

Samarbejd med Rusland for at mestre atomkernen, og rejs ud i rummet! LaRouchePAC Internationale Webcast, 16. december, 2016

Medierne svirrer med historier om, at den russiske præsident Vladimir Putin hackede de amerikanske valg. Vi får kommentarer fra Lyndon LaRouche om hele denne larm, og vi hører fra et medlem af Efterretnings-veteraner for Sund Fornuft (VIPS), tidligere senator fra Alaska, Mike Gravel, om disse beskyldninger, samt om, hvad vore relationer med Rusland og Kina bør være. Dernæst bevæger vi os ud i rummet, med overvejelser over behovet for fælles, internationalt samarbejde om forsvar af Jorden mod sådanne kosmiske trusler som vildfarne asteroider og kometer, samt diskuterer den moralske forpligtelse over for fremskridt og videnskabelig opdagelse, der i sig har potentialet til at forene nationer på basis af et nyt grundlag for internationale relationer mod fælles, menneskelige mål!

Engelsk udskrift:

We Need To Develop a Platform of Economic Activity that
Makes Mankind an Active Force in the Solar System!

LaRouche PAC Friday Webcast, December 16, 2016

JASON ROSS: Hi there! It's December 16, 2016, and you're joining us for our Friday LaRouche PAC webcast. We're recording today at 3:30 in the afternoon. My name is Jason Ross; I'll be the host today. I'm joined in the studio by Ben Deniston and via Google Hang-outs by Kesha Rogers, member of the LaRouche PAC Policy Committee.

So, the world has presently undergone a tumultuous sea-change in its orientation; away from the trans-Atlantic world of wars, of economic stagnation. We've seen this recently in such votes as the Brexit vote in England, which was a repudiation of that orientation; we've seen it in the election of Donald Trump in the United States, which certainly a repudiation of what Obama had represented and what Hillary was seen as being sure to

continue. Instead, we're seeing something much better come about in potential, which is the war avoidance strategy from Russia and the economic cooperation being put forward by China through the Belt and Road initiative; which is the Chinese policy initiative which has come as a result of decades of organizing by Lyndon and Helga LaRouche and their associates for a policy which they had called the Eurasian Land-Bridge and which has now become the New Silk Road, and as China calls it, the Belt and Road initiative for cooperation on economic projects internationally.

This isn't something that the trans-Atlantic financial and military power is taking lying down. Instead, the use of war, of murder, of destabilization to prevent such cooperation has been put into place; as we've seen with the disastrous military policy of Obama, for example, and of George Bush before him. Over the past few weeks, this has taken a turn with an increasing drumbeat of stories about Russia hacking the US election; of stories coming out, not backed by hard evidence, but by hearsay and by appealing to the words of authorities that we can presumably trust, that Vladimir Putin threw the election to Donald Trump by hacking the DNC and the emails of John Podesta, and I suppose controlling the thoughts of everybody who voted for Donald Trump. This has been going on since the summer; this is when the DNC first announced that its email system had been compromised. At that time, in discussions around this, the Secretary General of NATO, Jens Stoltenberg, said "A severe cyber-attack may be classified as a case for the alliance – NATO. Then NATO can and must react. How? That will depend on the severity of the attack." So, putting it on the table that cyber-attacks can be met with military responses by NATO. In October, the famous James Clapper, who said that the US was not wittingly collecting material on millions of Americans when asked by Senator Wyden, Clapper – along with the head of Homeland Security – said in October that "we believe, based on the scope and sensitivity of these efforts, that only Russia's senior-most officials could have authorized these activities."

Over the past weeks, we've seen front-page articles in the {New York Times}, the {Washington Post}; for example, last Friday the {Washington Post} without naming any sources or pointing to any specific facts, wrote that "The CIA has concluded, in a secret assessment, that Russia intervened in the 2016 election to help Donald Trump win the Presidency, according to officials briefed on the matter." So, no named sources. On Monday, plans

were announced to have the Electors of the Electoral College briefed by the intelligence agencies on foreign interference in our elections; basically trying to call into question the election itself and the laws governing Electors. Just yesterday, on NPR's "Morning Edition", President Obama said, "I think there is no doubt that when any foreign government tries to impact the integrity of our elections, that we need to take some action. And we will; at a time and place of our choosing. Some of it may be explicit and publicized; some of it may not be. But Mr. Putin is well aware of my feelings on this, because I spoke to him directly about it." That's what Obama had to say yesterday; he spoke about it more at his final press conference at the White House today.

