UK Registry of Outer Space Objects

To comply with international obligations and section 7 of the Outer Space Act 1986

May 2021
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Introduction
The UK is a signatory to several United Nations (UN) treaties governing the use of outer space including the Convention on the Registration of Space Objects 1976 (‘Registration Convention’).

One of the purposes of the Registration Convention is to ensure that a central registry of objects launched into outer space is established and maintained by the Secretary-General of the UN. As such, when a space object is launched, the Registration Convention requires the ‘launching state’ to notify the UN. The Convention defines the ‘launching State’ to mean either the State from whose territory the object was launched or the State which procured its launch (or whose nationals did).

The UN keeps information provided by member states relating to their space activity on its website. Furthermore, the Registration Convention requires the UK to maintain its own Registry of Space Objects and this is also embodied in Section 7 of the Outer Space Act 1986 (OSA).

The OSA ensures that there is transparency in the UK’s space activity by stating that any person is able to inspect the Registry. As such, the UK Space Agency maintains this Registry on its website.

There are also situations where the UK is not the ‘launching state’ for a particular object but has issued an OSA licence. This would include circumstances where there are joint launching states and it is decided that the other state will register the space object with the UN. These objects are included in the Supplementary Space Objects Registry which is also maintained on the Agency’s website.

United Nations Office for Outer Space Affairs website:

UK Space Agency website:
https://www.gov.uk/government/organisations/uk-space-agency
Glossary of Terms

**Apogee**
The point on the orbit where the space object is furthest from the Earth.

**Catalogue Number**
The North American Aerospace Defense Command (NORAD) catalogue number is made up of five digits. It is unique to each space object and allows for tracking by NORAD. This system has been used since the first satellite was launched in 1957.

**Designation**
This is the designation assigned by the Committee on Space Research (COSPAR) to each space object launched. This number remains constant and reflects the year of the launch and the sequence of launch within that year. The inclusion of a letter, for example, ‘A’ indicates that the object was the first satellite catalogued from that launch.

**Geostationary orbit**
A geosynchronous orbit with an inclination of zero degrees and one in which the object is synchronised with the Earth’s rotation. The space object will appear to remain fixed above one particular point on the Earth’s equator. In geostationary orbit the space object is positioned approximately 35,900 km above the Earth.

**Geostationary Transfer Orbit (GTO)**
An elliptical orbit used to transfer a space object from low Earth orbit to geostationary/geosynchronous orbit.

**Geosynchronous orbit**
A prograde, circular, low inclination orbit about the Earth having a period of 23 hours 56 minutes 4 seconds. A space object in such an orbit is tilted with respect to the plane of the equator. This means that the space object will remain over the same line of longitude but will wander up and down in latitude.

**Inclination**
The angular distance of the orbital plane from the Earth’s equator, stated in degrees.

**Low Earth Orbit (LEO)**
A space object in low Earth orbit is positioned between 160 km and 2,000 km above the Earth.

**Medium Earth Orbit (MEO)**
A space object that orbits the Earth below geostationary orbit and above low Earth orbit.

**Nodal period**
The time it takes a space object to travel once from ascending node to ascending node. The ascending node is the point at which an orbit crosses the ecliptic plane going north. The descending node is the point at which an orbit crosses the ecliptic plane going south.

**Orbital Position**
The longitude position around the geostationary orbit. The space objects are all approximately fixed in the sky above the equator.

**Perigee**
The point on the orbit where the object is nearest to the Earth.
SKYNET-1A

Owner/Operator: Ministry of Defence
Main Building
Whitehall
London
SW1A 2HB

Date of launch: 22 November 1969
Location of launch: Cape Canaveral, USA

Designation: 1969-101A
Catalogue Number: 4250

Nodal period: 1,436.13 minutes
Inclination: 1.56 degrees
Apogee: 35,784 km
Perigee: 35,794 km

Orbital position:

General function: Military communications
Notified to the UN: 1 January 1990

Disposed or decayed: Lifetime estimate (unit decay) > 1 million years
Disposal Notified to the UN: 6 December 1969

Accepted onto UK Register of Space Objects: 6 December 1989
Licence issued under the Outer Space Act 1986:

Additional information: Non-operational/not re-orbited. Now appears to be caught at 105 W stable point.
PROSPERO (formerly X3)

Owner/Operator: Ministry of Defence
Main Building
Whitehall
London
SW1A 2HB

Date of launch: 28 October 1971
Location of launch: Woomera, Australia

Designation: 1971-093A
Catalogue Number: 5580

Nodal period: 106.53 minutes
Inclination: 82.06 degrees
Apogee: 1,582 km
Perigee: 547 km

Orbital position:

General function: Technology satellite
Notified to the UN: 3 November 1971

Disposed or decayed: Estimated lifetime (to decay) 150 years
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: 7 August 1992
Licence issued under the Outer Space Act 1986:

Additional information: Non-operational.
BLACK ARROW (Rocket Booster)

Owner/Operator: Ministry of Defence
Main Building
Whitehall
London
SW1A 2HB

Date of launch: 28 October 1971
Location of launch: Woomera, Australia

Designation: 1971-093B
Catalogue Number: 5581

Nodal period: 103.8 minutes
Inclination: 82 degrees
Apogee: 7,722.5 km
Perigee: 6,907.4 km
Orbital position:

General function: Rocket body from launch of Prospero (Cat. No: 5580)
Notified to the UN:

Disposed or decayed: Disposal Notified to the UN: 7 August 1992

Accepted onto UK Register of Space Objects: Licence issued under the Outer Space Act 1986:

Additional information: Non-operational.
MIRANDA (formerly UK X4)

Owner/Operator: Ministry of Defence  
Main Building  
Whitehall  
London  
SW1A 2HB

Date of launch: 9 March 1974  
Location of launch: Vandenberg Air Force Base, USA

Designation: 1974-13A  
Catalogue Number: 7213

Nodal period: 101.2 minutes  
Inclination: 97.81 degrees  
Apogee: 916 km  
Perigee: 714 km

Orbital position:  
General function: Spacecraft Technology  
Notified to the UN: 12 April 1974

Disposed or decayed: Lifetime estimate 60 years  
Disposal Notified to the UN:  
Accepted onto UK Register of Space Objects: 29 March 1974  
Licence issued under the Outer Space Act 1986:

Additional information: Non-operational.
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SKYNET-2B

Owner/Operator: Ministry of Defence
Main Building
Whitehall
London
SW1A 2HB

Date of launch: 23 November 1974
Location of launch: Cape Canaveral, USA

Designation: 1974-094A
Catalogue Number: 7547

Nodal period: 1,469.5 minutes
Inclination: 1.9 degrees
Apogee: 35,794 km
Perigee: 35,784 km
Orbital position:

General function: Military Communications
Notified to the UN: 1 January 1990

Disposed or decayed: Lifetime estimate > 1 million years
Disposal Notified to the UN: 

Accepted onto UK Register of Space Objects: 6 December 1989
Licence issued under the Outer Space Act 1986:

Additional information: Uncontrolled/not re-orbited.
## ARIEL VI (formerly UK6)

| **Owner/Operator:** | Science and Engineering Research Council  
| | Polaris House  
| | North Star Avenue  
| | Swindon  
| | SN2 1ET |

| **Date of launch:** | 2 June 1979  
| **Location of launch:** | Wallops Island, USA |

| **Designation:** | 1979-47A  
| **Catalogue Number:** | 11382 |

| **Nodal period:** | 97.21 minutes  
| **Inclination:** | 55.03 degrees  
| **Apogee:** | 654 km  
| **Perigee:** | 600 km |

| **Orbital position:** |

| **General function:** | Detection of heavy cosmic particles and X-ray astronomy |
| **Notified to the UN:** | 10 October 1979 |

| **Disposed or decayed:** | Decayed 23 September 1990  
| **Disposal Notified to the UN:** | 13 September 1979 |

| **Accepted onto UK Register of Space Objects:** | 10 October 1979  
| **Licence issued under the Outer Space Act 1986:** |

| **Additional information:** | Non-operational. |
UOSAT-1 (OSCAR 9)

Owner/Operator: University of Surrey
Dept. of Electronic & Electrical Engineering
Guildford
Surrey
GU2 5XH

Date of launch: 6 October 1981
Location of launch: Vandenburg Air Force Base, USA

Designation: 1981-100B
Catalogue Number: 12888

Nodal period: 95.46 minutes
Inclination: 97.46 degrees
Apogee: 541 km
Perigee: 538 km

Orbital position:

General function: Communications and geophysics research
Notified to the UN: 9 August 1985

Disposed or decayed: Decayed 13 October 1989
Disposal Notified to the UN: 8 December 1989

Accepted onto UK Register of Space Objects: 4 July 1985
Licence issued under the Outer Space Act 1986:

Additional information: Notified the UN on 8 December 1989 that the satellite had decayed and was no longer in Earth orbit.
UOSAT 2 (OSCAR 11)

Owner/Operator: University of Surrey
Dept. of Electronic & Electrical Engineering
Guildford
Surrey
GU2 5XH

Date of launch: 1 March 1984
Location of launch: Vandenburg Air Force Base, USA

Designation: 1984-21B
Catalogue Number: 14781

Nodal period: 97.33 minutes
Inclination: 98.20 degrees
Apogee: 635 km
Perigee: 621 km

General function: Communications and geophysics research
Notified to the UN: 1 January 1990

Disposed or decayed: Lifetime estimate 80 years
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: 4 July 1985
Licence issued under the Outer Space Act 1986: 31 January 1990

Additional information: Non-operational.
AMPTE (UKS 1)

Owner/Operator: Science and Engineering Research Council
Polaris House
North Star Avenue
Swindon
SN2 1ET

Date of launch: 16 August 1984
Location of launch: Cape Canaveral, USA

Designation: 1984-088C
Catalogue Number: 15201

Nodal period: 2,653.9 minutes
Inclination: 28.68 degrees
Apogee: 113,729 km
Perigee: 552 km

Orbital position:

General function: Magnetosphere research satellite
Notified to the UN: 9 August 1985

Disposed or decayed: Decayed 8 December 1988
Disposal Notified to the UN: 21 February 1990

Accepted onto UK Register of Space Objects: 4 July 1985
Licence issued under the Outer Space Act 1986:

Additional information: UN notified on 21 February 1990 that the satellite had decayed and was no longer in Earth orbit (8th December).
**SKYNET-4B**

**Owner/Operator:** Ministry of Defence  
Main Building  
Whitehall  
London  
SW1A 2HB

**Date of launch:** 11 December 1988  
**Location of launch:** CSG Kourou, French Guiana

**Designation:** 1988-109A  
**Catalogue Number:** 19687

**Nodal period:** 1,436 originally, now 1,444 minutes  
**Inclination:** 3 degrees  
**Apogee:** 35,796 km  
**Perigee:** 35,778 km

