

THE JAPANESE SPACE PROGRAMME: FORGING AHEAD WITH LIKE-MINDED PARTNERS

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Space represents the final frontier of exploration for major global powers and Japan is no exception. The Japanese space programme experienced a pivotal transformation in 2003 with the successful launch of Hayabusa, which captivated the public through live broadcasts and renewed interest in space exploration. This event taught Japan the importance of public engagement, setting targeted goals and collaborating with like-minded nations. Consequently, Japan became an integral part of the US-led Artemis programme, where it leveraged its strengths to develop niche technologies. Japan's achievements include the creation of cost-effective H3 rocket launches, innovative and eco-friendly wooden satellites and remarkably precise unmanned moon landings, known as the "Smart Lander for Investigating the Moon" project. These accomplishments underscore Japan's growing influence and expertise in the realm of space exploration.

(Click on the link to read the above in [Chinese](#), [French](#) and [Spanish](#))

Chinese:

日本的太空计划：与志同道合的伙伴携手前进

太空是全球大国探索的最后前沿，日本也不例外。日本的太空计划在 2003 年经历了一个关键的转变，通过直播，那一年隼鸟号的成功发射吸引了公众的关注，并重燃了人们对太空探索的兴趣。这一事件让日本认识到公众参与的重要性，也明确了目标以及志同道合国家合作的意义。因此，日本成为美国主导的阿尔忒弥斯计划的重要组成部分，利用其优势开发了特别的技术。日本的成就包括成本效益高的 H3 火箭发射、创新且环保的木质卫星，以及被称为“探月智能着陆器”项目的极其精确的无人月球着陆。这些成就凸显了日本在太空探索领域日益增长的影响力和专业知识。

French:

LE PROGRAMME SPATIAL JAPONAIS: ALLER DE L'AVANT AVEC DES PARTENAIRES PARTAGEANT LES MÊMES VALEURS

L'espace représente la frontière ultime de l'exploration pour les grandes puissances mondiales et le Japon ne fait pas exception. Le programme spatial japonais a connu une transformation décisive en 2003 avec le lancement réussi de Hayabusa, qui a captivé le public à travers des diffusions en direct et a renouvelé l'intérêt pour l'exploration spatiale. Cet événement a appris au Japon l'importance d'impliquer le public, de fixer des objectifs ciblés et de collaborer avec des nations partageant les mêmes valeurs. Ainsi, le Japon est devenu une partie intégrante du programme Artemis dirigé par les États-Unis, où il a exploité ses forces pour développer des technologies de niche. Les réalisations du Japon incluent la création de lanceurs de fusées H3 rentables, de satellites en bois innovants et écologiques, et d'atterrissages lunaires automatisés d'une précision remarquable, connus sous le nom de projet "Smart Lander for Investigating the Moon". Ces accomplissements soulignent l'influence et l'expertise croissantes du Japon dans le domaine de l'exploration spatiale.

Spanish:

EL PROGRAMA ESPACIAL JAPONÉS: AVANZANDO CON SOCIOS AFINES

El espacio representa la última frontera de exploración para las principales potencias mundiales y Japón no es una excepción. El programa espacial japonés experimentó una transformación crucial en 2003 con el exitoso lanzamiento de Hayabusa, que cautivó al público a través de transmisiones en vivo y renovó el interés en la exploración espacial. Este evento enseñó a Japón la importancia de la participación pública, establecer objetivos específicos y colaborar con naciones afines. En consecuencia, Japón se convirtió en una parte integral del programa Artemis, liderado por Estados Unidos, donde aprovechó sus fortalezas para desarrollar tecnologías especializadas. Los logros de Japón incluyen la

creación de lanzamientos de cohetes H3 rentables, satélites de madera innovadores y ecológicos, y aterrizajes lunares no tripulados notablemente precisos, conocidos como el proyecto “Smart Lander for Investigating the Moon”. Estos logros subrayan la creciente influencia y experiencia de Japón en el ámbito de la exploración espacial.

Executive Summary

1. Japan is emphasising exploration missions to the Moon and Mars (including Martian moons) with the objective of making these celestial bodies accessible for future human activities.
2. On 10 April 2024, US President Joe Biden and Japanese Prime Minister Kishida Fumio revealed the initiative for a “Japanese national to be the first non-American astronaut to land on the Moon on a future Artemis mission”.
3. The long-term goal is to use the Moon as a platform for missions to Mars through Japan Aerospace Exploration Agency’s (JAXA) Martian Moons eXploration Mission to extract and bring back samples from the Martian moon Phobos in Japan Fiscal Year 2026.
4. The Cabinet of Japan developed the Basic Plan on Space Policy on 13 June 2023 and its Implementation Plan on 22 December 2023 through the Outer Space Development Strategy Headquarters, a Cabinet-level agency formed by the Basic Space Law.
5. SLIM Lander touched down on the Moon’s surface about 55m east of the originally designated landing site, representing the success of its main objective of a pinpoint landing within an accuracy of 100m.
6. On 9 April 2024, US NASA Administrator Bill Nelson and Japanese Minister of Education, Culture, Sports, Science and Technology Moriヤマ Masahito inked the agreement for Japan to build a pressurised lunar rover before NASA launches it to the Moon under the Artemis programme.
7. LUPEX is JAXA’s pioneering mission to launch a rover to the moon to look for subsurface water. JAXA takes responsibility for constructing the lunar rover while the Indian Space Research Organisation builds the lander that will carry the rover into space.

8. The launch of the H3 rocket on 1 July 2024 to deploy an advanced observation satellite into space was highly significant as the H3 is an affordable rocket that utilises 90% standard automotive components, such as sensors.
9. JAXA cooperated with West Japan Railway Company to apply the railway's AI-powered failure-prediction technology to operating spacecraft in October 2022.
10. The Japanese government established a Space Strategy Fund worth US\$6.4 billion, available from 2024 to 2034, to spur space industry research and development which has been identified as a priority economic growth sector.