Obama's Anti-Science Policy Endangers Planet Earth

This is an edited transcript of the LaRouchePAC Weekly Report of Aug. 15, 2012 (http://larouchepac.com/node/23641). Peter Martinson and Ben Deniston from the Basement Team joined Lyndon LaRouche.

Peter Martinson: First of all, the most important program that's underway in the world right now, is not really a program underway *in* the world: It's a Solar System program. We had this victory last week of the landing of the Mars Science Laboratory on Mars. But what I wanted to begin with, is a perspective from the White House. Several days ago, the President of the United States gave a call to JPL [NASA's Jet Propulsion Laboratory in California], and congratulated the Curiosity lander crew for their magnificent landing. On the one hand, it's a nice thing for a President to do. It's the third time that that's happened: Ford did it when they landed the Viking; Bush Jr. did it when the Spirit landed; and now, Obama did it. So, on the surface, it's a very good thing.

But there's a big problem with how it was carried out. Obama said, "This is a great thing"; he commented on the Mohawk guy; he said, "Let me know when you find life up there," and "I promise, I give you my commitment to ensure that you will continue to have the continued investments into this type of program, so that you can continue the type of work that you're doing." Now, he says this, in the midst of already having established the budget for NASA for 2013, which *slashes*, not just the manned space program—the manned space program is in a shambles right now in the United States, but also slashes the planetary space program, specifi-

NASA/JPL-Caltech

Engineers celebrate the landing of the Curiosity rover on Mars, on the morning of Aug. 6. The exuberance they are expressing here was echoed in reactions by people all over the world.

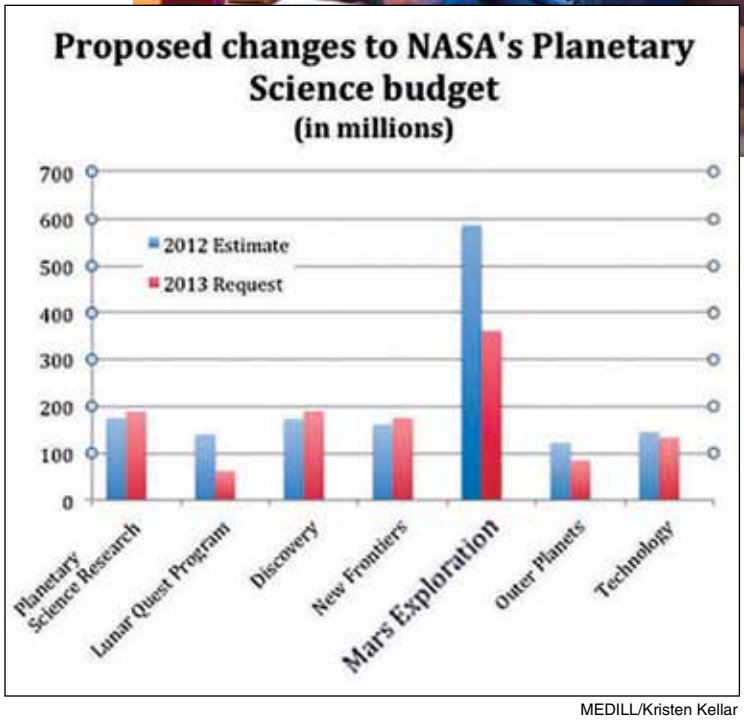
cally slashing the Mars program by 40%, almost half!

At this point, JPL and NASA can not do any Mars program that costs more than about $700 million. The Curiosity lander cost, at this point, upwards of $2.5 billion; it's a so-called "flagship" program. So the new budget established by Obama prevents any more projects of the class of Curiosity.

He had the audacity to go even further and set up what he calls the "Mars Program Planning Group," where he gets all the scientists together to say, "Okay, under this new budget, let's look at what other great programs we can do. Let's see how we can rearrange, and come up with some other great programs for the Mars mission."

White House Photo/Pete Souza

President Obama congratulates the Curiosity Mars rover team on Aug. 13. The graph shows the impact of Obama's proposed 20% budget cut for NASA's planetary science (Mars exploration gets the worst hit).



MEDILL/Kristen Kellar

Now, this is a big slap in the face to anybody who studies the Solar System. Because anybody who knows anything about exploring the Solar System knows that we have a full program already laid out for getting out and understanding our Solar System. Curiosity is a crucial point.

Curiosity, as I described last week [http://larouchepac.com/node/23584], is inside a crater, a pretty magnificent crater, because it has tons of evidence of previous water. It's sitting right next to what appears to be a feature called an alluvial fan, which is where water swept tons of material into the crater, at some point in the past, as part of flooding. On the other side of the rover, you have a mountain which looks like it's made of sediments, a sedimentary record, which will give the history of Mars going back something like 4 billion years.

Now, the importance of the rover, is that it will go into this area of the sediment, and make measurements that can then be compared to the observations that were made from orbital spacecraft, to correct and improve what we're getting from the orbital spacecraft.

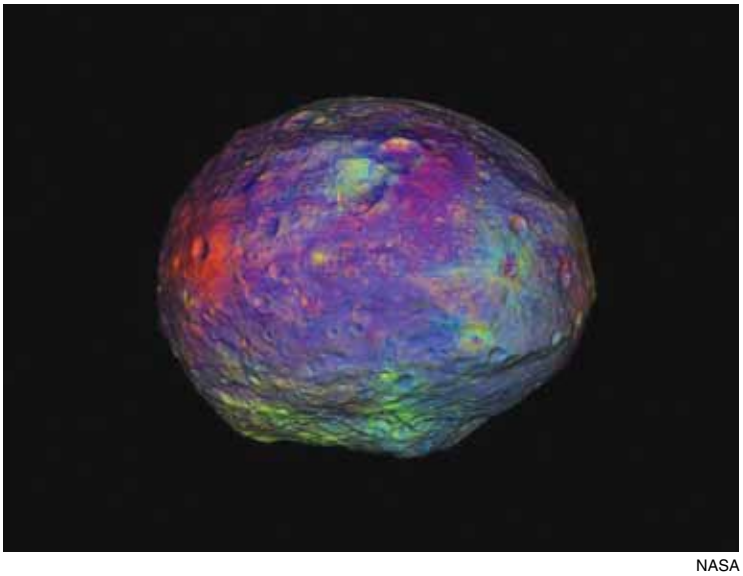
The next step is already very clear: We need to go to Mars, collect samples, and bring them back to Earth. The next step after that is pretty obvious: We need to send people there.

So, the program is already laid out, and there are already people working on aspects of the next step, to go there and start collecting samples. But what Obama does, after submitting his budget, and then putting together this Mars Working Group, is he says we need to define a whole new program for Mars exploration—as if we don't already have one! It's a slap in the face, for anybody studying the planet.

And what I think should be looked at, is a security threat. Because, what we're going to get into more is

that the existence of man in the Solar System *is not assured*. We don't have a donation for our species living for the rest of time, or something like that. We know that we're going to face major threats, because we have evidence on the Earth of major species extinctions that have happened in the past. We know that we're going to face those same types of extinctions.

In order to understand what the threats are, and defeat those threats, we have to understand the history of the Solar System, and how do we control the Solar System? The way we ask, do that, is by expanding our knowledge, by sending instruments out into the depths: We need to go to Mars, we need to send a lot of instruments to places like Mercury and Venus. We need to immediately get back to the Moon and colonize the Moon. We need to get *out* there!



NASA

Vesta is the second-largest known asteroid (525 km mean diameter). The false colors highlight the mineral content of the surface. (Don't worry about this one: Vesta travels in the Asteroid Belt and is not on a trajectory to hit the Earth.)

If we don't continue that, then no matter what you do on the ground, on the Earth, in terms of your budgetary policies, no matter what development you do on the ground, our species is still at risk of extinction. So, what Obama's doing, should be looked at as essentially a criminal act. The call to JPL was probably a campaign trick: He doesn't give a *damn*, about space exploration. If anything, he wants to stop exploration into space, which is what's represented by this budget. And it's a *threat to man*, if that continues.