**Orbital position:**

**General function:** Military Communications  
**Notified to the UN:** 1 January 1990

**Disposed or decayed:** Lifetime estimate (unit decay) >1 million years  
**Disposal Notified to the UN:**

**Accepted onto UK Register of Space Objects:** 6 December 1989  
**Licence issued under the Outer Space Act 1986:**

**Additional information:** Re-orbited above geostationary ring in June 1998. Now approximately 150 km above GEO.
SKYNET-4A

Owner/Operator: Ministry of Defence
Main Building
Whitehall
London
SW1A 2HB

Date of launch: 1 January 1990
Location of launch: Cape Canaveral, USA

Designation: 1990-001A
Catalogue Number: 20401

Nodal period: 1,427.6 minutes
Inclination: 3.34 degrees
Apogee: 35,492 km
Perigee: 35,784 km
Orbital position: 340 W

General function: Military Communications
Notified to the UN: 12 April 1990

Disposed or decayed: Lifetime estimate > 1 million years
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: 4 April 1990
Licence issued under the Outer Space Act 1986:

Additional information: Operations Licence issued to Paradigm on 29 May 2003. Placed in supersynchronous orbit on 20 June 2005, its height above GEO was measured to be 417km (apogee) and 307km (perigee).
UOSAT 3 – OSCAR 14

Owner/Operator: University of Surrey
Dept. of Electronic & Electrical Engineering
Guildford
Surrey
GU2 5XH

Date of launch: 22 January 1990
Location of launch: CSG Kourou, French Guiana

Designation: 1990-005F
Catalogue Number: 20437

Nodal period: 100.6 minutes
Inclination: 98.22 degrees
Apogee: 792 km
Perigee: 776 km
Orbital position:

General function: Demonstration of store and forward communications with extensive radiation monitoring experiments.

Notified to the UN: 12 April 1990

Disposed or decayed: Lifetime estimate is 300 years
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: 4 April 1990
Licence issued under the Outer Space Act 1986: 5 January 1990

Additional information: Deactivated 11 November 2003.
UOSAT 4 – OSCAR 15

Owner/Operator: University of Surrey
Dept. of Electronic & Electrical Engineering
Guildford
Surrey
GU2 5XH

Date of launch: 22 January 1990
Location of launch: CSG Kourou, French Guiana

Designation: 1990-005G
Catalogue Number: 20438

Nodal period: 100.8 minutes
Inclination: 98.72 degrees
Apogee: 805 km
Perigee: 787 km
Orbital position:

General function: Technology demonstration mission carrying solar cell experiments
Notified to the UN: 12 April 1990

Disposed or decayed: Lifetime estimate is 300 years
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: 4 April 1990
License issued under the Outer Space Act 1986: 5 January 1990

Additional information: Inactive.
**SKYNET-4C**

Owner/Operator: Airbus Defence and Space Ltd  
Gunnels Wood Road  
Stevenage  
Hertfordshire  
SG1 2AS

Date of launch: 30 August 1990  
Location of launch: CSG Kourou, French Guiana

Designation: 1990-079A  
Catalogue Number: 20776

Nodal period: 1,436.219 minutes  
Inclination: 13.221 degrees  
Apogee: 35,804.951 km  
Perigee: 35,773.044 km  
Orbital position: -1° E

General function: UK military communications satellite  
Notified to the UN: 23 July 1991

Disposed or decayed: Lifetime estimate (unit decay) > 1 million years  
Disposal Notified to the UN:  
Accepted onto UK Register of Space Objects: 5 June 1991  
Licence issued under the Outer Space Act 1986:  
Additional information: Operations Licence issued to Paradigm on 29 May 2003. Licence transferred to Airbus Defence and Space Limited on 1 January 2015.
**UOSAT-5**

**Owner/Operator:**  
Surrey Satellite Technology Ltd  
Senate House  
University of Surrey  
Guildford  
Surrey  
GU2 5XH

**Date of launch:**  
17 July 1991

**Location of launch:**  
CSG Kourou, French Guiana

**Designation:**  
1991-050B

**Catalogue Number:**  
21575

**Nodal period:**  
100.03 minutes

**Inclination:**  
98.32 degrees

**Apogee:**  
762 km

**Perigee:**  
752 km

**Orbital position:**

**General function:**  
Engineering research

**Notified to the UN:**  
7 January 1992

**Disposed or decayed:**

**Disposal Notified to the UN:**

**Accepted onto UK Register of Space Objects:**  
18 July 1991

**Licence issued under the Outer Space Act 1986:**  
3 May 1991

**Additional information:**  
STRV-1A

Owner/Operator: Ministry of Defence
Main Building
Whitehall
London
SW1A 2HB

Date of launch: 17 June 1994
Location of launch: CSG Kourou, French Guiana

Designation: 1994-034B
Catalogue Number: 23125

Nodal period: 527 minutes
Inclination: 7.03 degrees
Apogee: 35,836 km
Perigee: 277 km
Orbital position:

General function: Technology Research.
Notified to the UN: 19th October 2000

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects:
Licence issued under the Outer Space Act 1986:

Additional information:
## STRV-1B

**Owner/Operator:** Ministry of Defence  
Main Building  
Whitehall  
London  
SW1A 2HB

**Date of launch:** 17 June 1994  
**Location of launch:** CSG Kourou, French Guiana

**Designation:** 1994-034C  
**Catalogue Number:** 23126

**Nodal period:** 511 minutes  
**Inclination:** 7.02 degrees  
**Apogee:** 35,887 km  
**Perigee:** 285 km

**Orbital position:**

**General function:** Technology research  
**Notified to the UN:** 19th October 2000

**Disposed or decayed:**  
**Disposal Notified to the UN:**

**Accepted onto UK Register of Space Objects:**  
**Licence issued under the Outer Space Act 1986:**

**Additional information:**
ORION-1

Owner/Operator: British Aerospace Space Systems Ltd

Date of launch: 29 November 1994
Location of launch: Cape Canaveral, USA

Designation: 1994-79A
Catalogue Number: 23413

Nodal period: 1436 minutes
Inclination: 0.06 degrees
Apogee: 35,801 km
Perigee: 35,775 km
Orbital position:

General function: Direct broadcast satellite
Notified to the UN: 19 October 2000

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: 12 December 1994
Licence issued under the Outer Space Act 1986: 1 June 1994

Additional information: ORION-1 is now TELESTAR 11 and has been operated by Loral Skynet since October 1997. NASA's original launch notification of this satellite said that it was German.
## SKYNET-4D

**Owner/Operator:** Ministry of Defence  
Main Building  
Whitehall  
London  
SW1A 2HB

**Date of launch:** 10 January 1998  
**Location of launch:** Cape Canaveral, USA

**Designation:** 1998-002A  
**Catalogue Number:** 25134

**Nodal period:** 1,436 minutes  
**Inclination:** 4.12 degrees  
**Apogee:** 35,813 km  
**Perigee:** 35,760 km  
**Orbital position:** 340° W

**General function:** Military Communications

**Notified to the UN:** 19 October 2000

**Disposed or decayed:**  
**Disposal Notified to the UN:**

**Accepted onto UK Register of Space Objects:** 27 May 1998  
**Licence issued under the Outer Space Act 1986:** 29 May 2003

**Additional information:** Licence issued to Matra Marconi Space UK Ltd on 12 August 1997 to procure the launch of, and subsequently operate, the satellite. Title and operational control of SKYNET 4D transferred to the UK Ministry of Defence on 20 May 1998. Operation Licence issued to Paradigm on 29 May 2003. Placed in a super-synchronous orbit 28 Jan 2008, its height above GEO was measured to be 315km (apogee) and 296km (perigee).
SKYNET-4E

Owner/Operator: Airbus Defence and Space Ltd
Gunnels Wood Road
Stevenage
Hertfordshire
SG1 2AS

Date of launch: 26 February 1999
Location of launch: CSG Kourou, French Guiana

Designation: 1999-009B
Catalogue Number: 25639

Nodal period: 1,436.172 minutes
Inclination: 11.474 degrees
Apogee: 35,800.822 km
Perigee: 35,775.329 km
Orbital position: 1.2W (previous orbital position: 6°E)

General function: Military Communications
Notified to the UN: 19 October 2000

Disposed or decayed: Lifetime estimate (unit decay) > 1 million years
Disposition Notified to the UN:

Accepted onto UK Register of Space Objects: 27 May 1998
Licence issued under the Outer Space Act 1986: 29 May 2003

UOSAT–12

Owner/Operator: Surrey Satellite Technology Ltd
University of Surrey
Guildford
Surrey
GU2 5XH

Date of launch: 24 April 1999
Location of launch: Baikonur, Kazakhstan

Designation: 1999-021A
Catalogue Number: 25693

Nodal period: 97.51 minutes
Inclination: 64.56 degrees
Apogee: 662 km
Perigee: 614 km

General function: Engineering and technology research
Notified to the UN: 19 October 2000

Disposition or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: 30 April 1999
Licence issued under the Outer Space Act 1986: 19 April 1999

Additional information: Deactivated 21 September 2003.
### SNAP-1

**Owner/Operator:** Surrey Satellite Technology Ltd
University of Surrey
Guildford
Surrey
GU2 5XH

**Date of launch:** 28 June 2000
**Location of launch:** Plesetsk, Russia

**Designation:** 2000-033C
**Catalogue Number:** 26386

**Nodal period:** 98.3 minutes
**Inclination:** 98.42 degrees
**Apogee:** 682 km
**Perigee:** 667 km

**Orbital position:**

**General function:** Research spacecraft for evaluating the use of commercial micro-miniature technologies for highly advanced, yet tiny, satellites.

