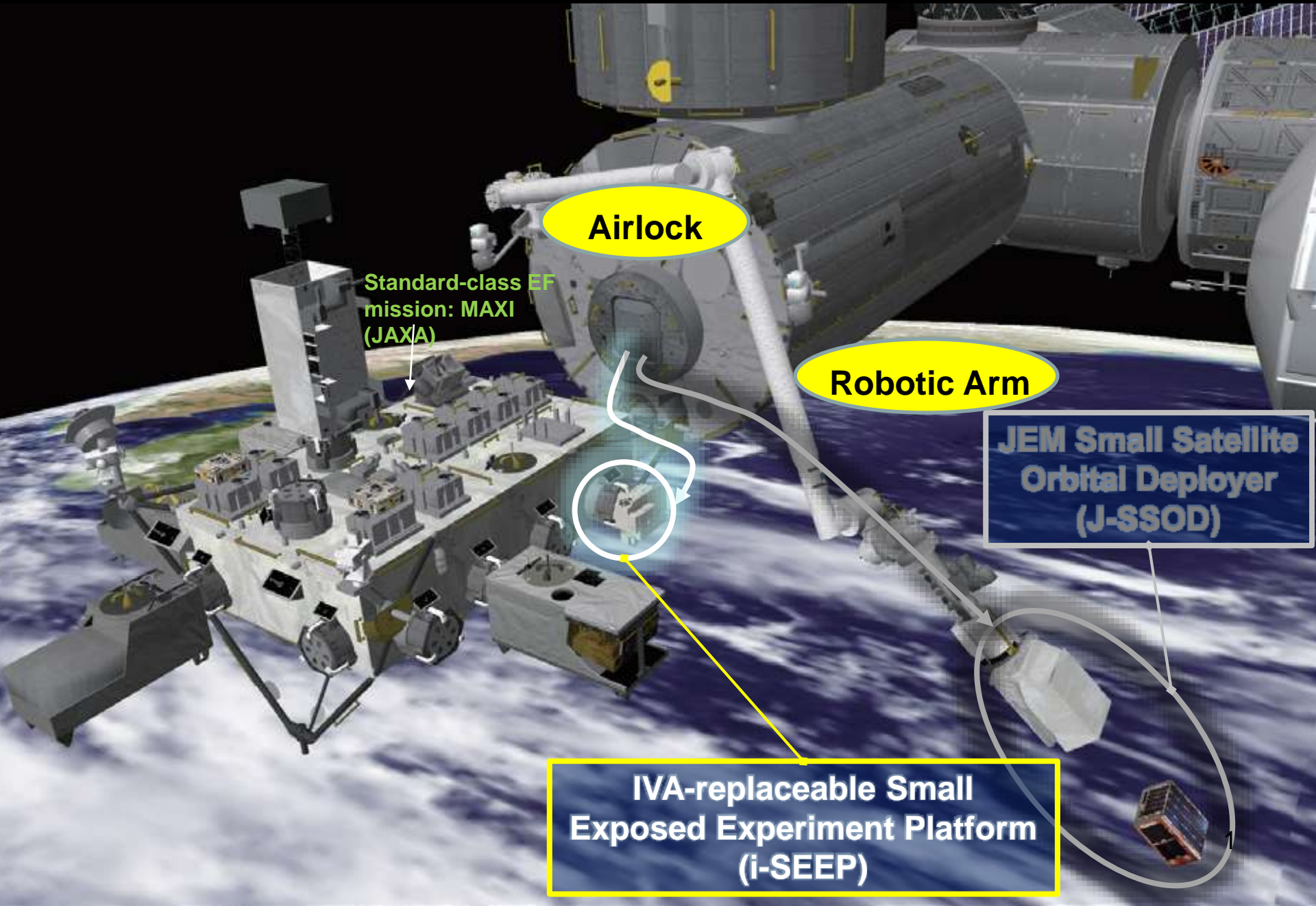


Exposed Facility of "Kibo"



