

\$100 million authorized by the defense authorization committee, so we are making certain we are going to end this reliance on Russian engines. The question is how we manage the space launch through the several years of launches before we have that engine. We need to do it without jeopardizing our national security.

The general provision I referred to allows for space launch competition in 2016 without regard to the source of an engine. It will permit real competition on four missions in 2016, and it will avoid trading one monopoly for another. I think I have explained how we have reached this point.

I think there is good faith on both sides. I don't question the motives of the senior Senator from Arizona. I hope he doesn't question mine. What we need to make certain of is that we move toward a day when America is safe and that the money spent by taxpayers is well spent.

I yield the floor.

I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The senior assistant legislative clerk proceeded to call the roll.

Mr. NELSON. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

NASA'S BUDGET

Mr. NELSON. Mr. President, we are going back into space with Americans on American rockets, and we are going to Mars. We are on the cusp of the next big breakthrough in space exploration.

It is interesting that this is at the very time that in our culture here on Earth, the movie that is harkening back—"Star Wars"—is coming out again, and it is going to be such a blockbuster at the box office. What is fictional in "Star Trek" and "Star Wars" is now becoming factual.

In large part, it is what has been done in the Nation's space program since the shutdown of the space shuttle back in 2011 and in the preparation of the new vehicles—the new rockets, the new spacecraft, the new satellites, the new exploratory missions that have gone on.

Who among us, merely three decades ago, would have thought the Hubble Space Telescope would look back into the far reaches of the universe—close to the beginning of that universe—and start to unlock secrets through this telescope that is orbiting the Earth that was put up by humans in the U.S. space shuttle? Who among us would believe that we now are going to launch a telescope in 2018 that will look back in time to the very beginning of the source of light in the universe—the big bang—and understand this universe all the more and how it evolved in this magnificent creation that we earthlings observe of the heavens? Who among us, over four decades ago when

we landed on the Moon, were not impatient to escape the bounds of Earth's gravity once again to get out and explore the heavens?

That is now becoming a reality. It is becoming a reality in large part because of the budget that will be presented to the Congress, which we will pass—an appropriation that just in this present fiscal year that we find ourselves in right now will increase NASA's budget \$1.3 billion over what NASA was appropriated last year. Getting Americans and American rockets back into space, since we haven't had Americans on American rockets since we shut down the space shuttle, had to be done. That was an essentially extraordinary creative flying machine, but its design had inherent flaws that were risky for human beings. Indeed, in over 135 flights of the space shuttle, we lost two crews—14 souls—because of its design. There was a malfunction where there was no escaping for the crew. But now we have new rockets that will have the crew in a capsule on the top of the rocket so that if there is an explosion on the pad, an explosion in ascent all the way into orbit, we can still save the crew because we can separate them by the escape rockets from the main vehicle and save the crew, ultimately having them land or by parachute—powered landing or a parachute landing.

These rockets are almost ready to fly. Indeed, some of them have been flying for quite a while. Two companies, SpaceX and Boeing, will have the spacecraft. SpaceX, its capsule and spacecraft called Dragon, is sitting on top of a rocket that has flown many times called the Falcon 9. Boeing, with a spacecraft called the Starliner, will sit upon the very proven Atlas V. Which one will fly first? We do not know. But the fact is that is only 2 years away—2017. They will fly with the first crews to and from the space station so that we no longer have to rely upon a very reliable partner that indeed helped us build the International Space Station to which we go and return not only with crew but with cargo as well. We won't have to rely on the Soyuz anymore. We will be flying on American rockets. That is going to happen in a short 2 years.

The assurance of that is this. It is the Omnibus appropriations bill that is coming forth that has appropriated the amount NASA needs to keep this competition between SpaceX and Boeing going for developing, hopefully, two spacecraft that will be launching Americans on American rockets to and from our International Space Station.

By the way, we have six human beings on the space station. It is an international crew. They are doing all kinds of experiments. At another time and another day, I can tell my colleagues about some of those exciting things.

We are going to Mars. We are going to Mars because we are developing a spacecraft called *Orion* that we have al-

ready test-flown out to 3,600 miles to check its structural integrity on a ballistic reentry. That was done a year ago. Now we are building the largest, most powerful rocket ever on Earth, called the Space Launch System, or SLS. *Orion* and SLS have also been given a boost in this appropriations bill. So we are well on our way for the first test of this full-up rocket with capsule in September of 2018. That is less than 3 years away, with the first crewed vehicle after the first test in 2021.

