as evidenced by his use of the power of the Federal government to foster retooling and the creation of new machine tools needed for the United States to win World War II.

Feeding the World

The next presentation was by Limari Navarette, a LYM member who is an elected member of the Los Angeles County Democratic Party Executive Committee (LACDPEC). She spoke on how we must apply advanced principles of both science and economics to revive family farms in America. Navarette presented a concise history of agriculture in the modern age, of how Leibnizian circles in Europe developed the new technologies which revolutionized food production, from the use of steam power, to the importance of railroads in developing agriculture in the Great Plains.

Today, we need irrigation, power, and parity pricing, to insure an adequate food supply. Instead, we have the takeover of land and the food supply by the grain cartels. We must wage a political fight against "free trade," she concluded, "so that our food supply is not in the hands of those who are committing mass genocide on the planet (the bankers and their allied food cartels), but rather in those that are contributing to the maintenance and development of this nation."

The final presentation of this part of the program was by another LYM member who is an elected member of the LACDPEC, Cody Jones, who spoke on "Advancing the Noösphere: The Transmutation of Materials." (See his speech below.)

'You Are the Democratic Party'

There were two other speakers who made presentations and joined the discussion. Eric Bauman, a long-time Democratic activist and Chairman of the LACDPEC, challenged the audience to take up the theme of the meeting, to become active in shaping the future.

"We've got to get organized," he said. "Learn to think, learn to organize, learn to be focussed, and never forget why we do this. We're not doing this for blatant power. If anybody's doing this for blatant power, they belong in the other party.

"We're doing this," Bauman continued, "because hundreds of thousands of people within five miles from where we sit today have no health insurance, they've got jobs that pay less than the minimum wage, their children are not getting a good education—that's why we're doing this." He concluded: "Keep doing what you're doing, keep organizing. . . . Don't be afraid to speak out, even if you disagree with me. . . . It's got to be about the future generation."

The final speaker was Ted Smith, the Chairman of the African-American Caucus of the California Democratic Party. Smith gave a fiery speech, beginning by acknowledging whom he was addressing. "You are the Democratic Party. . . . The Democrats must take up a new frontier," he said, in part a reference to the "new ideas" in Cody Jones's speech.

"There was a time when Democrats laughed about the LaRouche Movement, when you were on the outside." But I wanted to know, he continued, why you had some many youth members, when we were not recruiting youth. So I spoke to you, and I am here now, Smith said.

In response to a question about how many in the audience would attend the Democratic state convention in Sacramento at the end of April, Smith was surprised when he saw almost every hand in the room raised. "You will be heard," in Sacramento, he concluded, encouraging attendees to "establish the platform."

The full town meeting can be heard on the website of the LaRouche Youth Movement, at www.wlym.com.

Advancing the Noösphere: Transmutation of Materials

by Cody Jones

This is a transcript of a speech given April 1, 2006 at the Los Angeles Town Meeting sponsored by LaRouche PAC. Jones is a leader of the LaRouche Youth Movement, a member of the Los Angeles County Democratic Party Executive Committee, and a founder of the Franklin Roosevelt Legacy Club.

As Harley [Schlanger] mentioned earlier, I'll be talking about broad scientific initiatives, and he mentioned the idea of transmutation. Now, when people hear the word transmutation, perhaps the first thing that comes into their mind is [San Francisco Giants player] Barry Bonds or [California Governor] Arnold Schwarzenegger, but I'm going to tell you about something a little bit different.

First, I want to say that right now, in terms of current estimates, there are about one and a half billion people on the planet who exist on less than one dollar a day, and over three and a half billion who exist on less than two dollars a day. So that is over half of the world population, forced to exist on less than two dollars a day.

Now, people here can think about how, at worst, most of you have a minimum income job that pays maybe six dollars an hour; and think about how much you struggle just for housing, for health care, for basic food needs, electricity, transportation, on six or seven dollars an hour. Now think about two dollars a day.

And you start to see the kind of problem that exists in the world. That for two dollars a day, you're not able to get health care, to get adequate amounts of food and nutrition, to consume electricity, to have modern appliances applied to your daily life. Two dollars a day doesn't get you much.

