I know, thanks to God’s revelations, why and how our universe exists, and why and how the stars shine.

<https://www.youtube.c>

<https://www.youtube.com/watch?v=eAFS0N7oyZg>

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Cold fusion

This article is about the Fleischmann–Pons claims of [nuclear fusion](#) at room temperature, and subsequent research.

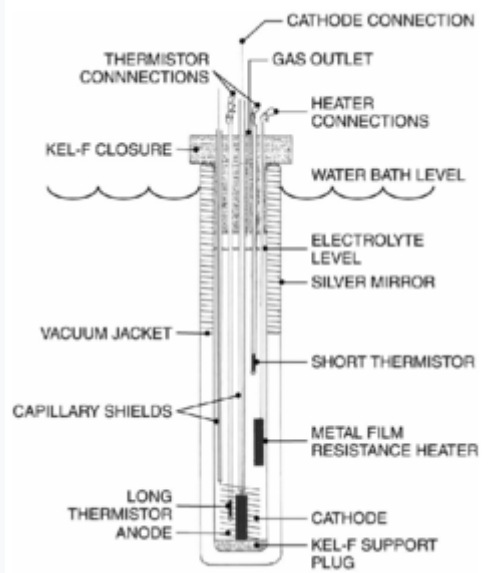


Diagram of an open-type [calorimeter](#) used at the New Hydrogen Energy Institute in Japan

Cold fusion is a hypothesized type of [nuclear reaction](#) that would occur at, or near, [room temperature](#). It would contrast starkly with the **"hot" fusion** that is known to take place naturally within [stars](#) and artificially in [hydrogen bombs](#) and prototype [fusion reactors](#) under immense

pressure and at temperatures of millions of degrees, and be distinguished from [muon-catalyzed fusion](#). There is currently no accepted theoretical model that would allow cold fusion to occur.

In 1989 [Martin Fleischmann](#) (then one of the world's leading [electrochemists](#)) and [Stanley Pons](#) reported that their apparatus had produced anomalous heat ("excess heat") of a magnitude they asserted would defy explanation except in terms of nuclear processes.^[1] They further reported measuring small amounts of nuclear reaction byproducts, including [neutrons](#) and [tritium](#).^[2] The small tabletop experiment involved [electrolysis of heavy water](#) on the surface of a [palladium](#) (Pd) electrode.^[3] The reported results received wide media attention and raised hopes of a cheap and abundant source of energy.

Pons and Fleischmann maintain that deuterium gas within the crystal structure of palladium electrode is under very high pressure (10^{27} atm.). Under this pressure deuterium nuclei overcome coulomb forces and achieve nuclear synthesis. Exact measurements and calculations, show, however, that the pressure is only 10,000 – 20,000 atm. In these conditions the closest approach between the neighboring deuterium nuclei is about two times the average distance between two neighboring molecules in deuterium gas. Hence, deuterium does not spontaneously fuse. There is no fusion!

Some scientists tried to replicate the experiment with the few details available. Hopes faded due to the large number of negative replications, the withdrawal of many reported positive replications, the discovery of flaws and sources of experimental error in the original experiment, and finally the discovery that Fleischmann and Pons had not actually detected nuclear reaction byproducts.^[5] By late 1989, most scientists considered cold fusion claims dead,^{[6][7]} and cold fusion subsequently gained a reputation as [pathological science](#).^{[8][9]} In 1989 the [United States Department of Energy](#) (DOE) concluded that the reported results of excess heat did not present convincing evidence of a useful source of energy and decided against allocating funding specifically for cold fusion. A second DOE review in 2004, which looked at new research, reached similar conclusions and did not result in DOE funding of cold fusion.^[10]