So, we reached Lyndon LaRouche for comment about this, this morning; and I'd like to play for you his response:

LYNDON LAROCHE [recording]: Those words in his mouth are, as far as they're there, that's a threat to murder people; to murder people of importance. Because this is the way Obama's stepfather taught him, and the way that Obama operated in killing people on Tuesdays during that episode period. So, the point is, the threat is murder; and the best thing to do is say, publicly, that the nations of the planet are now threatened by Obama's plan for mass killing of people. And that has to be said; because that's what that guy has always done, since his stepfather trained him. Obama is a killer; and therefore, he's not going to let things get by peacefully. Obama will kill, unless somebody stops him. That's the reality here. All the details and so forth, and things of your back and forth, really don't amount to much right now. Many of the people who are leading the effort of developing the world program don't need to be stirred up. It's only Obama's crowd that are dangerous; and they will kill. Therefore, it's important for those who are waiting for their opportunity but are not going to ask for it; that's where the problem comes in. Once Obama, with his crowd, starts killing people, that's going to be a bloody mess; and that's going to be the kind of thing that threatens the people of the United States and others right now. He's made it clear; the signals are all there. Obama is still going for a kill against the people of the United States and others.

ROSS: So, there you have LaRouche's views on the expected

response for Obama to take his usual course of killing to get his way on things.

Now, on Monday, the VIPS group – the Veteran Intelligence Professionals for Sanity – released a memo called "Allegations of Hacking the Election Are Baseless", in which they gave their reasons for coming to that assessment. We interviewed a leading member of the VIPS group, former Senator Mike Gravel – former Senator from Alaska – to get his take on this; and we can play that for you now.

Mike Gravel is one of the signers of a letter that was released by the Veteran Intelligence Professionals for Sanity a couple of days ago in response to the {New York Times} and the general media tumult around Russia hacking the elections, Russia denying Hillary Clinton the Presidency; that she deserved as a gift from God. So, I'd like to ask Senator Gravel, who is a former adjutant top-secret control officer for the Communications Intelligence Service, and a special agent of the Counterintelligence Corps; and in addition being a former Senator from Alaska. Senator Gravel, could you tell our viewers what you think of this notion that Russia hacked the election and determined the outcome of our Presidential election here in the US?

SEN. MIKE GRAVEL: First off, it's ridiculous! It's far-fetched ridiculous! We know – and here we can be grateful to Edward Snowden – that the United States' capability, along with their partners in Britain, have the capability of vacuuming up {every single communication in the world}. That means that the NSA has {all} of Hillary's emails; has {all} of the communications between the US and Russia. And so for the government to come out and say via the intelligence community, that this is all instigated by Russia, is just part of the demonization that we've seen taking place about Putin and Russia, as part of a plan in the United States to have regime change in Russia. Believe it. We're seeing what's happened in Syria with regime change, which is hundreds of thousands of people displaced and killed. And now we know that it was the US that financed the coup in Kiev, that unseated Ukraine's duly-elected President, who was favorable to Russia; which, of course, is normal, since they are neighbors and were essentially one country at one point. And so we destabilized that, and that was admitted to by the Under Secretary, Victoria Nuland, who's still there; was there under

Clinton. She admitted that the United States had spent \$5 billion over a 10-year period, to destabilize the government of Ukraine. We succeeded.

Then, of course, as a reaction to that, when Russia had to continue its fresh-water port, which is Sevastopol, which became under threat, they protected it by annexing – {re}-annexing, let's put it that way – because it was part of Russia before. It was given away by Nikita Khrushchev several years ago.

So, in point of fact, we have all the knowledge in the NSA. Maybe the NSA doesn't talk to the FBI, or doesn't talk to the CIA. I don't know. We've had this problem in 9/11, with nobody connecting the dots; and may have that same problem right now. But there's no question that the United States government does more activity in the cyber world than {anybody else}. Russia is probably a distant second. China is a distant second. But there's nobody that holds a candle to what we're capable of doing.

So, for our government to turn around – or {elements} within our government let's put it that way – to turn around and say that the Democratic Party was hacked and these hacks were given to WikiLeaks who then released them; well, it seems odd that the American government would have to be partners of WikiLeaks to let this stuff out. What seems more likely, is that somebody within the government, whether rogue or intent, saw this as an ability to try and embarrass Russia; embarrass Putin, and to save face for Hillary, who was promptly losing the election with her skullduggery.

As a result of this, we now see the {New York Times} – and this should not surprise us – the {New York Times} and the {Washington Post}, the two major national newspapers of note, have done a lot of disinformation over the years, and I think this is just one more instance of that disinformation coming out of the {New York Times}. Keep in mind it's the {New York Times} that ginned up the war to invade Iraq. You can take your credits from there, as to what they're capable of doing when they put their mind to it.

So, that's essentially what I think is the case. Here too, we have enough people with skills and knowledge, particularly with our group, the former intelligence officers in the government, very senior intelligence officers – because none of us are spring chickens – to be able to question what has been put out, and say that this doesn't seem accurate, and doesn't make sense.