The intention that we have as a movement, a political movement, is to effectively create the conditions whereby

EIRNS/Robert Detlof

Cody Jones: "To the extent that we can master the kind of process where we can start to bind the nuclei of hydrogen together, we will have an unlimited resource of all the elements in our Solar System."

every person on this planet can have the kind of living standard that is currently now enjoyed only by the upper 20% of income brackets in the United States.

Everyone in the world!

Now Prince Philip might have an idea about how you could create the conditions where everybody on the planet can have that living standard, or approach it. Prince Philip, the avowed Nazi sympathizer, would say, "Well, you know in my wildest fantasies I would come back as a deadly virus and deal with the world's population problem." So his idea of how you bring everyone up to that standard of living, is that you wipe several billion people off the planet, and now you have sort of evened the ratio of those who have a higher standard of living.

But what we are talking about is, bringing all six and a half-plus billion of the people on this planet up to that standard of living, and ultimately creating the conditions whereby we could have 20 billion people on this planet, existing at that standard of living. The kind of standard of living that is currently enjoyed by only about the upper 20% or so of the population of the United States.

And when we talk about that living standard, we're not talking about an ability to have six plasma screen TVs, or Internet porn, or the ability go down to exclusive hunting farms and shoot your friends in the face. We're talking about real health care, transportation, electricity, food—a real quality of life acceptable to a human being in the 21st Century: high-end education, access to technology, these kinds of things.

Generating New Resources

Now think about what would be required to do that. We are talking about the consumption of a hell of a lot of resources. Mike [Steger] mentioned the idea of the process sheet that goes into, say, just your metal chair. Lyndon LaRouche used the concept of the "worldwide cup of coffee," where you think about the kind of resources and energy and work that goes into bringing you your daily cup of coffee, in terms of the shipping, in terms of what went in to build the irrigation equipment, the transportation equipment, to feed the farm, to make the cups—you name it. You're talking about a lot of resource. And right now we are facing a situation, where we are running up against the wall in terms of the draw-down of overall resources on the planet.

We're not just talking about water. That's one resource we're running into a limit on, but other things—iron, palladium—all the other resources that we tend not necessarily to think about that go into our lives. This stuff that has a certain finite quantity in its existence on the planet; it's not unlimited.

But there is a way that it can be renewable, which is something that a lot of people have not ever thought of. How do you have renewable iron supplies? It's not something that just beams down from the Sun.

And this is where we are going to get into the idea of transmutation.

We're going to run through this relatively quickly, just to give people a surface view of what we are looking at, but we have a lot of material to get into in more detail. Now, here [**Figure 1**] is the standard periodic table that people probably last saw in high school. Here you have the periodic table of elements as organized by Mendeleyev. One of the things that we want to start to look at is, how would you actually start to regenerate a number of these elements of the periodic table?

Now the idea of transmutation is based on the notion, in effect, that the only thing that really differentiates these elements from one another, in terms of make-up, is its atomic structure, the structure of the nucleus, which is made up of protons, positively charged particles, and then neutrons, which have a neutral value to them. Then there are electrons, which don't necessarily exist in the way people think they do, as orbiting shells—but that is another story.