**Notified to the UN:** 19 October 2000

**Disposed or decayed:**
**Disposition Notified to the UN:**

**Accepted onto UK Register of Space Objects:** 3 August 2000
**Licence issued under the Outer Space Act 1986:** 26 June 2000

**Additional information:** Deactivated 30 March 2002
Europe*Star 1

| **Owner/Operator:** | Europe*Star Ltd  
|                    | 5 New Square  
|                    | Bedfont Lakes  
|                    | Feltham  
|                    | Middlesex  
|                    | TW14 8HA |
| **Date of launch:** | 29 October 2000 |
| **Location of launch:** | CSG Kourou, French Guiana |
| **Designation:** | 2000-068A |
| **Catalogue Number:** | 26590 |
| **Nodal period:** | 24 hours |
| **Inclination:** | 0 degrees (plus or minus 0.1) |
| **Apogee:** | 35,796 km |
| **Perigee:** | 35,776 km |
| **Orbital position:** | 45° E (plus or minus 0.1) |
| **General function:** | Telecommunications |
| **Notified to the UN:** | 16 March 2001 |
| **Disposed or decayed:** |  |
| **Disposal Notified to the UN:** |  |
| **Accepted onto UK Register of Space Objects:** | 16 March 2001 |
| **Licence issued under the Outer Space Act 1986:** |  |
| **Additional information:** | Europe*Star 1 has been operated by PanAmSat Satellite Europe Ltd since 23 October 2005. Renamed Intelsat-12 (IS-12) on 1 February 2007. Moved to 64.25E March 2019. |
STRV 1C

Owner/Operator: Space Dept  
Arthur C. Clarke Building  
DERA Farnborough  
Hampshire  
GU14 0LX

Date of launch: 16 November 2000  
Location of launch: CSG Kourou, French Guiana

Designation: 2000-072C  
Catalogue Number: 26610

Nodal period: 11 hours 47 minutes  
Inclination: 6.463 degrees  
Apogee: 39,274 km  
Perigee: 578 km  
Orbital position: GTO

General function: Scientific Research and Technology Demonstration  
Notified to the UN: 15 December 2000

Disposed or decayed:  
Disposal Notified to the UN:  
Accepted onto UK Register of Space Objects: 15 December 2000  
Licence issued under the Outer Space Act 1986:  
Additional information: DERA now QinetiQ. Non-operational, the satellite suffered onboard failures c. 2 weeks after launch.
STRV-1D

Owner/Operator: Space Dept
           Arthur C. Clarke Building
           DERA Farnborough
           Hampshire
           GU14 0LX

Date of launch: 16 November 2000
Location of launch: CSG Kourou, French Guiana

Designation: 2000-072D
Catalogue Number: 26611

Nodal period: 11 hours 48 minutes
Inclination: 6.451 degrees
Apogee: 39,293 km
Perigee: 580 km
Orbital position: GTO

General function: Scientific Research and Technology Demonstration
Notified to the UN: 15 December 2000

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: 15 December 2000
Licence issued under the Outer Space Act 1986:

Additional information: DERA now QinetiQ. Non-operational, the satellite suffered onboard failures c. 2 weeks after launch.
**SKYNET-4F**

**Owner/Operator:** Airbus Defence and Space Ltd  
Gunnels Wood Road  
Stevenage  
Hertfordshire  
SG1 2AS

**Date of launch:** 7 February 2001  
**Location of launch:** CSG Kourou, French Guiana

**Designation:** 2001-005B  
**Catalogue Number:** 26695

**Nodal period:** 1,436.005 minutes  
**Inclination:** 7.781 degrees  
**Apogee:** 35,796.433 km  
**Perigee:** 35,773.160 km  
**Orbital position:** -34° E

**General function:** Military telecommunication services  
**Notified to the UN:** 28 September 2001

**Disposed or decayed:**  
**Disposal Notified to the UN:**  
**Accepted onto UK Register of Space Objects:** 27 September 2001  
**Licence issued under the Outer Space Act 1986:** 29 May 2003

**Additional information:** Licence issued to Astrium on 2 February 2001 to procure the launch of, and subsequently operate, the Skynet-4F satellite. Operation Licence issued to Paradigm on 29 May 2003. Operations licence transferred to Airbus Defence and Space Limited on 1 January 2015. Moved to graveyard orbit October 2019.
BNSCSat1 (UK-DMC)

Owner/Operator: Surrey Satellite Technology Ltd
University of Surrey
Guildford
Surrey
GU2 5XH

Date of launch: 27 September 2003
Location of launch: Plesetsk, Russia

Designation: 2003-042D
Catalogue Number: 27942

Nodal period: 98.44 minutes
Inclination: 98.07 degrees
Apogee: 688 km
Perigee: 674 km

Orbital position:

General function: Disaster monitoring
Notified to the UN: 7 January 2004

Disposed or decayed: Reached its end of life in November 2011 and is no longer active. Dry mass approx: 85.4 kg. De-orbit from end of life in the range of 65 – 110 years.

Disposal Notified to the UN: 22 October 2013

Accepted onto UK Register of Space Objects: 27 September 2003
Licence issued under the Outer Space Act 1986: 27 September 2003

Additional information: Confusion over designation at time of launch. Appears on UNOOSA register as 27943 (2003-042E) as does Turkish satellite BILSAT-1. US Space Track gives catalogue number and designation as 27942 (2003-042D).
INMARSAT 4-F1

Owner/Operator: Inmarsat Ltd
99 City Road
London
EC1Y 1AX

Date of launch: 11 March 2005
Location of launch: Cape Canaveral, USA

Designation: 2005-009A
Catalogue Number: 28628

Nodal period: 1,436 minutes
Inclination: 3 degrees
Apogee: 35,786 km
Perigee: 35,786 km
Orbital position: 143.5 E

General function: Telecommunications
Notified to the UN: 15 June 2007

Disposed or decayed: Disposal Notified to the UN:
Accepted onto UK Register of Space Objects: 11 March 2005
Licence issued under the Outer Space Act 1986: 4 March 2005

Additional information: Active North/South and East/West station keeping. Inclination at beginning of life is given above and is decreasing, but will eventually increase back to 3 degrees.
TOPSAT

Owner/Operator: Qinetic Ltd
85 Buckingham Gate
London
SW1E 6PD

Date of launch: 27 October 2005
Location of launch: Plesetsk, Russia

Designation: 2005-043B
Catalogue Number: 28891

Nodal period: 98.6 minutes
Inclination: 98.2 degrees
Apogee: 707 km
Perigee: 681 km
Orbital position:

General function: Earth imaging
Notified to the UN: 15 June 2007

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: 11 October 2005
Licence issued under the Outer Space Act 1986: 11 October 2005

Additional information:
INMARSAT 4-F2

Owner/Operator: Inmarsat Global Ltd
99 City Road
London
EC1Y 1AX

Date of launch: 8 November 2005
Location of launch: Sea Launch vessel, Western Pacific Ocean

Designation: 2005-044A
Catalogue Number: 28899

Nodal period: 1,436 minutes
Inclination: 3 degrees
Apogee: 35,786 km
Perigee: 35,786 km
Orbital position: 25.1 E

General function: Telecommunications
Notified to the UN: 15 June 2007

Disposed or decayed: Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: 24 October 2005
Licence issued under the Outer Space Act 1986: 24 October 2005

Additional information: Active North/South and East/West station keeping. Inclination at beginning of life is given above and is decreasing, but will eventually increase back to 3 degrees. I4-F2 has moved orbital position to 63.9 E, UN notified 12 February 2016.
**SKYNET-5A**

| **Owner/Operator:** | Airbus Defence and Space Ltd  
Gunnels Wood Road  
Stevenage  
Hertfordshire  
SG1 2AS |
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td><strong>Date of launch:</strong></td>
<td>11 March 2007</td>
</tr>
<tr>
<td><strong>Location of launch:</strong></td>
<td>CSG Kourou, French Guiana</td>
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<tr>
<td><strong>Designation:</strong></td>
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<td><strong>Catalogue Number:</strong></td>
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<td><strong>Inclination:</strong></td>
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<td><strong>Apogee:</strong></td>
<td>35,802.775 km</td>
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<tr>
<td><strong>Perigee:</strong></td>
<td>35,772.460 km</td>
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<td><strong>Orbital position:</strong></td>
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<td><strong>General function:</strong></td>
<td>Military telecommunications</td>
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<td><strong>Notified to the UN:</strong></td>
<td>15 June 2007</td>
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<tr>
<td><strong>Disposed or decayed:</strong></td>
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<td><strong>Disposition Notified to the UN:</strong></td>
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<td><strong>Accepted onto UK Register of Space Objects:</strong></td>
<td>2 March 2007</td>
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<tr>
<td><strong>Licence issued under the Outer Space Act 1986:</strong></td>
<td>2 March 2007</td>
</tr>
<tr>
<td><strong>Additional information:</strong></td>
<td>OSA licence issued to Paradigm Secure Communications Ltd on 2 March 2007. Licence transferred to Airbus Defence and Space Ltd on 1 January 2015. Transferred to orbital position 95.2E</td>
</tr>
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</table>
SKYNET-5B

Owner/Operator: Airbus Defence and Space Ltd
Gunnels Wood Road
Stevenage
Hertfordshire
SG1 2AS

Date of launch: 14 November 2007
Location of launch: CSG Kourou, French Guiana

Designation: 2007-056B
Catalogue Number: 32294

Nodal period: 1,436.178 minutes
Inclination: 0.000 degrees
Apogee: 35,806.398 km
Perigee: 35,769.972 km
Orbital position: 25 E (previous orbital position: 53 E)

General function: Military telecommunications
Notified to the UN: 6 October 2008

Disposed or decayed:
Disposal Notified to the UN: 31 October 2007
Accepted onto UK Register of Space Objects: 31 October 2007
Licence issued under the Outer Space Act 1986: 31 October 2007

Additional information: OSA licence issued to Paradigm Secure Communications Ltd on 31 October 2007. Licence transferred to Airbus Defence and Space on 1 January 2015.
**SKYNET-5C**

| **Owner/Operator:** | Airbus Defence and Space Ltd  
| Gunnels Wood Road  
| Stevenage  
| Hertfordshire  
| SG1 2AS |
| **Date of launch:** | 12 June 2008 |
| **Location of launch:** | CSG Kourou, French Guiana |
| **Designation:** | 2008-030A |
| **Catalogue Number:** | 33055 |
| **Nodal period:** | 1436 minutes |
| **Inclination:** | 0.000 degrees |
| **Apogee:** | 35,796.926 km |
| **Perigee:** | 35,774.988 km |
| **Orbital position:** | 17.8 E |
| **General function:** | Military telecommunications |
| **Notified to the UN:** | 6 October 2008 |
| **Disposed or decayed:** |  
| **Disposal Notified to the UN:** |  
| **Accepted onto UK Register of Space Objects:** | 12 June 2008 |
| **Licence issued under the Outer Space Act 1986:** | 27 May 2008 |
| **Additional information:** | OSA licence issued to Paradigm Secure Communications Ltd on 27 May 2008. Licence transferred to Airbus Defence and Space on 22 December 2014. |
SES AMC-21

Owner/Operator: SES Global Satellite Leasing Limited
15-19 Athol Street
Douglas
Isle of Man
IM1 1LB