So, I just wanted to state that outright. And then, maybe we can go into some of the asteroid defense.

Bring the Inner Planetary Region Under Man's Control

Ben Deniston: Sure. Last week we discussed mankind getting a foothold in the whole Earth-Mars orbit region, as the first step toward ensuring the continued existence of mankind. Looking from the galactic perspective that we've discussed repeatedly here, the first step for man, ensuring that we can actually protect and ensure the continued existence of mankind, in comparing mankind's existence to all the previous forms of life that we know of, is going to be mankind taking the whole inner region of the Solar System, with Mars as the obvious first target—taking the Earth orbit, taking the Mars orbit, taking this whole region of space, and bringing that under mankind's control. And that's going to be the first necessary step to ensuring that we can protect our species from known threats, that have already demonstrated the ability to wipe out entire species, repeatedly, throughout billions of years of the history of life.

It has to be seen as mankind's mind coming to control this region, first typified by the expansion of what we call the synthetic sensory capabilities, expanding the power of mankind's mind, to understand, to see and perceive, this entire environment, in new ways that we couldn't do before, and to use that as the first ability to give early warnings, and the ability to give us a greater control over all these processes.

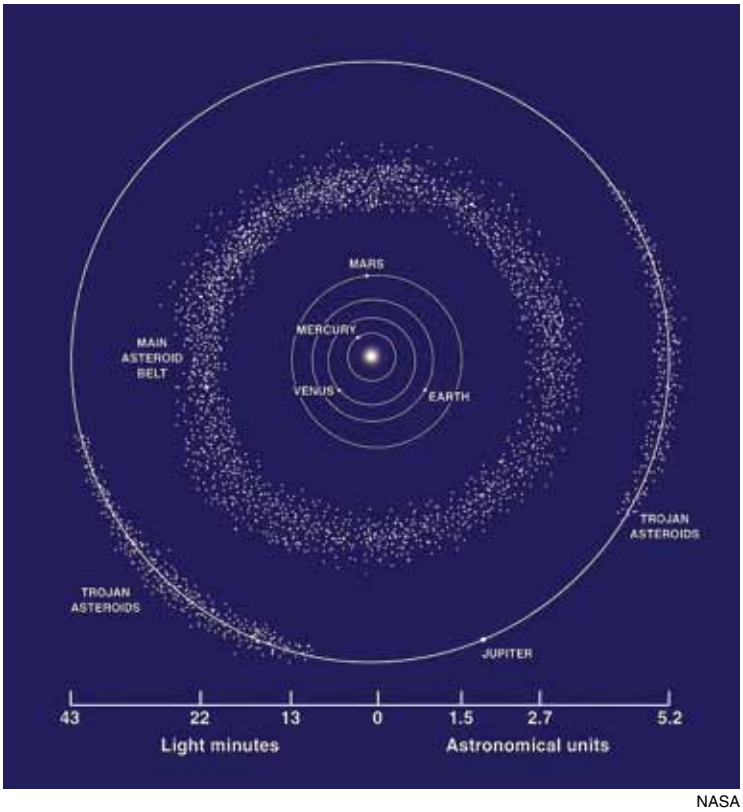
The question of asteroid defense, the Strategic Defense of Earth (SDE), is kind of an obvious first step in that direction, the first avenue for nations to begin to come together and take this threat seriously, and give it the weight it needs as an issue for all of mankind.

And so I have a couple of slides, to continue the discussion from last week.

We discussed a little bit about the scale of the threats we're dealing with. Now, I want to get a little bit more into the question of the observation systems we need, and how we need to begin to populate the Solar System with synthetic instrumentation, and how that has to be seen, as we said, as the extension of mankind's mind, to actually enveloping this whole region of the Solar System and bringing it under control.

The first image here (**Figure 1**) is just a classic cartoon-image of the inner Solar System. This is the

FIGURE 1



NASA

region we want to begin to focus in on; we'll step back outside of this in a minute, but, to take the basic first threats we have to deal with, we want to focus on this region here. So, you have here the four inner planets, Mercury, Venus, Earth, Mars, and you have this discontinuity of the Asteroid Belt, this famous discontinuity that Kepler forecast, looking at his conception of the harmonic organization of the whole Solar System; Gauss did a lot of work, taking Kepler's work further, discovering this anomalous character of the whole Solar System, this main Asteroid Belt.

So, this sticks out as the greatest density of these smaller objects in the Solar System. But if we take it a step further, **Figure 2** is a representation of the actual known populations of asteroids, as of 2006. We've done a lot of observation, some space-based observation, a lot of ground-based observation, to try to find as many of these objects as possible, for both scientific and defense reasons.

And so here, the white objects are the main Asteroid Belt; you see Jupiter just outside the main Asteroid Belt, and you've got the four inner planets, and this very large population of asteroids. But as you can see, as you look inside that main Asteroid Belt (**Figure 3**), there is a very significant population of other types of asteroids, they're shown here as blue, green, red.