Airlock

Standard-class EF mission: MAXI (JAXA)

Robotic Arm

JEM Small Satellite Orbital Deployer (J-SSOD)

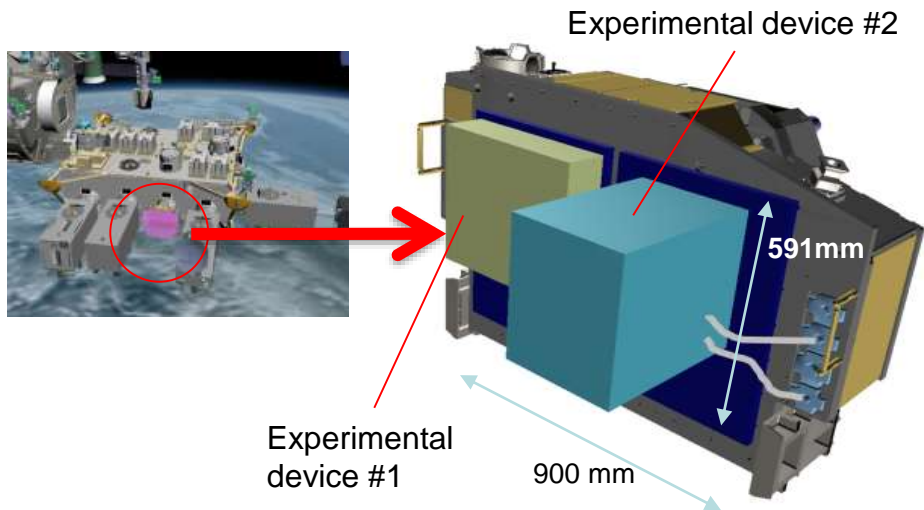
IVA-replaceable Small Exposed Experiment Platform (i-SEEP)

Exposed Facility (EF) port utilization platform using i-SEEP

i-SEEP expands possibilities for exposed testing and verification of equipment for use in space, holding several payloads **up to 50 cm x 70 cm x 35 cm and 200 kg in total.**

- i-SEEP (**IVA-replaceable Small Exposed Experiment Platform**) is an exposed payload to support exchangeable experiment equipment by supplying electrical power, Ethernet communication, and a cooling function.
- Experimental devices can be launched as pressurized cargo and attached to Kibo by crew operation.
- i-SEEP with experiment equipment is transferred to outer space through the JEM Airlock, and then moved and attached to a port of the Exposed Facility by JEMRMS.
- Devices can be returned to Earth for further analysis, if required.

Easier technology verification and Earth / astronomical observations are possible.



Experimental devices attached on i-SEEP

Item	Characteristics
Power	28 VDC (rated) 2 ch, up to 200 W/ch
Mass	Less than 200 kg
Communications	<p>Mid-speed Ethernet, Ethernet II, or IEEE 802.3m 2 ch wireless LAN: IEEE 802.11n, 1 access point</p> <p>Low-speed MIL-STD-1553B, 2 systems USB, USB 2.0, 2 ch</p> <p>Video NTSC, 1 ch</p>
Downlink	Nominal 1Mbps (Max. 27Mbps)
Heat dissipation	<p>400 W (max.) (Two cold plates attached to experimental equipment) Cold plate temperature: 16 – 40 degC</p>

Attaching CubeSat to ISS (on “i-SEEP”)

Coming Soon!!

A Small Payload(like CubeSat) accommodation equipment on i-SEEP is under development.

- CubeSat module:
100W×100L×113.5H
3U is acceptable
- 8 Units can be implemented on one side of i-SEEP
- Power and communication service is provided via USB
 - Power: 5V 4W
 - Comm.: 100kbps (Ethernet)
- Thermal: connected to cold plate. Total system is covered by MLI
- Each CubeSat module is launched separately and attached to i-SEEP by crew

