Russians Conduct Inspired Discussions of Space Exploration

by Rachel Douglas

May 26—Coincident with Vladimir Putin's return to the Russian Presidency and the naming of a new government, there is currently a high density of public discussion in Russia about the future of the real economy, the possibility of reviving science, and the space program, in particular. These discussions, on TV and elsewhere, have involved government officials, as well as some members of the self-identified "patriotic opposition."

Soviet cosmonaut Yuri Gagarin (1934-68), the first human being in space. His pioneering flight on April 12, 1961 inspired a generation.

The latter have expressed some optimism about the continuation of Dmitri Rogozin, who called for the Strategic Defense of Earth effort, as Deputy Prime Minister in charge of the Russian defense sector, as well as appointments such as defense industry specialist Denis Manturov to the position of minister of industry and Putin's naming of a tank factory shop steward as his Presidential Envoy to the Urals Federal District. Their enthusiasm is tempered by dismay at the naming of hardcore neoliberal monetarist Arkadi Dvorkovich as Deputy Prime Minister in charge of the economy as a whole, including the energy sector.

Thus it is fitting that the most dramatic televised Russian discussions of space policy have also featured strong attacks against monetarism—on Channel One Russia national television, no less.

One of the *de facto* keynotes of the latest public discussions on space was the April 13 interview with Lyndon LaRouche, published on the Terra America website, on the subject of the Strategic Defense of Earth, and mankind's mastery of the Solar System and the Cosmos. (See *EIR*, April 20, 2012.)

On May 22 the Den web TV channel, which is associated with the weekly *Zavtra*, carried a discussion titled "Space Exploration Against the New Barbarism." The participants were anti-free trade economist Mikhail Delyagin, journalist Maxim Kalashnikov, and historian Andrei Fursov—all of them regular *Zavtra* contributors and "patriotic opposition" figures. Fursov also participated in the Terra America series on LaRouche, giving an interview on the accuracy of LaRouche's analysis of the British Empire in history and today. Reflecting such discussions, Kalashnikov also recently conducted a web TV discussion with Yuri Krupnov, head of the Development Movement, on prospects for Russia's proposed new Far East Development Corporation: would it become "a new Tennessee Valley Authority" on a vast scale, or get hijacked as "a new British East India Company" to loot Siberia for the benefit of oligarchical interests?

The Den TV roundtable on space exploration vs. a New Dark Age was held on the premises of the giant rocket manufacturer, Energomash, whose executives took part in the discussion. Opening the dialogue, Fursov noted that only on two occasions in the 20th Century did Muscovites spontaneously pour into Red Square: on May 9, 1945, Victory Day over the Nazis, and on April 12, 1961, when Yuri Gagarin made mankind's first space flight. Fursov (born in 1951) recalled that as a 10-year-old he had read in *Tekhnika molodyozhi (Technology for Youth)* magazine an outline of future space plans: reaching the Moon by 1971, Mars by 1991,

and by around 2020 we were supposed to be setting out for the more remote planets. What happened, he said, was that a paradigm shift occurred in the 1970s: the victory of neoliberalism, first in the West, and then, after 1991, in Russia. This is what bogged down the space program.

Kalashnikov, according to a summary published in *Zavtra*, went on to call for "Russian space exploration to become the assembly point for a new future for Earth, a powerful magnet for geniuses and breakthrough technologies on a planetary scale."

Den TV is an online venue, but on May 15, equally inspired ideas were voiced on the popular "Citizen Gordon" talk show on Russia's biggest nationwide TV station, Channel One Russia. This round table took up the topic "Does Russia Need a Space Program?" Against the backdrop of host Alexander Gordon's "devil's advocate" protests that "it costs too much," serious advocacy for expanded efforts in space came from current and past leaders of Russia's space program, as well as other experts and activists in the field. The excerpts provided below as documentation of these lively Russian discussions about the future of mankind have been translated by *EIR* from the Russian transcript.

Documentation

Does Russia Need A Space Program?