FIGURE 2

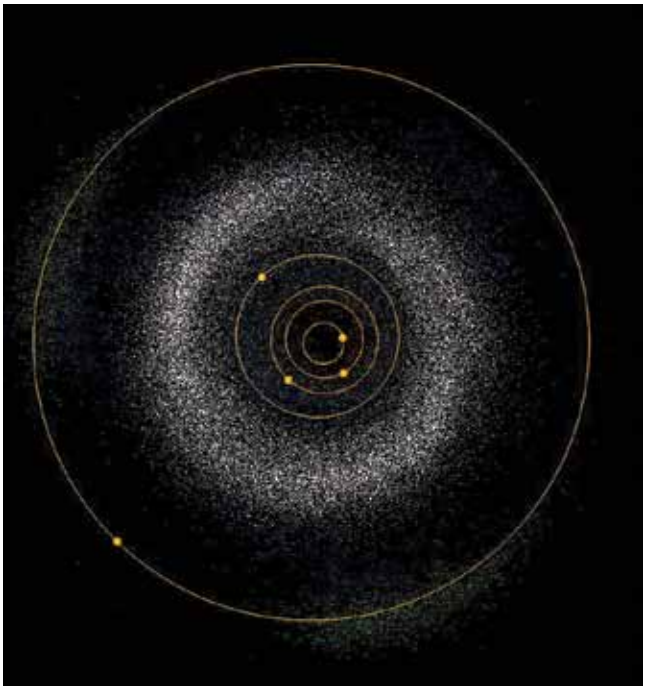


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FIGURE 3

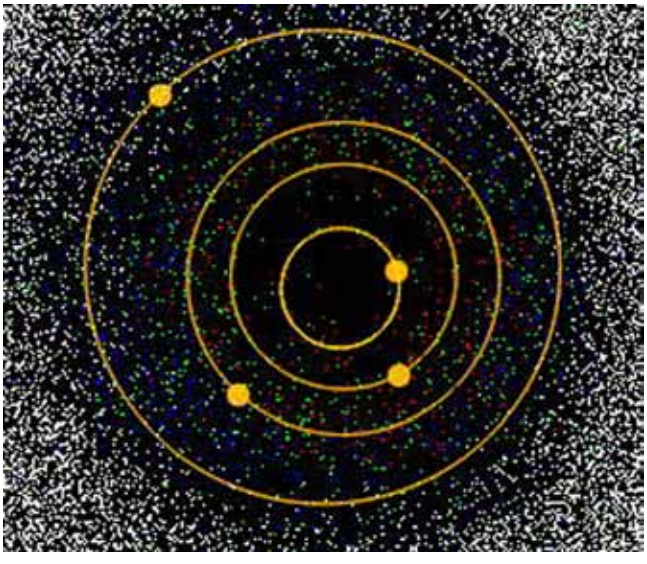

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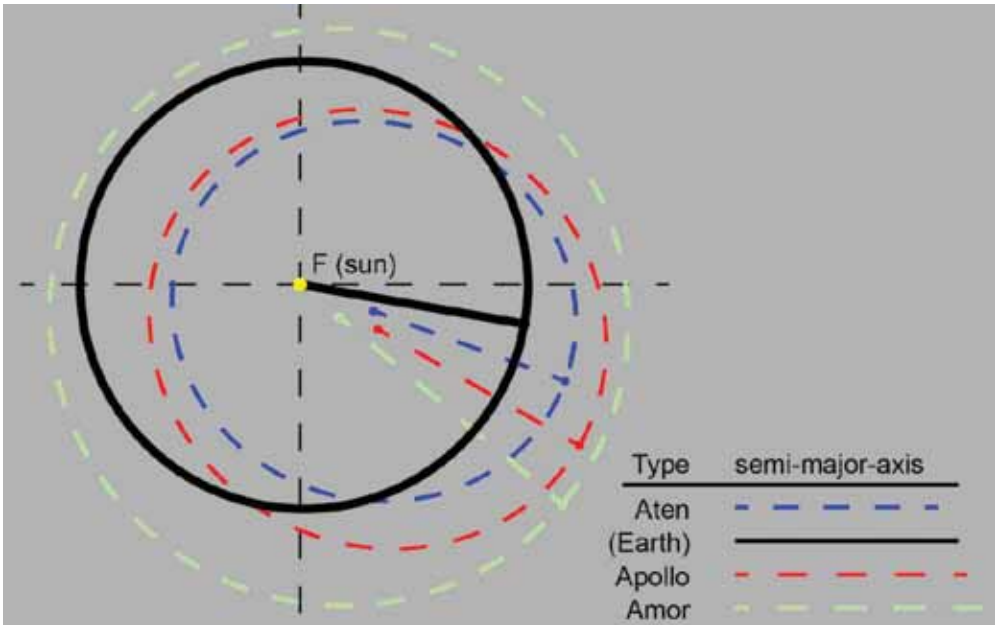
FIGURE 4



http://commons.wikimedia.org/wiki/User:Antonsusi

Near-Earth Objects

One of the classes here that we're particularly concerned about, that NASA, Russia, and other agencies are particularly concerned about, is this specific class of objects, called "near-Earth objects," "near-Earth asteroids." And they are the next image here (**Figure 4**). They have orbits that are significantly different from the main belt asteroids; they have orbits that are not all that different from the Earth's orbit. Here are three typical cases of the types of near-Earth objects that we are concerned with: The black is the Earth's orbit, and the blue, red, and green are three classes of near-Earth asteroids, near-Earth objects.

And so, you can see that these objects orbit the Sun, but the red and the blue ones have orbits that *cross* the Earth's orbit. So these become an object of great concern, because if the Earth is at that point of intersection when the asteroid is, then you're going to get an impact.

This is this particular class of objects that is being studied in great detail, these near-Earth objects. It's a little different than the main belt asteroids, a different class of objects. We want to find all of them, know where they all are, watch them, and forecast their orbits, to make sure that if we think one of them is going to impact the Earth, we can take proper measures to ensure that doesn't happen.

That's by no means the extent of what we need to do, but that's how to get into it, as an opening. Because the most immediate, on-the-table, up-front issue to deal with, is these near-Earth objects, specifically.

Last week we discussed a little bit about the range, the scale of impacts we're talking about. You have, on the one end, massive, global, devastating impacts of very large objects, like the object that hit the Earth about 65 million years ago, ten kilometers across. This is the size of Mount Everest,

FIGURE 5

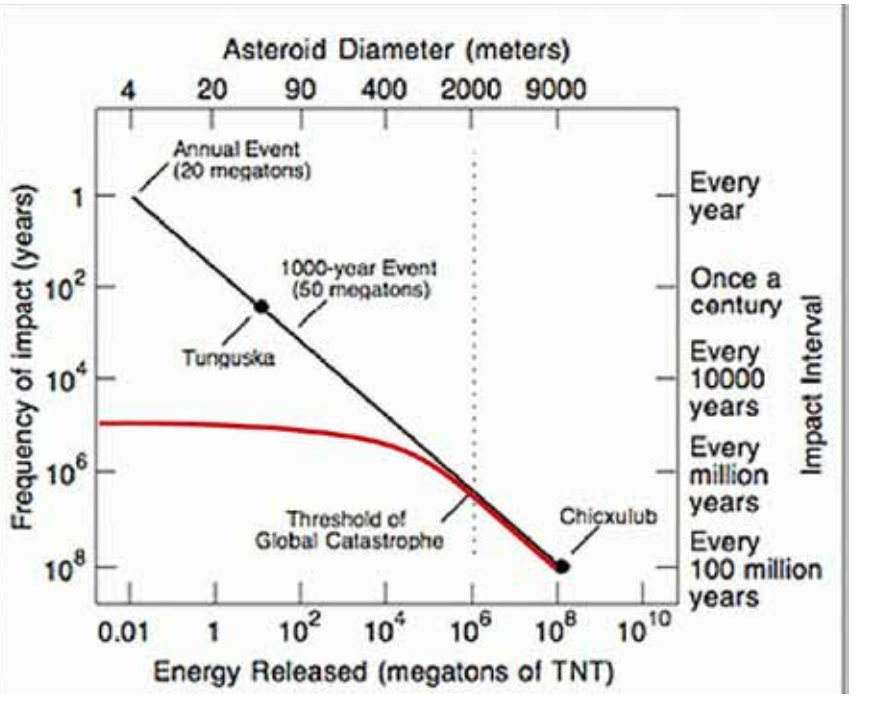


FIGURE 6
Impact Site of the Tunguska Near-Earth Object, 1908

tunguska.ru

so just imagine Mount Everest falling from the sky, down onto your continent; not even just falling, but coming in at 20-30,000 miles per hour! It's a mind-boggling event, and we know it's happened repeatedly in the past. Thankfully, these are significantly rare, on the order of hundreds of millions of years.

But there are many more smaller objects, and a lot of these smaller objects can have very significant regional or local effects, as we discussed last week.

So looking at **Figure 5**, as you go up from the bottom right to the upper left, you're looking at the slope of changing asteroid size, and also the frequency of impacts. As you go up toward the upper left, you get a greater frequency of impacts, which also represents a greater population. There are a lot more of these smaller bodies than there are of the large ones.

What we have here with the red line, the lower curve—and this is really important to emphasize—is a rough estimation of currently how many we think we've discovered. As you can see, towards the bottom right, we think we've discovered a significant amount—most, if not pretty much all, of the really large ones. The really large ones are obviously easier to see, easier to track; we think we've discovered 90-plus percent of the really large ones. But as you get to smaller and smaller sizes, there are more and more of them, and we haven't found anywhere near all of them.