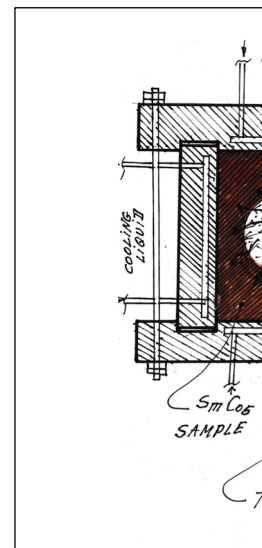
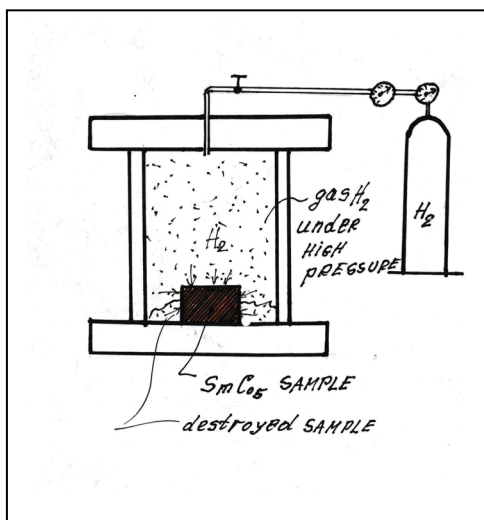
If light water is used, we have the same effect. Ordinary, not heavy, hydrogen nuclei never fuse each with another! It's a pure imagination, a speculation, of some scientists that such fusion is possible due to weak nuclear interaction. Nobody, in no one laboratory on the earth, observed such reaction – fusion.

At the end of 1990, in my lab in Sunnyvale, California, I found by pure chance, alloy SmCo_5 which absorbs, like crazy sponge, ordinary hydrogen gas under pressure – from bottle. See Figure...

Fraction of second after the start of saturation of the SmCo_5 sample with hydrogen gas, its temperature raises to the melting point! The process of free energy generation stops because of destruction of the structure of the metal lattice. Some small pieces of destroyed sample can continue to produce "cold fusion" effect until they are destroyed to powder.

At some critical - for triggering quantum process of generation of free quantum energy – saturation of metal lattice with hydrogen the distance between two neighboring H atoms becomes smaller than the "allowed" by physical laws (more precisely by Planck's constant) distance for compact liquid or solid bodies. The assembly of hydrogen atoms becomes super-dense plasma. At this moment hydrogen atoms surrender their electrons to the common electron cloud. At this moment the quantum effect of violation of Law of Energy Conservation becomes operational! In nature every stable material body is in state of internal balance. The pressure upon the hydrogen compressed assembly of ions (electrons and atomic nuclei – protons) is balanced (equalized) by the internal pressure created by the chaotic motion of ions (mostly by light electrons) which energy of electrical repulsion is, in fact, free quantum energy.

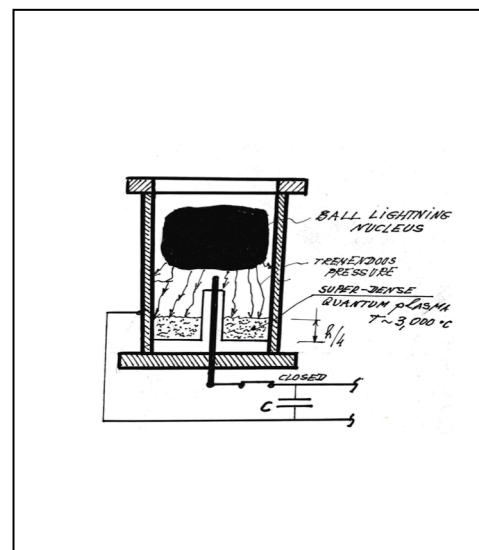
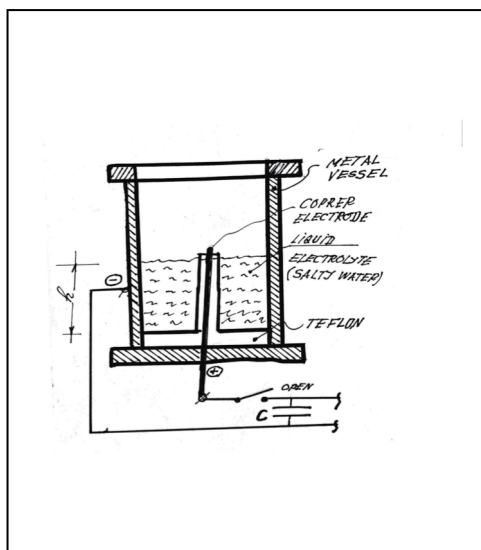
Can "cold fusion" be a limitless source of free quantum energy? Possibly, but only if rapid changes within crystal lattice of "cold fusion" active metals and alloys, do not lead to destruction of this lattice. Figure 1.



