



Secretariat

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**Committee on the Peaceful
Uses of Outer Space**

**Information furnished in conformity with the Convention
on Registration of Objects Launched into Outer Space**

**Note verbale dated 13 July 2017 from the Permanent Mission
of Japan to the United Nations (Vienna) addressed to the
Secretary-General**

The Permanent Mission of Japan to the United Nations (Vienna), in accordance with article IV of the Convention on Registration of Objects Launched into Outer Space (General Assembly resolution 3235 (XXIX), annex), has the honour to transmit information on space objects launched by Japan (see annex I) and the change of status of previously registered space objects (see annex II).



Annex I

Registration data on space objects launched by Japan*

Hodoyoshi 1

Information provided in conformity with the Convention on Registration of Objects Launched into Outer Space

Committee on Space Research international designator	2014-070B
Name of space object	Hodoyoshi 1
National designator	2014-070B
State of registry	Japan
Other launching States	Russian Federation
Date and territory or location of launch	6 November 2014 at 0735 hours 49 seconds UTC Yasny launch base, Orenburg region, Russian Federation
Basic orbital parameters	
Nodal period	94.686 minutes
Inclination	97.4369 degrees
Apogee	520.104 kilometres
Perigee	500.936 kilometres
General function of space object	Earth observation by means of an optical camera

Additional voluntary information for use in the Register of Objects Launched into Outer Space

Space object owner or operator	University of Tokyo
Launch vehicle	Dnepr launch vehicle
Other information	Launching organization is the International Space Company (ISC) Kosmotras

ChubuSat 1

Information provided in conformity with the Convention on Registration of Objects Launched into Outer Space

Committee on Space Research international designator	2014-070C
Name of space object	ChubuSat 1
National designator	2014-070C
State of registry	Japan
Other launching States	Russian Federation

* The information was submitted using the form prepared pursuant to General Assembly resolution [62/101](#) and has been reformatted by the Secretariat.

Date and territory or location of launch	6 November 2014 at 0735 hours 49 seconds UTC Yasny launch base, Orenburg region, Russian Federation
Basic orbital parameters	
Nodal period	95.22 minutes
Inclination	97.47 degrees
Apogee	536 kilometres
Perigee	536 kilometres
General function of space object	Earth observation by means of visible light and an infrared camera (detection of wildfires and monitoring of volcano temperatures using an infrared camera) and messaging service for amateur radio.

Additional voluntary information for use in the Register of Objects Launched into Outer Space

Space object owner or operator	Nagoya University
Launch vehicle	Dnepr launch vehicle
Other information	Launching organization is the International Space Company (ISC) Kosmotras

QSat-EOS “Tsukushi”

Information provided in conformity with the Convention on Registration of Objects Launched into Outer Space

Committee on Space Research international designator	2014-070D
Name of space object	QSat-EOS “Tsukushi”
National designator	2014-070D
State of registry	Japan
Other launching States	Russian Federation
Date and territory or location of launch	6 November 2014 at 0735 hours 49 seconds UTC Yasny launch base, Orenburg region, Russian Federation
Basic orbital parameters	
Nodal period	95 minutes
Inclination	97.4 degrees
Apogee	528 kilometres
Perigee	485 kilometres
General function of space object	Earth surface imaging, micro-debris detection, geomagnetic field measurement and local rain storm prediction.

Additional voluntary information for use in the Register of Objects Launched into Outer Space

Space object owner or operator	Kyushu University
Launch vehicle	Dnepr launch vehicle
Other information	Basic orbital parameters are those as at 31 January 2016 Launching organization is the International Space Company (ISC) Kosmotras

Technology Demonstration Small Satellite “Tsubame”

Information provided in conformity with the Convention on Registration of Objects Launched into Outer Space

Committee on Space Research international designator	2014-070E
Name of space object	Technology Demonstration Small Satellite “Tsubame”
National designator	2014-070E
State of registry	Japan
Other launching States	Russian Federation
Date and territory or location of launch	6 November 2014 at 0735 hours 49 seconds UTC Yasny launch base, Orenburg region, Russian Federation
Basic orbital parameters	
Nodal period	95 minutes
Inclination	97.4 degrees
Apogee	566 kilometres
Perigee	502 kilometres
General function of space object	High-speed attitude manoeuvring by means of micro control moment gyros; Earth observation by means of a small high-resolution optical camera; polarized gamma-ray observation by means of a hard X-ray Compton polarimeter.