Alexander Gordon (host): Russian efforts in space are directly connected with the concept of Russian Cosmism; there was a kind of pragmatic-romantic fusion. We may recall that the founder of Russian space exploration, Konstantin Eduardovich Tsiolkovsky, was a committed and principled follower of the great [Nikolai] Fyodorov. And he believed that space flights had one purpose. On the day when, in the view of the philosopher Fyodorov, the dead will rise again, they will rise not metaphysically, but in the flesh. And these bodies, appearing all of a sudden on Mother Earth, will need to be accommodated somewhere. In order to have somewhere to put these bodies, Konstantin Eduardovich proposed to colonize other planets....

Channel One Russia

"Citizen Gordon" talk show host Alexander Gordon

So, does a country that has an estimated 40 to 60 million wooden outhouses need a space program we can be proud of, or not? Is this where we should be investing huge amounts of government funds, i.e., your money? Or, is it time to revise the paradigm?...

The latest sociological survey shows that 81% of the population of Russia can't name a single current cosmonaut.... In the 21st Century, in today's Russia, in a rapidly changing world—how do we view space exploration?

Gen. Vladimir Popovkin, head of the Russian Federal Space Agency (Roscosmos): Mankind will always be posing the question of where life on Earth came from, what awaits us and our posterity in the future, and how the Earth will develop. Where will an end come to this life on Earth? Or, will it go on forever? For that to happen, we need to master other planets, see how life arose there, and look for what is in common with Earth. Ultimately, life on Earth is not eternal, and at some point mankind will be forced to think about where to go, if we leave Earth, or how to save the Earth. To do this, we have to look at what cataclysms have occurred in cosmic space in the history of the development of the Universe. We need to know this.

Gordon: ...We have lost the habit of asking "Why?" we do things.... If only some smart people would think up a specific threat, and say: "Why, guys? What do you mean? In 274 years an asteroid is guaranteed to destroy Earth. So let's have a full mobilization." They can even just make it up, but then any person looking up at the sky would be able to say, "Our guys are working on it. They're going to save us. We know what the purpose is. We, the Earthlings, will save ourselves by the power of our minds and technologies."

Fifteen years ago I visited the Lavochkin Science and Production Center. The people I knew there said, "We have a delivery system. We need an idea." Literally, I'm telling you: we have a rocket, but no idea....

Popovkin: First of all, there are ideas and there have been ideas. The problem is that for the past fifteen years there has been no money for acting on these ideas.

That was the problem even with Phobos: that was an idea born in the last century. But for fifteen years it was not implemented. And the same thing at the Lavochkin Center, which you mentioned. If you go there today, the people who were there at that time aren't there any more. Do you see? A new generation has come, and it has to start over, largely from scratch, and learn the practice of scientific research in space, and conquering other planets. That's why....

Yuri Koptev, former director of Rosaviacosmos (the former name of Roscosmos), chairman of the scientific and technical board of the state corporation Rostekhnologii: We keep avoiding the applied side of the space program. But this has become the basis for much in our life, civilization, and conditions of existence. There are 1,100 satellites in orbit, from different countries, today. They are performing a huge number of tasks, which we are quite far from achieving; so, should we stop working on these things?

Channel One Russia

Yuri N. Koptev, former general director of Roscosmos, is credited with saving the space program after the collapse of the Soviet Union in 1991.

Terraforming Mars

Gordon: No, but you haven't mentioned a single program that would awaken in my soul, and the soul of the Russian population, the least desire to help you in whatever way we can. That would make us go collect a kopeck from everybody, you know? And say: "Go ahead, guys, just get flying!" "Where to?" There's no answer.

Yuri Krupnov,[1] chairman of the supervisory board of the Institute of Demography, Migration, and Regional Development, founder of the Development Movement: The first thing is the colonization of Mars. Not just flying to Mars, but colonization. This is the program—and it is not just a Russian program, or just from the Russian budget—that could get space exploration moving all over the world, since it has stalled out everywhere.

