Good morning. Thank you for inviting me to speak today at the 10th Eilene (“I-Lean”) Galloway Symposium on Critical Issues in Space Law. Mankind’s accomplishments in outer space are often thought of in terms of activities – Neil Armstrong landing on the Moon, weather satellites taking pictures of hurricanes from geostationary orbit, and rockets launching. But there are also accomplishments in regards to improving law governing outer space, providing both domestically and internationally, the framework that allows us to do these great things. So I thank you for your important contributions to the exploration and use of outer space.

I’d like to start by taking the opportunity to bring you up to speed on some of the work Congress is doing related to the space community, as well as what we may have in store in the near future.

I represent the 36th district of Texas, which is home to the Johnson Space Center. Not surprisingly, my constituents know something about space. I joined the House Science, Space, and Technology Committee earlier this year, and was appointed the Chairman of the Space Subcommittee in June. The Committee has accomplished a lot this year. We unanimously sent a fiscal year 2015 (FY15) NASA Authorization to the Senate for them to act on, we passed a FY16 and FY17 Authorization out of the Committee that gave the Appropriations Committee direction on funding priorities, H.R. 2262, the U.S. Commercial Space Launch Competitiveness Act, was
passed by both chambers of Congress and signed into law by the President, and we continue to work with our colleagues on the Appropriations Committee to finalize spending bills for FY16.

On the oversight front, we’ve held ten space hearings, including reviews of unmanned aircraft systems, the commercial crew program, NASA’s overall budget request, astrobiology, planetary science discoveries, public-private partnerships for NASA’s Earth observation program, the International Space Station program and the impacts of the recent cargo accidents, and NASA’s efforts to develop deep space exploration systems. I’ve also had the pleasure of visiting a number of space industry facilities and NASA Centers where I saw first-hand the ingenuity and creativity of our space sector.

NASA remains the preeminent space organization in the world. In order to ensure it remains at the forefront of exploration, Congress, the Administration, and industry need to continue to work together. Exploration, and the science, technology, and engineering prowess that are necessary to make it possible, are drivers of economic growth and make our nation more secure. Because of this, it is imperative that we as a nation prioritize space exploration. This means that we must not only empower NASA to push the boundaries of the possible, but also unburden the private sector so they can innovate.

The private sector has always been a partner in space exploration. From McDonnell Aircraft Corporation building the Mercury and Gemini capsules, to Grumman building the Lunar Excursion Module for Apollo, or the United Space Alliance operating the Space Shuttle fleet, contractors and the private sector have worked hand-in-hand since the dawn of the space age. The future will be no different.

In his 1984 State of the Union speech, President Reagan remarked that our success in space “is a tribute to American teamwork and excellence.” He dared the nation’s engineers,
scientists, and entrepreneurs to develop private sector space launch solutions with minimal government interference. Congress followed up on this challenge by passing the Commercial Space Launch Act, which served as a catalyst for the commercial space sector. Since then, commercial space legislation has facilitated multiple advances in space launch; communications; entertainment; position, navigation, and timing technology; weather monitoring; remote sensing; space tourism; science experimentation; and expanded human spaceflight. In order to continue this growth, we need to provide stable, certain, and competitive regulatory environments at the Federal Aviation Administration (FAA), the Federal Communications Commission (FCC), the National Oceanic and Atmospheric Administration (NOAA), and the National Transportation Safety Board (NTSB) that facilitate domestic investment and creativity.

H.R. 2262, the Spurring Private Aerospace Competitiveness and Entrepreneurship Act (or SPACE Act for short), was the base legislation used to draft the U.S. Commercial Space Launch Competitiveness Act. It was sponsored by Majority Leader Kevin McCarthy, and I am proud to say that I was an original cosponsor along with Science, Space, and Technology Committee Chairman Lamar Smith. The Committee spent years engaging with stakeholders, holding hearings, and drafting the legislation. The result is a law that facilitates a pro-growth environment for the developing commercial space industry by encouraging private sector investment, creating more stable and predictable regulatory conditions, and improving safety. The law ensures American leadership in space and fosters the development of advanced space technologies.

The Act preserves FAA’s ability to regulate commercial human spaceflight in order to protect the uninvolved public, national security, public health and safety, safety of property, and foreign policy. Similarly, the Act preserves FAA’s ability to regulate spaceflight participant and crew safety as a result of an accident or unplanned event. The Act extends the learning period to 2023 to allow the FAA to gain data to inform possible future regulations or some other safety
framework, and calls for a progress report on the status of the knowledge the industry and FAA have gained. The Act also allows for industry to develop consensus standards in the interim and coordinate those efforts with the FAA. This will allow the nascent industry to grow in a stable regulatory environment without the threat of arbitrary and burdensome regulations impacting their ability to innovate. In turn, this will help the United States lead the world in commercial space endeavors.

