



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 12 November 2014 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, including changes of status, on space objects launched by Japan (see annex).



Annex

Registration data, including changes of status, on space objects launched by Japan *

PROITERES

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

Committee on Space Research international designator:	2012-047B
Name:	Project of Osaka Institute of Technology Electric-Rocket-Engine onboard Small Space Ship (PROITERES)
National designator:	2012-047B
State of registry:	Japan
Other launching States:	India
Date and territory or location of launch	
Date of launch:	9 September 2012 at 0423 hours 0 seconds UTC
Territory or location of launch:	Satish Dhawan Space Centre, Sriharikota, Andhra Pradesh, India
Basic orbital parameters	
Nodal period:	97.7 minutes
Inclination:	98.2 degrees
Apogee:	653.1 kilometres
Perigee:	634.9 kilometres
General function of space object:	The missions of PROITERES are to demonstrate powered-flight technology for an ultra-small satellite and observation of the Kansai District in Japan using a high-resolution camera

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

Website:	www.oit.ac.jp/elc/~satellite/index-e.html
Space object owner or operator:	Osaka Institute of Technology

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

Launch vehicle:	Polar Satellite Launch Vehicle CA C-21 (PSLV C-21)
Other information:	Launching organization is the Indian Space Research Organization

WNISAT-1

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

Committee on Space Research international designator:	2013-066H
Name:	WNISAT-1
National designator:	2013-066H
State of registry:	Japan
Other launching States:	Russian Federation
Date and territory or location of launch	
Date of launch:	21 November 2013 at 0710 hours 10 seconds UTC
Territory or location of launch:	Yasny launch base, Orenburg, Russian Federation
Basic orbital parameters	
Nodal period:	99 minutes
Inclination:	97.78 degrees
Apogee:	849 kilometres
Perigee:	593 kilometres
General function of space object:	1. Sea-ice monitoring of the Arctic Sea and other areas 2. Carbon dioxide monitoring

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

Space object owner or operator:	Weathernews Inc.
Launch vehicle:	Dnepr launch vehicle
Other information:	Basic orbital parameters are as at 25 November 2013 Launching organization is International Space Company (ISC) Kosmotras

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:	ShindaiSat
National designator:	2014-009A
State of registry:	Japan
Date and territory or location of launch	
Date of launch:	27 February 2014 at 1837 hours 0 seconds UTC
Territory or location of launch:	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 emitting lights (6 degrees), an area of approximately 40 kilometres in diameter can observe the lights simultaneously. For the demodulation of the FSK signals, a large aperture telescope (1-metre class in diameter) is necessary.

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

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

ITF-1 “Yui”

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

Committee on Space Research international designator:	2014-009B
Name:	ITF-1 “Yui”
National designator:	2014-009B
State of registry:	Japan
Date and territory or location of launch	
Date of launch:	27 February 2014 at 1837 hours 0 seconds UTC
Territory or location of launch:	Tanegashima Space Center, Kagoshima, Japan
Basic orbital parameters	
Nodal period:	91.8 minutes
Inclination:	65.0 degrees
Apogee:	377.9 kilometres
Perigee:	368.5 kilometres
General function of space object:	<ol style="list-style-type: none"> 1. ITF-1 uses a 435 MHz telemetry beacon to transmit a Morse code audio tone on an FM transmitter running at 300 kilowatts output. The audio tone can be received using simple equipment such as handheld transceiver with a simple Yagi-Uda antenna 2. Verification of a new type of microprocessor in the space environment 3. Verification of a new type of small patch-type antenna
Date of decay/re-entry/deorbit:	29 June 2014 at 0940 hours UTC

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

Space object owner or operator: University of Tsukuba
Launch vehicle: H-IIA Launch Vehicle Flight No. 23
(H-IIA-23F)
Other information: Basic orbital parameters are as at 6 April 2014
Launching organizations are Mitsubishi Heavy Industries, Ltd. and JAXA

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: OPUSAT “CosMoz”
National designator: 2014-009D
State of registry: Japan
Date and territory or location of launch
Date of launch: 27 February 2014 at 1837 hours 0 seconds UTC
Territory or location of launch: Tanegashima Space Center, Kagoshima, 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

