July 12, 2024

Good Afternoon!

This is Akin's biweekly policy newsletter on space policy and regulatory developments, providing information on major space headlines and forthcoming space-related events and hearings:

On The Hill

Articles and Quotes

Science Committee Passes NASA Reauthorization Legislation (House Committee on Science Space and Technology)

The House Science, Space and Technology Committee has passed H.R. 8958, the National Aeronautics and Space Administration (NASA) Reauthorization Act of 2024, with bipartisan support. The bill authorizes $25.225 billion for NASA in fiscal year 2025. It supports key NASA programs including the Space Launch System (SLS), International Space Station operations and Artemis missions. The bill mandates reports on various topics, such as non-NASA demand for SLS and the feasibility of reboosting the Hubble Space Telescope. It ensures continued operation of the Chandra X-ray Observatory and directs NASA to reconsider the GeoCarb mission for greenhouse gas monitoring.

Committee Approves FY25 Commerce, Justice, Science, and Related Agencies Appropriations Act (House Appropriations Committee)

The House Appropriations Committee has approved the Fiscal Year 2025 (FY25) Commerce, Justice, Science and Related Agencies Appropriations Act with a vote of 31 to 26. The $78.288 billion bill, which is 2% less than the previous year's budget, contains provisions emphasizing American leadership in space including NASA missions to study asteroid and orbital debris.

Reed and Wicker File Fiscal Year 2025 National Defense Authorization Act (Senate Armed Services Committee)

Senators Jack Reed and Roger Wicker have introduced the National Defense Authorization Act (NDAA) for FY25, S. 4638. The NDAA allocates $911.8 billion for military and national security programs across the Department of Defense and the Department of Energy. This bill outlines the budget and priorities for the upcoming fiscal year, including space domain awareness, space operations and space-based sensing capabilities relating to hypersonic defense.

Rogers, Smith Lead National Security Space Delegation to Europe (House Armed Services Committee)

U.S. Representatives Mike Rogers and Adam Smith led a bipartisan delegation to Luxembourg, France and Italy to discuss National Security Space cooperation. The group emphasized the need to counter growing space threats from China and Russia, which have turned space into a warfighting domain. They highlighted the importance of working with allies to enhance space situational awareness and build resilience through the North Atlantic Treaty Organization (NATO) and other alliances. During their visit, they met U.S. Space Force personnel in Italy and stressed the need for NATO allies to meet defense spending commitments to maintain a strong and capable alliance.

Introduced Legislation

The House Science, Space and Technology Committee introduced **H.R. 8958**, the NASA Reauthorization Act of 2024. The Reauthorization Act reaffirms the United States' commitment to human space exploration, supports the Artemis and Moon to Mars programs, facilitates the development of the low-Earth orbit economy, promotes space and aeronautics technology development, and fosters scientific discovery. Please see the bill text **here**, fact sheet **here** and section-by-section **here**.

Sens. Jack Reed (D-RI) and Roger Wicker (R-MS) introduced **S. 4638**, the Senate NDAA for FY25 on Monday, July 8. The Senate NDAA allocates $911.8 billion for military and national security programs across the Department of Defense and the Department of Energy. Please see the bill text **here**.

*Please find our Space Legislation Tracker **here**.*

Recent and Upcoming Congressional Hearings

July 8 - July 26, 2024

On Tuesday, July 9, the House Appropriations Committee favorably reported **H.R. 5893**, the FY25 Commerce, Justice, Science and Related Agencies Act, to the House floor in a 31-26 vote. Please see the full committee mark **here**. Please find a high-level summary of the hearing **here**.

On Wednesday, July 10, the House Science, Space and Technology Committee favorably reported **H.R. 8958**, the NASA Reauthorization Act of 2024, to the House floor in a 38-0 vote. Please see the full committee mark **here**. Please find a high-level summary of the hearing **here**.

There are no hearings or markups publicly scheduled in the Senate or House from July 15-26, 2024.

In The Executive Branch

Articles and Quotes

Military Space Trackers to Keep Public Informed on Starlink Satellite Reentries (*SpaceNews*)

U.S. Space Command announced it will closely monitor the controlled deorbiting of about 100 Starlink satellites, an operation SpaceX initiated in February due to potential issues with early version 1 models. This deorbiting process, expected to span several months, is larger than usual and aims to safely lower satellites from low Earth orbit. Space-Track.org will provide public reentry data for each satellite.

