AV's Precision Hardware Points Artemis II Laser Link to Earth

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AV's precision hardware enabled ultra-accurate laser pointing and unlocked faster, higher-volume data transmission from deep space

ARLINGTON, Va.--(BUSINESS WIRE)--Apr. 15, 2026-- AeroVironment, Inc. ("AV") (NASDAQ: AVAV) today announced that its precision pointing hardware was on board NASA's historic Artemis II Mission as part of the Orion Artemis II Optical Communications System (O2O) – a laser communications terminal developed by the Massachusetts Institute of Technology Lincoln Laboratory in collaboration with NASA Goddard Space Flight Center.

During the Artemis II mission, O2O used lasers to send high-resolution video and images of the lunar surface back to Earth. AV's best-in-class laser gimbal allowed the spacecraft to precisely point the laser at terrestrial receivers, providing high-speed data links between astronauts in lunar orbit and ground stations. The technology enabled data transfer at speeds "orders of magnitude more than we get via our S-band telemetry system," NASA Flight Director Rick Henfling told the New York Times.

"Contributing to the Artemis II mission is an honor for our team," said Wahid Nawabi, Chairman, President and Chief Executive Officer at AV. "Our role is focused but critical: making sure the laser communications beam is precisely pointed back to Earth so that astronauts can send large volumes of data quickly and reliably."

As part of O2O payload, AV delivered a two-axis gimbal and launch latch assembly that provided coarse pointing of the laser communications beam toward the ground station as the spacecraft changed orientation during its mission. The O2O laser communications terminal was delivered to NASA in 2023 to support the Artemis II mission.

"Laser communications systems like O2O dramatically increase the speed and amount of data a mission can send and receive in a single transmission compared to traditional radio frequency systems," said Mary Clum, President of Space, Cyber and Directed Energy at AV. "When you can return more images, more video and more science data, you accelerate discovery — and that's what ultimately advances human exploration."

AV also supplied multiple fast steering mirrors that provide jitter stabilization and extremely fine pointing adjustments to compensate for small motions on board the spacecraft caused by equipment operation, crew movement and environmental disturbances while in flight.

All of these components are precision-engineered to survive the intense vibration and acceleration of launch on one of the world's largest rockets and then deliver ultra-stable performance in space. Together, they enable payload pointing with an accuracy on the order of a single micro-radian—roughly equivalent to hitting a one millimeter target from one kilometer away.

Historically, AV has delivered over 150 subsystems across critical mission areas, including laser communications, for a range of customers. AV's work on the Artemis II laser communications terminal builds on the company's decades of experience in advanced electro -optical systems, precision pointing mechanisms and mission-critical hardware for challenging space environments.

About AV

AeroVironment ("AV") (NASDAQ: AVAV) is a defense technology leader delivering integrated capabilities across air, land, sea, space, and cyber. The Company develops and deploys autonomous systems, loitering munitions, counter-UAS technologies, space-based platforms, directed energy systems, and cyber and electronic warfare capabilities—built to meet the mission needs of today's warfighter and tomorrow's conflicts. At the core of these technologies lies AV_Halo™, a modular, mission-ready suite of AI-powered software tools that empowers warfighters and enables full-battlefield dominance: detect, decide, deliver. With a national manufacturing footprint and a deep innovation pipeline, AV delivers proven systems and future-defining capabilities at speed, scale, and operational relevance. For more information, visit www.avinc.com.

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