

September 8, 2011

The Honorable Barbara Mikulski
Chairman
Appropriations Subcommittee on Commerce, Justice, and Science
503 Hart Senate Office Building
Washington, D.C. 20510

The Honorable Kay Bailey Hutchison
Ranking Member
Appropriations Subcommittee on Commerce, Justice, and Science
284 Russell Senate Office Building
Washington, D.C. 20510

Dear Chairman Mikulski and Ranking Member Hutchison,

On behalf of the Commercial Spaceflight Federation, universities, both small and large businesses in the aerospace industry, and the space-science research community, we write in support of the National Aeronautics and Space Administration (NASA) Space Technology program for fiscal year (FY) 2012. We urge you to support the program at a level of at least \$535 million plus costs to cover the NASA labor transition. Space Technology is a critical priority for several reasons:

1. It enables our future in space. By investing in high-payoff technology, space technology advances the capabilities that will be utilized for NASA's future missions in science and exploration.
2. It enhances our economic competitiveness. As recognized by Congress in the America COMPETES Act, our nation's economic competitiveness and high standard of living are based on decades of investment in innovation, research, and technology. Through space technology, NASA will stimulate the economy and build America's global economic competitiveness through the creation of new products and services, new businesses and industries, and high-quality, sustainable jobs across NASA Centers, universities, and both small and large businesses.
3. Investments in space technology have consistently improved quality of life on Earth. Some of the benefits provided by America's investments in aerospace technology include knowledge provided by weather and navigational spacecraft, efficiency improvements in both ground and air transportation, biomedical applications including blood-flow monitoring devices, pacemakers, and Lasik eye surgery, as well as the protective armor that keeps our military, firefighters, and police safe. By investing in Space Technology, NASA will continue to improve our lives.

Additionally, the funding of Space Technology is essential to inspire future generations to consider science, technology, engineering, and mathematics (STEM) career paths. Given that our nation faces times of fiscal austerity, we urge you to support at least \$535 million for NASA's Space Technology program in FY 2012. These investments in human exploration, telerobotics, in-space propulsion, deep-space communication and navigation, space power generation and storage, next-generation life support, and radiation protection are all documented requirements for NASA to extend human presence beyond low-Earth orbit. The programs now under the Office of the Chief Technologist were authorized at a combined total of approximately \$800 million in the NASA Authorization Act of 2010. The National Research Council, in its preliminary report on NASA technology issued on August 31, 2011, stated, "NASA's technology base is largely depleted [and] success in executing future NASA space missions will depend on advanced technology developments that should already be underway." Furthermore, the

report notes, "Currently available technology is insufficient to accomplish many intended space missions." In FY 2011, Space Technology consists of on-going mission-focused technology development activities carried into the program from FY 2010 and a limited number of competitive awards made to academia, industry, and the NASA Centers. In many cases, these same technology activities will mature capabilities that are also required for NASA's future science missions as identified in National Research Council Decadal Surveys.

If funded at the current House Appropriations Subcommittee level of \$375M in FY 2012, Space Technology will not fulfill its potential. Under this funding constraint, ongoing activities required for NASA's future deep space missions like satellite servicing, composite cryotanks, human-robotic systems, high-bandwidth communication, aero-decelerators, radiation protection, in-space propulsion, and power generation and storage are at risk of being drastically rescopeed or cancelled. In addition, ongoing programs like the Center Innovation Fund, Centennial Challenges, and Commercial Reusable Suborbital Research, as well as planned space flight technology demonstration missions in cryogenic propellant storage and transfer and in-space propulsion, are at risk.

The Space Technology program is a critical investment in NASA's future, our nation's future in space, and America's technology leadership position in the world. We urge you to support NASA's Space Technology program at a level of at least \$535 million in FY 2012.

Thank you for your consideration.

Sincerely,

Aerojet
Andrews Space
Arizona State University
Bigelow Aerospace
Blue Origin
Brown University
California Institute of Technology
Carnegie Mellon University
Commercial Spaceflight Federation
DCI Services & Consulting
Ecliptic Enterprises Corporation
Environmental Tectonics Corporation's NASTAR Center
Esther Dyson
Excalibur Almaz
Georgia Institute of Technology
Harvard University
Innovative Health Applications
Massachusetts Institute of Technology
Masten Space Systems
MDA Corporation
Mojave Air and Space Port
New Mexico State University
Oklahoma Space Authority
Orbital Sciences Corporation

Orbitec

Paragon Space Development Corporation

Pratt & Whitney Rocketdyne

Raytheon

Richard Garriott

RS&H

Sierra Nevada Space Systems

Southwest Research Institute

Space Florida

SpaceX

The Ohio State University

The Spaceship Company

Triumph Aerospace Systems - Newport News

University of Cincinnati

University of Houston

University of Illinois

University of New Hampshire

University of Southern California

Virgin Galactic

Xcor

X PRIZE Foundation

cc:

Senate Appropriations Committee Chairman Daniel Inouye

Senate Appropriations Committee Ranking Member Thad Cochran