Additional voluntary information for use in the Register of Objects Launched into Outer Space

Space object owner or operator	Tokyo Institute of Technology
Launch vehicle	Dnepr launch vehicle
Other information	Launching organization is the International Space Company (ISC) Kosmotras

ArtSat2 DESPATCH

Information provided in conformity with the Convention on Registration of Objects Launched into Outer Space

Committee on Space Research international designator	2014-076C
Name of space object	ArtSat2 DESPATCH (Deep Space Amateur Troubadour's Challenge)
National designator	2014-076C
State of registry	Japan
Date and territory or location of launch	3 December 2014 at 0422 hours 4 seconds UTC Tanegashima Space Center, Kagoshima Prefecture, Japan
Basic orbital parameters	
Nodal period	543,330 minutes
Inclination	6.7 degrees
Apogee	166,275,000 kilometres
Perigee	138,081,000 kilometres
General function of space object	ArtSat2 DESPATCH is an art object cast into deep space that composes poetry. The poetry is transmitted on its continuous wave (CW) beacon.

Additional voluntary information for use in the Register of Objects Launched into Outer Space

Space object owner or operator	Artsat Project (Tama Art University and the University of Tokyo)
Launch vehicle	H-IIA Launch Vehicle Flight No. 26 (H-IIA-26F)
Celestial body the space object is orbiting	The Sun
Other information	Basic orbital parameters are those as at 14 December 2014 Launching organizations are Mitsubishi Heavy Industries, Ltd., and the Japan Aerospace Exploration Agency

S-Cube

Information provided in conformity with the Convention on Registration of Objects Launched into Outer Space

Committee on Space Research international designator	1998-067GY
Name of space object	S-Cube
National designator	1998-067GY
State of registry	Japan
Date and territory or location of launch	17 September 2015 at 1202 hours 0 seconds UTC International Space Station

Basic orbital parameters	
Nodal period	92 minutes
Inclination	51.6 degrees
Apogee	384.5 kilometres
Perigee	374.5 kilometres
General function of space object	Space-based observation of meteors

Additional voluntary information for use in the Register of Objects Launched into Outer Space

Other information	Date of launch is the date of deployment from the International Space Station
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Hitomi (ASTRO-H)

Information provided in conformity with the Convention on Registration of Objects Launched into Outer Space

Committee on Space Research international designator	2016-012A
Name of space object	Hitomi (ASTRO-H)
National designator	2016-012A
State of registry	Japan
Date and territory or location of launch	17 February 2016 at 0845 hours 0 seconds UTC Tanegashima Space Center, Kagoshima Prefecture, Japan
Basic orbital parameters	
Nodal period	96.2 minutes
Inclination	31.0 degrees
Apogee	576.5 kilometres
Perigee	574.4 kilometres
General function of space object	Hitomi (ASTRO-H) is an X-ray astronomy satellite for exploring energetic processes in the universe. It carries four telescopes and six detectors to collect data on soft X-rays, hard X-rays and gamma rays.

Additional voluntary information for use in the Register of Objects Launched into Outer Space

Space object owner or operator	Japan Aerospace Exploration Agency
Website	http://global.jaxa.jp/projects/sat/astro_h
Launch vehicle	H-IIA Launch Vehicle Flight No. 30 (H-IIA-30F)
Other information	Basic orbital parameters are those as at 17 February 2016 Launching organizations are Mitsubishi Heavy Industries, Ltd., and the Japan Aerospace Exploration Agency

ChubuSat 3

Information provided in conformity with the Convention on Registration of Objects Launched into Outer Space

Committee on Space Research international designator	2016-012C
Name of space object	ChubuSat 3
National designator	2016-012C
State of registry	Japan
Date and territory or location of launch	17 February 2016 at 0845 hours 0 seconds UTC Tanegashima Space Center, Kagoshima Prefecture, Japan
Basic orbital parameters	
Nodal period	96 minutes
Inclination	31 degrees
Apogee	581 kilometres
Perigee	561 kilometres
General function of space object	ChubuSat 3 is a demonstration satellite for optical remote sensing of the Earth.