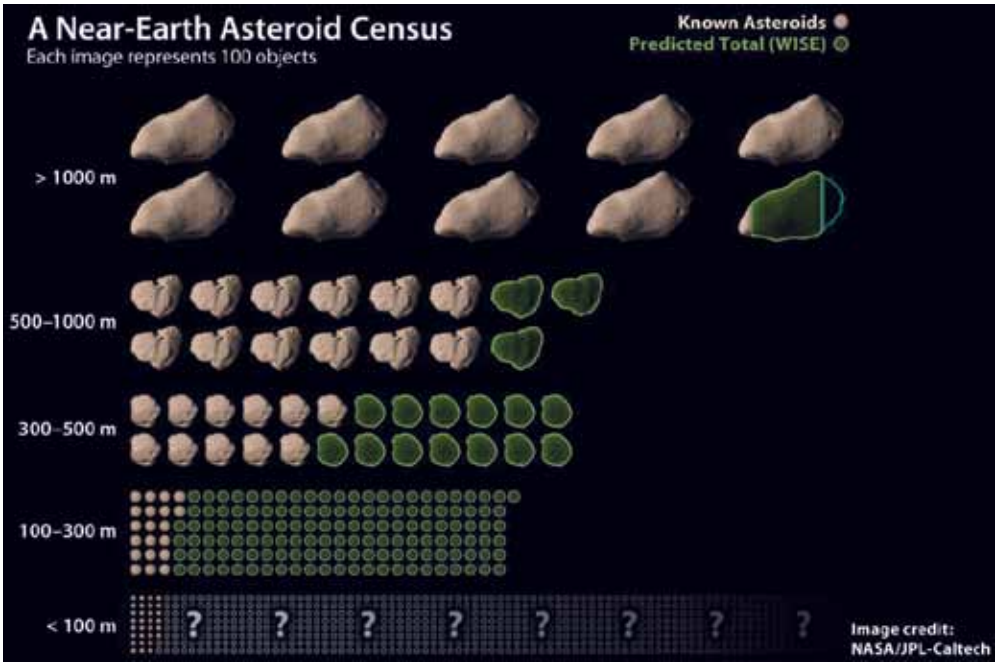
And again, to just make the point, last week we discussed the Tunguska case where an object—frankly, a pretty small object, 30-50 meters across—if it were to come in, could wipe out an area the size of any major metropolitan area. In 1908, you had an impact that leveled a huge area in Siberia (**Figure 6**). If you were to map this same area onto, say, San Francisco Bay area (**Figure 7**), this is the size of impact you'd be looking at. This range of 30-50 meters is about how big they think this object was; it's a rather small object!

Figure 8 shows the results of a relatively recent study, giving a different graphical representation of how many we think we've discovered, of different

FIGURE 7
San Francisco Bay Area

LPAC/EIR

FIGURE 8



sized objects. Again, the really big objects—each of the asteroids there, represents about 100 objects; the ones that are filled in that look like a normal asteroid, those are the ones we found. The green areas represent how many we *haven't* found. So, it gives you an idea of the percentage, somewhat rough estimations, but NASA thinks they have a pretty good idea of how many are out there, at different size ranges. And the green [at the bottom and on the right] represents how many we haven't yet found.

For the larger ones, say on the order of a kilometer or bigger, we think we've found over 90% of them. When you start to get to smaller sizes, the amount we haven't found grows, and you get down to the size range of 300-500 meters—if one of these were to come in, it could have an impact that would affect a small continent, a major country, that's the size of the impact there. So these are not insignificant events; even if they're not incredibly huge, they're still incredibly destructive, incredibly large effects. It looks like we've found maybe half of those.

When you get down to 100-300 meters, we've found maybe 10% of those, so 90% of those objects are still floating around. You get down to less than 100 meters, and there's not even a clear estimate of how many of these there are. Early estimates were saying there were upwards of a million. Upwards of a million objects! And these are just near-Earth asteroid objects, not even in the main Asteroid Belt; near-Earth objects that have orbits similar to the Earth's, that could intersect the Earth's orbit. Some estimates say upwards of a million; this more recent study said it was hard to even estimate, because there are so many of them out there, less than 100 meters. Tunguska was 30-50 meters.

So, we don't even know how many of these are out there. We think it's probably well over a million; we've found a very small percentage of these. So these are a completely unknown population out there, that could pose dramatic threats in the near future. And we don't even have the dedicated observational capability to, at first, even have the proper observation, to even know what the threats are that we're dealing with.

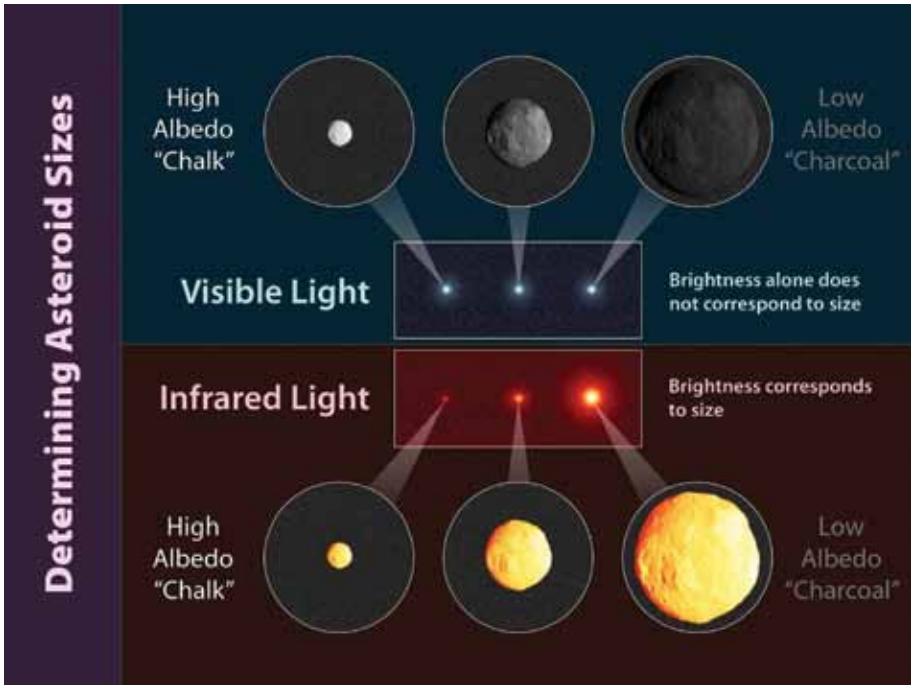
So, to emphasize, this is a first step, to get a sense of where we're at. There's been some work done at getting an estimation of the population, where they are, which ones are threatening, which ones aren't; but we still have a long way to go, even to deal with that. And that's even just a first step, because that's just expanding mankind's sensorium to know the environment we're living in.

Then, it's a question of how you're going to deal with potential threats. How would you go up and alter an orbit of one of these objects? How would you blow one up, if that's what you needed to do? What would be the best method to ensure that it doens't hit the Earth? This is another range of open questions, and we haven't even solved this one, yet, of getting a real census of what the full population is.

And then, to highlight one more thing on the subject specifically of getting the right type of instrumentation. Many of the observations have been done with ground-based systems; this one (Figure 8) was done with a space-based satellite, called the WISE satellite, an infrared satellite. It wasn't sent up to find asteroids. It did

the mission it was sent up to do, and then they extended its mission a little further, to say, "Hey, we have this infrared satellite up there, let's use it to look for asteroids, as long as it's up there." So it did that for a couple years, maybe; not all that long. And it did a significant job in finding a lot of these objects, because when you're dealing with these things, as you see in **Figure 9**, they're relatively small objects, especially the really small ones we're talking about, and they're not necessarily easy to see.

FIGURE 9



NASA

There's another complication, which is that they're made of different things! Some of them are very dark, so they're very hard to see against the blackness of space; some of them are very bright, more of a chalk-like color, so they're very reflective, and they're easier to see in normal, visible wavelengths. So, you could have a very small object that's very reflective, or you could have a very large object that's very dark, and they might look the same, if you're just looking in the visible range.

So, what was significant in what this infrared space telescope did, is it demonstrated that if we use the infrared spectrum, what we see is just the warmth of the body, basically. We see the infrared emissions in this different range of the spectrum, and it's much easier to see darker, colder bodies. It demonstrated that these infrared space telescopes could be of huge benefit, in at least this first step of getting a census of what the near-Earth environment is like, what the near-Earth asteroid population is like; and again, this is the very first step in even addressing this problem.