Courtesy of Yuri Krupnov

Yuri Krupnov, founder of the Development Movement and an impassioned advocate of space colonization

Gordon: Why be so modest? Why just colonization of Mars and not, say, terra-ization? Couldn't it be turned into a new Earth?

Krupnov: Colonization based on the principle of terraforming, Alexander. There is such a term: "terraforming," which means transforming Mars into a likeness of the Earth. This is a key program. And it should take a thousand years.

Gordon: The question of space definitely addles your brain! A thousand years?

Krupnov: Yes. But it has to be started today. Until there are programs like that, as well as programs on a slightly lesser scale, slightly more modest, space programs will have no prospects, neither in Russia or in the rest of the world.

Gordon: So you see a missionary aspect to space research?

Krupnov: Absolutely. And it is an absolutely false construct, to counterpose what we do on Earth and what we do in space. It's a false dichotomy.

Gordon: Wait a moment, you know what's false? When you have some guy, paying for this out of his pocket. Here in the audience you have ladies and gentlemen, who are playing for the space program. They won't be around in a thousand years.

Krupnov: That's a false question, because the money comes from the mission-related efforts. First, the mission activity; then some experimental programs; and then the technologies and money follow. Communications satellites would never have appeared, if [rocket designer Sergei] Korolyov and Gagarin had not existed.

Gordon: The space technology breakthrough in the Soviet Union was based on the fact, besides Tsiolkovsky's romanticism and religious beliefs, that the Soviet Union had a certain mission in the world, opposite to the mission of the U.S.A. And the space program

1. Yuri Krupnov's paper on the potential for a space industry development corridor around Russia's Far East cosmodrome was presented at the September 2007 Kiedrich Conference of the Schiller Institute. It was published in *EIR* of Sept. 28, 2007. The perspective has been only partially implemented in connection with plans for the new Cosmodrome Vostochny in the Amur Region.

arose and succeeded strictly because of the arms race....

Krupnov: That's important, but it's not the main thing. Alexander, if Sergei Pavlovich Korolyov in 1931 had not come to work and announced, "Tomorrow we're going to fly to Mars, we are creating a Mars program," there would have been no 1961.

Gordon: If there had been no [Russian Revolution in] 1917, there would have been no Korolyov to go to work and say, "Tomorrow we're going to fly to Mars." And there would have been no money to give Korolyov, to —

Krupnov: Money is not the point of departure.

Gordon: You're right, the point of departure is an idea, a vision, a charge of energy. And where is that today? I'll say it again: ... In a country where capitalism has triumphed, and which has not gotten out of a way of life with wooden outhouses, which a person has to visit two or three times a day when he's out in the countryside, or if he simply lives there. And you are proposing to this people, which right now is putting all its energy into trying to survive, that they should finally obtain an idea in the form of a space idea—to conquer Mars in a thousand years.

Krupnov: It's a false dichotomy. This people will not replace its outhouses, without taking up some real, strategic programs.

Cosmonaut Victor Savinykh flew on three spaceflights in 1981, 1985, and 1988.

The Asteroid Apophis

Gordon: I hear you. [He then turns to Savinykh.] So today you have all the money you need in the world, and any technology you need, and any manpower. Where do you go?

Victor Savinykh, cosmonaut, Twice Hero of the Soviet Union, President of MIIGAiK [the Moscow Engineering Institute for Geodesy, Aerophotography, and Cartography]: Apophis. It's doing a fly-by. It will be around the geostationary orbits. In 2036 all the astronomers think a collision is inevitable [sic]. There's a program. This program is being considered now. And this issue is being worked on.

Gordon: Now you're talking apocalypse, so this gets interesting. What is it that's going to hit us in 2036?

Savinykh: Apophis, it's an asteroid. Astronomers discovered it a while ago.

Gordon: I'm a fifth-grader, talk to me. A big meteorite, an asteroid.

Savinykh: A big meteorite, yes. 300 meters in diameter.

