Obtaining geological samples for return to Earth will be a major objective for any mission to a small body. JSC EVA Tools Development team has been testing via analogs such as: JSC Research and Technologist Studies; NASA Extreme Environment Mission Operations; and the Neutral Buoyancy Lab.

Challenge: Contamination control of 1000 g from various sites of 5 different types of samples: Float, Chip, Regolith, Surface, and Core.

Sample Briefcase with 4 different types of end effectors: Chip, Core, Surface, and Float/Regolith that interface with one of two different drivers: powered and manual.

Future Work:
- Rapid deployment and retrieval of Sample Markers
- Anchoring of science packages
- Cryogenic storage during sample return
- Deep Core drilling equipment/storage