ROSS: So, that interview took place on Wednesday; the same day the {New York Times} ran a front-page story – "Hacking the Democrats: How Russia Honed Its Cyber-power and Trained It on an American Election". So, it's half the front page; four full pages inside. That same day, Sam Biddle at the {Intercept} put out what had been amassed as all the public evidence that the Russian government was behind the hack; pointing out that it's not enough evidence. Comparing it to earlier invasions, such as when people working with the Chinese PLA hacked American industrial firms, the Department of Justice put out a 56-page report detailing all the specifics of how it happened; or when North Korea hacked Sony, the evidence was put forward. This time, though, it's just the say-so of intelligence officials.

All of this might look like it's a bunch of flailing around to explain the electoral defeat by blaming anybody except for the terrible candidate that the Democrats had, but it's much more than this. You have to remember, this isn't just domestic theatrics; the case is being made for – as Obama put it – a revenge attack or some kind of answer being made to Russia in some way or another. That is, threatening a nuclear-armed nation over allegations that have not been backed up with any specific evidence and frankly, of accusing Russia of things that the US admits to doing all the time. So, we asked Senator Gravel, what was the intent; why the anti-Russian hysteria? Is this just about the election? What's the push for this? This is what he had to say:

SEN. GRAVEL: The intent is to sabotage the potential new relationship [with Russia]. That's what the intent is. But here too, I think Trump has his own areas of expertise in this regard. And the new Secretary of State designate, Rex Tillerson, he also has a great deal of experience with the Russian leadership. And so, as a result of that, they're going to dictate their own policy.

What we see right now, is the last regurgitation of a failed policy, one that was very dangerous. In demonizing Putin the way we've done in American media, Western media, and then turning around and levelling the charge at them that they are trying to destabilize Western and Eastern Europe, is ridiculous. I know of no instance – and I would question anybody to quote an instance – where Russia has threatened anybody in the last decade in Eastern Europe and Europe proper. He sells them oil and gas; why

would he want to destabilize his customers? It makes no sense at all. But to the neo-cons, who are intent on trying to protect the hegemonic position of the United States in the world, {this makes a lot of good sense for them}. They need to demonize Russia and Putin, they need to demonize Xi and China, and assert our military prowess in the world. We have a significant economic position in the world, and these militarists feel they've got to shore that position up, with militaristic policies that make no sense at all.

What they should be doing, is joining with China in the Silk Road (One Belt, One Road) to raise the economic level of the world to a higher level, and that would be the biggest contribution we could make to the well-being of people around the world, and to the issue of having world peace. That's what we should be doing. But that's not what's happening. What's happening is what we learned from the study of the Thucydides Trap, where the power which is the global power – which is the United States – is now facing the problem of an ascending power like China moving in and surpassing us. Well, our egos may not be able to take that, but certainly the people of the world could take it; because it would mean greater economic activity, on the part of China.

So, it's all mixed up with this insanity that exists within the American government, by a group of people called neo-cons. They start with Cheney. They go from Cheney/Rumsfeld, that crowd, into the present group of neo-cons. Here you have a person like John Bolton, who's being considered for the Number Two man at the State Department. I can't think of a person who's more idiotic, as a neo-con, than John Bolton. I think Bush is just wantonly picking people, hither and yon, to satisfy the conservatives.

I think what they're going to find is when these conservatives attempt to assert policy positions that are at variance from Donald Trump, they're going to find they're short-lived. He'll fire them. He's done that on TV and he's used to that. "Give me the wrong advice, you're fired." That's what you're going to see from a President who's going to be tweeting. He's going to be tweeting his policies to the American people and the world, all by himself, in his room, with his little computer.

ROSS: You know, if you have time for one more question, I'd like to ask you about China, which you brought up. One of Trump's recent appointments was the former governor of Iowa,

which is a state that President Xi Jinping of China has close ties to, having lived there for years, studying agriculture when he was a lower-level figure in the government. You brought up the One Belt, One Road as a potential for the US to be involved in. It's currently something that, under the Obama administration, the US has been opposing. The US did not join the Asian Infrastructure Investment Bank; the US urged other nations not to join it as well. What would you see as the proper or the best – what should the US role in the world be? What should US relations with China in particular be with regard to this program?

SEN. GRAVEL: Well, the U.S. role should, first and foremost, rests upon economic activity – raising the quality of life for the people in the United States and for the people in the world. That's the goal that China has set with respect to its One Belt, One Road.

We oppose that because we are refusing to accept the fact that China is the ascendant power, and that within a couple decades, will be the Number One economic power in the world; but not the military power. If you just look at the amount of money they're spending, they spend about 10% of what we do on our defense posture. As a result of that, it demonstrates they have no interest in becoming the military predominant power in the world. They're ceding that to the United States.

But that, of course, is not all that attractive, as you saw in the Pivot to Asia. Thank God that we have a new President, Duterte, in the Philippines, who is now creating a rapprochement to China, which is the most enlightened thing they could do. Their future is not with the United States; their future is as a player in the economy of South Asia. That's what a rapprochement with China portends – that both the Philippines will be the recipient of extensive One Belt, One Road financing to raise the standard of living in the Philippines, which used to be superior to many of the other countries in Asia, and is now in the lower brackets.

