I. On the Space Frontier

MEGAN BEETS

Krafft Ehricke's Extraterrestrial Imperative and the Far Side of Moon

"The most important development for humanity to date."

—Lyndon H. LaRouche, referring to China's mission to the far side of the Moon

Last week, LaRouche PAC scientific and political leader Megan Beets kicked off a sweeping and stunning dialogue with fellow science team members and the nation at large on the question of why it is urgently necessary for the good of humanity that mankind begin the exploration and development of the far side of the moon. Her initiative extended across two events. What was striking about the discussion was that every question, no matter how technical, was answered by challenging the questioner as to his or her own identity and the future of the human race. Edited transcripts follow. The full transcripts, as well as video/audio of the August 31 *New Paradigm* show and the Sept. 1 *Fireside Chat*, are available at www://larouchepac.com

From the August 31, 2016 New Paradigm *show:*

In the recent period, China has announced that in 2018, two years from now, it plans, for the second time this decade, to land a lander and a rover on the surface of the Moon. But this time, it is planning to land in a place that has seen neither human nor even robotic presence before, a place that we have never ever touched, and that is the far side of the Moon.

A lot of people might not know what that means. Why do we say the Moon has a near side and a far side? Or sometimes people might hear, the "dark side," although that's not entirely accurate. If you look at the first slide [**Fig. 1**], this should be a pretty familiar view to you: This is our Moon, maybe in greater detail than you're used to seeing it. This is the only hemisphere of the Moon that you have ever seen from Earth; this is the only hemisphere of the Moon that any person, or animal to the extent they look up, has ever seen from the surface of the Earth. Now, why? Why can't we ever see the other side of the Moon from the Earth?

The Moon is in a state that's sometimes called "tidally locked" with the Earth; I'm not going to get into all those details, but in short, that means that the Earth itself acts on the body of the Moon and modulates its spin as it orbits the Earth.

Let's look at an example. In the next slide [**Fig. 2**] you see a diagram of the Earth. This is as if we were

FIGURE 1

FIGURE 2

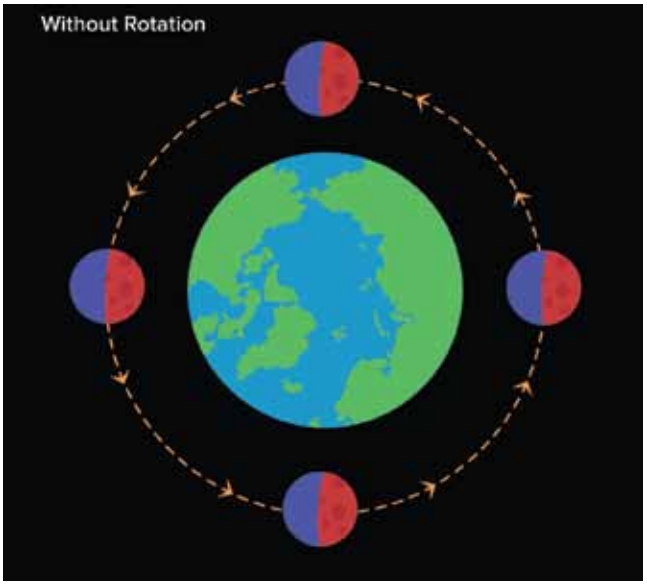
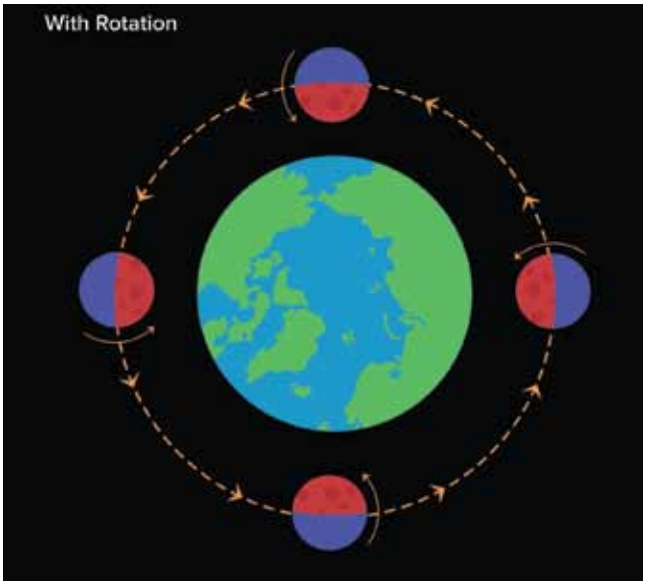


FIGURE 3



looking down from above the North Pole, and you have the Moon which is rotating counterclockwise. Now, if the Moon merely orbited the Earth, without rotating, then you would see it move from the left side down to the bottom and all the way around its full orbit, and over the course of that orbit people on Earth could see every possible face of the Moon. We would see a 360 degree view, so to speak, of the body of the Moon. But that's not what happens; our Moon does rotate.