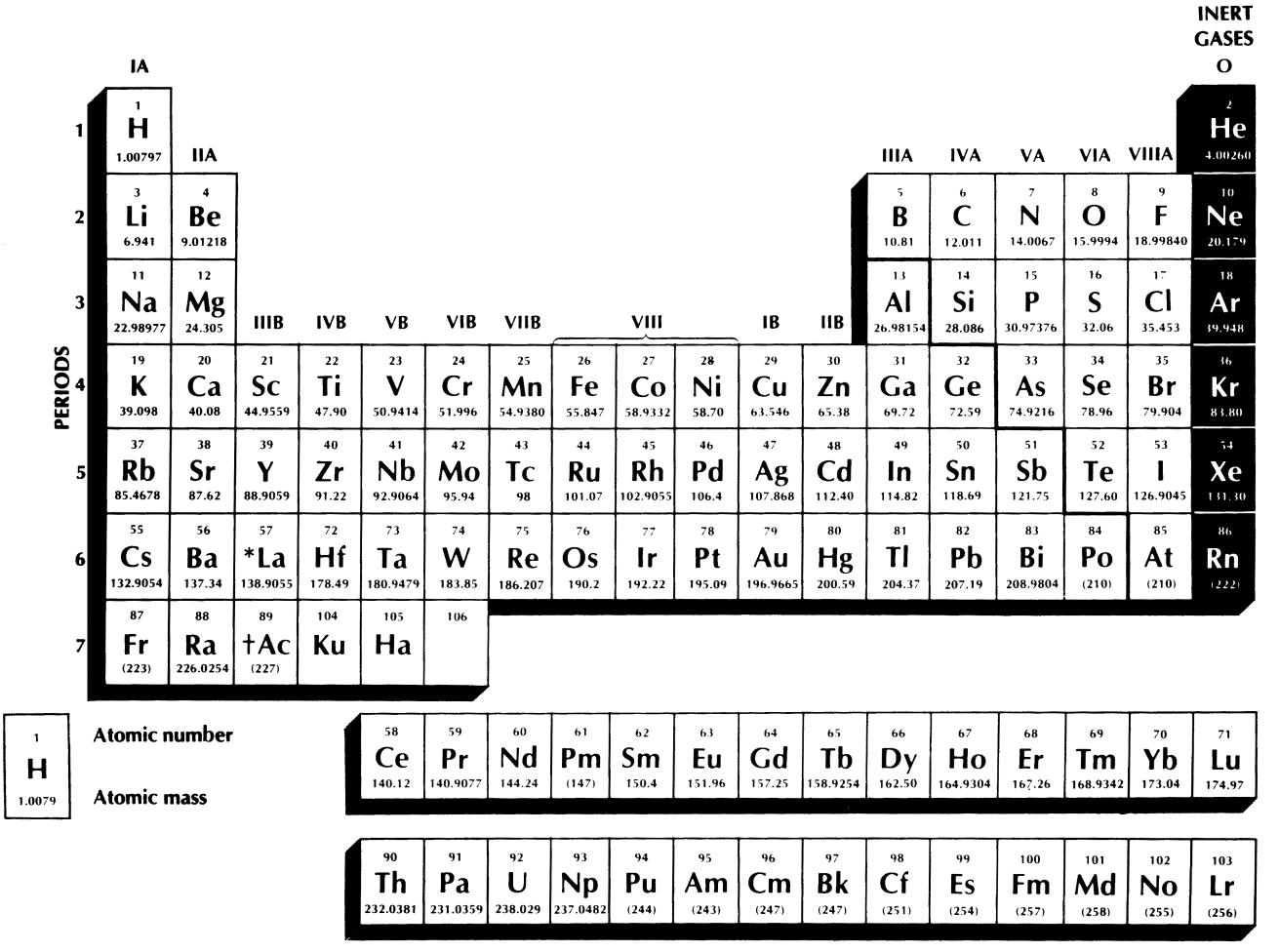
Neutrons can be thought of as sort of a combination of an electron of negative charge and a proton of positive charge. So, for example, any element is going to be determined by the number of protons it has—its character, which determines the shape of the space in which that element is existing.

The way you could think about it, is that the geometry of the proton structure is a determining sort of function, of a certain curvature of the space in which that element exists, which is then going to create a specific kind of effect; it will determine the character of that element.

There is a simple type of transformation that goes on in nature, which is what we call beta decay. With beta decay, you have the neutrons, which are made up of protons and electrons together, which give you a non-charge, lose a negatively charged electron. In beta decay, you have the loss of an electron, of a negatively charged electron. That means that what is left is then the positively charged aspect of the neutron, which in effect, can be thought of now as a proton. And so, what you have done is that that element, has gone through a kind of a transmutation, where it has lost the negative charge from the neutron, now it has one additional proton in its nucleus.

FIGURE 1

The Periodic Table of the Elements



Even though it has actually lost something, it has gained an additional proton to its nucleus, which means now you have a new element, because it is the number of protons in the nucleus which determine the characteristic of that element. So, if a series of these transmutations is carried out, or forced upon an element, you can transform one element into something completely different: something that was a gas into a metal, and vice versa.

This is something that occurs in a limited way in nature, but we want to do it on a mass scale.