My recommendation is the United States and the new administration would be Trump negotiating his "deal." And the deal he can negotiate is that, yes, the United States will join with China, and will raise the economic threshold of the world.

ROSS: That sounds like an excellent direction for the US. I was wondering, do you have any other final thoughts you'd like to leave for our viewers?

SEN. GRAVEL: No, not at all, except to thank the LaRouche organization for doing good work in advancing the cause of peace, and in advancing the cause of economic growth. The only way we going to bring about world peace is when we raise the standard of living of the people throughout the world. Again, thank you for the good work in that regard.

ROSS: Senator Mike Gravel, thank you very much.

SEN. GRAVEL: You're welcome.

ROSS: While keeping up front that assessment from LaRouche that Obama the murderer is not going to take this transition, take this shift lying down, and the use of the Russian hacking business as an opportunity from their perspective to create conflict, let's switch gears and discuss more about what that better future ought to be; what our positive policy is. I'd like to turn it over now to Ben Deniston.

BEN DENISTON: Thanks, Jason. This should serve as a useful counterpoint, I think, to everything we were just discussing here. In the recent weeks, we've had some discussions with Lyndon LaRouche about the prospect of bringing the principle of the SDI – Strategic Defense Initiative, or in its modern form, the Strategic Defense of Earth; bringing that principle back onto the table in this potential new strategic environment where, assuming Obama doesn't get his way and doesn't start thermonuclear war before the next President even has a chance to take power, we could see a new alliance emerging between the United States, Russia, and China. And setting aside this insane geopolitical framework of viewing these nations as our adversaries and doing everything we can to undermine their growth and development and rise to world prominence. Mr. LaRouche was very supportive of this being a time in which the Strategic Defense of Earth policy can come back as a real pillar of a new security architecture for the planet; which was also a focus that Helga Zepp-LaRouche had when we were discussing it with her earlier in the week as well. This can be a critical pillar for

how the security, the defense, the military institutions of nations in this new era, coming together and cooperating on the new challenges, the common threats and issues that face all nations. The reason why I say this is a principle, is because we're in a new – I would really say for the past couple of generations – a new historical phase for mankind in this thermonuclear age. We've reached the point where if we continue a geopolitical, imperial policy where a leading power tries to maintain control at all costs, you're at the point where if that goes to full-scale war as it has in past periods, past centuries, you're talking about the annihilation of mankind. You're talking about a new phase of mankind, where full-blown warfare now has the ability to wipe out civilization as we know it. That's been an historically new environment that mankind has been dealing with in the past generations. Now, we're seeing the potential for a build-up around that kind of war to be put off the table; put on the back burner around a new administration. But what we're talking about with this Strategic Defense of Earth and in the context of the broader exploration of space, the joint development of space which Kesha will have some comments on in a little bit. This needs to become a central positive issue that we rally nations around; it can't just become "Let's not have war or conflict because it's bad"; but "Let's have a positive, truthful conception – a real principle – of what are the issues that face all nations together, that we should be rallying around in cooperation."

That was LaRouche's SDI originally; {LaRouche's SDI}, not necessarily the program that got implemented to some degree. But LaRouche's idea of the SDI, which was a joint open cooperative program with the Soviet Union; sharing technologies and capabilities, and jointly developing new capabilities to – as Reagan said – "render the threat of thermonuclear weapons impotent and obsolete." We'd actually be working with the Soviets to do this; and Mr. LaRouche recruited Dr. Edward Teller, President Reagan around this idea. These were not hippie, flower-wielding peaceniks; these are not people that just ran around saying "No war. War is bad." These are pretty serious, staunch conservative Cold Warriors to a certain degree; but they recognized the truthful validity of what LaRouche was developing around his idea of the SDI. Mankind had reached a point where we needed positive, collaborative, joint development of these kinds of capabilities for the common aims of nations. Mr. LaRouche

came incredibly close, in collaboration with Reagan, Teller, and others, to really overturning the strategic framework back in the '80s with that program.

