



NSS/SFF 2015 August Home District Blitz Talking Points

An NSS Position Statement

Approved July 29, 2015



Who are we?

- **About the National Space Society (NSS):** NSS is an independent non-profit educational membership organization dedicated to the creation of a spacefaring civilization. NSS is widely acknowledged as the preeminent citizen's voice on space, with over 50 chapters in the United States and around the world. The Society publishes Ad Astra magazine, an award-winning periodical chronicling the most important developments in space. To learn more, visit www.nss.org.
- **About the Space Frontier Foundation:** The Space Frontier Foundation is an organization of people dedicated to opening the Space Frontier to human settlement as rapidly as possible. The SFF mission is to protect the Earth's fragile biosphere and create a freer and more prosperous life for each generation by using the energy and material resources of space. SFF looks to unleash the power of free enterprise and lead a united humanity permanently into the Solar System. To learn more visit www.spacefrontier.org.
- **Contacts:**

NSS Press Contact
Fred Becker
[\(321\) 271-9064](tel:(321)271-9064)
Media2015@nss.org

SFF Press Contract
Alexandra Abrams
[\(925\) 918-0081](tel:(925)918-0081)
alexandra.abrams@spacefrontier.org

NSS Policy Chair
Dale Skran
dale.skran@nss.org

SFF Policy Director
Aaron Oesterle
Aaron.oesterle@spacefrontier.org



America Needs to Pass – The Space Exploration, Development, and Settlement Act (SEDS Act)

- The 2015 *Pioneering Space National Summit* declared that: **The long term goal of the human spaceflight and exploration program of the United States is to expand permanent human presence beyond low-Earth orbit and to do so in a way that will enable human settlement and a thriving space economy.**
- The SEDS Act modifies the original Act creating NASA to permanently add space development and settlement as on-going goals for NASA.
- It gives American space policy a true long-term goal to work toward:
 - The 2010 NASA Authorization Act is consistent with the goals of development and settlement, but did not explicitly establish development and settlement as a fundamental part of why we go into space.
- Space settlement is an idea that inspires ... and so it will inspire a new generation to go into STEM fields.
- Space development and associated settlement has the potential to create an exponentially growing space-based economy, leading toward vast economic growth and abundant resources on Earth.
- It will provide humanity with a better chance for long-term survival.



SEDS Request

- House
 - Rep. Dana Rohrabacher is the primary co-sponsor in the House.
 - Looking for a Democrat primary co-sponsor in the House.
 - Contact Tony DeTora at tony.detora@mail.house.gov for coordination.
- Senate
 - Looking for both Republican and Democrat primary co-sponsors in the Senate

Full Funding for NASA's Commercial Crew Program



- Full funding for Commercial Crew (CC) in 2016 budget is critical
 - **American Independence in Space:** Currently, the only way Americans can fly to the ISS is on the Russian Soyuz. Soyuz prices are \$70M per seat and growing at 9% per year. This adds up to over \$400 million per year we are sending to Russia.
 - **Economic Growth:** Congress can bring aerospace jobs back from Russia and enable a new U.S. commercial industry to fly international researchers and citizen astronauts to Earth orbit.
 - **Expanded use of the ISS:** CC will enable the ISS crew size to grow immediately from 6 to 7 astronauts, roughly doubling the amount of research-hours NASA gets from ISS
 - **Significant risk reduction:** The development of two American crew transportation solutions will provide “dissimilar redundancy,” providing a backup to a failure in one system.

Commercial Crew Request

- Current status:
 - Administration requested \$1.243B
 - House authorized full \$1.243B
 - House appropriated only \$1B
 - Senate appropriated only \$900M
 - NASA has warned that failure to fully fund will lead to further program delays
- Request:
 - **Fully fund CC in House/Senate Conference at \$1.243B**
 - **NASA should be allowed to manage Commercial Crew as it has successfully managed COTS/CRS.** Congress must not micromanage the process via the imposition of additional burdensome requirements on NASA and the CC suppliers such as complex government accounting procedures.
 - **Under no circumstances should Congress remove competition from CC by forcing down-select to one vendor.** Continued competition between Boeing and SpaceX is critical to making the CC program robust and reliable and to lowering costs in the long-term.

Gapless Transition from ISS to Commercial Space Stations



- **BACKGROUND:** The U.S. and our partners have invested over \$140B in building and operating the International Space Station (ISS). The ISS has just started to produce scientific and commercial dividends.
- **PROBLEM 1:** Present U.S. and Russian policy is to deorbit the ISS in 2024. The ISS has the potential to operate until 2028 and beyond, but Russia plans to remove modules to create their own space station in 2024 and will no longer reboost the ISS. **Without the Russian reboost, the ISS will rapidly re-enter and burn up.**
- **PROBLEM 2:** The White House and NASA have announced that America will transition to commercially owned and operated space stations after ISS, but NASA has no plan for doing this beyond hoping that someone builds a commercial station. Scientists and corporations are already warning that the limited lifespan of the ISS is a major impediment to doing research on the ISS. **The threat of a gap between access to the ISS and potential future commercial stations could end scientific and commercial work in space long before the ISS ceases operation.**

ISS Gapless Transition Solution & Request



- **THE SOLUTION:** Have NASA use the proven COTS approach that was used to develop commercial ISS cargo delivery services to enhance and eventually replace the ISS with multiple privately-owned, commercially-operated stations, including:
 - Helping commercial companies build and operate new ISS modules and space stations with technical assistance, facilities, and partial funding.
 - Transferring existing ISS National Laboratory funding and other application funding to these facilities when they become operational to expand upon current ISS capabilities and allow for a gapless transition of on-going LEO work.
 - Investigating extension of the life of the ISS beyond 2024 using these new commercial modules, which will involve, at a minimum, replacing the Russian reboost capability.
- **THE REQUEST:**
 - Support legislative guidance in NASA authorization and appropriations to use COTS-like methods to develop privately-owned ISS modules and commercial space stations.
 - Support a legislative requirement that NASA assure a gapless transition for current and future users of the ISS national laboratory. **Failing to do this NOW risks an almost immediate decline in usage of the ISS as investigators move to other areas in anticipation of the looming ISS shut-down.**

Planetary Protection via Asteroid Detection



- Millions of objects in space pass through Earth's orbit. Larger asteroids pose threats ranging from the destruction of a city to eliminating humanity entirely.
- Current efforts are small compared to the magnitude of the threat, but for very reasonable funding levels we could have a truly excellent program to protect the Earth from an existential threat.
- The primary initial emphasis should be on detection since we cannot deflect what we cannot see and most of the dangerous asteroids are currently unseen.
- The NSS position paper "Protecting Earth from Cosmic Impacts" lays out the specific projects that need to be funded including:
 - The Large Synoptic Survey Telescope (LSST)
 - The B612 Sentinel
 - The JPL NEOCam
 - Ground based searches including the use of the Arecibo radio telescope
- This paper can be found at:
[http://www.nss.org/legislative/positions/NSS Position Paper Planetary Defense 2014.pdf](http://www.nss.org/legislative/positions/NSS_Position_Paper_Planetary_Defense_2014.pdf)



Planetary Protection Request

- Sponsor legislation to add 1% to the NASA budget to protect the Earth from asteroids and comets with a primary emphasis on detection.
 - This would add about \$180M to the NASA budget
 - We believe, as outlined in “Protecting the Earth from Cosmic Impacts” that this sum would be sufficient to pay for a high-quality program to detect the great majority of potential threats and to do early development of deflection technology for the day when the next threat is found.