PRISM: Lunar Surface Sample Photo Reference Marker

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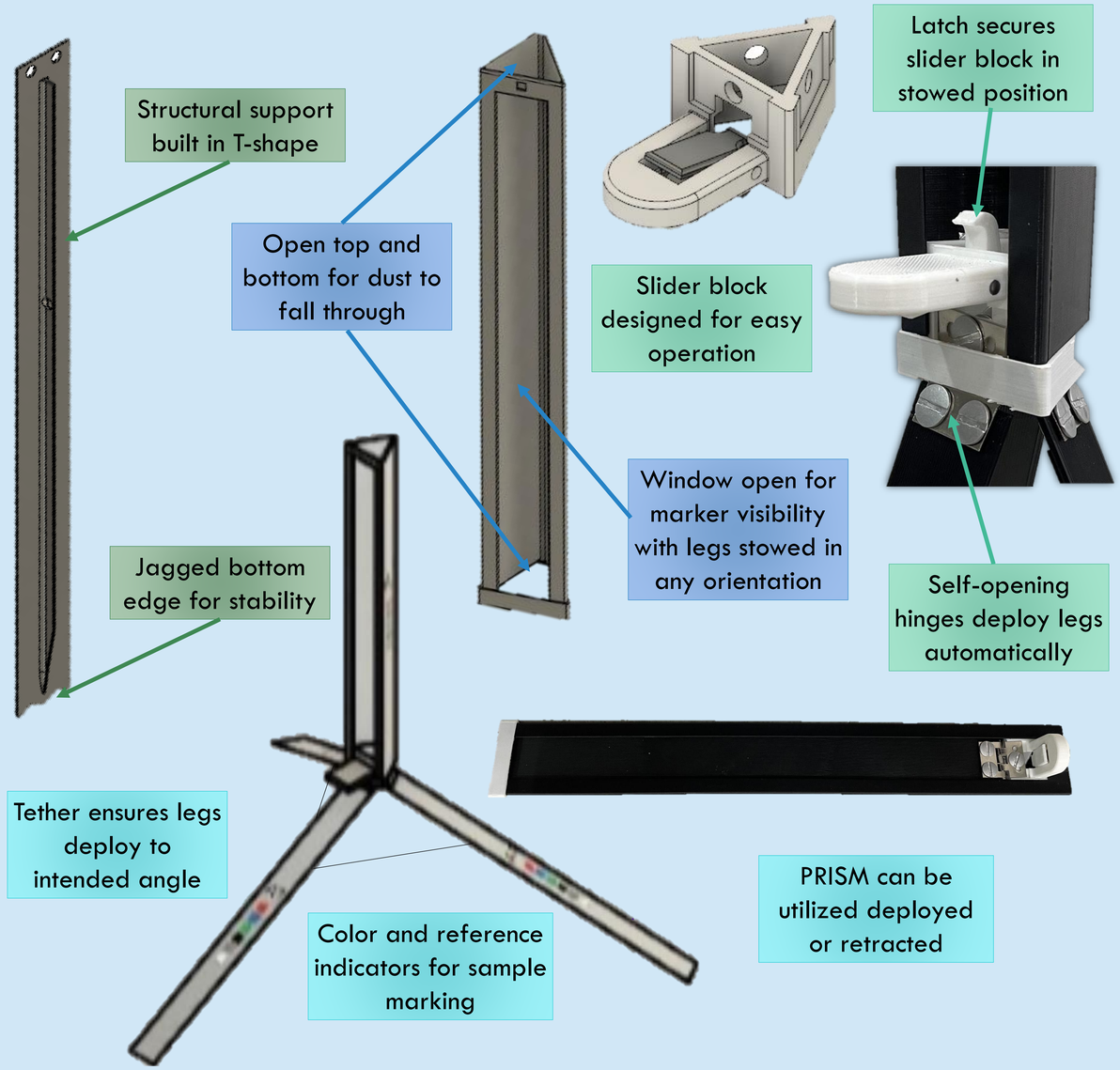
Project Overview

NASA's Artemis program includes plans to collect geological samples during lunar surface extravehicular activities (EVA). In order to evaluate potential sample sites, astronauts will take photographs to be sent to researchers on Earth. A sample photo reference marker is used to identify each potential site as well as provide size and color calibration, informing decisions on which samples to collect during EVA. The Photo Reference and Identification Sample Marker (PRISM) is designed to be a reliable and easy-to-use solution for these missions.

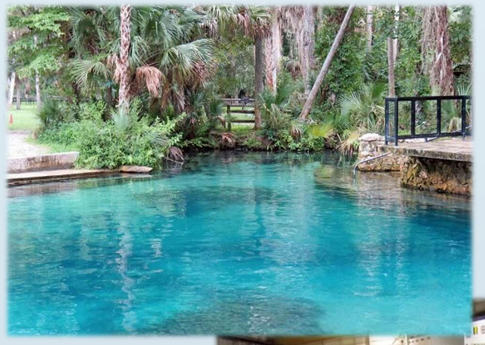


Outreach Highlights

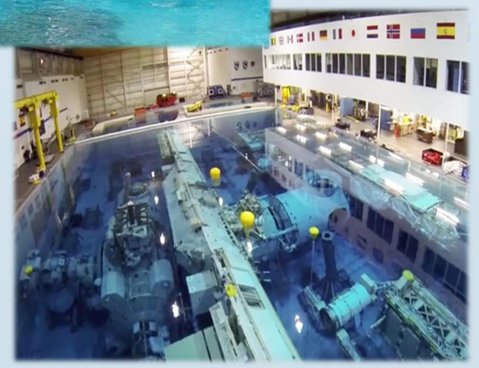
- **Janet's Planet**
  Working with Janet Ivey of the education program Janet's Planet, we ran several interactive sessions with virtual science camp kids to design an anchoring tool for astronauts, brainstorm the necessities of a lunar mission, and discuss space exploration.
- **High School Outreach**
  Team members reached out to their high school communities to share their space and engineering experience. We connected with two schools and shared the process of designing and building a tool, and what testing with NASA is like. We also discussed our educational and career paths.
- **Yuri's Night (Upcoming)**
  Team members will table at Yuri's Night at the Kennedy Space Center. The team will present projects within the lab and bring prototypes from various stages of the design evolution.

Testing

Our intention for PRISM is to send the device to NASA's Johnson Space Center in Houston to be tested in the Neutral Buoyancy Laboratory (NBL). The NBL has strict safety and material requirements to utilize the facility. To prepare, we conduct our own underwater SCUBA testing at Alexander Springs in Florida before sending our prototype to NASA.



Alexander Springs



NASA's Neutral Buoyancy Lab

Testing area focuses:

- Operation in a microgravity environment
- Ease of deployment and recovery
- Operability with spacesuit dexterity
- Stability on various surfaces including inclines
- Dust tolerance

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