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No. 3665

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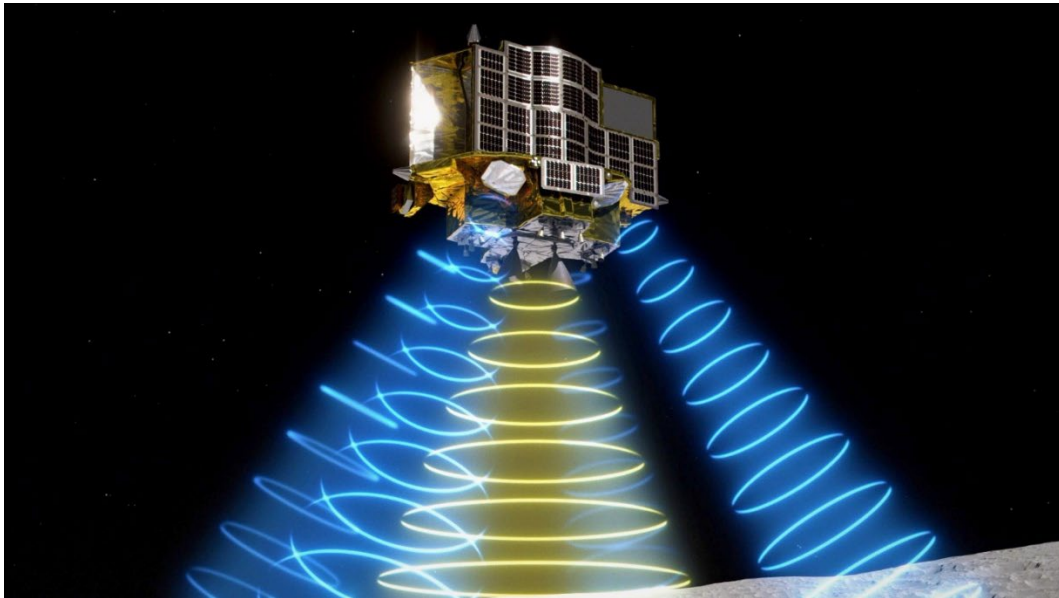
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Smart Lander for Investigating Moon “SLIM” Achieves World’s First High-Precision Landing on the Moon



Rendition of SLIM touching down on Moon (courtesy JAXA)

TOKYO, January 26, 2024 – [Mitsubishi Electric Corporation](https://www.mitsubishielectric.com) (TOKYO:6503) announced today that the Smart Lander for Investigating Moon (SLIM), a spacecraft developed by the company under contract with the Japan Aerospace Exploration Agency (JAXA), successfully achieved a high-precision landing on the lunar surface at 00:20 a.m. (Japan Standard Time) on January 20.

Data collected by JAXA confirmed that the precision touchdown was just 55 meters east of the target landing point, a level of accuracy that far surpasses that of conventional lunar landings, which are typically within several kilometers of their targets, making this an unprecedented achievement. High-precision landing technology for the precise positioning of spacecraft will become increasingly important for future lunar and planetary exploration.

Mitsubishi Electric was awarded a contract in 2015 with primary responsibility for the design, manufacture and testing of the SLIM at the company's Kamakura Works in Kamakura, Kanagawa Prefecture, Japan. In collaboration with JAXA, Mitsubishi Electric also developed the guidance, navigation and control (GNC) system used for high-precision landings. The GNC system's various sensors, including a camera and radar, onboard computer and software, allow the SLIM to autonomously estimate its position and attitude as well as make necessary corrections during flight. Equipped with an image navigation system developed by JAXA, which includes an image navigation algorithm and camera, the GNC system can estimate its position by taking images of the lunar surface to identify the locations of craters.

Being in charge of providing the SLIM's landing radar and other sensors, Mitsubishi Electric developed the onboard computer and software, both key components of the GNC system. The company also completed GNC system by integrating JAXA's image navigation technology with sensors, computer and software.

According to JAXA's post-landing analysis, the SLIM was within 10 meters of its target landing site at an altitude of about 50 meters when it began implementing obstacle avoidance maneuvers, confirming that the GNC system performed exceptionally well in guiding the SLIM's high-precision landing.

Mitsubishi Electric is continuing to collaborate with JAXA on further technical evaluations of the entire mission, including the historic landing.

Mitsubishi Electric's Space Business

Mitsubishi Electric, a leader in Japan's space development, has participated as a prime contractor in nearly half of JAXA's satellite-development projects. Since the late 1970s, the company has been researching and developing navigation-guidance and control technology through projects involving the Space Flyer Unit (SFU), Engineering Test Satellite-VII (ETS-VII), H-II Transfer Vehicle (HTV), etc. Many of these same technologies were used to develop the SLIM. Going forward, Mitsubishi Electric will continue to pursue advanced technologies and contribute to sustainable space exploration and human expansion into space, including through Japan's participation in the Artemis Program, an international space-exploration initiative.

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About Mitsubishi Electric Corporation

With more than 100 years of experience in providing reliable, high-quality products, Mitsubishi Electric Corporation (TOKYO: 6503) is a recognized world leader in the manufacture, marketing and sales of electrical and electronic equipment used in information processing and communications, space development and satellite communications, consumer electronics, industrial technology, energy, transportation and building equipment. Mitsubishi Electric enriches society with technology in the spirit of its "Changes for the Better." The company recorded a revenue of 5,003.6 billion yen (U.S.\$ 37.3 billion*) in the fiscal year ended March 31, 2023. For more information, please visit www.MitsubishiElectric.com

*U.S. dollar amounts are translated from yen at the rate of ¥134=U.S.\$1, the approximate rate on the Tokyo Foreign Exchange Market on March 31, 2023