Generation of Quantum Free Energy using artificial ball lightning to create super compressed quantum plasma

As was mentioned in my previous publications, ball lightning nucleus represents 2-D closed body (manifold) that possess unusual quantum features like: giant macro-atom that violate Law of Energy Conservation due to Pauli's Quantum Principle, ball lightning nucleus possess constant quantum temperature, ball lightning nucleus represents "black hole" (there is no space under its 2-D closed surface, and no material substance under this surface). When ball lightning appears in some place in the space, this spatial contour is cut off from the space.

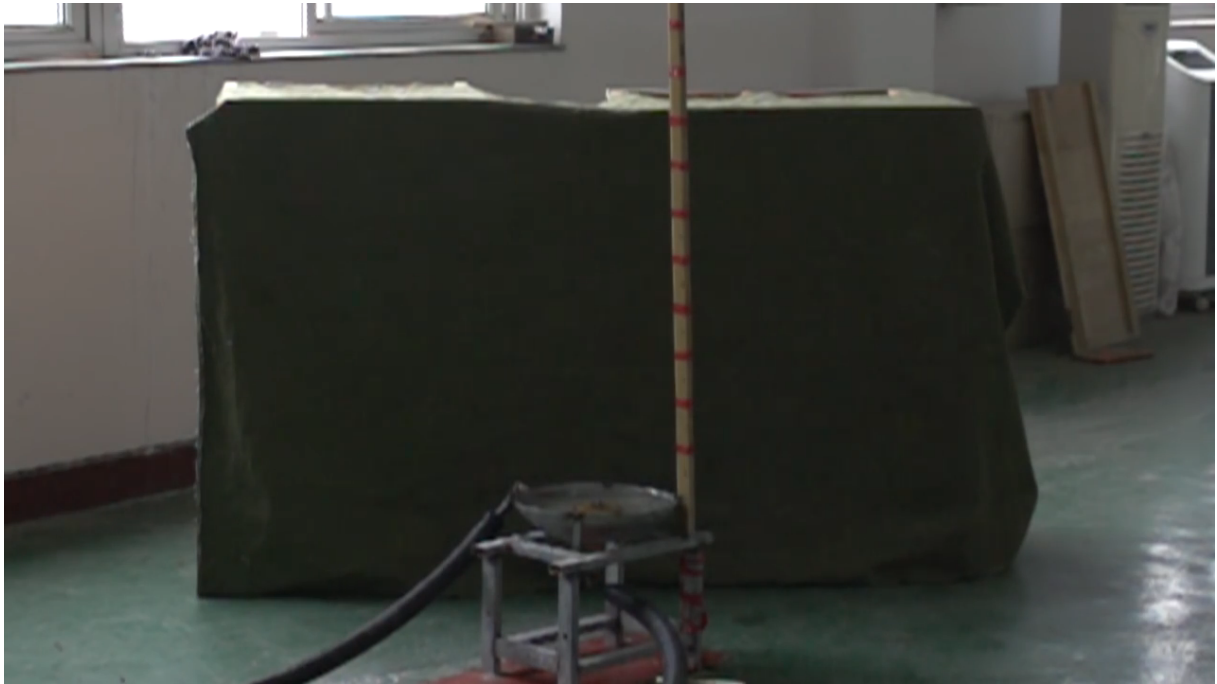
On Figure 2 is shown a scheme of set-up – chamber, filled with electrolyte and central electrode on the bottom.

