



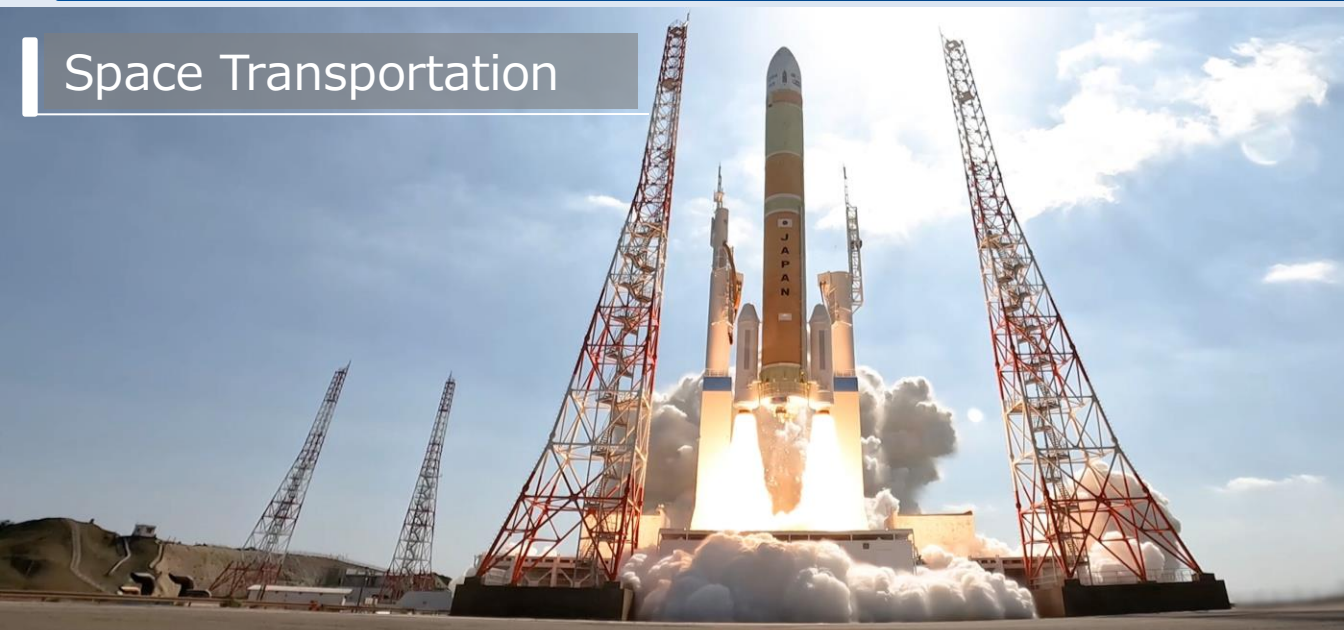
The latest topics from JAXA

Japan Aerospace Exploration Agency
Director, Bangkok Office
Takehiro Nakamura

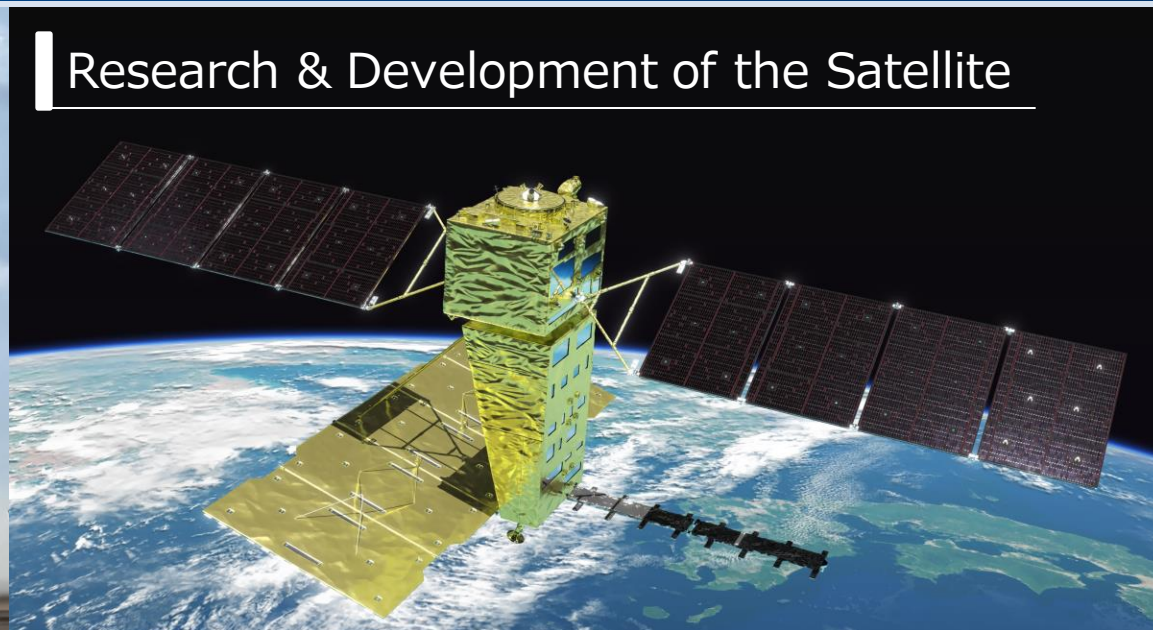
JAXA Missions



Space Transportation



Research & Development of the Satellite



Human Spaceflight

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Space Science and Exploration