Date of launch: 14 August 2008
Location of launch: CSG Kourou, French Guiana

Designation: 2008-038B
Catalogue Number: 33275

Nodal period: 23 hours 56 minutes
Inclination: 0.02 degrees
Apogee: 35,803 km
Perigee: 35,770 km
Orbital position: 124.9 W

General function: Communications

Notified to the UN: Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: 15 August 2008
Licence issued under the Outer Space Act 1986: 23 April 2008

Additional information: Operated by SES Satellites (Gibraltar) Ltd – operation licence issued by Gibraltar Regulatory Authority on 27 September 2006.
INMARSAT-4F3

Owner/Operator: Inmarsat Global Ltd
99 City Road
London
EC1Y 1AX

Date of launch: 18 August 2008
Location of launch: Baikonur, Kazakhstan

Designation: 2008-039A
Catalogue Number: 33278

Nodal period: 1,436 minutes
Inclination: 3 degrees
Apogee: 35,786 km
Perigee: 35,786 km
Orbital position: 97.65 W

General function: Telecommunications
Notified to the UN: 6 October 2008

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: 18 August 2008
Licence issued under the Outer Space Act 1986: 10 March 2008

Additional information: Active North/South and East/West station keeping. Inclination at beginning of life is given above and is decreasing, but will eventually increase back to 3 degrees.
NSS-9

Owner/Operator: SES Satellite Leasing Limited
15-19 Athol Street
Douglas
Isle of Man

Date of launch: 13 February 2009
Location of launch: Kourou, French Guiana

Designation: 2009-008A
Catalogue Number: 33749

Nodal period: 1436 minutes
Inclination: 0.05 degrees
Apogee: 35,820 km
Perigee: 35,752 km
Orbital position: 183 E

General function: Telecommunications
Notified to the UN: 6 August 2009

Disposed or decayed: Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: 29 July 2009
Licence issued under the Outer Space Act 1986: 28 January 2009

Additional information: UK authorised launch only – Netherlands has registered in-orbit operation.
UK-DMC-2

Owner/Operator: Surrey Satellite Technology Ltd
Tycho House
20 Stephenson Road
Surrey Research Park
Guildford
Surrey
GU2 7YE

Date of launch: 29 July 2009
Location of launch: Yasny Cosmodrome, Russia

Designation: 2009-041C
Catalogue Number: 35683

Nodal period: 97.43 - 97.9 minutes
Inclination: 98.13 degrees
Apogee: 681 km
Perigee: 618 km

General function: Disaster Monitoring

Notified to the UN: 6 August 2009

Disposed or decayed: Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: 29 July 2009
Licence issued under the Outer Space Act 1986: 24 July 2009

Additional information:
NSS12

Owner/Operator: SES Satellite Leasing Limited
22-24 Victoria Street
Douglas
Isle of Man

Date of launch: 29 October 2009
Location of launch: Kourou, French Guiana

Designation: 2009-058A
Catalogue Number: 36032

Nodal period: 1435.8 - 1436.4 minutes
Inclination: 0.05 degrees
Apogee: 35,820 km
Perigee: 35,752 km
Orbital position: 57 E

General function: Telecommunications
Notified to the UN: 17 May 2010

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: May 2010
Licence issued under the Outer Space Act 1986: 21 October 2009

Additional information: UK authorised launch only. Netherlands responsible for in-orbit operation.
Astra-3B

Owner/Operator: SES Satellite Leasing Limited
First Floor, Belgravia House
34 - 44 Circular Road
Douglas
Isle of Man
IM1 1AE

Date of launch: 21 May 2010
Location of launch: Kourou, French Guiana

Designation: 2010-021A
Catalogue Number: 36581

Nodal period: 1435.8 - 1436.4 minutes
Inclination: 0.05 degrees
Apogee: 35,820 km
Perigee: 35,752 km
Orbital position: 23.5 E

General function: Telecommunications
Notified to the UN: 22 March 2011

Disposed or decayed: Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: March 2011
Licence issued under the Outer Space Act 1986: 12 March 2010

Additional information: UK authorised launch only. Satellite owned and operated by Luxembourg.
HYLAS-1

Owner/Operator: Avanti Communications Group plc
Cobham House
20 Black Friars Lane
London
EC4V 6EB

Date of launch: 26 November 2010
Location of launch: Kourou, French Guiana

Designation: 2010-065A
Catalogue Number: 37237

Nodal period: 24 hours
Inclination: 0 degrees
Apogee: GEO circular
Perigee: GEO circular
Orbital position: 33.5 W

General function: Telecommunications
Notified to the UN: 22 March 2011

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: March 2011
Licence issued under the Outer Space Act 1986: 23 November 2010

Additional information: Completed re-positioning to 159E May 2021
Quetzsat-1

Owner/Operator: SES Satellite Leasing Limited
First Floor, Belgravia House
34 - 44 Circular Road
Douglas
Isle of Man
IM1 1AE

Date of launch: 29 September 2011
Location of launch: Baikonur, Kazakhstan

Designation: 2011-054A
Catalogue Number: 37826

Nodal period: 1435.8 – 1436.4 minutes
Inclination: 0.05 degrees
Apogee: 35,820 km
Perigee: 35,752 km
Orbital position: 77 W

General function: Commercial Telecommunications
Notified to the UN: 22 October 2013

Disposed or decayed: Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: November 2013
Licence issued under the Outer Space Act 1986: 26 September 2011

Additional information: UK authorised the launch only. The operation of the satellite is the responsibility of a Luxembourg company.
Sirius 5 (SES-5)

Owner/Operator: SES Satellite Leasing Limited
First Floor, Belgravia House
34 - 44 Circular Road
Douglas
Isle of Man
IM1 1AE

Date of launch: 9 July 2012
Location of launch: Baikonur, Kazakhstan

Designation: 2012-036A
Catalogue Number: 38652

Nodal period: 1435.8 – 1436.4 minutes
Inclination: 0.10 degrees
Apogee: 35,820 km
Perigee: 35,752 km
Orbital position: 5 E

General function: Commercial Telecommunications
Notified to the UN: 22 October 2013

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: November 2013
Licence issued under the Outer Space Act 1986: 11 June 2012

Additional information: UK authorised the launch. Satellite is operated by a company incorporated in Luxembourg.
HYLAS-2

Owner/Operator: Avanti Communications Group plc / Avanti Hylas 2 Ltd
Cobham House
20 Black Friars Lane
London
EC4V 6EB

Date of launch: 2 August 2012
Location of launch: Kourou, French Guiana

Designation: 2012-043B
Catalogue Number: 38741

Nodal period: 1436.1 minutes
Inclination: 0.0 degrees
Apogee: 35,803.9 km
Perigee: 35,784.2 km
Orbital position: 31.0 E

General function: HYLAS-2 carries fixed and steerable Ka-band transponders and is designed to provide broadband data communications to Europe, Africa, Middle East and West/South Asia.

Notified to the UN: 22 October 2013

Disposed or decayed: Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: November 2013
Licence issued under the Outer Space Act 1986: 30 May 2012

Additional information:
SKYNET-5D

Owner/Operator: Airbus Defence and Space Ltd
Gunnels Wood Road
Stevenage
Hertfordshire
SG1 2AS

Date of launch: 19 December 2012
Location of launch: Kourou, French Guiana

Designation: 2012-075A
Catalogue Number: 39034

Nodal period: 1,436.258 minutes
Inclination: 0.000 degrees
Apogee: 35,807.419 km
Perigee: 35,772.069 km
Orbital position: 53 E

General function: SKYNET 5D provides secure military communications capability at SHF and UHF to British Armed Forces and friendly nations.

Notified to the UN: 22 October 2013

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: November 2013
Licence issued under the Outer Space Act 1986: 14 December 2012

Additional information: OSA licence issued to Paradigm Secure Communications Ltd & Paradigm Services Ltd on 14 December 2012. Licence transferred to Airbus Defence and Space on 1 January 2015.
STRaND-1

Owner/Operator: Surrey Satellite Technology Ltd
Tycho House
20 Stephenson Road
Surrey Research Park
Guildford
Surrey
GU2 7YE

Date of launch: 25 February 2013
Location of launch: Sriharikota, India

Designation: 2013-009E
Catalogue Number: 39090

Nodal period: 100.4 minutes
Inclination: 98.6 degrees
Apogee: 783 km
Perigee: 771 km

General function: Outreach, education and technology demonstration
Notified to the UN: 22 October 2013

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: November 2013
Licence issued under the Outer Space Act 1986: 4 February 2013

Additional information:
**O3b M001 (O3b PFM)**

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<th><strong>Owner/Operator:</strong></th>
<th>O3b Limited</th>
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<tbody>
<tr>
<td></td>
<td>3rd Floor</td>
</tr>
<tr>
<td></td>
<td>Anley House</td>
</tr>
<tr>
<td></td>
<td>Anley Street</td>
</tr>
<tr>
<td></td>
<td>St Helier</td>
</tr>
<tr>
<td></td>
<td>Jersey</td>
</tr>
<tr>
<td></td>
<td>JE2 3QE</td>
</tr>
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**Date of launch:** 25 June 2013  
**Location of launch:** Kourou, French Guiana

**Designation:** 2013-031D  
**Catalogue Number:** 39191

**Nodal period:** 287.93 minutes  
**Inclination:** 0.03 degrees  
**Apogee:** 8,069 km  
**Perigee:** 8,063 km  
**Orbital position:**

**General function:** Communications  
**Notified to the UN:** 26 August 2013

**Disposed or decayed:**  
**Disposal Notified to the UN:**

**Accepted onto UK Register of Space Objects:** November 2013  
**Licence issued under the Outer Space Act 1986:** 3 May 2013

**Additional information:**
O3b M002 (O3b FM2)

Owner/Operator: O3b Limited
3rd Floor
Anley House
Anley Street
St Helier
Jersey
JE2 3QE

Date of launch: 25 June 2013
Location of launch: Kourou, French Guiana

Designation: 2013-031C
Catalogue Number: 39190

Nodal period: 287.93 minutes
Inclination: 0.03 degrees
Apogee: 8,069 km
Perigee: 8,063 km

General function: Communications
Notified to the UN: 26 August 2013

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: November 2013
Licence issued under the Outer Space Act 1986: 3 May 2013

Additional information:
O3b M004 (O3b FM4)

**Owner/Operator:** O3b Limited
3rd Floor
Anley House
Anley Street
St Helier
Jersey
JE2 3QE

**Date of launch:** 25 June 2013
**Location of launch:** Kourou, French Guiana

**Designation:** 2013-031B
**Catalogue Number:** 39189

**Nodal period:** 287.93 minutes
**Inclination:** 0.03 degrees
**Apogee:** 8,069 km
**Perigee:** 8,063 km

**Orbital position:**

**General function:** Communications
**Notified to the UN:** 26 August 2013

**Disposed or decayed:**
**Disposal Notified to the UN:**

**Accepted onto UK Register of Space Objects:** November 2013
**Licence issued under the Outer Space Act 1986:** 3 May 2013