Additional voluntary information for use in the Register of Objects Launched into Outer Space

Space object owner or operator	Mitsubishi Heavy Industries, Ltd.
Launch vehicle	H-IIA Launch Vehicle Flight No. 30 (H-IIA-30F)
Other information	Launching organizations are Mitsubishi Heavy Industries, Ltd., and the Japan Aerospace Exploration Agency

Horyu IV

Information provided in conformity with the Convention on Registration of Objects Launched into Outer Space

Committee on Space Research international designator	2016-012D
Name of space object	Horyu IV
National designator	2016-012D
State of registry	Japan
Date and territory or location of launch	17 February 2016 at 0845 hours 0 seconds UTC Tanegashima Space Center, Kagoshima Prefecture, Japan
Basic orbital parameters	
Nodal period	96.0 minutes
Inclination	31.0130 degrees
Apogee	577 kilometres
Perigee	557 kilometres

General function of space object	The main mission of Horyu IV is to generate high voltage to bias in dedicated solar cells and acquire the resulting discharge current-voltage (I-V) curve and the discharge image. In addition to the main mission, there are eight other submissions mounted on the satellite.
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Additional voluntary information for use in the Register of Objects Launched into Outer Space

Space object owner or operator	La SEINE (Laboratory of Spacecraft Environment Interaction Engineering), Kyushu Institute of Technology
Launch vehicle	H-IIA Launch Vehicle Flight No. 30 (H-IIA-30F)
Other information	Basic orbital parameters are those as at 13 April 2016 Launching organizations are Mitsubishi Heavy Industries, Ltd., and the Japan Aerospace Exploration Agency

JCSAT 14

Information provided in conformity with the Convention on Registration of Objects Launched into Outer Space

Committee on Space Research international designator	2016-028A
Name of space object	JCSAT 14
National designator	2016-028A
State of registry	Japan
Other launching States	United States of America
Date and territory or location of launch	6 May 2016 at 0521 hours UTC Cape Canaveral, Florida, United States
Basic orbital parameters	
Nodal period	..
Inclination	..
Apogee	..
Perigee	..
General function of space object	Satellite telecommunications

Additional voluntary information for use in the Register of Objects Launched into Outer Space

Geostationary position	154 degrees East
Space object owner or operator	SKY Perfect JSAT Corporation
Launch vehicle	Falcon 9
Other information	Launching organization is the Space Exploration Technologies Corporation (SpaceX)

JCSAT 16**Information provided in conformity with the Convention on Registration of Objects Launched into Outer Space**

Committee on Space Research international designator	2016-050A
Name of space object	JCSAT 16
National designator	2016-050A
State of registry	Japan
Other launching States	United States of America
Date and territory or location of launch	14 August 2016 at 0526 hours UTC Cape Canaveral, Florida, United States
Basic orbital parameters	
Nodal period	1,440 minutes
Inclination	0.013 degrees
Apogee	35,802.6 kilometres
Perigee	35,783.8 kilometres
General function of space object	Satellite telecommunications

Additional voluntary information for use in the Register of Objects Launched into Outer Space

Space object owner or operator	SKY Perfect JSAT Corporation
Launch vehicle	Falcon 9
Other information	Launching organization is the Space Exploration Technologies Corporation (SpaceX)

Himawari 9**Information provided in conformity with the Convention on Registration of Objects Launched into Outer Space**

Committee on Space Research international designator	2016-064A
Name of space object	Himawari 9
National designator	2016-064A
State of registry	Japan
Date and territory or location of launch	2 November 2016 at 0620 hours 0 seconds UTC Tanegashima Space Center, Kagoshima Prefecture, Japan
Basic orbital parameters	
Nodal period	1,436.15 minutes
Inclination	0.092176 degrees
Apogee	35,791.2 kilometres
Perigee	35,784.1 kilometres

General function of space object	The mission of Himawari 9 is to monitor atmospheric phenomena globally and uniformly with a visible and infrared radiometer in geostationary orbit and to relay data from Earth-based observing stations.
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Additional voluntary information for use in the Register of Objects Launched into Outer Space

