JAXA
Japan Aerospace Exploration Agency

Tsukuba Space Center
Tour Guide

Information

空へ挑み、宇宙を拓く

JAXA
宇宙航空研究開発機構
Japan Aerospace Exploration Agency

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TKSC URL: http://www.jaxa.jp/visit/tsukuba

未来が変わる。日本が変える。チャレンジ25

PRINTED WITH SOY INK

2012.06

Tsukuba City was taken by Advanced Land Observing Satellite "DAICHI"

Since it was founded in 1972, JAXA Tsukuba Space Center has played an important role as the center of Japan's space activities. The latest research and development in space are implemented here at JAXA Tsukuba Space Center.

"Space Dome" Floor Map

Dream Port

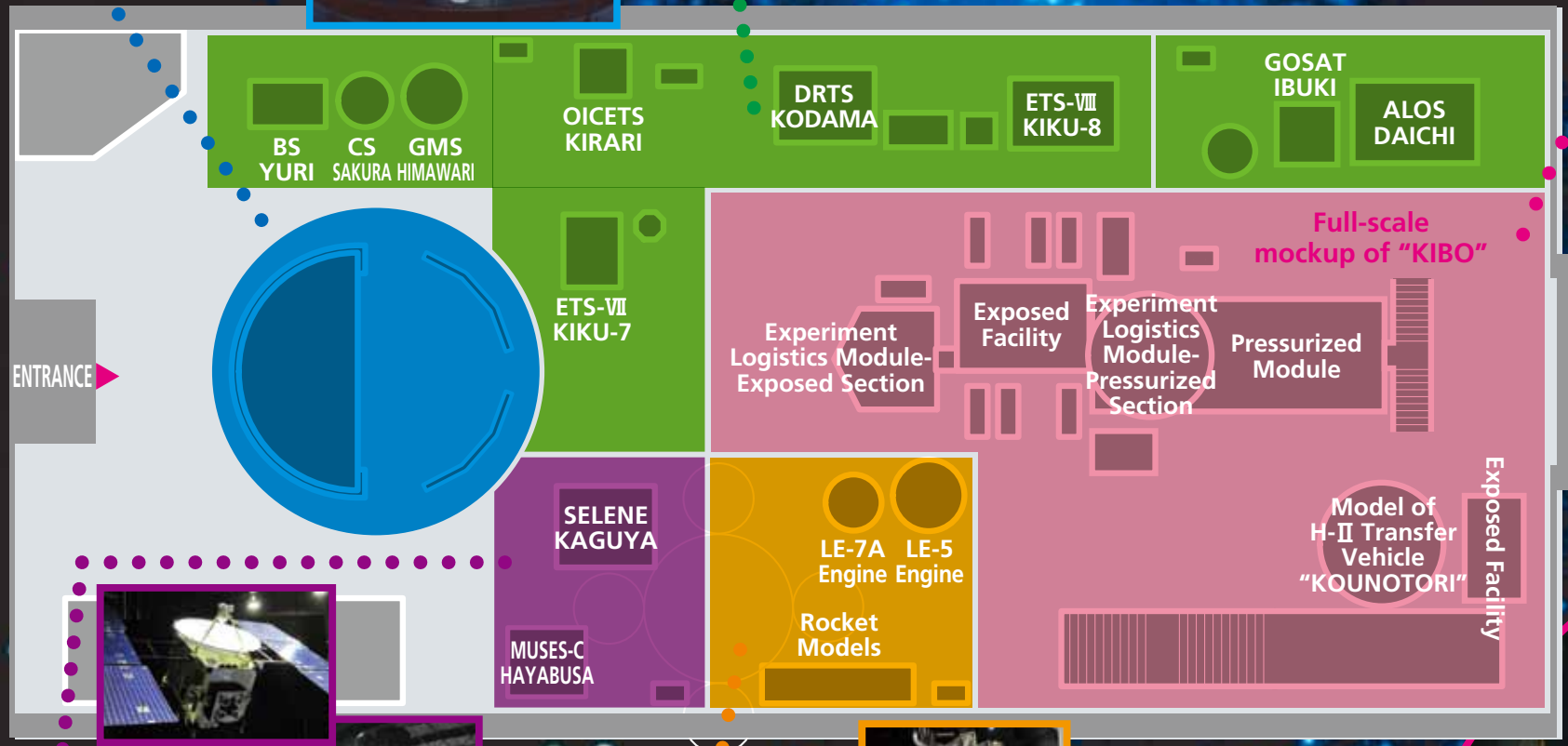
A beautiful one-millionth scale model of the Earth welcomes you at the entrance. "Reaching for the skies, exploring space." We introduce JAXA activities and the latest space developments.

