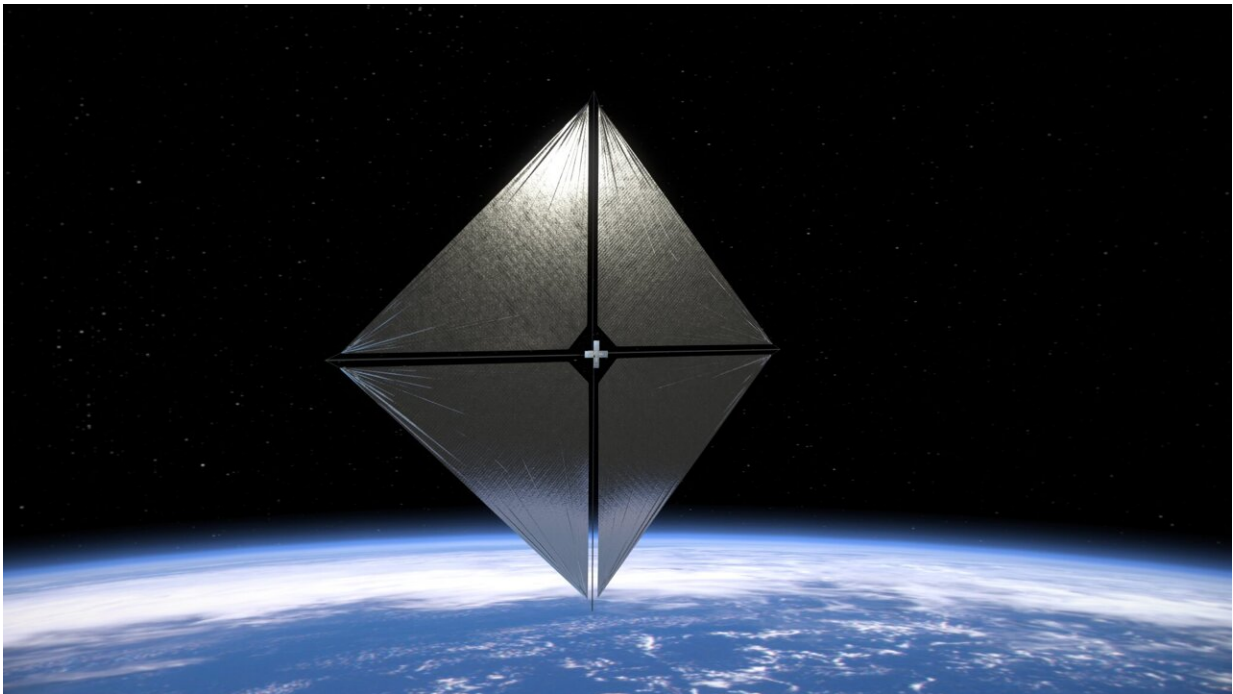


NASA to hoist its sail: Solar sail mission gets ready for launch

April 17 2024, by Abby Tabor



An artist's concept of NASA's Advanced Composite Solar Sail System spacecraft in orbit. Credit: NASA/Aero Animation/Ben Schweighart

A NASA mission testing a new way of navigating our solar system is ready to hoist its sail into space—not to catch the wind, but the propulsive power of sunlight. The Advanced Composite Solar Sail System is targeting launch on Tuesday, April 23 (Wednesday, April 24 in New Zealand) aboard a Rocket Lab Electron rocket from the

company's Launch Complex 1 on the Mahia Peninsula of New Zealand.

Rocket Lab's Electron rocket will deploy the mission's CubeSat about 600 miles above Earth—more than twice the altitude of the International Space Station. To test the performance of NASA's Advanced Composite Solar Sail System, the spacecraft must be in a high enough orbit for the tiny force of sunlight on the sail—roughly equivalent to the weight of a paperclip resting on your palm—to overcome atmospheric drag and gain altitude.

After a busy initial flight phase, which will last about two months and includes subsystems checkout, the microwave oven-sized CubeSat will deploy its reflective solar sail. The weeks-long test consists of a series of pointing maneuvers to demonstrate orbit raising and lowering, using only the pressure of sunlight acting on the sail.

NASA's Advanced Composite Solar Sail System aims to prove its ability to sail across space, increasing access and enabling low-cost missions to the moon, Mars, and beyond.

Provided by NASA

Citation: NASA to hoist its sail: Solar sail mission gets ready for launch (2024, April 17)
retrieved 2 May 2024 from <https://phys.org/news/2024-04-nasa-hoist-solar-mission-ready.html>

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