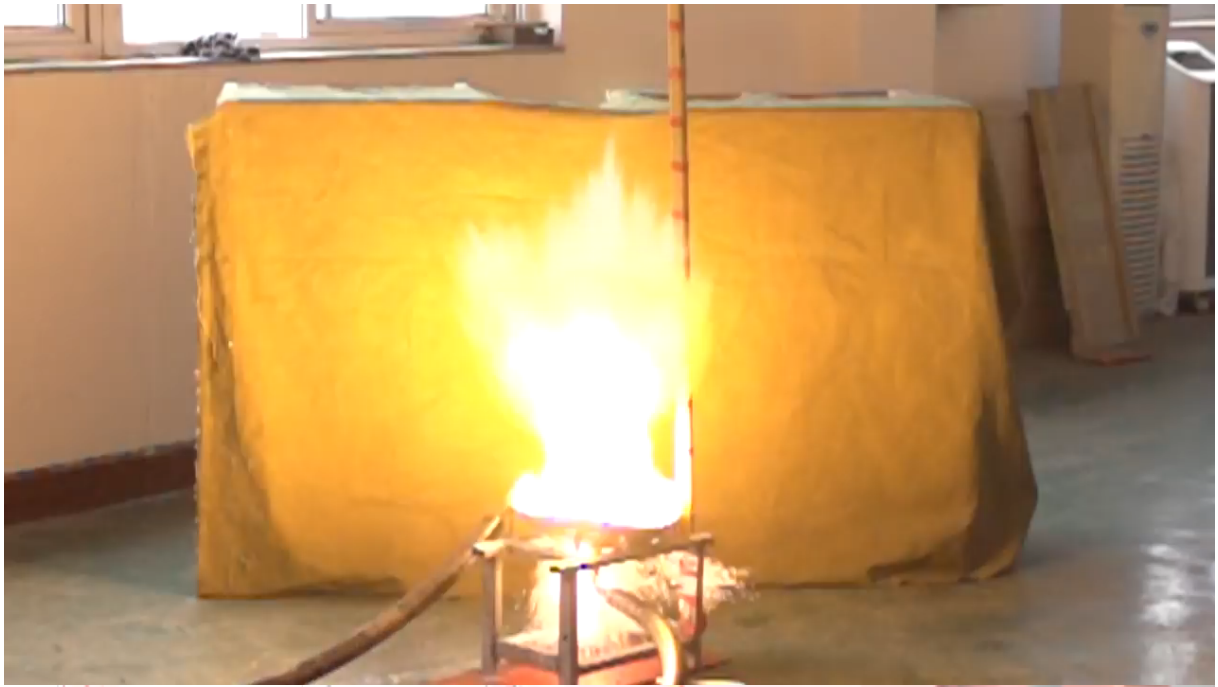


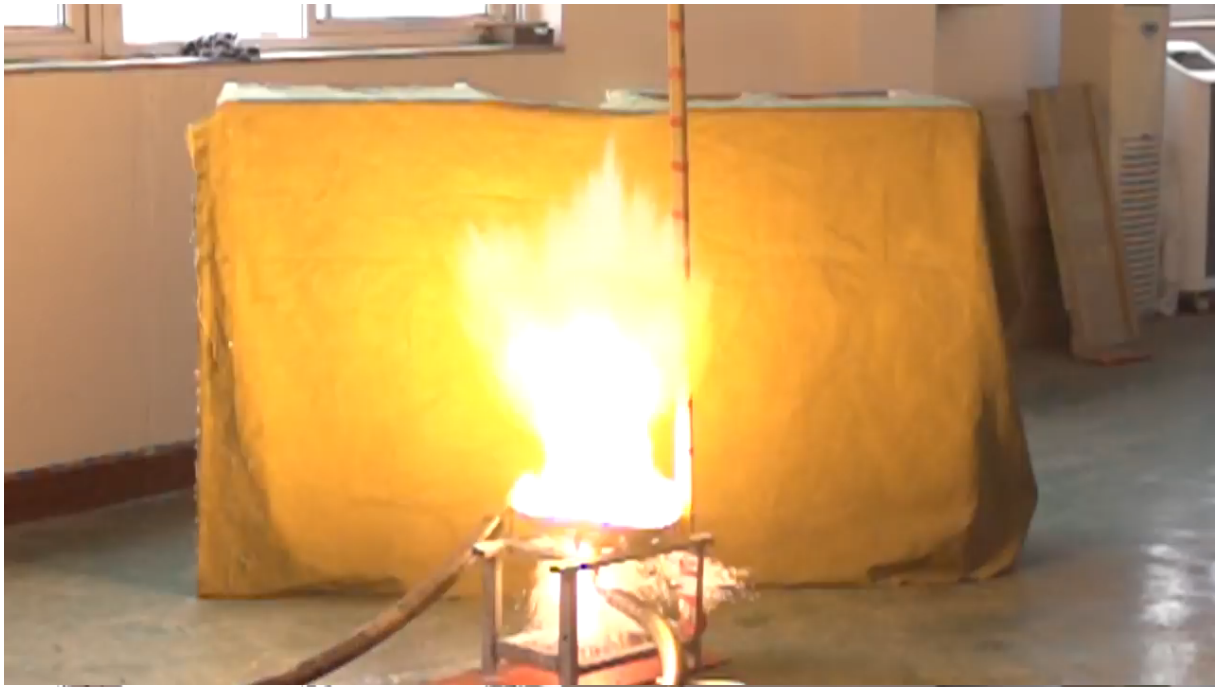
Central electrode is connected to the positive side of a battery of capacitors; the negative side of this battery is connected to the corps of the chamber in such way that the negative electrode is the whole liquid electrolyte. After switching the electrical charge of capacitors into the chamber, ball lightning appears almost immediately – in microseconds. See video....