Utilization of Space Satellites

Introducing the purposes and achievements of each project with an exhibition of engineering models of satellites.

Various types and shapes of satellites up close.

ALOS "DAICHI"



Human Space Activities Space Environment Utilization

Introducing the utilization of the space environment and International Space Station(ISS) with a full-scale mockup of "KIBO" and an engineering model of H-Ⅱ Transfer Vehicle "KOUNOTORI"

Pressurized Module of "KIBO", where astronauts do their experiments, is as big as Motor coach.

Model of H-Ⅱ Transfer Vehicle "KOUNOTORI"

MUSES-C "HAYABUSA"

Space Science and Solar System Exploration

Introducing research on space science and lunar and planetary science with an engineering model of "KAGUYA."

SELENE "KAGUYA"

Space Transportation Systems

Real rocket engines "LE-7A" and "LE-5," which were used for combustion tests, and 1/20 scale models of Japanese rockets from H-I rocket to the latest H-ⅡB rocket are on display.

Real rocket engine

One-twentieth scale model of successive rockets have been on display

Full-scale mockup of "KIBO"

We may change the layout of the exhibits.

Astronauts Course

Astronaut Training Zone

Astronaut Training Facility

The Astronaut Training Facility is used for basic training, health control, and physical training of astronauts. And also this facility is used for studying astronaut´s mental and physical health change during the long stay at the International Space Station.

Extravehicular Mobility Unit

Spacesuits

Astronauts wear spacesuits when they conduct extravehicular activities. Spacesuits consist from 14 layers of materials to protect astronauts from harmful radiation and space debris.
The portable life-support system containing such as enough oxygen for eight-hour activity is attached to the back of astronaut.

Space Biomedical Exhibition

Our mission is conducting the clinical studies and basic biomedical research for humans to live and work safely and effectively in space.
Among the technologies for living in space, there are many ideas which can contribute to improve our "Quality of Life (QOL)" on the Earth.

Space Station Course weekday 2pm/3pm

"Kibo" Flight Control Room

At the "Kibo" Mission Control Room, you can see operations of Flight Control Team in real time such as monitoring payloads and experiments.

50 flight controllers operate in three shifts, operating 24hours a day, 365days a year communicating with astronauts and contacting with other countries including NASA.

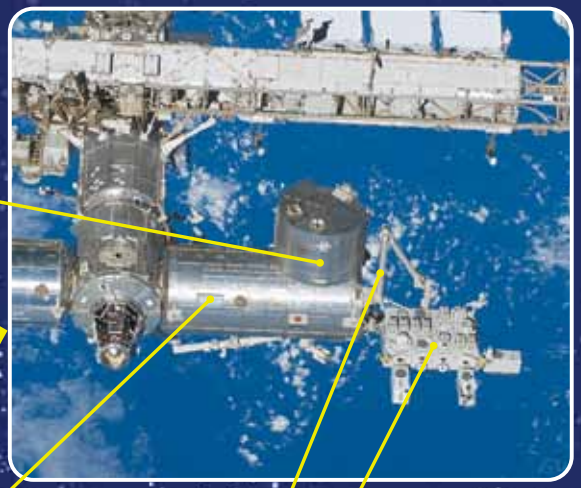
The ISS is spectacular space project of unprecedented scale.