**Additional information:**
O3b M005 (O3b FM5)

Owner/Operator: O3b Limited
3rd Floor
Anley House
Anley Street
St Helier
Jersey
JE2 3QE

Date of launch: 25 June 2013
Location of launch: Kourou, French Guiana

Designation: 2013-031A
Catalogue Number: 39188

Nodal period: 287.93 minutes
Inclination: 0.03 degrees
Apogee: 8,069 km
Perigee: 8,063 km

General function: Communications
Notified to the UN: 26 August 2013

Disposed or decayed: No
Disposal Notified to the UN: Yes

Accepted onto UK Register of Space Objects: November 2013
Licence issued under the Outer Space Act 1986: 3 May 2013

Additional information:
Alphasat

Owner/Operator: Inmarsat Global Ltd
Inmarsat Launch Company Ltd
99 City Road
Fort Anne
London
Douglas
EC1Y 1AX
Isle of Man
IM1 5PD

Date of launch: 25 July 2013
Location of launch: Kourou, French Guiana

Designation: 2013-038A
Catalogue Number: 39215

Nodal period: 23 hours 56 minutes
Inclination: Currently 0 degrees but will grow to 3.0 degrees
Apogee: 35,786 km
Perigee: 35,786 km
Orbital position: 24.85 E

General function: Communications satellite
Notified to the UN: 22 October 2013

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: November 2013
Licence issued under the Outer Space Act 1986: 12 July 2013

Additional information:
INMARSAT 5-F1

Owner/Operator: Inmarsat Global Ltd
99 City Road
London
EC1Y 1AX

Date of launch: 8 December 2013
Location of launch: Baikonur Cosmodrome, Kazakhstan

Designation: 2013-073A
Catalogue Number: 39476

Nodal period: 23 hours 56 minutes
Inclination: <0.05 degrees
Apogee: 35,786 km
Perigee: 35,786 km
Orbital position: 62.6 E

General function: Communications satellite
Notified to the UN: 30 May 2014

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: May 2015
Licence issued under the Outer Space Act 1986: 2 December 2013

Additional information:
TechDemoSat-1

Owner/Operator: Surrey Satellite Technology Ltd
Tycho House
20 Stephenson Road
Surrey Research Park
Guildford
Surrey
GU2 7YE

Date of launch: 8 July 2014
Location of launch: Baikonur Cosmodrome, Kazakhstan

Designation: 2014-037H
Catalogue Number: 40076

Nodal period: 97.3 minutes
Inclination: 98.4 degrees
Apogee: 639.5 km
Perigee: 630.7km

Orbital position:

General function: Technology Demonstration
Notified to the UN: 24 October 2014

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: May 2015
Licence issued under the Outer Space Act 1986: 2 July 2014

Additional information:
**Ukube-1**

**Owner/Operator:** UK Space Agency  
Polaris House  
North Star Avenue  
Swindon  
SN2 1SZ

**Date of launch:** 8 July 2014  
**Location of launch:** Baikonur Cosmodrome, Kazakhstan

**Designation:** 2014-037F  
**Catalogue Number:** 40074

**Nodal period:** 97.6 minutes  
**Inclination:** 98.4 degrees  
**Apogee:** 643 km  
**Perigee:** 642 km

**Orbital position:**

**General function:** Ukube 1 is the UK Space Agency’s pilot cubesat mission, designed to understand the benefits and challenges of a national cubesat programme. The self-funded payloads are from industry and academia, and cover technology demonstration and education/outreach.

**Notified to the UN:** 24 October 2014

**Disposed or decayed:** December 2018  
**Disposal Notified to the UN:** December 2018

**Accepted onto UK Register of Space Objects:** May 2015  
**Licence issued under the Outer Space Act 1986:** 27 June 2014

**Additional information:** End of life confirmed December 2018
O3b M003 (O3b FM3)

Owner/Operator: O3b Limited
3rd Floor
Anley House
Anley Street
St Helier
Jersey
JE2 3QE

Date of launch: 10 July 2014
Location of launch: Kourou, French Guiana

Designation: 2014-038A
Catalogue Number: 40079

Nodal period: 287.92 minutes
Inclination: 0.03 degrees
Apogee: 8,071 km
Perigee: 8,060 km

General function: Communications

Notified to the UN: 24 July 2014

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: May 2015
Licence issued under the Outer Space Act 1986: 30 August 2013

Additional information:
Owner/Operator: O3b Limited
3rd Floor
Anley House
Anley Street
St Helier
Jersey
JE2 3QE

Date of launch: 10 July 2014
Location of launch: Kourou, French Guiana

Designation: 2014-038C
Catalogue Number: 40081

Nodal period: 287.92 minutes
Inclination: 0.03 degrees
Apogee: 8,071 km
Perigee: 8,060 km

Orbital position:

General function: Communications
Notified to the UN: 24 July 2014

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: May 2015
Licence issued under the Outer Space Act 1986: 30 August 2013

Additional information:
### O3b M007 (O3b FM7)

**Owner/Operator:** O3b Limited  
3rd Floor  
Anley House  
Anley Street  
St Helier  
Jersey  
JE2 3QE

**Date of launch:** 10 July 2014  
**Location of launch:** Kourou, French Guiana

**Designation:** 2014-038B  
**Catalogue Number:** 40080

**Nodal period:** 287.92 minutes  
**Inclination:** 0.03 degrees  
**Apogee:** 8,071 km  
**Perigee:** 8,060 km

**Orbital position:**

**General function:** Communications  
**Notified to the UN:** 24 July 2014

**Disposed or decayed:**

**Disposal Notified to the UN:**

**Accepted onto UK Register of Space Objects:** May 2015  
**Licence issued under the Outer Space Act 1986:** 30 August 2013

**Additional information:**
O3b M008 (O3b FM8)

**Owner/Operator:** O3b Limited
3rd Floor
Anley House
Anley Street
St Helier
Jersey
JE2 3QE

**Date of launch:** 10 July 2014
**Location of launch:** Kourou, French Guiana

**Designation:** 2014-038D
**Catalogue Number:** 40082

**Nodal period:** 287.92 minutes
**Inclination:** 0.03 degrees
**Apogee:** 8,071 km
**Perigee:** 8,060 km

**General function:** Communications

**Notified to the UN:** 24 July 2014

**Disposed or decayed:**
**Disposal Notified to the UN:**

**Accepted onto UK Register of Space Objects:** May 2015
**Licence issued under the Outer Space Act 1986:** 30 August 2013

**Additional information:**
O3b M009 (O3b FM9)

**Owner/Operator:** O3b Limited
3rd Floor
Anley House
Anley Street
St Helier
Jersey
JE2 3QE

**Date of launch:** 18 December 2014
**Location of launch:** Kourou, French Guiana

**Designation:** 2014-083D
**Catalogue Number:** 40351

**Nodal period:** 287.9 minutes
**Inclination:** 0.03 degrees
**Apogee:** 8,070 km
**Perigee:** 8,060 km

**Orbital position:**

**General function:** Communications
**Notified to the UN:** 10 February 2015

**Disposed or decayed:**
**Disposal Notified to the UN:**

**Accepted onto UK Register of Space Objects:** May 2015
**Licence issued under the Outer Space Act 1986:** 9 December 2014

**Additional information:**
## O3b M010 (O3b FM10)

| **Owner/Operator:** | O3b Limited  
|                     | 3rd Floor  
|                     | Anley House  
|                     | Anley Street  
|                     | St Helier  
|                     | Jersey  
|                     | JE2 3QE |
| **Date of launch:** | 18 December 2014 |
| **Location of launch:** | Kourou, French Guiana |
| **Designation:** | 2014-083A |
| **Catalogue Number:** | 40348 |
| **Nodal period:** | 287.9 minutes |
| **Inclination:** | 0.03 degrees |
| **Apogee:** | 8,070 km |
| **Perigee:** | 8,060 km |
| **Orbital position:** |  |
| **General function:** | Communications |
| **Notified to the UN:** | 10 February 2015 |
| **Disposed or decayed:** |  |
| **Disposal Notified to the UN:** |  |
| **Accepted onto UK Register of Space Objects:** | May 2015 |
| **Licence issued under the Outer Space Act 1986:** | 9 December 2014 |
| **Additional information:** |  |
O3b M011 (O3b FM11)

Owner/Operator: O3b Limited
3rd Floor
Anley House
Anley Street
St Helier
Jersey
JE2 3QE

Date of launch: 18 December 2014
Location of launch: Kourou, French Guiana

Designation: 2014-083B
Catalogue Number: 40349

Nodal period: 287.9 minutes
Inclination: 0.03 degrees
Apogee: 8,070 km
Perigee: 8,060 km
Orbital position:

General function: Communications
Notified to the UN: 10 February 2015

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: May 2015
Licence issued under the Outer Space Act 1986: 9 December 2014

Additional information:
O3b M012 (O3b FM12)

Owner/Operator: O3b Limited
3rd Floor
Anley House
Anley Street
St Helier
Jersey
JE2 3QE

Date of launch: 18 December 2014
Location of launch: Kourou, French Guiana

Designation: 2014-083C
Catalogue Number: 40350

Nodal period: 287.9 minutes
Inclination: 0.03 degrees
Apogee: 8,070 km
Perigee: 8,060 km

General function: Communications
Notified to the UN: 10 February 2015

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: May 2015
Licence issued under the Outer Space Act 1986: 9 December 2014

Additional information:
INMARSAT 5-F2

Owner/Operator: Inmarsat Global Ltd
99 City Road
London
EC1Y 1AX

Date of launch: 1 February 2015
Location of launch: Baikonur Cosmodrome, Kazakhstan

Designation: 2015-005A
Catalogue Number: 40384

Nodal period: 1436 minutes
Inclination: 0 +/- 0.5 degrees
Apogee: 35,786.2 km
Perigee: 35,786.0 km
Orbital position:

General function: Communications Satellite
Notified to the UN: 24 February 2015

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: May 2015
Licence issued under the Outer Space Act 1986: 21 January 2015

Additional information:
Carbonite-1 (CBNT-1)

Owner/Operator: Surrey Satellite Technology Ltd
Tycho House
20 Stephenson Road
Surrey Research Park
Guildford
Surrey
GU2 7YE