So in the next slide [**Fig. 3**] you see the case where the Moon rotates: What you see here is the fact that our Moon, due to the action of the Earth on it, rotates at the exact same rate that it orbits. So starting on the left side, you have the Moon, and as it goes a quarter of an orbit toward the bottom it has also spun a quarter of the way around on its axis. For that reason, the same hemisphere of the Moon is always presented to the Earth.

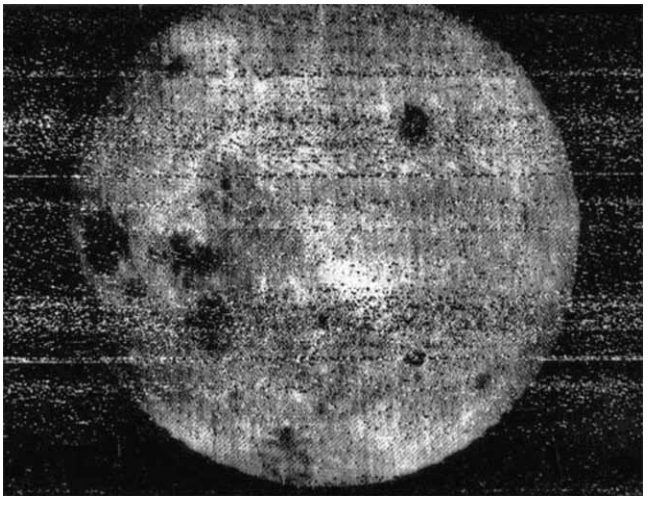
The Space Age

So for that reason, over the entire span of millennia that humans have been here on this planet, we have only ever seen one face of the Moon. Now the far side of the Moon was not even part of our world, it was something completely inaccessible, unthinkable except to speculation, until, in the 1940s, people such as Krafft Ehricke, about whom I'll say something more in a moment, and others, opened up the space age. They were the first in the 1940s to successfully launch a rocket from the Earth into space, suddenly making it within the realm of possibility that we could one day see and go to the far side of the Moon.

The space age was opened up, and in October 1957, human beings created the first artificial moon and we put our own moon in orbit around the Earth, and it was called Sputnik. Just one year later, the Soviet Union launched another probe, called Luna 3. Luna 3 left Earth in an orbit that took it swinging around the far side of the Moon.

Luna 3 swung around the far side of the Moon successfully, and you can see in the next slide here [**Fig. 4**] the picture that was taken by Luna 3 of the hemisphere

FIGURE 4



of the far side. I know it's very fuzzy, but you can imagine, and I'm sure some of our viewers may remember suddenly having the first view, ever, of this side of our neighbor, something so close, and yet before so impossible to reach.

Obviously, we've gotten much better pictures since Luna 3. So we've "seen" the far side of the Moon so to speak; we've had images of it. But what many, many people don't realize is that we have never, ever been there. No American, no lander, no Soviet lander, all of these landers that have been sent there over the decades, the Chinese lander—*none* of these have been to the far side. All of them have been on the near side of the Moon. And so the far side, and therefore, the Moon itself, the Moon as a whole, really remains quite a mystery to us. It's something of which our knowledge is extremely incomplete, and it also holds a lot of surprises.

The New Paradigm

Because of where we are in the world strategically—with the collapsing of the trans-Atlantic paradigm, the collapsing of the British Empire and its system of maintaining most of the planet in a state of controlled beasts—the fact that that is over and we're entering a new paradigm with the potentiality of setting up a new system, Mr. LaRouche pointed to China's announcement of this mission as the most important development for humanity to date. I want to read from something that Mr. LaRouche said on the topic in March of this year. He said,

> What is mankind? What are mankind's properties? What is the effect of mankind? What is the role of mankind in respect to the Solar system and beyond? What's that significance? What we're concerned about in order to understand what this reality is, we have to start with the back side of the Moon, which we have not yet seen. We will have some shadow of it, so we'll have to use our minds to understand what the powers are of the human mind which can lead us to the kinds of things we have to consider.
>
> So therefore, we have to accept the process that we are going to operate from the back side of the Moon. We're going to discover what the back side of the Moon is, and from that standpoint, when we've made that experiment successfully, now we will set a new standard for describing what the meaning of mankind is.

Now that's the crucial question: What is the meaning of mankind? What *is* mankind as a species? What is our concept and our understanding of the nature of the creative powers of mankind, and how will that guide our establishment of a new system among peoples, a new system among nations?