But that hasn't really gone away. We've discussed this on shows in the past, but it's worth just reminding people that in the '90s, right in the aftermath of the attempt to get the full SDI program, there was kind of a re-emergence of the same idea around the defense of Earth. The recognition at that time – in the early '90s – that the Earth is actually incredibly vulnerable to asteroid strikes, comet strikes; and we should actually be looking at what the heck we can do on this planet to defend the planet from these kinds of potential disasters. That was something that Dr. Edward Teller, in direct collaboration with other veterans of the SDI and their direct counterparts in Russia, took up as a major focus in the '90s. You had a whole series of conferences and investigations, and proposals really, for the same type of joint open cooperation between the defense institutions and related institutions in the United States and Russia for cooperation around this common threat of the defense of Earth from not only missiles, but missiles coming from the Solar System; these asteroids. Unfortunately, it didn't fully go through at the time. We had the continuation of this geopolitical framework, which has obviously continued through Bush and now Obama. But this issue has come back up again. It was in 2012 that the Russians refloated the offer, and it was named the Strategic Defense of Earth in some of the news coverage. Direct, explicit opposition to the US and NATO advancing their missile defense systems towards Russia's borders into Eastern Europe. They said, why don't we have a joint cooperative program for a Strategic Defense of Earth against the threats of asteroids and related issues? Now, today, again with the prospect of a real shift in the United States, assuming we can contain Obama and he doesn't return to his murderous streak and orientation as Mr. LaRouche has warned, we could actually see this principle emerge and become a central pillar of a new historical era today.

So, we thought it would be appropriate today, kind of as a counterpoint, to start to put some of this issue back on the table. I wanted to start just by illustrating some of what these threats are; what we're facing in terms of the threats to the Earth from these objects in our Solar System. If we go to the slideshow, we have a first graphic [Fig. 1] illustrating just the

reality that these impacts happen; and they happen quite frankly a lot more frequently than people probably tend to realize. In the animation, you can see the famous, very well-documented, surprise Chelyabinsk impact over Russia. Which we had no warning about; we did not know was coming. This frankly very small asteroid came in and impacted with such a high speed – which is characteristic of all of these collisions in the Solar System. A lot of the energy release is due to the fact that these speeds are incredibly fast. When you get an impact of two orbiting bodies in the Solar System, you tend to get massive energy releases, explosions. Here you had a very small object intersecting the Earth; slamming into the atmosphere and releasing the energy of a small nuclear explosion as it hit. This, I think, awakened a lot of the world to the reality that these kinds of things do happen, and we have no defense. One, we didn't even see this one coming; and two, if we had seen it coming, we have no demonstrated, developed capability to defend the Earth from these kinds of challenges. I'd like to point people to on this graphic additionally, from some data that's been released in the relatively recent period, we can see in this map of the world, an illustration of many smaller meteor impacts into the atmosphere that have occurred just between 1994 and 2013. The Chelyabinsk impact was the largest in this time range; these all were smaller than the Chelyabinsk impact, but these were still large explosions in the upper atmosphere. You can see that they've painted the entire Earth over the course of this time period; just to illustrate the fact that these impacts are constantly occurring.

Just to give another sense of defending the Earth from these asteroids, here is a schematic of the inner Solar System [Fig. 2]. You can see Jupiter's orbit as the farthest orbit out there; obviously then comes Mars, and Earth's orbit is a little bit darker than the other orbits. All of these blue lines – assuming you have high resolution to see the details of this visual – this blue haze you might see is actually composed of over 1400 orbits of asteroids that are specifically classified as particularly hazardous asteroids. That is, asteroids whose orbits cross the Earth's orbit at some point and create the potential for there to be an intersection where the asteroid is at the intersection at the same time as the Earth, and you have an impact, a collision. You can see here how crowded the inner Solar System is.

Fortunately, among these that we know of, none of these are expected to hit in the next century or any foreseeable timeframe as far as we know. This alone looks pretty dense, pretty packed in the inner Solar System here. What people should really get their mind around is, this is a tiny fraction of what we expect to be out there.

We can see here, if we take a little bit more complicated graphic [Fig. 3] and break it down, there are literally hundreds of thousands to millions of asteroids of the size of the Chelyabinsk meteor or bigger that we have not discovered. Based on our understanding of the distribution of asteroids of different sizes, we know that they're out there; we just don't know where they are. We don't know which ones might impact, which ones might not. We don't know when the impacts would be.

Here is a depiction [Fig. 4], you can see the relationship between, on the horizontal axis in a logarithmic scale, different sizes of near-Earth asteroids. On the far right, you can see the very large ones in the range of kilometers across in diameter, all the way down to sizes of meters. On the vertical axis, you can see the expected estimates of the distribution, the number, of near-Earth asteroids of those sizes. You can see for the very large ones, we believe there are not very many; but as you start to get to smaller sizes, you get a geometric growth in the number of near-Earth asteroids of these different sizes. You can also see depicted the scale of the damage that would be inflicted on the Earth if it were to hit over an unlucky location. The Chelyabinsk impact being pretty much the smallest size that would not – kind of representing a lower limit on what doesn't do huge amounts of damage. But if it were just a little bigger, that could have caused really catastrophic effects for Chelyabinsk, Russia – that region. In this range, what people sometimes call a "city-killer" range; the size of object that would release the energy of a large thermonuclear explosion, we've discovered maybe 1% of the near-Earth asteroids in this size range.