Date of launch: 10 July 2015
Location of launch: Sriharikota, India

Designation: 2015-032D
Catalogue Number: 40718

Nodal period: 97.7 minutes
Inclination: 98 degrees
Apogee: 667.3 km
Perigee: 642.1 km

Orbital position:

General function: Technology demonstrator
Notified to the UN: 30 September 2015

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: July 2017
Licence issued under the Outer Space Act 1986: 3 July 2015

Additional information:
# DeorbitSail

**Owner/Operator:** Surrey Satellite Technology Ltd  
Tycho House  
20 Stephenson Road  
Surrey Research Park  
Guildford  
Surrey  
GU2 7YE  

**Date of launch:** 10 July 2015  
**Location of launch:** Sriharikota, India  

**Designation:** 2015-032E  
**Catalogue Number:** 40719  

**Nodal period:** 97.63 minutes  
**Inclination:** 98 degrees  
**Apogee:** 657 km  
**Perigee:** 635 km  

**Orbital position:**  

**General function:** Technology demonstrator  
**Notified to the UN:** 26 November 2015  

**Disposed or decayed:**  
**Disposal Notified to the UN:**  

**Accepted onto UK Register of Space Objects:** March 2018  
**Licence issued under the Outer Space Act 1986:** 3 July 2015  

**Additional information:**
Inmarsat-5 F3

Owner/Operator: Inmarsat Global Ltd
Inmarsat Launch Company Ltd
99 City Road
Fort Anne
London
Douglas
EC1Y 1AX
Isle of Man
IM1 5PD

Date of launch: 28 August 2015
Location of launch: Baikonur, Kazakhstan

Designation: 2015-042A
Catalogue Number: 40882

Nodal period: 1,436 minutes
Inclination: 0 to 0.05 degrees
Apogee: 35,786.1 km
Perigee: 35,785.9 km
Orbital position: 179.6 E

General function: Communications satellite
Notified to the UN: 30 September 2015

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: July 2017
Licence issued under the Outer Space Act 1986: 13 August 2015

Additional information:
DMC3-FM1

Owner/Operator: Surrey Satellite Technology Ltd
Tycho House
20 Stephenson Road
Surrey Research Park
Guildford
Surrey
GU2 7YE

Date of launch: 10 July 2015
Location of launch: Sriharikota, India

Designation: 2015-032A
Catalogue Number: 40715

Nodal period: 97.7 minutes
Inclination: 98 degrees
Apogee: 671.4 km
Perigee: 644.1 km

Orbital position:

General function: High-resolution Earth observation satellite

Notified to the UN: 30 September 2015

Disposed or decayed: Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: July 2017
Licence issued under the Outer Space Act 1986: 3 July 2015

Additional information:
## DMC3-FM2

**Owner/Operator:** Surrey Satellite Technology Ltd  
Tycho House  
20 Stephenson Road  
Surrey Research Park  
Guildford  
Surrey  
GU2 7YE

**Date of launch:** 10 July 2015  
**Location of launch:** Sriharikota, India

**Designation:** 2015-032B  
**Catalogue Number:** 40716

**Nodal period:** 97.7 minutes  
**Inclination:** 98 degrees  
**Apogee:** 677.1 km  
**Perigee:** 641.2 km

**General function:** High-resolution Earth observation satellite

**Notified to the UN:** 30 September 2015

**Disposed or decayed:**  
**Disposal Notified to the UN:**

**Accepted onto UK Register of Space Objects:** July 2017  
**Licence issued under the Outer Space Act 1986:** 3 July 2015

**Additional information:**
DMC3-FM3

**Owner/Operator:** Surrey Satellite Technology Ltd
Tycho House
20 Stephenson Road
Surrey Research Park
Guildford
Surrey
GU2 7YE

**Date of launch:** 10 July 2015
**Location of launch:** Sriharikota, India

**Designation:** 2015-032C
**Catalogue Number:** 40717

**Nodal period:** 97.7 minutes
**Inclination:** 98 degrees
**Apogee:** 670.6 km
**Perigee:** 642.1 km

**General function:** High-resolution Earth observation satellite.

**Notified to the UN:** 30 September 2015

**Disposed or decayed:**
**Disposal Notified to the UN:**

**Accepted onto UK Register of Space Objects:** July 2017
**Licence issued under the Outer Space Act 1986:** 3 July 2015

**Additional information:**
SES-9

Owner/Operator: SES Satellite Leasing Limited
First Floor, Belgravia House
34 - 44 Circular Road
Douglas
Isle of Man
IM1 1AE

Date of launch: 4 March 2016
Location of launch: Cape Canaveral, USA

Designation: 2016-013A
Catalogue Number: 41380

Nodal period: 1,435.8 - 1,436.4 minutes
Inclination: 0.1 degrees
Apogee: 35,820 km
Perigee: 35,752 km
Orbital position: 108.2 E

General function: SES-9 will carry a variety of commercial telecoms traffic. It will provide capacity over Asia-Pacific and South Asia.

Notified to the UN: 17 January 2017

Disposed or decayed: No
Disposal Notified to the UN: No

Accepted onto UK Register of Space Objects: January 2017
Licence issued under the Outer Space Act 1986: 7 January 2016

Additional information: Operator’s licence held by Gibraltar
INMARSAT-5 F4

Owner/Operator: Inmarsat Global Ltd
99 City Road
London
EC1Y 1AX

Date of launch: 15 May 2017
Location of launch: Cape Canaveral, USA

Designation: 2017-025A
Catalogue Number: 42698

Nodal period: 1,436 minutes
Inclination: <0.05 degrees
Apogee: 35,786 km
Perigee: 35,786 km
Orbital position: 83.5 E

General function: Communications
Notified to the UN: 28 September 2017

Disposed or decayed: Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: September 2017
Licence issued under the Outer Space Act 1986: 8 May 2017

Additional information: In December 2017 Inmarsat-5 F4 was redeployed to 117.5 E. In August 2018 Inmarsat-5 F4 was redeployed to 11° E. In December 2018 Inmarsat-5 F4 was redeployed to 56.5E.
ViaSat-2

Owner/Operator: ViaSat Technologies Ltd
Sandford Lane
Wareham
Dorset
BH20 4DY

Date of launch: 01 June 2017
Location of launch: Kourou, French Guiana

Designation: 2017-029A
Catalogue Number: 42740

Nodal period: 1,440 minutes
Inclination: 0 degrees
Apogee: 35,786 km
Perigee: 35,786 km
Orbital position: 69.9 W

General function: Telecommunications Satellite
Notified to the UN: 19 December 2017

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: December 2017
Licence issued under the Outer Space Act 1986: 24 April 2017

Additional information:
**EchoStar 21/EchoStar XXI**

**Owner/Operator:** Hughes Network Systems Ltd
Hughes House
Rockingham Drive
Milton Keynes
MK14 6PD

**Date of launch:** 08 June 2017
**Location of launch:** Baikonur Cosmodrome, Kazakhstan

**Designation:** 2017-032A
**Catalogue Number:** 42749

**Nodal period:** 1,436 minutes
**Inclination:** 7.5 degrees
**Apogee:** 35,802 km
**Perigee:** 35,787 km
**Orbital position:** 10.25 E

**General function:** Communications Satellite

**Notified to the UN:** 19 December 2017

**Disposal or decayed:**
**Disposal Notified to the UN:**

**Accepted onto UK Register of Space Objects:** December 2017
**Licence issued under the Outer Space Act 1986:** 24 November 2016

**Additional information:**
Red Diamond

Owner/Operator: Sky and Space Global (UK) Ltd
Tower Bridge House
St Katharine’s Way
London
E1W 1DD

Date of launch: 23 June 2017
Location of launch: Sriharikota, India

Designation: 2017-036U
Catalogue Number: 42783

Nodal period: 94.7 minutes
Inclination: 97.4486 degrees
Apogee: 513 km
Perigee: 495 km

Orbital position:

General function: Red Diamond is part of the “Three Diamonds” constellation operated by Sky and Space Global to demonstrate narrowband communication services.

Notified to the UN: 29 September 2017

Disposed or decayed:
Disposal Notified to the UN: 

Accepted onto UK Register of Space Objects: September 2017
Licence issued under the Outer Space Act 1986: 26 May 2017

Additional information:
Green Diamond

**Owner/Operator:** Sky and Space Global (UK) Ltd
Tower Bridge House
St Katharine’s Way
London
E1W 1DD

**Date of launch:** 23 June 2017
**Location of launch:** Sriharikota, India

**Designation:** 2017-036W
**Catalogue Number:** 42785

**Nodal period:** 94.7 minutes
**Inclination:** 97.4488 degrees
**Apogee:** 513 km
**Perigee:** 495 km

**Orbital position:**

**General function:** Green Diamond is part of the “Three Diamonds” constellation operated by Sky and Space Global to demonstrate narrowband communication services.

**Notified to the UN:** 29 September 2017

**Disposed or decayed:**
**Disposal Notified to the UN:**

**Accepted onto UK Register of Space Objects:** September 2017
**Licence issued under the Outer Space Act 1986:** 26 May 2017

**Additional information:**
Blue Diamond

Owner/Operator: Sky and Space Global (UK) Ltd
Tower Bridge House
St Katharine’s Way
London
E1W 1DD

Date of launch: 23 June 2017
Location of launch: Sriharikota, India

Designation: 2017-036X
Catalogue Number: 42786

Nodal period: 94.7 minutes
Inclination: 97.4487 degrees
Apogee: 512 km
Perigee: 495 km
Orbital position:

General function: Blue Diamond is part of the “Three Diamonds” constellation operated by Sky and Space Global to demonstrate narrowband communication services.