That doesn't happen automatically—that creation of a new concept of mankind to govern a paradigm—that's not something which just "happens"; this has to be done willfully and deliberately. I think a lot of people, especially in the trans-Atlantic region, the United States especially, have lost a sense of that. We are not animals, we don't evolve along with the biosphere, we don't evolve along with the whims of the markets. We are a unique species.

The human species, humankind, advances due to the deliberate interventions and actions on the part of genius, on the part of people who have new insight into previously unknown powers of mankind, and an insight into how this changes man's relationship to the Universe. It is individuals such as that and movements such as ours which deliberately fight to establish that notion as a concept among mankind, to establish that as the basis for a new civilization.

Where Were You, When Man Walked on the Moon?

That's really the crucial background, against which people should consider the issue of the Moon, and China's mission and plans to land there in two years. I think that is the challenge, and I think that might not be so obvious to most people. I think it's likely that most people didn't resonate with that announcement that we're going to the far side of the Moon, in the same way that Mr. LaRouche did, and declare that this is the most important issue for humanity now. It just means that Americans, especially, really have to start to rouse themselves out of this slumber, rouse themselves out of this malaise, which then turned into a nightmare that's taken over for the past 40 years, and to imagine where they were, so to speak, mentally, where they were emotionally, before that. Where were they, if they were alive in the 1960s, when man walked on the Moon?

Put yourself in the shoes of a young person in China today. That's the standpoint from which I want people to consider what we're going to consider, what we're going to discuss about the Moon. So with those eyes, of a child or a young person in China, look at the Moon: Now, the Moon is not just a "thing." We tend to look up there and

say, "oh, that's a thing, we've been there and then we came back." The Moon isn't an object, or some destination, where we go and then check that off the list. The Moon is a reflection of, and also a clue to processes and principles which govern action within our Solar system and which reflect and can tell us something about the principles which organize our Galaxy and possibly galaxies beyond ours.

FIGURE 5

EIRNS/Stuart Lewis

LaRouches' Great Friend, Krafft Ehricke

This fact was realized very clearly by Krafft Ehricke. In the next slide [**Fig. 5**], you can see a picture of him speaking to a Fusion Energy Foundation conference in the 1980s. Ehricke was a great friend of Lyndon and Helga LaRouche, and he was first a German, and then an American space pioneer and visionary. As I said, he was part of the team that put the first rocket into space in Germany, and then he became a real foundation and leading visionary of the American space program.

Ehricke was an incredible engineer. He developed the Centaur upper stage hydrogen fuel rocket that we use in virtually every rocket launch today, including the ones that took us to the Moon. Yet Ehricke wasn't just an engineer. He was always thinking about mankind—what does this signify for mankind? What does this potential development, the fact that we could reach the Moon, what does this say about mankind as a species and where we could go? Krafft recalled—somewhat later in life—being twelve years old and going to the movie theater in Germany to see the film "Frau im Mond," which means, "The Woman on the Moon." He went back to see this film eight or ten times as a young man, because it overwhelmed him. He said that, for the first time, he realized that mankind could go to other planets! Mankind had the potential to open up other worlds than Earth.

Krafft saw the Moon in exactly that way. He called the Moon, "Earth's seventh continent," and he saw it as the first step that mankind would take off of the planet to establish himself as a "polyglobal civilization," or a *three-dimensional* civilization. In the last couple of decades of his life, he developed extensive plans for how mankind could develop and industrialize the Moon and establish a permanent colony there.

What drove Krafft was the totally optimistic passion that mankind had no limitations, and I think it's expressed, beautifully and explicitly, in his "Three Laws of Astronautics," which he wrote in 1958, the first of which reads: "Nobody and nothing under the natural laws of this Universe impose any limitations on man, except man himself." If you think about the implications of that, there are no limitations for mankind as long as we don't remain merely on the Earth, as long as we're fulfilling our potential to colonize other worlds. That means that even though mankind may have first appeared on Earth—mankind began

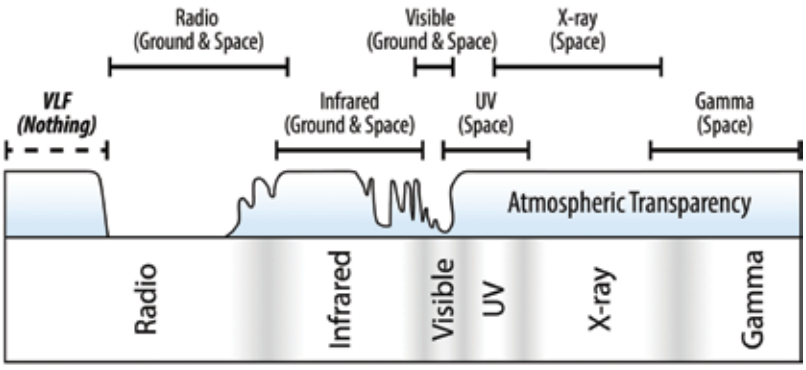
FIGURE 6

on Earth—we are not a terrestrial species, and that comes with a certain obligation to all of us.