While NASA has done a good job of finding and discovering a number of the larger objects which can do damage over a large fraction of the Earth if not effect the entirety of the Earth; we've found a good number of those for the asteroids in particular. But as you start to go to these smaller sizes, we've barely scratched the surface. As dense as you think this previous graphic is in terms of the number of bodies out there, there are orders of magnitude more that could do serious damage

that we just don't know about. Again, the first step is knowing where they are and when they might hit; the second step is actually having a defense capability. We've not really done anything besides general studies and theoretical investigations on that front. So, this is still an open, unanswered challenge. But this is kind of just the first step in a real defense of the planet Earth from these types of cosmic challenges. As people are probably aware, you also have the issue of comets. This really grabbed people's attention in the mid '90s when mankind sat on the planet Earth, looked to Jupiter, and watched a massive comet that had broken apart into a series of fragments as you can see in the upper graphic [Fig. 5] there, collide with Jupiter. In the moving animation, you see the explosion of one of these fragments as it impacted Jupiter's surface. The other bright object is one of Jupiter's moons; but this is an image in the infrared where you can see the effects of these energetic types of activities more clearly. In the purple image, you can clearly see the effects of the impact on the surface of Jupiter after the impact had occurred. These impacts let marks the size of the planet Earth on Jupiter's surface.

So, this was a big wake-up call in the mid '90s. This was comet Shoemaker-Levy 9 was one of the designations for it. Before this period, it wasn't widely accepting that we had to think about these types of impacts. When this occurred and they found this stream of comet fragments about a year before it actually hit; they looked at its orbit and said, "Wow! This is going hit Jupiter." So, everyone was sitting there watching, as this thing went up. We had the Hubble telescope, all these telescopes pointing; we saw this thing as well as we could from all over the world. This really was a major wake-up call to the fact that these impacts really do occur. They can come from asteroids, which you saw in the illustration of the inner Solar System, but they can also come from comets; which represents a qualitatively different challenge, as we'll see in the next animation. [Fig. 6]

This should give you a sense of this greater, more difficult challenge posed by comets. This is a particular case of a comet name C1996B2; and this was discovered in January 31, 1996. That's when we first knew this comet even existed. As you can see in the animation which is based directly off of the orbital data from NASA, we discovered this comet at the beginning of this animation when it was just out past the orbit of Mars. Within

two months, it made a close pass by the Earth. We had no idea it was out there until two months before it makes of close pass by the Earth. Whereas the object that hit over Russia – the Chelyabinsk impact – was measured at about 20 meters in diameter; this object is estimated to be about 5 kilometers in diameter. That's about half the diameter of the comet that's believed to have taken out the dinosaurs. As we let the animation play out, we see something very interesting that's characteristic of this distinct nature of the challenge of comets. Look at its orbit. The circular orbits you see here are the outer planets; that's Neptune's orbit. So, this has an extremely elliptical orbit that takes it far out into the depths of the Solar System. When these comets are out there in the far reaches of the Solar System, they're incredibly difficult to see. So, we only see them when they're starting to come into the inner Solar System. Again, as this case demonstrated, we saw this one two months before it made a close pass. If that had been on an impact trajectory, there would have been nothing we could have done. When we're talking about that size of an object with these comets, we're talking about something that can wipe out civilization. That is a global catastrophic impact, an object of that size. We're not talking about the local scale damage of the asteroids we were talking about a second ago; we're talking about catastrophic effects across the whole planet.

So, this is another depiction [Fig. 7] of where we think these bodies are. Based on the orbits of these comets – sometimes technically referred to as long period comets; it's believed that many of these comets reside in the farthest outreaches of the Solar System. Far, far beyond the outer planets. This is a logarithmic scale, so you can see that this distribution of comets – sometimes referred to as the Oort Cloud – begins over tens of times past where Voyager has currently reached, and extends tens times farther than that. We're talking about the very outskirts of the gravitational hold of the Sun. It's believed, again, we haven't seen this region – but based on the orbits of comets we see coming in just in the short time period mankind has been able to make these observations – it's believed that this is a very large population of bodies out in this outer region of the Solar System. Because the gravitational effect of the Sun is so weak out there, it doesn't take much to perturb their orbits and potentially send some into the inner Solar System. Again, with our current capabilities, we're

creating scenarios when we only see them months, maybe if we're lucky a few years, before an impact. Certainly not enough time to do anything about it with our current capabilities.

Now, I just want to end on kind of an interesting note, that there are some studies – although the data is limited – indicating there might be certain cyclical natures to these large comet impacts. Some people even believe it could relate to how the Solar System moves through the galaxy; which raises some very interesting questions about how this outer region of comets could get perturbed on a periodic basis and send in what they call "showers" – cometary showers of many comets coming into the inner Solar System, creating a scenario where it's much more likely that Earth or the other planets might get hit with an impact as Jupiter got hit in the '90s.