The Act also extends the indemnification risk-sharing structure. Since international law places liability for damages resulting from space accidents on the launching state, all spacefaring nations require some form of third party liability insurance for launching entities. The Act extends indemnification to 2025 and requires an update to how the FAA calculates the maximum probable loss associated with launches. This provision will prevent U.S. launches from going overseas where other nations have more favorable liability protection.

The Act also allows for license and permit flexibility by closing a statutory loophole that would have negated an experimental permit once a launch license was issued for the same vehicle design. This provision will foster greater innovation by allowing an experimental permit holder to continue testing while a license holder conducts operations.

H.R. 2262 includes a necessary technical definition for government astronauts. Current law only allows for two categories for individuals carried within a FAA licensed spacecraft – crew and space flight participants. Now that NASA is procuring astronaut access to the ISS, a new category is necessary to outline the roles, responsibilities and protections for astronauts on a commercial human spaceflight launch.

The Act also closed a loophole created by the 2004 Commercial Space Launch Amendment Act that carved out an exception for spaceflight participants from indemnification coverage. By including them in the provision, spaceflight participants that may participate in a
launch as a result of a contest or other means are not burdened with financial exposure above the limits, thereby opening up space to everyone, not just the ultra-wealthy.

The Launch Liability Convention, to which the U.S. is a party, places liability for space launch and reentry accidents on the federal government. The Act contains a provision that ensures federal courts review lawsuits resulting from accidents since the federal government is ultimately the responsible party as a result of the treaty, not the states. This provision also prevents venue shopping to ensure that suits are treated fairly, and still allows the application of state substantive law in tort cases filed in federal court.

The Act creates cross waiver consistency between launches for payloads and commercial human spaceflight. This provision includes spaceflight participants in this cross waiver requirement to ensure consistency and reinforce the informed consent requirements, while still allowing spaceflight participants to file claims in the event of gross negligence or willful misconduct. As lawyers, I’m sure you appreciate the fact that it is long been held by U.S. courts that such cross-waivers of liability do not allow for the waiver of claims of gross negligence or willful misconduct.

The Act asks for reports on orbital traffic management, space situational awareness, orbital debris, and compliance with the authorization and supervision requirements of the Outer Space Treaty. Similarly, the Act asks for more information on how the government should treat spaceflight support vehicles and state commercial launch facilities. The information gathered from these reports will inform future Congressional action related to commercial space.

The Act also extends authorization for ISS operation and utilization from 2020 through at least 2024.

Finally, the House also rolled three other separate bills into the U.S. Commercial Space Launch Competitiveness Act before it went to the Senate. These three bills were included as Titles under the Act. Title II is derived from H.R. 2261, the Commercial Remote Sensing Act of
2015, another bipartisan bill sponsored by Rep. Jim Bridenstine and Rep. Ed Perlmutter, ensures that the Department of Commerce is able to protect national security while maintaining the United States’ status as a leader in the development and operation of remote sensing technologies. Title III is derived from H.R. 2263, the Office of Space Commerce Act, sponsored by Rep. Dana Rohrabacher, updates the existing office’s name to appropriately reflect its duties and streamlines the functions of the Office to preserve flexibility for the Department in executing the Office’s responsibilities. The bill also expands the Office’s responsibilities supporting the Administration’s Positioning, Navigation, and Timing (PNT) policy to include its stewardship of the National Space-Based PNT Coordination Office. Title IV comes from H.R. 1508, the Space Resource Exploration and Utilization Act, a bipartisan bill sponsored by Rep. Posey and Rep. Derek Kilmer in the House with a companion bill in the Senate sponsored by Sen. Patty Murray and Sen. Marco Rubio, codifies a legal principle long-accepted by the United States, that the freedom to explore and use outer space includes the right of non-governmental entities to remove, take possession, and use in-situ (pronounced “in-sich-you”) natural resources on celestial bodies.

Title IV of the Act and its provisions on space resource exploration and utilization has gained particular attention from the press and the space legal community. Unfortunately, there have been a number of misconceptions about the intent and legality of Title IV, so please allow me to clarify a few provisions.

First, Title IV gives an effect to the right to explore and use outer space by establishing, under Federal law, private citizen rights over obtained in-situ space and asteroid resources. It does so consistent with U.S. international obligations. Article VI of the Outer Space Treaty explicitly recognizes that non-governmental entities, such as private corporations, may explore
and use outer space, including the right to remove, take possession, and use in-situ natural resources from celestial bodies. The United States Government has long taken this position, while recognizing and aware that this view is not shared by all States or commentators.

Second, this is consistent with United States obligations under Article II of the Outer Space Treaty and is not an assertion of sovereignty or jurisdiction over any celestial body.