Telescopes in the Orbit of Venus

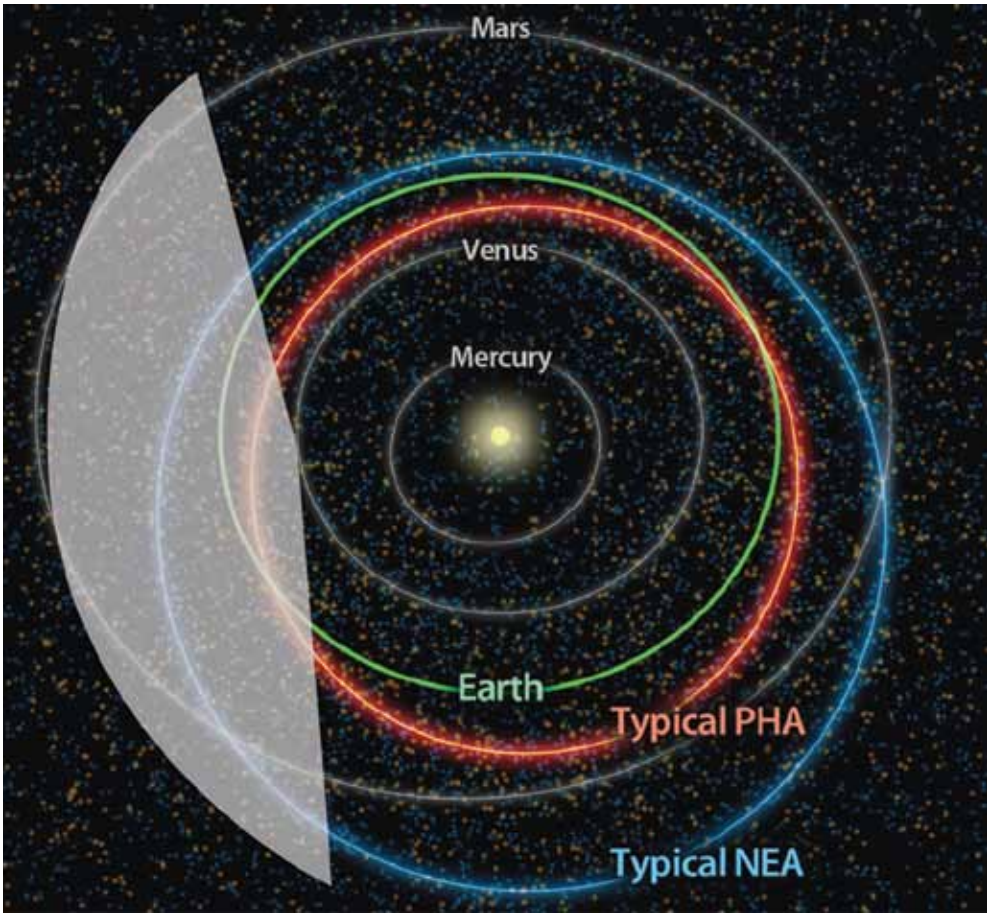
Now, a committee of some of the top specialists in the field of planetary defense, in the field of asteroid defense, came together about three, four, or five years ago—the NASA Ad Hoc Working Group on Planetary Defense—and they put together a very short proposal to NASA, to say, "These are the first things we'd like to do, to help protect the planet from asteroids." One of the things to highlight, is that they proposed that we put one, if not more—two, three, four—infrared space telescopes, in the orbit of Venus; not orbiting around Venus, but orbiting around the Sun, maybe either ahead of Venus, or behind Venus, and that's what **Figure 10** expresses. The Earth's orbit is in green; inside the Earth's orbit is Venus's orbit; and then in red and blue, you have a couple of typical examples of near-Earth asteroids, near-Earth objects.

And what this NASA report said, is that if you put these infrared telescopes closer to the Sun, say, in Venus's orbit, then you get a wider angle out, so you have a better vantage point to see a greater amount of space, a greater amount of the Solar System, and to perceive these near-Earth asteroids, these near-Earth objects.

NASA, unfortunately, as you opened with, Peter—their budget's been slashed across the board; they've said they have no money for this. So now this group is basically trying to do it with private funding. They just announced that they're trying to squeeze money out of the private sector, to pull together their own satellite to do this.

So, you have people who are concerned with actually defending the planet, and they are forced—they don't want to go to private funding. They'd rather do this in a serious way, with government support. But

FIGURE 10



NASA

PHA = potentially hazardous asteroid NEA = near Earth asteroid

they're forced now to try and scrape up money from the private sector, just to try and do this. They're now discussing a 2018 launch for a mission designed to do this.

This is just to give a sense of one aspect, the most immediate, on-the-table issue with asteroid defense, which is dealing with these near-Earth objects. But again, we should really emphasize that that's just the beginning. Frankly, that should have been done already. This has been a clear issue for a couple of decades. There's nothing new in terms of recognizing what the threat is—and this is just the begnning.

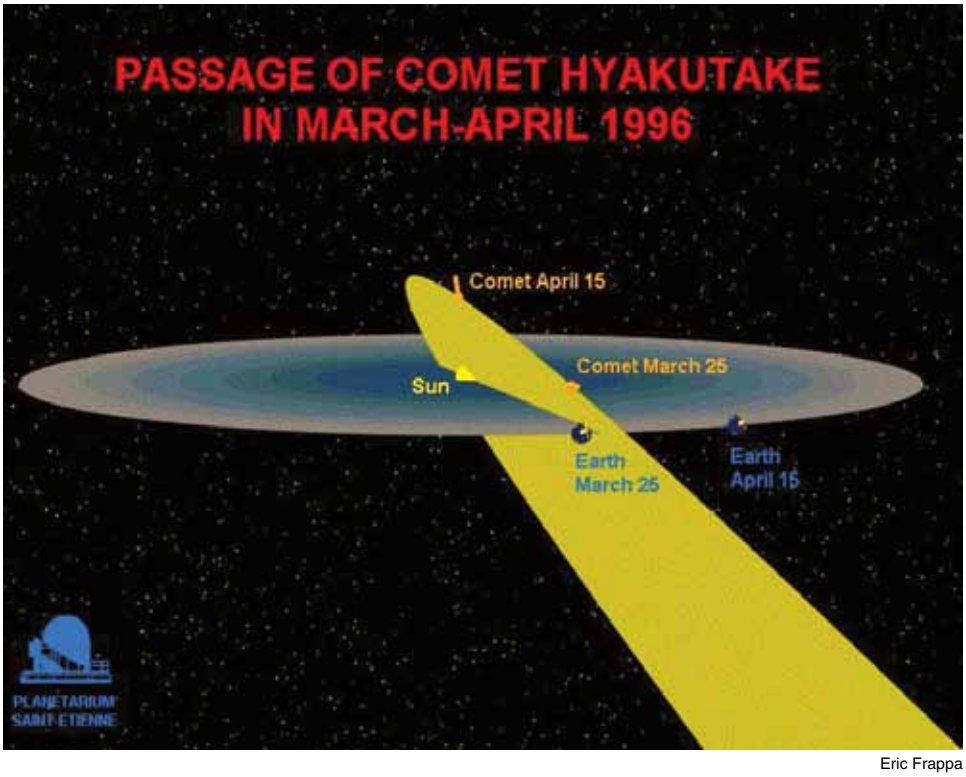
Comets: An Even Bigger Challenge

You also have different issues: Take the case of comets, for example. Near-Earth asteroids have orbits similar to Earth's; they're much easier to see. But comets are a different case. Their impact is significantly less frequent, but they represent a significantly greater threat, for certain reasons. One, they're larger, usually, so you're talking now, often on the scale of multi-kilometer objects. You're talking about global devastation, not just regional effects. Two, they often travel significantly faster. The speeds are incredible! The reason why these things are so devastating is that you're talking about 20, 30, 40, 50,000 miles-per-hour impacts! Which means these things explode and have huge impacts if they hit us.