That is the forerunner to building the spacecraft and the technologies that can take human beings and keep them alive all the way from Earth to Mars, land on Mars, stay on Mars for a while, and return safely to the Earth. "Star Wars," "Star Trek," is fiction. It is exciting, but it's fiction. This is space fact. It is happening in front of our eyes.

Now, there are other things that are happening with this appropriations bill. We think, in this solar system, if there is a chance for life besides Mars, or life that was there and we want to know what happened—there is a moon around Jupiter called Europa. Europa is so cold that it has an exterior that is ice. But the gravitational pull of Jupiter, as Europa goes around and around Jupiter, is such that it causes the friction from an inner core that already has heat and heats up from the inside. So under this crust of ice on Europa is water. In our experience as earthlings, wherever we have found water, we have found life. So is not Europa one of the best chances of there being life as we understand it in those oceans? It is a smaller body than Earth—Europa—and yet has oceans that are twice the volume of the oceans on planet Earth. That is a real possibility.

So in this appropriations bill, there is \$1.6 billion to proceed on a plan for taking us to Europa to see if there is other life in our solar system.

There is also something that is very important to us earthlings, and that is that we need to know what is happening to the planet and we need to be able to predict and we need to be able to foretell, because if a big storm is coming here, we want precise measurements to let us, bound on the face of terra firma, know what is that storm that is coming and what are the weather conditions. That accuracy is so important for us in our daily lives here on Earth, not even to speak of our national security.

You could go through the rest of the NASA budget and you can see that it indeed sets us on a course for extraordinary space exploration as well as taking care of the aeronautical research, which is the other "A" in NASA—aeronautics. That has a plus-up from the President's request—aeronautics—giving all the research on the technology to make sure that our aviation industry is at the absolute cutting edge.

We are going to Mars, and we are beginning this journey as we did with the

test of the spacecraft a year ago. That journey is going to accelerate, and in the lifetimes of many of those within the sound of my voice, they will witness a human crew of Americans and possibly an international crew that will go all the way to the planet Mars and return. Indeed what was science fiction based on science facts—the Matt Damon movie “The Martian”—really is right within our grasp. It is an exciting time as we bring our space exploration back to life so that the American people can see that there is a viable space program and that we have a goal and that goal is the planet Mars.

COAST GUARD LEGISLATION

Mr. NELSON. Mr. President, I want to take advantage of this opportunity to also share with the Senate that we have a very important Coast Guard bill on which we are going to try to get unanimous consent so that we can send it on to the House. There are parts that have been controversial and those parts generally have been worked out. There are one or two others.

This Senator thinks the American people—unless they get in trouble out on the high seas—don't really have an understanding of what a professional military organization the U.S. Coast Guard is. We have the Coast Guard participating with our Defense Department over in the war zones—the area of responsibility over in Central Command. We have the Coast Guard basically doing the job for the U.S. Navy in the waters off of Alaska. We have a Coast Guard that is patrolling the waters off of the continental United States, as well as the island State of Hawaii. The Coast Guard is always there when Americans get in trouble, and indeed when mariners who are not Americans get into trouble. The Coast Guard is an incredible professional organization that is doing the job.

Down in the waters off of my State of Florida, the Coast Guard does this incredible job working with the U.S. Navy on the interdiction of drugs. When the drug smugglers have to be interdicted, the Navy, if they are tracking them, hands that over to the Coast Guard because the Coast Guard, in fact, has the law enforcement capability to go in and take down the smugglers.

The Coast Guard can shoot the motors out of these go-fast boats to interdict smugglers—even going after submerged vehicles—to stop them. The Coast Guard does that from not only their boats but also from the air. The Coast Guard stands tall. We in the Congress now need to stand tall for the Coast Guard.

Earlier this month the majority leader offered a unanimous consent to discharge from the Senate commerce committee and pass the Coast Guard Authorization Act, giving the Coast Guard the resources it needs to carry out its mission. It cannot be overstated.

It is a small, very agile service of 42,000 Active-Duty members. It plays a vital role in protecting the Nation from narcoterrorism, human smuggling, environmental disasters, and from the loss of life and property at sea.