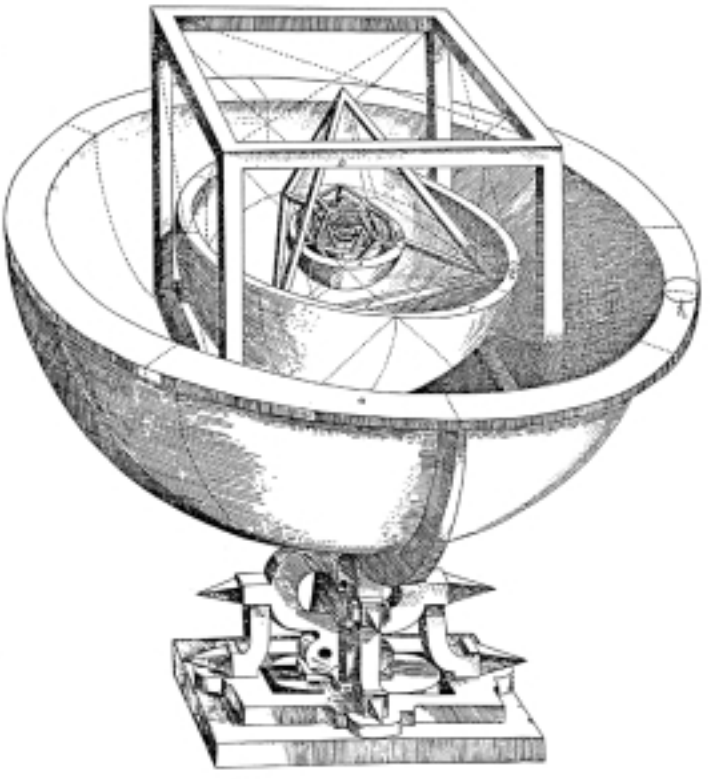
Creation Through the Fusion Process

Now, the other idea is to have a kind of fusion process going on. Lyndon LaRouche has talked about how in the early phases of our Solar System, there is a youthful spinning Sun, which was largely a spinning plasma ball of hydrogen and helium, and it was throwing off material, throwing off this plasma material, which then, in the process of being heated, was bonding the nuclei of hydrogen, effectively. This is a simple way you can think about it—bonding nuclei of hydrogen together to give you the periodic table.

You take two nuclei of hydrogen, bind them together, and now you have helium. You can carry out that kind of process and build up the periodic table, up to a certain limit, to the limit of iron, where there is a real perturbation in the periodic table. That's another story that we can get into, but it indicates that even more is going on than that binding process.

But what LaRouche has also talked about, is that in order to overcome that boundary condition, you have something called a polarized fusion process, where you have a more directed fusion process going on. Along the plane of the ecliptic, you have the Sun sending out very high-energy electromagnetic pulses, which are then overcoming a certain boundary condition in the formation of elements, and effectively utilizing a new kind of organizing principle, to give you the elements beyond iron. (That's something that maybe can be taken up in the question period.)

FIGURE 2
Kepler's Planetary Ordering



This is an engraving of Kepler's determination of the orbits of the plants, from his Mysterium Cosmographicum. *His ordering, beginning from the circumsphere defining the orbit of Mercury, is: octahedron, icosahedron, dodecahedron (of which the insphere is Earth and the circumsphere is Mars), tetrahedron, and cube.*

The Moon Model

Now, as LaRouche has talked about it, in order to do this, we're going to have to make serious advancements on a breakthrough that was initially introduced by a man named Dr. Robert Moon, who was a leading member of the Fusion Energy Foundation, and a very close collaborator of Lyndon LaRouche. He was one of what Mr. LaRouche called the three pillars of the Fusion Energy Foundation: Dr. Robert Moon and Dr. Winston Bostick (both of whom are dead), and LaRouche. They were really on the cutting edge of the development of fusion physics and technology.

Robert Moon, as many of you may know, was the first person in the United States to develop a powerful cyclotron, which gave us the ability to separate out different forms of uranium that went into creating the first nuclear pile, as part of the Manhatan Project. He made tremendous breakthroughs in physics and chemistry developments for the United States.

One discovery Moon made, or initiated, which has not been taken up in a thorough way by the modern scientific community, is what he called the Moon Model of the structure of the atomic nucleus, which is based on an idea that the structure of the nucleus occurs according to a certain kind of organizing principle consistent with the nesting of the Platonic solids, the five regular solids attributed to Plato, which were discovered prior to him, most likely in Egypt.

