



Statement of Ranking Member Brian Babin

Space and Aeronautics Subcommittee Hearing: Discovery on the Frontiers of Space: Exploring NASA's Science Mission

June 11, 2019

Year after year NASA amazes the world with new wonders to behold, and the Science Mission Directorate at NASA makes that happen. The Hubble Space Telescope has informed our understanding of the age of the universe, its rate of expansion, and provided a breathtaking perspective of our place in the cosmos with its Deep Field Image.

Other observatories like the Compton Gamma Ray Observatory, the Chandra X-ray Observatory, and the Spitzer Space Telescope returned stunning images of our universe's astronomical phenomena like supernova and neutron stars. The Curiosity Rover observed whirlwinds called "dust devils" on Mars and continues to search for the building blocks of life on the red planet. We've sent probes to every planet in our solar system, traveled through the rings of Saturn and landed on its surface with the Cassini-Huygens mission, explored Jupiter and its fascinating moons with the Galileo and Juno missions, and most recently visited Pluto with the New Horizons probe and revealed its heart-shaped icy surface.

We've located, tracked, characterized, and visited asteroids and comets with missions like Stardust, Deep Impact, WISE, and Dawn. NASA missions like Kepler and the TESS discovered thousands of planets around other stars, some of which may be in habitable zones that could harbor life. We've sent spacecraft like the Parker Solar Probe to interrogate the Sun, and beyond the solar system into interstellar space with the Voyager spacecraft.

NASA developed the next generation of weather satellites for NOAA that decreases the warning time for severe weather events like hurricanes and tornados, provides more reliable forecasts for farmers, fishermen, pilots, and every American. These are stunning achievements.

However - NASA has more to offer. NASA continues to develop the James Webb Space Telescope, the flagship follow-on to the Hubble Space Telescope, that stands to fundamentally rewrite textbooks. The Europa Clipper mission will explore Jupiter's icy ocean world that has intrigued scientists because of its potential to harbor life. Lucy and Psyche will explore unique asteroids, and Osiris-Rex will even return a sample to Earth. The Mars 2020 rover will also prepare and store samples for a future sample return mission. We live in an exciting time.

As NASA continues to awe us with scientific discoveries, we should be mindful that the Science Mission Directorate is also responsible for critical national missions that go beyond science. Congress charged NASA to find 90 percent of 140-meter asteroids that could harm Earth by 2020. NASA carries out this vital task through SMD's Planetary Defense Coordination Office. NASA also operates a fleet of heliophysics spacecraft that informs our understanding of space weather that impacts everything from the electrical grid to communications and GPS signals. Similarly, NASA's Joint Agency Satellite Division manages the development of our nation's critical weather satellites that serve as the backbone of weather forecasting.

The Administration's budget request for science is strong. While it is a reduction from the FY19 appropriation, it represents the highest budget request in history. The request was developed before the final appropriation for FY19 was determined. If you compare this request to the final budget request from the Obama Administration, which many on this committee supported, this request is much stronger. This request represents an increase of \$1.1 billion (about 21 percent) over President Obama's last budget request for discretionary spending in FY17. That same FY17 budget request from the previous Administration projected a notional FY20 request of \$5.627 billion. President Trump's proposed science budget is \$6.39 billion. That is \$767 million, or 13.6 percent, more than President Obama planned for FY20. This is a solid request for science at NASA, but that doesn't mean we should let our guard down.

Cost overruns like those experienced by JWST, the Mars 2020 rover, and ICESat-2 come at the expense of other missions like WFIRST and PACE and threaten the health of not just the Science Mission Directorate, but also the entire agency. That's why strong leadership is required to instill discipline in program management early and often. Tough choices have to be made to ensure that overruns do not threaten existing and future missions. The nation's space science enterprise can't afford to have another JWST or ICESat-2.