Starliner to Remain on ISS for More Thruster Tests (*SpaceNews*)

NASA and Boeing are extending the CST-100 Starliner's stay at the International Space Station into late July to conduct further tests on thruster malfunctions and helium leaks. NASA emphasized that astronauts Butch Wilmore and Suni Williams are not stranded and will return home safely. The additional testing, including ground-based thruster tests at White Sands, aims to understand and resolve these issues. The mission's extended duration affects the vehicle's certification for future crew rotations, initially planned for November.

SpaceX Launches Second Batch of Satellites for NRO's Proliferated Constellation (*SpaceNews*)

SpaceX launched the NROL-186 mission for the National Reconnaissance Office on June 28 from Vandenberg Space Force Base, California. This marks the second batch of satellites in a new imaging constellation built by SpaceX and Northrop Grumman. The number of satellites remains undisclosed. The first-stage booster successfully landed on a drone ship, marking SpaceX's 326th booster landing. Half a dozen additional launches are planned for 2024, with more expected through 2028.

Blue Origin, Stoke Space Selected By U.S. Space Force to Compete for Small Satellite Missions (*SpaceNews*)

The U.S. Space Force has added Blue Origin and Stoke Space Technologies to its Orbital Services Program-4 (OSP-4), enabling them to compete for small-satellite missions. Established in 2019, OSP-4 is an Indefinite Delivery/Indefinite Quantity (IDIQ) contract that leverages commercial launch capabilities for rapid-response missions. With a $986 million ceiling through 2028, the program has awarded seven missions worth over $190 million. Blue Origin's inclusion follows its National Security Space Launch Phase 3 selection, while Stoke Space targets its first orbital test in 2025.

SpaceX Wins NASA Contract to Launch Gamma-Ray Astronomy Mission (*SpaceNews*)

NASA has awarded SpaceX a $69 million contract to launch the Compton Spectrometer and Imager (COSI) spacecraft in August 2027 on a Falcon 9 rocket. COSI, part of NASA's Small Explorer-class (SMEX) program, aims to detect soft gamma rays from galactic and extragalactic sources. Initially scheduled for 2025, the mission's launch was delayed to 2027 to reduce near-term costs, increasing the overall budget. NASA is also addressing budget constraints by extending the design phases of other missions, including the Ultraviolet Explorer (UVEX) spacecraft, and exploring cost-saving measures for existing projects like the Chandra and Hubble observatories.

Crew of NASA's Earthbound Simulated Mars Habitat Emerge After a Year (*AP News)*

NASA's simulated Mars mission concluded with four volunteers emerging after over a year inside a 3D-printed habitat at Johnson Space Center, Houston. This simulation aimed to mimic the challenges of a real Mars mission, including isolation, limited resources, and delayed communication. The crew conducted "Marswalks," grew vegetables, and focused on nutrition's impact on performance. This experiment is part of NASA's Crew Health and Performance Exploration Analog (CHAPEA) project, with two more missions planned. The

crew emphasized the importance of sustainable living and the potential for space exploration to unite humanity and inspire future generations.

SpaceX Wins Contract to Bring International Space Station Out of Orbit (*The Hill*)

NASA has selected SpaceX to build the vehicle that will deorbit the International Space Station by 2030, awarding them an $843 million contract. The U.S. Deorbit Vehicle will safely guide the space station out of orbit, ensuring it breaks up without risk to populated areas. This decision supports NASA's plans for future commercial space destinations and allows continued use of low Earth orbit. The International Space Station, operational since 1998 and managed by five space agencies, will cease operations by 2030.

Federal Agency Space News

National Aeronautics and Space Administration

NASA Moon Rocket Stage for Artemis II Moved, Prepped for Shipment (July 8, 2024)

Eight CubeSats Lift Off for NASA on Firefly Aerospace Rocket! (July 4, 2024)

NASA's Planetary Radar Tracks Two Large Asteroid Close Approaches (July 3, 2024)

Volunteer Crew to Exit NASA's Simulated Mars Habitat After 378 Days (July 2, 2024)

NASA Awards Launch Services Contract for Space Telescope Mission (July 2, 2024)

NASA Asteroid Experts Create Hypothetical Impact Scenario for Exercise (July 2, 2024)

NASA Stennis Achieves Primary Success for Historic In-Space Mission (July 2, 2024)