Now here [**Figure 2**] is Johannes Kepler's model of the Solar System, his first hypothesis, which was based on the idea that the intervals of the planets—the ratios of distances relative to each other, could be known as a function of the spacing created by the nesting of these five regular solids. We're talking about the solids that all have the same angle at the vertices, as well as equal edges, and the same faces. The cube is the easy one to see, but there are five of these solids.

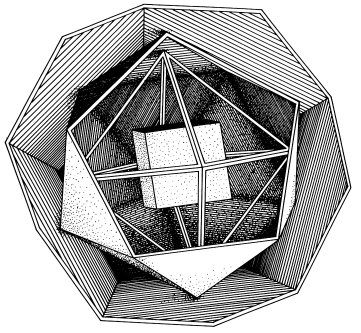
So Kepler's idea, which was the most appropriate hypothesis at the time, was that the orbits of the then-six known planets, their spacing, was according to a ratio determined by a nesting of the five regular solids, as you see here.

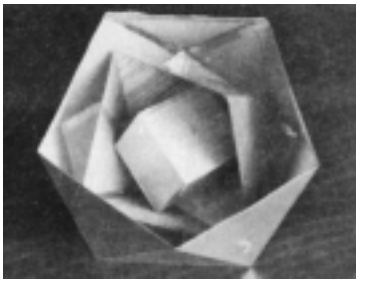
We, as a youth movement, in Los Angeles, and up and down the West Coast, have just completed working through Kepler's work on this, the *Mysterium Cosmographicum,* which is the first step toward an elaboration of Kepler's discovery that there weren't simply circular orbits, but elliptical orbits, which were then organized according to an even higher principle of a harmonic relationship, which has a direct relationship to what we think of as musical harmonies, musical intervals.

It was then in this tradition that Robert Moon developed his hypothesis about the physical space-time geometry of the nucleus.

Here [**Figure 3**] a diagram of the Moon Model, as it's known, which has a different nesting. It's not the same ordering of the solids, but it's the same regular solids. Some of the empirical evidence which lends itself to the appropriateness of this hypothesis is that, if you look at the most abundant elements in the Solar System—oxygen, silicon, iron, palladium—at the points where there is a completion of this nesting [putting a proton on every vertex], you find one of these elements. For example, as you nest one solid, say the cube, which has eight vertices, into the octahedron, which has eight sides, you have 14, which corresponds to silicon, which is one of the four most abundant elements.

