



# Advanced Space

Moon, Mars, and Beyond





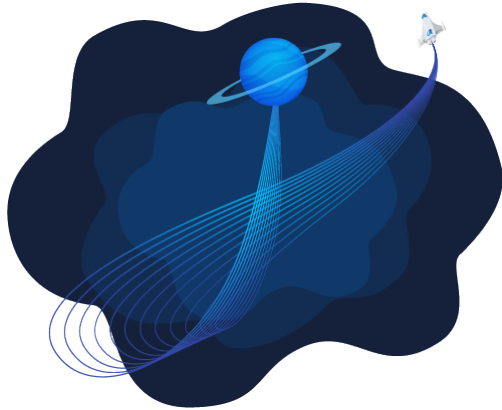
Advanced Space exists to enable the  
sustainable **exploration, development,** and  
**settlement** of space







# Our Core Competencies

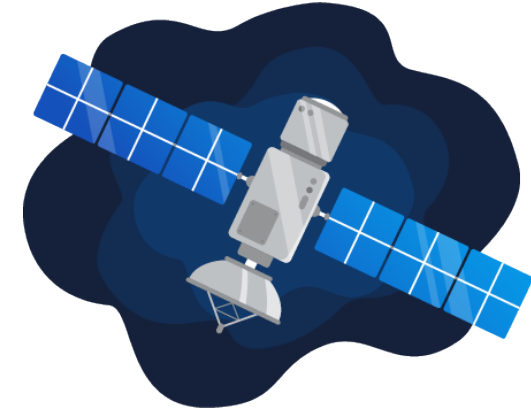
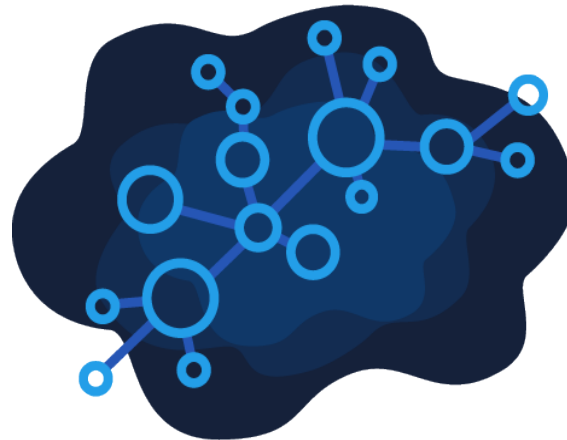


## Flight Dynamics

- ✧ We help people fly their spacecraft
- ✧ Specializing in:
  - ✧ Constellations
  - ✧ Electric Propulsion
  - ✧ Cislunar
  - ✧ Interplanetary

## Software Technology Development

- ✧ Autonomous spacecraft navigation
- ✧ Artificial intelligence, machine learning, & neural networks



## Rapid Turn-key Missions

- ✧ Integrated expertise
- ✧ Proprietary toolchains
- ✧ Systems engineering architecture for expedited analysis



# CAPSTONE

## Cislunar Autonomous Positioning System Technology, Operations, & Navigation Experiment

- ✧ Concept to Launch: ~33mo
- ✧ Launch: 28 June 2022
- ✧ Flight: ~4mo via low-energy Ballistic Lunar Transfer (BLT)
- ✧ Mission: ~18mo in orbit at the Moon
  - ✧ Completes 6mo primary mission this week!