<https://www.youtube.com/watch?v=eAFSON7oyZg>

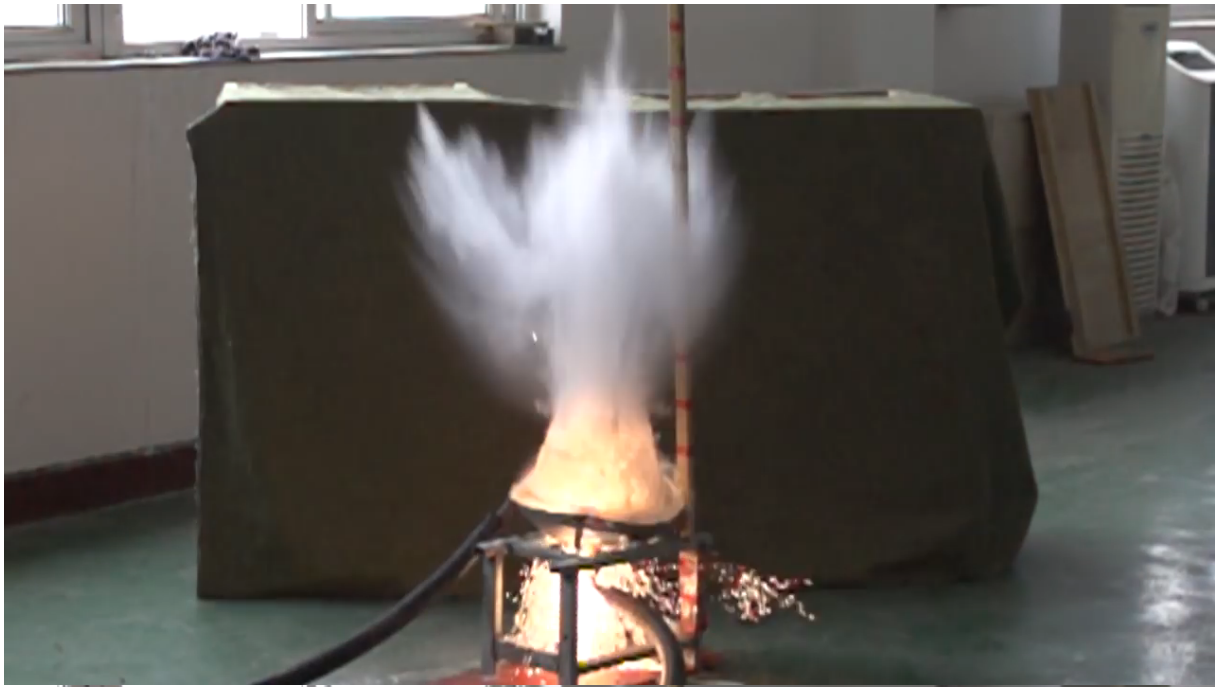
Below are shown different stages of the process of realization of free quantum energy.

