



Exploration Robotics and Astrobees

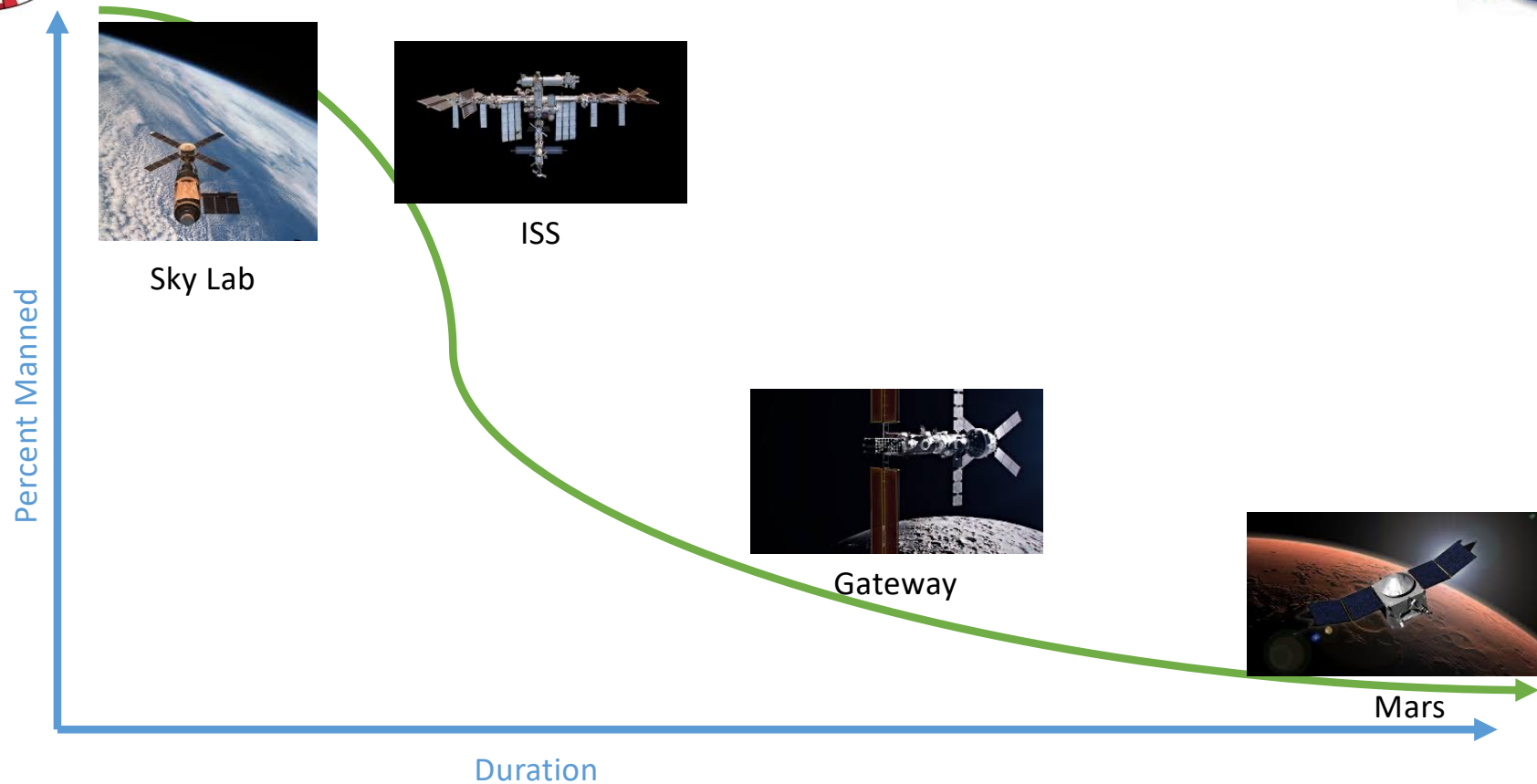
Sponsoring Org/Office Code: ISS Program, OZ3
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Progression of Exploration