Notified to the UN: 29 September 2017

Disposed or decayed: Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: September 2017
Licence issued under the Outer Space Act 1986: 26 May 2017

Additional information:
Carbonite-2

Owner/Operator: Surrey Satellite Technology Ltd
Tycho House
20 Stephenson Road
Surrey Research Park
Guildford
Surrey
GU2 7YE

Date of launch: 12 January 2018
Location of launch: Shriharikota, India

Designation: 2018-004E
Catalogue Number: 43115

Nodal period: 94.6 minutes
Inclination: 97.6 degrees
Apogee: 508 km
Perigee: 493 km

General function: Technology Demonstrator
Notified to the UN: 16 February 2018

Disposal or decayed:
Disposal Notified to the UN: 

Accepted onto UK Register of Space Objects: February 2018
Licence issued under the Outer Space Act 1986: 08 January 2018

Additional information:
SES-15

Owner/Operator: SES Satellite Leasing Limited
First Floor, Belgravia House
34 - 44 Circular Road
Douglas
Isle of Man
IM1 1AE

Date of launch: 18 May 2017
Location of launch: Kourou, French Guiana

Designation: 2017-026A
Catalogue Number: 42709

Nodal period: 1,435.8 - 1,436.4 minutes
Inclination: 0.1 degrees
Apogee: 35,820 km
Perigee: 35,752 km
Orbital position: 129.15° W

General function: Communications satellite
Notified to the UN: 28 August 2018

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: September 2018
Licence issued under the Outer Space Act 1986: 28 March 2017

Additional information: Operator’s licence held by Gibraltar
O3b M013 (O3b FM13)

Owner/Operator: O3b Limited
3rd Floor
Anley House
Anley Street
St Helier
Jersey
JE2 3QE

Date of launch: 09 March 2018
Location of launch: Kourou, French Guiana

Designation: 2018-024D
Catalogue Number: 43234

Nodal period: 288 minutes
Inclination: 0.05 degrees
Apogee: 8,069 km
Perigee: 8,062 km

General function: Communications
Notified to the UN: 15 May 2018

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: September 2018
Licence issued under the Outer Space Act 1986: 05 March 2018

Additional information:
O3b M014 (O3b FM14)

Owner/Operator: O3b Limited
3rd Floor
Anley House
Anley Street
St Helier
Jersey
JE2 3QE

Date of launch: 09 March 2018
Location of launch: Kourou, French Guiana

Designation: 2018-024C
Catalogue Number: 43233

Nodal period: 288 minutes
Inclination: 0.05 degrees
Apogee: 8,069 km
Perigee: 8,062 km

Orbital position:

General function: Communications
Notified to the UN: 15 May 2018

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: September 2018
Licence issued under the Outer Space Act 1986: 05 March 2018

Additional information:
O3b M015 (O3b FM15)

Owner/Operator: O3b Limited
3rd Floor
Anley House
Anley Street
St Helier
Jersey
JE2 3QE

Date of launch: 09 March 2018
Location of launch: Kourou, French Guiana

Designation: 2018-024A
Catalogue Number: 43231

Nodal period: 288 minutes
Inclination: 0.05 degrees
Apogee: 8,070 km
Perigee: 8,062 km

General function: Communications

Notified to the UN: 15 May 2018

Disposed or decayed: Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: September 2018
Licence issued under the Outer Space Act 1986: 05 March 2018

Additional information:
O3b M016 (O3b FM16)

Owner/Operator: O3b Limited
3rd Floor
Anley House
Anley Street
St Helier
Jersey
JE2 3QE

Date of launch: 09 March 2018
Location of launch: Kourou, French Guiana

Designation: 2018-024B
Catalogue Number: 43232

Nodal period: 288 minutes
Inclination: 0.05 degrees
Apogee: 8,070 km
Perigee: 8,062 km

Orbital position:

General function: Communications
Notified to the UN: 15 May 2018

Disposed or decayed: Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: September 2018
Licence issued under the Outer Space Act 1986: 05 March 2018

Additional information:
### Hylas-4

**Owner/Operator:** Avanti Communications Group plc  
Cobham House  
20 Black Friars Lane  
London  
EC4V 6EB

**Date of launch:** 05 April 2018  
**Location of launch:** Kourou, French Guiana

**Designation:** 2018-033B  
**Catalogue Number:** 43272

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**Disposal or decayed:**  
**Disposal Notified to the UN:**

- **Accepted onto UK Register of Space Objects:** April 2019  
- **Licence issued under the Outer Space Act 1986:** 27 February 2018

**Additional information:**
NovaSar-1

Owner/Operator: Surrey Satellite Technology Ltd
Tycho House
20 Stephenson Road
Surrey Research Park
Guildford
Surrey
GU2 7YE

Date of launch: 16 September 2018
Location of launch: Sriharikota, India

Designation: 2018-071B
Catalogue Number: 43619

Nodal period: 96.4 minutes
Inclination: 97.8 degrees
Apogee: 600.4 km
Perigee: 586.3 km
Orbital position:

General function: Technology Demonstration
Notified to the UN: 9 January 2019

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: April 2019
Licence issued under the Outer Space Act 1986: 06 September 2018

Additional information:
SSTL-300 S1-004

Owner/Operator: Surrey Satellite Technology Ltd
Tycho House
20 Stephenson Road
Surrey Research Park
Guildford
Surrey
GU2 7YE

Date of launch: 16 September 2018
Location of launch: Sriharikota, India

Designation: 2018-071A
Catalogue Number: 43618

Nodal period: 96.3 minutes
Inclination: 97.8 degrees
Apogee: 598.8 km
Perigee: 580.9 km
Orbital position:

General function: Technology Demonstration
Notified to the UN: 30 January 2019

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: 03 April 2019
Licence issued under the Outer Space Act 1986: 06 September 2018

Additional information:
SL0006 OneWeb

Owner/Operator: Network Access Associates Ltd
Asticus Building
2nd Floor
21 Palmer Street
London
SW1H 0AD

Date of launch: 27 February 2019
Location of launch: Kourou, French Guiana

Designation: 2019-010E
Catalogue Number: 44061

Nodal period: 109.4 minutes
Inclination: 87.9 degrees
Apogee: 1200 km
Perigee: 1200 km
Orbital position:

General function: Communications
Notified to the UN: 12 July 2019

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: 19 July 2019
Licence issued under the Outer Space Act 1986: 22 February 2019

Additional information:
| **Owner/Operator:** | Network Access Associates Ltd  
Asticus Building  
2nd Floor  
21 Palmer Street  
London  
SW1H 0AD |
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SL0008 OneWeb

Owner/Operator: Network Access Associates Ltd
Asticus Building
2nd Floor
21 Palmer Street
London
SW1H 0AD

Date of launch: 27 February 2019
Location of launch: Kourou, French Guiana

Designation: 2019-010E
Catalogue Number: 44059

Nodal period: 109.4 minutes
Inclination: 87.9 degrees
Apogee: 1200 km
Perigee: 1200 km
Orbital position:

General function: Communications
Notified to the UN: 12 July 2019

Disposed or decayed: Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: 19 July 2019
Licence issued under the Outer Space Act 1986: 22 February 2019

Additional information:
| **Owner/Operator:** | Network Access Associates Ltd  
|  | Asticus Building  
|  | 2nd Floor  
|  | 21 Palmer Street  
|  | London  
|  | SW1H 0AD |
| **Date of launch:** | 27 February 2019 |
| **Location of launch:** | Kourou, French Guiana |
| **Designation:** | 2019-010E |
| **Catalogue Number:** | 44058 |
| **Nodal period:** | 109.4 minutes |
| **Inclination:** | 87.9 degrees |
| **Apogee:** | 1200 km |
| **Perigee:** | 1200 km |
| **Orbital position:** | |
| **General function:** | Communications |
| **Notified to the UN:** | 12 July 2019 |
| **Disposed or decayed:** | |
| **Disposal Notified to the UN:** | |
| **Accepted onto UK Register of Space Objects:** | 19 July 2019 |
| **Licence issued under the Outer Space Act 1986:** | 22 February 2019 |
| **Additional information:** | |
SL0011 OneWeb

Owner/Operator: Network Access Associates Ltd
Asticus Building
2nd Floor
21 Palmer Street
London
SW1H 0AD

Date of launch: 27 February 2019
Location of launch: Kourou, French Guiana

Designation: 2019-010E
Catalogue Number: 44062

Nodal period: 109.4 minutes
Inclination: 87.9 degrees
Apogee: 1200 km
Perigee: 1200 km
Orbital position:

General function: Communications
Notified to the UN: 12 July 2019

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: 19 July 2019
Licence issued under the Outer Space Act 1986: 22 February 2019

Additional information:
SL0012 OneWeb

Owner/Operator: Network Access Associates Ltd
Asticus Building
2nd Floor
21 Palmer Street
London
SW1H 0AD

Date of launch: 27 February 2019
Location of launch: Kourou, French Guiana

Designation: 2019-010E
Catalogue Number: 44057

Nodal period: 109.4 minutes
Inclination: 87.9 degrees
Apogee: 1200 km
Perigee: 1200 km
Orbital position:

General function: Communications
Notified to the UN: 12 July 2019

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: 19 July 2019
Licence issued under the Outer Space Act 1986: 22 February 2019

Additional information:
IOD-1 GEMS

Owners/Operators: Satellite Applications Catapult
Electron Building
Fermi Avenue
Harwell Science and Innovation Campus
Didcot
Oxfordshire
OX11 0QR

&
Orbital Micro Systems
Alliotts
Imperial House
15-19 King’s Way
London
WC2B 6UN

Date of launch: 03 July 2019
Location of launch: Wallops Island, Virginia, USA

Designation: 1998-067QK
Catalogue Number: 44385

Nodal period: 92.81 minutes
Inclination: 51.64 degrees
Apogee: 415 km
Perigee: 409 km

Orbital position:

General function: Earth Observations
Notified to the UN: 30 July 2019

Disposed or decayed: 03 April 2021
Disposal Notified to the UN: 12 April 2021

Accepted onto UK Register of Space Objects: August 2019
Licence issued under the Outer Space Act 1986: 29 March 2019

Additional information: Re-entry and end of life 03 April 2021
Surrey Satellite Technology Ltd
Tycho House
20 Stephenson Road
Surrey Research Park
Guildford
Surrey
GU2 7YE

Date of launch: 20 June 2018
Location of launch: ISS

Designation: 1998-067NT
Catalogue Number: 43510

Nodal period: 92.5
Inclination: 51.6
Apogee: 408.4
Perigee: 404.4

General function: Technology Demonstration
Notified to the UN: 22 October 2018

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: August 2019
Licence issued under the Outer Space Act 1986: 28 March 2018 (launch) & 21 May 2018 (Ops)

Additional information: SSTL confirm end of life September 2018
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DoT-1

Owner/Operator: Surrey Satellite Technology Ltd
Tycho House
20 Stephenson Road
Surrey Research Park
Guildford
Surrey
GU2 7YE

Date of launch: 05 July 2019
Location of launch: Vostochny, Cosmodrome, Eastern Russia

Designation: 2019-038P
Catalogue Number: 44399

Nodal period: 95.26
Inclination: 97.49
Apogee: 549
Perigee: 514
Orbital position:

General function: Technology Demonstration
Notified to the UN: 08 August 2019

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: 08 August 2019
Licence issued under the Outer Space Act 1986: 03 July 2019

Additional information:
Vesta-1

Owner/Operator: Surrey Satellite Technology Ltd
Tycho House
20 Stephenson Road
Surrey Research Park
Guildford
Surrey
GU2 7YE

Date of launch: 03 December 2018
Location of launch: Vandenberg Air Force Base, USA