FIGURE 3
The Moon Model of the Nucleus



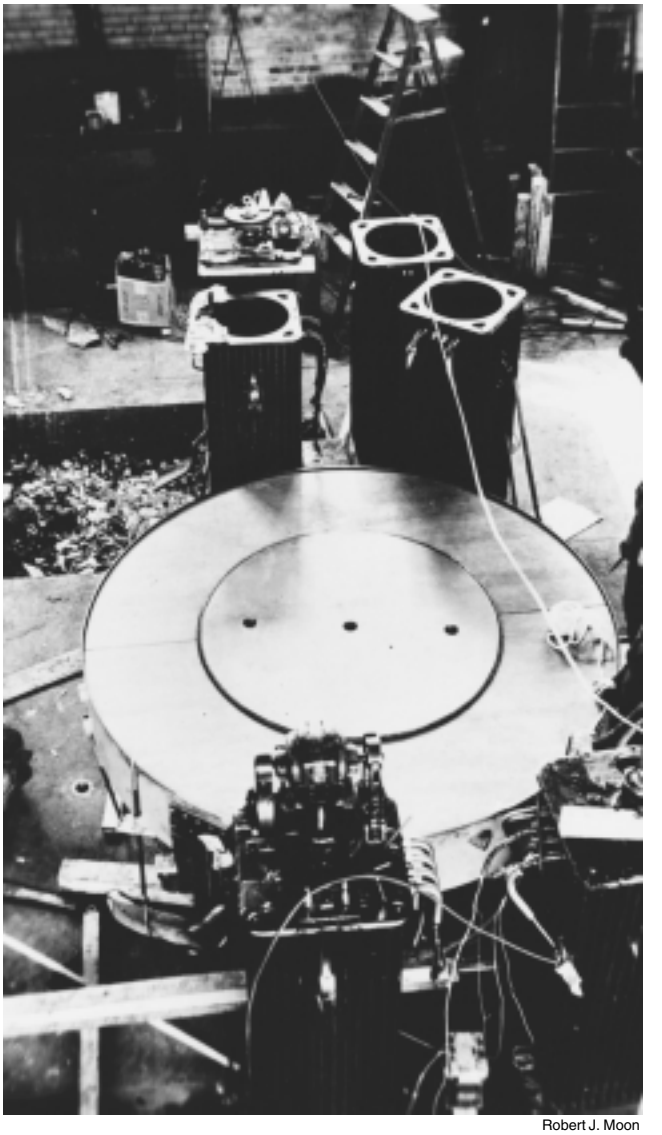


Moon's geometric nesting of the Platonic solids, shown here as an illustration (above) and in a photo of a working model. The nesting has the cube at the center, surrounded by the octahedron, icosahedron, and dodecahedron.

So as you, in effect, introduce another proton into the atomic structure, you are building up this structure. And at the point that you reach a completion of the nesting of any of these solids, like the cube inside the octahedron, inside the icosahedron, and then inside the dodecahedron—at each point that one of these solids is filled out, so to speak, in terms of distributing a proton to each one of the vertices, you actually then have the atomic number of the most abundant elements in the Solar System—oxygen, silicon, palladium, iron. You have empirical evidence which lends itself to say, well, of course, these would be the most abundant, because they would also be the most stable. You have a structure which is a stable structure, which doesn't have any open ends to it.

The Curvature of Physical Space-Time

Now this is something that we are currently investigating within our Youth Movement. We were also doing it to develop the long arc of development of the history of science. We are not just diving in here, and saying, "Well, let's just look at this." We are going back, as LaRouche has constantly referenced, back to the Egyptians, the Greeks' Sphaerics, working through the development of people like Gauss, Riemann, and leading into LaRouche's own work and Robert Moon's work. Of course, there are certain breakthroughs, which were made by people like Einstein on questions of relativistic curvature, relativistic physical space-time, where we actually have to get into—if we are going to really know the nature of the



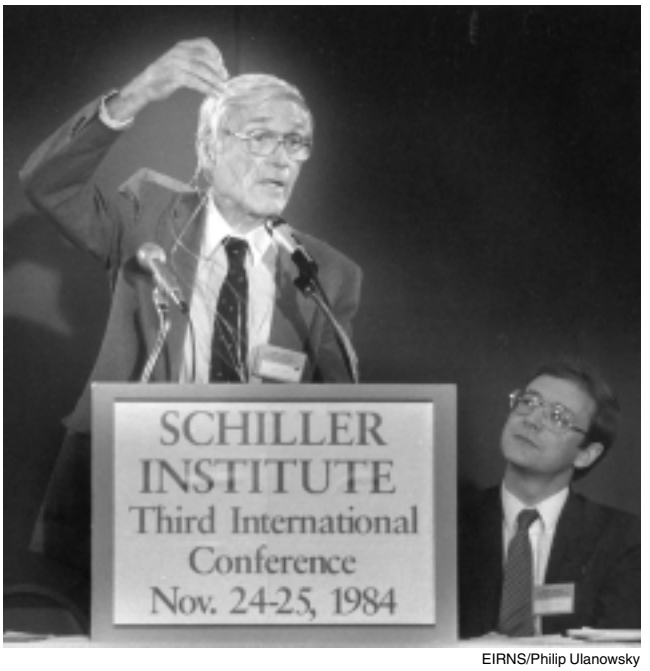
Robert J. Moon

The core of Dr. Moon's cyclotron in construction, at the University of Chicago.

structure of the atomic nucleus—to know the curvature in the very small. How do the number of protons and the introduction of a new proton *change* the curvature of physical space time in the very small?

And, so this is why, for example, every Tuesday and Friday, Sky [Shields] has been leading the curvature class, looking at things like Gauss's paper on the general investigation of curved surfaces, the Copenhagen Paper, Riemann's habilitation dissertation paper.

