

# Mirion Crew Active Dosimeters to Be Worn by Astronauts on NASA's Artemis II Mission

- *Mirion announces that its Crew Active Dosimeters (CAD) will be worn by astronauts on NASA's Artemis II mission, providing personal, time-resolved radiation exposure monitoring during the program's first crewed flight.*
- *Developed by Mirion Dosimetry Services and R&D teams in collaboration with NASA scientists, CAD has supported crew operations and radiation research aboard the International Space Station since 2020.*
- *Technology developed for CAD has since been applied to personal dosimetry in medical environments, illustrating the broader impact of collaborative innovation across spaceflight and healthcare radiation safety.*

ATLANTA--(BUSINESS WIRE)-- As NASA prepares for the Artemis II launch, [Mirion](#), a leading provider of advanced radiation safety solutions, today announced that its Crew Active Dosimeters (CAD) will be carried in astronauts' pockets aboard the Artemis II mission, providing personal, time-resolved radiation monitoring during the program's first crewed flight.

Artemis II will carry astronauts on an approximately 10-day mission around the Moon, marking a major milestone in NASA's Artemis program to return humans to lunar exploration and advance future missions beyond low Earth orbit. Monitoring radiation exposure during the mission is a critical component of astronaut safety and mission planning.

## **Crew Active Dosimeter: Real-Time, Crew-Worn Monitoring**

Developed by Mirion Dosimetry Services and Mirion's international R&D teams in collaboration with the Space Radiation Analysis Group at NASA's Johnson Space Center, the Crew Active Dosimeter is a compact, crew-worn instrument designed to measure personal radiation exposure in real time.

In space missions, time-resolved personal dosimetry plays a critical role in astronaut safety. Traditional passive radiation detectors have limitations in providing real-time data and telemetry capabilities required to optimize crew safety on long-term exploratory missions. Based on direct ion storage technology, CAD enables insight into how radiation levels vary throughout a mission depending on spacecraft location, radiation shielding and operational conditions. The technology has supported research and crew operations aboard the International Space Station since 2020.

## **From Space Missions to Medical Settings**

Since its development for human spaceflight, the same underlying direct ion storage technology used in the Crew Active Dosimeter has also been applied to [personal dosimetry solutions](#) Mirion designed for medical environments.

“Technology we’ve developed to meet the demands of spaceflight often informs how we approach radiation safety and measurement across other applications such as healthcare, environmental testing and research on Earth,” said Thomas Logan, Mirion Chairman and Chief Executive Officer. “The CAD is a powerful example of how collaboration in space exploration technology can drive broader advances in radiation safety.”

### **Early Contributions to Artemis**

Mirion’s involvement in Artemis II builds on the company’s earlier contributions to NASA’s lunar exploration efforts. For the uncrewed Artemis I mission, Sun Nuclear (a Mirion Medical company) provided custom anthropomorphic ATOM<sup>®</sup> phantoms – a technology used extensively for diagnostic quality assurance in radiation oncology. Designed to mimic human anatomy, the phantoms helped provide data to better anticipate how radiation may impact astronauts, particularly in areas of clinical sensitivity, supporting their safety during future crewed missions.

The CADs were also “worn” by the ATOM phantoms during the Artemis I mission.

### **Building Knowledge for Future Crewed Missions**

As Artemis II prepares to carry the first crew beyond Earth in the next phase of lunar exploration, Mirion’s role in developing the CAD devices highlight the company’s continued involvement in expanding the frontiers of science while helping to safeguard the people who make such journeys possible.

“Space radiation is one of the most complex challenges in human exploration, and measuring it accurately is essential to human safety,” Logan added. “We’re proud to contribute technologies and expertise that help scientists build a clearer picture of radiation exposure that will protect astronauts and enable future missions.”

### **About Mirion**

Mirion is a global leader in radiation safety, science and medicine, empowering innovations that deliver vital protection while harnessing the transformative potential of ionizing radiation across a diversity of end markets. Focused on nuclear and safety, the Mirion Technologies group is committed to powering advancements in nuclear energy through proven radiation safety technologies and expertise. Dedicated to driving better patient outcomes, the Mirion Medical group is focused on improving quality in cancer care through its broad range of solutions that enhance the delivery and ensure safety across the medical landscape. Headquartered in Atlanta (GA – USA), Mirion employs approximately 3,200 people and operates in 12 countries. Learn more at [mirion.com](https://www.mirion.com).

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