Also, their orbits are different. If you look at what they call "long-period comets," they have orbits that take them around the Sun, and then way out into the depths of the Solar System, past Neptune, past Pluto; some even much farther than that. They have highly elliptical orbits, and they go way out into the far depths of space, and then, when they come back in, their trajectory is much more like a straight line into the Solar System. Whereas these near-Earth objects are orbiting the Sun, so we can see more or less their entire orbit over the course of one year; with the long-period comets, all the way out to the the depths of, say, Pluto, you're going to have a helluva hard time seeing a comet out at that distance.

And the estimates, currently, from NASA and other agencies that have looked at this, is that if you have one of these long-period comets coming into the Solar System, say it's on an impact trajectory with the Earth, you might, if you're lucky, see it a year or 18 months before it impacts. And that is not enough time to do anything! To really do anything, you need to see this thing years ahead of time, to 1) prepare, design, and launch a mission to actually do something about it; and to 2) in-

FIGURE 11



Eric Frappa

tersect it early enough so you that can affect it with a small change, so by the time it reaches where the Earth would have been, what you have done has a larger effect on the trajectory.

This is another issue which we should already be tackling. We should have already have solved a lot of these issues with the near-Earth asteroids. With the comets, the open discussion is that we need fundamental breakthroughs in new telescope capabilities. We need much larger telescopes, very large apertures, that can see way farther out there. And we also need to look at new ways to intersect and to move these things with greater force.

I think that definitely puts on the table things like fusion propulsion systems, where ultimately, we're going to improve mankind's ability to again now control thie inner Solar System region, by moving to a nuclear/thermonuclear platform, where we're going to increase the power-density per capita of mankind, to be able to alter and control this whole system.

So I wanted to highlight some of that, just getting in some of the basics, and what the immediate steps need to be. But where we need to go further beyond that.

Get Obama Out!

LaRouche: The first thing we have to consider, then, once having considered these points, is, what are the capabilities which we can muster from mankind for dealing with these kinds of problems. First of all, as long as you have Obama in office, you have zilch chance of saving civilization. So if you care about the human race, you're against Obama, because he's an absolute obstacle.

On the other hand, you have Russia and China, the two most significant nations, in terms of this kind of work that we should be doing in the United States. So we have to take into account that factor. We can't just talk about what we're going to do to defend Earth; we have to think about getting the willingness to defend Earth, from nations; and the United States still is, despite all its shortcomings now, a keystone for doing this program. It's a vestige of what was being done before. And Russia has capabilities, China has capabilities, which are notable. But they also have defects and holes in their program. However, if we can mobilize the cooperation of nations such as the United States, Russia, and China, we then have a broader base from which to specialize appropriately and use our resources appropriately.

So, I think the thing we have to do, is immediately get beyond what we're talking about so far today. Do that! But don't leave it hanging. Mankind can't take it.

You saw the positive effect of Curiosity: The psychological effects we have to generate, on this issue, are key to doing it. And therefore, we've got to break this thing, and even our best people here are still stuck with the old idea of, you know, "the Communists," this, that, and so forth, which is no longer a relevant issue. But we have not developed a system of cooperation, particularly among major nations, and China and Russia are key. Russia's key for one reason; China's key because of its broad base.

And we're also involved now in developing systems on Earth, which can anticipate some of these problems, because we can develop on-Earth qualitative capabilities we don't have now! And China and Russia are key in that.

Europe is generally dead right now, because of what the British have done, so we don't have much capability there. The morale of the nations of Europe, doesn't really exist! Germany is the one nation on the continent of Europe which still exists in some sense; it still has some degree of integrity. The rest of Western and Central Europe has lost its integrity. The euro system, it's lost it!

So therefore, what we have to think about is, if you want to save civilization, you have to get rid of problems like Obama. You can not have Obama, and you certainly don't want the other creeps, the Republican creeps. So the question is, we have to *immediately*, in this period—the hot issue—we have to immediately take this into account, put this in the picture, put this whole thing in the picture. Don't worry about just what these comets can do; that's not the point. How can you defeat that process? How can you control it? We've talked here, at the table, about certain things that can be done, and certain possibilities, but that isn't going to save humanity from Hell. What we've done on Mars, that's more open.

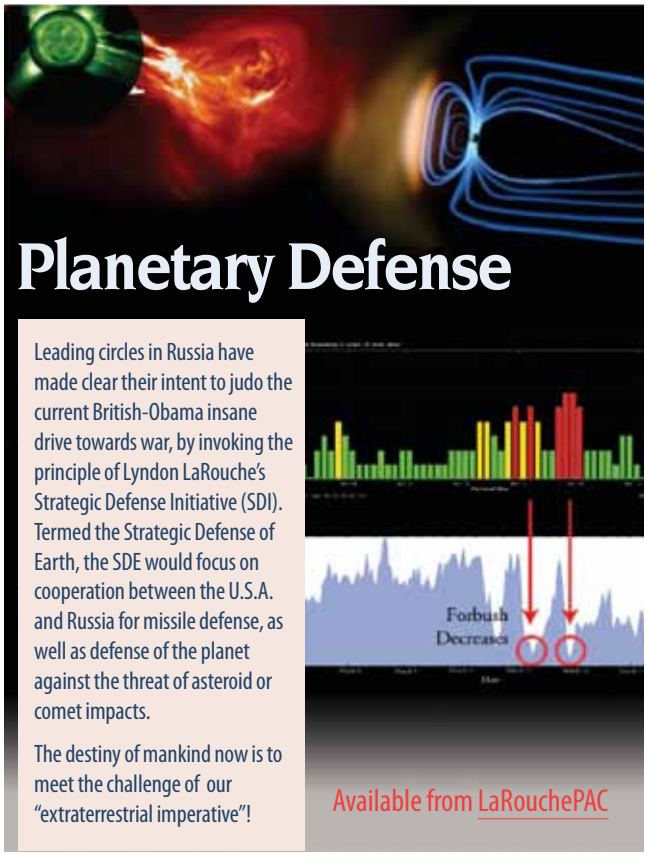
What we need is an international program, especially among leading nations, with combined resources, and that have these kinds of technological resources within their capacity. We need an *offensive* program, not just a defensive one! And we've got to go from what we're doing now, to actually kick butt, on the fact that mankind *must do this!* We must take these resources and cut this crap out! We have to defend the existence of the human species, and that means we have to have cooperation among, especially, leading nations, who command more resources of this type.

We have to outflank Obama, totally; and we have to get rid of him, really. As long as he's President, the United States doesn't have a chance. And of course, we've got all these poor idiots out there, our fellow citizens, who haven't got a *dream* of reality. They have no sense of what reality is. I mean, just ordinary people out there. Our citizens have, in general, no competence whatsoever to understand what the reality is. They don't know anything! They're ignorant! And they rotate, like something on a rotisserie, in their own ignorance.

But we do have allies, in reality; we do have allies like Russia and China, who do have significant capabilities, outstanding above other nations right now, and therefore, our cooperation with these nations, and bringing others in, additionally, for a planetary policy, is possible.

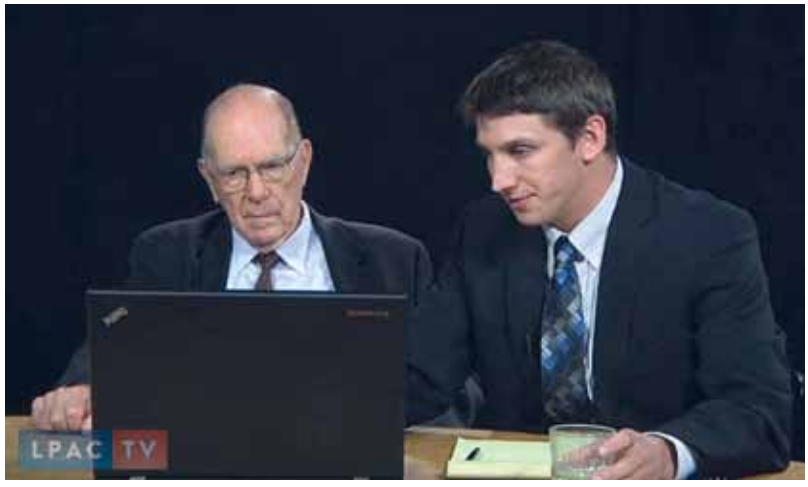
But don't sit there and say, "What's our problem, within these parameters?" We can't accept the parameter which is an Obama parameter. The human species can't accept it! And particularly the United States can not afford an Obama!