Gordon: 300 meters, that means comparable with the one that fell in the Yucatan, when the dinosaurs died out, right?

Savinykh: Yes.

Krupnov: Worse.

Gordon: Worse. And what are we going to do about it?

Savinykh: In 2028 it will fly by, and we can calculate its orbit with precision. Then we take our satellite—

Gordon: And we can deal with it in the space of eight years?

Savinykh: We can. Because the Japanese already have some experience.

Popovkin: No, in 2028, when it does the fly-by, we need to land a sensor on it, which will tell us where it is headed, and where it is flying at any given moment, so we can monitor it.

Gordon: Why didn't you start with that? This gets interesting. Do you see what I mean? You have just stated that you have a mission: to save the Earth.

Savinykh: Yes, yes. That is the mission.

Gordon: ...The Americans showed that psychology works the same in space, as on Earth.... Look at Apollo-13.... I'm not saying that there wasn't an accident, ... but to make that accident into a motivation for continued funding was something they could only do back then. Why? Because interest is declining.

Savinykh: Excuse me, but that's our media. You mentioned Apollo-13. I took part in the flight to the Salyut-7 space station, which our country was going to lose. And after Janibekov and I flew there, and after we repaired it — only then, a month later, were people told what had really happened. Why didn't we generate interest from that? And today, too, we're continuing to impede our own progress.....

Gordon: Today I heard from you for the first time about this asteroid that threatens to wipe out all life in

2036. And you have some kind of plan to save the Earth, squirrelled away somewhere; you're hanging on to it so the bastards won't get their hands on it. And after that, you want the media to help you out?... You guys have no drive! Why don't you take this to, I don't know, the President or, God forbid, the prime minister, and say: "Listen up! We are a mighty and flourishing nation with a thousand-year history. We had people like Tolstoy, Dostoevsky, and others. But, despite that, we're goners. As of 2036. And nobody except for Roscosmos can do anything about it!" What is this about 3 billion? Or 5 billion? What are you talking about. Every day people would tune in and look: where is it now, that asteroid? Did they reach it? Get going! What are they doing there? Why aren't they working on it? Did they take a smoking break? Come on, save us!"

Savinykh: The Association of Veterans of Space Flights, we have a forum every year. For ten years we've been telling everybody about this idea. It was reported to the UN, and everywhere else....

Oleg Dobrocheyev, director of the Forecasting Center of the Institute of Economic Strategies: May I say something about 2036? It's a rare event, of course, for such a large body to fly by, but it happens periodically in the history of the Earth. There are specialists in paleontology who study the climate changes that have occurred on Earth. And Roscosmos may not be familiar with these details, but around the 2030s it's actually forecast that cooling will occur, possibly (I don't know) from a meteorite strike and a decline of the solar albedo. It is forecast for this period of time. And they're talking about estimated global cooling by several degrees for the Earth.... Because many cosmic processes are amazingly harmonic.

Popovkin: What you're saying is quite right. There's a meteorological institute that says that the temperature will constantly rise, as a result of various effects.

Dobrocheyev: Fortunately we have more than one meteorological institute.

Popovkin: There is the Solar Institute, which says that the Sun is cooling, so therefore the Earth's temperature will decline. So here we have a need for scientific research in space. In order to test all these hypotheses that the scientists are coming up with.

Gordon: This is not what I mean. We started at the highest level, and now we're having a debate down in the caves. Look, space exploration began in the soul, the minds of men, as an desire to break through the boundaries of that microcosm we inhabit, because of its imperfection and finite character, right? In other words, there was a vision, an idea: to go somewhere, *per aspera ad astra,*[2] the striving for eternal life. But life on Earth has been so ordered, that that aspiration has disappeared. It has vanished from cosmonautics.

Krupnov: No, wait a minute. Who says it has?

Gordon: There's no competition.

Savinykh: The implication of your words is that we have become degraded, as mankind.

