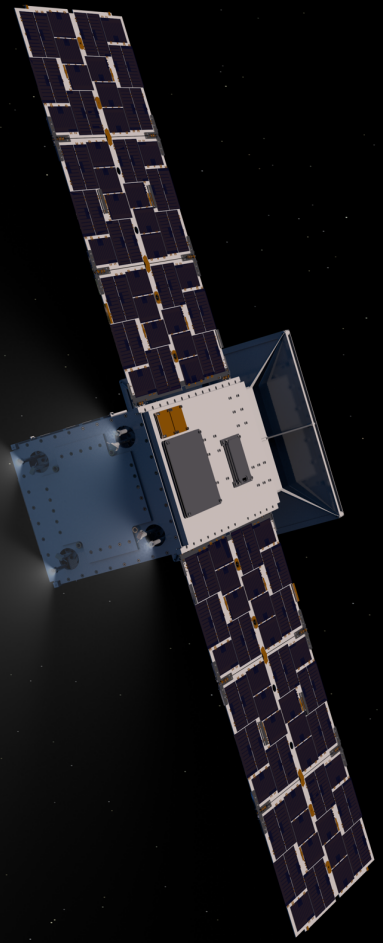


National Aeronautics and Space Administration

NASA Small Spacecraft Technology Program

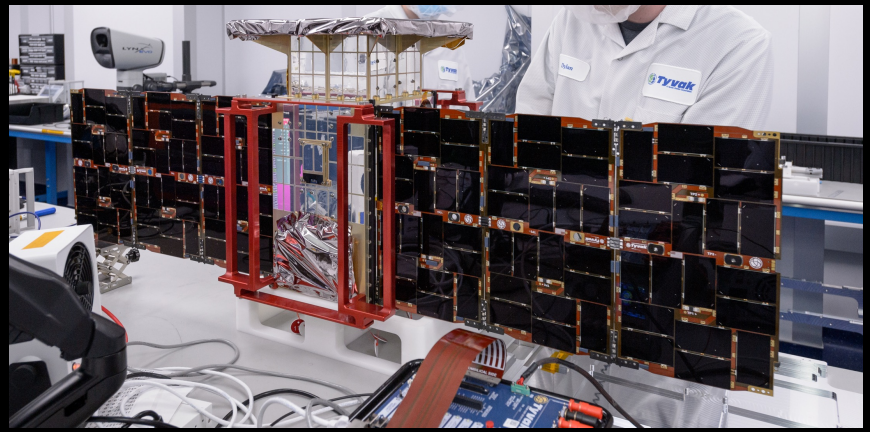
Roger C. Hunter
Program Manager
Small Spacecraft Technology Program

NASA Town Hall ✦ August 8, 2022
Small Satellite Conference

2022-2023 Launch Schedule

Technology Demonstrations	Launch Timeframe
PTD-3: *Pathfinder Technology Demonstrator-3: Payload: TBIRD 200GB Laser Communications*	Launched May 25, 2022
CPOD: *CubeSat Proximity Operations Demonstration*	Launched May 25, 2022
CAPSTONE: *Cislunar Autonomous Positioning System Tech Ops & Navigation Experiment*	Launched June 28, 2022
CLICK-A: *CubeSat Laser Infrared CrossLinK*	Launched July 14, 2022
Starling: *Demonstration of Autonomous Swarm Technologies*	**Late 2022**
ACS3: *Advanced Composite Solar Sail System*	1H 2023
Lunar Flashlight: *Mapping of Water and Volatiles at the Lunar Surface*	Early 2023
PTD-4: *Pathfinder Technology Demonstrator-4: Payload: LISA-T High-Power Deployable Solar Array Antenna*	Mid 2023
PACE-2: *Payload Accelerator for CubeSat Endeavors*	Mid 2023
CLICK B/C: *CubeSat Laser Infrared CrossLinK*	Late 2023