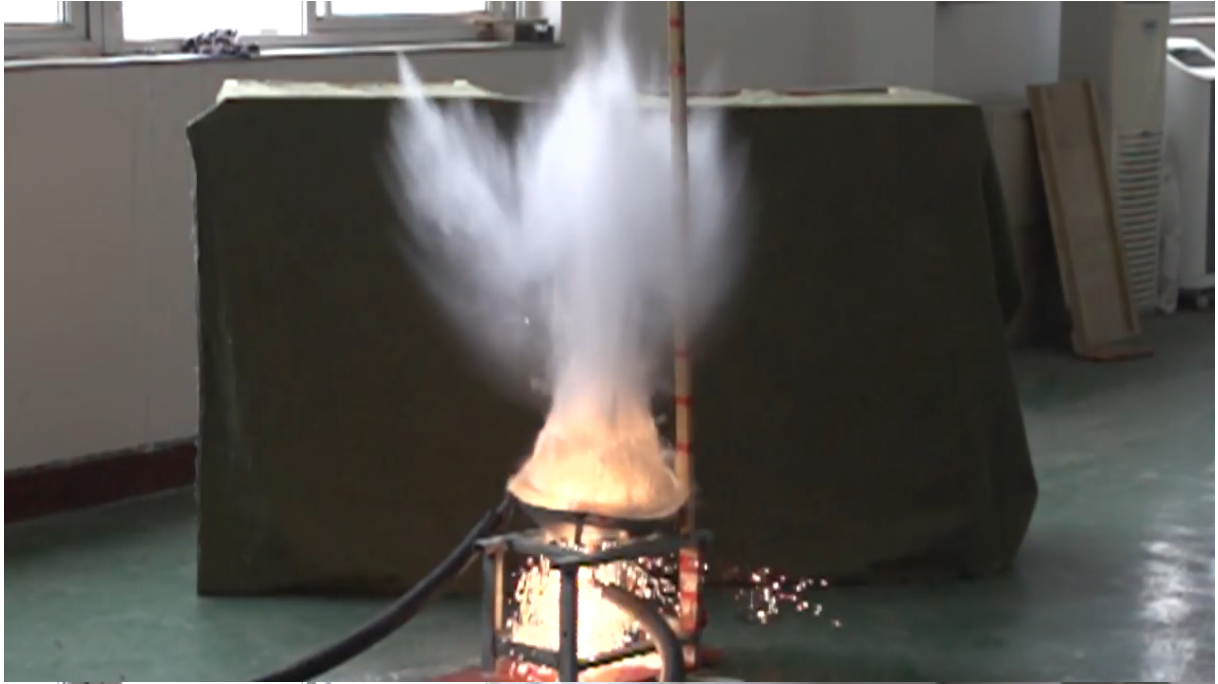


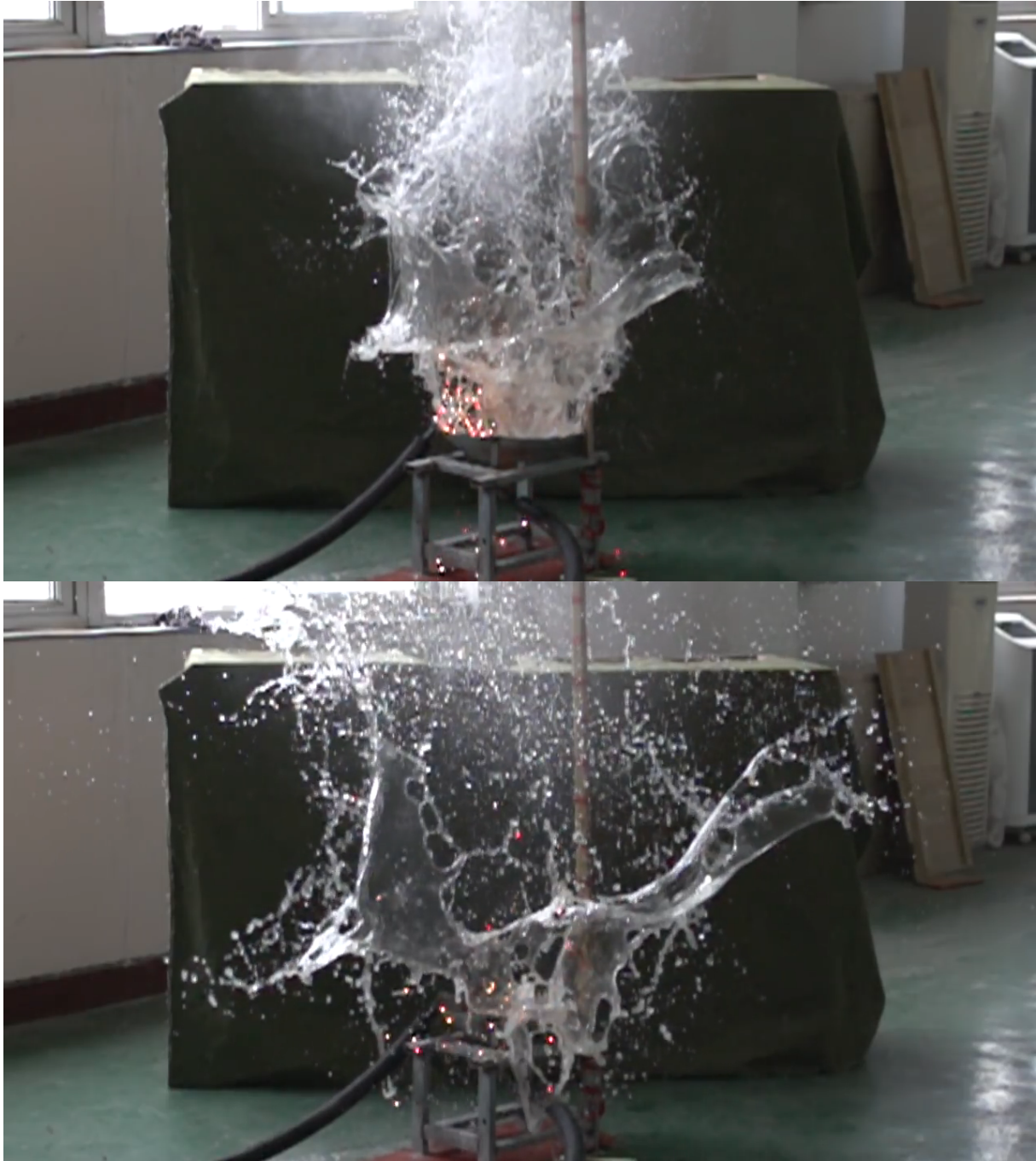












Stage 1.

High voltage high amps electrical current from capacitors strips electrons from gas (air) molecules and transform the assembly of positive ions into 2-D ball lightning nucleus. Free electrons form the ball lightning electron shell. In fact, we have giant macro-atom for which the Pauli's Principle is operating. And, as for formation

(fusion) of bigger atomic nuclei from smaller ones, nuclear energy is released. (Hydrogen and oxygen nuclei are the positive ions of the gas/plasma components). This energy is radiated in the environment in form of photons. The nuclear energy of photons can vary in very large interval of values – from eV to Giga-eV and more, depending on the density of the ball lightning nucleus. The max value of this energy is the nuclear energy of “normal” micro-nuclear fusion. The time-duration of this stage is several micro-seconds.

Stage 2.

After nuclear photons are dissipated into environment, ball lightning nucleus becomes visible. Ball lightning exists shortly, but much longer than the time of formation of ball lightning. It can exist (life-duration) few milli-seconds. Quantum temperature of the ball lightning nucleus is very high – few thousands °C in these conditions: open vessel, moderate input power. Ball lightning nucleus touches water molecules of the liquid electrolyte under its closed 2-D surface – for 2-3 miliseconds – and heats them to a boiling stage. We observe big amount of water vapor coming up from the place where just was ball lightning nucleus. Can you calculate the power of evaporating factor? Tremendous!

Stage 3.