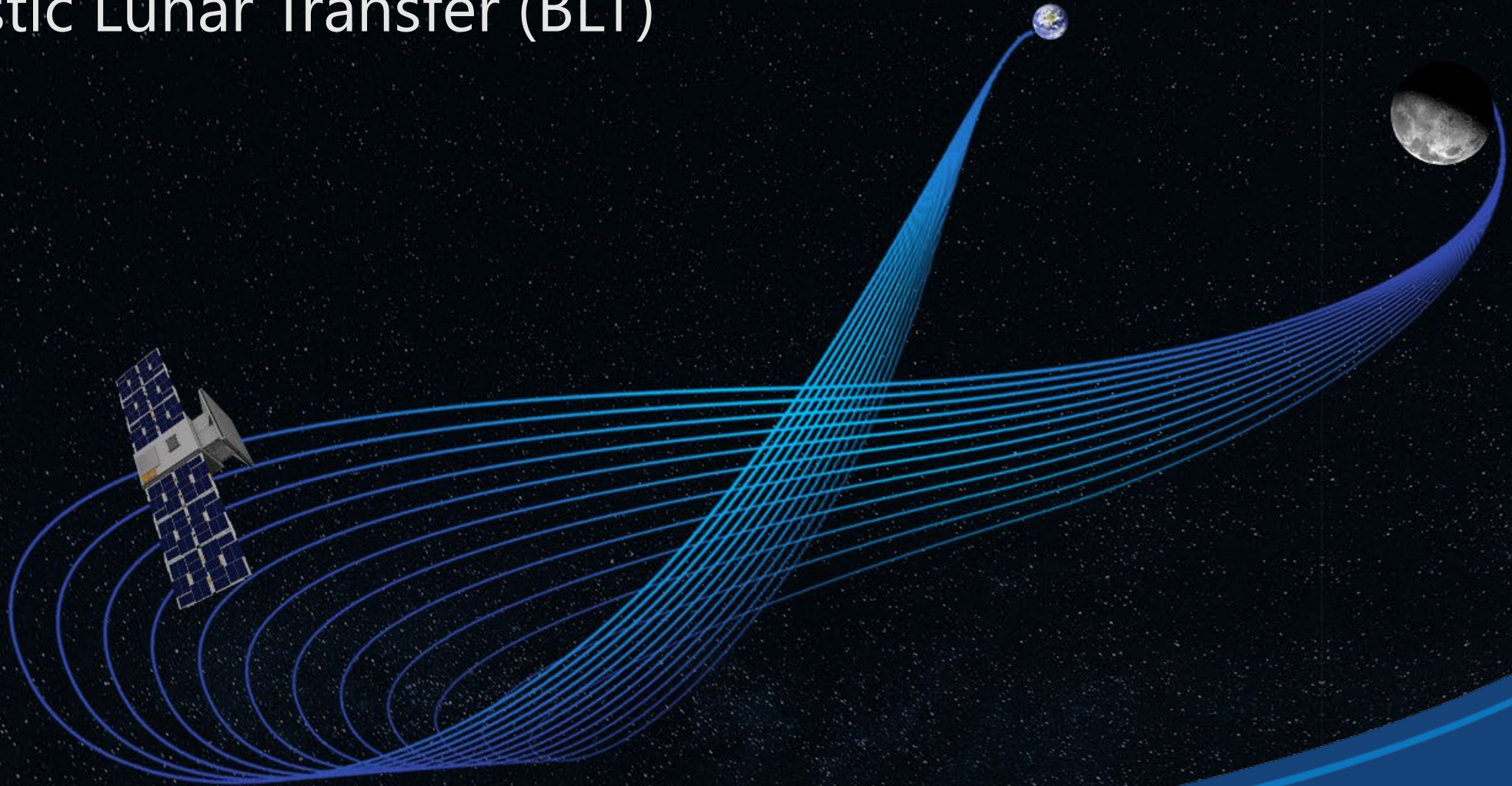






# Getting to the Moon

## Via Ballistic Lunar Transfer (BLT)

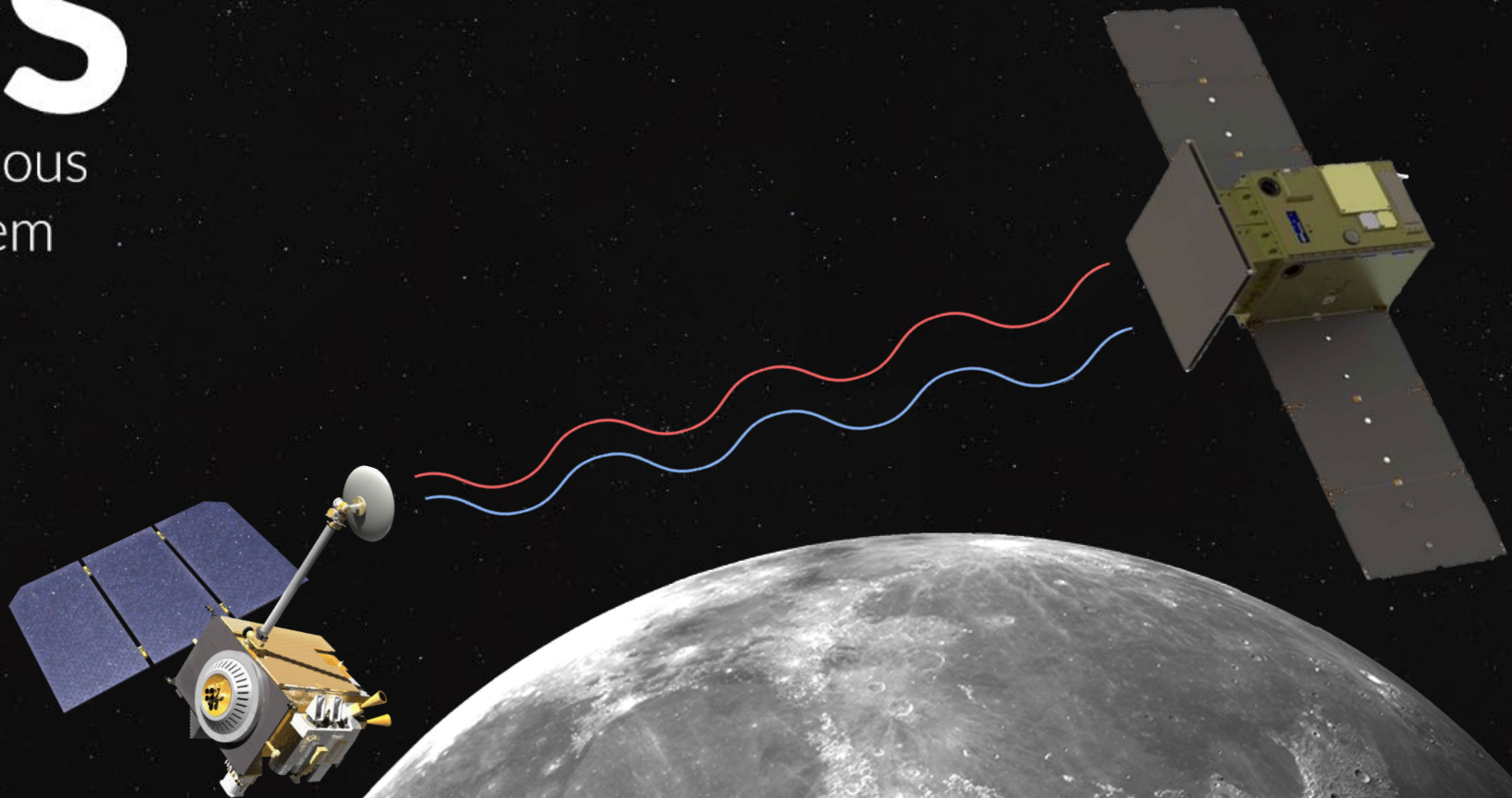






# CAPS™

Cislunar Autonomous  
Positioning System