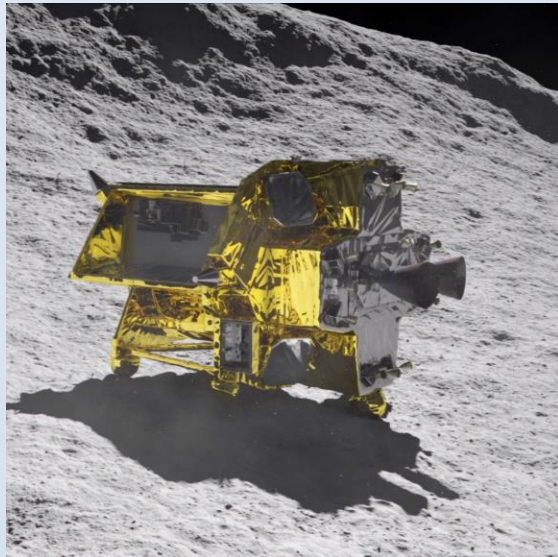


Aeronautics

Recently completed & Upcoming Events 2024~



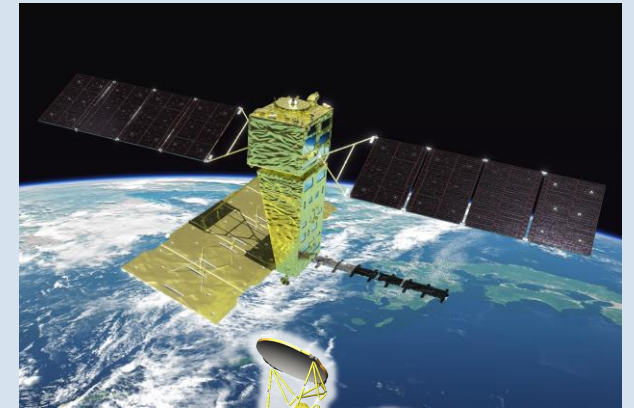
H-IIA Rocket Launch



Lunar Surface Landing



Human Spaceflight



Earth Observation



Return to Flight of H3 Rocket



First Flight of Epsilon S



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Active Debris Removal

Mission Completed

In Operation

Under Development

Earth Observation

MOS-1/MOS-1b
1987-1990/1995-1996

JERS-1
1992-1998

ADEOS 1996-1997
ADEOS-II 2002-2003

TRMM/PR
1997-2015

ALOS
2006-2011

Aqua/AMSR-E
2002-2015

GOSAT
MOE/JAXA/NIES
2009-

GCOM-W
2012-

GPM/DPR
2014-

ALOS-2
2014-

GCOM-C
2017-

GOSAT-2
MOE/JAXA/NIES
2018-

ALOS-4
JFY2024

EarthCARE

JFY2024

GOSAT-GW
MOE/JAXA/NIES
JFY2024

PMM
JFY2028

ALOS-3 (Optical)
*Lost due to launch failure

JAXA Astronauts



MOHRI Mamoru



MUKAI Chiaki



DOI Takao



YAMAZAKI Naoko



NOGUCHI Soichi



WAKATA Koichi



FURUKAWA Satoshi



HOSHIDE Akihiko



YUI Kimiya



ONISHI Takuya



KANAI Norishige



SUWA Makoto



YONEDA Ayu

New Astronaut Candidates

Astronaut Satoshi FURUKAWA on Crew-7 Mission

- ◆ Launched by SpaceX's Crew-7 on Aug. 26th, 2023
- ◆ Astronaut Furukawa has been on the International Space Station for about six months, conducting a variety of research, including experiments aimed at future exploration of the Moon and Mars, and, of course, experiments related to space education
- ◆ Returning to the Earth on 12th February 2024



H-IIA Flight No.48

- ◆ Successfully launched from Tanegashima Space Center on Jan. 12th, 2024
- ◆ Government mission satellite on board
- ◆ 42 consecutive successful launches from Flight No.7, leading to a success rate of over 98%
- ◆ H-IIA is scheduled for two more launches in this year 2024. Once the 50th and final vehicle is launched, H2A will be completely retired and replaced by the new H3 launch vehicle.





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SLIM (Smart Lander for Investigating Moon) & Lunar Excursion Vehicles

- ◆ Launched by HIIA 47 on Sep. 7th, 2023
- ◆ Successfully landed on the lunar surface on January 20th JST, 2024, and achieved high-precision (“pinpoint”) landing technology



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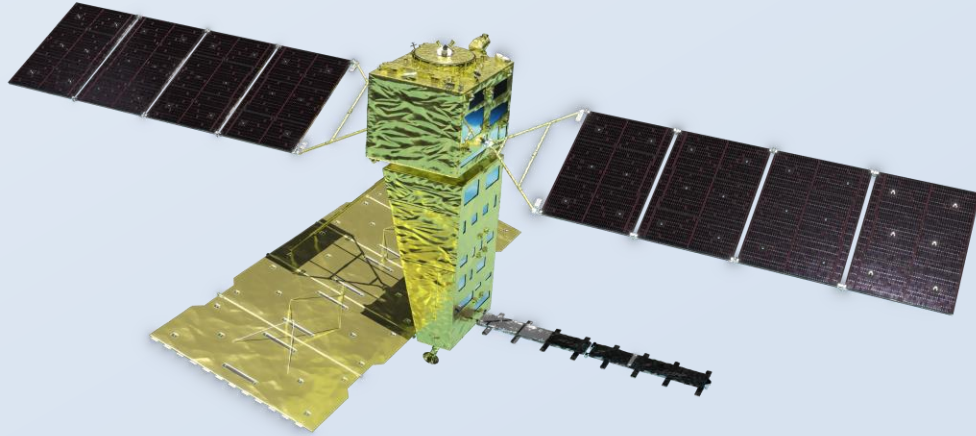
▲ Images of the Lunar surface taken and transmitted by Transformable Lunar Robot “SORA-Q”