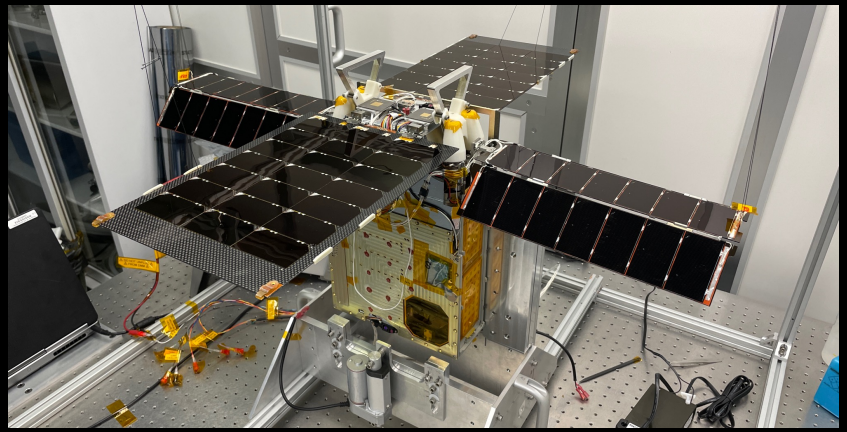
U-Class Exploration Mission Status



CAPSTONE
Launched: June 28, 2022

Demonstrate how to enter and function in a near rectilinear halo orbit around the Moon and demonstrate spacecraft-to-spacecraft navigation

Image Credits: NASA

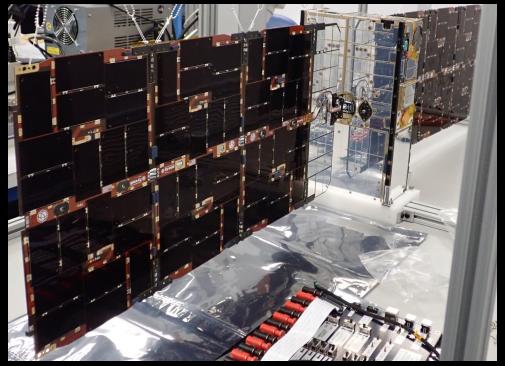


Lunar Flashlight
Launch Timeframe: Early 2023

Characterize lunar *in-situ* resource utilization potential. Measure quantity and distribution of surface ice deposits in lunar South Pole cold traps with a compact laser spectrometer

Image Credits: NASA/JPL-Caltech

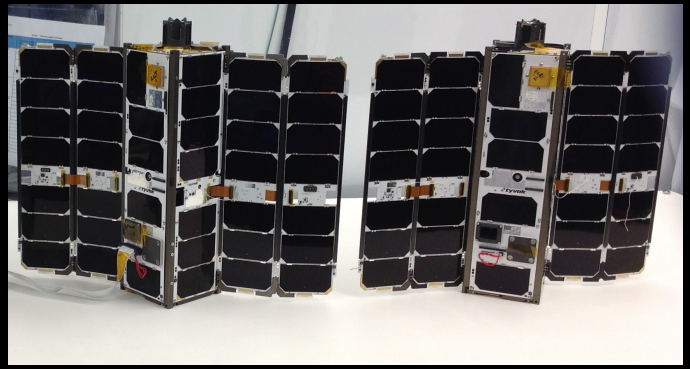
On-Orbit U-Class Technology Demonstration Missions – 2022



Pathfinder Technology Demonstrator (PTD-3)
Launched: May 25, 2022

Demonstrate TeraByte InfraRed Delivery (TBIRD) technology for high-bandwidth laser communications - 200 gigabit per second data downlink rate

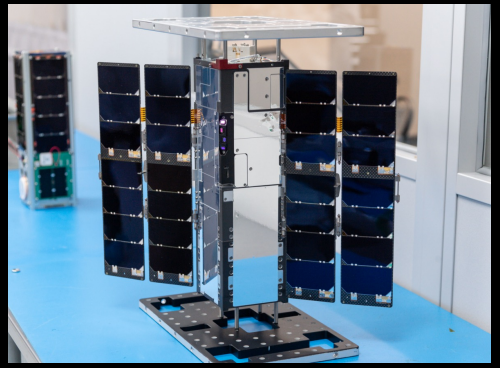
Image Credits: Terran Orbital Corporation



