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## II. The Ideas that will Govern the Future

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A NEW GENERATION OF LEADERS

# An Exchange on Nuclear Propulsion for Space Exploration

*The following is an edited transcript of an exchange between Kesha Rogers, former candidate for Congress and a leader in the LaRouche movement, and NASA Administrator Jim Bridenstine, following his presentation on “JFK and the Race to the Moon” at the Rice Space Institute in Houston, Texas on September 12, 2019. A [video](#) of that exchange is available.*

**Kesha Rogers:** Thank you very much for your service, and thank you for being an excellent NASA Administrator.

My name is Kesha. I want to let you know that I have been a very strong proponent of the space program. I contributed to a report on the subject on behalf of the national LaRouche organization. Right now we’re circulating a petition in support of President Trump’s Artemis program, and we’re getting quite a bit of support on campuses across the nation and internationally. I’ll give you a copy of that report before we leave here.

**James Bridenstine:** Let me know what I can do to help. I mean that seriously.

**Rogers:** My question to you is on the subject of not just supporting the next four years of the 2024 goal, but looking at the next 50 years of space exploration. You’re talking about the Moon-Mars mission. If we’re going to send human beings to Mars, we can’t be “taking your time,” and, “let’s do this,” getting people there in as long as nine months or more. There’s discussion right



*NASA Administrator James Bridenstine at the Rice Space Institute in Houston, Texas on September 12, 2019.*

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now on the question of fusion propulsion.

**Bridenstine:** Oh yeah.

**Rogers:** So, I want you to speak on that, because the importance of this right now is, how can we actually get human beings to Mars, safely, efficiently, through 1g acceleration, through advanced propulsion—taking instead of more than nine months, less than a few weeks. And I think that’s a very important subject. Even the Russians are talking about the importance of fusion, and many countries are looking to mining the Moon for helium-3, as a fuel for fusion propulsion. So, I’d like you to comment on that.

**Bridenstine:** My goodness there’s a lot, Kesha! Thank you for your advocacy, and thank you for wear-

ing that shirt. Keep doing that. [laughter]

You mentioned 2024, and some people have said maybe that's a partisan date. Remember what Kennedy said, "by the end of the decade": He gave it a date. Why? Because that's how you get results. And it's important, in this particular case, when we look at why—We compressed the timeline; originally it was 2028, based on traditional budgets. The President said, that's not good enough, so he said, accelerate it. We did. He helped us with additional budget in the budget request. We did a [legislative] amendment and we got that amendment over to the Hill.

### **'NASA Has a *Political* Problem!'**

But here's the important thing: NASA doesn't have a science problem or a technical problem. We can retire all of the technical risks you can imagine. We're an amazing agency, with amazing engineers. We have a *political* problem! That's why we're not on the Moon right now; that's [why] we're not at Mars right now. And Professor Brinkley [Douglas Brinkley at Rice University] has been very clear about why Kennedy was successful: It was bipartisan—and, he gave it a deadline and he moved fast; there was a race.

So, when a program goes 15 years, 20 years, and costs billions of dollars and people aren't seeing results, that's when they get cancelled. When we cannibalized the Science Mission Directorate to fund human exploration, that's when it creates a partisan fight. When we cannibalized the International Space Station to fund deeper space exploration, we create a parochial fight—I'm saying that because the Texas delegation is sitting right here in front of me. [laughter]

So these are all things that—we have a political science problem at NASA historically. I have been very clear: My objective is to fix that. I've been working on it since the day I got into this office.

That being said, fission—fusion, you said, we're not there on fusion; that's going to take a number of years.

For people in the room that might not be aware, fusion of course is taking two nuclei and pushing them together. That's basically how you get energy out of the Sun, and of course the release of energy is massive. Fission is actually nuclei breaking apart.

Fission, I think, is in the short term, how do we do nuclear propulsion. It's going to be necessary to go to Mars: Radiation in deep space is harsh on the human condition; if instead of a seven-to-nine-month journey, we can make it a two-to-three-month journey, it's really good for the medical condition of the astronauts. I will also say that we can do it so safely, that we can do it in a way that it could never be weaponized, and certainly we don't want that, and we would never allow that to happen in the agency.



*Kesha Rogers posing a question to NASA Administrator James Bridenstine.*

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But I will say, other countries do it, other countries are developing that technology right now, and we should be part of it. But cis-lunar space, when you talk about having nuclear propulsion in space, being able to maneuver in cis-lunar, basically the space between the Earth and the Moon, is going to be critical for the future from a national security perspective, for all kinds of reasons I'm not going to talk about here.

But at the end of the day, that's a technology that the DOD [Department of Defense] is interested in. There's no reason, if the DOD is developing it, that we shouldn't take advantage of it for exploration, and it's important.

So anyway thank you all, so much. [applause]