

Space BD Awarded JAXA Space Strategy Fund for “Low Earth Orbit Versatile Experimental System Technology”

Leading the development of experimental device to drive the
expansion of the space experiment market beyond 2030



Space BD Inc., a space business operator that provides various services including satellite launches and microgravity research on the ISS, has been awarded the JAXA Space Strategy Fund to develop the “Low Earth Orbit Versatile Experimental System Technology” for FY2024. (Head of the Research Team: Shuji Yamazaki, Head of ISS Internal Platform Business, Space BD)

※1 This is the sole development project in the life science category for this fiscal year’s Space Strategy Fund.

※1: <https://fund.jaxa.jp/content/uploads/kekka13.pdf> (Japanese Only)

■About the “Low Earth Orbit Versatile Experimental System Technology”

The “Low Earth Orbit Versatile Experimental System Technology” is one of the technology development themes included in the Space Strategy Fund. Based on our technological knowhow accumulated through experiments utilizing microgravity environment on the Japanese experiment module ISS ‘Kibo’, Space BD will develop a new experimental device that would provide

opportunities for more efficient and economical space experiments beyond 2030 in the post-ISS era (※2).

※2: https://note.com/space_bd/n/n367f583bf0a8 (Japanese Only)

The main features of the experimental device are as follows:

- A highly versatile system that could be applied to diverse experiments such as protein crystallization and cell research
- An experiment process that facilitates semi-automation and ground operation minimizes the labor time of astronauts and dramatically reduces preparation time and experimental costs
- A user-friendly design allowing space experiments that are an extension of experiments conducted on the ground

Through the development of this technology, the experimental environment would become easier to use for an increasing number of research institutions and corporations, and more commercial firms could be expected to develop projects and businesses utilizing LEO.

■About Space BD's initiatives

Since Space BD was commissioned by JAXA as the sole commercial service provider for the high-quality protein crystal growth experiment in 2021, we have accomplished numerous results with space experiments in the life science field, including the “Concept Study of Future LEO Manned Facility Projects and Orbital Life Science Experiment System” entrusted to us in December 2023. In particular, during the protein crystallization experiment conducted in a microgravity environment, Space BD was entrusted with 480 samples from the academic sector and about 40 samples from the private sector, and our results were among the top in Japan. Through these achievements, we developed partnerships with other Commercial Low Earth Orbit Destination (CLD) businesses. Space BD is also securing unmanned experiment opportunities and increasing collaborations with foreign implementation partners toward the post-ISS era.

With this JAXA award, Space BD will spearhead technological development as a versatile experiment system developer. We will leverage our accumulated knowledge and expertise to offer increasingly comprehensive life science services through our device development efforts.

■Comment by Shuji Yamazaki, Head of ISS Internal Platform Business, Space BD Inc.



It is a great honor that we were selected as leading developer of the Low Earth Orbit Versatile Experimental System Technology, a technology that is viewed with high expectations in the post-ISS era. I am very pleased and humbled that we will be leading the technology development using our experience and knowledge gained through numerous space experiments conducted on the ISS. I wish to express my sincere gratitude for the enormous support and understanding extended to us from our partners and stakeholders for this initiative. We will work together with you all to develop space utilization as a dominant industry.

■ About Space BD

Space BD is a one-stop service provider of various solutions to foster commercial utilization of space. Ranging from launch of small satellites with commercial launchers as well as via the International Space Station, to supporting pharmaceutical research with protein crystallization in

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microgravity, Space BD can support everything from business plan formulation and market research to hands-on technical operations. As of Oct. 2024, Space BD has supported over 80 satellite projects and over 500 related missions.

U R L : <https://space-bd.com/en/>