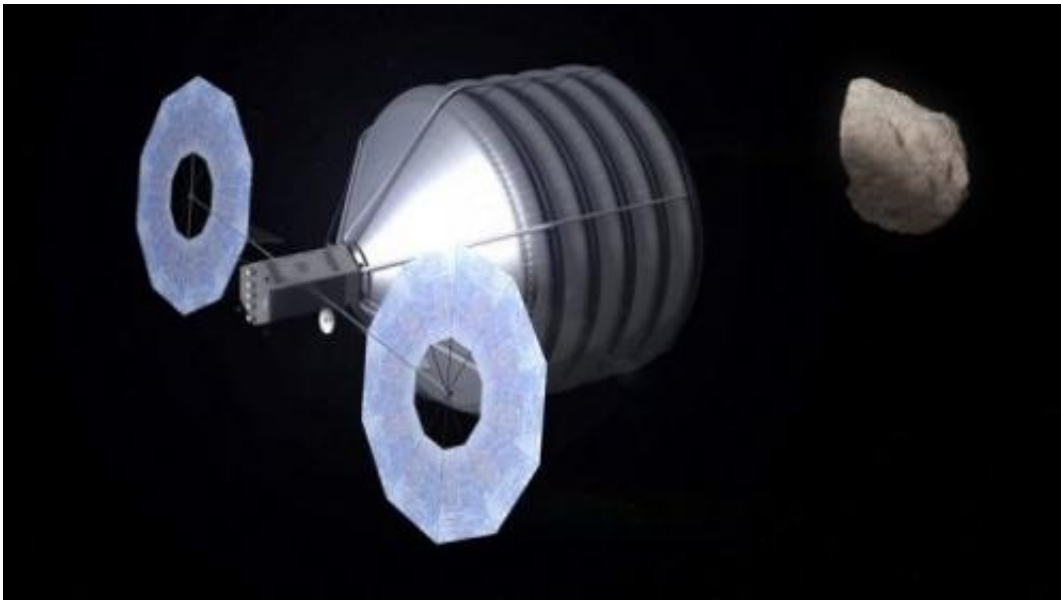


# NASA identifies three potential asteroids for capture

September 12 2013, by Kerry Sheridan

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This NASA artist's rendering obtained on May 31, 2013 shows what capturing an asteroid could look like. The US space agency has narrowed its hunt for an asteroid to capture to three, NASA said.

The US space agency has narrowed its hunt for an asteroid to capture to three, NASA said Wednesday.

The asteroids fit the requirements of being between seven to 10 meters (yards) in size, and further study should be able to narrow the choice even more, scientists said at a conference in San Diego, California.

"We have two to three which we will characterize in the next year and if all goes well... those will be valid candidates that could be certified targets," said Paul Chodas, senior scientist at the NASA Near-Earth Object Program Office.

The plan is to send a [robotic spacecraft](#) to capture the [asteroid](#) and drag it into orbit around the Moon.

Once there, astronauts could visit the asteroid and take samples of it back to Earth for study.

The spacecraft used for travel there and back would be the Orion multi-purpose vehicle, which is being built but has not yet been used, as well as a new deep space [rocket launcher](#).

The program aims to break new ground by increasing NASA capabilities beyond low Earth orbit, where the International Space Station circles the globe.

NASA has touted the planetary defense capabilities the project would build toward protecting the Earth from a potential hazardous [asteroid collision](#), as well as the technology it would boost for future human missions to deep space.

President Barack Obama has proclaimed the project would be a key step on the way to sending humans to Mars by the 2030s.

Bill Gerstenmaier, associate administrator of NASA's Human Exploration and Operations Directorate, described the asteroid mission as "pretty compelling."

"If you think about grabbing an object in space and then manipulating it for our use and putting it into a destination where we could go back and

routinely visit and let commercial companies go visit, I think that is a pretty compelling activity."

Obama's 2014 budget for NASA asked for \$100 million for the asteroid project, but the overall costs may be as high as \$2 billion.

"It's a little different way than just a date and a destination. We are really good at just picking dates and destinations. But that's really hard in this budget environment where things are constrained and we have flat budgets, et cetera et cetera, to pull that off," said Gerstenmaier.

"It is not just a one-time thing. It actually feeds forward into the broader context of what we want to do with humans in space."

The launch could happen as early as 2017 or as late as 2019.

After launch of the robotic mission, the journey to the asteroid would take a year and a half, and the act of towing it toward the moon could take another three and a half years, NASA said.

The project would use a new fuel technology called solar electric propulsion.

"We are talking about engineering the solar system, in a way. We are talking about taking an asteroid which was once here, and then putting it into a useful orbit for our purposes," said Chodas.

"This is a very large idea here that we are talking about and I think it will reinvigorate interest in the space program," he said.

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