Third, it should also be made clear that in drafting and negotiating Title IV of the *U.S. Commercial Space Launch Competitiveness Act*, specifically Sec. 51303, there was a challenge as to what language should be used to give effect to this right. The term “obtain” was ultimately chosen because it carried no presumption about the technical means with which the resource was to be recovered. However, it was never our intent that “obtainment” would allow a company to remotely sense a resource and assert a right of possession. Only through physical recovery does this right manifest.

Fourth, nothing in Title IV supports the creation of an international body to establish rules and regulation over space resource mining. Doing so is unnecessary and would be counter-productive – undermining U.S. national interests and dis-incentivizing private sector investments. The purpose of Title IV is to allow state domestic law and customary practice to develop without unnecessarily proscribing international rules.

Congress has directed the President of the United States to promote the right of U.S. citizens to engage in commercial exploration for and commercial recovery of space resources free from harmful interference. Such promotion could include the Department of State working diplomatically with other countries to adopt domestic laws and policies that support mutual recognition of space resource rights. But neither the President, nor the NASA Administrator, should promote establishing an international body to govern space resource mining. The U.S.
continues to lead the world in space exploration; however, other nations would like to impede that progress for their own benefit by placing the burdensome yolk of an international body around the neck of U.S. innovation. While there is certainly a place for the U.S. to engage internationally, those efforts should focus on mutually beneficial arrangements. I think the President agrees with this perspective, that’s why he was “delighted” to sign the bill. I trust that NASA and the State Department will share in the President’s delight and advance this bipartisan and unanimous position.

The U.S. Commercial Space Launch Competitiveness Act, including all additional provisions I just mentioned, reflects the hard work of the Congress, the House, Science, Space, and Technology Committee, and the stakeholders who have been engaged all along the way.

Despite the enactment of the U.S. Commercial Space Launch Competitiveness Act, we recognize that more needs to be done. Article VI of the Outer Space Treaty requires the United States Government to authorize and supervise the activities of its citizens and companies in outer space. However, a number of new commercial space actors are pushing the boundaries of our regulatory regime and the Act has a number of reporting requirements to address these new private sector developments. Section 108 directs the Office of Science and Technology Policy to assess current and proposed near-term, commercial non-governmental activities conducted in space, to identify appropriate authorization and supervision authorities, and to develop recommendations on an authorization and supervision approach that would prioritize safety, utilize existing authorities, minimize burdens to the industry, promote the U.S. commercial space sector, and meet the United States obligation under international treaties. Section 202 directs the Secretary of Commerce, in consultation with the Advisory Committee on Commercial Remote Sensing, to submit a report on statutory updates necessary to the 1992 Land Remote Sensing Act.
Section 402 directs the President to submit to Congress a report on the authorities necessary to meet the international obligations of the United States, including authorization and continuing supervision by the Federal Government, for commercial recovery of space resources by U.S. citizens.

We will also have to evaluate the impact of the recent commercial launch failures going forward. Commercial spaceflight accidents that involve people and those that involve cargo are clearly different. Government missions and completely private activities are equally different. I look forward to reviewing the results of all the accident investigations so that we can decide how best to address these different incidents, and efficiently and effectively review future accidents. However we address commercial launch accidents going forward, we must continue to facilitate innovation, protect personal liberties, promote safety, and remain vigilant stewards of taxpayer funding. As Congress wraps up consideration of arguably the most significant commercial space bill in decades, we still have more work to do.

This is a good opportunity to turn to the Committee’s work toward a NASA Authorization Act. The last NASA Authorization Act expired at the end of 2013. This is unacceptable. The House has passed multiple bipartisan Authorizations over the last two years—one by unanimous consent. This should be an easy bill for the Senate to take up and pass quickly. The underlying policy provisions in even the most recent Authorization passed out of Committee are not controversial and would provide consistency of purpose as NASA transitions to a new Administration in just over a year. The funding levels for next year will most likely be decided by the Appropriations process in the Omnibus that is expected by the end of the year. I urge everyone here to recommend that the Senate to take up consideration of a NASA
Authorization so that we can present a bill to the President by the end of the year, or early next year at the latest.

There is a great deal of promise in the future of space. I know that we will be able to develop policies that benefit the nation and mankind. If we fail to provide long-term solutions to the issues our nation faces, we may well lose our leadership in space. China stands ready to fill that leadership void at a national level. Russia and Europe will gladly fill that role from a commercial perspective once again. Our leadership in space shouldn’t be taken for granted. If we fail to provide a competitive environment, other nations will happily step up. This will lead to an eroded industrial base, decreased national capabilities, declining international influence, and the loss of a skilled workforce. I, for one, don’t want that to happen on my watch.

It is up to all of us to find common ground and responsible solutions that meet the needs of our nation and grow the economy and maintain our leadership in space. I want to make sure the children in elementary schools around the country right now become the next generation of space pioneers. As leaders of the space legal community, you have an important role to play. I look forward to working with all of you to make the promise of a thriving commercial space industry a reality. Thank you again for allowing me to speak with you today.

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