Gordon: So, maybe there's a paradigm shift? Maybe the place where we were going to find refuge turns out to represent a mortal danger to us, and we need to save ourselves from it? I keep thinking about how to give an impulse to that impassioned space exploration, which we had. Mars? You won't get anybody to fly to Mars. We don't even have people who want to go to Siberia, and you want to go to Mars.

Krupnov: Alexander, first of all, tremendous thanks, because you really have posed the key question. Nobody has an answer to the question "Why?"—an answer that is clear for themselves and also to millions of people. Not the Americans, not the Russians, not the professionals or the non-professionals. ... But! We have a unique situation, because, as Yuri Nikolayevich [Koptev] already said—and he is the man who saved the space program and assured continuity with what we had in the Soviet period (as much as it was possible to do that, in those years, with that level of financing)—

Gordon: That is indisputable.

Krupnov: Vladimir Alexandrovich [Popovkin] is just starting now. So I am certain that programs will emerge, in the near future; the kind of program that will be clear for everybody. But, on the colonization of Mars, what you say is not right. Because precisely this, is the question of saving humanity. Why? Yes, let's take a thousand-year period, with terraforming. But we can't even study climatic and atmospheric processes on Earth, from Earth.... All these problems: climate change, the environment, systemic equilibrium or disequilibrium, warming, cooling, where it's going in a million years—we are absolute ignoramuses on all these things. In colonizing Mars, besides continuing manned space flight, we can approach two things. First, to experiment on a completely different planet. It's a completely different plaything, but not as dangerous from the standpoint that—

Gordon: You mean we've almost killed this one, so let's go after another? OK.

2. Lat. "Through adversity to the stars."

Krupnov: No, the problem is not that we have destroyed this planet, but that we can't experiment with setting it up in some different way. And the second thing is that space flight, the Cosmos, order, and beauty are a question of humanity's common life together. One way or another, in the years immediately ahead we shall reach the point where communities begin to carry out colonization. Communities. Our Soviet Russian Salyut-Mir space station was the first entry into a new phase of space flight. … We will go there, we will colonize space, there's no way around it. But the question is what we do right now.

Gordon: I'll tell you why we won't. Because in 2036 it's game over for us.

Not a Question of Money

Krupnov: We'll do it, we will.… In two years, you will be discussing the colonization of Mars on this program.

Anastasia Gacheva, philosopher (from the audience): I would like to say, first of all, that of course the Cosmos and space programs are not an area for rivalry. And when we talk about who will be first, that's the wrong way to pose the question. Space is a zone of cooperation.

Gordon: Space programs emerged as a zone of rivalry.

Gacheva: In reality, no. The Cosmos arose in the minds of people, of our philosophers, writers, poets, and people who worked on cosmonautics as a zone of breakthroughs and cooperation, as a zone of humanity's moving upward and forward. And man's first extraordinary capability, which distinguished him from a monkey, was when he stood up. That was an attempt to counteract natural necessity, so to speak, to resist gravity, which holds all living things to the Earth. Man stood up, and it was as if he raised himself into a prayerful vertical stance, turning his eyes to the heavens, to the Universe, and to God.…

And civilization was born from that impulse. Now that mankind has gone into space, that is, if you will, a kind of new turn of the evolutionary spiral, which poses new tasks that we simply cannot evade. So what you're saying here about outhouses vs. a space program, excuse me—I see here two fundamental choices: to choose comfort, consumption, and pleasure, or to choose responsibility. The space program was born as a zone of responsibility, including, by the way, responsibility for Earth. Actually, the cosmists never talked about needing to save ourselves somewhere or other. The Earth is a part of the Cosmos, and man is a cosmic being, if you will. Just as he is a religious being, who cannot exist without religion, without that which elevates him. Dostoevsky said that "Man is not simply a terrestrial creature, but is connected with other worlds and with eternity." And there is a summons from eternity, a call from the Universe, in which man and mankind may be unique and unreplicable. And therefore we bear enormous responsibility. Why did life emerge exactly here, on this little planet Earth?