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 as at 3 April 2014
 Launching organizations are Mitsubishi Heavy Industries, Ltd. and JAXA

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: Microbe Observation Satellite “TeikyoSat-3”
 National designator: 2014-009E
 State of registry: Japan
 Date and territory or location of launch
 Date of launch: 27 February 2014 at 1837 hours 0 seconds UTC
 Territory or location of launch: Tanegashima Space Center, Kagoshima, 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 cellular slime mould *Dictyostelium discoideum* during its differentiation phase in the low-gravity and intense-radiation environment of outer space
 Specifically, an onboard 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

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

Space object owner or operator: JAXA
 Launch vehicle: H-IIA Launch Vehicle Flight No. 23 (H-IIA-23F)

Other information: Basic orbital parameters are as at 27 March 2014
 Launching organizations are Mitsubishi Heavy Industries, Ltd. and JAXA

First Art Satellite “ARTSAT1: INVADER”

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

Committee on Space Research international designator: 2014-009F

Name: First Art Satellite “ARTSAT1: INVADER”

National designator: 2014-009F

State of registry: Japan

Date and territory or location of launch

Date of launch: 27 February 2014 at 1837 hours 0 seconds UTC

Territory or location of launch: Tanegashima Space Center, Kagoshima, Japan

Basic orbital parameters

Nodal period: 92.1 minutes

Inclination: 65.0 degrees

Apogee: 392 kilometres

Perigee: 364.1 kilometres

General function of space object: The Interactive satellite for Art and Design Experimental Research (INVADER) one-unit CubeSat is an art project of the Tama Art University. It is the first mission of the ARTSAT: Art and Satellite Project. The satellite will contribute to the amateur radio community from the viewpoint of the field of art. The satellite features some sensors that provide data for use in artworks

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

Space object owner or operator: JAXA

Launch vehicle: H-IIA Launch Vehicle Flight No. 23 (H-IIA-23F)

Other information: Basic orbital parameters are as at 7 March 2014
 Launching organizations are Mitsubishi Heavy Industries, Ltd. and JAXA

KSAT2

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

Committee on Space Research international designator:	2014-009G
Name:	KSAT2
National designator:	2014-009G
State of registry:	Japan
Date and territory or location of launch	
Date of launch:	27 February 2014 at 1837 hours 0 seconds UTC
Territory or location of launch:	Tanegashima Space Center, Kagoshima, Japan
Basic orbital parameters	
Nodal period:	91.5 minutes
Inclination:	65 degrees
Apogee:	352.0 kilometres
Perigee:	341.1 kilometres
General function of space object:	<ol style="list-style-type: none"> 1. Observe atmospheric water vapour distribution and disturbances using a newly developed technique 2. Take Earth images from space 3. Conduct basic experiments for a low Earth orbit satellite positioning system 4. Conduct orbital determination experiments using a radio interferometer 5. Operate the satellite at a very low Earth orbit, i.e. below 250 kilometres 6. Conduct in space a demonstration test of a newly developed boom structure 7. Carry "Messages of encouragement from space to Japan" into orbit <p>In addition, its mission includes education in the areas of space science and engineering</p>
Date of decay/re-entry/deorbit:	18 May 2014 at 0000 hours UTC

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

Space object owner or operator:	Kagoshima University
Launch vehicle:	H-IIA Launch Vehicle Flight No. 23 (H-IIA-23F)
Other information:	Basic orbital parameters are as at 8 April 2014 Launching organizations are Mitsubishi Heavy Industries, Ltd. and JAXA

STARS-II “Gennai”

