

### **WHO WE ARE:**

- Private U.S. citizens who advocate at our own expense for a bold and well-reasoned space agenda worthy of the U.S.

### **NON-PROFIT SUPPORTING ORGANIZATIONS:**

- National Space Society
- Space Frontier Foundation
- Lifeboat Foundation
- Mars Foundation
- Mars Society
- Moon Society
- Students for the Exploration and Development of Space
- Students on Capitol Hill
- Space Development Foundation
- Space Development Steering Committee
- Space for Humanity
- Space Renaissance USA
- Space Tourism Society
- Tea Party in Space
- Waypaver Foundation

1. Make space development and settlement part of NASA's official mission
1. Passage of the Space Frontier Act
1. Support planetary defense by moving NEOCam forward in fiscal year 2020

- Space offers extraordinary value to America and humanity at large.
  - This value comes from accessing the enormous resources of space:
  - The solar energy budget of the solar system is two billion times that of Earth.
- Asteroids are sufficient to create living space over a thousand times greater than the surface of Earth.
- This value can be realized by enabling as many people as possible to live, work, and raise families permanently in space.
- Settlement will require large-scale space economic, technical, artistic, and societal development; creating opportunities for every single person on Earth.
- The world is better off if the best of American values are the foundation of space development settlement - freedom, open markets, opportunity creation, property rights and human rights.
- Given this, we believe that the time has come to publicly declare that space settlement is an important goal for our space activities.

- The Advancing Human Spaceflight Act (S.584), sponsored by John Cornyn (TX-R) and Gary Peters (MI-D) in the Senate had good language addressing this for NASA
- The Senate is currently working on a NASA Authorization bill, which could easily incorporate this settlement language
- The ASD has developed a stand alone bill that address space settlement for NASA, Department of Transportation, and the Department of Commerce, and is looking for a Primary sponsor in the House of Representatives

**Senate Request: Are you willing to encourage the Senate Commerce Committee to include Settlement Language in their NASA Authorization Act?**

**House Request: Are you willing to sponsor the Space Development and Settlement Act?**

- S.919 – The Space Frontier Act is a bill that would help speed space development. This bill would:
  - Allow commercial launch providers to move vehicles back to the experimental permit stage for testing purposes
  - Streamline the regulatory process for Earth observation and remote sensing, a rapidly growing sector in the space economy
  - Authorize a Commercial Low Earth Orbit space station program, while extending the International Space Station
  - Raise the Office of Space Commerce to a Bureau of Space Commerce
- A similar bill last year passed the Senate, and almost passed the House.

**Request: Will you support passage of the Space Frontier Act?**

- In 2013 an asteroid struck near Chelyabinsk, Russia damaging buildings, collapsing a factory roof, shattering windows, and sending hundreds of people to the hospital
- About a million asteroids larger than the Chelyabinsk object (~60 ft) cross Earth's orbit. If we do nothing, roughly 20,000 of these objects are expected to eventually hit Earth
- Potential effects range from city or regional devastation to mass extinction
- The next major impact could be centuries or more in the future or just a few weeks from now
- Humanity has the technical capacity to discover and track and if necessary deflect the vast majority of objects that would cause significant damage on Earth at modest cost
- In an Associated Press poll 68% of respondents said planetary defense very or extremely important, more than any other space activity in the poll

# Why is JPL NEOCam the next critical step in protecting our planet?

- Detection of a potentially hazard is the essential first step in planetary defense
- Current NASA and international efforts to find dangerous Near Earth Objects (NEOs) using only ground-based instruments have inherent limitations:
  - Cannot see in direction of Sun, near the Moon, during daylight, or through clouds
  - The best frequency for detection (infra-red) is absorbed by the atmosphere
- An excellent solution is JPL's NEOCam space-based infrared 0.5 meter telescope
  - Rated #3 of 28 proposals during the recent Discovery mission selection
  - JPL NEOCam will be located at the Earth-Sun L1 point, allowing it to detect football-field sized objects. near Earth, including potential impactors
  - Total procurement costs, including launch, is \$568M spread over six years
- Objective is to find 2/3 of all objects larger than 140 meters in five years
  - Goal is to discover >90% of 140 meter and larger asteroids within 10 years

**Request: Support full funding to enable NEOCam to share a low cost launch in 2024 with the approved Interstellar Mapping and Acceleration Probe (IMAP) mission**