Actually, this stage happens simultaneously with the stage of existing of the ball lightning. When ball lightning is formed its 2-D nucleus destroy the space in the place of its appearance. Like with scissors the space was cut off from this place. As a result, ball lightning nucleus exercises tremendous pressure over the liquid electrolyte. We know that liquids are not compressible – due to Planck’s constant. But very strange thing happens: liquid electrolyte is compressed 3-4 times! What happens with this liquid? Obviously water molecules are destroyed into ions of hydrogen and oxygen. Electrons become free floating particles in this unusual quantum super-dense plasma. To balance the external pressure of ball lightning nucleus, ions and free electrons must move (in all directions) with very high speeds due to electrical repulsion of equally charges ions. Especially free electrons, as very light particles, are moving at very high velocities and create counter-pressure balancing the external pressure upon this plasma. What is the source of energy that make ions to move so fast? For sure it is

not some chemical or nuclear process! Mother Nature resorts to violation of Law of Energy Conservation only when other “legitimate” resources are not available. In fraction of second the super-dense plasma is heated (due to violation of physical law of energy conservation) to very high temperature – several hundreds, or more, °C. Quantum Free Energy is what generated in this super-dense quantum plasma! On the photo we see red color hot stuff coming from the bottom of the vessel. So much compressed liquid (now super dense plasma) is jumping up back from the vessel like strongly compressed spring. The friction between this very fast moving up material stuff and the walls of vessel make the whole vessel to move up (jump), like frog, at one foot at least. Because of this free quantum heating additional evaporating of the liquid is observed. After quantum state of liquid is over, another material (restored to a state of liquid water) jumps out of the vessel. On photo we see fountain of warm water flashing out of the vessel. Kinetic energy of this fountain is free quantum energy!

