



EXPLORE SPACE TECH

NASA's Flight Opportunities Program

NASA Townhall at the 2022 Small Satellite Conference | August 8, 2022

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EXPLORE SPACE TECH

THROUGH SUBORBITAL FLIGHT

The Flight Opportunities program rapidly demonstrates promising technologies for space exploration, discovery, and the expansion of space commerce through suborbital testing with industry flight providers.

**254 successful flights have been completed since 2011,
enabling more than 870 tests of space technologies.**



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Commercial Vehicles Make Flight Opportunities Possible

Rocket-Powered Vehicle

- Blue Origin
- Exos Aerospace
- UP Aerospace
- Virgin Galactic



Parabolic Flights

- Zero Gravity Corporation

High-Altitude Balloons

- Aerostar International
- Angstrom Designs
- Near Space Corporation
- Stratodynamics
- World View Enterprises



Vertical Takeoff Vertical Landing (VTVL) vehicles

- Masten Space Systems

Accessing Flight Tests Through Flight Opportunities

NASA TechLeap Prize

Annual challenges addressing specific NASA technology needs

- Open to businesses, universities, entrepreneurs, and other innovators
- Up to \$650K to build payloads, plus access to a suborbital flight test

2022: Nighttime Precision Landing Challenge No. 1

2021: Autonomous Observation Challenge No. 1



NASA TechFlights Awards

Annual solicitation addressing topic areas that address agency and mission goals

- Open to businesses, universities, entrepreneurs, and other innovators
- Up to \$750K per awardee to purchase flights directly from any eligible U.S. commercial flight provider
- TechFlights 2022 allows flight tests on both commercial suborbital and orbital platforms



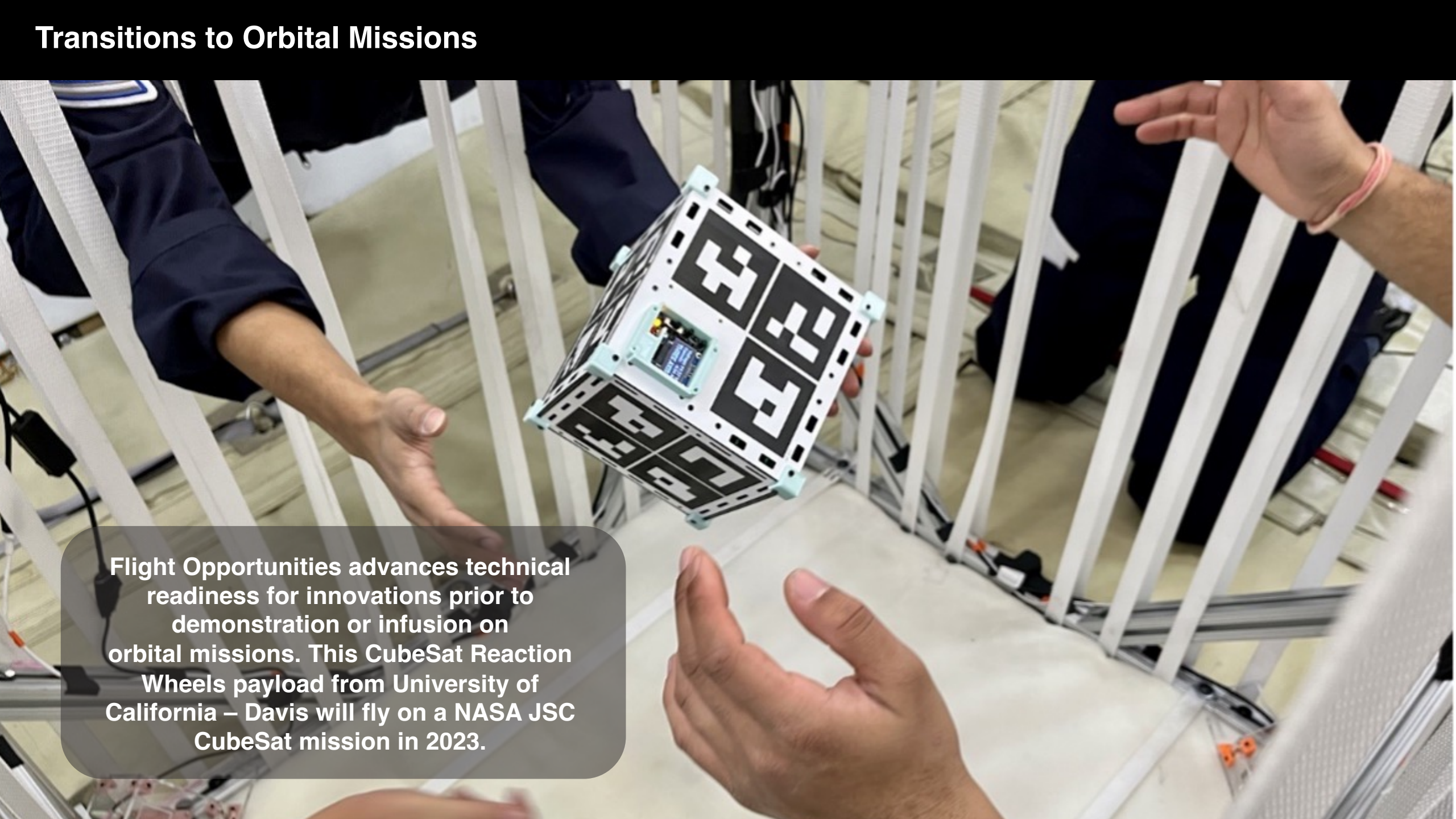
NASA TechRise Student Challenge

Annual competition to inspire the next generation of space researchers

- Open to U.S. students in grades 6-12
- 2021 challenge winners received \$1,500 to build their payloads, plus access to a suborbital flight test



Transitions to Orbital Missions



Flight Opportunities advances technical readiness for innovations prior to demonstration or infusion on orbital missions. This CubeSat Reaction Wheels payload from University of California – Davis will fly on a NASA JSC CubeSat mission in 2023.



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