I think it's just worth noting that one of the leading astronomers in this whole field, Eugene Shoemaker, who unfortunately passed away in the late '90s, had pioneered much of the work in this field. And for whom this comet that impact Jupiter is named; him and his wife, who discovered it together. He himself believed that it is likely that we are currently in the period of a comet shower; that was something that he published in the late '90s. Based upon the types of crater records and other evidence, he said it's not certain, but it could be the case that we're currently in the middle of what on a human time scale is a long period in which there's an increased frequency of cometary entries into the inner Solar System and an increased likelihood of impacts occurring. Whether this directly accounts for his hypothesis or not, it was only last year that we found out that a relatively dim star had actually passed through the Oort Cloud about 70,000 years ago; which is one of the kinds of scenarios that can perturb many of these bodies. Again, since these things are so far away, it can take 70,000 years for these things to reach the inner Solar System. The point is, this is still incredibly preliminary knowledge of this region – of the Oort Cloud; of the region between the Oort Cloud and the inner Solar System. There could be a long period comet that's only ten years out, that's been travelling for 50,000 years from the Oort Cloud, or even longer; and it's now only ten years away and it's on a direct impact course with the Earth, and we wouldn't even know. It could be just in the outskirts of the outer planets region of the Solar System; not even in this far, far depths region. Again, we're talking about things that can devastate

civilization completely, globally as we know it.

This discovery of this dim star passing through the Oort Cloud, we just found that out a year ago. How many other bodies are out there that might have had close passes in the geologically recent past that could be doing similar effects? The point is, our knowledge is incredibly miniscule for something that threatens the entire planet; and our defense capability doesn't exist. This typifies just one of the issues; and I think there's a lot more we're going to get into in coming shows. But this typifies one of the issues that is front and center for this principle of the SDI, the SDE to re-emerge and center around. These are threats that don't recognize national borders; they don't recognize cultural boundaries. They challenge the entire planet and they're outside of our current capabilities. If we're going to have a sane and principled relationship for leading nations in the planet, then it has to return to these kinds of challenges. Addressing these common aims and threats as Dr. Edward Teller had spoken of, as Mr. LaRouche put on the table with this whole SDI proposal.

The point that I think we should really end on, and maybe discuss a little bit in conclusion, is that – and this is something that we've been discussing with Mr. LaRouche over the recent weeks – this isn't a separate, isolated issue. This is part of mankind becoming a Solar System species. This is part of mankind expanding to a new level, developing a platform of economic activity that makes mankind a presence, an active force in the Solar System. We can come up with specific scenarios where you can deflect one asteroid or maybe a particular telescope that can help us see some of these things; and we should be discussing and looking at those things. But the fundamental issue is, how do we expand mankind into the Solar System as a much more active and capable presence where we can handle these kinds of challenges? How do we engage other nations in cooperation and collaboration, instead of hiding our technology and hiding our capabilities because we want to have a leg up over China or Russia? How do we jointly develop the fundamental science and technologies mankind needs to defend the planet Earth in an open, cooperative way?

If we're going to seriously, actually get into that, Mr. LaRouche has been emphatic; that takes us right to the work of Krafft Ehrlicke, his collaboration with Krafft Ehrlicke, and these early space pioneers who really worked out the fundamental

principles of mankind's development of the Solar System. I think that is fully integrated with this Strategic Defense of Earth perspective. I think Kesha might have more to say, but that's going to be a critical part of this new space paradigm that we've been discussing in recent weeks.

KESHA ROGERS: Very good. I wanted to go back and really take up this conception of what it really means to advance the cause for peace. Because first of all, we have to end the perpetuation and acceptance of a big lie, a murderous lie that human beings cannot have access to that which is truthful. This is what the fight really is. When you're talking about the murderous policy of Obama, it's not a matter of opinion or whether or not you have a belief or non-belief, or like or dislike this President. This President is acting on behalf of the same factions which are indicative of what Bertrand Russell actually represented. He set back the cause of human progress in society. To say that if you make enough people believe that snow is black, or you perpetuate a lie enough; then enough people will believe it. But now, we're seeing that that's not working anymore. That the cause that Bertrand Russell and those who were against the genius of Albert Einstein that mankind can have access to that which is truthful, that system is being destroyed; it's losing out, and there is a new era, a new system of mankind emerging that is being represented by what the United States has the potential to become if we break with the lies that have been perpetuated and say, "No more! Obama must be thrown in jail now." Anybody who's pushing this policy that we have to be at odds with nations such as Russia and China, are continuing to set back the progress of mankind. This is not just about waiting for the next election and saying OK, well we dealt with Obama and hopefully we can survive this next few weeks or so. The question is, that people who continue to allow for this murderous policy to dominate the thinking and the direction of our nation, cannot be tolerated.

I think it's important to really look at what it is that this President has done in setting back the course of human progress by his dismantling and attacks on the manned space program. What you're really dealing with right now is that we have to look at the advancement of the space program as a new evolutionary leap in the progress of mankind. To look at the advancement of the space program not just as a discretionary

budgetary matter for internal US relations, but as Mr. LaRouche said at the onset of this election when Mr. Trump was elected, you now have a new system of international relations emerging. The United States has to join with that.