CubeSat Proximity Operations Demonstration (CPOD)
Launched: May 25, 2022

Demonstrate rendezvous, proximity operations and docking using two 3U CubeSats

Image Credits: Terran Orbital Corporation

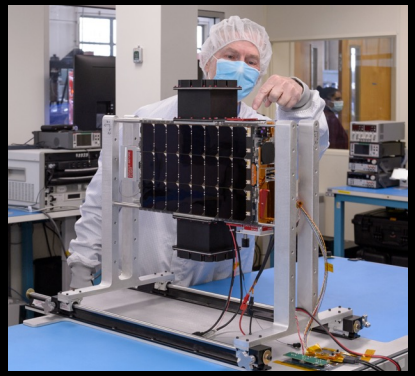


CubeSat Laser Infrared CrossLinK (CLICK-A)
Launched: July 14 2022

Risk reduction mission to test elements of an optical communications system via a single 3U spacecraft and a ground station telescope

Image Credits: NASA

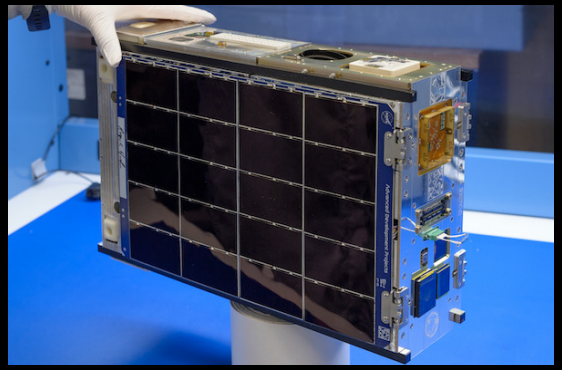
Upcoming U-Class Technology Demonstration Missions – 2022



Starling
Autonomous Swarm Tech.
Launch: Late 2022

Demonstrate swarm maneuver planning and execution, communications networking, relative navigation, and autonomous coordination between four 6U CubeSats

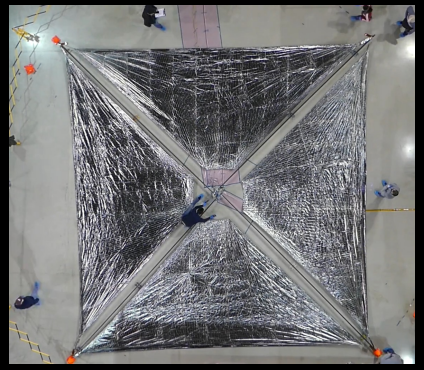
Image Credits: NASA



PACE-2
Launch: Mid 2023

Demonstrate upgrades to the PACE avionics system as well as a camera and image processing payload

Image Credits: NASA

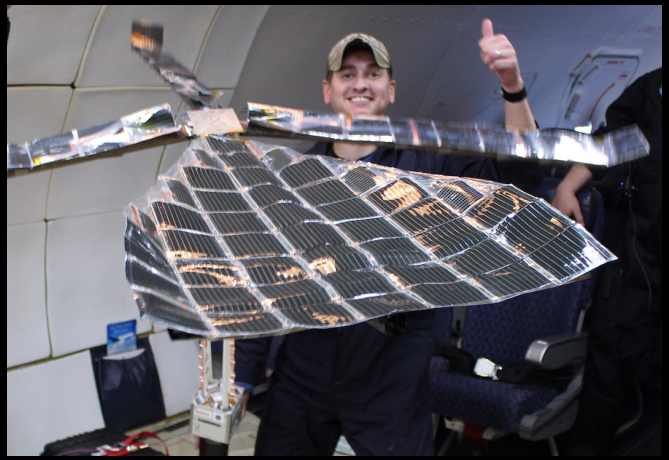


Advanced Composite Solar Sail System (ACS3)
Launch: 1H 2023

Demonstrate deployment of the composite boom solar sail in low-Earth orbit. The unfurled solar sail will measure approximately 84 m^2