NASA Shares Use Requirements with Commercial Destination Partners (July 2, 2024)

NASA Awards Support STEM Research at Minority Serving Institutions (July 1, 2024)

Behind the Scenes of a NASA 'Moonwalk' in the Arizona Desert (July 1, 2024)

NASA Announces Winners of Inaugural Human Lander Challenge (June 28, 2024)

NASA Shares Two New Moon to Mars Architecture White Papers (June 28, 2024)

NASA Awards Contract for Cargo Mission Support (June 27, 2024)

NASA Kennedy Team Recognized During White House Sustainability Awards (June 27, 2024)

NASA Parachute Sensor Testing Could Make EPIC Mars Landings (June 27, 2024)

NASA Selects International Space Station US Deorbit Vehicle (June 26, 2024)

Detective Work Enables Perseverance Team to Revive SHERLOC Instrument (June 26, 2024)

NOAA's GOES-U Satellite Launches (June 26, 2024)

Federal Communications Commission

Upgraded International Communications Filing System (ICFS) Preview (June 26, 2024)

U.S. Space Force

Lockheed Martin Receives Laser Retroflector Arrays for GPS III SV9, SV10 (July 9, 2024)

Satellite Communications Mission Brings Space Force to Navy Town (July 5, 2024)

Patrick Space Force Base Wins Annual Installation Award (July 5, 2024)

SpOC Commander, CMSSF Visit Space Delta 4 (July 5, 2024)

Space Delta 9 Welcomes New Orbital Warfare Commander (July 3, 2024)

USSF Leadership Highlights Military Women's Challenges, Opportunities (July 2, 2024)

King, Queen of Denmark, Greenland Prime Minister Visit Pituffik SB (July 1, 2024)

Combat-Ready – Embracing a New US Space Force Generational Model (July 1, 2024)

NSIC Changes Commanders, Redesignated Field Operating Agency (July 1, 2024)

Space Delta 8 Welcomes New SATCOM Commander (June 28, 2024)

Space Force Releases Promotion Cycle Statistics (June 24, 2024)

Check out below for comment opportunities, requests for proposals, notices of proposed rulemaking and a look at the week ahead in space events:

Comment Opportunities (RFIs)

Information Collection: NASA Applied Remote Sensing Training Program Follow-Up Survey

National Aeronautical and Space Administration
Close Date: Aug 5, 2024

Federal Acquisition Regulation: Prohibition on Certain Semiconductor Products and Services

Department of Defense, National Aeronautical and Space Administration, & General Services Administration
Close Date: Aug 2, 2024

Centennial Challenges Program LunaRecycle Challenge Request for Information

National Aeronautical and Space Administration
Close Date: Aug 2, 2024

Requests for Proposals (RFPs)

Living with a Star Science

National Aeronautics and Space Administration
Close Date: Aug 13, 2024

Artificial Intelligence Applications in Heliophysics

National Aeronautics and Space Administration
Close Date: Aug 20, 2024

NASA Technical Standards System (NTSS)

National Aeronautics and Space Administration
Close Date: Jan 22, 2025

ROSES 2024: A.36 The Science of PACE

National Aeronautics and Space Administration
Close Date: Jan 22, 2025

Heliophysics U.S. Participating Investigator

National Aeronautics and Space Administration
Close Date: Jan 29, 2025

TECHNOLOGY TRANSFER OPPORTUNITY: Smart Coating for Corrosion Detection and Protection (KSC-TOPS-1)

National Aeronautics and Space Administration
Close Date: Jun 4, 2025
*Request to License

Notices of Proposed Rulemakings (NPRMs)

There are no new notices or proposed rules.

International

Articles and Quotes

Putting Data Centers in Space Could Reduce Their Carbon Footprint, European Study Finds (***The Wall Street Journal***)

A European initiative led by Thales Alenia Space has determined that building data centers in space is economically viable and could significantly reduce the carbon footprint of data infrastructure. The Ascend study, funded by the European Union (EU), compared space-based and Earth-based data centers, finding that space centers powered by solar energy could support the EU's carbon neutrality goals by 2050. These centers, which wouldn't need water for cooling, could also yield a return on investment of several billion euros by 2050.