The Far Side

So, turn back to looking at the Moon, and turn back to its far side. We've already seen the first picture from 1959 of the Moon's far side. Nine years later, as you can see in this slide [**Fig. 6**], human beings went there. We didn't land there, but the Apollo 8 mission took people to the Moon for the first time, and they orbited around the far side and took this among many other pictures of the Moon's far side. Only a mere eight months after the Apollo 8 mission came the Apollo 11 mission, with mankind's famous first steps on the Moon. The Apollo 11 mission was followed by five other missions which landed people on the Moon, who explored the Moon, who performed physical experiments on the Moon, who drove a little buggy on the Moon, gathered samples of rocks, of dust, of different things they could find to bring back to Earth.

FIGURE 7



Which wavelengths of the electromagnetic spectrum are visible or detectable from Earth's surface, and which are blocked by the atmosphere? The horizontal bank marked Atmospheric Transparency shows, for example, that very low frequency (VLF) radio waves cannot be detected, nor can gamma and x-rays, and some other frequency ranges are partially or wholly blocked.

What we have gained from those samples is incredible, and it's such a small sampling of our neighbor, but what we've learned over the last 40 years from those samples, the last of which came back in the 1970s, is absolutely incredible, and we keep making discoveries with this diminishing store of samples—such as that there is indeed helium-3, the fusion fuel, in the lunar soil, something which was hypothesized, but then finally confirmed.

But even with all of this, our knowledge of the Moon is far from being complete, and I think it's illustrated by the fact that the Apollo missions, the astronauts of the Apollo missions, in their explorations of the surface, only covered 5% of the lunar surface; and then you could add maybe a little bit more than that with the Chinese probe and a couple of Russian landers. So we've explored 5% of the surface and all of that was on the near side.

The last Apollo mission, Apollo 17, was launched in 1972. Three more Apollo missions were planned, Apollos 18, 19, and 20. They were cancelled even before the end of the sequence of Apollo missions that did fly. But there was a certain discussion within NASA and particularly within the astronaut corps itself that at last one of those missions should be a far-side mission. We need to keep pushing the boundaries and go to the far side, open up new questions, find new ironies to counterpose to what we've discovered on the near side.

A far side mission, landing on the far side, why didn't we just go there? Why didn't we just go for the biggest goal? Actually it's quite difficult to land and operate on the far side of the Moon. Why? The main reason is that, as we saw, you can't see the far side of the Moon from Earth and people on the far side of the Moon will not see the Earth either. That means that all lines of sight to the Earth are blocked, which means in turn that all radio communications to and from the Earth are blocked from the far side. So that provides a certain amount of difficulty and poses obstacles to be overcome to operate over there.

You have to work with that, obviously. One thing that has been proposed and will be done by the Chinese, is to launch a satellite which will be stationed in an orbit at an adequate distance behind the Moon, and which will be able to see and communicate with both the Earth and the far side, and can act as a relay for communications.

Viewing the Rest of the Universe

There are obstacles, but if we think of being on the far side, and instead of thinking about the the obstacles to communication with Earth, to operating with Earth, coordinating with Earth, and orienting to Earth,— if we think instead of turning around, turning away from Earth, and orienting out toward the rest of the Solar system, toward the Galaxy, toward the different galax-

FIGURE 8

An image of the Hercules A galaxy (center) in the visible wavelengths.

FIGURE 9

The Hercules A galaxy in radio wavelengths, disclosing a dramatic pair of gas jets. Many features and objects seen in visible light do no appear.

ies we might be able to see, toward doing astronomy from the surface of the far side of the Moon, well, that radio communication blackout from Earth actually becomes a really wonderful thing!

At this point, Megan discusses the immense possibilities for observing the rest of the Solar system and the Universe beyond, with telescopes that can detect, from the far side of the moon, wavelengths which cannot be seen through the Earth's atmosphere [**Fig.7**]. *This section is better viewed on the video at larouchepac.com* [**Fig. 8, Fig. 9**], *as is what follows, the elaborate plans for China's 2018 Chang'e 4 Mission, including China's invitation to the world to use its communication satellite and join its mission.*

A New Leap for Mankind

What you are seeing is China in a process of taking a new leap for mankind—and it is for mankind. It has been very explicit about this. This is not for Chinese glory. This is for the advancement of man. And this is where humanity was headed under the space program in the United States and internationally.