But when you're talking about advancing the cause of peace, it's expressive of the fight that Mr. LaRouche, his wife Helga, and this organization have been advancing and leading for a very long time. Then you talk about Mr. LaRouche's policy of the Strategic Defense Initiative; a lot of people tried to lower that to a scale of just missile defense and defense of nations acting against the appearance of nuclear weapons from other nations, or just on a small scale. But what you're talking about, is the advancement of an evolutionary leap in the progress of mankind throughout the Solar System, throughout the Universe. And mankind understanding how to come together for a common aim of mankind; to submit to the development of the whole of the Solar System, which is going to increase our understanding of how to advance mankind both here on Earth and off the planet. This is what has been missing. The way people think about human economy, the way people think about relationships to the advancement of mankind in the Universe, is based on these small scale relations; but it has to be completely changed at this point in time. What Krafft Ehrlicke discussed in terms of an extraterrestrial imperative in his third law, was really taking the lid off on human progress; that mankind was an expression of unlimited potential. He says in that third law that by expanding through the Universe, man fulfills his destiny as an element of life endowed with the power of Reason and the wisdom of moral law within himself.

The problem is that we have lost that sense of moral law within mankind to act for the betterment of human beings and human progress. And have lost that power of Reason because we refuse to fight for that which is truthful. That has to end; that has to be stopped now. I think the fight going forward, has to be centered around this basis; that we are going to uplift human society out of the depths of despair, and actually organize around a new commitment to human progress that has been missing for far too long.

I just wanted to say that because I think that we are on the verge of a new era for mankind right now, but people have to get a sense of it. It's not going to happen unless you fight for it; unless you fight to bring it into existence. The starting point

of that is that we have to develop a new system of international relations, working with Russia, with China; not as enemies, but working together to end this threat to human progress that has been going on for far too long.

ROSS: Absolutely! I think that ties it also with that other major leap that's needed in humanity of Lyndon LaRouche's fourth law of his "Four Laws to Save the USA Now"; which is the breakthrough to get fusion power. Like this need for adopting a platform that allows us to have a control over space, that let's us really have this region of the Solar System; something that's within our power, within our reach, within our ability to interact with and intervene on if something is about to kill us all. The essential to make that happen is fusion power. No matter how efficient a windmill you design, or no matter what breakthroughs they make in building solar panels, those aren't ever going to be at all useful for moving into space. You're not going to go to Mars with a windmill. What we are going to do that's going to transform our relationship to nature – I think this idea that we must grow; it's the characteristic of the human species, this moral law that you spoke of, Kesha. This law that we have to answer to is that it's been the nature of the Universe to develop; we've seen it with the creation of the Solar System. We've seen it with the development of life on this planet into increasingly higher forms; not in a purely qualitative way, but also through some specific quantitative measures adopted by Vladimir Vernadsky, for example. Where he looked at the increase of concentration of energy in forms of life; where he looked at the increasing range of chemical elements that were used by life; an increasing power and density of energy flow through the biosphere. That's really up to us at this point. The Universe, in a real way, depends upon us for those next levels of development that are the fruits of our minds. To create things in nature that have never happened before. Just like multi-cellular life, that was a new thing that hadn't happened before; chlorophyll – life going extraterrestrial to get the power of the Sun to feed on. That was something that hadn't been seen before. Now, it's the kinds of things that we do: electromagnetism; the breakthroughs that we have available to us with nuclear science, with fusion power. This is the calling that we have to respond to; this is something that we can come to in resonance with other nations around the planet and really

cooperate on as a real basis for international relations. Not maintaining supremacy, or maintaining the power of a bloc; but having a serious mission that is common to all people to collaborate on and to move forward.

DENISTON: It's maybe a minor point relative to everything, but I couldn't help noticing when Mr. Gravel mentioned that we spent \$5 billion over 10 years to destabilize Ukraine; that's more per year than our fusion budget by a fair amount. That's \$500 million a year; our fusion budget for magnetic confinement has been significantly less than that. Just in terms of a particular reflection of the totality; we're spending more to overthrow Ukraine, to mess with Russia, than we're spending on what could be infinite power for mankind for centuries to come.

ROSS: Priorities, huh?

DENISTON: Yeah.

ROSS: All right. I think that was a good discussion; we hit on a lot of topics today. I think if we keep ourselves focussed on getting these Four Laws of Lyndon LaRouche implemented and preventing the hullabaloo now around this Russian hacking, etc. In these last periods of the current administration, they're attempting to create some sort of possibly irreversible conflict with Russia; that has to be stopped, and the foundation for a new system of cooperation among nations and people has to be put into place. That's something that we're very uniquely situated to do. So, I look forward to your help in making that a possibility and seeing you next time on larouchepac.com. Good bye.