Space object owner or operator	Japan Meteorological Agency
Launch vehicle	H-IIA Launch Vehicle Flight No. 31 (H-IIA-31F)
Other information	Basic orbital parameters are those as at 10 November 2016 Launching organizations are Mitsubishi Heavy Industries, Ltd., and the Japan Aerospace Exploration Agency Operating organization of the satellite is the Himawari Operation Enterprise Corporation

H-II Transfer Vehicle “Kounotori6” (HTV6)

Information provided in conformity with the Convention on Registration of Objects Launched into Outer Space

Name of space object	H-II Transfer Vehicle “Kounotori6” (HTV6)
State of registry	Japan
Date and territory or location of launch	9 December 2016 at 1326 hours 47 seconds UTC Tanegashima Space Center, Kagoshima Prefecture, Japan
Basic orbital parameters	
Nodal period	92.6 minutes
Inclination	51.6 degrees
Apogee	410.7 kilometres
Perigee	399.7 kilometres
General function of space object	HTV6 is an unmanned re-supply vehicle used to transport various types of cargo, including research materials, replacement equipment and daily commodities to the International Space Station (ISS).
Date of decay/re-entry/deorbit	5 February 2017 UTC

Additional voluntary information for use in the Register of Objects Launched into Outer Space

Space object owner or operator	Japan Aerospace Exploration Agency
Launch vehicle	H-IIB Launch Vehicle Flight No. 6 (H-IIB-6F)
Other information	Basic orbital parameters are those as at 13 December 2016 After delivering cargo to the ISS, HTV6 unberthed from the ISS and made a

controlled re-entry into the Earth's atmosphere.

Launching organizations are Mitsubishi Heavy Industries, Ltd., and the Japan Aerospace Exploration Agency

ARASE (ERG)

Information provided in conformity with the Convention on Registration of Objects Launched into Outer Space

Committee on Space Research international designator	2016-080A
Name of space object	ARASE (ERG)
State of registry	Japan
National designator	2016-080A
Date and territory or location of launch	20 December 2016 at 1100 hours 0 seconds UTC
Basic orbital parameters	
Nodal period	568.08 minutes
Inclination	31.65 degrees
Apogee	32,250.75 kilometres
Perigee	435.67 kilometres
General function of space object	The main objective of ARASE (ERG) is to understand acceleration, transportation and loss of energetic particles in the Van Allen belts. ARASE (ERG) directly observes plasma/particles and field/waves inside the Van Allen belts and provides new information about the Van Allen belts' activity. ARASE (EGR) will contribute to space weather research by measuring the near-Earth plasma environment, which will be useful in reducing the risk of satellite damage.

Additional voluntary information for use in the Register of Objects Launched into Outer Space

Space object owner or operator	Japan Aerospace Exploration Agency
Launch vehicle	Epsilon Launch Vehicle No. 2

JCSAT 15

Information provided in conformity with the Convention on Registration of Objects Launched into Outer Space

Committee on Space Research international designator	2016-082A
Name of space object	JCSAT 15
National designator	2016-082A

State of registry	Japan
Other launching States	France
Date and territory or location of launch	21 December 2016 at 2030 hours UTC Kourou, French Guiana
Basic orbital parameters	
Nodal period	1,440 minutes
Inclination	0.008 degrees
Apogee	35,797.9 kilometres
Perigee	35,788.5 kilometres
General function of space object	Satellite telecommunications and broadcasting

Additional voluntary information for use in the Register of Objects Launched into Outer Space

Geostationary position	110 degrees East
Space object owner or operator	SKY Perfect JSAT Corporation
Launch vehicle	Ariane 5 ECA
Other information	Launching organization is Arianespace

Annex II

Change of status of space objects previously registered by Japan*

ShindaiSat

Information provided in conformity with the Convention on Registration of Objects Launched into Outer Space