I do want to just leave it there, but just to underscore, this is really the potential before us, and this far side of the Moon is not just someplace we're going to go and stick a flag and then cancel our space program. This is the revival of the completely optimistic process that was cut off in the 20th century, that was further cut off by Obama, and the Chinese are opening the door again. And they're opening the door to those questions that LaRouche laid out, in what I read: What is mankind? What are the properties of mankind? What is the effect of mankind as a species? This is what we can decide that we want to establish as the mission orientation of the new paradigm. And that's what China is leading, and Americans should get excited about it and make sure the United States joins that.

During the discussion, Liona Fan-Chiang noted that Mr. LaRouche has always pointed to the space program as a defining feature of all the other things that China is doing, and that it's not a separate subject. It's not that you do this, and you do that, and you also put up an Internet network and whatever; it's not a combination of things for your economy. But it's a declaration of intention: You say, "OK, we're going to develop mankind," and then, "well what's necessary for that? People need to not be starving. People should not be in Third World conditions; they need to be collaborating, and so on, and you build the steps from above.

Megan responded, We're going to develop man-

kind; actually that's quite provocative. According to today's standards in the trans-Atlantic, you can't say that. You can't declare that you know where mankind should go: The markets determine that. Even if people say, "that's silly," I think most people think like that; most people have let themselves become assimilated into that kind of mindset and it's imperialism.

And that's not what man is. Man isn't an animal. We don't have to wait for nature to do something to us; we create nature. We create new principles when we have an insight into the discovery of something that's true about the Universe. How can we make that happen on purpose? How can we organize all of our activity, as a species all over the planet, with coordination between nations, to make that happen on purpose, and to make it happen more often? It's incredible: No other species can do that. How the Galaxy operates, we still don't know. But then we should also recognize there's probably stuff we haven't even thought of yet, because the whole history of this is a history of surprises. It would be a surprise if we did not get surprises.

A 'Far Side' Chat About the Moon

The following day, Sept. 1, Megan kicked off the weekly LaRouche PAC Fireside Chat with a provocative challenge for listeners to imagine what could have been.

I want to start by asking everybody on the phone here and listening over the Internet, to imagine something. I want you to imagine that it's not late summer of 2016, but imagine that it's late summer of 1986, thirty years ago, and you have just received the news that Expedition Ares, NASA's first manned mission to Mars, has successfully landed. That means that the first human being ever, is about to take her first step on the surface of the red planet.

Now, imagine what that would have meant over the fifteen or so years prior to 1986, the time since the 1969 Moon landing. It would have meant that, instead of the cancellation of the Apollo program, instead of the downsizing of NASA and the layoffs, instead of the shutdown of industry, instead of the takeover by Wall Street, instead of all that, we would have spent those 17 years expanding our presence on the Moon and in lunar orbit.

We would have just begun to build an orbiting space station around the Moon that would house scientists, engineers, and construction workers; we would have established several scientific stations on the surface of the Moon where scientists could go for temporary periods to do astronomical observations and geological work. Some of those science stations could have been on the far side of the Moon, which is where the Apollo 18, 19, and 20 crews would have landed. We would have just set up the first of what would be many automated mining stations on the Moon to begin to utilize lunar resources, and we would have had regular trips to and from Earth's orbit to lunar orbit.

We also would have sent that Expedition Ares crew to Mars, not on a regular chemical rocket, not on the kind of rocket that took people to the Moon. We would have sent them there on a nuclear rocket, meaning that it took them weeks to get there, rather than months. Imagine all of that.

Not a Fantasy

That is not a fantasy. Those were the plans of many of the people inside of NASA and in the space program generally who were the ones to take the leadership to put us on the Moon. That was the outlook of people coming off of the great achievements of the 1960s. Now imagine where we would be today, if that had been our history in the 20th Century, if the United States had not given up on that path, if we as a nation had not given up on what that represents about the nature of mankind.

Now, I want you to imagine something different. Imagine it is the late summer of 2007, which is probably a little bit easier for some of you; so it's late summer of 2007, and you are a young person in China, and China is going to the Moon. In less than two months, a rocket will leave the launch center in China and take a little satellite and put it in orbit around the Moon. That satellite's name is Chang'e 1, and that little satellite is going to orbit the Moon and send back photographs, scans of the surface, and all sorts of data to the people on Earth.