Laser Retro-reflector Array provided by NASA on board ▶



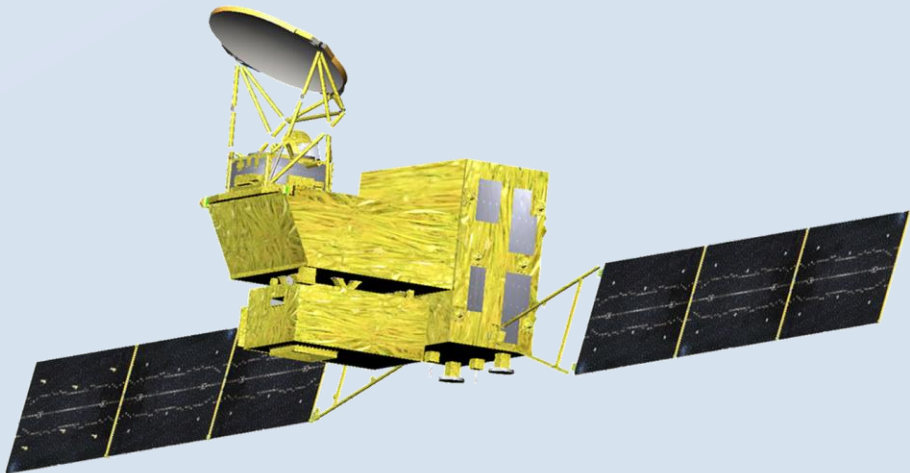
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ALOS-4



- ◆ ALOS-4 (Advanced Land Observing Satellite-4)
 - L-band radar satellite observing and monitoring disaster-hit areas, forests, and sea ice.
 - Achieving both high resolution (3m) and a broader observation swath (200km)
 - Will be launched by H3 rocket in JFY2024