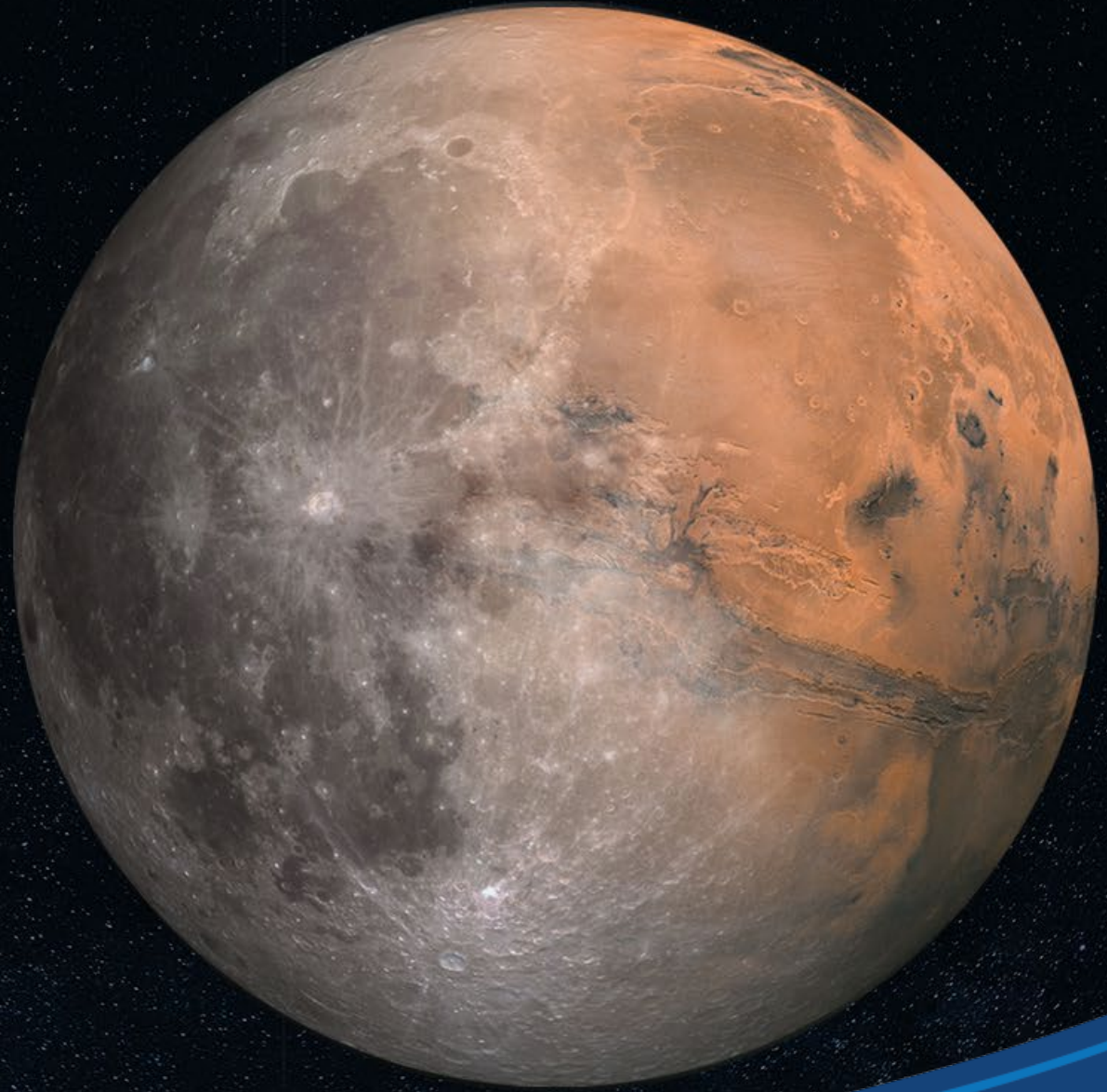






# Moon to Mars

Lessons learned from missions at the Moon are not only proving grounds for technology but also for operational planning, long-term living in space environments, and more.





# Mars Expertise

Supporting UC Berkeley on ESCAPADE  
*Escape, Plasma, and Acceleration Dynamics Explorer*



# Artemis III to Mars: How will lunar surface missions advance humans to Mars?



*Image credit: NASA*