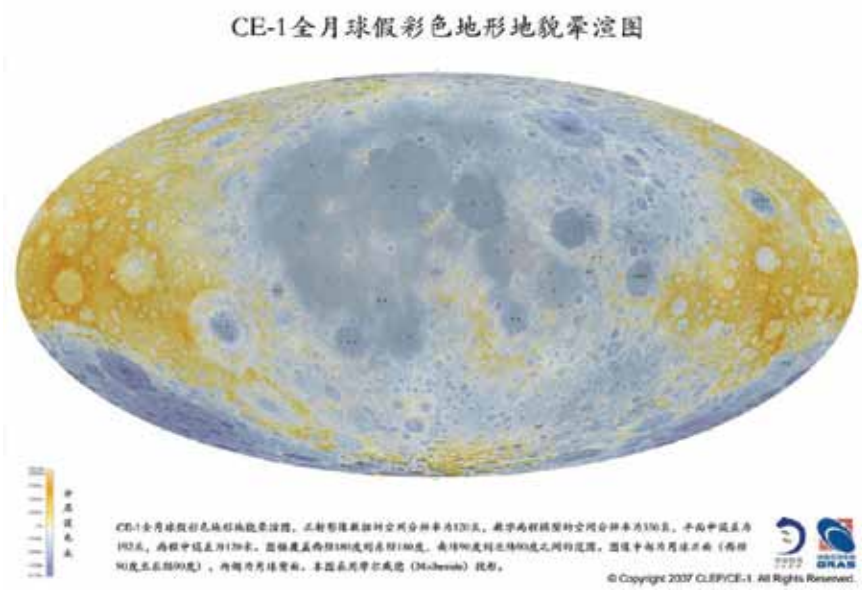
Yutu

Now that is not a fantasy, either. *That happened*. That is China's very recent history. Since then, not only has China developed a very robust manned space program, putting people into space and building a space station, but China has sent three more robots to the Moon: It sent another orbiter, and in December 2013,

FIGURE 10

Hemispheric views of the Moon. The far side is on the right.

FIGURE 11



A topographic map (Mollweide projection) of the entire surface of the Moon, combining images taken by Chang'e 1.

China sent the Chang'e-3 lander and its little companion, its rover named Yutu, and they landed on the lunar surface. This is the first time in *40 years* that anyone has landed anything on the lunar surface.

Another one of these little robots was sent from Earth; it swung around the back side of the Moon, and it returned to Earth again, the first time that man has returned anything to Earth from the Moon in 40 years. That happened. Next year, in 2017, China will send its fifth mission to the Moon, and this little robot will land on the surface. It will sample lunar dust, lunar rocks, lunar materials, and will lift off from the surface and will bring these samples back to Earth—again, the first time any sample has come back from the Moon in *40 years*.

The year after that, in 2018, two years from now, China will send a little robot to do what *no country* has *ever* done, and that is to land on the *far side* of the Moon., the side of the Moon that never faces Earth, ever [**Fig.10, Fig. 11**].

That side of the Moon, the far side, is really a mystery to us. It's very, very different from the side that faces Earth, the near side of the Moon, in many different ways, and we don't know *why*. There's something about the process of the Moon that has created this completely fascinating asymmetry, in the structure of the Moon and in many other features, and we have no idea why. The far side of the Moon is also an extremely desirable place to be for astronomy. We'll be able to look out at the Solar system and the Galaxy, and at other galaxies, and see them from the far side of the Moon, in a way that we *cannot* see them from Earth.

Leading the Cause of Mankind

In taking this leadership by doing something which is a first, ever, for mankind, China will begin to open up some questions and begin to answer some of the questions as to the mysteries that the far side of the Moon can reveal to us. Mr. LaRouche has said repeatedly that what China is doing, what it plans to do with the far side of the Moon, is one of the most important things occurring within humanity today, and people have to focus on that. China, in taking the leadership to pioneer a new state for mankind.

Up to this point, the United States, which once had

that kind of identity, has lost it. We have lost our connection to that. We have lost our *identity* that we had in that. It's almost as if a state of amnesia has come over the people of the United States, and we have forgotten what it is to be human. We have forgotten that mankind is a species of perpetual progress.

That's really the mission and that's where we have to set our sights as these incredible developments—occurring over this weekend and into next week in Asia, especially around the G20 Summit—take place.

I will leave it there and we can go to questions.

Freedom from Deductive Thinking

To a question on tidal locking, by which the Earth controls the Moon, Megan responded that the question reflects a mechanistic view of the interactions of the bodies, and that the larger point is that—

as this imperial system crumbles, we can begin to free ourselves, especially in the trans-Atlantic, from the scourge of Bertrand Russell, mathematical thinking, deductive thinking, the idea that man's mind can't actually know anything, and all we can do is describe the effects of things. The more we begin to free ourselves from that, the more we'll have the potential for future geniuses to hypothesize principles that we are not even thinking of, that we have blinded ourselves to, that are actually acting on and organizing the structure and processes of solar systems and galaxies.

Maybe that's a more general comment on what you're saying, but I think that it really is a beautiful thought that future generations will be freed from this kind of mental darkness, that we've suffered under and science has suffered under in the 20th Century. And that will certainly be led by the space program.