Image Credits: NASA

Upcoming U-Class Technology Demonstration Missions - 2023



Pathfinder Technology Demonstrator (PTD-4)
Launch: Mid 2023

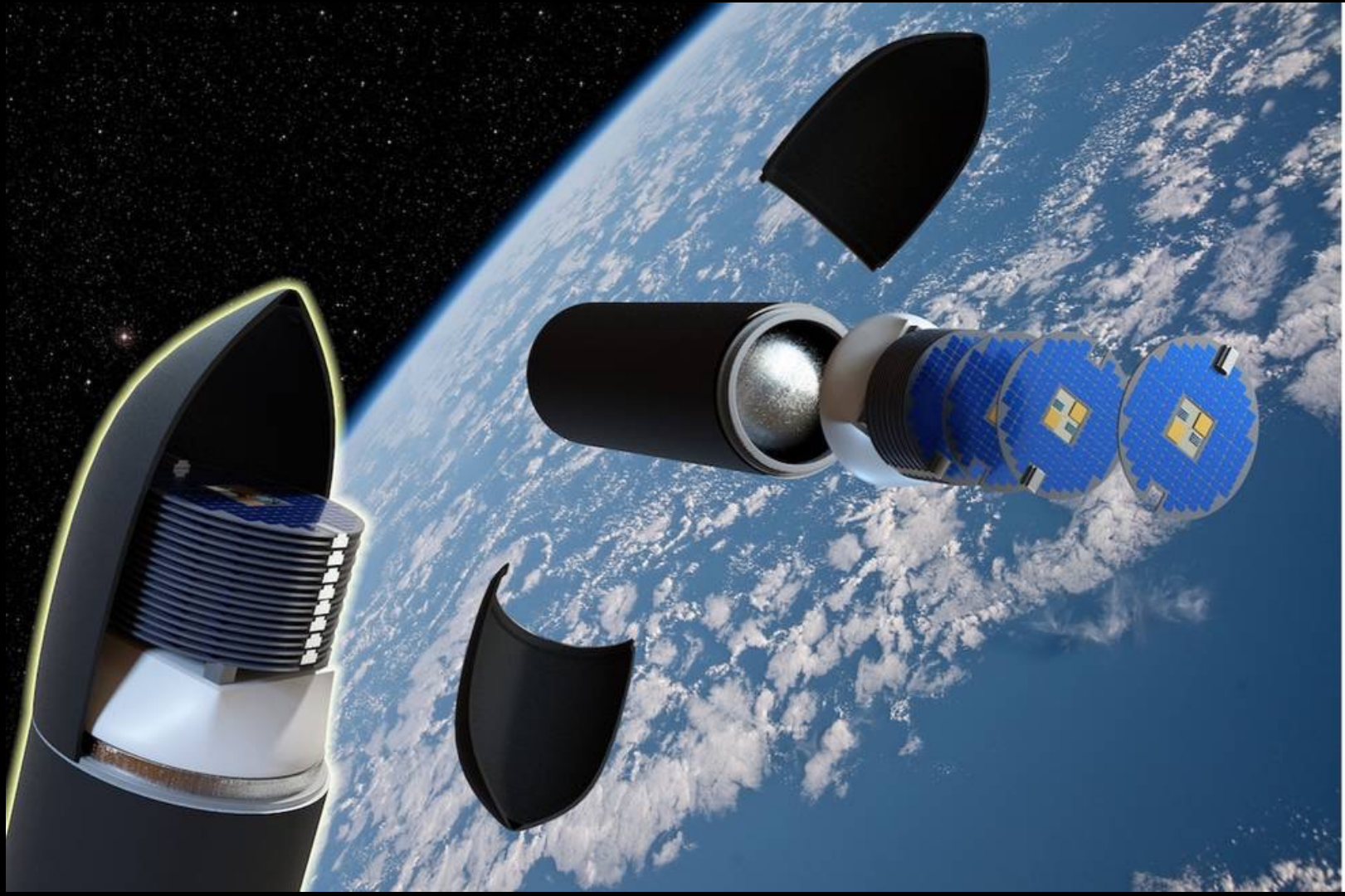
Demonstrate Lightweight Integrated Solar Array and anTenna (LISA-T), a high-power, low-volume deployable solar array with an integrated antenna

Image Credits: NASA

CubeSat Laser Infrared CrosslinK (CLICK B/C)
Launch: Late 2023

Demonstrate optical crosslink and precision ranging between two 3U CubeSats at a data rate of 20 Mbps and range up to 580 km

Image Credits: NASA (illustration) and Blue Canyon Technologies (photograph)

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