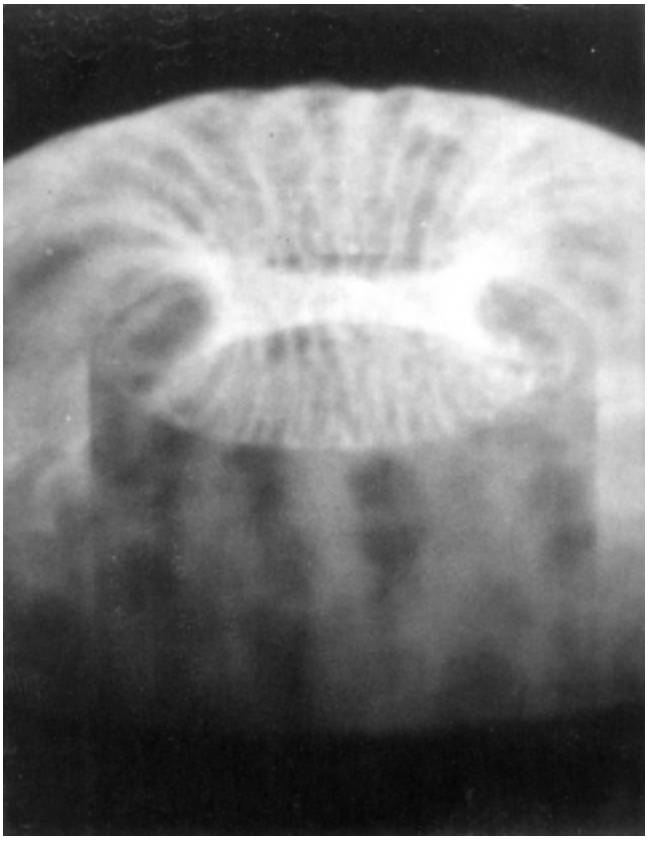
We are actually looking at the foundation which then led into people like Einstein's investigation of relativity. We're looking at the foundation, so that we can really start to get an intense and deep understanding of what do we mean by questions of the curvature of physical space-time, and how can the knowledge and breakthroughs in that, that then led to



EIRNS/Philip Ulanowsky

Dr. Winston Bostick, one of the pillars of the Fusion Energy Foundation, demostrating his filamentary model of the electron.

FIGURE 4



Vortex filaments from the current sheath in a plasma discharge from a theta pinch fusion machine, photographed by Winston Bostick. The filaments show the natural tendency of a plasma toward organized structure.

our ability to master the processes.

As we see here [**Figure 4**], this is a representation of a plasma, a toroidal plasma structure, which is one of the kind of directions that some of us are moving in right now. Here you use highly heated gases, which have been stripped of their electrons, which is what a plasma is. You are confining it into a certain structure using very intense magnets. In this case, you are putting it into a toroidal structure, which then creates a kind of internal organizing process within the plasma.

The plasma actually takes on a self-organizing characteristic, and you start to get certain things like these filaments within it, and these vortexes. You create a certain kind of internal geometry within the plasma, which can then, say, draw into this vortex the nuclei, say, of hydrogen, and you can start to get a kind of binding process going on. So, out of these plasmas structures, falling out of that, so to speak, you could start to get different elements.

Now, people should know that the overwhelming abundance of the material in our Solar System, in our galaxy, in the universe, is hydrogen. It is virtually an unlimited resource. So, to the extent that we can master the kind of process where we can start to bind the nuclei of hydrogen together, we will have an unlimited resource of all the elements in our Solar System. When we start binding hydrogen, we can make anything.

The Real Philosopher's Stone

You know, the joke is: Nick Walsh gave a class about Newton and his intense search for the philosopher's stone. Newton, this wild optimist, commits his life to all kinds of cabbalistic manipulations of numbers and insane stuff, trying to find the philospher's stone, i.e., the idea of how you can create gold out of mercury. Well, the funny thing is, that by dumping and abolishing the Newtonian approach to physics, we may have actually found a real philosopher's stone.

This is the direction that we can start to move things toward now. Any kinds of limits to growth, to resource production, can be completely overcome, but it is going to actually come through a political fight, which is what we are waging now. This is why we have the LaRouche Youth Movement, which is why we have the Franklin Roosevelt Legacy Club. Because we have got to create the political initiatives to have the kind of drive and scientific education in terms of the science-driver policy for the economy, so that we are employing and training more and more scientists in this *real* tradition of science, which is typified by exactly what we are investigating on a daily basis in our Youth Movement, through the works of Kepler, Gauss, Riemann, and, of course, LaRouche.