15 countries: Japan, the United States, Canada, European countries, and Russia, are cooperating to promote the ISS construction and utilization. We participates to the ISS by developing Japanese Experiment Module(JEM) called " KIBO " which means hope in Japanese. "KIBO" had been completed in July 2009 by three separate space shuttle flights.

The ISS is a huge manned construction located about 400km above the Earth. While it circles around the Earth at a speed of 90 minutes per orbit, experiments and research for a long term by utilizing environment peculiar to the space are conducted. And it will promote science and technology by utilizing the results of such research, and contribute to daily lives and industries on the Earth.

The Experiment Logistics Module-Pressurized Section takes a roll of an on orbit storage area which accommodates experiments or consumables.

Experiment Logistics Module - Pressurized Section



Pressurized Module

The central part of "Kibo", in which mainly experiments utilizing the microgravity environment are conducted. It enables conducting experiments with the newest technology in a shirt-sleeve environment.

Remote Manipulator System

Serves as an arm to support experiments conducted on the Exposed Facility. The arm is equipped with a TV camera which allows astronauts to monitor the operation from inside the pressurized module.

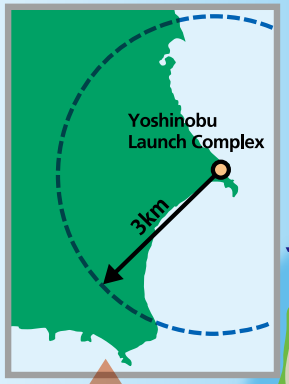
Exposed Facility

Located outside the ISS and is exposed to outer space all the time. On ISS, the EF and the truss facilities are the only locations where the space environment can directly be utilized.

Launch Vehicle Course sat/sun/holidays

Hands-on acoustics of the rocket launch

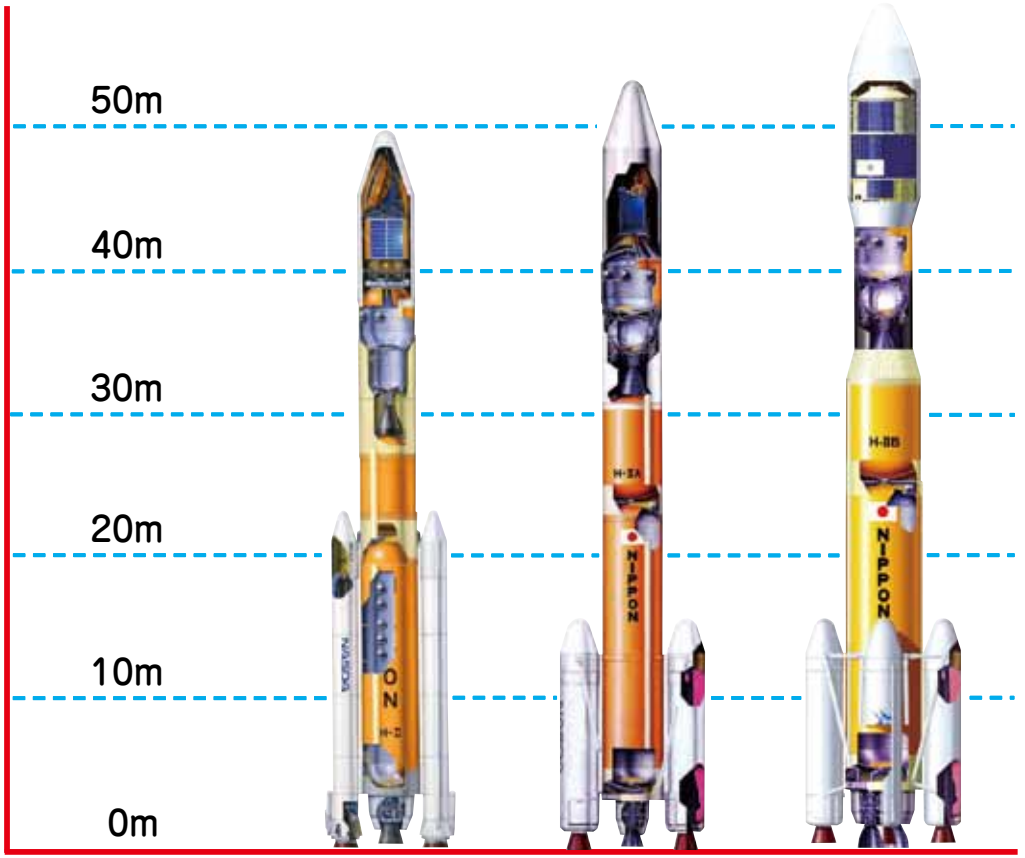
You can experience the acoustics of the rocket launch at radius of 3 kilometers from the launch site at Tanegashima.



