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# NASA chooses ASU to lead moon mission



An ASU-built CubeSat about the size of a shoebox will be used to produce a map of the water resources on the moon for future space exploration. It is the first ASU-led interplanetary mission.



By Hayley Ringle  
Reporter, Phoenix Business Journal  
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Arizona State University has been chosen by NASA to lead a moon mission.

ASU will design, build and operate the lunar CubeSat mission in the \$5.5 million shoebox-sized project on the Tempe campus, said [Craig Hardgrove](#), the postdoctoral research scientist for the ASU School of Earth and Space Exploration.

This will be one piece of NASA's larger mission to fully map the water content at the lunar South Pole in preparation for exploration, resource utilization and improved understanding of the moon's geologic history, Hardgrove said. The team will be using a neutron detector to measure hydrogen levels in the lunar dirt.

"We know from previous missions that enrichments of hydrogen are due to water-ice," said

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purpose of this mission is to get very close to the South Pole and make highly detailed maps of how much and where the hydrogen is.”

The goal is to help NASA understand how much water might be available to help inform NASA’s strategy for sending humans farther into the solar system.

The Lunar Polar Hydrogen Mapper spacecraft will produce the most detailed map to date of the moon’s water deposits.

At least 20 ASU faculty members and students will be working on the project, which is estimated to take three and a half years to build.

The planned launch is for late 2018, with data analyzed in late 2018 to early 2019, said Jekan Thanga, assistant professor for the School of Earth and Space Exploration, who is responsible for the design of the spacecraft and the engineering.

“This is a phenomenal opportunity,” Thanga said. “No one has done this before. For ASU to be given this opportunity to be in this class of pioneers to focus on the science mission is a big responsibility and a big sign of endorsement to where ASU has come from.”

This is the third major space project ASU has been a part of for NASA in the past year, although previously ASU’s involvement consisted of instruments on other missions.

“It really speaks to what we’re doing at the school here to come up with ideas like this and work on it together,” Hardgrove said.

The project will be completed in partnership with NASA’s Jet Propulsion Laboratory and several other business partners supplying space-qualified hardware and services. One local company is Tempe-based KinetX Aerospace Inc.

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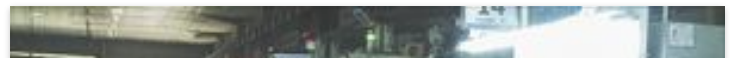
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