Astrobotic Wins NASA Contract for Robot Teams to Explore Martian and Lunar Caves

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PITTSBURGH, PA – NOV. 29, 2011 – NASA today selected Astrobotic Technology Inc. for a contract to develop robotic teams to explore extensive caves on Mars, the Moon, and other planetary destinations. Astrobotic will develop robots that cooperate to overcome the challenges of underground planetary missions: no light for solar power, radio communications blocked by rock, and mobility challenged by rough terrain.

Through a subcontract to Carnegie Mellon University, the research will build on multi-robot and subterranean robot research pioneered at CMU to improve capabilities and reduce risk of failure relative to single-robot missions.

Recent interest in exploration of planetary caves was prompted by the discovery of skylights on the Moon and on Mars through satellite imagery. The presence of these skylights, believed to be entrances to lava tubes, on two distinct planetary bodies suggests that these features can be found on other planets. It is unknown whether these systems are present as intricate ‘plumbing’ networks extending for hundreds of miles, or occur as isolated caverns of limited extent. Planetary caves could be ideal early shelters for robots and crews against the radiation, micrometeorites and extremely high and low temperatures of the lunar surface.

“Team exploration with robots is similar to a football team,” said Steve Huber, Astrobotic’s principal investigator for the contract. “One may call the plays, some do the heavy work, and others are sufficiently nimble to reach the farthest pockets of the cave.”

Selection by NASA will be followed by a negotiation period before the $125,000 contract is formally awarded to the company.

“NASA officials see Astrobotic as a key option to get their payloads to the Moon at a cost the agency can afford in this tight budget environment,” said Astrobotic President David Gump. “This is the eighth lunar contract we’ve won, and an indication of the interest NASA has in commercial approaches to lunar exploration.”

About Astrobotic

Astrobotic Technology Inc. is a Pittsburgh based company that delivers affordable space robotics technology and planetary missions. More information is available at: www.astrobotictech.com.

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Astrobotic Technology Inc. is a Pittsburgh based company that delivers affordable space robotics technology and planetary missions. Astrobotic was spun out of Carnegie Mellon University’s Robotics Institute in 2008.