

NASA considering capturing and placing asteroid into moon orbit

January 3 2013, by Bob Yirka

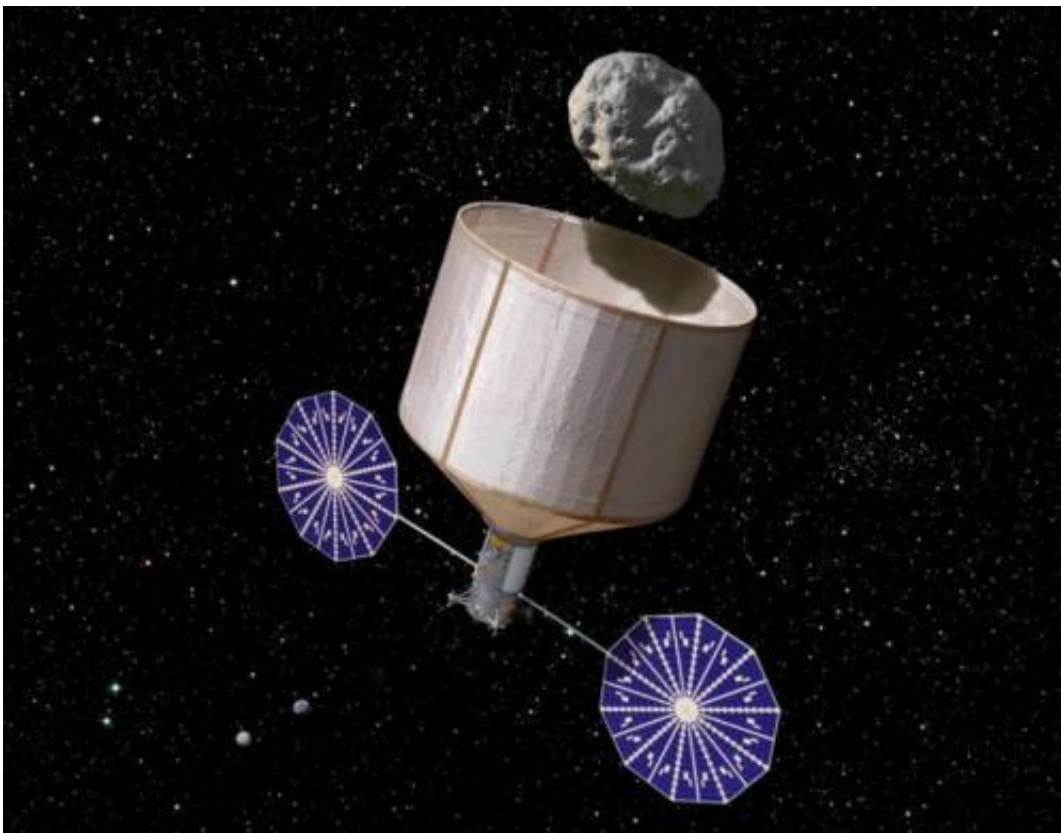
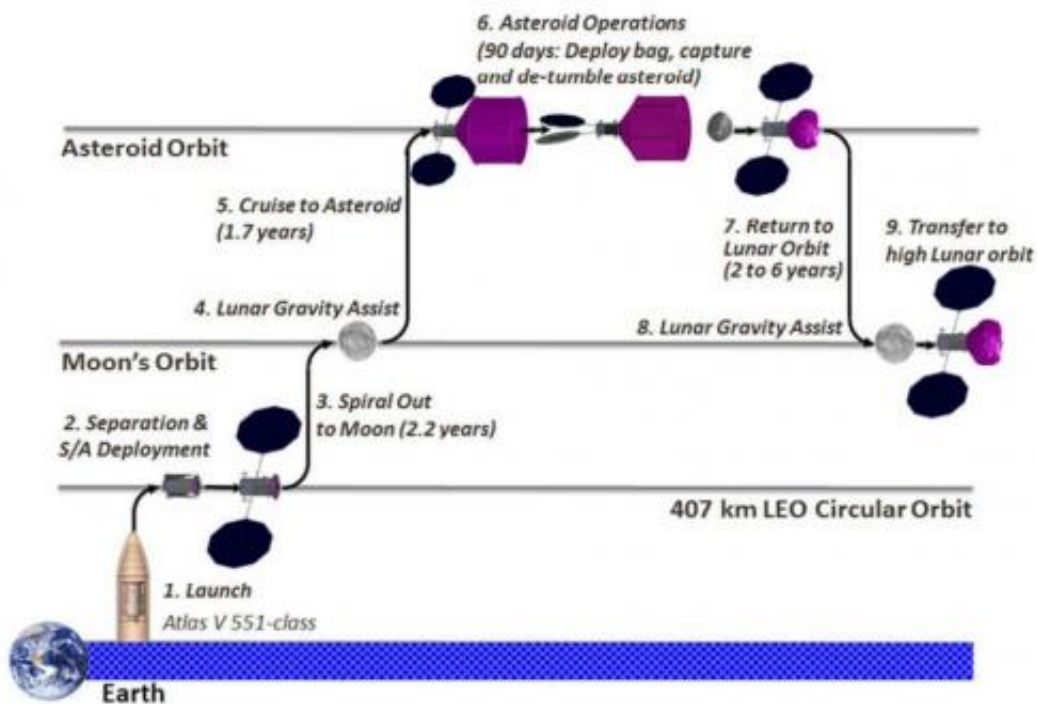


Illustration of an asteroid retrieval spacecraft in the process of capturing a 7-m, 500-ton asteroid. Credit: Rick Sternbach / KISS

(Phys.org)—Researchers at the Keck Institute for Space Studies have released a [paper](#) outlining a proposal to send an unmanned spacecraft into deep space to capture an asteroid and return it as a Near Earth

Asteroid (NEA) orbiting the moon. In putting together the paper, the team at Keck worked with several NASA agencies, universities and private groups with the aim of discerning the feasibility of such a project and then outlining how it might come about.

The researchers say that putting an asteroid in orbit around the moon has become feasible in recent years due to three main developments: the ability to find and track small asteroids, the capability of building spacecraft that have the ability to fly to an asteroid and bring it back and finally, the plans by several groups to have a manned presence in the vicinity of the moon during the time proposed (sometime in the 2020s) for the capture of the asteroid. Putting an asteroid in orbit around the moon would allow for much more convenient study and also open the door to mining possibilities.



Asteroid return mission concept. Return flight time of 2 to 6 years depending on the asteroid mass.

In their paper, the Keck team proposes using an Atlas V rocket to launch a craft that once in space would be slow moving, powered by solar heated ions. Once the target is reached, a bag would be opened that would engulf the asteroid – which would likely be no bigger than 7 meters wide – then drag it back and place it into orbit around the moon. Such a mission, the researchers suggest, would likely take six to ten years depending on the distance to the asteroid and cost in the neighborhood of \$2.6 billion, which isn't much more than the Mars Curiosity rover mission.

Currently NASA's only officially planned [manned space mission](#) is called Orion and its aim is to send a craft around the moon. President Obama has also suggested that he would be open to sending a [manned mission](#) to an asteroid. By first moving an asteroid to moon orbit, it appears [NASA](#) could accomplish both the Orion objectives and landing a manned craft on an [asteroid](#) in a single mission. Doing so with an NEA would also be far less risky – sending astronauts into [deep space](#) would expose them to long term radiation and would put them beyond the limits of a rescue mission should something go wrong.

More information: .
via [Newscientist](#)

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