Experiencing the acoustics of rocket launch

To ensure the launch vehicles and satellites will function properly in a severe environment, JAXA Tsukuba Space Center simulates the environment, such as loud sound, vibration, ultra-high vacuum, and high temperature, using our facilities and tests them before the launch.

Comparison of H-Ⅱ, H-ⅡA and H-ⅡB



Rocket	H-Ⅱ	H-ⅡA	H-ⅡB
Stages	2	2	2
Height	50 m	53 m	57 m
Diameter	4 m	4 m	5.2 m (1st Stage)
Mass	260 ton	289 ton	531 ton
Launch Capacity	4 ton	4 ton	8 ton

Tour Information

Exhibition Hall "Space Dome" ··· No Advance booking required

Closed ● Year-end, New Year holidays (from Dec. 29 to Jan. 3) and facilities maintenance day

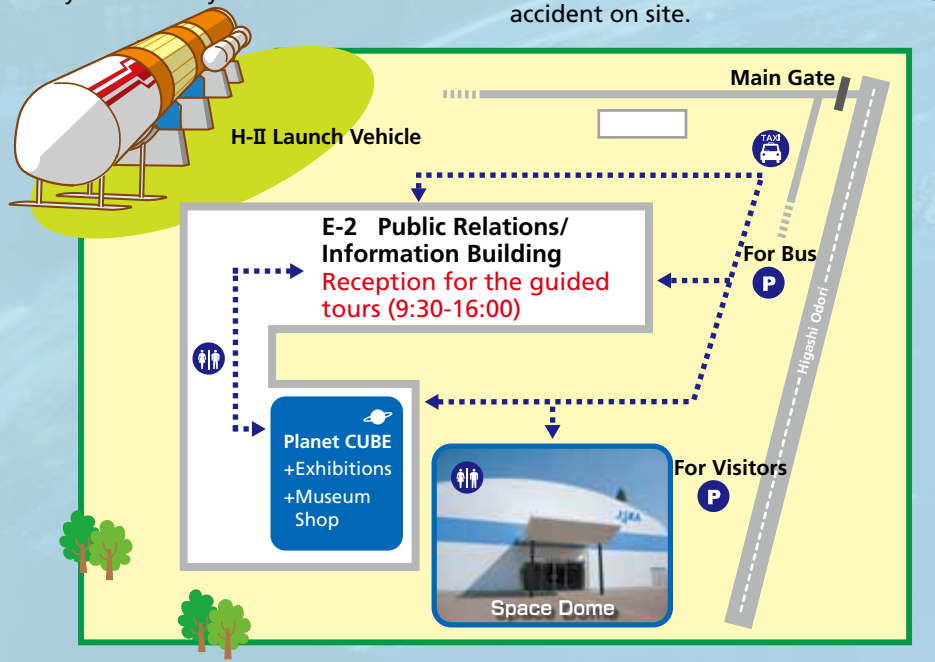
Open ● From 10:00am to 5:00pm

Admission ● Free

Parking ● Free parking lot for 50 cars

NOTICE

- Eating and drinking are prohibited in "Space Dome". Public Relations / Information Building (E-2) and cafeteria are open for tour guests. If you use the cafeteria, registration is required at the reception. If you have food or drink you bring, Public Relations / Information Building (E-2) and cafeteria are available as food and drink area. The cafeteria is open only on weekdays.
- Please take your rubbish home.
- Please feel free to take pictures of the exhibits.
- Do not damage any exhibited items and building.
- Smoking is prohibited on the premises of JAXA except in designated smoking areas.
- Please be advised that the Tsukuba Space Center is not responsible for any accident on site.



GUIDED TOURS ··· Advance booking required

Closed
- Monday, Year-End and New Year holidays (from Dec. 29 to Jan. 3) and facilities maintenance day
- We will open on Monday only for "National Holiday" and during summer vacation.

Admission ● Free

Contact ● Please call the Reception Desk (Tel: 029-868-2023) for tour availability and application (9:30am to 5:00pm)

Tour Schedule ● Tours are held 5 times a day. (approximately 75-90 min)

