



November 22, 2024

The Honorable Jeanne Shaheen  
Chair, Subcommittee on Commerce, Justice,  
Science and Related Agencies  
Committee on Appropriations  
Room S-128, The Capitol  
Washington, D.C. 20510

The Honorable Hal Rogers  
Chair, Subcommittee on Commerce, Justice,  
Science and Related Agencies  
Committee on Appropriations  
H-310, The Capitol  
Washington, D.C. 20515

The Honorable Jerry Moran  
Ranking Member, Subcommittee on Commerce,  
Justice, Science and Related Agencies  
Committee on Appropriations  
Room S-128, The Capitol  
Washington, D.C. 20510

The Honorable Matt Cartwright  
Ranking Member, Subcommittee on Commerce,  
Justice, Science and Related Agencies  
Committee on Appropriations  
Washington, D.C. 20515

Dear Chair Shaheen, Ranking Member Moran, Chair Rogers, and Ranking Member Cartwright:

The Coalition for Aerospace and Science (CAS) is an alliance of prominent industry, academic, and scientific organizations united in support of robust and sustained federal investment in the National Aeronautics and Space Administration (NASA). **We request Congress appropriate at least \$25.43 billion for Fiscal Year 2025, an ambitious but justifiable increase that maintains development of key Artemis program elements; continues development of a balanced portfolio of science missions and research; and provides the funding growth needed to accommodate new and expanded technology development programs and scientific endeavors that will support the next generation of breakthrough research and exploration.**

CAS appreciates House and Senate efforts to increase NASA's funding during the FY 2024 appropriations process despite the constrained funding environment. As such, the Coalition's FY 2025 appropriations request of \$25.43 billion is based on the laudable House and Senate marks. This approach is consistent with past requests by CAS that always prioritized robust and inflation-adjusted growth.

NASA's broad profile of activities preserves the U.S.'s global leadership role in space and reflects the growth of the sector and increasing demands placed upon NASA and its partners. This budget addresses: (1) priorities from the National Academies' decadal surveys recommendation including for astronomy and astrophysics, and planetary science and astrobiology, (2) progress of the Artemis program in building a sustainable lunar architecture, including landing the first woman and person of color on the Moon in 2025, and (3) scientific and technological work preceding human exploration of Mars, all while maintaining an enduring American presence in low Earth orbit (LEO). Stagnation in funding would undermine these critical efforts by jeopardizing existing schedules and creating uncertainty for our aerospace manufacturing and R&D workforces.

Each member of CAS works with NASA on critical research, missions, and programs throughout the agency. Thereby, each member of the coalition understands that healthy growth in funding and support for NASA overall has a positive impact on individual priorities. CAS requests Congress give specific attention to the following programs.

## SCIENCE

**CAS requests at least \$7.69 billion for NASA's Science Mission Directorate (SMD).** This would maintain the current slate of SMD activities while accommodating the planned cost peaks of missions in development, enable new competitive mission opportunities across all mission sizes, and continue support for individual investigator grant programs that are crucial for supporting the next generation of researchers. NASA would also have resources to begin implementing recommendations from the recent decadal surveys in astrophysics and astronomy, planetary science and astrobiology, and biological and physical sciences, as well as, the upcoming decadal in heliophysics. Additional rationale for CAS's request includes the following priorities:

- **Planetary Science:** The Coalition requests \$2.9 billion for Planetary Science. This includes support for the Mars Sample Return mission, the Planetary Defense Coordination Office, support for upcoming announcements of opportunities for the Discovery and New Frontiers programs, and funding to begin formulation for the highest-priority planetary flagship mission following Mars Sample Return: the Uranus Orbiter and Probe.
- **Earth Science:** The Coalition requests \$2.4 billion for Earth Science. This funding level would support NASA's new Earth System Explorer PI-led mission class, increase support for the Earth Science Technology Office and support for the new Responsive Science Initiatives. CAS also supports NASA's completion of its Earth System Observatory (ESO) by the end of the 2020s and encourages NASA to work with industry to the maximum extent possible to support completing the ESO constellation within the decade.
- **Astrophysics:** The Coalition requests \$1.58 billion for Astrophysics. This includes continued development for the Nancy Grace Roman Space Telescope, support for the new decadal-recommended astrophysics Probe missions, and the budgetary flexibility to begin technology maturation in the context of the new Habitable Worlds Observatory.
- **Heliophysics:** The Coalition requests \$811 million for Heliophysics to continue the program of record, fund a range of novel missions, such as the recently-selected MIDEX mission, and support human space exploration efforts through improved characterization of the radiation environment around Earth, the Moon, and Mars, and prepare for the new initiatives from the upcoming decadal survey.

## SPACE TECHNOLOGY

**CAS requests \$1.2 billion for the Space Technology Mission Directorate (STMD).** Since its inception, STMD has focused on improving NASA's technological capabilities across a wide array of areas—from propulsion and power generation to materials science and high-performance computing—that help the agency achieve mission requirements across all its directorates. Specifically, CAS requests:

- A new "OPEN" solicitation modeled after the eponymous ARPA-E funding call, a highly successful and competitive triennial program that solicits "blue sky" technology development proposal. As the "ARPA" for space, STMD can expand its ability to leverage university-based, cross-disciplinary research through an "OPEN" mechanism that matures critical technologies aligned with its priority taxonomies. The current "Tipping Point" program targets this TRL range; however, eligibility and funding structure is oriented exclusively to industry.
- Increased support for industry and academic partnerships including for the Early Stage Innovation Program; and
- Development and demonstration of a nuclear thermal propulsion system and for fission surface power for demonstration by 2027.

## EXPLORATION SYSTEMS DEVELOPMENT

**CAS requests \$7.6 billion for the Exploration Systems Development Mission Directorate.** NASA's human exploration agenda – and the global visibility and prestige it confers – is an unparalleled national asset that has spurred immeasurable economic, inspirational, and geopolitical benefits. CAS requests Congress continue to support NASA's Artemis program and recommends continued support for the **Space Launch System; the Orion spacecraft; and for Exploration Ground Systems.** These foundational systems will soon begin launching a series of exploration missions as part of NASA's Artemis program that will not only carry Americans to the Moon but will establish the critical infrastructure for humanity's first crewed missions to Mars.

## SPACE OPERATIONS

**CAS requests \$4.4 billion for the Space Operations Mission Directorate (SOMD).** The Coalition requests that SOMD maintain its support for the International Space Station and Commercial Crew and Cargo programs, and the **Commercial LEO Development (CLD)** program. Given the uncertain future of the NASA-Roscosmos partnership, CAS encourages Congress to allocate funding above this request to accelerate CLD activities and develop contingencies should Russia terminate its commitments to the partnership.

## AERONAUTICS

**CAS requests \$965 million for the Aeronautics Research Mission Directorate (ARMD).** This would provide the much-needed increase in funding for subsonic, supersonic, and hypersonic flight technologies and flight demonstrations. Research from this directorate develops technologies that transform the way we fly by lowering operating costs, increasing flight efficiency, and reducing aviation related environmental impacts. ARMD is critical to the United States' leadership in hypersonic technologies and systems while also advancing research on Unmanned Aircraft Systems for safe integration into the national airspace system.

## STEM ENGAGEMENT

**CAS requests \$143.5 million for the Office of STEM Engagement (OSTEM)** and supports NASA's efforts to expand and strengthen its STEM workforce. NASA must attract, fully engage, and retain the best talent available in the face of stiff competition from other science and technology sectors. Within this amount includes **\$58.5 million for the National Space Grant College and Fellowship program.** OSTEM's Space Grant program serves to strengthen and promote a national network of state-based programs in partnership with NASA to develop, sustain and expand a competitive STEM workforce, improve STEM-based learning opportunities for all students, and further the progress of space and earth sciences and engineering that transforms our future and sustains American leadership.

Sincerely,