**B612 Foundation Fact Sheet**

*Updated May 10, 2018*

*“We are all citizens of SpaceShip Earth and it is our obligation to protect our planet.”* **Rusty Schweickart**, Apollo 9 Astronaut and Co-founder, B612

**Vision and Mission**

B612 Foundation is the world’s leading non-profit organization dedicated to protecting Earth from asteroid impacts. The organization’s work is divided into two areas: 1) public education and advocacy, and 2) the development of new scientific and technological åprojects within the Asteroid Institute. The foundation is entirely funded by private donations.

**Asteroid Institute**

*“If you look at the history of our planet over 4.5 billion years, it has been struck by asteroids, large and small thousands of times. Science and technology now provide us with the opportunity to change the evolution of the solar system by deflecting Near Earth objects that would otherwise impact Earth.”* Dr. Ed Lu, Executive Director

The vision of the **Asteroid Institute,** a program of B612, is to be the international center of excellence for scientific collaboration on the discovery and deflection of asteroids as well as an incubator for new technologies.

**Current major projects within the Institute include:**

* **The Asteroid Institute Fellows** selects Postdoctoral Fellow, who will work with our partners to conduct collaborative scientific and technical research
* **ADAM**, an open source cloud-based platform for asteroid data analysis and mapping
* **Synthetic Tracking.** Development of a technology to enhance asteroid discovery and tracking from smaller telescopes.

A key focus for the Asteroid Institute is the creation of a **dynamic map** of the inner solar system. The map will be a critical resource for planetary defense, while contributing to our understanding of the origins of our Solar System and future space exploration.

**Asteroid Institute: ADAM Project**

*“The science of the next decade will be driven by data, from a new generation of telescopes and surveys coming online…*” Andy Connolly, Director. DIRAC, University of Washington.

ADAM is a project of the Asteroid Institute to provide the open-sourced, cloud-based infrastructure needed for large-scale orbital dynamics and related computations, related to identifying, tracking and analyzing asteroids. Key attributes include:

* Providing transparency and an open infrastructure, by providing all users with a baseline for comparison and collaboration of asteroid threats.
* Enabling astrodynamics algorithms to be run at an extremely large scale, with many runs simultaneously.
* Increasing the speed of calculations, to enable researchers to see patterns quickly, iterate results, and share this information with collaborators to provide accurate asteroid threat information to decision-makers.

**Asteroid Institute: Synthetic Tracking**

The Asteroid Institute believes that we can revolutionize the discovery of asteroids by enhancing our ability to track millions of asteroids too small to be tracked by existing telescopes. Synthetic Tracking is a technology that compensates for the blurring effect caused by the motion of asteroids, allowing for very long exposure times and the use of small inexpensive telescopes for finding smaller asteroids.

**Collaborators**

Asteroid Institute collaborators include: Caltech, Jet Propulsion Lab (JPL), Southwest Research Institute (SwRI), Analytical Graphics Inc (AGI), Google Cloud, and the Data Intensive Research in Astrophysics and Cosmology Center (DIRAC) at the University of Washington.

**B612 Foundation History**

B612 was founded in 2002, by visionary astronauts Dr. Edward T. Lu, and Russell (Rusty) Schweickart, Apollo 9, with the mission of protecting Earth from dangerous Asteroids by enhancing detection, mapping and deflection of asteroids. In the first ten years of operations was volunteer run, starting in 2012 expanded it’s program activities to include significant technology development and formalized education and advocacy programs. In 2016 the Asteroid Institute was launched. The education programs historically and continues to include public speaking, events and advocacy efforts.

[**Asteroid Day**](https://asteroidday.org/)

In 2014 B612 was the founding partner of Asteroid Day and through this collaboration with other organizations, businesses, science centers, schools and universities, we conduct education and advocacy programs around the world. In 2016, the United Nations officially declared June 30 each year to be “Asteroid Day”, dedicated to global awareness and continuing education of asteroids. June 30 is the anniversary of the Tunguska Asteroid Impact, the largest asteroid impact in recorded history (1908).

* The official Asteroid Day Expert Panel is comprised of experts in planetary science and defense.
* In 2017, in partnership with the Government of Luxembourg, Asteroid Day produced a 24-hour broadcast of educational programing around the world with world leaders and experts in planetary science and planetary defense.

In 2017, supporters of Asteroid Day worldwide, produced more than 1300 events in 200 countries.

**100X Declaration**

*“One of the major threats to intelligent life in our universe is a high probability of an asteroid colliding with inhabitable planets.”* Professor Stephen Hawking

T[he 100x Declaratio](https://asteroidday.org/declaration/)n, introduced for the inaugural Asteroid Day 2014, calls for a 100-fold acceleration in the discovery and tracking of near-Earth asteroids to 100,000 per year, within a decade. To date, tens of thousands of individuals have signed the 100X Declaration, including scores of notable astronauts, entertainers, business executives, academics, and private citizens. The 100X Declaration is available [online](https://asteroidday.org/declaration/) for signing.

**Executives**

**Danica Remy, President**

Danica was elected President of B612 in 2017, and leads the organization’s global efforts to protect Earth from the potential asteroid impacts. She previously served as B612’s COO, and COO of TIDES, and VP of The Well. Ms. Remy has led operations for several business and philanthropic organizations, providing expertise and extensive experience in information technology, facilities, human resources, finance, and government relations, and is a co-founder of Asteroid Day, supported by the Government of Luxembourg and sanctioned by the United Nations as a global day of education and awareness of asteroids.

**Full profile:** https://b612foundation.org/members/danica-remy/

**Dr. Ed Lu, Board Director and co-founder of B612; Executive Director, Asteroid Institute**

Dr. Lu is an explorer whose quest is to map the unknown. As a NASA Astronaut, he flew three missions logging 206 days in space, to construct and live aboard the International Space Station. He earned his undergraduate degree at Cornell University and a PhD from Stanford. Dr.Lu has numerous commendations, including NASA’s highest honor: The Distinguished Service Medal.

**Full profile**: https://b612foundation.org/members/ed-lu/