China Gears Up for Deep Space Missions After Collecting 1,935 Grams of Lunar Far Side Samples (***SpaceNews***)

China has successfully completed the Chang'e-6 mission, retrieving 1,935 grams of lunar samples from the Moon's far side. The mission, which ended on June 25, aims to provide insights into lunar geology, particularly the South Pole-Aitken Basin. The samples are expected to be available for domestic research in six months and internationally in two years. Additionally, China plans further deep space missions, including asteroid and comet exploration, and Mars and Jupiter missions by 2030.

Europe's Space Funding Gap Threatens Industry Potential (***SpaceNews***)

Europe needs better capital allocation for its space industry to capitalize on early-stage investments, warns Bogdan Gogulan, CEO of NewSpace Capital. The European Space Policy Institute reports that while Europe averages 96 space investment deals annually, close to the U.S.'s 114, it lags in total investment, with €1.4 billion compared to the U.S.'s €6.3 billion.

Chinese Rocket Static-Fire Test Results in Unintended Launch and Huge Explosion (*SpaceNews*)

Space Pioneer's Tianlong-3 rocket stage test in Gongyi, Henan, ended in an explosion after unexpectedly launching and crashing back to Earth. The mishap occurred during a static-fire test and caused no casualties but may delay the rocket's upcoming orbital launch, initially planned for Wenchang spaceport.

Low-Intensity Explosion Caused Russian Satellite to Spew Debris (*SpaceNews*)

A Russian satellite, Resurs P1, likely experienced a "low-intensity explosion," generating over 100 debris fragments in low Earth orbit, reports LeoLabs. The breakup, first noted on June 26, stems from either a collision or an internal malfunction. Although the main satellite remains intact, the debris poses risks to other satellites and space stations.

Kazakhstan Joins China's ILRS Moon Base Program (*SpaceNews*)

During Chinese President Xi Jinping's visit to Kazakhstan, the two countries signed 30 agreements, including one focused on space cooperation that would have Kazakhstan join China's International Lunar Research Station (ILRS) initiative. The partnership aims to enhance collaboration between their aerospace agencies and explore commercial uses of their spaceports. This move supports China's ambitions to build a permanent lunar base by the 2030s, parallel to NASA's Artemis Program. Kazakhstan is the 12th country to join ILRS.

SpaceX Launches Turkey's First Home-Grown Communications Satellite (*SpaceNews*)

SpaceX successfully launched Turkey's first domestically built communications satellite, Turksat 6A, on July 8. The satellite, which will be operated by Turksat, lifted off on a Falcon 9 rocket from Cape Canaveral, Florida, and will provide TV and communication services across Europe, the Middle East and Asia, including new coverage areas like India, Thailand, Malaysia and Indonesia.

Russia Plans to Create Core of New Space Station by 2030 (Reuters)

Russia's Roscosmos space agency plans to establish a new four-module orbital space station by 2030, with the first module launching in 2027. This initiative follows Russia's announcement to withdraw from the International Space Station (ISS) by 2028, citing the need for independent scientific and technological advancements. The new station will support national security and economic goals unattainable under current ISS constraints. The project also includes developing new crewed spacecraft, rockets, and ground infrastructure.

SERA Names India as Partner Country for Blue Origin Space Flight (Reuters)

The U.S.-based Space Exploration and Research Agency (SERA) has announced India's participation in its human spaceflight program, partnering with Blue Origin. The program will launch six citizen astronauts from countries with limited spaceflight history into space using Blue Origin's New Shepard rocket. Indian citizens can apply for a chance to join the 11-minute suborbital journey by paying a $2.50 verification fee and meeting physical requirements. The final candidate will be selected through public voting. This initiative aims to promote international collaboration in space exploration and make space travel more accessible.

Europe Rejoins Space Race but New Rocket's Flight Ends in Anomaly (*The New York Times*)

On July 9, the European Space Agency's Ariane 6 rocket successfully launched from French Guiana, marking a significant milestone after years of delays. The rocket, developed by ArianeGroup, deployed several small satellites into orbit. However, a final phase anomaly prevented it from reaching the required altitude for the last payload. Despite this, officials are confident about future launches. Ariane 6 aims to restore Europe's independent space access, crucial for climate monitoring and exploration. Critics question its competitiveness due to outdated technology and high costs. Nonetheless, Ariane 6 has 30 launches scheduled through 2028, including missions for Amazon's Project Kuiper.

Upcoming Space Events

UN/Austria Symposium 2024 "Climate action: transforming space-based technology projects into sustainable services that support policy-making"

UNOOSA

July 17-18, 2024

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Questions?

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