And this other jerk [Mitt Romney], we can deal with him, easily. This other jerk [Paul Ryan] is just thrown in there, in order to hope to bring Obama back for a new term. I mean, Ryan? He's nothing! He's an idiot! He hasn't got a head on his shoulders. All he's got there is a body, and I don't know where that fake head image comes out. I don't think he has a head. But in any case, he's just a bugaboo, that's all he is: He's thrown into the thing, to try to build up support for Obama, by putting in something really creepy and evil, like this kid!



Deniston: Right, to play the countergang.

LaRouche: Yes, and we can not tolerate this. If we want to save humanity, if we don't want to see the extinction of the human species, we're going to de-promote Obama, and we're going to get ourselves a different Presidential candidate. And that is not difficult! We can get a better candidate than Obama, almost from Mickey Mouse! But we don't want Mickey Mouse.



Lyndon LaRouche and Ben Deniston

There are actually members of the Senate who are obviously qualified to take the position of President. You can create a President for the United States, very easily! I mean, there will be a little squabbling and so forth, but nonetheless, in terms of reality, the reality is, almost any jerk would be better than Obama. There isn't a jerk who is not better than Obama. So we don't need Obama! We don't need these jerks! All we have to do, is pick some sane people as Presidential candidates, and with just sane people, given the reality of what we face, what mankind faces on this planet now, all the problems, it's not hard to pull a program together to define it. This idea, the mystery—that it's got to be this guy or that guy? No!

So, I think what we have to do, is take this thing and spin it a little bit, to get it okay.

What Will It Take for Victory?

If we confine ourselves to the United States government now, what's the chance of survival of civilization? Under Obama? Zilch. Zilch! You want to become exterminated, vote for Obama. You think this guy Ryan's a problem? He's a joke! Obama's the danger, the fact that he is President is the danger. And therefore, we have to shift the thing, to what are the measures which are required, because of this galactic problem—which is what it really is; when you start talking about comets, you're talking about galactic effects.

So therefore, what we have to do, is turn the thing from the awful dangers that threaten, and say, "What can we do to overcome this threat?" Well, if Earth is mobilized among some leading nations, we can do a space program which is attuned to meet this requirement. And I think what we have to do, is state what we're stating now, the line we're going on now. But let's talk about the other thing: What is it going to take for victory? Not, what is our pitiful defense, but what is it going to take for victory? Like World War II: What will it take for victory? And that's the message we have to give out to people out there.

They have to have a credible view that a victory is possible. Not that we're going to be defeated this way, or defeated that way—or maybe if we have great luck or something like that. And in the U.S. population and elsewhere, I think the potentiality is there, as was demonstrated by effect of the Curiosity landing, if we stress this and present this case. And even we can present it, with our resources—even we can do it.

So I think we just have to upgrade what we're doing now. These are the facts, but these are not the complete facts. What are the facts, then, if we *change* the subject to what we can do, if we go with cooperation with Russia and China, and other countries? What power do we have to mobilize the kinds of things we have to do, by going back to the Moon?

The first thing we have to do, is reopen the Moon. You want to talk about this stuff? Well, look at the difficulties of getting one rover onto Mars! Now, if we're operating from the Moon, I think we can get cracking, in a shorter period of time, on actually reaching Mars. That is, the actual [human] travel to Mars.

Why can't we get to thermonuclear fusion? We have thermonuclear fusion implicitly. We have experimental work on matter-antimatter reactions, we have studies on this matter. Well, if we go to this approach, cut out this stupid war, cut down this nonsense, and say, we are going to mobilize for the defense of man. The first thing we have to do, is reopen the Moon, and announce that immediately. And we have a place

on the Moon for Obama: It's called the "Lunatics' Hole."

So therefore, if we're serious, that's what we're going to do. And I think we would be doing a disservice to ourselves and our intention, if we don't come up with this. What is the alternative? What are the political requirements? And with any tickle from us, from the United States on that part, you'll find that China and Russia will immediately cooperate.

Deniston: And to emphasize, Russia already put it on the table, repeatedly! You had the SDE offer proposed,[1] and re-proposed. You had the international security conference held in St. Petersburg, back in April. It was the third one of these they've had, by the Russian Security Council. The previous two mostly focused on terrorism, war issues, the drug trade, stuff like that. This year, for the first time, they put asteroid defense on the table; they said it should be on the table for international discussion of international security issues.

A Science-Driver Program

LaRouche: Well, what we need is a science-driver program, and the first thing for a science-driver program: If you can force the issue on going back to the Moon, as an emergency effort, *that* cracks the ice! If you get Russia—China's already committed to that, the Moon operation, right? Russia has capabilities in that direction. When you combine these forces with a mission-orientation, you have changed the options completely. And that's what we have to do!

So, I think that with our modest resources, and what we can get from saying we're going to do this, we're initiating this, we want people to do it. And let's take the case of Curiosity: Curiosity made a change. Well, let's give it a little more impetus; expand the impetus.

Martinson: I think it exposes pretty conveniently how much, not just Obama, but also Romney, are campaigning for British Empire money, based on their propitiation of the most pessimistic aspects in the population, both candidates. The most Romney's said on the Moon program—he commented on the Chinese program to go to the Moon, and said, "Well, you know, we've already been there. Maybe they can grab our junk and bring it back for us." Which is about as much as Obama's said about going back to the Moon. Which propitiates the most pessimistic people inside the United States, in order to get British Empire money.

But the Russians have stated their intention to go back to the Moon, as their major national space program objective. The Chinese are very public about it: This is their next-decade program, and they're following the American script perfectly. They've already docked two spacecraft; they have a functioning space station up there now, where they can practice rendezvous, and things like that. They're going to the Moon.

Now, the thing with the United States is, instead of being pessimistic about it, and saying, "Aw, screw those other people," the most exciting thing would be to use our expertise, the fact that we've demonstrated we're the masters at landing things on other planets: landing on the Moon, and also landing on Mars. We're the best at that by far! We should offer our collaboration with these other nations. We can get back to the Moon, obviously, and then begin to spread out throughout the Solar System.

LaRouche: Well, let's do that! Let's say we're going to agree to do that, today, among us. We're going to push this now. We're going to push this change in perspective, and from there we can take off with that, with the usual kinds of things that we do.

Martinson: It's usually the idiots and the Congress that say, "Oh, what is the benefit to go to these other planets? What's the benefit to go to these other places?"

LaRouche: What's the benefit of surviving on Earth?

Martinson: The power of a representative government, a republican form of government, is that you have a population that's willing to support the best aspects of the human creative spirit. Which is what you saw with the landing of Curiosity. You have a population—you've referenced this—you have a population that's been beat down, not just by Bush, but then Obama; just destroyed and defeated. But then, this one landing, the excitement around this one landing, inspires the best people in the United States to get out of their doldrums!

LaRouche: What we have to do, essentially, is to say, "Look, if you want to live, if you want the United States to live, if you want the people of the United States to live, there are two things you must do immediately. One, is throw Obama out of office. Number

1. See Rachel Douglas, "Strategic Defense of Earth: Russia To Put SDE at Top of Agenda," *EIR*, May 4, 2012, http://larouchepub.com/eiw/public/2012/eirv39n18- 20120504/57-58_3918.pdf

two, throw the Republican ticket out of office. And start from scratch: We can do much better." And this has to be it. We have to do that!