So what is in this bill? It is the result of several months of negotiations between the House and the Senate. The chairman of our Senate commerce committee, JOHN THUNE, and I, as the ranking member of the commerce committee, have worked with our colleagues to craft a bill that will authorize a total of \$9.1 billion in each of the fiscal years 2016 and 2017. It is a \$380 million per year increase over the amount authorized last year, and it enhances the Coast Guard and its capability to do a number of the things that I have listed, which include cracking down on the drug trade and the destruction of evidence, including the destruction of illegal drugs. It enhances the Coast Guard capabilities to stop the smuggling of drug money across our maritime borders. The Coast Guard's Western Hemisphere strategy is to combat the criminal networks, secure the borders, and safeguard American commerce. So to meet all that, this legislation's increased funding is going to support the Coast Guard's ongoing fleet recapitalization program, including the design and construction of a new offshore patrol cutter and continued production of a fast response cutter.

I have ridden in these fast response cutters. I have ridden in the go-fast boats as they simulated a drug smuggler that was trying to avoid us. This boat can do the hairpin turns and the sudden 180-degree turns at top speed, and that is how these guys can't get away. If for some reason they were not able to interdict them at sea, we have them from the air.

I have watched the Coast Guard sharpshooters blow out the motors on a go-fast drug smuggling boat. But we have to recapitalize a lot of these old boats. The average age of a Coast Guard high endurance cutter is 45 years old. The average age of the Coast Guard's 210-foot medium endurance cutter is 48 years old. These are two of the primary ships that are used for interdiction and rescue worldwide. So new offshore patrol cutters, fast response cutters, will give our Coast Guard an effective coastal and offshore interdiction capability in order to meet its objectives.

You think of the Coast Guard off the coast. They are in Washington. I am not talking about the ones onshore. They are out there protecting national security assets in and around the Potomac and the Anacostia Rivers.

In addition to this recapitalization, the bill allows the Coast Guard to begin updating its fleet of polar icebreakers, allowing the service to pay an estimated \$1 billion needed for the acquisition of a new state-of-the-art heavy polar icebreaker. Why do we need that?

Have you noticed recently what the Chinese have been doing in the Arctic? Especially, have you noticed what the Russians are doing in the Arctic? Have you noticed that the Russians have 19 icebreakers and we have just a few? Have you noticed that China is funding and building icebreakers for the Arctic?

Part of our icebreakers, the Polar Star and the Healy were built in the 1970s and 1990s. The Polar Star is now well beyond its intended 30-year service life. It is vital that we enable the Coast Guard to begin bringing these new vessels online to support the Coast Guard's Arctic strategy and cooperative maritime strategy and to meet the President's stated intent for increased American presence and capabilities in the Arctic.

I went with the Coast Guard to Alaska. As I said a moment ago, the Navy has really ceded the Alaskan waters to the Coast Guard to protect maritime shipping—a huge fishing fleet up there. But also on the North Slope of Alaska, which is the beginning of those Arctic waters, there is a lot of activity up there—not only fishing but exploring for oil. At times of the year when it is totally incapable of a seaworthy vessel to crack the ice, you have to have an icebreaker to do it. The Russians have 19. They are getting very aggressive in the Arctic. Just ask the Prime Minister of Norway, with all of his teams, how concerned they are with what the former Soviets are doing up in the Arctic. Thus, this bill enhances and speeds up our capability of getting another icebreaker—a modernized icebreaker.

So this legislation is also going to provide the Coast Guard parity with our Department of Defense sister services with respect to personnel policies such as parental leave and eligibility for combat-related special compensation. If they are out there on the frontlines, they should have parity with our sister men and women in uniform.

This legislation will ensure that the Coast Guard is properly equipped to protect our national and homeland security interests in our ports, on our coastal and inland waters, such as Washington, and on the high seas around the world.

This Senator believes that we will be able to do this by unanimous consent, if we work through a few more things. So I urge our colleagues in the Senate: Let's get this up and get it passed before the Christmas recess so the House will have it the first part of next year so we can get on about the process of getting this bill authorized, completed, and sent down to the President for signature into law.

I yield the floor.

The PRESIDING OFFICER (Mr. SCOTT). The Senator from Pennsylvania.