Asteroid hunters want to launch private telescope

Alicia Chang AP Science Writer

Who will protect us from a killer asteroid? A team of ex-NASA astronauts and scientists thinks it's up to them.

In a bold plan unveiled Thursday, the group wants to launch its own space telescope to spot and track small and mid-sized space rocks capable of wiping out a city or continent. With that information, they could sound early warnings if a rogue asteroid appeared headed toward our planet.

So far, the idea from the B612 Foundation is on paper only.

Such an effort would cost upward of several hundred million dollars, and the group plans to start fundraising. Behind the nonprofit are a space shuttle astronaut, Apollo 9 astronaut, former Mars czar, deep space mission manager along with other non-NASA types.

Asteroids are leftovers from the formation of the solar system some 4.5 billion years ago. Most reside in the asteroid belt between Mars and Jupiter but some get nudged into Earth's neighborhood.

NASA and a network of astronomers routinely scan the skies for these near-Earth objects. And they've found 90 percent of the biggest threats - asteroids at least two-thirds of a mile across that are considered major killers. Scientists believe it was a six-mile-wide asteroid that wiped out the dinosaurs.

But the group thinks more attention should be paid to the estimated half a million smaller asteroids - similar in size to the one that exploded over Siberia in 1908 and leveled more than 800 square miles of forest.

"We know these objects are out there and we can do something to prevent them" from hitting Earth, said former Apollo 9 astronaut Rusty Schweickart, who helped establish the foundation a decade ago.

Asteroids are getting attention lately. NASA nixed a return to the moon in favor of a manned landing on an asteroid. Last month, Planetary Resources Inc., a company founded by space entrepreneurs, announced plans to extract precious metals from asteroids within a decade.

Since its birth, the Mountain View, Calif.-based B612 Foundation - named after the home asteroid of the Earth-visiting prince in Antoine de Saint-Exupery's "The Little Prince" - has focused on finding ways to deflect an incoming asteroid. Ideas studied include sending an intercepting spacecraft to aiming a nuclear bomb, but none have

been tested.

Last year, the group shifted focus to seek out asteroids with a telescope.

It is working with Ball Aerospace & Technologies Corp., which has drawn up a preliminary telescope design. The contractor developed NASA's Kepler telescope that hunts for exoplanets and built the instruments aboard the Hubble Space Telescope.

Under the proposal, the asteroid-hunting Sentinel Space Telescope will operate for at least 5 1/2 years. It will orbit around the sun, near the orbit of Venus, or between 30 million to 170 million miles away from Earth. Data will be beamed back through NASA's antenna network under a deal with the space agency.

Launch is targeted for 2017 or 2018. The group is angling to fly aboard SpaceX's Falcon 9 rocket, which made history last month by lifting a cargo capsule to the International Space Station.

Experts said the telescope's vantage point would allow it to spy asteroids faster than ground-based telescopes and accelerate new discoveries. NASA explored doing such a mission in the past but never moved forward because of the expense.

"It's always best to find these things quickly and track them. There might be one with our name on it," said Don Yeomans, who heads the Near-Earth Object Program at NASA's Jet Propulsion Laboratory, which monitors potentially dangerous space rocks.

Aside from the technological challenges, the big question is whether philanthropists will open up their wallets to support the project.

Nine years ago, the cost was estimated at $500 million, said Tim Spahr, director of the Minor Planet Center at Harvard University who was part of the team that came up with the figure for NASA.

Spahr questions whether enough can be raised given the economy. "This is a hard time," he said.

The group has received seed money - several hundreds of thousands of dollars - from venture capitalists and Silicon Valley outfits to create a team of experts. Foundation chairman Ed Lu said he was confident donors will step up and noted that some of the world's most powerful telescopes including the Lick and Palomar observatories in California were built with private money.

"We're not all about doom and gloom," said the former shuttle astronaut. "We're about opening up the solar system. We're talking about preserving life on this planet."

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