If we don't take in the political factor, then we don't have the resources to ensure any reasonable chance of saving humanity. Therefore, the political factor must come up first! Obama will not do it. He's not qualified to be President. He's a threat to humanity, generally, but a threat to the United States, in particular. And you can not have a threat to the United States be a President of the United States any more! And that's where we are.

Peter Martinson

And you can not just say, "We're going to make suggestions." The point is, there's a threat to the existence of civilization, a threat to the existence of humanity. You're going to go out there and fight, like you fight a war! You're going to fight that war. You're going to save humanity! You're going to use the methods and intellect of warfare, to save humanity from this threat, this strange thing, out there in space, which doesn't talk to us. And we'll talk to it, with what mankind can do.

We know the elements are there: For example, thermonuclear fusion, I guarantee you, they're sitting on this thing. Not sitting on it and squashing it, but thermonuclear fusion is much closer to feasibility, at least when you're talking about this problem, about the astronomical problem.

Deniston: Right, the propulsion.

LaRouche: Right, because we're just on the edge of it! It's just a matter of developing it. From Moon to Mars, we actually can have that journey, occurring on a rise and decline into orbit, we can have that, actually, within a week. If we can get to Mars and back in a week, which is possible. Thermonuclear fusion's development is the only thing that stands in the way.

And that will force us to look at the matter-antimatter reaction program, which is the thing which is relevant for the comets.

Deniston: Yes, that's why on the Russian side, they say, to do this Mars mission, you need to develop the Moon. And it's worth emphasizing really, Russia's program, they say explicitly—we got an interview with the head of Roscosmos[2]—he made the point that Russia's program is *not* to do just what was done before in the '60s and just return man to the Moon. They want to *develop* the Moon. They're talking about permanent space infrastructure. So you have a permanent capability for mankind to move from the Earth to the Moon; move robotic equipment from the Earth to the Moon; set telescope systems, robotic systems on the Moon; so you're developing a permanent presence of mankind there. And you've got to look at, how is that going to increase mankind's capability to defend himself?

LaRouche: And if you add not just matter-antimatter—that's your objective—but if you have the thermonuclear fusion program, that gives you an access to Mars, an access to related things, way beyond anything feasible now. But it's within reach! It's technologically within reach, scientifically within reach.

Obama Cut MIT's Fusion Budget

Martinson: And just to add to the list of indictments against Obama, as if he needs more, in the latest 2013 budget, he tried to slash one of the three major fusion programs in the United States, up at MIT. He tried to just shut it down, and there was a big campaign to stop it.

So, this guy's completely against expanding human creativity, and increasing our power over the system.

LaRouche: He's against the human species—actually!

Martinson: He might not be part of the human species, actually.

LaRouche: Yes, probably. He rejects the idea of being part of the human species, and he's doing a fairly convincing job of that!

2. Interview with Gen. Vladimir Popovkin, *EIR*, June 1, 2012, http://www.larouchepub.com/eiw/public/2012/eirv39n22-20120601/31-32_3922.pdf

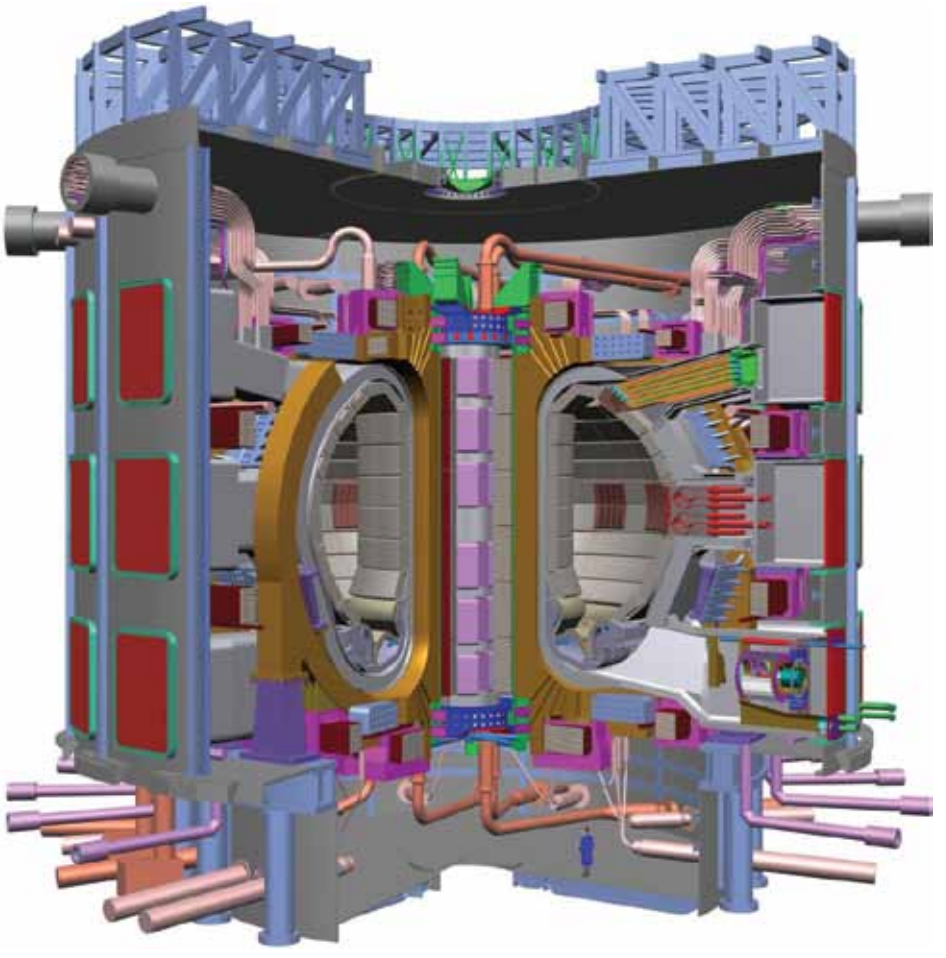
Martinson: We should look at the space between the Moon and Mars as our experimental laboratory for all these things. Because, Mars is not the end-point. Mars is a crucial way-point towards control of the entire system.

LaRouche: Like, for example, the defense of Earth: Mars is the best place from which to do it.

Martinson: Yes! We need to use that whole area as an experimental test bed. We need to control the entire region within the Mars orbit.

LaRouche: Which means we need to have a higher density of development: higher-density development, thermonuclear fusion.

Martinson: And you don't want to put people on fusion rockets, at first. You want to put robotic instruments on these fusion-accelerated rockets.



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Controlled thermonuclear fusion is urgently needed for both the space program and power production on Earth, but Obama tried to slash one of the three major fusion programs in the country, the MIT program. Shown is the Joint European Tokamak.

LaRouche: We can do that; we've just demonstrated that. So you just upgrade that; now you've got to control the landing. And you've got to put things actually in Mars orbit, not just on Mars. You have to set up an orbital system, in the Mars orbit: Plant your things there. Because the first place you go, if you're going to put people there, you're going to go to one of the moons of Mars. You probably are not going to drop people directly on Mars. You probably are going to set something up; you could have emergency capabilities. You've got to think about the defense of the life of people at risk, and if you put them into orbit on the Mars moon—which is one of the options that I planned on—if you do that first, now you've got a way of getting in and out of the situation. Because you want return flights!

And how would you do a return flight? Well, a thermonuclear-fusion drive, back to the Moon, from the Mars moon to the Earth Moon, would be the easy way to do it.

We've got to launch this, talk about this, and launch it. Get some more discussion with people, on how we're going to do it.

But we have to have a positive alternative for mankind, and it has to be public and it has to be political. And we'll see what we can do with the Russians and with the Chinese.

Martinson: I think they'll be cautiously eager to join forces on this type of a project.

LaRouche: Well, I think at a certain point, some people in Russia have confidence in me, and some people in China now have confidence in me. So therefore, I have to do it. I can't trust the other guy! And, it gives us something to do!