First tour	Second tour	Third tour	Fourth tour	Fifth tour
10 am	11 am	1 pm	2 pm	3 pm

Notes
- Please make sure to register at the reception desk.
- A Tsukuba Space Center Bus is used for transportation during the tour. The bus can accommodate up to a maximum of 40 people.
- If you are arriving on a chartered bus, you can use it. In such case a guid will attend you on your bus.
- Please be sure to wear Visitor Card which will be delivered at the Reception Desk. (Guide will collect them after the tour)

TOUR COURSE

The tour course is subject to change without prior notification due to various research projects, development activities, and experiments.

Astronauts Course (Weekdays)

❶ Video → ❷ Space Dome → ❸ Astronaut Training Zone

Space Station Course (Weekdays 2pm/3pm)

❶ Video → ❷ Space Dome → ❸ "Kibo" Flight Control Room※

※Flight Control Room
This room requires much higher security. Please note that you are under several regulations in and around this room.

Launch Vehicle Course (Saturday/Sunday/Holidays)

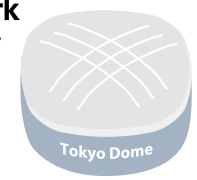
❶ Video → ❷ Space Dome → ❸ Hands-on acoustics of the rocket launch

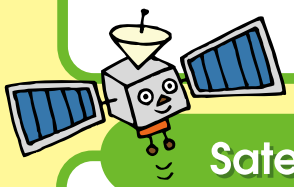
JAXA Tsukuba Space Center

Did you know ...?

Tsukuba Space Center

Tsukuba Space Center is about 12 times as large as the baseball park "Tokyo Dome."

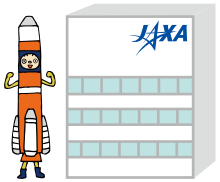




Rocket

The length of H-ⅡA rocket is the same as the height of Headquarters Building.

53 meters!



Satellite

The insulation is attached to satellites with Velcro.

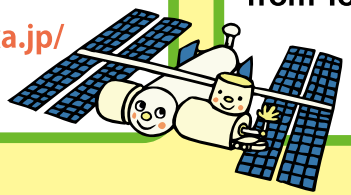
Space Suit

Space suit worn for extravehicular activity weighs about 120kg.

International Space Station

ISS, which is located about 400 kilometers above the Earth, can be seen with the naked eye.

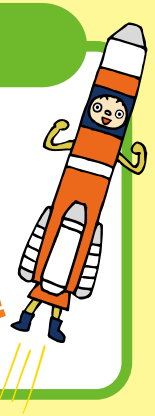
http://kibo.tksc.jaxa.jp/



Rocket

If you take a H-II rocket, it takes about one minute from Tokyo to Osaka.

WOW !!!



commemoration stamp

Tsukuba Space Center