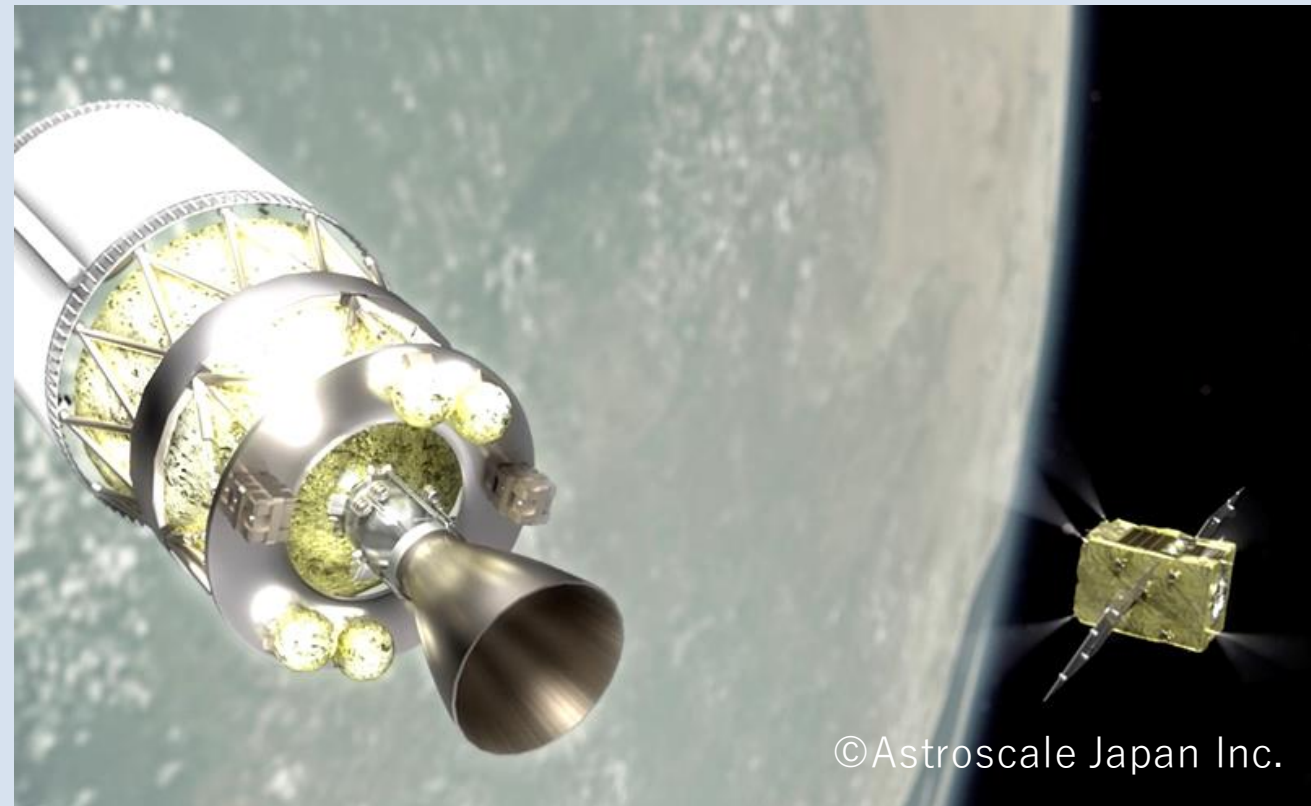
GOSAT-GW



- ◆ GOSAT-GW (Global Observing SATellite for Greenhouse gases and Water cycle)
 - Joint mission with MoE, NIES, and JAXA
 - Global monitoring of GHG and water cycle variation
 - Will be launched by H-IIA Rocket in JFY2024

Commercial Removal of Debris Demonstration (CRD2) Phase I

- ◆ ADRAS-J (Active Debris Removal by Astroscale-Japan)
 - The world's first attempt to safely approach and characterize an existing piece of large debris through Rendezvous and Proximity Operations (RPO)
 - Successfully launched by Rocket Lab Electron rocket from Launch Complex 1 in Mahia, New Zealand on February 18th



©Astroscale Japan Inc.



H3 launch vehicle

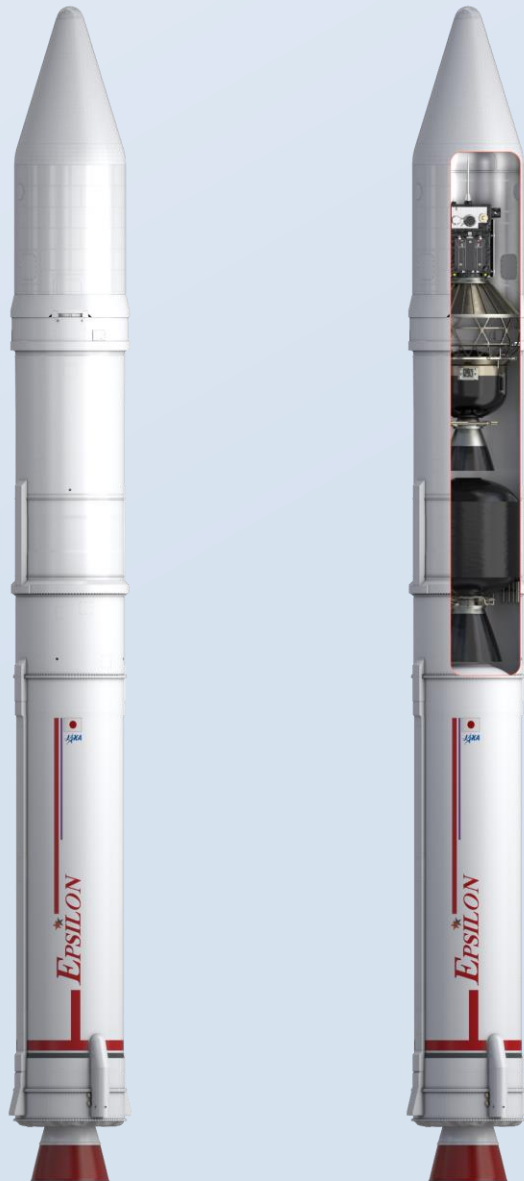
- ◆ Japan's next-generation heavy-lift launch vehicle
- ◆ The second test flight was successfully launched from Tanegashima Space Center on February 17th and realize a “Return to Flight”

Launch capability: more than 6.5t to GTO

Target price: about 5 billion yen*

*for a light configuration with no solid rocket booster





Epsilon S launch vehicle

- ◆ Solid-propellant rockets for increasing launch demand of small- and micro-satellites, and CubeSats
- ◆ Aiming to expand Japan's industry base in space transportation by transferring the Epsilon Launch Vehicle to the private sector (IHI Aerospace)
- ◆ Plan to launch the first test flight in JFY2024
- ◆ Some of JAXA's solid fuel launch vehicle technology is used in the Japanese space rocket venture Space One's launch vehicle.

Launch Capability Targets:

More than 1,400kg to LEO / More than 600kg to SSO





Thank you for your attention