In Varna, Bulgaria, 2013, we were able to create quantum free energy fountain (geyser) that was throwing up some compressed water – about 10 liters – at 30 meters height. See video: <https://www.youtube.com/watch?v=9Tcwa9LIqIA>

A 6 kg projectile was thrown by the same “quantum cannon” at similar height. See videos:

<https://www.youtube.com/watch?v=u5RZOc7J1Oo>

On next video you can see how ball lightning is created and how it disappears with “boom”.

<https://www.youtube.com/watch?v=lk0BFrvFqYc>

The input energy from capacitor is very small – if fully dissipated in the salty water temperature of the late can be elevated no more than 0.5 oC. Kinetic effect due to free quantum energy, as you see, is much, much bigger. It is impossible so small input electrical energy – converted into kinetic energy - to destroy so strong cylinder of plexiglass with walls tick $\frac{1}{2}$ inch and top and bottom tick $\frac{3}{4}$ inch.

At the beginning – after discharge of capacitor – we see very bright glow of “nuclear” photons released during the time of formation of ball lightning nucleus. This time is very short – micro-seconds. Then, when this glow is dissipated in the environment, ball lightning nucleus becomes visible. It lasts few milliseconds. Ball lightning nucleus is very hot – three – five thousands oC.

Thought the time of contact of this 2-D very hot nucleus with the water is very short, considerable water vapor is produced – we see vapor bubbles around the nucleus. Ball lightning appears in its final spherical shape, not like explosion from some little seed formed around the electrode.

As was mentioned above, 2-D ball lightning nucleus represents “black hole”. It is like physical point with no space under its closed 2-D surface, but with macro-spatial dimension from outside. In our case we had ball lightning with diameter 15-18 cm. This quantum 2-D sphere “black hole” cuts off the space in the place of its existence. As a result, liquid electrolyte (salty water) is compressed into much smaller volume. Pressure in the cylinder increases drastically and the cylinder blows like bomb. Quantum Free Kinetic Energy!

On Photo is shown not-finished quantum generator for Bulgarian firm ARTEKS. Ball lightning is used only once – to create tremendous pressure in the liquid water in order to pass the limit between non-quantum liquid and “super-dense quantum plasma”. The lower chamber with super-dense quantum plasma is taken off from the ball lightning charging chamber and go to the client eternal fuelless quantum generator – at home, in the car,... To maintain the state of “quantum hot plasma” we need to keep perfect sealing of the chamber filled with “quantum super-dense hot plasma”!

The Source of Energy of stars and other massive bodies in the universe

As was considered above in this publication, measurements and theoretical models of the ways of heating stars with nuclear energy are ABSOLUTELY NOT CONVINCING!!! Just an excuse for official science's ignorance about energy processes happening in the core of cosmic massive bodies (massive planets, stars, galaxy nuclei, quasars,...

No one experiment conducted in earth laboratory, no one observation in the cosmos, prove that nuclear energy between two light H nuclei is possible.

Absolutely there are no experimental and observational proves that neutrinos possess mass in rest, and neutrinos produced in the interior of the Sun, all of which are electron neutrinos when they are produced, are changing their flavor into muon and tau neutrinos by the time they reach the Earth. And because Official Science has nothing available, but nuclear energy in its energy arsenal to explain so powerful energy that heats the stars and other massive bodies in the Cosmos, it uses this last discovered major energy to explain - with lies and tricks - the powerful source of the stars. On another hand, the absolute believe in universal validity of the Law of Energy Conservation is a second reason not to consider another options for solving the problem of energy of stars.

In the core of the sun there exists permanently tremendous pressure due to gravity of its huge mass! In these conditions hydrogen can exist ONLY in state of "quantum super-dense hot plasma"!!! This plasma is producing the free energy of sun permanently, non-stop!!!

There will be no moment – after 5 billion years, as theorized by conventional scientists – when all amount of light hydrogen will be burned into ashes – helium – and the sun

**will collapse due to the huge gravitation of its mass.
Released huge gravitational energy of the collapse will
create conditions for monstrous explosion – sun will
become “red giant”. And then – collapse to “white dwarf
star”. Bluff, bluff!!! Impotent Official Science!!!**

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