Committee on Space Research international designator	2014-009A
Name of space object	ShindaiSat
National designator	2014-009A
State of registry	Japan
Registration document	ST/SG/SER.E/735
Date of launch and territory or location of launch	27 February 2014 at 1837 hours 0 seconds UTC Tanegashima Space Center, Kagoshima, Japan
Basic orbital parameters	
Nodal period	92.3 minutes
Inclination	65.0 degrees
Apogee	396 kilometres
Perigee	381 kilometres
General function of space object	The main mission of ShindaiSat (nicknamed “Ginrei”) is the demonstration of light-emitting diode (LED) visible light communication (VLC) for very long distances (a few hundred kilometres) by frequency-shift keying (FSK) and continuous wave (CW) modulation. ShindaiSat is controlled by two reaction wheels and three magnetic torquers for pointing the LED emitting panel (the +Z axis) towards nadir or an arbitrary ground station. Because of the wide irradiation angles of its emitting lights (6 degrees), the lights can be observed simultaneously within an area of approximately 40 kilometres in diameter. For the demodulation of the FSK signals, a large aperture telescope (1-metre class in diameter) is necessary.
Date of decay/re-entry/deorbit	25 November 2014 at 0745 hours 0 seconds UTC

* The information was submitted using the form prepared pursuant to General Assembly resolution [62/101](#) and has been reformatted by the Secretariat.

Additional voluntary information for use in the Register of Objects Launched into Outer Space

Space object owner or operator	Shinshu University, National University Corporation
Launch vehicle	H-IIA Launch Vehicle Flight No. 23 (H-IIA-23F)
Other information	Basic orbital parameters are those as at 13 March 2014 Launching organizations are Mitsubishi Heavy Industries, Ltd., and the Japan Aerospace Exploration Agency

OPUSAT “CosMoz”

Information provided in conformity with the Convention on Registration of Objects Launched into Outer Space

Committee on Space Research international designator	2014-009D
Name of space object	OPUSAT “CosMoz”
National designator	2014-009D
State of registry	Japan
Registration document	ST/SG/SER.E/735
Date and territory or location of launch	27 February 2014 at 1837 hours 0 seconds UTC Tanegashima Space Center, Kagoshima Prefecture, Japan
Basic orbital parameters	
Nodal period	91.8 minutes
Inclination	65.0 degrees
Apogee	362.9 kilometres
Perigee	362.9 kilometres
General function of space object	The missions of OPUSAT are to develop, experiment and verify in orbit an advanced hybrid electrical power-supply system using a lithium-ion capacitor and a lithium-ion battery.
Date of decay/re-entry/deorbit	24 July 2014 UTC

Additional voluntary information for use in the Register of Objects Launched into Outer Space

Space object owner or operator	Osaka Prefecture University
Launch vehicle	H-IIA Launch Vehicle Flight No. 23 (H-IIA-23F)
Other information	Basic orbital parameters are those as at 3 April 2014 Launching organizations are Mitsubishi Heavy Industries, Ltd., and the Japan Aerospace Exploration Agency

Microbe Observation Satellite “TeikyoSat-3”

Information provided in conformity with the Convention on Registration of Objects Launched into Outer Space

Committee on Space Research international designator	2014-009E
Name of space object	Microbe Observation Satellite “TeikyoSat-3”
National designator	2014-009E
State of registry	Japan
Registration document	ST/SG/SER.E/735
Date and territory or location of launch	27 February 2014 at 1837 hours 0 seconds UTC Tanegashima Space Center, Kagoshima Prefecture, Japan
Basic orbital parameters	
Nodal period	92.2 minutes
Inclination	65.0 degrees
Apogee	385.2 kilometres
Perigee	375.2 kilometres
General function of space object	The mission of TeikyoSat-3 is to observe the behaviour of the fruiting body of the cellular slime mould <i>Dictyostelium discoideum</i> during its differentiation phase in the low-gravity and intense-radiation environment of outer space. Specifically, an on-board camera will take pictures of the fruiting body and send them to the ground in order to compare them with those on Earth. The results are expected to give new insights into biological processes.
Date of decay/re-entry/deorbit	25 October 2014 at 0123 hours UTC

Additional voluntary information for use in the Register of Objects Launched into Outer Space

Space object owner or operator	Japan Aerospace Exploration Agency
Launch vehicle	H-IIA Launch Vehicle Flight No. 23 (H-IIA-23F)
Other information	Basic orbital parameters are those as at 27 March 2014 Launching organizations are Mitsubishi Heavy Industries, Ltd., and the Japan Aerospace Exploration Agency