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

Committee on Space Research international designator:	2014-009H
Name:	Space Tethered Autonomous Robotic Satellite-2 (STARS-II) “Gennai”
National designator:	2014-009H
State of registry:	Japan
Date and territory or location of launch	
Date of launch:	27 February 2014 at 1837 hours 0 seconds UTC
Territory or location of launch:	Tanegashima Space Center, Kagoshima, Japan
Basic orbital parameters	
Nodal period:	91.7 minutes
Inclination:	65.0 degrees
Apogee:	365 kilometres
Perigee:	352 kilometres
General function of space object:	<ol style="list-style-type: none"> 1. Tether deployment using gravity gradient forces 2. Electric current generation by the electrodynamic tether 3. Robot attitude control using long tether tension 4. Relative motion control by tether tension
Date of decay/re-entry/deorbit:	26 April 2014 at 0632 hours UTC

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

Space object owner or operator: Kagawa University
 Launch vehicle: H-IIA Launch Vehicle Flight No. 23 (H-IIA-23F)
 Other information: Basic orbital parameters are as at 26 March 2014
 Launching organizations are Mitsubishi Heavy Industries, Ltd. and JAXA

AES satellite “SOCRATES”

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

Committee on Space Research international designator: 2014-029C
 Name: Advanced Engineering Services (AES) satellite “SOCRATES”
 National designator: 2014-029C
 State of registry: Japan
 Date and territory or location of launch
 Date of launch: 24 May 2014 at 0305 hours 14 seconds UTC
 Territory or location of launch: Tanegashima Space Center, Kagoshima, Japan
 Basic orbital parameters
 Nodal period: 97.2 minutes
 Inclination: 97.9 degrees
 Apogee: 628.9 kilometres
 Perigee: 618.4 kilometres
 General function of space object: 1. Demonstration of the small satellite standard bus
 2. Provision of an environment to demonstrate advanced mission and mission-element technologies in orbit

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

Space object owner or operator: Advanced Engineering Services (AES)
 Launch vehicle: H-IIA Launch Vehicle Flight No. 24 (H-IIA-24F)

Other information:	Basic orbital parameters are as at 30 June 2014
	Launching organizations are Mitsubishi Heavy Industries, Ltd. and JAXA

RISING-2

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

Committee on Space Research international designator:	2014-029D
Name:	RISING-2
National designator:	2014-029D
State of registry:	Japan
Date and territory or location of launch	
Date of launch:	24 May 2014 at 0305 hours 14 seconds UTC
Territory or location of launch:	Tanegashima Space Center, Kagoshima, Japan
Basic orbital parameters	
Nodal period:	97.3 minutes
Inclination:	97.9 degrees
Apogee:	631.0 kilometres
Perigee:	624.4 kilometres
General function of space object:	<ol style="list-style-type: none"> 1. Earth observation with a high-resolution multi-spectrum telescope 2. Observation of cumulonimbus clouds with a near infrared bolometer array sensor 3. Observation of sprites and other transient luminous events 4. Use of high-precision 3-axis attitude control system

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

Space object owner or operator:	Tohoku University and Hokkaido University, Japan
Launch vehicle:	H-IIA Launch Vehicle Flight No. 24 (H-IIA-24F)
Other information:	Launching organizations are Mitsubishi Heavy Industries, Ltd. and JAXA

Combined Membrane Structure Satellite “SPROUT”

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

Committee on Space Research international designator:	2014-029E
Name:	Combined Membrane Structure Satellite “SPROUT”
National designator:	2014-029E
State of registry:	Japan
Date and territory or location of launch	
Date of launch:	24 May 2014 at 0305 hours 14 seconds UTC
Territory or location of launch:	Tanegashima Space Center, Kagoshima, Japan
Basic orbital parameters	
Nodal period:	97.1 minutes
Inclination:	97.9 degrees
Apogee:	627.1 kilometres
Perigee:	615.0 kilometres
General function of space object:	The missions of SPROUT are to demonstrate deployment of a combined membrane structure, to demonstrate attitude determination and control, to evaluate orbital decay of the membrane structure, and to share use of an onboard camera and other devices with the amateur radio community

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

Space object owner or operator:	Nihon University
Launch vehicle:	H-IIA Launch Vehicle Flight No. 24 (H-IIA-24F)
Other information:	Basic orbital parameters are as at 9 July 2014 Launching organizations are Mitsubishi Heavy Industries, Ltd. and JAXA