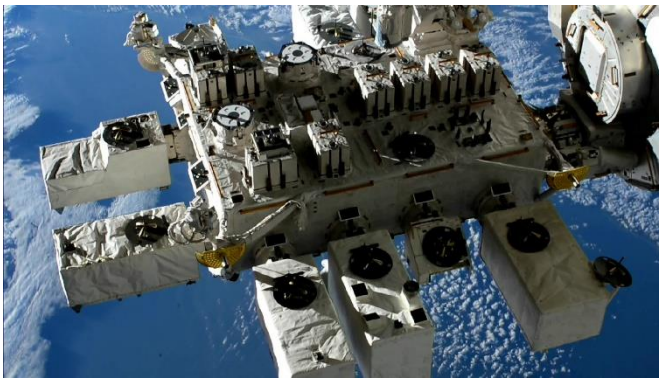


Space BD to start Space Delivery Project

Joint project in collaboration with global research & educational institutions and the private sector to launch research objects & mementos by the end of FY2021



<ISS Exposed Facility> ©JAXA/NASA

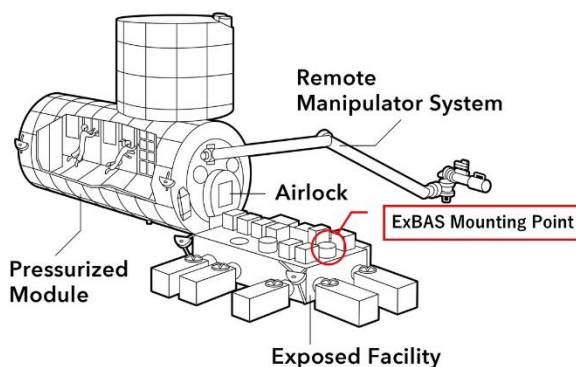


<A part of launch items>

Tokyo - The leading Japanese space startup Space BD announced the start of the Space Delivery Project to launch and expose to outer space various items such as research materials, photographs, and illustrations collected from 10 research institutes, educational institutions, and private companies in Japan and overseas.

The primary purpose of this project is research by academic institutions. In addition, mementos produced by private companies and educational institutions will also be exposed to outer space and returned to Earth. The items will be carried to the International Space Station (ISS) via the ISS resupply vehicle by the end of fiscal year 2021.

■ About the Space Delivery Project



<ExBAS on the International Space Station>

The Space Delivery Project utilizes a new external experiment facility: ExBAS. ExBAS will be installed on the IVA-replaceable Small Exposed Experiment Platform (i-SEEP) on the ISS Japanese Experiment Module Kibo.

Space BD has taken the lead in inviting a wide range of organizations to participate in the project

and is providing a variety of support, including for the selection of objects and their launch & return to Earth. In the first Space Delivery Project, Space BD will deliver various items such as research materials, photographs, and illustrations collected from a total cohort of ten private companies and research institutions.

Space BD has jointly developed ExBAS with JAXA since 2020. Space BD will broaden the scope for space exposure from simply covering research purposes, the main focus to date, to also include more general utilization. This is expected to expand the horizons of the possible use of space.

■ **Timeline**

September 2021: All items will be delivered to JAXA

By the end of FY2021: All items will be delivered to the International Space Station

The items will be exposed to outer space for 6 months

June 2022: The items will be returned to the inside of the ISS, and return to Earth







■ **Comment from Genki Hiraga, Business Development at Space BD**






As part of our efforts to open up the ISS to the private sector, I am glad to have ten participants from various fields, including domestic and international research institutes, educational institutions, and private companies. Of course this exposure of materials will be mainly for research and development purposes, but beyond that, we at Space BD hope that we can convey the dreams of people around the world, especially the younger generations who will lead the future in space, along with these mementos, and in so doing contribute to expanding the horizons of how we use space.

I would also like to mention that this project would not have been possible without the support of our partner companies, who take pride in their high level technological abilities.

■ Space Delivery Project participating organizations

Organization name	Items	Images
Adamant Namiki Precision Jewel Co., Ltd. (Japan)	〈Research purpose〉 Industrial diamonds	
Kyoto University (Japan)	〈Research purpose〉 Wood specimens and polyurethane resin to check durability in space to launch a wooden satellite	
Clark Memorial International High School (Japan)	〈Memento〉 Aluminum plate with engraved logo panel of the school name	
Space SAGA (Japan)	〈Memento〉 Aluminum plate engraved with a QR code to the official website of Geo-Gastronomy, a food system that interacts with the Earth	
Sompo Holdings, Inc. (Japan)	〈Memento〉 Aluminum plates printed with photos selected from among the photos of memories collected from the public during the campaign	
Tanpopo mission research team (Fukuoka Institute of Technology, Yokohama National University, Hokkaido University, Universität Wien, etc.) (Japan)	〈Research purpose〉 Bio-organic synthesis and microbial viability in space environment to elucidate the origin, migration and survival of life in space.	

TOAGOSEI CO., LTD. (Japan)	〈Research purpose〉 Space experiment on the Aron Alpha glue	
Hachinohe Institute of Technology Daiichi High School (Japan)	〈Educational materials〉 Student handmade aluminum plates with character designs of foxes from local folktales, engraved on NC milling machines	
Airvantis (Brazil)	〈Memento〉 Aluminum plate with engraved corporate logo	
Toucan Space (France)	〈Memento〉 A bundle of paper signed by notables	<no image>

■ **Space Delivery Project collaborators**

Company name	Collaboration details
Adachi textile Co., Ltd.	Contracted for vacuum packing at a level as close to outer space as possible to protect objects that are not space environment resistant.
Core Machinery, Inc.	Contracted to produce a variety of commemorative aluminum sheets, using the company's specialized surface processing technology to express complex designs on aluminum sheets.
Sagami coating Ltd	Contracted for the atomic oxygen resistant coating necessary to maintain the design of commemorative aluminum plates after exposure to space.
TOAGOSEI CO., LTD.	Providing an atomic oxygen resistant coating agent developed jointly with JAXA, which is needed to protect the commemorative aluminum plates.
YUKI Precision Co., Ltd.	Contracted to manufacture the frame plates for fixing each object to the side part of ExBAS.
WEL Research Co., Ltd.	Contracted for the bonding of the temperature sensor required to measure the temperature of ExBAS.

Takenouchi Industrial Textile Corp.	Contracted to manufacture cloth boxes necessary for storing the subject items.
Kyoso Technoshudan	Contracted to fabricate aluminum frames and shafts for securing wood exposure test specimens.
KOGEI STANDARD	Contracted for the processing of wood test pieces for exposure.
Hokkaido Research Organization	Providing wood for exposure.

■ About Space BD

Space BD is a space business development firm aims to be a company that represents Japan and develops a world-class industry. Since its foundation in 2017, Space BD has provided a one-stop service from proposing business plans to providing engineering support regarding space utilization, including the International Space Station (ISS).

In March 2021, Space BD was selected as a company implementing JAXA's "Lunar orbit transportation service concept study work" and started a life science business by utilizing the ISS's microgravity environment based on a basic agreement with JAXA in May.

Furthermore, Space BD has also developed and provided an original educational program based on the astronaut training program at NASA/JAXA to foster leaders for our future society by planning and managing entrepreneurship development projects.

Space BD will promote the industrialization of space by providing comprehensive services with both business development and technical aspects for all those who want to utilize space.

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