Channel One Russia

Philosopher Anastasia Gacheva spoke from the audience on the crucial importance of the space program.

Gordon: Tell me, please, will 5 billion a year be enough for answering that summons?

Gacheva: I think that it is not a question of money. It is a question of action. And, by the way, a question of unifying ourselves. Excuse me, but GIRD [Korolyov's Group for the Study of Jet Propulsion] was called a "group of researchers, working without pay." And you had [Fridrikh] Tsander, who didn't leave the place even at night. Once Korolyov arrived in the morning and saw him sitting and typing on a typewriter. He came, and he said, "Onward to Mars!" These people were not thinking about how many millions they needed. Do you understand? And indeed, any genuine undertaking, any genuine discovery generally has nothing to do with the commercial side. Great strategic projects are projects that really are moved by dreams and enthusiasm.

Gordon: Thank you very much. You see what a great mass of emotion and passion is behind those words? Do you have it? I would not like for our officials—

Popovkin: I'll answer that question, if I may. It's easy to talk, when you are not responsible for this area of work. In general, I very much support, and from the standpoint of the content of what you said, I fully share that. But there's another side. There are the realities in which we live, and the condition of the [space] sector today. And of course we can talk about flying to Mars and we can talk about studying other universes. But

today our space sector has one very real objective. It is in crisis, and we have to lift it out of crisis....

Gordon: We don't have very many space specialists, do we? Despite how advanced we are. There are almost none in the government; maybe none at all. You are preparing a Roscosmos development program. And let's say you bring it to an aide to the prime minister, or to the prime minister himself.

Koptev: No, there are many more filters; it's a long way before you get to the prime minister.

Gordon: Right. And these people who don't know beans about it start sequestering [the funds for] one thing, then two, then a third, a fifth, and a tenth.... It reaches the prime minister in a condition where—and then he probably makes his own amendments.

The Need for Vision

Popovkin: Not exactly. In the 11 months that I've been heading up Roscosmos, there has been support from the prime minister [i.e., from Putin]. When we were getting approval for the GLONASS[3] program up to 2020 and when we were getting approval for the Vostochny program, his first question was, "They didn't cut anything on you, did they?" Officials from the other ministries tried not to make cuts....

Gordon: ...Still, the first thing is that the vision of space exploration has faded, and likely will never come back, for the masses. The worst thing is that there is no vision, and no dreamers, in the masses. Would Korolyov have said that he was being held back by some limitations? Would Tsiolkovsky have complained that he wasn't being paid enough? He published his books with his own money (the ones later used to stoke stoves in Kaluga).

Popovkin: You say, and everybody says "There is no vision"—but, there is. Look at the Spectre-R, launched last year, which has greater capabilities than the Hubble. It enables us to peer into cosmic "worm holes," where a quasar disappears, and then for some reason shows up somewhere else. We can study what dark matter is, and what bursts of energy are. And all the concepts, concerning which our current science is really limited.

Gordon: I understand that space exploration is needed for our fundamental science, cosmology, and astronomy, even on the pitiful, albeit advanced, as you said, scale of today. I have great confidence in the abilities of our scientists, who had it just as hard in the 1990s as Roscosmos did, barely surviving by a miracle and continuing to exist.... But what I'm talking about is something different. We're talking about space today because on this TV program we always come back to the same thing. Somebody has let the air out of our lives. Today our life is nothing like the life my generation [b. 1964] grew up with and remembers. This is a fundamentally, qualitatively different life. Who is to blame? What should we do about it? How can we live without this? I don't know. And if, by this time, neither art, film, literature, or the space program will save us; if no politician will answer the question of what country we are living in and where we are going; then we need to seek an answer ourselves. And if what it takes to save our state (I mean the state within us), the country we live in, the land we want to live in, requires that the asteroid come four years sooner, I'll do what I can for that. On condition that you promise to destroy it, whack it away, so that Earth will—

Savinykh: Better make it four years later. Then we can promise for sure.

3. GLONASS is the Russian satellite navigation system.