Krafft Ehricke

In response to a comment by a caller fascinated by the idea of Krafft Ehricke, that if the Creator wanted mankind to explore the Universe, he would have given us a Moon, Megan replied:

Krafft Ehricke is absolutely the right reference point. Ehricke was always thinking deeply about the nature of man, not just a person, but the nature of mankind as a species. We are unlike any other species on the planet because human beings are not animals. We don't evolve into the future because of biological evolution; it doesn't happen that way. We evolve because of willful, discontinuous leaps upward in our powers which are the result of creative discoveries. That was Ehricke's understanding of man, and that led him to the conclusion that mankind was not supposed to stay on Earth; mankind was supposed to expand from the Earth, to begin utilizing the resources in our Solar system.

He had a really beautiful image of the Earth as a ship which was traveling in the convoy of the Sun. The Earth was the most luxurious of the passenger liners, while the other planets he compared to freighters. They carried all of the resources that we might need. His idea is that mankind is an extraterrestrial species; we have an extraterrestrial imperative.

The beautiful thing about Krafft Ehricke is that he was a visionary. He saw, and in the certain sense of that term, he saw into the future what mankind must become. But he also did the work and laid out the plans of how we might do that. He spent the last decade or more of his life putting together very detailed plans for how we could colonize the Moon and start to industrialize and utilize the resources of the Moon.

But just having this image of Ehricke and his insistence that there were no limitations for mankind, is really the right view.

'Finite But Unbounded'

To a question about Einstein's comment that the Universe is "finite but unbounded," Megan said,

It came from Einstein's work on relativity, considering the shape of space of the Universe. I can't say too much more than that on what Einstein's conception of it was, but in terms of LaRouche's conceptions, what does it mean that the Universe is finite but unbounded? I think it was about seven or eight years ago that LaRouche said, it's better to say that the Universe is infinite but bounded, which is a very closely related idea, and I think what you want to think about is the real nature of the human mind. This is something that people don't spend enough time thinking deeply about: What is the human mind? The human mind makes discoveries, and the discoveries of these principles that are made by geniuses, they don't come from the past, they don't come from deduction. They come from "out of the blue," so to speak.

What is it about the human mind that can actually tap into and bring into existence within the mind, conceptions which didn't exist before, and these conceptions of the human mind—for example, the discovery of Einstein, for example the discoveries of Johannes Kepler, his notion that the planets are moved by *a physical power of the Sun*—these things are formed within the human

mind, and yet they correspond to the actual Universe.

This is not something which comes from the senses. It does not come from description. It comes from the same capacity of the human mind that great musical composition comes from.

These Discoveries come from the same capacity that great poetic ideas come from. So what is that mind?

That is what is limitless, that potential to overturn what the human mind was and could do before, and establish something completely new, a completely new meaning of the human mind, new powers of creativity that surpass what came before. That is what is unbounded in Einstein's sense, or infinite in LaRouche's sense.

Cancel Wall Street

In answer to a question on how we can fund the space program when we have so many problems in this country, while China does so because they don't care about their people, Megan replied,

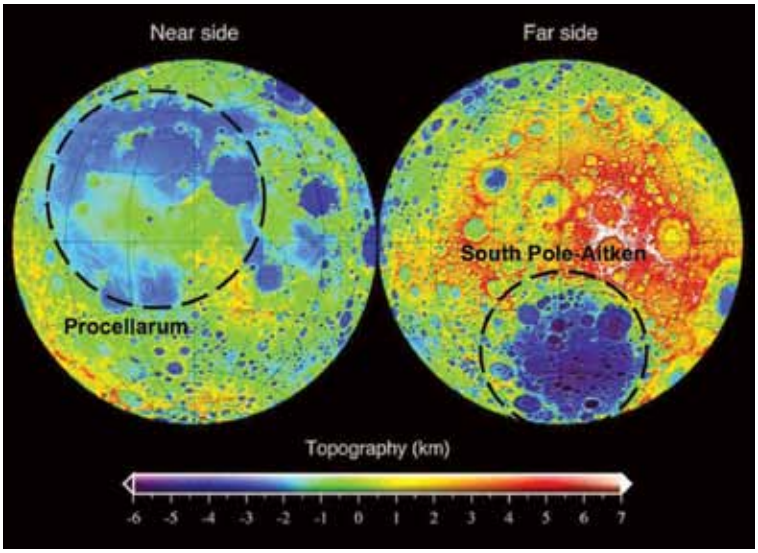
We can, and you ask why we can't bring the space program back—we can. The way we do it is, we cancel Wall Street and we fire Obama. That's how we do it. [Caller laughs.] You need the money for NASA? You cancel Wall Street. You know, why have we gone along with the idea that there are trillions of dollars for the Wall Street *criminals* and people get demoralized and say, "Well, I guess we don't have any money for our space program." Cancel Wall Street! Put them through bankruptcy, reinstate Glass-Steagall. Get our credit system back!