Classification of Exploration Robots



Stationary

Mobile

Micro-G



ISS



Voyager 1

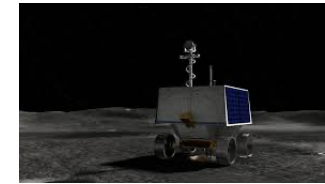
Planetary



Mars Dune Alpha



Apollo



VIPER

Accessory



Canadarm



Robonaut



Astrobee

3



Project Description



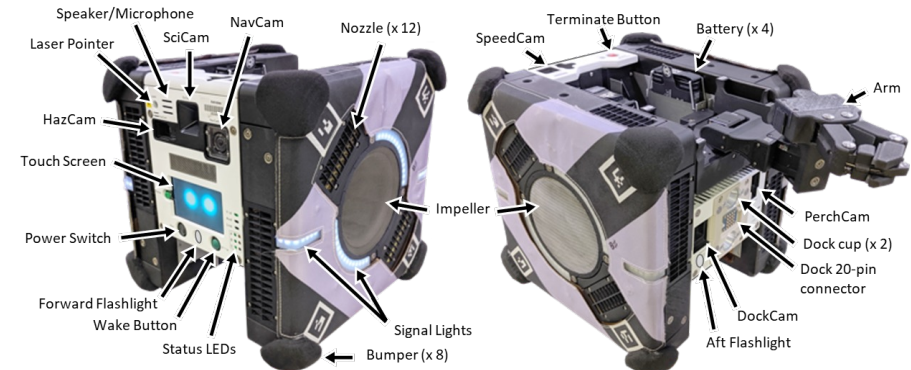
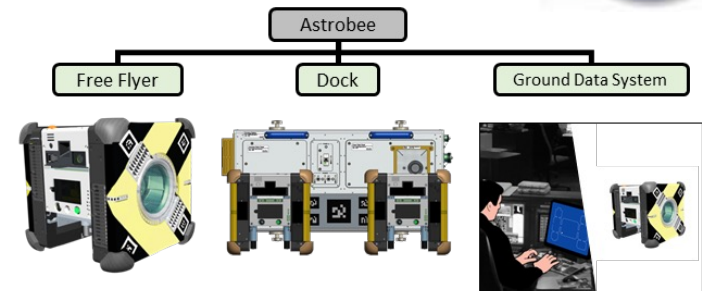
Chris Cassidy, GMT 248 2020



Astrobee Facility Overview

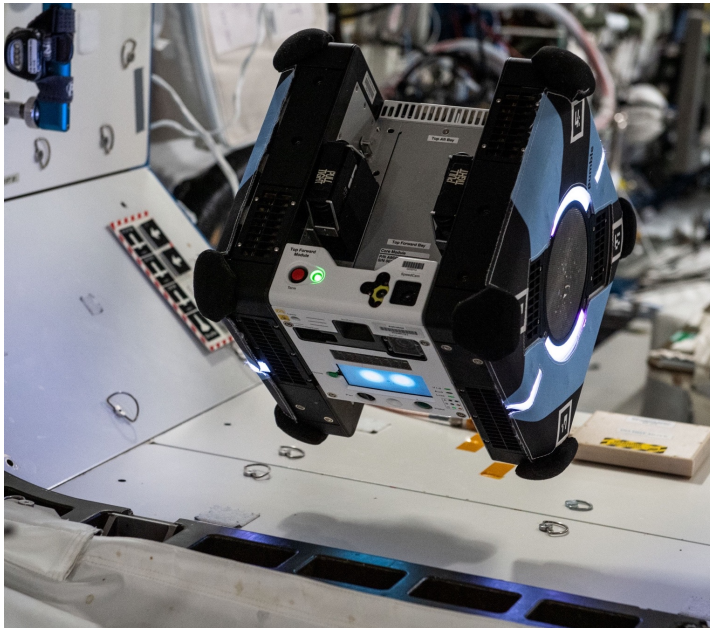


- Astrobee research platform ecosystem
 - Astrobee hardware: Ground and flight units
 - Ames Research Center Experimental Facilities
 - Astrobee Robot Software
 - Access to the International Space Station
- Support different research: Artificial Intelligence, manipulation, computer vision, Human Robotic Interactions, many, many other fields!





Robotic Caretaking (ISAAC)



Close-up targeted inspection of hatch seals



Coordinated ISS interior survey with multiple Astrobees

A man in a grey t-shirt with 'ISS' on it is giving a thumbs up in a space station module. The background is filled with various equipment, cables, and a laptop. A large white bag is on the right. A semi-transparent banner with the URL 'www.nasa.gov/astrobee' is overlaid on the bottom half of the image.

www.nasa.gov/astrobee