Designation: 2018-099Z
Catalogue Number: ST/SG/SER.E/908

Nodal period: 96.3
Inclination: 97.8
Apogee: 599.9
Perigee: 579.5

General function: Technology Demonstration

Notified to the UN: 20 August 2019

Disposed or decayed:
Disposal Notified to the UN: 27 August 2019

Accepted onto UK Register of Space Objects: 27 August 2019
Licence issued under the Outer Space Act 1986: 26 September 2018

Additional information:
**O3b M017**

**Owner/Operator:** O3b Limited  
3rd Floor  
Anley House  
Anley Street  
St Helier  
Jersey  
JE2 3QE

**Date of launch:** 04 April 2019  
**Location of launch:** Kourou, French Guiana

**Designation:** 2019-020C  
**Catalogue Number:** 44114

**Nodal period:** 288  
**Inclination:** 0.04  
**Apogee:** 8069  
**Perigee:** 8059  
**Orbital position:**

**General function:** Communications  
**Notified to the UN:** 23 August 2019

**Disposed or decayed:**

**Disposal Notified to the UN:**

**Accepted onto UK Register of Space Objects:** 29 August 2019  
**Licence issued under the Outer Space Act 1986:** 02 April 2019

**Additional information:**
O3b M018

Owner/Operator: O3b Limited
3rd Floor
Anley House
Anley Street
St Helier
Jersey
JE2 3QE

Date of launch: 04 April 2019
Location of launch: Kourou, French Guiana

Designation: 2019-020D
Catalogue Number: 44115

Nodal period: 288
Inclination: 0.05
Apogee: 8070
Perigee: 8062
Orbital position:

General function: Communications
Notified to the UN: Pending

Disposed or decayed:
Disposal Notified to the UN: 23 August 2019

Accepted onto UK Register of Space Objects:
Licence issued under the Outer Space Act 1986: 29 August 2019
02 April 2019

Additional information:
O3b M019

Owner/Operator: O3b Limited
3rd Floor
Anley House
Anley Street
St Helier
Jersey
JE2 3QE

Date of launch: 04 April 2019
Location of launch: Kourou, French Guiana

Designation: 2019-020B
Catalogue Number: 44113

Nodal period: 288
Inclination: 0.04
Apogee: 8070
Perigee: 8062
Orbital position:

General function: Communications
Notified to the UN: 23 August 2019

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: 29 August 2019
Licence issued under the Outer Space Act 1986: 02 April 2019

Additional information:
O3b M020

Owner/Operator: O3b Limited
3rd Floor
Anley House
Anley Street
St Helier
Jersey
JE2 3QE

Date of launch: 04 April 2019
Location of launch: Kourou, French Guiana

Designation: 2019-020A
Catalogue Number: 44112

Nodal period: 288
Inclination: 0.05
Apogee: 8068
Perigee: 8057
Orbital position:

General function: Communications
Notified to the UN: 23 August 2019

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: 29 August 2019
Licence issued under the Outer Space Act 1986: 02 April 2019

Additional information:
NSL-1

Owner/Operator: Clyde Space Ltd
123 St Vincent Street
Glasgow
G2 5EA

Date of launch: 5 July 2019
Location of launch: Vostochny Cosmodrome, Eastern Russia

Designation: 2019-038E
Catalogue Number: 44391

Nodal period: 96.21
Inclination: 97.7
Apogee: 592
Perigee: 562
Orbital position:

General function: Technology Demo
Notified to the UN: 21 November 2019

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: December 2019
Licence issued under the Outer Space Act 1986: 03 November 2019

Additional information:
Inmarsat GX5

Owner/Operator: Inmarsat Global Ltd
99 City Road
London
EC1Y 1AX

Date of launch: 26 November 2019
Location of launch: Kourou, French Guiana

Designation: 2019-080B
Catalogue Number: 44801

Nodal period:
Inclination: 0.00
Apogee: 35786
Perigee: 35786
Orbital position: 11E

General function: Communications
Notified to the UN: December 2019

Disposed or decayed:
Disposal Notified to the UN: 

Accepted onto UK Register of Space Objects: December 2019
Licence issued under the Outer Space Act 1986: 07 November 2019

Additional information:
OneWeb Launch 2 (OWLID00007-OWLID00040)
(See Annex 1 for details of each individual satellite in this launch)

Owner/Operator: Network Access Associates Limited
195 Wood Lane
West Works Building
London
W12 7FQ

Date of launch: 06 February 2020
Location of launch: Baikonur, Kazakhstan

Designation: See Annex 1 for details
Catalogue Number: See Annex 1 for details

Nodal period: 110
Inclination: 87.9
Apogee: 1229
Perigee: 1212
Orbital position:

General function: Communications
Notified to the UN: 30 March 2020

Disposed or decayed: See Annex 1 for details
Disposal Notified to the UN: See Annex 1 for details

Accepted onto UK Register of Space Objects: April 2020
Licence issued under the Outer Space Act 1986: 31 January 2020

Additional information:
## Annex 1

**OneWeb Launch 2 – Baikonur, Kazakhstan, 06 February 2020**

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OneWeb Launch 3 (OWLID00041-OWLID00074)
(See Annex 2 for details of each individual satellite in this launch)

**Owner/Operator:** Network Access Associates Limited
195 Wood Lane
West Works Building
London
W12 7FQ

**Date of launch:** 21 March 2020
**Location of launch:** Baikonur, Kazakhstan

**Designation:** See Annex 2 for details
**Catalogue Number:** See Annex 2 for details

**Nodal period:** 109.4
**Inclination:** 87.9
**Apogee:** 1229
**Perigee:** 1212

**Orbital position:**

**General function:** Communications

**Notified to the UN:** 17 April 2020

**Disposed or decayed:** See Annex 2 for details
**Disposal Notified to the UN:** See Annex 2 for details

**Accepted onto UK Register of Space Objects:** May 2020

**Licence issued under the Outer Space Act 1986:** 06 March 2020

**Additional information:**
# Annex 2

OneWeb Launch 3 – Baikonur, Kazakhstan, 21 March 2020

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Faraday-1

Owner/Operator: In-Space Missions Limited
Whitmore View
Hammer Lane
Grayshott
Hampshire
GU26 6JD

Date of launch: 4 July 2020
Location of launch: Mahia Launch Facility

Designation:
Catalogue Number:

Nodal period:
Inclination:
Apogee:
Perigee:
Orbital position:

General function: In Orbit Demonstration
Notified to the UN:

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: September 2020

Licence issued under the Outer Space Act 1986: 02 July 2020

Additional information: The Electron Launch vehicle failed during the second stage burn and the satellite was lost
OneWeb Launch 4 (OWLID00075-OWLID000110)
(See Annex 3 for details of each individual satellite in this launch)

**Owner/Operator:** Network Access Associates Limited
195 Wood Lane
West Works Building
London
W12 7FQ

**Date of launch:** 18 December 2020
**Location of launch:** Vostochny Cosmodrome, Russia

**Designation:** See Annex 3 for details
**Catalogue Number:** See Annex 3 for details

**Nodal period:** 109.4
**Inclination:** 87.9
**Apogee:** 1213
**Perigee:** 1209

**Orbital position:**

**General function:** Communications
**Notified to the UN:** 07 January 2021

**Disposed or decayed:** See Annex 3 for details
**Disposal Notified to the UN:** See Annex 3 for details

**Accepted onto UK Register of Space Objects:** 08 January 2021
**Licence issued under the Outer Space Act 1986:** 07 December 2020

**Additional information:**
## Annex 3

OneWeb Launch 4 – Vostochny Cosmodrome 18 December 2020

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OneWeb Launch 5 (OWLID00110-OWLID000146)
(See Annex 4 for details of each individual satellite in this launch)

Owner/Operator: Network Access Associates Limited
195 Wood Lane
West Works Building
London
W12 7FQ

Date of launch: 25 March 2021
Location of launch: Vostochny Cosmodrome, Russia

Designation: See Annex 4 for details
Catalogue Number: See Annex 4 for details

Nodal period: 109.4
Inclination: 87.9
Apogee: 1213
Perigee: 1209

Orbital position:

General function: Communications
Notified to the UN: 12 April 2021

Disposed or decayed: See Annex 4 for details
Disposal Notified to the UN: See Annex 4 for details

Accepted onto UK Register of Space Objects: 12 April 2021

Licence issued under the Outer Space Act 1986: 25 January 2021

Additional information:
### Annex 4

#### OneWeb Launch 5 – Vostochny Cosmodrome 25 March 2021

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3B5GSAT (SOSAT)

Owner/Operator: Open Cosmos Ltd
Electron Building
Fermi Avenue
Harwell
OX11 0QR

Date of launch: 22 March 2021
Location of launch: Baikonur, Kazakhstan

Designation: 2021-022Y
Catalogue Number: 47954

Nodal period: 95.64
Inclination: 97.57
Apogee: 564
Perigee: 535
Orbital position:

General function: IOT Demo
Notified to the UN: 01 April 2021

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: 01 April 2021

Licence issued under the Outer Space Act 1986: 12 March 2021

Additional information:
LacunaSat-2B

Owner/Operator: Open Cosmos Ltd
Electron Building
Fermi Avenue
Harwell
OX11 0QR

Date of launch: 22 March 2021
Location of launch: Baikonur, Kazakhstan

Designation: 2021-022S
Catalogue Number: 47948

Nodal period: 95.65
Inclination: 97.00
Apogee: 562
Perigee: 535

Orbital position:

General function: IOT Analysis
Notified to the UN: 01 April 2021

Disposed or decayed:
Disposal Notified to the UN:

Accepted onto UK Register of Space Objects: 01 April 2021

Licence issued under the Outer Space Act 1986: 12 March 2021

Additional information:
OneWeb Launch 6 (OWLID00147-OWLID000182)  
(See Annex 5 for details of each individual satellite in this launch)

Owner/Operator: Network Access Associates Limited  
195 Wood Lane  
West Works Building  
London  
W12 7FQ

Date of launch: 25 April 2021  
Location of launch: Vostochny Cosmodrome, Russia

Designation: See Annex 5 for details  
Catalogue Number: See Annex 5 for details

Nodal period: 109.4  
Inclination: 87.9  
Apogee: 1213  
Perigee: 1209

Orbital position:

General function: Communications  
Notified to the UN: 07 May 2021

Disposed or decayed: See Annex 5 for details  
Disposal Notified to the UN: See Annex 5 for details

Accepted onto UK Register of Space Objects: 07 May 2021

Licence issued under the Outer Space Act 1986: 08 April 2021

Additional information:
## Annex 5

**OneWeb Launch 6 – Vostochny Cosmodrome 25 April 2021**

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