We had a credit system. *Money* has a completely different meaning. Older people may have memories of this—the meaning of money has been completely transformed and degraded over the last 40, 50 years by this Wall Street system. Money has no inherent value! There's no lack of money. Where do we get money? We make it! We just make the money we need, but the problem is value. With the Wall Street system today is the age-old system of empire and they loot. There's a limit to how much you can loot, and kill, and suck the blood of the population. That system actually destroyed the existing value, the current physical wealth and value, but more importantly it destroyed the potential for the creation of future value.

The space program did the opposite. The investment in bringing into being of new discoveries, breakthroughs in principle, which tell us that the Universe is different than we thought—and these principles lead to new powers, new capabilities of machining, exponential growth in the productive powers of our workforce—that creates wealth. That's the proper meaning of wealth, it's the potential of the human mind to make these breakthroughs. The space program is anti-entropic.

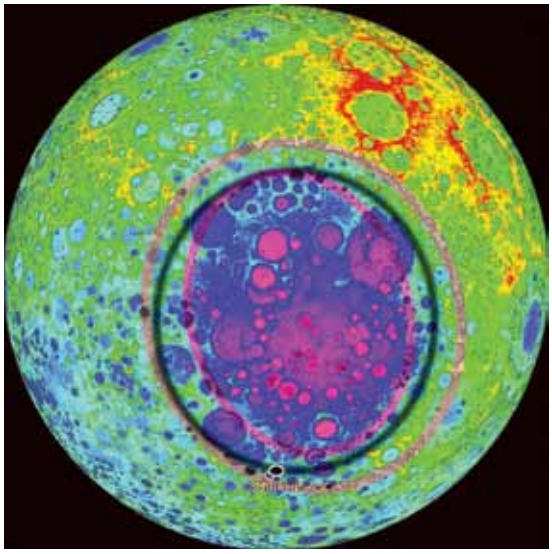
China recognizes that. People have a little bit of an outdated idea of China. The current and recent administrations in China have made a complete, 180-degree turn in their vision for China. What we have seen over the past couple of decades is that China has brought 600 million of their people out of poverty! The idea of China today is to finish the job by creating more high-tech urban areas, high industry, high-skilled urban areas, and to connect these with tens of thousands of miles of high-speed rail. You talk about a government that cares about its people, China has built over 10,000 miles of high-speed rail in the past decade—and we have built none. China is different from what most people may have been told, or may remember from times past, and it has surpassed all other countries in the world in this respect.

FIGURE 12



Topographic map showing a large, deep region on the near side and a much deeper region, the South Pole Aitken Basin, on the far side.

FIGURE 13



Enlarged view of the Aitken Basin, the largest, deepest crater on the Moon.

Craters on the Moon

Someone asked about the craters on the Moon that are so deep that they get no sunlight. Megan answered,

There are some very interesting features on our Moon which are what the questioner described [**Fig. 12, Fig. 13**]: Craters where the deeper part has never been exposed to sunlight, and these are craters which are near the poles. Which means that they remain at very, very low temperatures. We don't know what kinds of materials are in there; we think that it is possible that gases and materials that go back billions of years to the formation of the Moon could be trapped in them because there has been no evaporation. The Moon is a very tantalizing place to go and study.

But that question just brings up the whole issue that, the Moon is so close—it's a quarter of a million miles away—it's so close, and yet we know almost nothing about it. We need to study the Moon, not from the standpoint of sitting here on Earth and saying "Oh, great, we know that." But we have to study the Moon from the standpoint of letting our activity on the Moon change mankind. Let these questions and challenges to the way we think the Universe works, and let the challenges to our own powers in terms of what we can achieve and make happen—let them transform mankind and turn us into a species of a higher order. I think once we take that on, in the way that China is taking it on, as an international effort, I think, 30, 40, 50 years from now we will be a very different species than we are today, and that's something we can be completely optimistic about.

In closing, Megan returned to the main theme.

Act Right Now

The main point is that we are a creative species; there are no limitations. We have an incomparable, magnificent opportunity presented to us, and the developments in Asia are really forging a new future for mankind. It is a future which is unstoppable. Obama and the British cannot stop it. They can start a world war, and that would certainly slow us down, but a new paradigm is coming into existence for man. We in the United States, and especially we in the LaRouche movement, have a lot to offer. We who are around the thinking of Lyndon LaRouche have an indispensable role right now. LaRouche is a genius, and his insights into the nature of the human mind must play a role in the formation of policy and our own outlook on what we want mankind to become. That should be the mission of everybody on this call. And if that's your mission you had better act right now, to make sure that we win.